

# 2015 Oncology Nursing Society Annual Congress: Podium and Poster Session Abstracts

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## Podium Sessions

### IMPACT OF A NURSE NAVIGATOR TELEPHONE INTERVENTION IN REDUCING UNPLANNED HOSPITALIZATIONS IN BLOOD CANCER PATIENTS. Lori Dagostino, BSN, RN, OCN®, Penrose Cancer Center, Colorado Springs, CO

**Objective:** The learner will be able to describe the process for utilizing evidence-based practice to decrease unplanned hospitalizations in blood cancer patients.

**Topic Significance and Study Purpose, Background, and Rationale:** The physical, emotional, and economic consequences of hospitalization among cancer patients are well documented and underscore the need for nursing interventions to reduce unplanned hospitalizations. Recent literature demonstrates the effectiveness of telephone support in reducing hospitalizations among cancer patients, but effectiveness has not been well studied across a broad range of cancer diagnoses.

**Methods, Intervention, and Analysis:** In 2011, a retrospective chart audit revealed high rates of unplanned hospitalizations among blood cancer patients treated at this hospital-based, community cancer center where approximately 300 cases of lymphoma, leukemia, and multiple myeloma are diagnosed and treated annually. At baseline, 27% of navigated patients experienced unplanned hospitalizations. Following an evidence review and multidisciplinary discussion, the navigator, an oncology certified nurse specializing in the care of blood cancer patients, initiated a proactive telephone intervention for ambulatory patients receiving chemotherapy. The navigator utilizes evidence and experience to anticipate symptoms commonly occurring between scheduled appointments. Weekly telephone support consisting of proactive symptom assessment is administered to individuals at high risk for hospitalization. High risk patients are defined as those who live alone; are uninsured/underinsured; have poorly managed depression or anxiety; or have a cognitive deficit. These criteria were established following a review of this institution's local data. When symptoms cannot be adequately managed through telephone support, the navigator collaborates with primary nurses to ensure the patient is examined in office by an oncology provider or instructs the patient to seek emergency care when appropriate.

**Findings and Interpretation:** Data collected over two years demonstrate that proactive telephone support contributed to decreasing unplanned hospitalizations among blood cancer patients from 27% to 8%, reflecting a 70% overall reduction. In the absence of telephone support, a 29% incidence of unplanned hospitalization has been reported among diffuse large B-cell lymphoma patients receiving chemotherapy. Published literature does not address cost implications associated with proactive telephone support to reduce unplanned hospitalizations. A 70% overall reduction in hospitalizations at this institution has resulted in an estimated \$495,000 annual healthcare cost savings.

**Discussion and Implications:** Within the context of a multidisciplinary approach, proactive telephone support provided by an oncology certified nurse navigator, reduces unplanned hospitalizations among blood cancer patients and contributes to significant cost savings.

### ASSESSMENT AND MEASUREMENT OF MEDICATION ADHERENCE: ONS PEP ORAL ANTI-CANCER AGENTS. Sandra Spoelstra, PhD, RN, Michigan State University, East Lansing, MI, and Cynthia Rittenberg, RN, MN, AOCN®, FAAN, Rittenberg Oncology Consulting, Metairie, LA

**Objective:** To describe assessments and measures that examined risk on nonadherence to medications.

**Topic Significance and Study Purpose, Background, and Rationale:** Significance: Oral anti-cancer agent (OA) adherence is often sub-optimal and may influence cancer treatment success. Clinicians are challenged to find ways to assess and measure adherence to OAs. Problem & Purpose: When assessing and measuring OA adherence, it is essential to evaluate the timing, dosage, frequency, and duration of the regimen. The purpose of this paper is to report on the Oncology Nursing Society (ONS) Putting Evidence Into Practice (PEP) initiative to examine tools to assess and measure medication adherence.

**Methods, Intervention, and Analysis:** Framework: Not applicable. Methods: A review of the literature on tools using MEDLINE®, the National Library of Medicine database, CINAHL®, and the Cochrane Database was conducted, and tools were reviewed and critiqued.

**Findings and Interpretation:** Findings: Morisky Medication Adherence Scale (MMAS) predictive validity is 0.75 for adherence and 0.47 for nonadherence, with sensitivity of 0.81, specificity of 0.44, and floor or ceiling effects are likely. The Adherence Estimator has sensitivity of 0.88 and specificity of 0.59. MMAS and Adherence Estimator may only be effective at predicting risk of nonadherence. The Beliefs about Medication Questionnaire (BMQ) has sensitivity and specificity below 0.50, and the Medication Adherence Report Scale (MARS) has internal consistency of  $\pm 0.77$ , sensitivity of 0.53 to 0.13, specificity of 0.57 to 0.94, and are unlikely to be effective. ASK-12 (Adherence Starts with Knowledge) has internal consistency reliability ( $\pm 0.75$ ), test-retest reliability ( $r = 0.79$ ), and convergent validity ( $r = -0.74$ ;  $p < 0.001$ ), and the Brief Adherence Rating Scale (BARS) has internal reliability ( $\pm 0.92$ ), sensitivity (0.73), and specificity (0.74), and are likely to be effective for predicting nonadherence and measuring adherence rates.

**Discussion and Implications:** The MMAS, Adherence Estimator, ASK-12, and BARS may be useful at predicting risk of medication nonadherence, and ASK-12 and BARS may be useful for measuring rates of adherence. Nurses need to assess and measure whether a patient is following the OA regimen as prescribed. Future research needs to focus on testing tools that are sensitive and specific to cancer patients prescribed OAs. Tools could be modified to a specific clinical setting, and used in a standardized format to assess risk of medication nonadherence and measure OA adherence rates.

### TRANSITIONING CANCER SURVIVORS FROM PEDIATRIC TO ADULT SURVIVORSHIP CLINICAL CARE. Debra Loacker, RN, BSN, Fred Hutchinson Cancer Research Center, and Leslie Vietmeier, RN, BSN, APRN, FNP-BC, Seattle Cancer Care Alliance, both in Seattle, WA

**Objective:** Improved coordination of care for cancer survivors transitioning to adult care, as shown by an increased appointment completion rate at the adult survivorship clinic as compared to baseline of 50%.

**Topic Significance and Study Purpose, Background, and Rationale:** The Childhood Cancer Survivor Study (CCSS) has made tremendous contributions to our understanding of physical and psychosocial late effects of cancer treatment. Results strongly indicate the need of providing survivorship-focused clinical care to survivors of pediatric cancer as they transition into adulthood. In 2013 the APRN-led survivorship programs at the Seattle Cancer Care Alliance (SCCA) and Seattle Children's Hospital (SCH) came together to evaluate and improve the process for transitioning young adult cancer survivors to the adult survivorship program.

**Methods, Intervention, and Analysis:** A program was created to improve transition from pediatric to adult survivorship care based on three goals: improved communication between providers of both programs, coordination of care for cancer survivors, and improved education on the benefits of survivorship

care across the age span. This program involved regularly scheduled meetings with providers of both institutions. A formalized process for referrals was identified and implemented. A database was created to track referrals, appointment completion and general patient demographics. Evaluation and educational materials are in development to assess readiness for transition, the transition process and to promote benefits of adult survivorship care.

**Findings and Interpretation:** From January 2010 through September 2014, 49 patients were referred from the Survivor Clinic at SCH to the Survivorship Clinic at the SCCA. 69% (N = 34) of these referrals occurred after the intervention was implemented. These patients were 47% male, age 17-29 with the following diagnoses: leukemia 51%, lymphoma 14%, brain tumors 14%, sarcoma 10%, other 10%. Success of the intervention will be measured by completion of SCCA appointments. The majority of patients (N = 34) referred after intervention implementation are due for visits beginning in September 2014. Ongoing tracking will compare appointment completion rate to the 50% baseline completion rate.

**Discussion and Implications:** We are encouraged by a 100% increase in referrals since implementing this program, and will continue to monitor the appointment completion rate. A secondary gain has been the formation of a robust, multidisciplinary and multi-institutional committee focusing on the needs of young adult survivors.

**BREAST CANCER CHEMOTHERAPY EDUCATION: TAKING IT FROM THE CLASSROOM TO THE COMPUTER.** Krista Henderson, BSN, RN, CBCN®, Amiee Gosbee, BS, RN, CBCN®, Lorianne Classen, MS, CHES, and Theresa Johnson, BSN, RN, CBCN®, all at University of Texas MD Anderson Cancer Center, Houston, TX

**Objective:** Viewers will be able to identify the need for better access to chemotherapy education through an online tool for breast cancer patients.

**Topic Significance and Study Purpose, Background, and Rationale:** Breast cancer patients start chemotherapy with many questions that may not be adequately addressed in a fast-paced, high volume clinic. Nurses at a National Cancer Institute designated comprehensive cancer center recognized that patients called frequently and returned with many questions regarding their specific cancer despite receiving a general chemotherapy guide booklet and an opportunity to attend chemotherapy class. Evidence has shown that computer-based teaching is effective in increasing knowledge and decreasing anxiety. The need for access to education was identified to provide knowledge to patients when information cannot be provided at clinic visits. The necessity for better access to education inspired the collaboration among oncology nurses, health education specialists, physicians and pharmacists to develop a breast specific online educational tool.

**Methods, Intervention, and Analysis:** The existing institutional online chemotherapy class was edited to meet the specific needs of the breast cancer patient. Nurses then developed a script instructing ways to manage side effects which was added as a voice over. Per Patient Health Literacy requirements, the material was evaluated to be eighth grade level or lower for appropriate comprehension. Physicians and pharmacists approved the education provided in the video. In December 2009 the new online Chemotherapy Class was made available for viewing on the institutional website. An information sheet on how to locate the online class was created for inclusion with chemotherapy class booklets provided during clinic visits.

**Findings and Interpretation:** The Breast Center had an average of 43.6 patients per month start chemotherapy. Audits from fiscal year 2014 showed that there were 81 average monthly views. This was reassurance that the education was being accessed. Additionally, 68 viewers responded to a survey and results showed that 97% had a positive experience with 78% reported a decrease in anxiety following utilization of the online educational content.

**Discussion and Implications:** Since its inception, video viewings have continued to exceed chemotherapy starts each month, suggesting patients may return to view the video as needed for continuing education. This process appears to be effective, sustainable, and reproducible in other settings. Studies could compare the impact of viewing the educational content with the number of patient calls regarding chemotherapy issues.

**THE EFFECT OF AN ORAL CHEMOTHERAPY COURSE ON KNOWLEDGE AND CONFIDENCE LEVELS OF NURSES ADMINISTERING ORAL CHEMOTHERAPY TO PATIENTS ON UNITS OUTSIDE THE ONCOLOGY SETTING.** Rachel Ray, MSN, RN, OCN®, Madona Plueger, MSN, RN, ACNS-BC, CNRN, and Christan Mychajlonka, BS, PharmD, all at St. Joseph's Hospital and Medical Center, Phoenix, AZ

**Objective:** The primary objective of this project was to provide nurses attending an oral chemotherapy course with an opportunity to evaluate and improve their confidence level in administering these novel medications.

**Topic Significance and Study Purpose, Background, and Rationale:** The use of oral chemotherapy is on the rise. A 2010 study reported that 16.1% of oncology patients were treated with oral chemotherapy, and it is estimated that this number will soon reach 25%. Consequently, patients on long term oral chemotherapy may be admitted to the hospital on units outside of oncology for treatment unrelated to their cancer. Nurses outside of oncology often lack confidence about administering anti-neoplastic agents and caring for patients receiving them because they are unfamiliar with the drugs and safe administration standards. Oncology educators and pharmacists play a pivotal role in educating nurses about oral chemotherapeutic agents.

**Methods, Intervention, and Analysis:** This project took place from March-May 2014 at a large academic acute care hospital. The target audience primarily consisted of 63 charge nurses and educators unfamiliar with oncology. Course content was delivered to nurses by an oncology pharmacist, CNS, and oncology education specialist in a 4 hour live course that incorporated the ASCO/ONS chemotherapy administration standards, and included a "role-play oral chemotherapy administration scenario. Participants completed a pre-test which included one question about administration confidence levels. A post-test with the same content was administered at course completion. Nurses were also provided with patient education handouts, an oral chemotherapy reference chart, and administration checklist to be used on their respective units.

**Findings and Interpretation:** The confidence and knowledge on oral chemotherapy was improved after a four hour course. When pooled on their confidence, 4% were confident on their knowledge prior to the course and 66% were confident or strongly confident after the course. The classes pre-test to post-test scores were improved by an average of 30%.

**Discussion and Implications:** An oral chemotherapy course can significantly improve the confidence and knowledge of inpatient nurses administering these complex agents. Future studies should focus on evaluating whether educational courses such as this can help minimize oral anti-neoplastic administration errors.

**ONS PEP PUTTING EVIDENCE INTO PRACTICE: EVIDENCE-BASED INTERVENTIONS FOR ORAL ANTI-CANCER AGENTS.** Sandra Spoelstra, PhD, RN, Michigan State University College of Nursing, East Lansing, and Holly SanSoucie, DNP, RN, AOCN®, CBCN®, GlaxoSmithKline Oncology, Philadelphia, PA

**Objective:** To describe PEP evidence recommended to promote adherence to oral anti-cancer agents and likely to be effective at promoting adherence to oral anti-cancer agents.

**Topic Significance and Study Purpose, Background, and Rationale:** Significance: Adherence to oral anti-cancer agents is a significant clinical problem among patients who are very sick with a life threatening disease and may have a substantial impact on treatment success or failure. Problem & Purpose: The limited evidence available suggests that adherence to oral anti-cancer agents is a significant clinical problem and may have a substantial impact on treatment success or failure. The purpose of this paper is to report on the Oncology Nursing Society (ONS) Putting Evidence Into Practice (PEP) initiative, a comprehensive examination of the current literature was conducted to identify effective interventions for patients prescribed oral anti-cancer agents.

**Methods, Intervention, and Analysis:** Framework: Not applicable. Methods: The ONS PEP Weight of Evidence Classification Schema levels of evidence were used to categorize interventions to assist nurses in identifying strategies that are effective at improving adherence. An extensive review of the literature regarding medication adherence was conducted using MEDLINE®, the National Library of Medicine database, CINAHL®, and the Cochrane Database using the consolidated problem, intervention, comparison and outcome (PICO) terms. Articles were in the past 10 years, in English, and in adults (> 18 years of age). The PEP team used a systematic approach to review, critique, and assign levels of evidence.

**Findings and Interpretation:** Findings: A total of 120 studies met the inclusion criteria and were included in the review. Patient feedback and monitoring and multicomponent interventions were recommended for practice (n = 4); text messaging, automated voice response, and treatment of depressive symptoms were likely to be effective (n = 22); and education, cognitive behavioral therapy, motivational interviewing, behavioral contracting, packaging, dosing, reminders, medication dispensers, electronic devices, decision aids, calendars, refill cues, system level interventions, health information technology, and copay reduction were effectiveness not found (n = 94). No interventions were found that were effectiveness unlikely, benefits balanced with harms, or not recommended for practice.

**Discussion and Implications:** Implications: The majority of evidence found was conducted in conditions other than cancer, thus, research is needed to identify if these interventions are effective at promoting adherence in cancer patients.

**IMPLEMENTING SEPSIS FIRST SIX HOURS BUNDLED INTERVENTIONS IN A HEMATOLOGIC MALIGNANCY AMBULATORY CLINIC.** Brenda Shelton, DNP, RN, CCRN, AOCN®, Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins, Julie Stanik-Hutt, PhD, RN, ACNP, CCNS, FAAN, Johns Hopkins University School of Nursing, Joyce Kane, MSN, RN, Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins, and Richard Jones, MD, Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins, all in Baltimore, MD

**Objective:** Describe evidence-based interventions for sepsis, and facilitators or barriers to implementation of these practices in a hematologic malignancy ambulatory clinic.

**Topic Significance and Study Purpose, Background, and Rationale:** Infectious complications are the most common non-malignant cause of death in patients with cancer. International best practices for recognition and management of sepsis using bundled interventions reduce morbidity and mortality. Integration of these practices has not been documented in ambulatory oncology clinics where cancer patients present for infection evaluation. This quality improvement project aimed to enhance adherence to Sepsis Bundled interventions in an ambulatory clinic for hematologic malignancy patients receiving chemotherapy or hematopoietic stem cell transplant.

**Methods, Intervention, and Analysis:** This Institutional Review Board approved quality improvement project incorporated sepsis best practices through an interprofessional protocol. It included screening guidelines, electronic orders, practice algorithms with independent nurse interventions, and clinical decision support for providers. Baseline performance was evaluated in a group of forty clinic patients admitted with possible infection between July 2012 and March 2013. After protocol implementation, seventy-nine patients screening positive for sepsis were evaluated. Time to first intervention (collection of blood cultures or lactate, first antibiotic), hemodynamic support, and completion of appropriate interventions were measured. Differences between baseline and post-protocol groups were analyzed using descriptive and inferential statistics.

**Findings and Interpretation:** Timeliness and adherence to sepsis interventions improved after protocol implementation. Time to the first intervention was a mean of 23 (SD = 22.4) minutes after protocol implementation and 303 (SD = 540) minutes in the comparison group. Adherence with threshold times for drawing blood lactate and cultures, and start of antimicrobials improved 104–870% post-protocol and met benchmarks 60–87% of the time. Timely completion of all recommended interventions improved to an 82.3% adherence rate.

**Discussion and Implications:** This project demonstrated that integrating guidelines with technologic support can enhance adherence to best practice sepsis management. Though this project was not powered to evaluate morbidity and mortality, evidence suggests that practice improvements may translate to improved outcomes. Sepsis screening criteria were highly sensitive (42% of all clinic visits met sepsis criteria), yet only 12% were infected at the time of screening. Additional data is needed to evaluate sensitivity, specificity, and confounding variables for sepsis outcomes in this population.

**CALL LIGHT RESPONSIVENESS: A LEAN SIX SIGMA APPROACH.** Vickie Thomas Januska, MBA, BSN, RN, NE-BC, and Wendy Miano, MSN, DNP, RN, AOCN®, both at Seidman Cancer Center, Case Medical Center, University Hospitals, Cleveland, OH

**Objective:** Explain how Lean Six Sigma Methodology was applied to call light responsiveness on a surgical oncology division. Identify tool utilized to increase call light responsiveness on a surgical oncology division

**Topic Significance and Study Purpose, Background, and Rationale:** Lean Six Sigma principles have been successfully utilized in manufacturing companies for decades. Lean Six Sigma principles can be applied in healthcare with goals to decrease cost, increase quality, and increase staff and patient satisfaction. Call light responsiveness, a key factor in patient satisfaction, ranked in the 19th percentile measured on the HCAHPS survey on a surgical oncology division in 2013. The purpose of this project was for the interdisciplinary team to apply Lean Six Sigma interventions and solutions to increase patient satisfaction scores for call light responsiveness above the 60th percentile benchmark in 2014.

**Methods, Intervention, and Analysis:** While working on the call light responsiveness project, Lean Six Sigma tools, worksheets, and formulas were utilized to collect data. The interdisciplinary team gathered information about the current call light responsiveness process, mapped out on paper the “current state. The current state allowed the team to analyze work flow, discover communication breakdowns, hand off failures, delays, omissions, lack of standardized work and prioritizations related to patient requests. A fishbone diagram was utilized to brainstorm causes of time variations in response. Once data was analyzed, a “future state value stream map was created to minimize hand offs, develop standardize work, logical continuous work flow to complete patient requests. The team assessed ease

of implementation, cost, time and impact for effective solutions. Tools created were such items as checklists, rounding tool, call log and welcome letters.

**Findings and Interpretation:** Call light responsiveness outcomes were 63 percent of nursing assistants were busy, current state contained 33 steps and 20 delays, 7 percent of the calls were toileting, 46 percent of calls occurred on day shift, staff and patient perceptions varied related to call light responsiveness

**Discussion and Implications:** The call light responsiveness project on the surgical oncology division validated Lean Six Sigma principles utilized to eliminate waste related to energy, money and time. The interventions allowed the division to develop efficient and effective processes related to call light responsiveness, raising the patient satisfaction scores to above the 2014 benchmark. As more research is completed on Lean Six Sigma in healthcare, principles can be incorporated into evidence-based practice to support call light responsiveness.

**NURSING ASSESSMENT OF FAMILY CAREGIVER KNOWLEDGE AND ACTION TOOL (NAFKAT): DEVELOPMENT AND PSYCHOMETRIC TESTING.** Patricia Geddie, MS, CNS, AOCNS®, Orlando Health, Orlando, FL, Victoria Loerzel, PhD, RN, OCN®, University of Central Florida, Orlando, FL, and Anne Norris, PhD, RN, FAAN, University of Miami, Miami, FL

**Objective:** Participants will be able to discuss the findings from the reliability and validity testing of this new instrument (NAFKAT) and its implications for nursing practice and future research.

**Topic Significance and Study Purpose, Background, and Rationale:** Older adults are at increased risk for experiencing cancer treatment side effect related symptoms. Understanding family caregiver knowledge and action for cancer treatment symptoms is important for prevention of unplanned hospital admissions in older adults with cancer. However, it is unclear how prepared family caregivers are to recognize and manage these symptoms in the home setting. No measures of nursing assessment of family caregiver knowledge and action exist for these symptoms. The purpose of this study was to examine the reliability and validity of a newly developed measure, Nursing Assessment of Family Caregiver Knowledge and Action Tool (NAFKAT).

**Methods, Intervention, and Analysis:** The NAFKAT was developed and evaluated in a 3 step process. First, formative work for item development, response options, and format was conducted. The second step was an inter-reliability study with oncology clinic nurses. Nurse raters were asked to view and record responses from three researcher developed video vignettes of family caregiver interviews. The third step was a validity study of family caregiver known groups: gender, education, caregiving experience, and cancer experience. The tool was administered by the PI with family caregivers via structured interview format with predetermined response choices.

**Findings and Interpretation:** Excellent inter-rater reliability was obtained (> 95%). Almost half the total sample (48.8%) scored 11 points (top score) and the mean score for the total sample was 9.22 (SD = 2.13), indicating a fairly high level of knowledge and plan of action for fever and dehydration symptoms. Significant differences were found in mean total scores for gender ( $p < 0.05$ ) and in mean fever subscale scores for females, college educated, and experienced ( $p < 0.05$ ). There were no significant within group differences in mean dehydration subscale scores in any of the known group analyses ( $p > 11$ ).

**Discussion and Implications:** Preliminary support was found for reliability and validity of total scale and fever subscale and it's potential for assessing caregiver symptom knowledge. Additional research is needed to evaluate the sensitivity of the dehydration subscale to known group differences. The NAFCK-

AT has potential usefulness to assess family caregiver baseline symptom knowledge, identify patient and family caregivers who need additional support and purposeful follow-up by the healthcare team.

**Underwriting or Funding Source Name:** Lupus Foundation of Florida.

**MULTIDISCIPLINARY DEVELOPMENT OF A BONE MARROW ASPIRATE AND CORE BIOPSY PERFORMED BY REGISTERED NURSES.** Daravan Kao, RN, BSN OCN®, Grace Steiner, RN, BSN, and Robert A. Chapman, RN, MN, CCRN, Seattle Cancer Care Alliance, Seattle, WA

**Objective:** Participants will describe the three key elements of a bone marrow program, which prepares registered nurses to perform bone marrow aspirate and biopsy.

**Topic Significance and Study Purpose, Background, and Rationale:** Bone marrow aspiration (BMA)/biopsies (BX) are procedures used to diagnose and evaluate hematologic diseases in general oncology and hematopoietic stem cell transplant (HSCT) patients. These procedures are typically done by physicians or advance practice providers. In contrast, at a large National Comprehensive Cancer Network (NCCN) center, specially trained registered nurse procedurists have undertaken this as an expansion of their practice. The Institute of Medicine's key message confirms that registered nurses should practice to the full extent of their education and should be full partners in the redesigning of health care delivery. The center's bone marrow program integrates this key message, a practice which has been confirmed by an advisory opinion obtained from the Washington State Nursing Quality Assurance Commission.

**Methods, Intervention, and Analysis:** A multidisciplinary team developed and implemented the registered nurse led BMA/BX program which includes these three key elements, didactic training, technical skills acquisition, and ongoing quality assurance. The assurance of quality outcomes for the BMA/BX program is measured using the Patient Bone Marrow Quality indicators (BMA QI). These metrics are accurate diagnosis and evaluation of disease response. Bone marrow procedures and quality of specimens are evaluated using BMA QI audits regularly compiled for each registered nurse procedurist.

**Findings and Interpretation:** From January 2012 to June 2013, registered nurses performed 1,975 BMA/BX procedures (monthly average of 106 BMA/BX.) In these 106 cases, 2 specimens were judged unsatisfactory for BMA and BX. Overall, the registered nurses maintained a score of 98% satisfactory BMA/BX samples per rating by pathologists. There have been no reported incidences of post-procedure complications for these cases.

**Discussion and Implications:** The use of registered nurse procedurists for BMA/BX demonstrates an innovative partnership for clinical practice as recommended by the IOM. Clinical outcomes for patients and disease management support this expansion of practice for registered nurses. Future observation and data collection is needed to assess patient satisfaction.

**FALL PREVENTION IN THE ONCOLOGY POPULATION AN INTERDISCIPLINARY APPROACH USING SYSTEMS THEORY.** Tahitia Timmons, MSN, RN-BC, OCN®, VA-BC, Medical University of South Carolina, Charleston, SC

**Objective:** Participants will be able to describe systems theory its effectiveness on falls reduction and the use of a falls committee when designing a prevention program for oncology patients.

**Topic Significance and Study Purpose, Background, and Rationale:** Decreasing mortality is a goal that the American College of Surgeons has established for oncology. Falls are concerning in oncology due to underlying pathology. One study found that patients with cancer experienced the third highest number

of hospital falls compared to patients without. According to the National Council on Aging, every 29 minutes an older adult dies from a fall. General multifactorial programs have reduced fall rates, however sustainability and impact is always a challenge. The creation of oncology specific fall prevention programs may be to key in further decreasing fall related mortality in this population.

**Methods, Intervention, and Analysis:** A literature search was conducted related to falls prevention, strategies, and oncology. This led to the creation of the following PICO question: Would an interdisciplinary falls committee composed of clinical and non-clinical staff using systems theory be more effective at reducing falls in an oncology hospital than a traditional multifactorial program? Systems theory states in order to influence the system you need to break down the whole and discover what influences it. The program was staged and divided into six interdisciplinary teams/pillars. They were Patient Education, Stakeholder Education, Environment of Safety, Rounds/Pharmacy, Informatics, and Holism. Teams composed the monthly Falls Committee and worked to implement evidence based interventions and create awareness for all stakeholders.

**Findings and Interpretation:** Dividing the tasks and focusing on transparency within a framework made objectives manageable and achievable. Prior to implementation falls was mainly the focus of clinical staff and without a framework or committee. The new program emphasized systems theory, an integrative hospital view, and committee for reporting data and unified purpose. The fall rate the first quarter the program was implemented decreased over 25%.

**Discussion and Implications:** Oncology nurses need to address falls with the latest effective evidence based programs. Falls are challenging and considered "never events by the National Quality Forum, when serious injury occurs. The hypothesis of the program is that a theoretical framework to guide falls prevention programs with a committee may be the missing pieces. Fall reduction is a goal that must be on the agenda for every oncology nurse due to the population's vulnerability for injury.

## THE FUTURE OF HEALTHCARE: DEVELOPING AN OBSERVATION PROGRAM FOR THE ONCOLOGY PATIENT.

Catherine Licitra, RN, MA, CNML, and Janine Kennedy, MA, RN, OCN®, AOCNS®, both at Memorial Sloan Kettering Cancer Center, New York, NY

**Objective:** Participants will be able to learn and understand the usage of an observation program and unit for the oncology patient population.

**Topic Significance and Study Purpose, Background, and Rationale:** In a changing healthcare market, oncology admissions to the inpatient units have been scrutinized and reimbursements have been denied. Hospitals have established observation programs to deal with the evolving healthcare trends. Despite this, the specialized needs of the oncology patient haven't been considered. Establishing an oncology observation program was the vision at our national comprehensive cancer center. Nursing played a vital role including development, education, implementation and evaluation of this major initiative.

**Methods, Intervention, and Analysis:** After a review of the literature, observation has been seen as an alternative to admission for patients whose symptoms require nursing interventions, who are expected to be discharged home within 24 hours and have a diagnosis that is expected to respond quickly to interventions. An 11 bed virtual observation unit was implemented in July 2013, with plans to construct a 9 bed unit adjacent to the Urgent Care Center (UCC) by the end of 2014. The goal of this virtual pilot unit was to determine if hospital admissions could be decreased by placing patients in a 23 hour observation stay. Nursing goals

were to increase the efficiency of patient flow, decrease length of stay and increase patient satisfaction.

**Findings and Interpretation:** During the pilot, we had 1,861 patients placed in observation with their main complaints being fever, fluid and electrolyte imbalance, pain control and nausea and vomiting. All of these are relevant complications to the oncologic patient. During the pilot phase, there was a 36% admission rate from observation to the inpatient units. Patient flow through the UCC became more streamlined and patient satisfaction remained unchanged as the virtual unit was a current inpatient floor. With the opening of a dedicated unit at the end of 2014, we are hoping to see improvements in these areas.

**Discussion and Implications:** Nursing staff became empowered thru education to become the change agents to help move patients from admission to rapid discharge. With expansion of these services, nursing will define the scope and standards of observation care for the oncology patient. With the adoption of this approach, oncology patients have the benefit of decreased hospitalization stays which is in the interest of the patient, hospitals and payers.

## LUNG CANCER SCREENING AND THE ROLE OF THE ONCOLOGY NURSE.

Gean Brown, MSN, RN, OCN®, Middlesex Hospital Cancer Center, Middletown, CT

**Objective:** The participant will describe the rationale for lung cancer screening.

**Topic Significance and Study Purpose, Background, and Rationale:** Lung cancer accounts for 30% of deaths from cancer in the United States, and the five year survival rate for lung cancer remains extremely low, at 15% (Jiemin, 2013). However, this number increases to 60% when lung cancer is diagnosed at Stage I. Two recent groundbreaking studies have documented this effectiveness and life-saving ability of lung cancer screening. The International Early Lung Cancer Action Project (IEL-CAP) published a non-randomized trial that showed a survival benefit with low-dose CT screening, and the National Lung Cancer Screening Trial (NLCST) was a randomized, controlled trial comparing chest radiograph to low-dose CT scan. Access to a lung screening program may influence survival rates for persons affected by lung cancer, and by working with a multidisciplinary team, oncology nurses, are uniquely poised to lead the way in implementing such a program and its related care pathways.

**Methods, Intervention, and Analysis:** The U.S. Preventive Services Task Force has given low-dose CT lung screening a "B" rating, which, under the Affordable Care Act, requires insurers to pay for screenings as of January 2015. The Centers for Medicare and Medicaid are being encouraged to follow suit. Additionally, recommendations put out by the National Comprehensive Cancer Network (NCCN) provide guidance in identifying high-risk persons and providing appropriate surveillance Utilizing these advances, the Middlesex Hospital Total Lung Care Center team, comprised of oncologists, pulmonologists, thoracic surgeons, radiologists and oncology nurses, created a program in which the lung nurse navigator performs outreach to clinicians and the public, facilitates screening, and coordinates follow-up for positive findings and any suspicious nodules.

**Findings and Interpretation:** Since launching the lung screening program in 2012, a total of 312 scans have been performed, with 5 diagnosed at stage I. This rate of positive findings exceeds that of the general population, indicating continued need for the services

**Discussion and Implications:** The role of the lung nurse navigator can vary based on institution, but the outcomes at the Middlesex Hospital Total Lung Care Center indicate that a comprehensive screening program can positively impact those at high risk for disease and ultimately improve patient outcomes, as well as societal burden from lung cancer.

## CONSTIPATION & OPIOIDS: CREATION AND ADOPTION OF EVIDENCE-BASED PATIENT EDUCATION TOOL.

Juliana Amankwah, RN, BSN, Stephanie Winn, RN, BSN, CLC®, Lucy Akins, RN, BSN, Dorothy Diaz, RN, CHPN®, Sarah Thirlwell, RN, MS, MS(A), CHPN®, AOCNS®, RN, MS, MS(A), CHPN®, AOCNS®, Margaret Wagnerowski, RN, MSN, CNS-BC, AOCN®, AOCNS®, all at H. Lee Moffitt Cancer Center and Research Institute, Tampa, FL

**Objective:** Describe the role of the oncology nurse in the provision of quality, evidence-based management of opioid-induced constipation in partnership with the patient and provider.

**Topic Significance and Study Purpose, Background, and Rationale:** Reports indicate 25–95% of cancer patients require opioids for pain control and invariably experience constipation as a side effect. Constipation increases illness burden and decreases quality of life, which could lead to non-adherence to opioids. As oncology nurses in the Supportive Care Medicine (SCM) clinic, our goal is to provide quality, evidence-based care in partnership with the patient and provider in managing opioid-induced constipation (OIC).

**Methods, Intervention, and Analysis:** An interdisciplinary task force of clinic nurses, clinical nurse specialists, medical assistants, clinic manager, and a palliative physician embarked on an evidence-based, performance improvement project to identify the incidence of OIC among SCM patients. A review of patient-reported outcomes indicated that 47% of patients had unmanaged constipation and 0% received written education on OIC management. The task force collaborated to review the literature, to create an evidence-based OIC patient education tool (PET), and to establish a process to provide the tool to every SCM clinic patient. The OIC PET included sections on how to avoid OIC, a description and recommended use of over-the-counter medications, and when to call the doctor. The OIC PET was reviewed and approved by the Patient Advisory Council.

**Findings and Interpretation:** Six months post-implementation of the OIC PET, 21% of patients had unmanaged constipation and 97% received education on OIC management. At 18 months, results indicate that improvements are sustained with 13% patient-reported unmanaged constipation, 100% patient-reported adherence to their opioid medication plan, and 100% received written education on OIC management. Patient satisfaction related to information provided regarding medication and instructions for use at home, as measured by Press Ganey, has also shown improvement from baseline. Given the success of this project, Nursing Leadership invited the SCM task force to disseminate the evidence-based OIC PET across our institution. The SCM nurses partnered with other oncology nursing specialties to implement the tool for other patient populations.

**Discussion and Implications:** This project exemplifies how an evidence-based, performance improvement approach can positively impact a patient's symptom experience, highlighting the nurses role in oncology care. The SCM team will repeat this approach as it embarks on a new project to decrease the illness burden and improve quality of life related to distress.

## USE OF AUTOMATED SEPSIS ADVISORY TRIGGERS IN AN INPATIENT ONCOLOGY UNIT.

Courtney Crannell, RN-BC, MSN, OCN®, Maureen Seckel, APN, ACNS-BC, CCNS, CCRN, Angela Ross, RN, BSN, OCN®, C. Wayne Stephens, Vinay Maheshwari, MD, and David Biggs, MD, all at Christiana Care Health Systems, Inc., Newark, DE

**Objective:** The sepsis advisory trigger program detects early changes in patient condition. Outcomes examined to measure success include percentage of antibiotics ordered, percentage of RRT calls, along with other criteria.

**Topic Significance and Study Purpose, Background, and Rationale:** Sepsis is an oncologic emergency which can be life threatening if not acted upon in a timely manner. The goal is to act quickly and early to prevent patient deterioration in an already compromised patient population.

**Methods, Intervention, and Analysis:** The sepsis advisory trigger program was initiated 12/4/13 on a 40-bed medical oncology unit in an 1100 bed health care system. Patients were screened in the electronic medical record (EMR) every 48 hours by the use of the Cerner St. John Sepsis Agent scanning for the presence of 3 out of 4 of the Systemic Inflammatory Response Syndrome (SIRS) criteria or 2 out of 4 of the SIRS criteria and 1 indication of organ dysfunction. The patient RN was alerted through the EMR and contacted the physician with a scripted message along with documenting the sepsis advisory trigger as a critical test result. A sepsis order set was created to prompt the nurse/physician team in ordering fluids, blood cultures, lactate level, and antibiotics.

**Findings and Interpretation:** From 12/4/13 to 8/31/14, results showed a total of 109 first sepsis advisory triggers. Antibiotic prescribed ranged from 75.9% to 75.6%. Lactate ordered within 2 hours prior or less than 3 hours after ranged from 44.8% to 34.1% with a total of 44 lactates obtained and 14 (31.9%) lactates were abnormal (severe sepsis or septic shock). Use of rapid response team remained stable at 20.7% to 22%. Transfer to ICU increased from 3.4% to 4.9% of firings. Overall median length of stay decreased from 12 days to 6 days. Average mortality rate was 12.1%.

**Discussion and Implications:** The results indicate that an early sepsis advisory warning may be beneficial in the oncology population, allowing for earlier intervention, and improving compliance and awareness of sepsis care. Opportunities from the pilot have led to the automation of lactate orders directly from sepsis advisory trigger in 9/14.

## DEVELOPMENT OF A PRE-OPERATIVE EDUCATION TOOL FOR THE HEAD AND NECK PATIENT UNDERGOING MICROVASCULAR RECONSTRUCTIVE SURGERY.

Eugene Terkoski, RN, Ellen Kokott, RN, BSN, OCN®, and Barbara Wampler, RN, BSN, OCN®, all at H. Lee Moffitt Cancer Center and Research Institute, Tampa, FL

**Objective:** Objective is to improve patient education satisfaction as evidenced by increased satisfaction scores on follow up survey.

**Topic Significance and Study Purpose, Background, and Rationale:** Microvascular reconstruction is a high-risk, complex procedure with minimal information regarding post-operative care available in the literature. This limited formalized information allowed for a lack of standardization in the pre-operative education provided to the patients and families in the Head and Neck Clinic. This impacted the oncology patients and the practices of the oncology nurses. The lack of information related to the post-operative course (nutrition, pain management, and wound care) caused unnecessary uncertainty and anxiety. The impact on nursing was a higher volume of calls related to wound care questions from the patients, families and home health nurses. The purpose of this abstract is to describe the clinic nurses EBP efforts to develop pre-operative educational tools.

**Methods, Intervention, and Analysis:** An assessment of the educational tools available to patients in the clinic revealed a lack of materials related to microvascular reconstruction surgeries. An interdisciplinary team comprised of nurses, physicians, social workers, speech pathologists, and dieticians met to develop an educational needs questionnaire. The objectives were to determine areas of weakness in current educational processes and to identify the preferred modality of presentation. Questionnaires were given to former free flap patients to complete at a long-term follow up clinic visit.



**Findings and Interpretation:** The results of the questionnaires were analyzed. Patients preferred a written educational tool, provided during the clinic appointment when surgery is discussed and scheduled, that addressed their questions around the topics of expectations related to surgery and the immediate post-operative care, and home care. Specific topics include wound care, diet, hygiene, tube feeding, tracheostomy care, and pain management. With support of the clinical nurse and patient education specialists, two written educational tools were developed. The tools were translated into Spanish with professional medical illustrations.

**Discussion and Implications:** By identifying specific areas of concerns to patients and families, patient satisfaction was improved. The collective efforts of the interdisciplinary team to standardize patient education and nursing practice were another positive outcome of this project. Future collaborative team work to utilize the educational tools to reinforce patient teaching on the inpatient units is underway.

**THE ONCOLOGY PRACTICE CONSULTANT: AN INNOVATIVE APPROACH TO SUPPORTING HEALTH CARE PROFESSIONALS ACROSS NOVA SCOTIA.** Michele Rogez, RN, BScN, CON(C), AE(D), Cancer Care Nova Scotia, Sydney, Canada, Kara Henman, RN, MSN, CON(C), Cancer Care Nova Scotia, Halifax, Canada

**Objective:** Participants will be able to describe the unique role of the oncology practice consultant in Nova Scotia.

**Topic Significance and Study Purpose, Background, and Rationale:** In 2008, as a result of discussions with the District Health Authorities, in conjunction with the creation of satellite oncology clinics across Nova Scotia, it became evident that there would be a need for education and support for oncology health care professionals practicing outside of the two tertiary cancer centers. To fulfill this need, Cancer Care Nova Scotia (CCNS) created an innovative position Oncology Practice Consultant (OPC). This role was created to support oncology health professional educational interventions required to meet the outcomes defined in oncology provincial standards, guidelines, policies and procedures. The OPC's lead oncology clinical education and also work collaboratively with other oncology education resources across the province. The OPC's are part of a virtual team, with one OPC located at each of the provinces two cancer centers.

**Methods, Intervention, and Analysis:** OPC's in action: (a) Just in time consultation, (b) Foster a provincial network of oncology nurses, (c) Policy development, (d) Curriculum development, (e) Present educational in-services by request of the health districts and also based on practice/policy change, (f) Facilitate the Administration of Cancer Chemotherapy Online Program, (g) Participate in committee work, participates in quality improvement initiatives.

**Findings and Interpretation:** In 2011, CCNS assessed the impact of the OPC role. There was broad consensus amongst the District Health Authorities that the OPC role was valued, as it supported the districts in making changes in practice to achieve safe, quality care, thus enabling patients to receive care closer to home. Services noted as particularly beneficial included: (a) Support for chemotherapy related issues/learning needs, (b) Maintaining a connection between the main Cancer Centers and rural centers, (c) Establishing confidence in the system, (d) Standardizing practice, (e) Increased access to oncology education, (f) Supporting best practice.

**Discussion and Implications:** As Cancer Care Nova Scotia continues to support safe quality cancer care for Nova Scotians through the development of new standards, and guidelines; the role of the OPC also continues to evolve to support practitioners across the province. Several new initiatives that are currently in development include: (a) An Oral Systemic Therapy Policy

and Procedure for oncology and non-oncology health professionals, (b) Adapting Oncology Emergency Guidelines for Nova Scotia, (c) Creating a General Practitioner in Oncology (GPO) framework, (d) Promoting the use of the "teach back" patient education technique, (e) Developing an Oncology 101 program for non-oncology health professionals.

**IMPROVING STAFF COMMUNICATION THROUGH SOCIAL MEDIA.** Suzanne Cowperthwaite, MSN, RN, NEA-BC, and Barbara Van de Castle, MSN, ACNS, OCN®, BC, Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins, Baltimore, MD

**Objective:** Participants will learn the steps for creating and the benefits of using social media as a communication tool in health care settings.

**Topic Significance and Study Purpose, Background, and Rationale:** Effective, timely and transparent communication benefits team performance. The ability to easily share knowledge and information, and to collaborate with employees at every level of the organization, enhances success. Diverse, busy staff, with complicated work and personal schedules, can challenge communication efforts. Meetings, conference calls, e-mail, sharepoint sites, newsletters and bulletin boards have limitations related to access, timeliness and who initiates and who receives communication. Web-based social media has become ubiquitous and can be utilized as an added communication tool for those working in health care settings.

**Methods, Intervention, and Analysis:** Nursing administration in this NCI-designated comprehensive cancer center worked with Internet Specialists in the Marketing and Communications Department to create a private Facebook group for staff. Privacy and confidentiality policies are pinned to the top of the Facebook page. Group administrators monitor posts and can remove inappropriate items. An email introducing the project was sent to all staff. Subsequently, invitations to join the group were sent to approximately 250 staff via work email accounts. To accept the invitation staff selected the included hyperlink and entered their personal Facebook password. Potential members were then approved by a group administrator. New members are invited in orientation and by existing group members.

**Findings and Interpretation:** Postings include journal club announcements with electronic link to the article, CE offerings, ONS news, staffing needs, celebrations, kudos and humor. Pictures are often included with postings. The names of staff that have viewed a post are visible to the administrators. Postings can and are made by all group members. Polls have been conducted and provide quick feedback. There have been no inappropriate posts. Member feedback has been positive, including comments and likes for individual posts.

**Discussion and Implications:** Communication has been enhanced through the Facebook group. Members receive timely communication, since many check Facebook frequently via cell phones. Members share information across nursing units and staff levels, promoting collaboration and a sense of community. Staff that are not members of the Facebook group receive formal announcements through more traditional media. However, other posts, such as kudos, may only be shared on Facebook. The department is committed to increasing membership and number and types of posts.

**GASTROINTESTINAL ONCOLOGY NAVIGATION: IMPLEMENTING BEST PRACTICES.** Teresa Labovich, RN, MSN, OCN®, Penrose Cancer Center, Colorado Springs, CO

**Objective:** The learner will be able to identify the process for utilizing evidenced based practices to improve patient care in patients with gastrointestinal malignancies.

**Topic Significance and Study Purpose, Background, and Rationale:** Colorectal cancer is the fourth most common cancer in the United States with 136,830 estimated new cases in 2014, accounting for 8.6% of all cancer deaths. Although breast cancer navigation has been around since 1998, the Gastrointestinal Oncology Nurse Navigator (GI ONN) is a relatively new and unique position that can remove barriers to care, and facilitate timely, comprehensive, and evidence-based care for patients. At our hospital-based, community cancer center, the multidisciplinary care (MDC) team and the GI ONN determined quality indicators based on evidence and national standards and took targeted action to improve the timeliness and quality of care for GI oncology patients.

**Methods, Intervention, and Analysis:** For colon cancer, the National Comprehensive Cancer Network (NCCN) guidelines recommend initiating adjuvant chemotherapy within 30 days of surgery, reporting that each 30-day delay results in a 14% decrease in overall survival. For rectal cancer patients, the National Benchmark data recommends initiating treatment within 4-6 months of diagnosis. Extrapolating from the colon data, the MDC team felt more comfortable initiating neoadjuvant chemoradiotherapy within 30 days of diagnosis. Additionally, the NCCN guidelines had recommended Lynch Syndrome screening for all patients less than 50 years of age. Upon careful scrutiny of the literature, as well as our performance in screening patients < 50 years of age (61%, N = 18), we implemented universal screening on all colorectal cancer patients, regardless of age, to include monitoring and facilitation of proper follow-up diagnostic tests, and referrals to the Genetic Counselor. Successful implementation of this process was accomplished through targeted navigator interventions including provider and staff education, tracking and monitoring of pathology results, and facilitation of patient flow through multiple disciplines by the GI ONN.

**Findings and Interpretation:** Data collected over three years demonstrated improved patient outcomes and increased adherence to the NCCN guidelines and National Benchmark recommendations: colon cancer patients- 32 days from surgery to chemotherapy start, (N = 32); rectal cancer patients- 30 days from diagnosis-treatment start (N = 61); universal Screening of all colorectal cancer patients for Lynch Syndrome, 94% (N = 160).

**Discussion and Implications:** This discussion will review the quality indicator processes implemented by our MDC team and the resultant outcomes for our patients with GI cancers.

**MERGING ACADEMIA WITH CLINICAL PRACTICE TO OPTIMIZE THE EDUCATION OF ADVANCE PRACTICE NURSES WHO SPECIALIZE IN ONCOLOGY.** Renee Kurz, MSN, FNP-BC, Rutgers University, Newark, NJ; and Tracy Krimmel, MSN, AOCN®, APRN-BC, and Janet Gordils-Perez, MA, RN, ANP-BC, AOCNP, both at Rutgers Cancer Institute, New Brunswick, NJ

**Objective:** Participants will identify the importance of forming partnerships between academia and clinical practice in order to ensure adequate training and education of advanced practice nurses specializing in oncology.

**Topic Significance and Study Purpose, Background, and Rationale:** Since the adoption of the Consensus model (2008), advanced practice nurses are being educated as generalists according to the population they will care for. Specialty training, such as oncology, is discouraged as our educational system favors our new graduates being trained as primary care providers. This model has served to bring uniformity to educating advanced practice nurses, increased mobility of advanced practice nurses between states, and helped to ensure basic competencies are met. Unfortunately, many graduates of these programs are not prepared to care for the complexities of oncology patients. After networking with other NCI-designated Cancer Centers across the country, it became apparent that this was not a find-

ing unique to the Rutgers Cancer Institute. Other cancer centers had vacancies to be filled and a lack of providers with training or experience applying for positions.

**Methods, Intervention, and Analysis:** A literature search was completed. Other similar programs were contacted via teleconference including those with academic partnerships, fellowship programs and post-graduate programs. A needs assessment will be done on junior and senior level undergraduate nursing students, current graduate students at Rutgers, alumni from all nursing programs within the past two years, as well as current nursing staff at the Rutgers Cancer Institute of New Jersey. A team of experienced staff from both the Rutgers Cancer Institute and the Rutgers School of Nursing was assembled to provide input on the creation of a DNP with a specialty track in oncology curriculum as well as a post-masters certification in oncology. On completion, the curriculum will be peer-reviewed by experts in the field. Both a post-masters certification in oncology and a DNP with a specialization track in oncology will be offered at the Rutgers School of Nursing. This program will be offered jointly with the Rutgers Cancer Institute of New Jersey and taught by an interdisciplinary team of oncology specialists. Upon graduation of the post-masters certification program, students will be eligible to sit for AOCNP® certification. Upon graduation of the DNP program, students will be eligible to sit for both the population examination and the AOCNP, following the successful completion of the population examination.

**Findings and Interpretation:** Currently, the survey tool being finalized and submitted for IRB approval. Pending approval, the survey will be administered by email over a three-week time period. A committee has been formed with both Rutgers Cancer Institute employees and Rutgers School of Nursing faculty to develop the curriculum. In spring 2015, the curriculum will be submitted to the curriculum committee for approval.

**Discussion and Implications:** The number of people diagnosed and living with cancer is expected to rise by 81% by the year 2020. During the same time frame, the demand for inpatient cancer services is expected to experience a 10 percent increase in volume. The American Society of Clinical Oncology has urged a workload redesign including utilizing a team of providers that includes APNs to provide cancer care to patients. It is critically important for partnerships between academia and practice to form partnerships to educate and train advance practice nurses in oncology to meet the needs of patients with cancer in the United States.

**ENHANCING INPATIENT ONCOLOGY CARE BY REDUCING WAIT TIMES—NURSES DECREASE DOOR-TO-CHEMO TIMES.** Barbara Cashavelly, MSN, AOCN®, NE-BC, Barbara Blakeney, MS, RN, FNAP, BettyAnn Bursn-Britton, RN, BSN, and Kristen Gorynski, RN, BSN, all at Massachusetts General Hospital, Boston, MA

**Objective:** The purpose of this project was to reduce the wait time patients experience from time of admission to initiating chemotherapy by 20% and to enhance the patient experience of care.

**Topic Significance and Study Purpose, Background, and Rationale:** Medical Oncology patients admitted to a 32-bed, acute care oncology unit for chemotherapy treatment waited an average of 8.4 hours for their chemotherapy to begin. Demands for inpatient oncology beds are overwhelmingly high. Chemotherapy patients frequently had to wait for bed availability late in the day. As a result, chemotherapy administration often occurred late in the evening/night. Prolonged waiting creates anxiety and frustration for our patients, their families, and our staff. Staff believed that prolonged wait times were due to systems issues of which they lacked the power to change.

**Methods, Intervention, and Analysis:** Attending nurses from a medical oncology unit identified an issue with delays in

chemotherapy administration to patients. Utilizing the IHI inpatient waste identification tool an assessment was completed and an initial, hand tabulated run chart was developed. For 2 weeks, Attending Nurses tracked the admission process for 19 patients receiving chemotherapy treatment. In-depth review and run-charts were created to identify factors that delayed chemotherapy starts: Pre-admission labs, IV access, PICC placement, hydration and chemotherapy orders. FMEA techniques were used to map processes and procedures and a fish diagram was developed. The unit team met with the oncology attending physicians, described the delays in care, identified barriers and requested changes in pre admission processes. The Attending Nurses developed a proposal for several practice changes. The medical oncology teams changed their workflow for lab tests and chemotherapy orders. The Attending RNs also worked with the IV therapy leadership team to expedite PICC line placement. They also collaborated with pharmacy and the resource nurses to review the chemotherapy admission orders and ensure timely activation of the patient's chemotherapy orders.

**Findings and Interpretation:** Three delays in care were identified: Blood work and chemotherapy orders were not done or not charted, pharmacy prepares hydration, premedications and chemotherapy medications together as one order and long wait for insertion of a PICC line at time of admission. After the interventions, delay times were reduced in all three resulting in an overall 38.9% reduction in the admit to chemo in-time. Admit to chemo in-time of 5.2 hours from a beginning time of 8.5 hours in the 12 weeks following the tests of change. The average length of stay declined from 4.7 days to 4.1 days in the 12 weeks following implementation of the three tests of change. The decrease in LOS is projected to result in a 17% cost savings per year for this patient population and will allow an increased capacity of between 10 and 20% for this patient population. Savings estimates assume a reduction in total hospital days for targeted patients based upon length of stay reduction resulting from implementation of new admit to chemotherapy procedures. Improved patient satisfaction and staff satisfaction was also identified.

**Discussion and Implications:** The three tests of change proved very successful. Taken together, the changes lead to a decrease wait time for chemotherapy start time, decreased length of stay, increased unit capacity and financial savings. This process improvement project has proven that unit-based nurses have the ability to identify systems issues and are empowered to make systems changes to improve nursing practice and patient's satisfaction. Patients and staff alike have acknowledged reduced wait times.

## UNCOVERING THE COMPLEXITY OF SLEEP COMPLAINTS IN BREAST CANCER SURVIVORS: ARE SYMPTOMS INDICATIVE OF POTENTIAL SLEEP DISORDERS?

Julie Otte, PhD, RN, OCN®, Indiana University School of Nursing; Shalini Manchanda, MD, and Todd Skaar, PhD, both at Indiana University School of Medicine; Michael Weaver, PhD, RN, FAAN, Indiana University School of Nursing; Kevin Rand, PhD, PhD, Indiana University, Purdue University; and Janet Carpenter, PhD, RN, FAAN, Indiana University School of Nursing, all in Indianapolis, IN

**Objective:** To describe how symptoms of poor sleep in breast cancer survivors can be suggestive of sleep disorders.

**Topic Significance and Study Purpose, Background, and Rationale:** It is known that sleep complaints in breast cancer survivors (BCS) are a highly prevalent and persistent problem well into survivorship. When a BCS presents with a sleep complaint, it is difficult without a comprehensive evaluation to determine if symptoms suggest the presence of an underlying sleep disorder such as a specific insomnia disorder, sleep apnea, restless leg syndrome, periodic limb movements, or narcolepsy.

Not all sleep complaints suggest such an underlying disorder. Sleep complaints are often addressed in oncology follow-up visits; however, no studies have evaluated sleep complaints in BCS in the context of possible sleep disorders. Having this information is requisite to providing optimal treatment options. It is important to understand which BCS are in need of further evaluation by a sleep specialist versus women who could benefit from evidence-based, tailored cognitive-behavioral treatments alone. The purpose of this study was to perform comprehensive evaluations of symptoms of poor sleep to delineate symptoms suggesting a sleep disorder in BCS one year after completing treatment.

**Methods, Intervention, and Analysis:** Structured interview, questionnaires, and biomarker data was obtained from a convenience sample of breast cancer survivors and analyzed using descriptive statistics and frequencies.

**Findings and Interpretation:** The sample consisted of 38 postmenopausal BCS who were 47.7% African American, 44.7% Caucasian, non-Hispanic; were a mean age of 58.7 years (SD = 9.2); and had high body mass indexes (M = 31.13; SD = 6.4). Only one woman had previously been seen by a sleep medicine specialist. Findings showed that 97% of the women had symptoms suggesting a sleep disorder. Most symptoms met the minimum criteria for: insomnia (97%), sleep apnea (71%), and restless leg syndrome (53%). Thirty-four percent suggested hypersomnia. All but one woman had symptoms suggesting multiple sleep disorders.

**Discussion and Implications:** The foregoing provides preliminary evidence that a very large percentage of BCS with sleep complaints have symptoms suggesting underlying sleep disorders requiring referral to a sleep medicine specialist for further evaluation and treatment. Integration of basic screening questions in oncology clinic visits is needed to help delineate the problem and better triage those in need of referral.

**Underwriting or Funding Source Name:** Supported by funding from the Indiana University School of Nursing Center for Enhancing the Quality of Life in Chronic Illness.

## AN INNOVATIVE APPROACH TO CHEMOTHERAPY COMPETENCY ASSESSMENT: SIMULATION TO THE RESCUE.

Lisa Malick, MS, RN, OCN®, Sheree Carter Chase, MSN/MBS, RN, CHSE, Nancy Corbitt, BSN, RN, OCN®, CRNI, Amanda Harris, BSN, RN, OCN®, Donna Huffer, MA, RN, OCN®, and Kristina Miller, BSN, RN, OCN®, all at University of Maryland Medical Center, Baltimore, MD

**Objective:** Describe the use of simulation as a safe, consistent method to validate chemotherapy competency and impact critical thinking skills.

**Topic Significance and Study Purpose, Background, and Rationale:** The Oncology Nursing Society advocates for nurses annual demonstration of chemotherapy administration to assure competent, safe chemotherapy/biotherapy administration to patients. Our hospital supports annual competency validation. However, we were challenged to find opportunities for bedside observation of 93 nurses administering peripheral IV vesicants.

**Methods, Intervention, and Analysis:** Thus, nurses on our Cancer Center's Professional Development Council (PDC) were charged with developing an alternative evidence-based validation method. The team proposed using high-fidelity human simulation for chemotherapy competency validation in our facility's Simulation Center. Literature purports that simulation creates a safe haven for learning in a life-like environment without patient risk. Beginning one year ago, all oncology nurses at our institution were required to attend a one-hour simulation-based competency to demonstrate vesicant administration, extravasation management, short infusion administration, and emergency response to a hypersensitivity reaction.

**Findings and Interpretation:** The PDC nurses conducted and evaluated the simulation-based competency assessment.

A written pre- and post-simulation test consisting of six open-ended questions was used to evaluate the impact of simulation on critical thinking skills. Pre to post scores improved for 57.3% of participants, suggesting that simulation activities had a positive influence on critical thinking. Evaluators observed nurse performance skills varied, with about 12% not demonstrating one of the critical actions on a predetermined skills list. This prompted the addition of remedial sessions to assure consistent practice. All nurses attending a remedial session performed the required critical skills. Post-simulation satisfaction surveys indicated that 97% of nurses felt simulation was a valuable method for competency evaluation and 97% also felt more confident in chemotherapy administration.

**Discussion and Implications:** This project showed simulation based evaluation is a feasible, effective method to validate chemotherapy competency and ensure all nurses receive the opportunity to demonstrate competencies in a safe and consistent manner. It demonstrated the value of pre and post tests using case scenarios to assess nurses critical thinking skills. According to participant surveys, simulation was an acceptable evaluation method that improved confidence. While not all facilities have high-fidelity simulation centers, we believe that this project can be replicated with similar outcomes using low cost equipment, a supportive learning environment, and skilled evaluators.

**APN DRIVEN URGENT VISIT PROGRAM IN A LARGE ACADEMIC CENTER: REDUCTION OF ONCOLOGY ED ADMISSIONS.** Vanna Dest, MSN, APRN, BC, AOCN®, Catherine Lyons, MS, RN, NEA-BC, Kerin Adelson, MD, Rogerio Lilenbaum, MD, Salimah Veliji, MPH, MPH, and Richard Lisitano, MS, RPh, Yale New Haven Hospital, New Haven, CT

**Objective:** Describe the implementation and benefits of an Oncology APN driven urgent visit program.

**Topic Significance and Study Purpose, Background, and Rationale:** In the United States, 30% of the total cancer expenditure is spent in the last year of life and 55% of this is spent on inpatient care. For patients with advanced cancer, most hospitalizations arise from expected disease progression. The goal of this program was to understand the current rates of oncology patients seeking ED attention, subsequent hospital admission, admission diagnoses, and length of stay.

**Methods, Intervention, and Analysis:** A retrospective chart review through EPIC reporting looked at all oncology patients that presented to the Yale New Haven Hospital ED from 1/1/2014 through 5/31/2014.

**Findings and Interpretation:** A total of 391 patients presented to the ED in a 5-month period. The analysis revealed that 90% of the oncology patients (n = 351) seen in the ED were admitted and potentially half of those patients could have been managed as an outpatient if seen in the ambulatory clinic as an urgent/same day visit. The majority of those patients (62%) arrived during the daytime hours of 9:00AM-5:00PM and the volume was greatest on Thursdays, Fridays and the weekend. The patients seen in the ED were representative of the following disease teams: Gastrointestinal (n = 77), Thoracic (n = 46), Neuro-oncology (n = 37), Hematology (n = 40), Breast (n = 30), Melanoma (n = 22), Gynecologic (n = 28), Sarcoma (n = 21), Head/Neck (n = 12), Genitourinary (n = 8), Endocrine (n = 4), & Unknown/undefined (n = 66). The most common admitting diagnoses included fever/neutropenia/sepsis (n = 49, 14%), pain (n = 38; 11%), altered mental status/cerebral edema (n = 45; 11.5%), dehydration/electrolyte disturbances (n = 77; 22%), pneumonia/dyspnea/cough (n = 41; 11.7%), and exacerbation of disease including failure to thrive (n = 56; 16%). Length of stay (LOS) ranged from 0-72 days (Mean LOS = 6.74 days). The average daily cost per admission was \$1886 per day. The top drivers of the direct expenses are nursing, pharmacy, and laboratory. This leads to a total expenditure of \$12,711 during mean length of stay for this population.

**Discussion and Implications:** Despite a large ambulatory practice and access to ambulatory palliative care and infusion services, our patients are presenting to the ED during standard daytime hours and the vast majority of these ED visits lead to hospital admission and prolonged length of stay. This provides a real opportunity for quality improvement. We will launch an advanced practice provider (APP) driven same day visit program with access to urgent palliative care consultation and infusion chairs. We will have capacity to treat dehydration, nausea, vomiting, pain, low risk neutropenic fever, DVT, and other diagnoses in the ambulatory setting. This will require a cultural change and education of physicians, nurses, support staff, as well as patients and their caregivers to utilize the urgent care program rather than referring patients to the ED. Two months after implementation, the APPs saw 147 patients in the ambulatory setting as "urgent visits". It also showed a 32% reduction of oncology patients presenting to the ED and 36% reduction in patients admitted from the ED. At a reduction of 6 admissions per week and an average length of stay of 5.77 days, this represents a reduction of inpatient costs by \$587,640.

**BRIEF CLINIC BASED CBTI FOR PATIENT-CAREGIVER DYADS.** Patricia Carter, PhD, RN, CNS, University of Texas at Austin School of Nursing; and Sabrina Q. Mikan, PhD, RN, CNS, and Debra Patt, MD, MPH, both at Texas Oncology, all in Austin, TX

**Objective:** After viewing this poster, participants will be able to describe changes observed in cancer patient-caregiver dyad's sleep following a clinic based behavioral sleep intervention.

**Topic Significance and Study Purpose, Background, and Rationale:** Over 40% of cancer patients and 50% of family caregivers experience insomnia. Cognitive behavioral therapies for insomnia (CBT-I) are effective in treating insomnia. However, the time burden associated with cancer treatment precludes additional travel for insomnia treatment. In response, we developed a brief CBT-I (cognitive therapy, stimulus control, sleep hygiene, relaxation techniques, and individual goal setting and monitoring) and explored the feasibility of delivering this brief CBT-I in the oncology clinic infusion room to the patient-caregiver dyad.

**Methods, Intervention, and Analysis:** A 4-week quasi-experimental study design was used. Sleep was measured with Actigraphs, PSQI, and ISI. The CESD, PSS, and FACT-G were also used to assess contextual factors. Actigraphs were worn continuously for 4 weeks. Other measurements were taken weekly.

**Findings and Interpretation:** Four patient-caregiver dyads participated (n = 8 individuals). Dyads were cohabitating. Patients mean age was 71 (SD = 1.2), Caregivers mean age was 66 (SD = 3.4). 3 of the dyads were legally married; one was an adult daughter-mother dyad. Two of the cancer patients were female, two male. Patient baseline sleep scores were: Duration 6.8h (SD = 1.4); Latency 27m (SD = 2); Efficiency 79% (SD = 7). Caregiver baseline sleep scores were: Duration 5.5h (SD = 0.15); Latency 27.5m (SD = 1.5); Efficiency 87% (SD = 0.5). Average PSQI improvement for patients was 2 points and 5 points for caregivers. The intervention administration averaged 60 minutes [initial] with 2-15 minute follow ups. Infusion room nurses reported no interruption of workflow. A positive synergistic effect was noted by delivering this brief CBT-I to the patient and caregiver in a joint session.

**Discussion and Implications:** Cancer patient-caregiver dyads report similar levels of sleep disturbance. This can be addressed with a brief CBT-I delivered during patient therapy in the infusion room with little to no negative effects on clinic flow. Patient-caregiver dyads learning to improve their sleep together may reinforce positive behavior changes that may result in greater improvements than seen with interventions targeting the individual. Oncology nurses frequently hear of patient-caregiver sleep disturbances. A brief CBT-I delivered in the infusion

room to the dyad during therapy helps to bring empirically supported interventions to the dyad while they are already at the clinic. Further work is needed to determine longitudinal effects and wide scale implementation factors.

**Underwriting or Funding Source Name:** Shivers Foundation for Cancer Research

**PICC REMOVAL WITH CONFIRMED CATHETER-RELATED THROMBOSIS (CRT).** Cheri Constantino-Shor, RN, MSN, CRNI, Bob Chapman, RN, MSN, and Timothy Ehling, RN, MSN, all at Seattle Cancer Care Alliance; Bruce Montgomery, Associate Professor, Medicine/Division of Oncology, and David Madtes, Associate Professor, Medicine/Division of Pulmonary and Critical Care Medicine, Associate Professor, Medicine/Division of Pulmonary and Critical Care Medicine, both at University of Washington Medical Center; and Michael Linenberger, Professor, Medicine Hematology, Fred Hutchinson Cancer Research Center, all in Seattle, WA

**Objective:** The learner will be able to recognize potential embolic risk associated with removal of a PICC with confirmed catheter-related thrombosis and describe the importance of individual patient decision-making for management.

**Topic Significance and Study Purpose, Background, and Rationale:** Peripherally-inserted central catheters (PICC) are inserted for the administration of chemotherapy in the outpatient oncology setting. The incidence of development of peripherally inserted central catheter-related thrombosis is reported as 2-11%. Oncology patients are reported to have a higher risk for developing a CRT. Removal of a PICC with a confirmed CRT places patients at theoretical risk for mobilization of the clot, with a subsequent risk of pulmonary embolus (PE). Definitive evidence is not available to inform timing of anticoagulation and PICC removal, therefore multi-disciplinary, collaborative decision-making for individual patients is critical.

**Methods, Intervention, and Analysis:** Qualitative measures were used to evaluate level of comfort of experienced PICC nurses in removing a PICC with a confirmed CRT. A current literature review was conducted to determine if standard practice guidelines existed for anticoagulation timing and the removal of a PICC with CRT. A discrepancy existed between expert opinion and comfort in performing the removal on a patient with CRT. A knowledge gap existed for both nurses and providers. Fifty percent of polled PICC nurses expressed reservations about removing a PICC with known CRT without adequate anticoagulation. Oncology physicians and midlevel providers expressed a wide variation in knowledge of management of a CRT and any associated risk with removal. The literature review indicated a lack of definitive evidence to guide appropriate management and timing of removal.

**Findings and Interpretation:** An algorithm, based on evidence, was created as an addendum to a PICC Removal Nursing Policy and Procedure to help guide collaborative management. The tool provides guidance on individual decision making for each case once a CRT has been confirmed. Its use has decreased frustration reported from a lack of mutual understanding of best practices for management of PICCs with known CRT.

**Discussion and Implications:** PICC nurses and providers now use the algorithm (and its associated references) to guide a collaborative conversation on the management of each individual PICC with confirmed CRT requiring removal. This tool provides guidelines for a standardized approach to evidence-based decision-making regarding management of each patient with a PICC with CRT, thereby improving the quality of care provided.

**I'M SAFE, YOU'RE SAFE, WE'RE ALL SAFE!** Christina Klein, RN, BSN, OCN®, CRNI, Heather Brown, RN, BSN, OCN®, Deborah Baldassarre, MSN, RN, OCN®, HN-BC, and Gerry

Finkelston, MSN, RN, CCRN, OCN®, all at Cancer Treatment Centers of America, Philadelphia, PA

**Objective:** The purpose of the chemotherapy biotherapy workshop was to provide oncology nurses the opportunity to demonstrate safe administration including: adverse drug reaction, chemotherapy spill clean-up, managing extravasation, and documentation.

**Topic Significance and Study Purpose, Background, and Rationale:** Topic Significance and Study Purpose/Background/Rationale: In accordance with the 2013 ASCO/ONS Chemotherapy Administration Safety Standards our chemotherapy biotherapy policies were updated. A needs assessment was developed by the nurse educators and administered to all in-patient and infusion nurses to evaluate where the knowledge deficit with administration of chemotherapy and biotherapy existed. Results showed that nurses required supplemental education to accompany the ONS Chemotherapy Biotherapy course. The purpose of the workshop was to provide the evidence based knowledge to the nurses who administer chemotherapy and biotherapy to our patients.

**Methods, Intervention, and Analysis:** **Methods, Intervention, and Analysis:** The workshop was developed by the nurse educators to provide a hands-on learning experience. The mandatory workshop was offered four days; during day and evening hours to allow for maximum participation. A pretest and post test was developed to evaluate the effectiveness of our education. The nurses completed the pretest prior to participating in the workshop which included four stations: policies/safe administration, personal protective equipment/chemotherapy spills, pre-medication/disposal, and adverse drug reactions/extravasation. After completing the educational activities associated with each station the nurses completed the post test and program evaluation.

**Findings and Interpretation:** Findings and Interpretations: After completing the 90 minute workshop the post test results revealed the planned workshop had a positive impact. The comparison of the pre and post test showed that we minimized the knowledge gaps identified in the needs assessment. The program evaluation disclosed that the nurses valued this educational experience.

**Discussion and Implications:** **Discussion and Implications:** As a result of the positive feedback and educational impact, the chemotherapy biotherapy workshop will be offered annually. Understanding of best practice ensures patient safety and improves patient outcomes. Annual chemotherapy/biotherapy education programs will reflect the most current ASCO/ONS Chemotherapy Administration Safety Standards. This program is one way to ensure safe nursing practice with administration of chemotherapy and biotherapy.

**ONCOLOGY NURSE RESIDENCY PROGRAM FOR RECENT GRADUATE NURSES.** Deborah Baldassarre, RN, MSN, OCN®, HN-BC, and Marie Decker, RN, MSN, AOCN®, NE-BC, HN-BC, both at Cancer Treatment Centers of America, Philadelphia, PA

**Objective:** The purpose of the Nurse Residency Program is to provide knowledge, clinical expertise, and support for graduate nurses to become competent oncology nurses.

**Topic Significance and Study Purpose, Background, and Rationale:** In 2010, the Institute of Medicine recommended healthcare organizations develop nurse residency programs to improve retention, expand competencies, and improve patient outcomes. The purpose of this Nurse Residency Program is to provide the necessary knowledge, clinical expertise, and support for graduate nurses to become competent oncology nurses. Nurses build confidence and professional acumen by participating in a 12-month Nurse Residency Program. They then transition

from an entry-level nurse to competent professional nurse, defined by Benner's Novice to Expert theory.

**Methods, Intervention, and Analysis:** Although our facility traditionally did not hire new graduate nurses due to the critical nature of our patient population, a nurse residency program was developed by the oncology clinical nurse specialist with administration approval. The first 12 weeks were the nursing orientation program, where the nurses completed unit based competencies and a variety of courses including, but not limited to: oncology basics, pain management, and oncology emergencies. After six-months of oncology experience, the expectation is to complete the ONS Chemotherapy/Biotherapy course.

**Findings and Interpretation:** During the structured courses the residents completed a formative assessment of the program to assure the nursing department was addressing their needs. Additional education regarding End of Life Care and Naturopathic Medicine were subsequently incorporated into their formal training. Of the 80% retained from the August 2013 start date, all 12 continue to be involved in patient care. Over the 12 month period, hospital infection rates remained consistent when compared to historical data, including the continued CLABSI rate of zero since January 2014. End of program evaluation results showed the nurse residents had adequate ongoing clinical support and education resources provided by the clinical nurse specialist and their individual preceptor. All 12 residents belong to one or more shared governance councils, all are telemetry certified, eight have completed their chemotherapy biotherapy provider course, and two have become holistic certified nurses.

**Discussion and Implications:** As a result of the residency program, a formal mentor program has been developed and implemented. Evaluations from the residents revealed a desire for more classroom time to practice clinical skills. The residents will attend ELNEC training beginning in October 2014. Our next cohort begins October 2014 with 13 nurses.

**MULTI-SITE TRIALS: MODELS, METHODS AND OUTCOMES.** Gwen Wyatt, PhD, RN, FAAN, Michigan State University, East Lansing, Michigan, United States, Alla Sikorskii, PhD, Michigan State University, East Lansing, Michigan, United States

**Objective:** Participants will be familiar with the model guiding a multisite randomized clinical trial of reflexology with breast cancer patients, and describe lessons learned through study execution across multiple recruitment sites.

**Topic Significance and Study Purpose, Background, and Rationale:** Complementary therapies including reflexology are used by a majority of breast cancer patients for symptom management supporting the need for rigorous study designs. Multisite randomized clinical trials (RCTs) allow for achievement of statistical power through collaboration among investigators and expedite data collection efforts, but also present challenges in execution. The purpose of this presentation is to discuss the conceptual model used and lessons learned from a multi-site RCT utilizing reflexology among women with breast cancer.

**Methods, Intervention, and Analysis:** The modified Wilson and Cleary model for health related quality of life (HRQOL) as adapted by Ferrans guided the design of this RCT. According to this model, HRQOL has four central components: biological, symptoms, functioning, and general health perception, and incorporates factors that influence the central components, i.e., characteristics of the environment and individual. The hypothesis was that reflexology would have a positive impact on the symptom component of the model, which in turn would affect functioning and general health perception. A three group design was used: reflexology via a practicing reflexologist, lay foot manipulation via a study staff, and usual care control. A sample size of 385 was necessary to test this hypothesis among trial groups,

and multiple recruitment sites were utilized. Intervention protocols were standardized across all sites. All study reflexologists were trained by the lead reflexologist in the standardized protocol. All study staff who delivered the lay foot manipulation were trained in the standardized protocol by the education coordinator. Lay providers ranged from massage therapists to staff who were naive to reflexology. Some of the 14 recruitment sites had an on-site integrative medicine center where participants came for session, while other sites sent protocol providers to the participants home.

**Findings and Interpretation:** Standardization across multiple sites was successful: no differences in patient HRQOL outcomes were found among sites or type of lay provider.

**Discussion and Implications:** Methodological challenges to testing of complementary therapies can be overcome by study designs that are based on a strong conceptual model and by ensuring protocol fidelity across all study groups and recruitment sites.

**Underwriting or Funding Source Name:** National Institutes of Health, National Cancer Institute (R01CA104883).

**IMPROVING TRANSITIONS FROM THE INPATIENT TO OUTPATIENT SETTING IN BMT PATIENTS.** Gina Quinlan, BSN, RN, CCM, Sara Orndoff, MSN, RN, OCN®, and Sharon Hanchett, MSN, RN, OCN®, all at UPMC Shadyside, Pittsburgh, PA

**Objective:** Improvement of nursing staff satisfaction between in and out patient nurses during the transition of care for BMT patients.

**Topic Significance and Study Purpose, Background, and Rationale:** Safe patient handoffs are a national patient safety goal. The inpatient and outpatient Blood and Marrow Transplant (BMT) units identified a gap in transition of care from in to out patient. Information was being conveyed by multiple members of the care team to the outpatient nurses, however, no communication was occurring on a nurse to nurse level. Information was not conveyed consistently to the outpatient clinic. Poor transitions are noted in the literature to be a key source of communication failures, adverse events and readmissions. Literature also discusses the need for establishing a foundation to assure safe transition from one health care setting to another. Development of a standard process can reduce errors, readmissions and also promote patient satisfaction across the care setting.

**Methods, Intervention, and Analysis:** Nurses in both setting were surveyed and interviewed regarding the current method of handoff report for discharged patients. A workgroup was formed with leadership from the inpatient and outpatient setting along with nurses from both outpatient and inpatient with the goal to improve transitions by developing a standard tool.

**Findings and Interpretation:** The current process was found to be both insufficient and irrelevant. It was decided to move to a standardized approach using electronic communication in SBAR format, which includes relevant information needed by the clinic staff to develop the plan of care for the outpatient setting.

**Discussion and Implications:** The SBAR format allows direct communication with outpatient clinic care providers. Pertinent information includes immunosuppression information, homecare orders for labs and infusions, and an area to convey psychosocial concerns. This process has improved the handoff by providing critical information to the outpatient area. Additionally, this method of communicating discharge information was spread to other outpatient oncology clinics within the health system as well as 2 more inpatient units. The new process has also highlighted care transition challenges from outpatient to inpatient. Evaluating patient education across the BMT program and assuring congruency across the continuum of care is also a next step.

**IMPLEMENTING CLINICAL EDUCATION THROUGH THE UTILIZATION OF SOCIAL MEDIA.** Amy Malensek, RN, OCN®, CBCN®, and Cynthia Daniels, RN, MSN, OCN®, both at Cancer Treatment Centers of America at Western Regional Medical Center, Phoenix, AZ

**Objective:** Creating multi-dimensional, yet cost-efficient clinical education through the utilization of existing social media platforms such as YouTube and Lync.

**Topic Significance and Study Purpose, Background, and Rationale:** Clinical presentation of the cancer patient can be complex and challenging for the novice oncology nurse. Proper assessment skills are essential in identifying items of concern; side effects related to treatment, complications of disease process, as well as symptoms of possible infection. Clinical education of proper assessment techniques can be time-consuming and pose challenges with instructor and staff availability due to limited resources. Yet, education must remain available in order to provide and maintain staff competency and patient safety. The advent of social media may offer a flexible platform for providing in-depth, multi-dimensional assessment instruction that is readily available to staff. Although the utilization of social media is relatively new among professional educators, it proves to be user-friendly and cost efficient. Posting through an already established, secure site, these tools may be of benefit in teaching hands-on assessment skills to the novice oncology nurse.

**Methods, Intervention, and Analysis:** Clinical educators collaborated with the Social Media Department to develop disease site-specific education utilizing YouTube and Lync. Videos were created by means of phone cameras, laptop cameras, and other hand-held non-professional cameras, thereby minimizing overall expenses. Each video averaged 5 minutes in length and provided both visual and oral instruction for each demonstrated assessment. Current clinical staff were instructed to view each video via the secure sharepoint site and compliance was documented in the Learning Management System (LMS). Moving forward, the videos will be assigned to onboarding nursing staff as a component of New Hire Orientation.

**Findings and Interpretation:** The use of Social Media has become an everyday event for most nursing staff. The utilization of a medium in which they are already comfortable created a sense of excitement, and the resistance to new information was decreased. Staff report an increase in confidence with assessing their patients, and they are identifying symptoms and possible complication before they progress, thereby improving patient safety.

**Discussion and Implications:** The utilization of social media with clinical education is a viable alternative to repetitive in-services and instructor-led classes in certain cases. It is both time and cost efficient, and it is readily available to all shifts at all times.

**WELCOME TO THE WALK THROUGH COLON.** Heather Askren, NP-C, RN, OCN®, Franciscan St. Elizabeth Health, and Susan DeCrane, PhD, RN-BC, Purdue University, both in Lafayette, IN

**Objective:** After reviewing this poster, nurses should be able to identify how to develop a team approach to help educate the public on colon cancer.

**Topic Significance and Study Purpose, Background, and Rationale:** Colon cancer is the third most common cancer in both men and women according to the cancer facts and figures for 2014. In Tippecanoe County, Indiana colorectal cancer is too often diagnosed as a late stage disease. 90% of colorectal cancer can be cured with early detection. Our data collection showed that colon cancer was diagnosed as stage 3 or higher 45% of the time.

**Methods, Intervention, and Analysis:** In 2013, the hospital wanted to focus on colorectal cancer over the next 4-5 years. This would make the hospital part of the movement toward 80% by 2018. The purpose of 80% by 2018 is to have 80% of the population screened for colon cancer by 2018. A small team was put together consisting of an oncology nurse, staff nurse, cancer registrar, surgeon, social worker, and administration member to look at the best way to educate on colon cancer. The team wanted to try new education tools and explored the possibility of a walk through educational colon. With the assistance of the hospital foundation department, it was decided to apply for a grant for funding.

**Findings and Interpretation:** This was led by the oncology nurse. In the spring of 2014, funding was approved to purchase a 10ft tall, 12 ft wide, and 20ft long colon. This allowed space for up to 8 educational areas to be displayed inside the colon. With the help of the surgeon we decided to display normal colon tissue, crohns disease, diverticulitis, polyp, malignant polyp, colon cancer, advanced cancer, and keeping your colon healthy. At each station is a description of the disease state. There are many people in Tippecanoe and surrounding counties that speak little to no English, so it was decided that descriptions of each disease state should also be added in Spanish as well as English.

**Discussion and Implications:** The colon was displayed for employees first to start a buzz within the hospital on this new educational tool. Within 24 hours of using the colon, requests were coming in to bring the display to their business, churches, and social clubs. When you exit the colon, you are offered information from the American Cancer Society on screening guidelines, a fecal occult blood test kit, provided with information on talk with your doctor about scheduling an outpatient appointment for a colonoscopy. We plan to continue to use the colon, for educational events in high school health classes, nursing schools, and work with local county health departments to reach a wide variety of people.

**ENHANCING PATIENT CARE AND REDUCING PROCESS WASTE THROUGH KAIZEN HUDDLE BOARD UTILIZATION IN AN AMBULATORY CANCER CENTER.** Joni Watson, MBA, MSN, RN, OCN®, Baylor Scott & White Health, Waco, Texas, United States

**Objective:** Detail the clinical and administrative benefits of the kaizen lean methodology of daily huddles and huddle boards in ambulatory oncology care.

**Topic Significance and Study Purpose, Background, and Rationale:** Frontline clinical leaders are the best individuals to identify gaps or duplicative elements within patient care. In addition, their ideas—large or small—can dramatically improve patient care or eliminate waste in order to remain sustainable in the ever-financially-competitive oncology healthcare environment. The Baylor Scott & White Cancer Center “Waco (BSWCC) utilizes lean methodologies in clinical care, including daily huddles and huddle boards to share information, capture ideas, analyze processes, and escalate issues for quick resolve. This presentation discusses the use of the kaizen lean principle of daily huddles and huddle boards throughout an ambulatory cancer center in order to enhance patient care and eliminate financial and process waste from the oncology healthcare setting.

**Methods, Intervention, and Analysis:** New to implementing lean principles in daily care and work, BSWCC added huddle boards to all areas shortly after opening. Leaders conducted monthly audits of all boards to ensure appropriate information was included. Boards and huddles were refined each month. Initial monthly audits indicated an overall 30% compliance with all components and team members huddling daily less than 25% of work days. With ongoing refinement, monthly huddle audits now routinely show 90% or greater compliance with necessary huddle board elements and team members consistently

huddling daily, leading to idea generation, implementation, and evaluation to improve oncology care.

**Findings and Interpretation:** Refinement and hard-wiring of daily huddles and huddle board utilization has led to numerous and ongoing improvements in the BSWCC including tracking Commission on Cancer efforts each month, identifying missed revenue opportunities to prevent future recurrences, developing in-house education programs and obtaining external education for team members as needed, analyzing appointments to determine root causes of missing items, creating a patient assistance fund in order to serve the practical needs of cancer patients, initiating campus-wide cancer awareness events, reducing overtime and increasing department productivity, and eliminating wasteful medical supply use, among other examples.

**Discussion and Implications:** The BSWCC has improved patient care and work through the kaizen lean principle of improvement over ten months. With training and ongoing attention, lean methodologies are replicable in the oncology clinical environment leading to triple aim success and empowered frontline team members.

### REDESIGNING ORIENTATION: EMBRACING THE CHALLENGE OF MULTIDISCIPLINARY ONCOLOGY CARE.

Donna Colabory, RN, MSN, OCN®, CCM, and Maura Price, RN, BSN, OCN®, both at Lehigh Valley Health Network, Allentown, PA

**Objective:** Determine the efficacy of an oncology-specific, one-day orientation program for assimilating new nursing and allied health employees into a large cancer program offering multiple services in a variety of locations.

**Topic Significance and Study Purpose, Background, and Rationale:** The multidisciplinary nature of cancer care in today's health network settings typically involves multiple campuses and a variety of services offered in varied locations. This can be challenging for new hires to navigate. Oncology nurse leaders from Lehigh Valley Health Network (LVHN) recognized the need to reevaluate their current orientation program. An orientation redesign team was formulated and consisted of representatives from each cancer program area including oncology nurses, social workers, medical secretaries, registrars, financial coordinators, advanced practice nurses, and additional allied health professionals. The team acknowledged the importance of educating entry colleagues regarding scope and context of available oncology services throughout the healthcare system. The redesigned orientation program was initiated to provide key information from each area involved in cancer patient care.

**Methods, Intervention, and Analysis:** Brainstorming sessions were held with the redesign team. These key collaborators provided a vision for what would be the end product: a one-day orientation event of face to face presentations from every department within the LVHN Cancer Program. Two oncology nurses led the redesign team and developed the actual one-day orientation program. The oncology nurses created objectives, an evaluation form, and pre/post-test orientation day assessments. Multiple choice and open-ended questions were incorporated into these tools to allow for quantitative and qualitative data collection.

**Findings and Interpretation:** The program was implemented September 2014. Results from pre/post assessments and evaluations revealed that participants had increased knowledge of LVHN's Cancer Program services, locations, and how to access them. Qualitative feedback was positive: "Comprehensive program," "Great introduction to all departments," "Learned about multidisciplinary teams under the cancer program umbrella." Review of literature showed much research in the area of general orientation programs for staff and nurses, but nothing specific to an oncology orientation program.

**Discussion and Implications:** An oncology-specific, one-day orientation program has the potential to positively impact current practice by increasing staff knowledge of clinical resources and patient care services available to oncology patients in a multitude of settings throughout the continuum of care. The program encourages multidisciplinary collaboration and promotes the highest quality patient care. Further studies are needed to measure effectiveness of this format in other institutions and offer insight for future programs.

### USING CONSENSUS BUILDING TO STANDARDIZE AN AMBULATORY MULTISITE ONCOLOGY INFORMATION SYSTEM.

Paula DesJardins, RN, BSN, OCN®, Karmanos Cancer Center, Detroit, MI

**Objective:** The learner will be able to identify the value of consensus building to standardize an Oncology Information System.

**Topic Significance and Study Purpose, Background, and Rationale:** The viability of free standing small community cancer centers is hanging in the balance. Increasingly, small sites are being integrated into larger health systems. Recently, a number of community sites merged with an academic cancer center to form the largest multisite cancer care network in the state. Achieving a single standardized Oncology Information System (OIS) across 18 ambulatory sites presented distinct challenges post-integration. Challenges to overcome included: standardizing record types, policies, and procedures; aligning standards with regulatory criteria; and achieving agreement about software configuration. A nursing working group (NWG) was formed to identify system content. The NWG had representation from the academic and community settings. Each member brought to the table a strong knowledge base and commitment to defend their way of doing things. Members were asked to commit to a common purpose but consensus building was needed to achieve project goals.

**Methods, Intervention, and Analysis:** Consensus building was used to strengthen group member alliances, shift allegiances, and achieve outcomes. Careful attention was given to three distinct consensus building stages: pre-negotiation, substantive discussions, and implementation. It was expected that consensus building would facilitate goal achievement --Electronic Medical Record (EMR) up and running within an aggressive time frame.

**Findings and Interpretation:** After 4 months, the OIS was standardized around nine nursing assessments and fully endorsed for use by all NWG members. Four of the nine nursing assessments have been implemented into practice in our new EMR which is now operational at 5 of 18 sites.

**Discussion and Implications:** Mergers and acquisitions challenge oncology nurses to confront the realities of a technologically advanced health information system. Nurse leaders need to embrace technology, advocating and supporting its use in all nursing operations to meet the demand for high quality care (McHaney, 2009). Standardizing care across multiple sites is a goal that cannot be achieved without giving deliberate attention to the stages of consensus building; especially when operating under an aggressive timeline.

### ONCOLOGY ADVANCED PRACTICE REGISTERED NURSE (APRN) EDUCATION IN THE 21ST CENTURY: A SINGLE INSTITUTION'S EXPERIENCE WITH EMBRACING TECHNOLOGY TO ADVANCE THE SPECIALTY.

Suzanne Walker, CRNP, MSN, AOCN®, BC, Elizabeth Prechtel Dunphy, CRNP, MSN, AOCN®, BC, Genevieve Hollis, MSN, CRNP, ANP-BC, AOCN®, Victoria Sherry, MSN, CRNP, AOCNP®, Deborah Becker, PhD, RN, PhD, RN, and Amy Moore, RN, MSN, OCN®, all at University of Pennsylvania School of Nursing, Philadelphia, PA



**Objective:** To explore one institution's experience with transitioning an oncology specialty program to a hybrid on-line format.

**Topic Significance and Study Purpose, Background, and Rationale:** According to the American Society of Clinical Oncologists (ASCO), cancer will become the leading cause of death in the United States by the year 2030 (ASCO, 2014). The number of new cancer cases is expected to increase by 45%, with a projected growth in the number of cancer survivors as well (ASCO, 2014). Oncology care will be significantly impacted not only by the projected shortage of oncologists, but perhaps even more so by the predicted nursing shortage that will occur by 2030 (Juraschek, Zhang, Ranganthan, & Lin, 2012). The Oncology Nursing Society (ONS) position statement on the impact of the national nursing shortage on quality cancer care advocates not only for increased oncology content in nursing education programs, but also innovative methods of delivering this content.

**Methods, Intervention, and Analysis:** The University of Pennsylvania School of Nursing (PENN) has offered graduate oncology specialty education since 1982. The program has evolved from a stand-alone APRN program to its current offering as an Adult Oncology Specialty Minor/Post-Master's Certificate. Faculty leaders at PENN recognized the need to expand quality graduate oncology education outside their geographic area, and in 2013 the program transitioned to a hybrid on-line format. The program began with its first cohort of students in the fall of 2013, and is now in its second year. The instructional format was devised to include both synchronous and asynchronous methods of instruction employing various teaching strategies, as well as two mandatory on campus intensive sessions. Additionally, a clinical component was included to reinforce the didactic content.

**Findings and Interpretation:** This poster will explore one university's challenges with administering a distance learning program in oncology, including utilizing and managing technology, assessing student comprehension, garnering institutional support, and marketing/advertising of the program. The identifiable barriers will be contrasted with the benefits of distance learning, and include parameters for assessment of program performance. Recommendations for program modifications will be explored as well.

**Discussion and Implications:** With significant shortages in the oncology workforce projected by the year 2030, online specialty education offers a novel approach to addressing this issue. The experiences of this institution may benefit other schools of nursing looking to begin similar programs.

**NOVA SCOTIA: OPENING THE PANDORA'S BOX OF ORAL SYSTEMIC THERAPY.** Michele Rogez, RN, BScN, CON(C), AE(D), Cancer Care Nova Scotia, Sydney, Canada, and Kara Henman, RN, MSN, CON(C), Cancer Care Nova Scotia, Halifax, Canada

**Objective:** Participants will examine the rationale for developing provincial standards for the utilization of oral systemic therapy for cancer, and also analyze the proposed standards.

**Topic Significance and Study Purpose, Background, and Rationale:** Oral systemic therapy (ST) for cancer is an emerging trend with 25% of treatment drugs expected to be oral by 2015. While oral ST can appear safer and easier for patients, this is not the case as the safety mechanisms in place for IV ST are non-existent for oral. Moreover, studies also show that many patients are non-adherent to oral treatments, causing the drugs to be ineffective. While practitioners readily relate to the challenges oral chemo poses, no policies exist to support safe practice to patients or providers.

**Methods, Intervention, and Analysis:** Cancer Care Nova Scotia formed a working group with oncology health professionals from across the province to create an Oral Systemic

Therapy for Cancer Provincial Policy and Procedure. Our focus included: ordering, preparation, dispensing, administration, patient education and follow-up/adherence monitoring. All practice settings, oncology unit, non-oncology units, long term care and the patient's home were considered.

**Findings and Interpretation:** A provincial policy was drafted and the group recognized that the policy statements would have impact on a variety of areas of the health care system. Knowing this, we engaged various stakeholders (College of Registered Nurses of Nova Scotia [NS], College of Licensed Practical Nurses of NS, Pharmacy Association of NS, NS Department of Continuing Care and Community Service, Oncologists, Oncology nurses, managers), for feedback

**Discussion and Implications:** Thus far there is strong agreement with the key policy statements, although concern does exist in some of the procedural statements with how facilities will be able to comply. The need for education also became evident, which led to the development of: an online Nursing and Pharmacy Toolkit, a patient education pamphlet, Oral Systemic Therapy for Cancer: A Guide for Patients and Families, and also led us to update the patient education pamphlet Cytotoxic Precautions: A Guide for Home.

**POSITIVE OUTCOMES IN MECHANICALLY VENTILATED CANCER PATIENTS IN THE CRITICAL CARE SETTING THROUGH AN EARLY PROGRESSIVE UPRIGHT MOBILITY PROGRAM.** Anne Hodge, BSN, RN, CCRN, Jeffrey Hoag, MD, MS, Joanne McGovern, BSN, RN, CCRN, Ann Marquis, BSN, RN, Jennifer Leahy, RN, and Kate Reifsnnyder, BSN, RN, OCN®, all at Cancer Treatment Centers of America, Philadelphia, PA

**Objective:** The participant will review the effectiveness of an early progressive mobility program in mechanically ventilated oncology patients which decreased ventilator days, complications of mechanical ventilation, and ICU length of stay.

**Topic Significance and Study Purpose, Background, and Rationale:** Patients requiring mechanical ventilation due to respiratory failure are often immobilized which leads to deconditioning and weakness. Mechanical ventilation costs an average of \$1,522 per day, with complications such as pneumonia increasing hospital stay by \$40,000. It is unclear whether patient mobilization is effective in preventing complications associated with prolonged mechanical ventilation. Malignancy and short life-expectancy have been exclusions from all prior studies examining this issue. This paper describes a retrospective evaluation of the evidence regarding the effectiveness of an early progressive mobility program (PUM) in mechanically ventilated oncology patients in an intensive care unit (ICU) as measured by decreased ventilator days, decreased complications of mechanical ventilation, and decreased ICU length of stay (LOS). In January, 2013, a team of oncology ICU nurses, intensivist physicians, physical therapists, and a CWOCN® established the PUM program. The nurses championed the study.

**Methods, Intervention, and Analysis:** Baseline data was collected for six months, and subsequently lead to the development and implementation of a stepwise PUM protocol for all mechanically ventilated patients admitted to a subspecialty cancer hospital ICU. Exclusion criteria included hemodynamic instability, continuous moderate sedation, or neuromuscular blockade. Baseline data including demographics, severity of illness, ventilator days, and LOS, was compared to post-intervention data collected over a six month period. A total of 69 pre-patients were compared to 55 post-patients.

**Findings and Interpretation:** Mean ICU LOS decreased by an average of 1.7 days. Mean ventilator days decreased by 28% (2.2 days) after PUM intervention. This is the first study demonstrating a reduction in ventilator days in patients with cancer.

There was no difference in complications between pre and post-intervention groups related to PUM.

**Discussion and Implications:** This study suggests that oncology patients demonstrate positive outcomes after intubation when a PUM program is utilized. Such programs require the collaboration of the multidisciplinary team. Replication of this study or further non-randomized studies needs to be conducted to demonstrate reproducible results of decreased ventilator days in patients with a cancer diagnosis

**INNOVATIVE TEACHING STRATEGY FOR BEST PRACTICES IN CENTRAL LINE BLOOD STREAM INFECTION PREVENTION.** Ashley Mickiewicz, BSN, RN, OCN®, Anusuya Govindarajan, BSN, RN, OCN®, Lauren Li Brizzi, BSN, RN, OCN®, Surrinder Kaur, BSN, RN, OCN®, and Paola Cuevo, RN, RN, all at Robert Wood Johnson University Hospital, New Brunswick, NJ

**Objective:** Participants will be able to appraise a teaching technique for prevention of central line blood stream infections.

**Topic Significance and Study Purpose, Background, and Rationale:** Robert Wood Johnson University Hospital had 91 CLABSIs in the year 2013 with a rate of 1.66 infections/ 1,000 catheter days. Various new products and initiatives had been implemented. The quality audit data showed lower than expected compliance with dressing changes (~94%), central line maintenance (~87%) and central line documentation (~83%). Education programs had been given to nurses with each new initiative but staff continued to demonstrate incorrect technique with central line care. The CLABSI PR was created to provide education to all nurses in easily accessible, thorough, hands on manner that allowed the ability to interact while performing central line maintenance.

**Methods, Intervention, and Analysis:** The CLABSI (central line associated blood stream infection) committee members developed a CLABSI Prevention Roadshow (PR). Nurses have difficulty leaving the unit during their shift for education; this initiative brings the education to the unit. The Roadshow is mobile and able to travel to multiple units during a day. Sessions include return demonstration of central line dressing change, medication administration, documentation, and various CLABSI Prevention Initiatives. The primary goal of this initiative is to create an educational environment that is practical for the bedside nurse and facilitates best practice in central line care.

**Findings and Interpretation:** The CLABSI PR impact on CLABSI is monitored by the prevalence rates and monthly chart review audits. 100 nurses participated in this initiative. A volunteer response survey was used to evaluate the effectiveness of this teaching method, 100% of the respondent stated that a change in practice resulted from the teaching and 1:1 skill training. The CLABSI PR has been effective in providing education to nurses about central line care and maintenance along with the importance of documentation.

**Discussion and Implications:** Changes have been made to the electronic medical records wording to increase documentation compliance. Observation of practice has encouraged the hospital to continue to look at a potential product change. The format of education is not very efficient for time of the instructors. An average 2 hours was needed to educate the staff on shift for one unit. Select staff nurses have been trained as instructors, to increase the number of offerings, and provide peer to peer feedback.

**AWARENESS OF DISEASE STATUS IN CANCER PATIENTS: A CONCEPT ANALYSIS.** Catherine Finlayson, MS, RN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY

**Objective:** Awareness of disease status in cancer patients is a concept that is complex and not well defined in the literature.

This concept analysis will aid in understanding the concept.

**Topic Significance and Study Purpose, Background, and Rationale:** Background and Purpose Advances in science and technology have made it possible for patients who are diagnosed with cancer to choose treatments and therapies that may lengthen their survival and impact their quality of life. Patient's awareness of disease status (ADS) has been identified as a factor in patient decision making. However, the concept of ADS has not been well defined and operationalized in the literature.

**Methods, Intervention, and Analysis:** Methods The Rogers and Knafelz method was utilized to guide this concept analysis. Data were obtained through a systematic search of six databases. The key terms utilized were: Awareness, perception, truth disclosure, diagnosis, prognosis, terminal illness, status, neoplasm and metastasis. Using various combinations of the key terms, the following databases were searched: PubMed, CINAHL®, Embase, PsycINFO®, Web of Science, and SCOPUS. 47 articles met criteria for inclusion.

**Findings and Interpretation:** Results This concept analysis identified antecedents to the concept: communication between patients and health care professionals, denial, coping, educational level, cancer type, gender, culture, and age. Various definitions have been applied to the concept including awareness or conscious knowledge of disease diagnosis, prognosis, progression, incurability, and survival. Researchers operationalized the concept by determining if the patient could identify medical terminology for cancer, if the patient knew their cancer diagnosis and/or prognosis, if the patient could estimate time until death, or acknowledge if treatment was curative.

**Discussion and Implications:** Conclusions and Implications The concept of ADS has been defined in this concept analysis as an evolutionary process which evolves with the disease trajectory and is influenced by various factors and subsequently impacts treatment decisions and quality of life. Qualitative studies examining the lived experience of patients having ADS are needed in order to have a better understanding of the phenomenon.

**Underwriting or Funding Source Name:** Memorial Sloan Kettering Cancer Center Research Fellowship

**WE CALL BECAUSE WE CARE: RESULTS FROM A POST-DISCHARGE FOLLOW-UP INTERVENTION.** Kelly Keane, RN, BSN, OCN®, Joey Misuraca, RN, BSN, OCN®, and Deborah Allen, PhD, RN, AOCNP®, all at Duke University Hospital, Durham, NC

**Objective:** The learner will describe components of a post-discharge phone call intervention in an adult hematology-oncology population and the impact on patient-centered care.

**Topic Significance and Study Purpose, Background, and Rationale:** Hematologic oncology patients undergo complicated medication regimens, may develop new side effects from chemotherapy, or experience new symptoms after hospital discharge. Hospital-based patient education may not be retained by an oncology patient overwhelmed with a new diagnosis, medications/chemotherapy, and life change. To enhance patient-centered care across the healthcare continuum, an in-patient adult hematology-oncology unit identified the need to offer follow-up nurse-managed calls to review discharge instructions, assess health status since discharge, and provide symptom management guidance.

**Methods, Intervention, and Analysis:** Calls include an introduction, health status assessment, medication review, review of future appointments, assessment of hospital experience, and review what to do if a health concern arises. A script was created to guide the nurse and probe deeper when needed. Nursing Tip Sheets for common side effects or symptoms were developed to explore symptom presence and provide evidence-based non-pharmacologic strategies. These were developed for fatigue,

anorexia, mucositis, nausea/vomiting, diarrhea, constipation, and pain. Outcome variables include readmission rate, patient satisfaction, symptom management, triage referrals, ED use. The intervention was initiated 08/01/2014.

**Findings and Interpretation:** 79 calls have been completed with assistance provided in 58 calls (73%): 31 symptom management, 12 scheduling appointments, 9 medication needs, and 6 calls forwarded to primary oncologist for further management. No calls were referred for emergent management. Press-Ganey patient satisfaction scores have increased (July scores: September scores): good understanding managing health, 58.3% to 100%; symptoms/problems to look for, 81.8% to 100%; and understanding purpose of taking meds, 58.3% to 75%. Patient responses have been positive: "Bless your heart, thank you so much for calling me," "It's nice to know that someone at Duke is still looking out for me," "This has been so helpful, you have done your good deed for the day." Analyses regarding intervention impact on unplanned readmission rates and triage call reduction are ongoing.

**Discussion and Implications:** Preliminary results are positive and support continuation of the intervention. Patients report being grateful to receive a call after discharge. As this intervention has been beneficial for the hematology-oncology patient population, it can be modified to benefit other specialty populations to extend quality patient-centered care across the continuum and improve patient satisfaction and outcomes.

**A SYSTEMATIC REVIEW OF INTERVENTIONS FOR TREATMENT-RELATED SYMPTOMS IN OVARIAN CANCER.** Lorie L. Davis, MSN, RN, OCN®, and Janet S. Carpenter, PhD, RN, FAAN, both at Indiana University, Indianapolis, IN

**Objective:** Increased awareness of the treatment-related SPADE symptom cluster of sleep disturbance, pain, anxiety, depression and low energy/fatigue in ovarian cancer and identification of efficacious nursing interventions for these treatment-related symptoms.

**Topic Significance and Study Purpose, Background, and Rationale:** Women with ovarian cancer have high symptom burden secondary to ongoing chemotherapy treatment. This review was conducted to (a) describe the experimental and quasi-experimental research addressing interventions for symptoms in the treatment-related symptom cluster of sleep disturbance, pain, anxiety, depression, and low energy/fatigue (SPADE) in women with ovarian cancer and (b) critique the quality of the interventions.

**Methods, Intervention, and Analysis:** Methods: The PubMed database was searched for studies meeting pre-specified inclusion criteria. Eight studies meeting the inclusion criteria were evaluated and critiqued for the quality of the intervention in six important content areas.

**Findings and Interpretation:** Results: Seven studies (87.5%) had statistically or clinically significant findings. Interventions were complex with an average of 4.4 and a range of three to six components. Intervention delivery, setting, and exposure varied widely across studies. Only three studies (37.5%) contained detail sufficient to replicate the intervention.

**Discussion and Implications:** Discussion & Implications: There are a limited number of published studies addressing treatment-related symptoms in ovarian cancer. Lack of clarity in intervention reporting may explain perceptions of clinically inefficacious symptom management in this context. Improved reporting would facilitate better translation of interventions into practice. Attention to intervention reporting is necessary for future research and importantly including complex cancer symptom clusters, a current research priority.

**Underwriting or Funding Source Name:** Sources of support: Supported in part by a Doctoral Degree Scholarship in Cancer Nursing from the American Cancer Society (DSCN-14-080-01-

SCN); a Predoctoral Fellowship from the Behavioral Cooperative Oncology Group, Walther Program for Cancer Care Research.

**ADDRESSING THE SPIRITUAL NEEDS OF PATIENTS AND THE CANCER CARE TEAM: AN ONCOLOGY NURSING AND PASTORAL CARE COLLABORATIVE.** Michele Gaguski, MSN, RN, AOCN® CHPN APN-C, Juliann Henry, MDiv, Karen Brady, RN, OCN®, Jacinth Brown, RN, Josefina Ellis, BSN, RN, OCN®, BSN, RN, OCN®, and Allison Gibase, RN, OCN®, all at Atlanticare Cancer Care Institute, Egg Harbor Township, NJ

**Objective:** Describe a collaborative model for addressing spiritual needs of oncology patients and the cancer care team.

**Topic Significance and Study Purpose, Background, and Rationale:** Spirituality has long been recognized as a vital aspect of the patient's coping ability during the cancer trajectory. Spiritual nursing care is an essential part of practice and can provide support and healing to patients/caregivers during the cancer journey. Spiritual needs may change from diagnosis to end of life, however prompt attention by the interdisciplinary team can allow patients the unique opportunity to explore life meaning, and persevere with hope in the face of challenges to quality of life. Furthermore, the very nature of caring for patients with cancer also impacts the personal and professional coping, self care, and spiritual perspective of the care team. There is significant literature highlighting the importance of addressing compassion fatigue and burnout among oncology healthcare providers.

**Methods, Intervention, and Analysis:** In an effort to support the emotional and spiritual needs of oncology patients and team members, the nursing and pastoral care teams at two community-based ambulatory cancer centers collaborated to address the spiritual needs for patients, caregivers and the professional care teams. This partnership focused on promoting the availability and utilization of pastoral resources to patients and caregivers in the outpatient setting, developing organizational strategies to recognize and address the importance of healthy coping mechanisms, and implementing processes such as formal debriefing, education, and an annual renewal retreat.

**Findings and Interpretation:** The Pastors/Nurses Addressing Spirituality Collaborative (PNASC) has been working together for several years and has raised awareness of the significance of spirituality for patients and the care team. The PNASC meets quarterly to assess progress, barriers and generate ideas to move spiritual care of the patient with cancer to the forefront of clinical practice. Outcomes have included: weekly rounding of active treatment patients by the pastoral care team, on-site patient consultations, and staff de-briefing sessions after a difficult patient death, on-site annual renewal retreat, and blessing of the hands for all care providers, and educational sessions on the topics of spirituality, self care and coping.

**Discussion and Implications:** Patient satisfaction scores are in the 90th percentile and team feedback and evaluations have been positive since project implementation. Oncology nurses may find this collaborative model useful to creating a culture committed to enhancing spiritual care.

**THE CHALLENGES OF EDUCATING STAFF TO CARE FOR BOTH PEDIATRIC AND ADULT ONCOLOGY PATIENTS.** Susan Mejsstrik, RN, BSN, OCN®, and Susan Franco, RN, BSN, OCN®, Nebraska Medicine, Omaha, NE

**Objective:** Describe two efforts utilized to address the challenges of educating staff that care for both adult and pediatric patients and one barrier experienced in implementing these efforts.

**Topic Significance and Study Purpose, Background, and Rationale:** As the clinical educators of busy academic oncology programs, it has been a challenge to prepare, orient and

maintain the competence of staff to care for pediatric and adult oncology patients. We currently have a robust comprehensive orientation that includes a Nurse Residency Program for new graduates and a comprehensive Oncology Nursing Fellowship Program (ONFP). Despite incorporating pediatric content into all orientation materials, experiences, the ONFP and having staff certified in Pediatric Advanced Life Support, staff nurses verbalized a lack of comfort level in caring for pediatric patients. A contributing factor was the variability in our pediatric volumes compared to adult volumes.

**Methods, Intervention, and Analysis:** To address this problem, the pediatric medical team, nurse managers, and nurse educators collaborated to find a working educational model moving forward. The decision was made to form a pediatric core team of nurses that would consistently care for pediatric patients. All staff would continue to maintain a level of competence in caring for pediatric patients. However, it was felt that consistent exposure in caring for the pediatric patients would increase the nursing staff's and the patient/family's level of comfort. In addition to forming the pediatric core team, a variety of learning opportunities in pediatric care were developed. Working collaboratively with the nurse educators and the Pediatric Oncology Nurse Practitioners (APNs), educational opportunities included: nurses shadowing the APNs for the day, shadowing on the inpatient pediatric unit, poster boards on pediatric topics, development of a Pediatric Resource Book, in-services by the APN's, in-services utilizing a simulation baby, e-learning modules and a lanyard card was designed with pediatric vital signs.

**Findings and Interpretation:** The biggest challenge in implementing our pediatric core team has centered on staffing. At times, it has proven challenging to manage the experience of the nurse with patient acuity and age while trying to maintain consistent care-givers. Additionally, staffing limitations has made it difficult to allow staff off the unit for additional learning opportunities.

**Discussion and Implications:** It has been a year since we came together and formulated this plan. Steps to evaluate the effectiveness of these efforts and evaluate the comfort level of the staff nurses are under development.

**HEALTH-RELATED QUALITY OF LIFE IN PATIENTS WITH LOWER RECTAL CANCER AFTER SPHINCTER-SAVING SURGERY: A PROSPECTIVE 6-MONTH FOLLOW-UP STUDY.** Yumiko Kinoshita, ME, RN, Kyushu University, Fukuoka, Japan, Kathleen Nokes, PhD, RN, FAAN, Hunter College and Graduate Center, City University of New York, New York, NY, Rieko Izukura, MN, RN, Kyushu University, Fukuoka, Japan, Kayo Toyofuku, MN, RN, University of Occupational and Environmental Health, Fukuoka, Japan, Yuki Nagamatsu, MN, RN, University of Occupational and Environmental Health, Fukuoka, Japan, and Mami Miyazono, PhD, RN, Fukuoka Prefectural University, Fukuoka, Japan

**Objective:** This study aimed to determine whether health-related quality of life, in particular defecation issues, differed during the 6 months following surgery for rectal cancer according to three sphincter-saving surgical approaches.

**Topic Significance and Study Purpose, Background, and Rationale:** Rectal cancer can be treated either via sphincter-saving surgery (SSS) or abdominoperineal resection resulting in a permanent stoma. Sphincter-saving laparoscopic surgical approaches include intersphincteric resection (ISR, partial resection of the internal anal sphincter), ultra-low anterior resection (ULAR, anastomoses 2 cm from the dentate line), and low anterior resection (LAR, performed under the peritoneal reflection). Each has its own challenges and impacts health-related quality of life (HRQOL). This study aimed to determine whether there were differences in HRQOL, with emphasis on defecation issues, during the 6 months following ISR, ULAR, or LAR.

**Methods, Intervention, and Analysis:** Between November 2008 and October 2013, 85 patients with lower rectal cancer were enrolled. Seventy-three (mean age, 59 years), including 42 men, completed the questionnaires for all data points. We used the 36-item Short Form Health Survey (SF36) and European Organization for Research and Treatment of Cancer (EORTC) Quality of Life Questionnaire (QLQ) C30/CR38 to compare HRQOL in ISR, ULAR, and LAR patients during the 6-month post-operative period.

**Findings and Interpretation:** ISR patients had significantly lower HRQOL scores than ULAR and LAR patients in the mental health category. During the 1-month post-operative period, mental health scores declined significantly in ISR patients compared with LAR patients on both the SF-36 and EORTC QLQ C30/CR38 scales. ISR patients had significantly higher defecation problems scores than ULAR patients 1 and 6 months after SSS, as well as lower global health status and social functioning scores.

**Discussion and Implications:** Although there is information about the needs of patients with permanent stomas, little is known about patients who receive SSS. This study explored longitudinal changes in HRQOL during the 6 months after SSS and showed significantly lower scores, most notably the defecation problems score, in the ISR group. Patients in this group need mental and social support, especially during the early post-operative period. Defecation problems had an influence on HRQOL. Pre-operatively, patients should be advised of the possibility of a significant decline in their HRQOL, especially during the 6-month post-operative period. Nurses should ensure that HRQOL issues are being addressed via interactions with SSS patients that include phone calls and home visits and that occur during regular post-operative appointments.

**Underwriting or Funding Source Name:** Supported in part by JSPS KAKENHI Grant Number (no. 21592755 and no. 24593301).

**CREATING A CENTRALIZED TELEPHONE TRIAGE MODEL IN A COMPREHENSIVE CANCER CENTER.** Mary Ann Plambeck, MSN, RN, OCN®, Amy Boswell, MSN, RN, OCN®, and Tracy Gosselin, PhD, RN, AOCN®, all at Duke Cancer Institute, Durham, NC

**Objective:** The participants will be able to identify the three phases of implementing a new telephone triage model in a comprehensive cancer center.

**Topic Significance and Study Purpose, Background, and Rationale:** The oncology patient experience has shifted from an inpatient to an outpatient experience that incorporates a variety of visit types and treatments. Patients and family members are performing self-care at home and are often confronted with questions about treatment plans, medications, care coordination, and symptom management. Within the Duke Cancer Center how patients contacted their provider varied greatly from speaking to a non-clinical person, a nurse in clinic, the paging operator, or leaving a message on a phone that was later returned. The purpose of this project was to provide a consistent level of triage services for all patients receiving care by creating a centralized triage model. Our goals were to improve response, decrease clinic interruptions and flow, and improve patient satisfaction.

**Methods, Intervention, and Analysis:** During Phase I we surveyed patients, staff and providers about the current state of triage in their program. Call volume and type were identified. Phase II included identifying resources including staff, equipment, and current methods of documentation and communication. Leadership mapped out process flow. Providers and clinic staff received communication about the new triage model via staff, department/division meetings and mass communication such as emails and newsletter. Phase III was our Go Live, and phase IV is our ongoing monitoring.

**Findings and Interpretation:** This new triage model has been live for 6 weeks. The call volume is approximately 1,500 per week and the top 3 symptom calls are fever, nausea and pain, while the top 3 administrative calls are related to test results, medication refills, and follow up questions. Further data surrounding call trends, flow, and symptom reports by program will be shared in this presentation. In this early go live phase, the centralized model has decreased clinic staff overtime and improved clinic flow.

**Discussion and Implications:** In the current health care economy keeping patients out of the emergency room and at home is an achievable goal across care settings. Patients and/or their care givers need access to oncology nurses with clinical expertise and critical thinking skills. This not only saves the institution money, but improves efficiency, safety and satisfaction of staff and patients.

**IMPLEMENTING A MULTIDISCIPLINARY ORAL ANTI-CANCER PROGRAM TO ACHIEVE BEST PRACTICE SAFETY STANDARDS AT AN ACADEMIC AMBULATORY CANCER CENTER.** Alysha Riegert, BSN, RN, OCN®, Richella Singers, BSN, RN, OCN®, Melissa Rhoades, PharmD, and Theresa Rudnitzki, MS, RN, AOCNS®, ACNS-BC, all at Froedtert and the Medical College of Wisconsin, Milwaukee, WI

**Objective:** To describe one institution's experience with implementing best practice standards for oral anticancer agents

**Topic Significance and Study Purpose, Background, and Rationale:** Due to the increased FDA approval rate of oral anti-cancer agents, safe administration and management practice guidelines by the American Society of Clinical Oncologists (ASCO) and Oncology Nursing Society (ONS) have been recently updated to include specific recommendations for oral anti-cancer agents. To standardize practice between oral and intravenous therapy, it was critical for the nurse to remain involved. Through the nurse-patient relationship, the nurse has the understanding of the individuality of the patient and family that impacts their teaching approach and potential patient adherence barriers.

**Methods, Intervention, and Analysis:** An internal multidisciplinary task force was convened in 2012 to review current practice and recommend changes for guideline alignment. In 2013, a collaborative oral anti-cancer program integrating nursing, pharmacy, and providers was developed, piloted, and implemented throughout the cancer clinics. Medication education now involves both the nurse and pharmacist. The roles of the nurse and pharmacist were defined in the process to maximize their clinical expertise. In addition to the nurse presenting key concepts about the drug and safe handling precautions, they assist the patient in determining lifestyle changes needed to accomplish successful adherence, while also addressing reproductive or fertility concerns. The nurse evaluates the effectiveness of the education session and plans for further interventions with the team. The pharmacist reviews the therapy for safety and efficacy, completes a drug interaction screening, reinforces important teaching points about the medication, and presents other available pharmacy services. Patients receive weekly follow up by phone or in office to assess adherence and address adverse effects of therapy. After the first month, patients are followed on a monthly basis and are encouraged to contact the team between visits for questions or concerns.

**Findings and Interpretation:** The overall outcome of the intervention was very positive. Patients appreciate the collaborative education and follow up they receive. The nurses were glad to have the additional expertise of the pharmacist when educating patients.

**Discussion and Implications:** Future directions with the project that are underway include completing implementation in all cancer clinics and developing oral chemotherapy prescriptions into treatment templates in the electronic medical record.

**INSTITUTING A PROGRAM FOR THE ASSESSMENT, MONITORING AND MANAGEMENT OF DISTRESS IN THE CANCER PATIENT POPULATION OF A COMMUNITY CANCER CENTER.** Carol Blecher, RN, MS, AOCN®, APNC, CBCN®, Juanita Fryar, RN, OCN®, MS, and Roxanne Ruiz-Adams, LCSW, Trinitas Comprehensive Cancer Center, Elizabeth, NJ

**Objective:** The participant will identify one method of instituting distress screening in a community cancer center patient population and the effects of assessment and intervention on Quality of Life.

**Topic Significance and Study Purpose, Background, and Rationale:** Distress, according to the NCCN (National Comprehensive Cancer Network) definition, is a multi-factorial unpleasant experience that can interfere with the individual's ability to cope effectively with cancer and treatment. Studies have demonstrated that distress negatively impacts quality of life in the cancer patient causing poor decision making, non-compliance with planned treatment regimens and unfavorable patient outcomes. A cancer patient requires early assessment and intervention to manage their distress effectively. The NCCN guidelines recommend that distress be recognized, monitored, documented and treated promptly. The NCCN developed an assessment tool, The Distress Thermometer, to ascertain specific information regarding distress. The tool includes a distress scale and thirty six item problem list that address practical, family, social, emotional, spiritual and physical problems. Several studies have identified the distress thermometer as being valid and usable in various groups of cancer patients.

**Methods, Intervention, and Analysis:** We began our distress screening program as a pilot project in Radiation Oncology. The distress thermometer was administered on the first day of treatment, midway through therapy, on RT completion, and thereafter on patient follow up visits. As per NCCN guidelines for distress management anyone scoring a 4 or more was evaluated further. Referrals were made to the APN and Social Worker, based on issues identified in the problem list. In September the program was expanded to include all treatment patients. They were asked to rate their distress on a 0-10 scale and those who were at 4 or greater completed the NCCN thermometer, which was translated into Spanish to meet the needs of our patient population.

**Findings and Interpretation:** 106/225 people reported distress of 4 or more and a total of 243 referrals were made: 106 medical, 106 psychosocial and 31 nutritional. Referrals were based on identified problems. After two weeks the system was streamlined due to the volume of referrals, by raising the intervention level to 6 and the patients were assessed only when they came for physician visits. This has decreased referrals making interventions more timely and manageable by the APN and Social Worker.

**Discussion and Implications:** Distress screening in the Community Cancer Center is a challenge, but with persistence and adaptations it can be managed.

**911, WHAT IS YOUR EMERGENCY? ONCOLOGIC EMERGENCY GUIDELINE DEVELOPMENT IN NOVA SCOTIA, CANADA.** Michele Rogez, RN, BScN, CON(C), AE(D), Cancer Care Nova Scotia, Sydney, Canada, and Kara Henman, RN, MSN, CON(C), Cancer Care Nova Scotia, Halifax, Canada

**Objective:** Participants will be able to examine the process Nova Scotia utilized to formulate new Oncologic Emergency Guidelines. Specifically, participants will inspect the Febrile Neutropenia Guideline.

**Topic Significance and Study Purpose, Background, and Rationale:** In 2011 Cancer Care Nova Scotia identified the lack of

consistent guidelines to support the care of patients experiencing oncologic emergencies. Rather than develop new guidelines, CCNS received permission from Alberta Health Services (AHS) to adapt their guidelines "Oncologic Emergencies: A Guide for Family Physicians, to meet our needs.

**Methods, Intervention, and Analysis:** The AHS guide was sent to stakeholders across Nova Scotia with a survey to give feedback on the relevance, applicability and any adaptations that should be made fit the needs of NS. Another survey was sent to patients in the Cancer Patient Family Network to understand the education provided about oncologic emergencies (OE's) and their experiences with an OE. A working group was formed to tailor the guidelines to the NS practice context, including both the pre-hospital (Emergency Health Services) and Emergency Department setting. A second subgroup was formed to adapt the febrile neutropenia guideline to include the management of low risk patients, an area not addressed in the AHS guide.

**Findings and Interpretation:** The working groups adapted the guidelines and developed algorithms to be used as a quick reference tools. They also standardized a fever card for use across the province; this card was previously only being utilized in one district health authority and had both a medical oncology and hematology version. Now all patients receiving systemic therapy at risk for developing FN will receive this card. It includes instruction to patients and directions for staff on what to do when the patient presents in the ED. The Neutropenia patient education booklet was also updated.

**Discussion and Implications:** The adaptation and development of these resources will ensure patients experiencing an OE will receive the same treatment whether they present in a tertiary care facility or a rural site. The introduction of the fever card across NS will also facilitate the standardization of care for FN.

**ENHANCED RECOVERY AFTER SURGERY IN BLADDER CANCER SURGERY: DEVELOPMENT AND IMPLEMENTATION.** Kerri Dalton, MSN, RN, AOCNS®, Duke Cancer Institute; Anne Federico, MSN, ANP, and Ashley Schneider, RN, both at Duke University Hospital; and Edward Rampersaud, JR, MD, Duke Cancer Institute, all in Durham, NC

**Objective:** To be able to discuss the use of an enhanced recovery protocol after bladder cancer surgery.

**Topic Significance and Study Purpose, Background, and Rationale:** Radical cystectomy with bilateral lymph node dissection is the standard surgical treatment for muscle invasive bladder cancer. Despite advances in surgical techniques, intraoperative and perioperative care, this complex surgery continues to be associated with high morbidity and inpatient length of stay. International guidelines from the Enhanced Recovery After Surgery (ERAS) Society recommend use of their recovery protocol to reduce surgical stress and reduce complications. ERAS is a multimodal perioperative care pathway designed to maintain preoperative organ function and modify physiologic/psychological stress responses following surgery.

**Methods, Intervention, and Analysis:** A urological multidisciplinary team comprised of the Clinical Nurse Specialist, Nurse Practitioner, inpatient nurse, and Surgical Urologist developed and implemented an ERAS protocol for patients undergoing oncologic radical cystectomy with bilateral lymph node dissection (ORCBLND). Variables to be monitored included pre-implementation length of stay (LOS), readmission rates, care costs, and patient satisfaction scores. The team met with appropriate stakeholders and colorectal surgical teams who had successful experiences with protocol implementation. These components can be broken into three phases: (a) Preoperative—developing and enhancing preoperative patient education, (b) Intraopera-

tive—preventing fluid excess by implementing Doppler guided fluid management and techniques to maintain homeostasis, and (c) Postoperative—educating staff on ileus prevention, which includes early ambulation, early oral feeding, tight glucose management, and chewing gum. We used Lippitt's 7 step theory of change for the 3rd phase.

**Findings and Interpretation:** All patients undergoing ORCBLND since January 2014 (n = 29) have been treated using the ERAS protocol. Nine months post-implementation LOS has been reduced by 26% from 14.45 to 10.63 days with a cost savings of 16%. Readmission rates have remained unchanged. While post-operative ileus rates remain stable, there are trends towards earlier resolution. Patient satisfaction surveys indicated improvements in communications from physicians (88 to 100%), from nurses (75 to 100%), and about medications (71 to 100%). Nurses across the continuum of care have engaged with the implementation of this protocol.

**Discussion and Implications:** The implementation of the ERAS protocol for radical cystectomy with lymph node dissection has been successful. This protocol has helped reduce LOS and enhance recovery for these patients. Next steps include ongoing monitoring and ERAS implementation in other surgeries.

**THE BUZZ ON BEDSIDE REPORTING: THE JOURNEY.** Marie Decker, MSN, RN, AOCN®, NE-BC, HN-BC, Jessica O'Driscoll, BSN, RN, Dana McNeil, BSN, RN, Tasha Cinco, RN, Leniece Jones, BSN, HN-BC, BSN, HN-BC, and Alyssa Lamson, BSN, RN, all at Cancer Treatment Centers of America, Philadelphia, PA

**Objective:** To significantly enhance therapeutic relationships with cancer patients by further developing oncology nurses professional practices.

**Topic Significance and Study Purpose, Background, and Rationale:** The traditional method of handoff reporting can be ineffective at the crowded nurses station due to the beehive effect. This loud, escalating hum of voices generated occasional misunderstandings, and difficulty hearing one another, leaving room for potential errors and omission of important information. Because the need for 24 hour care is often provided by multiple disciplines and services, communication among health care personnel is an essential component of safe, effective care. Through a collaborative effort, oncology nurses recognized their unique opportunity to both enhance therapeutic relationships with cancer patients and further develop their professional practice. A rigorous literature review provided education to the staff, and facilitated nurses autonomy to be engaged, pilot bedside reporting, and accept the challenge of this quality improvement initiative.

**Methods, Intervention, and Analysis:** A Plan, Do, Study, Act method was introduced. Pre and post-surveys, scripting, and role playing were used. Guidelines allowed bedside reporting champions to assist their peers and address challenges. A positive culture shift transformed the unit as unseasoned nurses championed the practice change. The nurses identified the need for a new handoff tool. They collaborated to generate an intervention in the Situation Background Assessment Recommendation (SBAR) format to provide the necessary information for report. The SBAR is updated throughout the day to prevent errors, missed information, and capture a synopsis of patient status within a 24 hour window.

**Findings and Interpretation:** From a return rate of 83%, Post-SBAR implementation surveys revealed significant improvements in two dynamic measurements: communication in handoff report increased by 86.2%, and professional practice improved by 75.8%. Patient feedback from qualitative surveys during this month-long pilot indicated that 99% of the patients felt more informed and endorsed full implementation of this practice. Thus, aligning with

Staggers et al.'s (2013) article, "The majority of oncology inpatients would like to participate regularly in nurses' handoffs as long as they are awake and feel well enough to do so."

**Discussion and Implications:** This best practice sparked interest from other nursing units. The plan is to share our success and drive this improvement on both fronts; the implementation of bedside report and The SBAR. It is quite the BUZZ!

**IMPLEMENTING AN ELECTRONIC CHEMOTHERAPY PRE-ADMINISTRATION CHECKLIST.** Veronica V. Campos, BSN, RN, University of Texas Health Science Center, San Antonio, TX

**Objective:** The purpose of this paper is to explore how the implementation of an electronic-based pre-administration checklist will improve patient safety when administering chemotherapy.

**Topic Significance and Study Purpose, Background, and Rationale:** Medication errors are responsible for 40,000 to 98,000 deaths each year in the U.S. Preventing chemotherapy administration errors is crucial, since small errors may result in serious harm or death. According to the Institute for Safe Medication Practices chemotherapy is a high-alert medication that presents more threat to patient safety over potassium chloride and insulin. Administering chemotherapy is a complex process that involves highly potent agents with low therapeutic indexes and narrow safety margins. The healthcare facility currently uses MEDITECH, which allows nurses to use an electronic medication administration that includes bar-coding technology. The main problem on the oncology unit is that MEDITECH does not give nurses the ability to electronically document the pre-administration checklists.

**Methods, Intervention, and Analysis:** A literature review was conducted to investigate and understand the effects on chemotherapy administration errors with the implementation of electronic chemotherapy pre-administration checklists. A SWOT analysis and a system snapshot analysis were completed to assess the current workflow process for administering chemotherapy to create a more effective and improved process. Utilizing the plan-do-study-act model will test the change of the new workflow for administering chemotherapy, while the Gantt will show how long the improvement plan will take.

**Findings and Interpretation:** The lack of evidence regarding the implementation of a specific chemotherapy administration checklist is evident. Although, there is evidence that supports the utilization of a checklist to improve patient outcomes, and the effectiveness of safety alerts in electronic medication administration records. Specific step-by-step instructions and checklist items can help nurses become more aware of safety issues allowing nurses to detect errors, thus improving patient safety. Electronic documentation can prevent paper-related errors such as transcription errors, illegible handwriting, and non-standardize documentation.

**Discussion and Implications:** Completing a safety checklist is one solution to decrease chemotherapy administration errors and increase patient safety. The plan is to replace the current paper-based chemotherapy pre-administration checklist to electronic documents that will include safety alerts and reminders. Components incorporated in the checklist have many strengths to prevent chemotherapy administration errors which include the following: the verification by two nurses (badge scan), dose check, bag/package check, pre-medication/hydration check, bedside check, site verification check, and pump setting check.

**CARING FOR THE PROFESSIONAL CAREGIVER—IMPLEMENTATION OF AN EVIDENCED-BASED PRACTICE FOR LARGE URBAN ACADEMIC NCI COMPREHENSIVE CANCER CENTER.** Wendy Rowehl Miano, MSN, DNP, ACON, Kim Day, LISW-S, OSW-C, ACHP-SW, and Elizabeth

Weinstein, MD, MS, University Hospitals Seidman Cancer Center, Cleveland, OH

**Objective:** University Hospitals Seidman Cancer Center (UH SCC) implemented The Schwartz Center Rounds, to facilitate discussion of the emotional issues that arise when caring for cancer patients and their families.

**Topic Significance and Study Purpose, Background, and Rationale:** University Hospitals Seidman Cancer Center (UH SCC) sought an opportunity to provide an infrastructure to care for the professional caregiver. The Schwartz Center for Compassionate Care mission, promote compassionate healthcare so that patients and their caregivers relate to one another in a way that provides hope to the patient, support to the caregivers, and sustenance to the healing process, resonated with UH SCC's desire to provide care to professional caregivers. Gaining UH SCC senior leadership support and engaging The Schwartz Center Rounds program, The Schwartz Center Rounds were launched in Fall 2013.

**Methods, Intervention, and Analysis:** UH SCC's vision was to develop a forum where health care professionals discuss the social and emotional issues that arise when taking care of cancer patients and their families. The Schwartz Center Rounds became the evidence-based platform to bring to UH SCC a structured support system for the health care team. A multidisciplinary team Steering Committee was formed. Key to the success of UH SCC's Schwartz Center Rounds Committee was senior leadership engagement. A facilitator, through a Cleveland based non-profit organization providing services to cancer patients and their families, was secured. Her background as a psychiatric clinical nurse specialist, positioned her well for managing the complex feelings and vulnerability that would surface.

**Findings and Interpretation:** Eight Schwartz Center Rounds multidisciplinary panel presentations have taken place. Topics have ranged from the care of a dying young person and his family to the patient seeking every last treatment option while the team struggled with non-beneficial treatments. The Steering Committee debriefed after each session, assessing where the audience was in their ability to attend to their feelings. Often, the debriefing has stimulate future themes.

**Discussion and Implications:** The benefit of the Schwartz Center Rounds at UH SCC is evidenced by a strong turn out and positive participant evaluations. The benefit of a facilitated discussion affords several salient points: sharing of best practices in self care; normalizing the difficulty and emotional toll taken in caring for cancer patients and their families; and coaching one another in the value of being present, sharing the human side of health care.

**DECREASING FALL RISK WITH ATTENTION TO CHEMOTHERAPY PRE-MEDICATIONS.** Ashley Mickiewicz, BSN, RN, OCN®, and Nicole Mc Entee, BSN, RN, OCN®, BMTCN, both at Robert Wood Johnson University Hospital, New Brunswick, NJ

**Objective:** The participant will evaluate a project designed to decrease falls for Bone Marrow Transplant unit.

**Topic Significance and Study Purpose, Background, and Rationale:** The Bone Marrow Transplant Unit (BMTU) at Robert Wood Johnson University Hospital (RWJUH) had a fall rate of 6.7 unit falls/1000 patient days in the 3rd Quarter of 2013 and a rate of 2.23 falls with injury/1000 patient days. This was a significant increase for the unit that averaged around 2.3 unit falls/1000 patient days the previous six Quarters. During the 3rd Quarter of 2013 it was noted that several patients received Busulfan with their conditioning regimen for bone marrow transplant. These patients contributed to the falls that Quarter. Busulfan lowers the seizure threshold. Ativan 1-2 mg every six hours was given to prevent seizures.

**Methods, Intervention, and Analysis:** A group consisting of Physicians, Pharmacists and Nurses discussed other medications that would prevent seizures but decrease neurological changes that would increase the risk of falls. Based on literature searches and discussion, the group decided to change the premedication for Busulfan to Levetiracetam. Additionally, the group looked at other regimens. Aggressive lorazepam dosing was used frequently as a premedication. Their discussion led to decreased prescription of lorazepam or changing to an as needed medication. Pharmacy was encouraged to review the orders with fall risk potential in mind and query physicians if premedications can be adjusted.

**Findings and Interpretation:** The 4th Quarter of 2013 the unit had rates of 0.00 falls with injury/1000 patient days and 1.3 falls/1000 patient days. The 1st Quarter of 2014 the unit had rates of 0.00 falls with injury/1000 patient days and 3.46 falls/1000 patient days. The falls in the 1st Quarter of 2014 occurred in the first month and were investigated to reveal that chemotherapy premedications were noncontributory to the fall risk for those individuals.

**Discussion and Implications:** This project led to a decrease in the falls and falls with injury for the bone marrow transplant unit. The fall rate for the other oncology units has also noted a decrease as the premedication choices from the physician and pharmacists are reviewed with regards to the potential risk of falls.

**THE IMPACT OF MODEL OF CARE ON CHEMOTHERAPY INDUCED NAUSEA AND VOMITING.** Deborah Selm-Orr, BSN, MS, DNP, AOCN®, Cancer Treatment Centers of America, Philadelphia, PA

**Objective:** Describe results of a pilot study designed to measure impact of model of care on Chemotherapy Induced Nausea and Vomiting.

**Topic Significance and Study Purpose, Background, and Rationale:** Nausea and vomiting are significant symptoms for cancer patients undergoing chemotherapy. Guideline recommendations are not always followed. Impact of model of care is not described in the literature. The purpose of this pilot study was to describe the interrelationships between patient assessment of care, using the Patient Assessment of Chronic Illness Care (PACIC), and the symptoms of chemotherapy induced nausea and vomiting (CINV) from chemotherapy in patients at a private oncology-based hospital.

**Methods, Intervention, and Analysis:** Established instruments to measure nausea, vomiting, and quality of life were utilized. Incidence of nausea, vomiting, and retching (INVR) measured nausea and vomiting. European Organization for Research and Treatment of Cancer Quality of Life Questionnaire (EORTC QLQ C-30) measured nausea, vomiting, and quality of life (QOL). PACIC measured empowerment. A descriptive pilot study compared differences between patients who were new to the patient empowered care model versus patients who had been treating at Cancer Treatment Centers of America for at least six months. Outcomes measured included nausea, vomiting, quality of life, disease status, emetogenicity of the chemotherapy, and model of care.

**Findings and Interpretation:** The project demonstrated utility of measuring CINV with INVR and EORTC, and patient engagement with PACIC. SPSS statistical package was utilized to interpret findings via Chi-squared, Mann Whiney U, and Kruskal-Wallis. Attribute variables were measured for central tendencies. Significant differences were found in the variables of time since diagnosis and emetogenic potential. There was a wide variation on chemotherapy regimens as well as differences in diagnosis between the control group (n = 28) and the experimental group (n = 70). A non-significant trend towards higher quality of life was evident in men in the intervention

group. Additional tests compared gender against PACIC, INVR, EORTC-nausea, vomiting and quality of life; then testing for age, against the same variables. Model of care approached significance when compared against PACIC (p = .084), and INVR (p = 0.058). EORTC nausea was significant (p = .004). Quality of life was not significant

**Discussion and Implications:** Chemotherapy-induced nausea and vomiting continues to be a major problem with cancer treatment. It is important to consider a multidisciplinary approach utilizing medications, teaching strategies, nutrition, and complementary therapies, in managing these symptoms.

**BEYOND THE FINAL BREATH: NURSING CARE AT THE TIME OF DEATH.** Debra Rodgers, BSN, RN, OCN®, CHPN, and Beth Calmes, MSN, RN, both at Santa Barbara Cottage Hospital, Santa Barbara, CA

**Objective:** Participants will be able to name five benefits identified by family members who experienced a Bathing and Honoring nursing intervention after their loved one died on an in-patient oncology unit.

**Topic Significance and Study Purpose, Background, and Rationale:** Approximately one third of the United States population dies in acute care hospitals. Although nurses are expected to give compassionate care around the time of death, the literature lacks specific evidenced-based interventions for care after death. Oncology nurses conducted a qualitative study to examine family members experience of a Bathing and Honoring Practice as part of nursing care after patient death.

**Methods, Intervention, and Analysis:** Following a patient death, all families on the oncology unit at Santa Barbara Cottage Hospital were offered the opportunity to participate in bathing their loved one and reciting nondenominational honoring words. This was deemed the Bathing and Honoring Practice (The Practice). Of 149 patients who died, 89 (60%) of the family members chose to participate in the Practice. Three months after the patient's death, we interviewed 13 family members by telephone using a semi-structured qualitative interview script. Interviews were recorded, transcribed and verified. Three investigators analyzed the interviews independently and then collectively using conventional and summative qualitative content analysis methods. We coded emergent themes and grouped them into categories of superordinate themes, ranking them by number of times mentioned and number of interviews in which they occurred.

**Findings and Interpretation:** Eleven superordinate themes emerged from the data. The top five themes were: (a) positive experience, (b) supported grief process, (c) meaningful experience, (d) honored loved one, and (e) ritually and spiritually significant. A Bathing and Honoring Practice was found to be a beneficial intervention for families after a patient dies in an acute care setting. The Practice is a "caring moment, caring occasion" as defined by Jean Watson in her Nursing Theory of Caring and meets criteria in Domain 7 of the National Consensus Guidelines for Palliative Care.

**Discussion and Implications:** This study lends insight into a nursing intervention after patient death that provides a final positive experience for family members and allows them to begin the grieving process. Further research could be done to investigate effectiveness of this nursing intervention across a variety of care settings.

**A COMPARISON OF STRATEGIES FOR INJECTION TEACHING IN PATIENTS AND THEIR CAREGIVERS.** Erica Fischer-Carlidge, MSN, RN, CNS, CBCN®, AOCNS®, Chasity Walters, PhD, RN, and Nancy Houlihan, MA, RN, AOCN®, all at Memorial Sloan Kettering Cancer Center, New York, NY



**Objective:** Identify the impact of different teaching modalities on patient/caregiver satisfaction and confidence in administering home injections by analyzing data from a nurse-led clinical trial comparing two teaching methodologies.

**Topic Significance and Study Purpose, Background, and Rationale:** Teaching patients/caregivers self-injection results in increased self-efficacy, feelings of independence, adherence, and empowerment. Self-injection is shown to be more convenient with time and cost-saving depending on distance, time, and cost involved with traveling to the healthcare setting. Nurses use a variety of modalities when teaching self-injection; however there is a paucity of evidence to suggest which methods result in more prepared and confident patients. The aim of this study is to compare verbal and written teaching (control) to verbal and written teaching plus simulation using an injection model (intervention) in self-injection naïve participants. Study objectives included comparison of patient/caregiver satisfaction and self-confidence before and after teaching, changes in participant-reported worry about injection, and nurse satisfaction.

**Methods, Intervention, and Analysis:** An IRB-approved prospective, quasi-experimental study is sampling 50 patients/caregivers scheduled to self-inject pegfilgrastim after chemotherapy. To aid with intervention fidelity, a sequential design was used; enrolling the first 25 participants to the control group and the second 25 to the intervention. To date 46 participants have completed the study. Structured questionnaires were administered to participants at three time points: before the teaching, immediately after the teaching, and after the injection was performed at home. Descriptive statistics using chi-square, Mann-Whitney U tests and Wilcoxon Rank Sum Test will be used for data analysis.

**Findings and Interpretation:** Preliminary data examination suggests no statistically significant difference between control and intervention groups in worry or confidence after teaching; however participant satisfaction with the teaching experience appears significantly higher in the intervention arm. After administering the injection, participant satisfaction with how the teaching prepared them decreased when compared to post-teaching levels, implying that neither methodology was viewed as enough preparation for administration in both arms. Data collection and analysis is ongoing.

**Discussion and Implications:** These findings contribute to the literature related to use of simulation during patient/caregiver education. Presentation will include final data analysis and interpretation for all study objectives, demographics, and research findings comparing patient and caregiver participant results. Although results are preliminary, data suggests that both education methodologies are equivalent preparation for prefilled self-injections such as pegfilgrastim and that simulation is not useful in assuaging worry or improving confidence in lay persons administering injections.

**Underwriting or Funding Source Name:** Research grant received from The Geri & Me Fund.

**ADDRESSING THE EDUCATIONAL NEEDS OF CANCER SURVIVORS TO MAINTAIN THEIR HEALTH AND WELL-BEING.** Guadalupe Palos, DrPH, LMSW, RN, Fran Zands-tra, MBA, RN, OCN®, Jacklyn Flores, BS, Katherine Gilmore, MPH, Patricia Chapman, BA, and Alma Rodriguez, MD, all at University of Texas MD Anderson Cancer Center, Houston, TX

**Objective:** To assess the educational and information needs of adult cancer survivors who have returned to live in their communities

**Topic Significance and Study Purpose, Background, and Rationale:** The "Red Flags in Caring for Cancer Survivors" report prepared by the Oncology Nursing Society addresses the critical need for survivors to manage their own health and wellness. However, it is challenging to provide educational programs and

clinical services based on a survivor's preferences, diagnosis, and phase of their cancer experience. Our aim was to determine the educational and information needs of adult cancer survivors who were living in their own communities.

**Methods, Intervention, and Analysis:** We surveyed a convenience sample of adult survivors attending a community-based survivorship conference. Data were collected from participants once verbal consent was obtained. Questions focused on (a) preferences related to follow-up care, (b) information and educational needs, and (c) preferences for receiving health information. Simple descriptives were used to summarize and report the results. Our institutional Quality Improvement Assessment Board approved this project.

**Findings and Interpretation:** We distributed 284 questionnaires and 169 returned, yielding a 59.5% response rate. Respondents were predominantly female (79.9%), married (58.6%) and college educated (81.7%). Over half were diagnosed with breast cancer (51.3%) and over three-quarters reported good to excellent health (81.8%). Survivors requested additional information for; improving memory or concentration (83.9%), improving energy and exercise (83.3%), and benefits of a personalized survivorship care plan (74.6%). The majority of survivors reported "no" they did not want information on smoking cessation (88.5%) and alcohol (87.5%). 64% cited the most important reason for follow-up care was to check for recurrence of the original cancer and almost half (46.0%) reported not receiving a summary care plan when completing their cancer treatment. Primary sources for health information included from their health care provider and the internet.

**Discussion and Implications:** These community-based survivors sought additional information on ways to self-manage physical symptoms and patient-provider communication on the benefits of survivorship care plans. This cohort of survivors were unique in terms of their high education level and predominance of females diagnosed with breast cancer, hence these results may not be generalizable to all cancer survivors. Nurses are in ideal positions to offer clinical care, counseling recommendations, and educational programs that promote healthy lifestyles and wellness across the survivorship continuum.

**Underwriting or Funding Source Name:** The Holiday Letter Grant Program from the University of Texas MD Anderson Cancer Center

**DISCHARGED; BUT NOT DISCONNECTED.** Jean Smith, RN OCN®, Ginny Martin, RN, MSN, AOCN®, and Susan Weiss Behrend, RN, MSN, AOCN®, all at Fox Chase Cancer Center, Philadelphia, PA

**Objective:** The unique role of the oncology triage nurse, facilitating the Transitional Care Clinic in an ambulatory oncology department of a NCI designated comprehensive cancer center.

**Topic Significance and Study Purpose, Background, and Rationale:** A Transitional Care Clinic (TCC) was initiated at Fox Chase Cancer Center in 2013, following the publication by the Department of Health and Human Services on Transitional Care Management Services. Our facility utilizes physician hospitalists for the management of patients in the acute setting. The goal of TCC is to prevent readmission once a patient is discharged within a 30 day period status post discharge from the hospital. As the ambulatory oncology triage nurse, I am responsible for initiating contact with the patient and/or caregiver, with a telephone call( telephonic visit) within 48 hours of discharge. During this interview, I compare the discharge summary and medication reconciliation form with the telephone assessed discharge status, which I complete by collaborating with both the hospitalist, and medical oncologist.

**Methods, Intervention, and Analysis:** TCC was added to our clinic schedule, including both a transitional telephonic visit and the on-site visit within two weeks of discharge. The initial

call documents subjective patient responses to specific questions regarding health status, medication review and teaching, as well as instructions for follow-up appointments. The visit can then be moved up if needed, based on the findings stated by the patient. Sometimes labs, IV hydration, or other interventions are needed, that can be done in the out-patient setting, thus thwarting re-admission. The nurse performs the initial on site TCC visit assessment, followed by the hospitalist who cared for the patient during the hospitalization. Documentation of TCC visit note is finalized by the hospitalist and sent to the Primary Care Physician, along with the medication reconciliation and discharge summary.

**Findings and Interpretation:** Currently FCCC is collecting outcomes data for TCC compliance, rate of re-admissions and overall patient satisfaction.

**Discussion and Implications:** The role of the oncology triage nurse as a pivotal conduit with acute care hospitalist and medical oncology has the potential to provide improved patient outcomes along the continuum of care. In addition, the focus on post-discharge recovery paradigms are prioritized and tracked.

**TOUCHY SUBJECTS: ADDRESSING INTIMACY, SEXUALITY, AND FERTILITY ISSUES IN AN OUTPATIENT ONCOLOGY SETTING.** Leslie Vietmeier, RN, BSN, MN, APRN, FNP-BC, Seattle Cancer Care Alliance, Fred Hutchinson Cancer Research Center, Seattle, WA

**Objective:** State five activities used by this nurse-led, multidisciplinary workgroup to increase the availability of intimacy and sexuality resources for oncology patients and providers in a major outpatient cancer center.

**Topic Significance and Study Purpose, Background, and Rationale:** Sexuality, intimacy, and fertility preservation are essential components of oncology patient health, yet these topics are significantly under-addressed. In 2012, we formed a nursing-led interdisciplinary workgroup to research and address patients needs around sexuality related care within the Seattle Cancer Care Alliance (SCCA). The resulting Workgroup on Intimacy, Sexuality, and Cancer (WISC) includes nurses, nurse practitioners, social workers, clinical psychologists, patient educators, and others. Together, we have greatly improved education and access to resources for both patients and providers.

**Methods, Intervention, and Analysis:** Based on initial needs assessment survey of SCCA patients and providers (data available), WISC implemented multiple interventions to increase awareness of sexuality-related issues. Both patients and providers emphasized a lack of resources as a primary barrier. WISC has spearheaded production of education materials for both patients and providers on fertility preservation and sexuality topics; produced informational videos now available on SCCA's patient education website; conducted engaging classes on body image, communication, sexual function, and intimacy products; organized an expert panel presentation on fertility preservation; and added books on sexuality topics to the SCCA resource library. WISC has also presented their needs assessment results and updated resources to department heads of each oncology service and to nursing leadership within SCCA.

**Findings and Interpretation:** There has been an immensely positive response to WISC's efforts so far. The new patient resource webpages have received hundreds of views, handouts continually need to be restocked, and SCCA has ordered additional copies of books provided in the library due to high checkout rates. In addition, clinical teams often request WISC members to attend their team meetings, and there has been a strongly positive response (data available) from both patients and providers.

**Discussion and Implications:** WISC is moving forward with additional goals. We are actively assisting in policy development and implementation around American Society of Clinical

Oncology (ASCO) Fertility Preservation Guidelines, and two University of Washington Doctoral nursing students will be working with WISC to provide and study the effects of sexuality education with SCCA providers. As our work continues, we hope to provide an achievable model for addressing intimacy, sexuality, and fertility that other cancer centers can follow.

**TWINNING ONCOLOGY NURSING PRACTICE: BUILDING AN INTERNATIONAL COLLABORATIVE RELATIONSHIP FROM PITTSBURGH TO KAZAKHSTAN.** Lydia Wall, DNP, RN, Cheryl Steele, RN, MSN, MPM, AOCN®, Margaret Pevarnik, RN, MSN, OCN®, and Mary Kate Egan, RN, MSN, OCN®, all at UPMC CancerCenter, Pittsburgh, PA

**Objective:** The participant will be able to explain the importance of creating collaborative relationships to enhance safe nursing practice on an international level.

**Topic Significance and Study Purpose, Background, and Rationale:** According to the World Health Organization, cancer is one of the leading causes of death in the world, yet significant disparities in diagnosis, treatment, and survival remain between high-income countries and low-income countries. Fortunately, Vosit-Steller & colleagues emphasize that "establishing collaborative nursing education and practice programs ultimately improves clinical experiences and patient care." In 2013, the University of Pittsburgh Medical Center (UPMC) partnered with Nazarbayev University of Kazakhstan to develop a National Cancer Research Center in the capital city of Astana. The partnership also aims to provide oncology education to the nurses who will work in the new facility. Currently, Kazakhstan nurses do not receive specialized oncology training; hands-on skills and nursing care are taught on the unit in which they will work. Based on assessments of current Kazakhstan nursing practice, key areas for education were identified. Nursing education was developed to address these areas by twinning UPMC's current oncology education and orientation program. Twinning is "cooperation between centers in developed countries and low-income countries, whereby knowledge and organizational skills are shared."

**Methods, Intervention, and Analysis:** Prior to coming to Pittsburgh, 20 Kazakhstan nurses completed a foundational knowledge assessment. Oncology education included a 5-day course addressing nursing assessment and care of patients with solid tumors, hematological malignancies, oncology emergencies, and stem cell transplants. An additional 4 day course addressed chemotherapy and biological therapies, safe handling and administration of chemotherapy, and management of adverse effects and toxicities. The Kazakhstan nurses were also placed on inpatient and outpatient units for clinical observation. At the end of the course, the Kazakhstan nurses were given a post-course knowledge assessment.

**Findings and Interpretation:** Post-course knowledge assessments demonstrated an increase in learning. Class discussions demonstrated effective critical thinking abilities and a high level of clinical reasoning. International twinning provides a great opportunity for education, which helps advance quality of care.

**Discussion and Implications:** This collaborative relationship could result in a positive impact on patient care; patient, nurse, and staff safety; safe administration of chemotherapy; and job satisfaction. It is hoped that it will also facilitate interdisciplinary communication and relationships. The twinning practice can certainly be applied to any aspect of nursing.

**DOES THE USE OF THE PROVIDER RESILIENCE APP INCREASE NURSES PROFESSIONAL QOL?** Patricia Jakel, RN, MN, AOCN®, Jillian Kenney, RN, BSN, OCN®, Natalia Luden, RN, BSN, OCN®, and Stefanie Carson, RN, BSN, all at UCLA Healthcare System, Los Angeles, CA

**Objective:** The attendee will describe the use of the Provider Resilience app by oncology nurses and the impact on the nurse's professional QOL.

**Topic Significance and Study Purpose, Background, and Rationale:** Oncology nurses have increased exposure to the prolonged illness, tragedy, loss, and premature death experienced by patients and families. As a result, oncology nurses are at higher risk of developing compassion fatigue, defined as the secondary traumatic stress on helpers through their efforts at helping others, as a relational source of stress that weighs heavily on oncology nurses. Over time, unaddressed compassion fatigue can lead to decreased job satisfaction and productivity, as well as increased sick time use and job turnover. While compassion fatigue has been identified in, and defined for the nursing community, few interventions have been developed that can reach all nurses on a given unit. The researchers in this study are educating oncology nurses on the definition and prevalence of compassion fatigue, as well as to assist them in utilizing the Provider Resilience Mobile App as a means of developing skills to combat fatigue and increase professional quality of life. Potter et al. (2010) define compassion fatigue as "the traumatization of helpers through their effort at helping others," and as "a relational source of stress that also weighs heavily on oncology nurses." Several other definitions exist, and it appears that the nursing community has yet to reach a formal definition (Boyle, 2011). However, other definitions of CF share common descriptions of psychic exhaustion and emotional distress resulting from close contact with suffering patients and families. Nurses internalization of this suffering, combined with the inability to alleviate it completely, contribute to nurses feelings of professional futility or self-blame. If these scenarios repeat over time without alleviation or attention, the nurse begins to experience emotional detachment from patients and apathy toward patient and family; physical symptoms of GI distress, sleep problems and headaches can also occur. At the most extreme end of the spectrum, changes in job or career can occur. CF needs to be addressed early for nurses to learn self-care, to increase nurse AND patient satisfaction, to increase professional quality of life and to reduce job turnover in the nursing profession. The team consisted of 2 nurse scientists, 1 oncology CNS and 3 oncology staff nurses.

**Methods, Intervention, and Analysis:** Our purpose was to raise awareness among our staff about compassion fatigue, and to provide access to the Provider Resilience Mobile Application as a means of reducing compassion fatigue and increasing professional quality of life. We raised awareness through an educational inservice that was provided to all staff. We provided an accessible and convenient intervention to the staff via the Provider Resilience Mobile Application, which has been developed by the Department of Defense to aid in alleviating compassion fatigue among the social workers, nurses and physicians who treat military service members. We invited the staff to download and utilize the app. We wished to evaluate whether the use of this app by oncology nurses, in addition to the traditional educational inservice, results in decreased symptoms of compassion fatigue and increased professional quality of life. Research question Does the addition of the provider resilience app, to traditional education on compassion fatigue to oncology nurses, result in increased professional quality of life? Sample: Staff Registered Nurses on Solid Tumor Oncology Unit Design: This is a prospective study using a convenience sample of oncology staff RNs Data collection procedure: Participants will use an email address connected to their app when the app is downloaded; participants will have the option of creating an anonymous email address if that is preferred. The researchers will identify participants via the email address and name, then keep Master sheet of names in a locked area accessible only by peer RN researchers. Researchers will track app use via software provided to us by the app designers. App usage data will then be compared to pre/post Professional Quality of Life scales. All

identifying data will be destroyed at the end of the study via shredder OR unit-based confidential paper collection bin. The Provider Resilience app was used with permission from the VA Healthcare system where it is used by healthcare providers caring for veterans with PTSD. The VA has established the app's reliability and validity with non-nurses. This is a first in nursing study with the guidance of the VA staff that created the app.

**Findings and Interpretation:** Data analysis by the nurse scientists will be completed within the next month. The sample size is 20 nurses in the research arm and 15 in the control arm. This is a pilot study.

**Discussion and Implications:** Awaiting final data analysis.

**WEEKLY PAIN ROUNDS IMPROVE ONCOLOGY PATIENT'S PAIN MANAGEMENT.** Rachael Johnson, RN BSN MHA OCN®, Mercy Medical Center, Des Moines, IA

**Objective:** Participants will examine information about a successful process used by a 32-bed acute care oncology unit which positively impacted patient satisfaction with pain management.

**Topic Significance and Study Purpose, Background, and Rationale:** Educating nurses in pain management has shown limited long-term success impacting patient care. Shifting to a proactive team approach is needed for improved, individualized pain management. Unmanaged pain continues to be a healthcare challenge. Previous pain management strategies include certified pain clinicians, implementing pain champions, establishing a pain task force and development of a pain algorithm. To optimize oncology patients satisfaction with pain control, we utilize a strong evidence-based Careful Nursing approach. Adding Pharmacy to the multidisciplinary team enhances pain management strategy recommendations to physicians.

**Methods, Intervention, and Analysis:** The organization's Evidence-Based Practice and Research Model guided methodology. Interventions were implemented over an eight month period. Patients are identified during discharge rounds on Wednesdays. The Oncology Pharmacy Specialist and other clinicians complete rounding tool. Pain Clinicians, Unit Director, Oncology Pharmacy Specialist, and available students complete pain rounds every Thursday. All patients and families are asked scripted questions regarding patient satisfaction during rounds. Patients white boards are also updated with time for next pain medication, and all analgesics are reviewed. An event note is placed in the patient's chart, detailing pain round discussions. Additional follow-up completed by pain clinicians continues throughout hospital stay. If event notes suggest improvement to help patient's pain control, staff nurses follow-up with physicians. Patient/family education emphasizes pharmacological and non-pharmacological pain management. Rounds are completed on additional random patients, assessing pain and satisfaction with care while on 8 South. Pain scores and patient satisfaction scores are analyzed monthly.

**Findings and Interpretation:** Rounds, supported by literature, improve nursing staff knowledge and patient satisfaction. Rounds promote multidisciplinary teamwork with nursing, pharmacy, physicians, patients and families. Data demonstrates pain management patient satisfaction consistently hovering around the 90th percentile in Healthstream's HCAHPS database.

**Discussion and Implications:** Enhanced pain management demonstrates increased patient satisfaction. Pain clinician's role as educator regarding pain management is key in the rounding process. Timely conversion from IV to PO pain medications improves patient outcomes. Implementing evidence-based pain rounds is the foundation for improving patient satisfaction with pain management. Rounds increase bedside nurse awareness for pain management collaboration. Improved nurse, physician and pharmacy relationships promote team collaboration regarding patient's plan of care.

**LESSONS LEARNED FROM A COMMUNITY-BASED, NURSE-LED CLINICAL CANCER TRIAL.** Jill Benedeck, RN, BSN, OCN®, Centegra Health System, McHenry, IL, and Laura Beamer, PhD(c), DNP, AOCNP®, AOCNS®, Northern Illinois University, DeKalb, IL

**Objective:** Participants will be able to identify methods to surmount common obstacles encountered when conducting research in community cancer programs.

**Topic Significance and Study Purpose, Background, and Rationale:** Most cancer patients receive their care in community cancer programs (National Cancer Institute, 2012). All US cancer patients are encouraged to participate in cancer research (Institute of Medicine, 2010). However, many oncology nurses in community cancer programs received little training and have minimal experience in designing and executing nurse-led cancer research. Payne and Berry (2010) suggest attitudes toward research change with increased knowledge and support. Additionally, as the number of health care systems achieving Magnet recognition increase, the number of oncology nurses conducting small studies will multiply. The purpose of this presentation is to share our experiences with other nurses so they can learn from our opportunities.

**Methods, Intervention, and Analysis:** The lessons were gleaned from a random assignment, open-label, non-inferiority trial of Manuka honey dressings compared to silver sulfadiazine for the management of moist desquamation among female breast cancer patients receiving external beam radiotherapy. This study remains to open to accrual. Participants apply either Manuka honey dressings or silver sulfadiazine twice a day to moist radiation-induced wounds. The study outcomes include: time to healing, participant-reported pain level, and infection rate. The CTCAE v4.03 is used to measure radiation-induced skin toxicity. The inter-rater reliability of the nurse raters was 80% after training at the start of the study and again after the tenth participant was accrued. Field notes are documented as surmountable obstacles appear.

**Findings and Interpretation:** The main portion of the study is ongoing. Obstacles discovered to date include: slow study accrual, larger than expected allergy to sulfa medication which is an exclusion criterion for the study, a trend toward patients receiving internal radiotherapy (i.e., brachytherapy), an unexpected change in radiation oncologists and practices, and a decrease in patient census. All of these factors contributed to inequality of accrual to each study arm. This inequality will resolve as more participants are accrued.

**Discussion and Implications:** The results of our study suggest a need to: plan for a longer recruitment period, use a randomization plan that assigns participants by groups of 10, and consider adding a third arm for candidates that do not meet a specific eligibility criterion (e.g., no sulfa allergy).

**AN INTERPROFESSIONAL MODEL FOR THE FOLLOW-UP OF PATIENTS RECEIVING ORAL ANTI-CANCER THERAPIES.** Eirena Calabrese, RN, BScN, MN, Lauran Adams, RN, BScN, Sarah Nestico, RN, BScN, Angie Giotis, BSc Phm, Urban Emmenegger, MD, and Scott Berry, MD, MHSc, FRCPC, all at Sunnybrook Health Sciences Centre, Toronto, Canada

**Objective:** You will be able to describe an interprofessional model for the follow-up of patients on oral anti-cancer agents and describe essential steps in developing, implementing, and evaluating the model.

**Topic Significance and Study Purpose, Background, and Rationale:** Oral anti-cancer agents are a growing treatment option for patients. Follow-up of these patients has historically been challenging, as patients are not required to be seen as frequently in the cancer centre. Further, adherence to oral medication is a

challenge. An interprofessional group within the urology site at a large cancer centre in Toronto, Ontario developed and implemented a follow-up model for patients who were prescribed Abiraterone to improve adherence, education, and toxicity management.

**Methods, Intervention, and Analysis:** Patients are given instructions to pick up their medication, via telephone, by a nurse. When pharmacy dispenses the medication, education is again provided. A follow-up phone call is made to patients by the pharmacist within 72 hours of starting the medication. This phone call assesses adherence and compliance, understanding of the medication, and any early toxicities. The patient is then informed to return to the clinic in two weeks to have bloodwork and to be seen by the nurse. A thorough assessment is then done by the nurse, including toxicity assessment and interventions, and adherence. If there are any concerns, the nurse can provide telephone follow-up or contact the physician. This quality improvement pilot will be evaluated using retrospective and prospective chart audits to assess the impact on adherence and toxicity management. Calls made to the nursing or pharmacy line will be evaluated, as well as dictated notes from the physicians, from the time the drug was dispensed, until the 4 week follow-up visit with the physician. Patient and clinician surveys will be administered to evaluate overall satisfaction.

**Findings and Interpretation:** On-going evaluation of the pilot continues, however early data suggests that patients are extremely satisfied with the follow-up model, and feel they are confident in their understanding's of the drug, how to take it, and toxicity reporting and management. Most recent data will be presented.

**Discussion and Implications:** This interprofessional follow-up model could be utilized across cancer centers for various oral anti-cancer agents. This model utilizes the expertise of different members of the interprofessional team, promotes the optimization of scope of practice, and allows the interprofessional team to provide safe, excellent care for patients.

**ETHICS THEATER: A STAGE FOR A NURSE-LED ETHICS PROGRAM.** Andria Caton, RN, OCN®, CHPN, Northeast Georgia Medical Center, Gainesville, GA

**Objective:** Summarize the role of ethics education in improving nursing and patient outcomes.

**Topic Significance and Study Purpose, Background, and Rationale:** Maintaining the integrity of the nursing profession requires attention to and the evaluation of the unique ethical situations encountered by nurses each day. Advanced medical technology, societal and cultural changes, and healthcare delivery challenges, often increase the frequency in which nurses experience ethical dilemmas in clinical practice. To help support and mentor nurses dealing with growing ethical challenges, educational approaches featuring practical experiences, personal reflection, and peer support have been shown to be effective in increasing the moral reasoning abilities of nurses. Oncology nurses have long been seen as agents of change, patient advocates, and are well positioned to promote practical ethics education. Nurse led ethics education models can help bridge ethics theory and principles to everyday clinical practice. The Ethics Theater promotes a way to connect ethics theory to every day clinical practice.

**Methods, Intervention, and Analysis:** A learning needs assessment of hospital-based nurses was conducted through an online survey to clarify the gap in ethics knowledge presumed by nursing leadership. The survey consisted of four questions consisting of a self-assessment of level of ethics knowledge, ethical topics, time availability, and preferred learning formats. An interdisciplinary group reviewed the survey results, identified needs, gaps in knowledge, and worked to formulate an educational plan. A format of ethics education was developed

featuring ethical video vignettes followed by a peer discussion to reflect on ethical situations experienced in practice, focus on the ethical issues, critically analyze the situations, talk over other possible courses of action, and review resources. The programs or Ethics Theaters are held every month, and to discuss more urgent ethical issues, ethical huddles are held bi-weekly. Overall attendance, with a focus on interdisciplinary attendance, is tracked and recorded.

**Findings and Interpretation:** As seen in current literature, the nurses desire knowledge and skills to act ethically. Furthermore, nurses desire the ability to discuss ethical issues in a safe and non-judgmental environment. Nurses participating in Ethics Theater and huddles report difficulty discussing ethical concerns with other healthcare team members and the ability access ethics resources.

**Discussion and Implications:** Bridging ethics theory to daily clinical practice has great implications for reducing moral distress, burnout, and turnover rates. Increased interdisciplinary collaborations, appreciation of peers and other team member roles, and different perspectives in patient care issues lead to improved patient outcomes.

### IMPROVING THE DISCHARGE PROCESS THROUGH COLLABORATIVE TEAMWORK FOR INPATIENT CANCER PATIENTS.

Belinda Frazee, RN, MSN, OCN®, Patricia Booth, RN, BSN, and Matthew Brennan, MD, Penn State Hershey Medical Center, Hershey, PA

**Objective:** To improve the discharge process and communication by forming a collaborative, multidisciplinary committee to focus on discharging patients prior to noon and increasing patient satisfaction.

**Topic Significance and Study Purpose, Background, and Rationale:** The discharge process is an important part of any hospital stay. Speed of that process is a publicly reported measure of patient satisfaction. On our Cancer Inpatient Unit, patient discharge frequently occurred in late afternoon/early evening hours despite a daily discharge rounding team meeting. Late discharges caused disruption in patient flow by delaying scheduled chemotherapy and/or emergency admission of cancer patients. Delays caused significant dissatisfaction for patients being discharged, as well as for patients awaiting admission for therapy.

**Methods, Intervention, and Analysis:** A committee was formed to improve collaboration surrounding the discharge process, examine reasons for late discharges, increase physician ownership of the discharge process, and improve patient satisfaction with this process. The multidisciplinary committee structure included care coordination staff, outpatient nurse coordinators, inpatient and outpatient nurse leaders, social workers, outpatient medical office assistants, physicians, and pharmacists. The group met every 2 weeks to focus on improving processes and communication for efficient, timely patient discharge. Ideas from the outpatient area such as scheduling needs, medication prior authorization, and accurate discharge instructions were discussed for impact on discharge planning. A goal was established to increase the number of discharges occurring before noon. Baseline data on discharge time prior to initiation of the multidisciplinary group was obtained. Weekly data collection continued and was reviewed throughout the time period the group met to discuss implementation of new ideas and processes.

**Findings and Interpretation:** Over the three week baseline data collection period, 25% of discharge orders were written prior to noon. 5% of actual discharges occurred prior to noon; 30% occurred prior to 3:00pm. After implementation of the discharge committee, 50% of discharge orders were written prior to noon. 7% of actual discharges occurred prior to noon; 50% prior to 3:00pm.

**Discussion and Implications:** Implementation of new ideas and processes generated by the multidisciplinary committee re-

sulted in a 2% increase in actual discharges prior to noon and a 20% increase in actual discharges prior to 3:00pm. Written discharge orders before noon increased by 25%. Review of data demonstrated that a need for transportation home delayed time from discharge order to actual discharge in half the cases.

### LINKING RIGHT-ON-TIME NURSE NAVIGATION & SURVIVORSHIP THROUGH CLOUD BASED TECHNOLOGY.

Elizabeth Jernigan, RN, MSN, OCN®, and Deborah Olsen, RN, MPH, OCN®, both at Central Florida Health Alliance, The Villages, FL

**Objective:** Participants will utilize current software technology to navigate patients through their treatment and survivorship. Cloud based technology allows frequent interaction and right on time symptom monitoring to the care team.

**Topic Significance and Study Purpose, Background, and Rationale:** This abstract describes the development of a combined navigation/survivorship program. Per COC, by 2015, all patients receiving cancer care must receive a survivorship plan at the completion of treatment. Our Cancer Committee defined survivorship as starting at diagnosis and continuing through survivorship. Current literature focuses on the review of software for either a navigation or survivorship program but not one that is combined.

**Methods, Intervention, and Analysis:** In order to insure participation it was important to increase patient engagement and self efficacy. Patients are invited to participate in the program at time of initial appointment. They complete a brief assessment including the NCCN distress tool. This information along with data from the medical record assists the nurse in initiating an individual care plan. The care plan is readily accessible to the entire team. The patient is also informed on how to best prepare for their first visit. At any time during their treatment experience the patient can report symptoms. The care team receives alerts of patient events. Patients are invited to provide feedback at various points. A treatment calendar allows for coordination and appointment notification reminders via e mail or text. At completion of treatment the navigator meets with the patient and reviews the survivorship plan. The patient is encouraged to continue to utilize the software to manage appointments and interact with their health care team. The software provides a vital and dynamic link for the patient

**Findings and Interpretation:** A patient focus group confirmed interest in an easy-to-use, accessible system. A pilot project, that is currently underway, will further define strengths and weakness of the program.

**Discussion and Implications:** Navigation involves over site of many patients through all phases of their care. Navigators need a succinct way to review numerous patient records, to contact patients receiving treatment and follow up. Patients are utilizing social media for their health care needs. Our belief is that nursing practice will be enhanced through incorporating technological advances with the basics of nursing care.

**NEUTROPENIC FAST PASS.** Jenna Campbell, MSN, RN, OCN®, Novant Health Forsyth Medical Center, Winston-Salem, NC

**Objective:** Discuss how the Neutropenic Fast Pass can be used to decrease a febrile neutropenic patient's risk for infection.

**Topic Significance and Study Purpose, Background, and Rationale:** Neutropenia is a common side effect of myelosuppressive chemotherapy, which places the patient at an increased risk for infection, sepsis and septic shock. Patients who develop a neutropenic fever outside of normal office hours are instructed to present to the emergency department (ED). Evaluation of the patient in the ED can take hours, putting the patient at an increased risk for complications. Lynn, Chen, Weng, & Chiu

(2013) found that febrile neutropenic patients who presented to the emergency department and did not receive antibiotics in a timely manner were more likely to experience serious complications. This authors' inpatient oncology unit saw an opportunity for improvement in getting patients who present to the emergency department with a neutropenic fever to the unit in a timely manner.

**Methods, Intervention, and Analysis:** The Neutropenic Fast Pass is a card that allows patients an expedited triage through the ED. The card alerts ED staff and providers that the patient may appear fine, but should be triaged as a high risk patient. The card clearly defines what medications the patient is currently taking, including chemotherapy and growth factors, as well as what type of vascular access device is in place. The providers are instructed to activate the Sepsis/Febrile Neutropenia Order-set as appropriate, which allows the patient to receive timely labs and treatment. Patients who present with the card are expedited to the inpatient oncology unit to minimize their exposure in the ED.

**Findings and Interpretation:** Although this is not a research study, this author has encountered times when the neutropenic fast pass was not honored by emergency department physicians, which resulted in a delay of care. Currently, this author is working with the Clinical Nurse Educator in the emergency department to re-educate the physicians.

**Discussion and Implications:** The Neutropenic Fast Pass serves as a reminder to both patients and providers the potential dangers of febrile neutropenia. This author's unit is planning to build upon this project by developing a neutropenic kit (lab supplies & antibiotics) to help ensure these patients do not experience any delay in treatment.

**DECREASING ADVERSE EFFECTS OF IMMUNOSUPPRESSION THERAPY IN PATIENTS WITH ACUTE GRAFT-VERSUS-HOST DISEASE BY STANDARDIZING PRACTICE: A QUALITY IMPROVEMENT PROJECT.** Karley Trautman, DNP, RN, ANP-BC, University of Colorado, Aurora, CO

**Objective:** Decrease the adverse effects of immunosuppressive therapy specifically related to hyperglycemia and infection in adults that have undergone allogeneic stem cell transplantation by standardizing assessment and treatment of graft-versus-host-disease.

**Topic Significance and Study Purpose, Background, and Rationale:** Graft-versus-host disease (GVHD) is a major complication of allogeneic stem cell transplant effecting 35-50% of patients post-transplant. Treatment consists of immunosuppressive therapies placing the patient at risk for complications including hyperglycemia and infection. Evidence-based practice (EBP) guidelines exist to reduce these complications. The doctoral prepared advance practice nurse served as the quality improvement leader and effectively changed practice improving patient outcomes.

**Methods, Intervention, and Analysis:** The sample included adult patients (age >18) that have undergone allogeneic stem cell transplantation at an academic medical center in Aurora, CO. The provider sample included four attending physicians and eight nurse practitioners. EBP guidelines were used to develop a clinical practice guideline, which standardized a GVHD grading scale, steroid taper and proper prophylactic antibiotic use. Data was collected for 12 months before and after guideline implementation. Statistical analysis was performed using SPSS-20 and 2x2 Fisher's Exact Test and Independent T-tests were run depending on the outcome measured.

**Findings and Interpretation:** A review of 607 individual clinic visits reviewed revealed the rate of hyperglycemia decreased from 25.7% to 14.7% ( $z = 1.7$ ,  $OR = 2.01$ , 95% CI [0.60, 6.77]  $p = 0.202$ ); infection rates decreased 20.0% to 17.6% ( $z < 0.01$ ,  $OR =$

1.17, 95% CI [0.35,3.91],  $p = 0.52$ ); provider documentation of GVHD grading increased from 8% to 39% ( $z = 6$ ,  $OR = 0.13$ , 95% CI [0.08, 0.21],  $p < 0.0001$ ); and steroid taper initiation improved from a median of 14 days to 7 days ( $t(50) = 2.82$ , 95% CI [1.64, 9.80],  $p = 0.007$ ).

**Discussion and Implications:** Education and standardization of practice for GVHD improved adherence to EBP guidelines and lead to prevention of treatment related hyperglycemia and infections. EBP guidelines aid providers in making sound clinical decisions in the management of patients with GVHD. QIP have a vital role in effective translation of EBP in practice.

**A QUALITATIVE STUDY EXPLORING WHAT BDSIDE NURSES NEED TO FACILITATE ADVANCE CARE PLANNING.** Beth Cusack, RN, BSN, MSN, Maureen DeMenna, RN, BSN, MSN, Susan Meighan, RN, BSN, MSN, Rebecca Moreno, RN, BA, MSN, all at South Shore Hospital, So. Weymouth, MA

**Objective:** How can nursing leaders empower nurses to take a more active role in eliciting end of life wishes and facilitating treatment preferences into congruent medical plans of care?

**Topic Significance and Study Purpose, Background, and Rationale:** Advances in medical technology enable people to live much longer with advanced disease, resulting in slow prolonged declines prior to death. While these advances allow patients to live longer lives, they also have blurred the boundaries of end of life care. The distinctions between care for chronic illnesses, palliative care and hospice care are not always evident, leaving patients and families unsure of treatment options. Advance care planning is the process of decision making about end of life care. Education about advance care planning has been recognized as crucial to providing competent end of life care (Colville & Kennedy 2010). Studies have shown that nurses, are effective in eliciting the end of life wishes of their patients (Support Investigators, 1995; Detering, Hancock, Reade & Sylvester, 2009; Martin & Koesel, 2010, Jackson et al, 2012). Persistent barriers remain in translating patients preferences into congruent medical plans of care, leaving nurses experiencing moral distress related to delivering what they perceive as futile care, while patients suffer as they approach the end of life (Browning, 2013). Education about advance care planning has been recognized as crucial to providing competent end of life care (Colville & Kennedy 2010). Studies have shown that nurses, with proper education and tools, are effective in facilitating advance care planning (Support Investigators, 1995; Thompson-Hill, J., Hookey, Salt & O'Neill, 2009).

**Methods, Intervention, and Analysis:** This is qualitative research study using appreciative inquiry with focus group methodology. The participants of the study were registered nurses working full or part-time at the bedside on medical surgical units. Nurses that work as per diem nurses, float nurses, case managers, and in managerial roles were excluded from the study. According to Struebert-Speziale and Carpenter (2003), "individuals are selected to participate in qualitative research based on their first-hand experience with a culture, social process, or phenomenon of interest" (p. 24). This type of sampling is known as purposive sampling and was utilized in this study. Nurses were recruited based upon their first-hand experience of the phenomenon of advance care planning with patients. The researchers recruited the nurses during staff meetings, huddles, and through snowball sampling methods. A total of three focus groups were formed. Each focus group included between three and six nurses and lasted between 1.5 and 2 hours. This approach ensured that the topic was covered to the satisfaction of all of the participants. Each focus group was facilitated by two researchers. Data collection includes the researcher observations, field notes and transcribed audio-tapes of the focus group sessions. Focus groups were audio taped and transcribed verbatim. Transcripts of the focus group interviews were analyzed

through systematic qualitative analysis (Struebert-Speziale & Carpenter, 2003). All transcripts were read and re-read by all researchers to gain insight into the opinions, attitudes and experiences of all the participants. Emerging themes were identified by each researcher individually and then shared as a group to validate the findings. Thematic analysis in qualitative research involves searching through transcriptions of focus group sessions to identify any recurrent patterns.

**Findings and Interpretation:** To be effective in engaging in advance care planning and promoting shared decision making, nurses need enhanced collaboration and communication with their physician partners and access to resources. Everyone caring for the patient needs to be “on board” with the plan of care, moving patients from understanding their diagnosis, prognosis, and treatment options to acceptance of the inevitable. In addition, nurses need access to resources for managing patients in crisis as they approach the end of life, such as rapid response teams for pain and palliative care teams for symptom management.

**Discussion and Implications:** Although the themes that emerged from the research are not necessarily generalizable, other organizations may consider providing education to help interdisciplinary teams “get on board” with topics such as family meetings, Goals of Care, The Five Wishes (a widely accepted advance directive), the Medical Orders for Life Sustaining Treatments (in states where these documents are available), palliative and hospice care services. Conducting Appreciative Inquiry interviews with members of the interdisciplinary teams may also provide useful guidance on how to enhance interdisciplinary communication and teamwork. Finally it is recommended that institutions adopt and track indicators to measure the quality of life and end of life care to provide quantitative assessment of future research interventions or performance improvement initiatives.

## Poster Sessions

### #1

**INCREASING THE PERCEPTION OF SAFETY FOR CHEMOTHERAPY ADMINISTRATION PRACTICES.** Tina Curtis, MBA, MSN, RN, NEA-BC, and Julianna Manske, MSN, RN, OCN®, Froedtert Hospital, Milwaukee, WI

**Objective:** Participants will identify ways to increase the culture of safety in their work area by standardizing and maintaining chemotherapy administration best practices through the combined efforts of a multidisciplinary team.

**Topic Significance and Study Purpose, Background, and Rationale:** In fall 2012 a series of safety concerns surrounding the administration of chemotherapeutic agents was raised by staff nurses. Specifically, nurses questioned the lack of standardized chemotherapy administration process, the use of personal protective equipment (PPE), and environmental safety. Staff nurses, pharmacy, internal occupational health, and the leadership team collaborated to address each safety concern and implement standardized practices that adhere to national guidelines.

**Methods, Intervention, and Analysis:** The unit development council orchestrated a uniform double check process for chemotherapy administration in conjunction with the implementation of the organization’s first outpatient medication barcoding technology. A group of nurses piloted the practice and trained their peers. An industrial hygienist was consulted to evaluate PPE practices, safety policies, and test for potential exposure. Aimed at further reducing occupational exposure, nursing and pharmacy trialed several closed system transfer devices (CSTD) and implemented the best one for our organization. In addition, occupational health developed a policy to address long-term exposure to chemotherapy in which staff is offered

baseline and yearly testing. A Clinical Nurse Specialist was hired to support and standardize nursing practice. Finally, to increase communication between disciplines, an Oncology Pharmacy-Nursing Committee was created to discuss best practices and create standardized administration guidelines between all oncology sites in the Cancer Network.

**Findings and Interpretation:** The 2014 employee engagement survey showed a statistically significant improvement in all of the items related to safety. In addition, engagement scores improved in the areas of communication, training, and trust within the work unit. Nurses currently maintain competence through an annual chemotherapy and PPE competency. The double check process is also a sustained practice change and is integrated into the orientation process for all new nurses.

**Discussion and Implications:** Through the combined efforts of staff nurses drive to change practice, the addition of a clinical practice expert, and financial support for barcoding and CSTD equipment, the Cancer Center successfully changed and sustained safe chemotherapy administration practice. These changes were implemented while patient volumes remained stable and overall turn-around-time decreased. Through the collaboration of nursing, pharmacy, occupational health, and the leadership team, we have implemented best practices and have an environment keenly focused on safety.

### #2

**PATIENT TEACHING TOOL FOR HOME DISCONNECTION—CADD® PUMP.** Kim Marchand, RN, OCN®, and Arleen Benton, BSN, RN, OCN®, both at UT Southwestern Simmons Cancer Center, Dallas, TX

**Objective:** The purpose of this project was to develop a patient education tool that would enable our patients to safely disconnect their CADD® pump at home.

**Topic Significance and Study Purpose, Background, and Rationale:** In the changing health care environment, tasks which formerly were performed only by licensed personnel are shifting to being completed by patients in the home setting. As the only NCI designated cancer center located in Dallas, many of our patients travel several hours in order to receive care from our institution. Regimens which require continuous home infusion require the initial infusion visit and an additional visit to disconnect their infusion pump. Managing patient care in a time sensitive fashion was the impetus for this project.

**Methods, Intervention, and Analysis:** The education tool was developed to enable patients to disconnect their CADD pump, flush their port and remove their huber needle safely in the home setting. Safe handling of chemotherapy waste is strongly emphasized in this teaching. This tool contains narrative instruction with photos detailing the process. Zeng-Treitler, Kim, and Hunter (2008) found that supplementing written discharge instructions with pictographs enhanced patient’s immediate and long term retention of education material. The initial training is performed by infusion staff members, and includes a return patient demonstration of newly acquired skills in disconnection. A copy of the education tool is provided to the patient for home reference. The completed tool is available in our electronic medical record for staff use in patient education. This assures continuity among educators as well as continuity in education materials provided to our patients.

**Findings and Interpretation:** Most patients were able to complete their own pump disconnect without difficulty. When observing the patient perform the skill, close attention was paid to ensure that aseptic technique was maintained as well as safety precautions adhered to in handling the chemotherapy waste.

**Discussion and Implications:** Oncology patients are a very special group of patients whose time is of a premium. By enabling these patients to disconnect their pumps at home, an additional clinic visit was avoided, thus improving patient

satisfaction and enhancing staff utilization. Zeng-Treitler Q, Kim H, Hunter M. Improving patient comprehension and recall of discharge instructions by supplementing free texts with pictographs. *AMIA Annual Symposium proceedings/AMIA Symposium AMIA Symposium*; 2008. pp. 849-53. Epub 2008/11/13

### #3

**THE DEVELOPMENT OF ACUITY CRITERIA ON A DISEASE MANAGEMENT TEAM TO DETERMINE ADEQUATE STAFFING: LOOKING AT PAST RAW NUMBERS TO ENSURE SAFE PATIENT CARE.** Natasha Ramrup, MSN, RN, OCN®, and Anna Schloms, MSN, RN, both at Memorial Sloan Kettering Cancer Center, New York, NY

**Objective:** Our objective was to develop acuity criteria to justify the use of additional nursing resources on our Disease Management Team (DMT) of Gastrointestinal/Hepatopancreatobiliary oncology service.

**Topic Significance and Study Purpose, Background, and Rationale:** It has been well documented in the literature that adequate staffing is essential to patient safety. However, there are no documented acuity systems to assist in determining adequate staffing for oncology patients. At our NCI-designated cancer center, criteria to determine acuity was developed by nurses to support more staffing. Examples of the criteria identified include; sepsis, hepatic encephalopathy, respiratory distress, bleeding, pain crisis and end of life issues etc. Maintaining optimal nurse-patient ratios is a challenge, not just for our facility, but for hospitals nationwide. Our main purpose in creating these acuity criteria for oncology patients was to support better patient/staff ratio to deliver effective care in a safe environment. Adequate staffing is vital in achieving reductions in: medication errors, patient complications, readmission rates and mortality.

**Methods, Intervention, and Analysis:** Over a nine month period of time in which our data was collected, there were 142 emergencies identified based on the criteria created by our DMT. In eighty-eight of these occurrences, patients were transferred to an alternate level of care such as intensive care or a Step down unit. Of the 142 emergencies, which were predominantly Rapid Response calls, 58 were cardiovascular related incidents and 25 were respiratory related issues.

**Findings and Interpretation:** Data was collected in order to ascertain the need for additional staff, as well as to better allocate our nursing resources based on acuity. This creative strategy based on acuity has led to better nurse-patient ratio to meet our specialized patient population; and is ultimately supported by nursing leadership. This collaborative process ensures adequate staffing for our DMT.

**Discussion and Implications:** Due to the complexity of our patient population, an effective solution was needed to address our high acuity. In an ever changing healthcare environment, safe staffing levels may not be one size fits all. Each DMT needs to address acuity and staffing needs to meet their unique patient population. This nurse driven initiative of acuity criteria has led to progressive increases in nursing resources over the past years.

### #4

**APPRECIATIVE INQUIRY: UNLOCKING THE CREATIVE TALENTS OF COLLEAGUES TO ENHANCE COMMUNICATION AND COLLABORATION IN THE ONCOLOGY SETTING.** Rebecca Moreno, RN, BA, MSN, Beth Cusack, RN, BSN, MSN, Susan Meighan, RN, BSN, MSN, and Maureen DeMenna, RN, BSN, MSN, all at South Shore Hospital, So. Weymouth, MA

**Objective:** To enhance communication and collaboration between staff nurses and oncologists through the process of appreciative inquiry.

**Topic Significance and Study Purpose, Background, and Rationale:** We identified an opportunity to enhance interdisciplinary communication and collaboration as an area for improvement while conducting a separate qualitative research study involving focus groups with staff nurses. Nurses described the need for more access to the oncologists and other resources available to through the outpatient cancer center affiliated with the hospital. Dematteo & Reeves (2011) described the value of engaging colleagues in a constructive dialogue through appreciative inquiry to elicit fresh ideas for enhancing interdisciplinary collaboration. Appreciative inquiry is an interview technique that identifies desired outcomes and re-frames short-term problems into constructive opportunities that can be aligned with strategic goals (Carter et al, 2007). Effective communication and collaboration are the foundation needed for any healthcare team to support a culture of safety. Improving interdisciplinary relationships leads to higher performing teams; higher performing teams lead to improved communication with patients and families, which in turn results in improved patient satisfaction and improved patient outcomes (IOM,2001). The performance improvement initiative was conducted in an effort to meet the 2014 Quality Study Standards for the Commission on Cancer Accreditation to improve the patient experience.

**Methods, Intervention, and Analysis:** The performance improvement initiative was conducted at a 378 bed Magnet designated regional medical center south of Boston. The participants were staff nurses on an inpatient oncology unit and medical oncologists in an outpatient cancer center affiliated with the regional medical center. Appreciative Inquiry (AI) interviews were conducted with four oncologists, one nurse practitioner, and a nurse navigator from the outpatient cancer center and six nurses on an inpatient medical oncology unit. AI focuses on discovering strengths and amplifying them, rather than focusing on problems and fixing them (Cooperrider & Godwin, 2010). In each of the interviews it was explained that the interviewees were interested in learning about the patient experience when an oncology patient was admitted to the hospital. Each individual was asked to reflect on a time when working collaboratively made a positive difference for a patient. Ideas about how exemplary interdisciplinary collaboration could become usual practice were also sought. Field notes and reflections from all of the interviews were read and reread by all of the nurses involved in conducting the interviews to gain insight into the patient experience through the lens of different interdisciplinary team members. Common themes emerged from the analysis through constant comparison of the field notes and reflections. The themes were then shared with the participants at the Cancer Committee Meeting and nursing staff huddles.

**Findings and Interpretation:** The baseline measures of the current state revealed that on average three inpatients per day were scheduled for an oncologist consultation which has the potential for 21 encounters between inpatient nurses and oncologists per week. This figure was estimated based on the average of six patients admitted to the inpatient oncology unit from the affiliated oncology practice per week, with each patient having some changes in the plan of care, on average, every other day. Encounters were defined as direct person to person communication, in person or on the telephone, regarding changes in the plan of care. Nurses self reported the number of encounters between the nurses and the oncologists using a simple tracking log to assess the current level of collaboration. Baseline data were collected for one week prior to interviews, and only three encounters were identified by six nurses. Over the next four weeks, four oncologists, a nurse practitioner, and six inpatient staff nurses were interviewed starting with the oncologists. Based on suggestions from the initial interviews with the oncologists, an additional nurse from the cancer center (Nurse Navigator) was also interviewed. The common themes identified included asynchronous workflows, access to cancer center



resources, and need for patient centered interdisciplinary education. Three action items were selected as future quality improvement plans and presented to the Cancer Committee. This project's target improvement was to see at least 8 encounters between direct care nurses and oncologists discussing specific patient experiences per week following the interventions. The goal was assessed using the self-reported tracking log. What was observed, beyond what was documented in the tracking log, exceeded the expectation of 8 encounters. Encounters between nurses and oncologist occurred more frequently and in more contexts. Much of this was not captured on the data collection logs but was observed by the project team members. Asking authentic appreciative questions of the nurses generated enthusiasm for more educational opportunities and attracted the attention of the clinical nurse specialist. What was noticed was enhanced mutual respect and trust between the nurses and the oncologists through the process of appreciative inquiry, each discipline appreciating each others work, calling each other by name, and keeping the patient in the center of the discussion.

**Discussion and Implications:** Engaging interdisciplinary staff through the use of appreciative inquiry is an effective approach for enhancing interdisciplinary collaboration; it engages individuals, allowing them to feel a part of a change and to have ownership in successes (Carter et al, 2007). AI helped to create awareness for the benefits of interdisciplinary collaboration from the patient's perspective, generated creative ideas, and paved the way for the team to move to the next step "launching improvement initiatives around action plans generated from consensus building. This process may be repeated and continue to generate ideas for other quality improvement initiatives throughout the cancer program as well as other specialty areas.

## #5

**UTILIZATION OF A VIRTUAL PATIENT AND CAREGIVER EDUCATION LIBRARY.** Chasity Walters, PhD, RN, Kermit Ramirez, BS, and Julia Vishnevetsky, MPH, all at Memorial Sloan Kettering Cancer Center, New York, NY

**Objective:** The participant shall be able to identify at least two benefits to developing a web-based patient and caregiver education library.

**Topic Significance and Study Purpose, Background, and Rationale:** Workflow challenges and lack of confidence related to Internet use for sourcing patient and caregiver education resources contribute to HCPs dependency on preprinted resources, leading to wasted time and material resources and the dissemination of outdated information. To alleviate these concerns, a web-based content management system (CMS) was developed and implemented to house a library of educational resources for easy access by patients, caregivers, and HCPs.

**Methods, Intervention, and Analysis:** The virtual library allows for unrestricted access to reliable resources that can be viewed on the Internet or printed just-in-time. When logged into the website, HCPs at Memorial Sloan Kettering Cancer Center can electronically prescribe resources tailored to the needs of their patient (e.g., content, media type, preferred language), which are then delivered to that patient via the patient portal or personal email address. The development of a custom search engine takes the library one step further to allow users to search the Internet more widely yet constraining the search to vetted sources.

**Findings and Interpretation:** The CMS provides access to 3,612 unique multimedia resources for a total of 9,837 resources when including translated versions. Over the past year, 564,693 visits to the website were made from across the 50 states and 186 countries. HCP adoption of the technology is further demonstrated by the steady increase in utilization of the electronic prescribing feature, with a total of 2,092 user queries in the same time period and a 12% decrease in orders of pre-printed mate-

rials. A feedback link, made available in January to encourage comments and questions, has had 98 responses to date, with 97% reporting the information is easy to understand, 94% stating they would recommend it to family and friends, and 89% stating it was easy to find the information they were looking for. Since the launch of the virtual library on-hand inventory has decreased by 27%, which is expected to lead to a decrease in material waste.

**Discussion and Implications:** The development and implementation of this virtual library has facilitated access to reliable educational resources in a variety of media formats and languages for patient, caregivers, and HCPs. Future work includes the integration of the prescribing function with the electronic medical record and continued growth of multi-media content.

## #6

**RADIATION ONCOLOGY ADVANCE PRACTICE NURSE CARE MODEL: AN INNOVATIVE APPROACH TO SURVIVORSHIP CARE.** Dorothy Pierce, RN, DNP, APN-C, CBCN®, and Susan Schwartz, RN, MSN, AOCNP®, both at Rutgers Cancer Institute of New Jersey, New Brunswick, NJ

**Objective:** The purpose of this poster presentation is to describe the development of an innovative APN-led model of survivor care in radiation oncology (RAD/ONC).

**Topic Significance and Study Purpose, Background, and Rationale:** Nearly 22.4 million cancer survivors are alive globally and 14 million lives in the United States (US). Cancer survivors experience multiple challenges such as physical and psychological obstacles related to diagnosis and treatment. Excellent advances in medical care attributes to this increase. The Institute of Medicine (IOM) illuminated that current healthcare systems are inadequate, implying that the ideal systems should focus on prevention, surveillance, intervention, and coordination of care between the multidisciplinary team. Adequate health care institutions deliver system that provides access to comprehensive quality care. With the growing numbers of cancer survivors and their unmet needs provided opportunities to create this model of care delivered by radiotherapy advanced practice nurses (APNs). The Path Forward: Cancer Survivorship Program was established to address the many compelling needs of survivors. Endorsements of the model encompass delivery of care that is in conformity of the IOM suggestions, delivered by APNs and coordinated between disciplinary teams.

**Methods, Intervention, and Analysis:** The RAD/ONC APNs, in conversation with administration and collaborating physician concerning the survivorship program, attended a survivorship course. They established a Survivorship Program in the Radiation Department as an alternate model of care in RAD/ONC. Eligibility criteria and specific tumor sites were determined, and referral protocol was developed. This new program will include the establishment of comprehensive lymphedema care and supported by trained lymphedema APN. Using resources obtained from the Survivorship Course, the program will implement multiple goals. We will schedule six survivorship educational sessions with department staff, develop a survivorship assessment questionnaire for evaluating competencies and patient satisfaction survey. We will provide monthly reports to the RAD/ONC leadership team regarding patient program referral to establish the status, needs, and direction.

**Findings and Interpretation:** "The Path Forward" Program has been well received. Processes for program evaluation will be implemented; clinical data will provide rich sources for research, addressing improvement in overall quality of care.

**Discussion and Implications:** In radiotherapy, APNs will manage the cancer survivorship care. Cancer survivor providers will have the skills to manage challenges and control life burden.

## #7

### **SURVIVORSHIP CARE FOR VETERANS: ADDRESSING THE UNIQUE NEEDS OF VETERAN SURVIVORS.**

Jennifer Smith, MSN, CNP, Louis Stokes Cleveland VA Medical Center, Cleveland, OH

**Objective:** Discuss the unique needs of veterans receiving cancer survivorship care.

**Topic Significance and Study Purpose, Background, and Rationale:** In 2013 only 26% of all veterans received care within the Veterans Health Administration. Therefore oncology nurses and health care providers in the private sector need to be knowledgeable about veterans unique cancer risks and survivorship care needs. Many veterans have had military exposure to toxic chemicals and radiation, have multiple co-morbid conditions (many of which may be service-connected), and have complex psychosocial care needs, including post-traumatic stress disorder, depression, anxiety, addictive disease and homelessness all of which impact survivorship.

**Methods, Intervention, and Analysis:** At the Cleveland Veterans Affairs Medical Center (VAMC), an advanced practice nurse (APN)-led survivorship program was developed and imbedded within an interdisciplinary ambulatory cancer clinic. From the time of diagnosis, the survivorship APN assesses and manages veterans physical symptoms and psychosocial issues especially military service and civilian exposures, support systems and mental health issues. The survivorship APN collaborates with the oncology and primary care teams to make certain health promotion and maintenance, management of comorbidities, and active cancer surveillance are addressed. At the end of active treatment, patient visits are alternated between oncologists and the survivorship APN for about five years. The unique needs of the veteran cancer survivor are incorporated into the formal Survivorship Care Plan (SCP). The SCP is completed by the oncology team three months after the conclusion of active treatment.

**Findings and Interpretation:** To date, formal SCPs have been completed on veterans with breast, melanoma and lymphoma diagnoses. Veterans and the oncology and primary care teams have reported satisfaction with the process and the formal survivorship care plan.

**Discussion and Implications:** To better address veteran needs, aspects of this VA program and its SCP can be integrated into non-VA cancer survivorship clinics. Nurses leading non-VA survivorship clinics can increase their understanding of veteran needs by visiting the Veterans Health Administration website, becoming knowledgeable about veteran benefits and resources, and networking with VA nurses at local ONS chapter meetings.

## #8

### **HYPERTHERMIA TREATMENT FOR RECURRENT BREAST CANCER—WHAT IS IT AND WHAT DO ONCOLOGY NURSES NEED TO KNOW: A CASE REPORT.**

Colleen Schaidle, ANP-BC, MSN, Rakhi Mathews, RN, BSN, Adam Gliniewicz, BS, Micheal Mysz, MS, William Small, MD, FACRO, FACR, FASTRO, and Tarita Thomas, MD, PhD, all at Loyola University Medical Center, Maywood, IL

**Objective:** A case report to exemplify what hyperthermia is and how it is used in the treatment of recurrent breast cancer and how and why this is important to oncology nurses.

**Topic Significance and Study Purpose, Background, and Rationale:** Introduction: Hyperthermia treatment is a way of increasing the body's tissue temperature by delivering heat from an external source to destroy cancerous cells or prevent cancer growth. Several trials have focused on the use of hyperthermia treatment in patient populations such as breast, cervix, and brain with positive results. Breast cancer recurrent to the chest

wall can be particularly challenging and multiple studies have noted improved outcomes with the addition of hyperthermia to radiation. The below case study exemplifies such.

**Methods, Intervention, and Analysis:** Case report.

**Findings and Interpretation:** 75 year old female presented with a palpable left breast mass and erythema of the surrounding breast tissue. Punch biopsy confirmed grade 3, infiltrating ductal carcinoma, estrogen receptor, progesterone receptor, and human epidermal growth factor 2 negative, with positive lymph node metastasis. Given these findings the patient was diagnosed with inflammatory breast cancer. She was then treated with neoadjuvant chemotherapy followed by modified radical mastectomy and lymph node dissection. The patient was then referred to radiation oncology. On initial physical examination, the patient was noted to have several small raised papules inferior to the mastectomy scar with associated erythema extending to the inferior chest wall. Biopsy confirmed disease recurrence. The patient then proceeded with concurrent xeloda with radiation and hyperthermia treatment, completing 50 Gy to the chest wall and supraclavicular followed by 10 Gy boost to the scar. Hyperthermia treatments using the BSD 500 system which emits microwaves immediately followed external beam radiation and were administered per nursing. The patient completed 20 (12 medial and 8 lateral) hyperthermia treatments. The patient tolerated treatment well with expected skin changes, with the exception of a small thermal blister noted at treatment 16. Approximately 6 weeks post radiotherapy there is no evidence of disease.

**Discussion and Implications:** Discussion/nursing implications: Hyperthermia is a well-studied treatment modality with several mechanisms of action thought to aid in destroying cancer cells. Oncology nurses need to be aware of hyperthermia especially since nurses at many institutions administer treatments and assess treatment-related complications. Currently, our institution is developing a survey to evaluate common hyperthermia nursing practices among multiple institutions.

## #9

### **TRANSITIONING HIGH DOSE CHEMOTHERAPY FOR ACUTE MYELOID LEUKEMIA TO THE OUTPATIENT SETTING IMPROVES THE PATIENT EXPERIENCE.**

Bernadette Cuello, MSN, NP-C, Cornelia Melendez, RN, BSN, OCN®, Christopher Brooks, MSN, RN, OCN®, Margaret Brennan, MSN, RN, OCN®, and Elizabeth S. Rodriguez, DNP, RN, OCN®, all at Memorial Sloan Kettering Cancer Center, New York, NY

**Objective:** Patients receiving high dose chemotherapy in an outpatient setting yields high satisfaction in quality of life and decreases time spent at the Center.

**Topic Significance and Study Purpose, Background, and Rationale:** Treatment of Acute Myeloid Leukemia (AML), the most common adult acute leukemia, typically consists of intensive induction followed by high dose consolidation chemotherapy. Consolidation with high dose intravenous cytarabine (HiDAC), has always required a 5-6 day inpatient admission at our Center. In our overall effort to reduce lengths of stay (LOS), we questioned whether consolidation with HiDAC could safely be transitioned to the outpatient setting.

**Methods, Intervention, and Analysis:** A multidisciplinary task force developed guidelines for HiDAC administration, patient education, and nursing roles and responsibilities. Outpatient drug administration included two doses of HiDAC, 12 hours apart. The first dose was administered in our outpatient infusion unit; the second dose was infused by the patient at home via CADD Prizmâ, pump. Patient were prepared for the self infusion during a 30 minute instruction session with an office practice nurse. A video was used to teach techniques for disconnecting the

pump at completion. Nurses communicated daily with patients at home through video conference using a WebEx platform.

**Findings and Interpretation:** In the first 12 months, 15 patients received outpatient HiDAC during 23 occasions. Three patients required admissions during the first 2 weeks of the treatment cycle for fever, thrombocytopenia, and severe nausea/vomiting. Average time spent in the outpatient clinic during the initial phase was 13 hours over five days compared to the conventional 120 hours spent inpatient for the same treatment. In the second phase, when administration of both doses of chemotherapy occurred at home via the pump, on site time was reduced to three hours over five days. Quality of Life measurement using the FACT-G instrument demonstrated improved quality of life with home administration and a separate usability survey related to the WebEx conferencing also indicated high patient satisfaction.

**Discussion and Implications:** Transitioning a long standing intensive chemotherapy regimen for AML proved to be safe and feasible and improved the patient experience by reducing the need for hospital stay. Innovative technical support systems for assessment and reinforcement of instructions added to patient comfort and overall satisfaction. Reduction of this population's LOS increased access to acute care beds in our Center. This presentation will include our Standard Operating Procedures for treatment and education and our outcome data.

## #10

### QUALITY OF LIFE (QOL) WITH LANREOTIDE DEPOT (LAN) VS PLACEBO IN PATIENTS WITH PANCREATIC AND GASTROINTESTINAL NEUROENDOCRINE TUMOURS: RESULTS FROM THE CLARINET PHASE III STUDY.

Michiko Iwasaki, RN, University of Texas MD Anderson Cancer Center and Alexandria Phan, MD, Methodist Hospital, both in Houston, TX; Martyn Caplin, DM, Royal Free Hospital, London, United Kingdom; Philippe Ruzsniowski, MD, PhD, Beaujon Hospital, Clichy, France; Marianne Pavel, MD, Charite University Medicine Berlin, Berlin, Germany; and Edda Gomez-Panzani, MD, Ipsen Biopharmaceuticals, Inc., Basking Ridge, NJ

**Objective:** To better understand the impact on QOL with lanreotide treatment for patients living with NET.

**Topic Significance and Study Purpose, Background, and Rationale:** Background: QoL in patients with gastroenteropancreatic-NETs can be affected by the symptom burden, but also treatment efficacy and safety. To better evaluate this, the EORTC developed a NET specific QoL questionnaire (QLQ-GI.NET21), to be used in combination with its more generic questionnaire, EORTC QLQ-C30. Here, we examine the impact of LAN vs placebo on QoL from the CLARINET study.

**Methods, Intervention, and Analysis:** Methods: CLARINET was a 96-week, randomised, double-blind phase III study, in which patients with well/moderately differentiated, non-functioning EP-NETs were treated with LAN 120 mg (n = 101) or placebo (n = 103) deep SC injections every 4 wks (NCT00353496). The primary endpoint was progression-free survival (PFS). Safety was a key secondary endpoint. QoL (also a secondary endpoint) was assessed at each study visit using the EORTC QLQ-C30 and the EORTC QLQ-GI.NET21.

**Findings and Interpretation:** Results: LAN significantly prolonged PFS vs. placebo (hazard ratio 0.47; 95% CI 0.30, 0.73; stratified log rank, p = 0.0002). Treatment-related AEs occurred in 50% of patients in the LAN group vs 28% in the placebo group. Gastrointestinal disorders were the most common AEs (37% vs 19%). The QLQ C30 global health status scores and the QLQ-GI.NET21 endocrine and gastrointestinal subscale scores were similar in the two treatment groups at baseline and throughout treatment, though inter-individual variation was high (Table). Results for the other subscale scores of the QLQ-C30 and QLQ-GI.NET21 questionnaires were also similar between LAN and placebo.

**Discussion and Implications:** Conclusions: Overall, patients on LAN 120 mg had a significantly improved PFS and a good safety/tolerability profile that did not compromise patients QoL vs placebo. Further analyses are ongoing to evaluate QoL based on patient characteristics and treatment response.

**Underwriting or Funding Source Name:** Ipsen.

## #11

### ADVANCED PRACTICE COMMITTEE DEVELOPMENT.

Deborah Selm-Orr, BSN, MS, DNP, AOCN®, Jerome Maxfield, MSN, Cheryl Jones, MSN, AOCN®, Anne Ojala, MSN, AOCNP®, Janell Clark-Brown, MSN, MBA, and Dottie Wiegand, MSN, CRNP, all at Cancer Treatment Centers of America, Philadelphia, PA

**Objective:** Describe the process for growth and development of advanced practice council for nurse practitioners and physician assistants.

**Topic Significance and Study Purpose, Background, and Rationale:** Nurse practitioners are an integral partner in the health care team. Estimated physician shortages will create an even more important role for nurse practitioners in the future. Care provided by NPs and PAs, in collaboration with physician colleagues, has demonstrated a high level of patient satisfaction as well as improved coordination of care. Further enhancement of the NP/PA role increases engagement and satisfaction.

**Methods, Intervention, and Analysis:** Initially, a group of four nurse practitioners met to develop a committee for nurse practitioners, as required by state law. An initial SWOT analysis (strengths, weaknesses, opportunities, threats) was performed and shared with administration. After discussion of the SWOT analysis, the group was enlarged to include physicians assistants. A needs assessment was sent to all members of the committee which included all advanced practice providers. Response rate was 50% of active participants. Data from this assessment was further discussed by the Advanced Practice Provider Committee, and a determination was made to focus on mission and vision statement development, and to then proceed with other aspects of committee function. A subcommittee was then formed to develop priorities based on evidence based practice, and a recent statewide conference that focused on utilization of NP and PA clinicians. Committee members were given the options of topics that were most important and least important. This is consistent with the participatory, evidence-based, patient-focused process for advanced practice nursing role development, implementation and evaluation (PEPPA framework) described by Bryant-Lukosius and Dicenso.

**Findings and Interpretation:** Overwhelming response was to develop vision and mission statements, to then provide the framework for further projects that include job descriptions and integration into medical bylaws. Study findings developed the process of committee formation and provided a clearer framework to promote development of this council. After the development of an orientation program, vision and mission statements, the group also worked to develop a clinical ladder.

**Discussion and Implications:** This collaborative endeavor coincides with shared governance model of care. This process can assist other advanced practice groups in developing enhanced recognition within the organization from internal and external venues.

## #12

### FALLS REDUCTION IN MEDICAL ONCOLOGY : KEEPING MOBILE PATIENTS MOBILE.

Karin Swiencki, MSN, RN, AOCN®, and Joan Kaiser, MA, RN, AOCN®, both at New York Presbyterian Hospital, New York, NY

**Objective:** To decrease the number of falls on an inpatient medical oncology unit by educating RN and Assistive Personnel Staff on the importance of and techniques for mobilizing patients.

**Topic Significance and Study Purpose, Background, and Rationale:** One of the major initiatives on the medical oncology unit has been to decrease the number of falls. The number of falls did not decrease from 2012 through 2013 despite various initiatives, including purposeful hourly rounding, staff education, and falls awareness programs. The Oncology Nursing Leadership partnered with the Physical Therapy Leadership to provide education regarding the importance of maintaining and optimizing mobility, as well as basic training regarding safe mobilization of patients.

**Methods, Intervention, and Analysis:** Oncology Nursing staff attended a unit-based educational session provided by the Physical Therapy Department. Staff also learned and demonstrated safe mobilizing techniques in small group sessions, also provided by PT. Several sessions were held in order to train 100% of the staff. The identified goal was to safely mobilize patients out of bed for three meals, as able in order to help maintain patient mobility and decrease falls that might be attributed to patient deconditioning.

**Findings and Interpretation:** Staff training in patient mobilization was completed by the end of 2013. As of September, 2014, there was a 50% reduction in the number of falls from the same time period in 2013. Oncology Leadership reinforced the importance of mobilizing patients in daily staff huddles, and ensured patients were "out of bed" during regular rounds on the unit.

**Discussion and Implications:** Although the reduction in falls cannot be entirely attributed to the mobilization education, this project is believed to have had a significant impact on keeping patients mobile who might otherwise become deconditioned during hospitalization. Although our project goal was to decrease falls through education and training of staff, there may have been the additional benefit of patients being identified as having deficits that required PT intervention.

### #13

**HOSPITAL ACQUIRED ANEMIA AND BLOOD WASTE FROM CENTRAL LINES: AN EDUCATIONAL INTERVENTION.** Kristin Daly, MSN, ANP-BC, OCN®, Siteman Cancer Center, Washington University School of Medicine, St. Louis, MO

**Objective:** Understand risks of hospital acquired anemia (HAA), phlebotomy as a major risk factor for HAA, and evidence-based recommendations for blood waste prior to lab draws from central venous catheters.

**Topic Significance and Study Purpose, Background, and Rationale:** Background: Hospital-acquired anemia (HAA) is common in hospitalized patients. HAA is significantly associated with morbidity and mortality in various patient populations, both during hospitalization and after discharge. Phlebotomy volumes contribute significantly to HAA, but in the literature, the volume of blood wasted by nurses from central arterial or venous catheters prior to blood draws has either not been measured or merely estimated. Purpose: The purpose of this intervention was to decrease iatrogenic blood loss by educating oncology nurses about HAA and the current evidence for appropriate blood waste from central lines.

**Methods, Intervention, and Analysis:** Method: A five-question anonymous survey measuring clinical practices when wasting blood from central lines was administered to oncology nurses before and after an educational intervention on evidence-based procedures for blood wasting from central lines.

**Findings and Interpretation:** Findings: A total of 136 nurses completed surveys pre-intervention; 126 completed post sur-

veys. A 58% decline in the percentage of nurses inappropriately wasting blood was realized. Differences in practice were noted by years of experience and the major sources of information cited as the basis for blood wasting practice changed from 2012 to 2013.

**Discussion and Implications:** Implications: Nurses need to use evidence-based strategies in clinical practice to minimize iatrogenic blood loss and the negative sequelae of HAA. Wasting the appropriate amount of blood from central lines prior to lab draws is well within the nursing scope of practice. Bedside nurses need to be informed of both the risks of HAA and the rationale behind evidence-based policies and procedures in order to effect changes in clinical practice.

### #14

**ONCOLOGY NURSE PRACTITIONER FELLOWSHIP PROGRAM.** Tracy Krimmel, AOCN®, APRN-BC, and Janet Gordils-Perez, MA, RN, ANP-BC, AOCNP®, both at Rutgers Cancer Institute of New Jersey; and Renee Kurz, MSN, FNP-BC, Rutgers University, all in New Brunswick, NJ

**Objective:** The participant will understand the implications and the importance of a nursing fellowship oncology program in the future of advanced practice nursing.

**Topic Significance and Study Purpose, Background, and Rationale:** Recruiting and training new nurse practitioners can be a daunting task in the current healthcare system. Our NCI-designated Cancer Center has experienced tremendous clinical growth in the past two years. With this growth comes the need for oncology nurse practitioners with specialized knowledge, skills and experience in caring for these highly complex cancer patients. We found that our organization lacked the support needed for new nurse practitioners graduating from current programs that now focus on primary care with no clinical experience in oncology. The Rutgers Cancer Institute Advance Practice Fellowship program was designed to provide specialized training for new nurse practitioners seeking to work in oncology. A comprehensive six-month pilot program was developed and implemented using didactic, clinical, and research components.

**Methods, Intervention, and Analysis:** The fellowship program was developed in collaboration with Rutgers School of Nursing. A literature search was completed. Benchmarking with other similar fellowship programs was done via teleconferencing. Didactic portion included ONS evidence-based resources (post master's certification program) as well as tumor specific education. Formal learning sessions were done on a variety of complex clinical challenges commonly encountered by oncology patients. The program was tailored to the individual needs gathered from an initial needs assessment and paired with a mentor based on clinical specialty. Specialty rotations and precepted clinics provided the participants with hands-on experience. Program evaluation included participant evaluations of each component of the program, evaluation of mentors, pre and post needs assessment, a complete course evaluation and completion of AOCNP® examination.

**Findings and Interpretation:** Four advance practice nurses are currently participating in this program. Anecdotal feedback and preliminary data reveal a high satisfaction from the fellows as well as the mentors. Formal evaluations done prior to start of program, throughout and at completion will be presented.

**Discussion and Implications:** Preparing nurse practitioners with the skills and knowledge necessary to meet the needs of clinically complex oncology patients is essential to provide quality care. A comprehensive fellowship programs can be designed and implemented to provide advanced education with focused skills training and mentorship experience in oncology for the new nurse practitioner.

## #15

### SEASONS: A PROSPECTIVE STUDY ASSESSING THE PHYSICAL, PSYCOSOCIAL, SPIRITUAL AND FINANCIAL NEEDS OF BREAST AND PROSTATE CANCER PATIENTS.

Nancy Ehmke, RN, MN, AOCN®, Parkview Comprehensive Cancer Center; Breck Hunnicutt, RN, BSN, CCRC, Parkview Health; and Brooke Hoverman, CCRC, Judith Irvin, RN, CCRC, Hillary Biddle, RN, CRC, and Lisa Heral, RN, BA, all at Parkview Research Center, all in Fort Wayne, IN

**Objective:** To identify the physical, psychosocial, financial, and spiritual needs of breast and prostate cancer survivors in North-east Indiana in the acute, extended and permanent phases of survivorship.

**Topic Significance and Study Purpose, Background and Rationale:** According to the National Cancer Institute (NCI), “{a}n individual is considered a cancer survivor from the time of diagnosis through the balance of his/her life”(NCI,2014). The three phases or “seasons” of survivorship have been described as the “acute” from diagnosis to treatment completion- the “extended” intermittent treatment and surveillance -the “permanent” when the likelihood of recurrence diminishes. Each phase is associated with unique physical, psychosocial, spiritual, and financial needs. Numerous studies have described the needs of survivors through completion of treatment but few provide insight into needs beyond treatment completion. The ability to accurately assess survivor needs will increase the quality of care with better utilization of resources, specifically to community hospitals, which treat 85% of cancer patients. (NCI, 2013).

**Methods, Intervention, and Analysis:** This is a prospective study involving breast and prostate cancer patients receiving treatment at Parkview Cancer Center. Participants receive a survey regarding physical, psychosocial, financial, and spiritual needs. The questions inquire about educational needs, support methods and level of interest in participating in programs and follow-up care preference. The surveys are completed at the start of treatment, 4-6 weeks after treatment, 8-16 months after treatment, then annually for four years. The Cronbach alpha reliability estimation tool is used. The Pearlman-Mayo Survey of Needs is used to assess needs. A series of paired samples t-tests determined if differences in needs existed between the various time periods.

**Findings and Interpretation:** 183 surveys were collected between 05/06/2013 and 0/9/05/2014. Seventy-two individuals completed the survey at the start of treatment and 4 - 6 weeks post treatment. 85% of the survivors were breast cancer survivors and 15% were prostate cancer survivors. Age ranged from 25 to 85 years. Among general health results, fatigue ( $t=-6.409$ ,  $df=71$ ,  $p<.001$ ), loss of appetite ( $t=-2.963$ ,  $df=71$ ,  $p<.01$ ) and skin changes at the site of radiation ( $t=-7.723$ ,  $df=71$ ,  $p<.001$ ) yielded statistically significant differences between start of treatment and first follow-up. The amount of distress reported by respondents increased in the other three categories including sexual and hormonal symptoms ( $t=3.606$ ,  $df=71$ ,  $p<.001$ ). These findings are consistent with current literature.

**Discussion and Implications:** Interim results indicate the psychosocial distress tool be provided throughout the survivorship journey rather than only at initial contact. Results indicate a preference to be followed by an advanced practice nurse. Based on the results of this study, initial educational programs should focus on dealing with fatigue and sexuality issues. The SEASONS study validated the needs of breast and prostate cancer survivors in our own community and led to changes in our survivorship care.

## #16

### ONCOLOGY NURSES' ROLE IN A MESSAGE PROGRAM: AN INNOVATING INTERVENTION THAT ENHANCES PATIENTS SATISFACTION AND EXPERIENCE. Diego Rodriguez,

RN, BSN, OCN®, Joan Scagliola, MSN, RN, German Rodriguez, MSN, RN, Pat Eklund, RN, and Eva Pendleton, LMT, all at Perlmutter Cancer Center at NYU Langone Medical Center, New York, NY

**Objective:** At the end of this presentation, the nurse will be able to describe the benefits of an integrative health intervention and how massages comfort oncology patients undergoing chemotherapy.

**Topic Significance and Study Purpose, Background, and Rationale:** Integrative Health Program provides interventions for stress management and symptom control for patients with a high symptom burden. Patients undergoing chemotherapy treatment were identified as a high-need population for these services. In 2009 a program that offers massages to patients during their infusion sessions began at this urban Cancer Center. Oncology nurses play a vital role in assessing and acknowledging patients needs for interventions that will ease and enhance chemotherapy treatments and experiences. Patients were only eligible for massage therapy by direct referral from infusion nurses. Licensed Massage Therapists (LMTs) collaborated with nurses when adapting a new approach. A multidisciplinary team developed a process improvement plan that will allow LMTs to provide massages at our busiest times by implementing unit rounds. Our goal was to generate the most referrals while fostering teamwork.

**Methods, Intervention, and Analysis:** LMTs were educated on how to navigate the infusion schedule and to be familiar with the nursing patient assignment. Massage therapists rounding became part of the LMTs workday. We established criteria with patient's laboratory values to alert LMT's to consult with the nurse and obtain an approval for massage. Patients are able to choose an area of massage such as hands, neck, feet or shoulders. A massage therapy assignment sheet was generated that includes: biometrics, diagnoses, treatment, precautions and new treatments.

**Findings and Interpretation:** Over the course of FY 2014, we provided 2090 more massages and infusion massage encounters increased from 13% in FY 2013 to 18% in FY 2014. Massage intervention volume increased by 65%. Nursing staff reported observations of significant reduction in patients anxiety, nausea, and vomiting complaints. Benefits such as having an easier time in caring for patients was often mentioned by infusion nurses. LMTs reported higher work related satisfaction and greater sense of accountability.

**Discussion and Implications:** This presentation will demonstrate how a complementary and integrative medicine intervention like massages provides comfort and improves patient distress associated with chemotherapy. Next step is to survey patients and staff, and reassess the process improvement plan. We are expanding this program to other chemotherapy suites. Collaboration between nurses and interdisciplinary team provides patient centered interventions that are comforting and beneficial to patients.

## #17

### THE NURSING DELIVERY OF PALLIATIVE CARE IN THE AMBULATORY ONCOLOGY SETTING. Jennifer Pavone,

RN, BSN, Margaret Rosenzweig, PhD, CRNP-C, AOCN®, FAAN, and Heidi Donovan, PhD, RN, all at University of Pittsburgh School of Nursing; and Yael Schenker, MD, UPMC Division of General Internal Medicine, Palliative Care, all in Pittsburgh, PA

**Objective:** Examine current roles of cancer center infusion room registered nurses (RNs) to describe their daily work routines and, specifically, time spent on palliative care (PC) assessment and management.

**Topic Significance and Study Purpose, Background, and Rationale:** The majority of cancer care now occurs within the ambulatory patient setting, where patients with metastatic cancer often receive chemotherapy until they are transitioned to end-of-life care. Referral to palliative care specialists is often delayed or simply unavailable despite evidence that it benefits both patients and their caregivers. It is not clear how often and to what degree PC assessments or interventions are implemented by infusion room oncology RNs.

**Methods, Intervention, and Analysis:** An observational work-sampling project was performed in three ambulatory cancer centers within the University of Pittsburgh Medical Center (UPMC) network. A single observer, using validated coding criteria, followed nine RNs. Activities were recorded every 2-minutes and later divided into the appropriate PC or non-PC direct or indirect care activity. The activities were then analyzed via percentage of total time spent on each particular activity and then percentage of time within the PC and non-PC categories.

**Findings and Interpretation:** A total of nine days with 60-hours of observation and 1800 total observations occurred. It was found that RNs spend only approximately 2% of their time performing PC assessments and management and of this time 29.7% was spent on treatment plan discussions with patients and caregivers. For non-PC care time (97.9%), the RNs time was divided between indirect (70.9%) and direct care (29.1%) respectively. The majority of non-PC indirect care activities were charting (16%) and travelling (7%), defined as walking about the unit. Lastly, RNs spent 12.6% of their time multi-tasking, primarily performing clinical tasks while interacting with patients and caregivers.

**Discussion and Implications:** Oncology nurses spend over half of their time in indirect care activities unrelated to palliative care, including charting and traveling. Time, role uncertainty, and lack of knowledge are cited as RN PC implementation barriers. With re-organization of infusion room cancer center RNs workflow and thoughtful time management RNs would be able to provide primary palliative care, bringing PC assessment to all patients with end stage cancer receiving treatment.

## #18

**VALUE OF ADVANCED PRACTICE PROVIDER (APP) LED TRANSITION TO SURVIVORSHIP VISITS (TSV) AT STANFORD CANCER INSTITUTE (SCI).** Kelly Bugos, MS, ANP-C, Jessica Foran, MS, NP, Katrina Pose, MPA, PA-C, Jan Petree, MSN, FNP, AOCNP®, Brigid Miralda, MSN, FNP-C, and Kathryn Gail Bailey, MSN, MBA, RN, all at Stanford Cancer Institute, Stanford, CA

**Objective:** Our objective is to evaluate patients perception, knowledge and confidence gained from TSV.

**Topic Significance and Study Purpose, Background, and Rationale:** Cancer survivorship care is becoming an essential standard. The timing and elements of the care are still being determined. APPs are Nurse Practitioners and Physician Assistants, who often provide survivorship care. Since 2012, SCI offers APP led TSV for survivors of breast cancer, acute leukemia, lymphoma and Hodgkin's disease. Eligibility criteria are complete remission following intensive chemotherapy, surgery and radiation. TSV includes lickert-scale assessment of common survivor symptoms.

**Methods, Intervention, and Analysis:** TSV participants completed a clinic designed survey in Survey Monkey® (94%) or paper (6%) immediately following their TSV. The anonymous responses were collected from November 5, 2012 to February 11, 2014.

**Findings and Interpretation:** Of the 104 unique patients, 80 surveys were analyzed. 98% (78/80) found the standard symptom assessment form helped in their communicating symptoms. 98% (78/80) of the patients received a survivorship

care plans (SCP). 96% (75/78) of the SCP recipients found the SCP increased their knowledge about past treatment and future health recommendations. 93% (68/73) were confident or very confident about health care providers (HCP) responsibility for each aspect of the patients' health care. 98% (78/80) were highly satisfied with the care they received. 71% (52/73) would like future cancer survivorship visits Specific to breast cancer survivors, 94% (66/70) were < 6 months from treatment end and 70% (49/70) rated the optimal time to receive SCP as 1-3 months from treatment end.

**Discussion and Implications:** Based on patient survey results, APP-led TSV adds a valuable component to patient care at SCI and the SCP increases knowledge about past treatment and future health recommendations.

## #19

**CANCER FERTILITY PRESERVATION MADE EASY! ACHIEVING OPTIMAL PATIENT CARE AND AMERICAN SOCIETY OF CLINICAL ONCOLOGY (ASCO) QUALITY ONCOLOGY PRACTICE INITIATIVE (QOPI) STANDARDS.** Maria Grabowski, RN, MSN, OCN®, Stephanie Clayton, MHSM, CMPE, and Deborah Spitzer, RN, MSN, OCN®, all at UT Southwestern, Dallas, TX

**Objective:** Participants will gain understanding of comprehensive, effective approaches to maximize fertility opportunities in cancer patients - from early intervention pretreatment approach through survivorship.

**Topic Significance and Study Purpose, Background, and Rationale:** Cancer Survivorship is a wonderful reality. A growing number of patients have the opportunity to experience their hopes and dreams, which often include family building. Sadly, many patients do not receive timely information about fertility preservation, leading to disillusionment and mistrust. This is now recognized as an important quality metric. The American Society of Clinical Oncology (ASCO) 2006 Quality Oncology Practice Initiative (QOPI) guidelines state that "Infertility risks [should be] discussed prior to chemotherapy with patients of reproductive age (QOPI, 2006)." However, national compliance remains low at 6% (Tallent, 2013). At our institution, a survey of patient records found that less than 5% included a documented discussion of infertility risks. Nursing services can ensure awareness, informed consent, and patient self-advocacy. We are developing a comprehensive program to provide fertility preservation awareness, education, and meaningful treatment options throughout the reproductive life span.

**Methods, Intervention, and Analysis:** The Comprehensive Fertility Preservation Program is implemented at an NCI-Designated Cancer Center and follows ASCO QOPI guidelines. It is designed to reach all adult oncology patients as well as providers at the time of initial patient encounters. A streamlined Electronic Medical Record (EMR) tool populates for all cancer patients of child-bearing age. The EMR offers an immediate referral option to the campus Reproductive Endocrinology clinic, which has committed to seeing patients and initiating care within 48 hours. Patient education collateral is available regarding Fertility Preservation possibilities. Reduced pricing for cancer patients is provided.

**Findings and Interpretation:** As cited in 2006 QOPI guidelines, early referrals are essential. The focus has been on program development, implementation, and tracking of performance metrics. Our program increases provider ease and mandates compliance to address fertility preservation using streamlined systems. Utilization of the EMR supports simple quantitative analysis for future nursing research, including studies to identify barriers to compliance.

**Discussion and Implications:** This comprehensive fertility preservation program is built with thoughtful, resourceful, targeted methods to assist provider's efforts toward supporting

their patients achieving maximum fertility where choice is available. Provider education is critical for visibility and successful implementation. A comprehensive approach to fertility preservation supports our patients hopes, dreams and trust in us.

## #20

**DISTRESS MONITORING: BRIDGING THE GAP BETWEEN PSYCHOSOCIAL DISTRESS AND CANCER TREATMENT ADHERENCE.** Marilyn Omabegho, RN, MSN, OCN®, NE-BC, Robert Wood Johnson University Hospital, New Brunswick, NJ

**Objective:** To describe the use of a patient assessment tool, effective intervention and impact on adherence of therapy.

**Topic Significance and Study Purpose, Background, and Rationale:** Distress is an unpleasant experience of emotional, psychosocial, social or spiritual nature that impacts a patient's quality of life. Research has shown that an estimated 20-40% of cancer patients experience distress during their treatment journey. To that end, the Commission on Cancer Standard 3.2 mandates that all cancer patients be evaluated for psychosocial distress. In our Radiation Oncology department, we piloted a distress screening tool with early interventions to ensure quality care.

**Methods, Intervention, and Analysis:** The NCCN Distress Thermometer was utilized for each patient seen for a consultation or follow up appointment. The oncology nurse reviewed the tool with the patient and a distress score >4 required an action plan with intervention. The pilot data revealed 400 patients were screened; 15 declined to complete the form; 14 required social work referral; 4 required chaplain services; 25 needed assistance with transportation; 115 had physical concerns that were managed by medical and nursing staff. All needs were met prior to the patients' discharge.

**Findings and Interpretation:** Patients distress scores ranged from 0 to 10. New patients scored higher due to the unknown (scheduling and coordination of care with chemotherapy treatment and work schedule), duration of treatment, transportation and parking issues. Follow up patients scored higher than expected. A percentage of these patients had existing diagnosis of anxiety/depression already being managed; while others were worried about their follow up test results. Another subset of patients scored high on emotional distress due to impact of diagnosis on family members and their perception of caregiver burden. Financial problems were stressors for both groups. All distress scores >4 required further investigation and intervention. Formal chart audits will be completed to assess impact on treatment adherence.

**Discussion and Implications:** Oncology nurses in any ambulatory cancer setting are in the best position to screen for psychosocial distress in their patients. This is very important for patient centered care. Understanding how stress affect each patient will assist the oncology nurse in developing individualized care plans to ensure that patients' needs are addressed in a timely manner. The Distress Thermometer is a reliable and valid user-friendly tool, and can serve as the healthcare team communication tool to understand the patient's source of distress.

## #21

**CAN YOU SEE WHAT I SEE?: OCULAR TOXICITY OF CHEMOTHERAPY, BIOTHERAPY AND TARGETED AGENTS.** Mary Elizabeth Davis, RN, MSN, AOCNS®, Memorial Sloan Kettering Cancer Center, New York, NY

**Objective:** Minimize the impact of ocular toxicity of anti-cancer therapies by increasing nursing recognition of the etiology and importance of early diagnosis and treatment to enhance vision and quality of life.

**Topic Significance and Study Purpose, Background, and Rationale:** Systemic anti-cancer therapies can cause both acute and chronic damage to the eye. This ocular toxicity is generally underestimated and may be considered a minor side effect. For the patient, however, blurred or loss of vision, and other ocular symptoms can be troublesome and affect quality of life. Damage to the ocular surfaces, retina, cornea, and optic nerve can be temporary or permanent. The eye has a high degree of sensitivity to toxic substances; fluorouracil can be detected in tears several minutes after intravenous administration and can cause epiphora and conjunctivitis. Other common chemotherapeutics such as etoposide and cisplatin can cause retinopathy, while vincristine, vinblastine, and procarbazine have been shown to cause photophobia. The taxanes have been linked to glaucoma while hormones and chronic administration of corticosteroids can cause the development of cataracts. Biotherapies can adversely affect the eye and can cause a myriad of symptoms. Research has linked serious retinal toxicity from tyrosine kinase inhibitors and new targeted therapies.

**Methods, Intervention, and Analysis:** The oncology nurse, knowledgeable of the potential ocular effects of cancer modalities, can closely monitor and educate patients at risk to promote well-being and vision. Anticipation of treatment related toxicity can provide opportunity to intervene to minimize or prevent side effects. Treatment may include holding or reducing drug dose, administration of medication: lubricants, anti-infectives, steroids, miotics, adrenergic agonists, and beta blockers or other procedural interventions such as nasolacrimal dilation and irrigation

**Findings and Interpretation:** Knowledge of the risk factors and etiology of ocular toxicity of systemic cancer therapies can guide nursing assessment, enhance patient education and improve care management. Including a review of eye symptoms and vision issues in nursing assessment can enhance early detection and treatment of ocular toxicity

**Discussion and Implications:** Close communication and collaboration with the primary team and ophthalmology can promote consultation and screening for early detection to diagnosis and treat ocular changes from cancer treatment. Patients are encouraged to have a baseline exam and to report changes in vision or ocular symptoms immediately. Nurses need to educate patients on prescribed medications, correct administration of drops and ointments, interventions such as eyelid hygiene, warm or cool compresses and ultraviolet light precautions

## #22

**ONCTOBER FEST: A SYSTEM-WIDE ONCOLOGY EDUCATION FAIR.** Rebecca Martin, BSN, RN, OCN®, BMTCN, Julianna Manske, MSN, RN, OCN®, Emily Richter, MSN, ACNS-BC, AOCNS®, Colleen McCracken, BSN, RN, MSN, CRNI, Lynn Czaplewski, MS, RN, ACNS-BC, CRNI, AOCNS®, and Shannon Beran, BSN, RN, OCN®, all at Froedtert Hospital, Milwaukee, WI

**Objective:** Participants will learn how collaboration of an oncology service-line or health system creates standardization of practices at an annual oncology-focused skills fair.

**Topic Significance and Study Purpose, Background, and Rationale:** In October 2013, Clinical Nurses Specialists and Nurse Educators from both inpatient and outpatient areas of four sister hospitals collaborated to create an oncology specific education skills fair for staff nurses. Held annually in October, the aim of ONCTober Fest was to standardize the way nurses practice throughout the oncology service-line or health system to provide consistent and high-quality care to all patients.

**Methods, Intervention, and Analysis:** Topic areas were chosen based on oncology-specific information that nurses do not typically receive at yearly hospital-initiated skills fairs. Booths

included proper use of personal protective equipment, administration of vesicant medications, preventing and treating extravasations, accessing and drawing blood from an implanted port, utilizing the Teach Back method during patient education, administering intraperitoneal chemotherapy, demonstrating intradermal injections, bone marrow transplant patient discharge instructions, reviewing information about clinical trials, a chemotherapy trivia game, and a booth that offered materials about becoming oncology certified. Booths were created and staffed by nurses in Development Council (a branch of Shared Governance), oncology educators, and clinical nurse specialists.

**Findings and Interpretation:** An electronic post-evaluation survey validated positive feedback from staff. Nurses appreciated that the information provided was pertinent to their everyday practices and enjoyed networking with staff from areas other than their own. Some questions about minor practice differences between areas did arise due to this event which sparked further collaboration and greater communication between sites.

**Discussion and Implications:** Overall, ONCtober Fest strengthened connections between oncology units, created an enjoyable learning experience for nurses, and elicited a high standard of care for our patients.

### #23

#### FLUOROURACIL SAFETY AND TOXICITY—WHO KNEW?

Richelle Cilio, BSN, RN, OCN®, CRNI, and Eileen Eisenhower, BSN, RN, OCN®, CRNI, both at Cancer Treatment Centers of America, Philadelphia, PA

**Objective:** Due to the severity of Fluorouracil (5-FU) toxicity, it is essential that oncology nurses are equipped to promote safety through education and early recognition of 5-FU toxicity and overdose.

**Topic Significance and Study Purpose, Background, and Rationale:** According to the National Institute of Health (NIH) federal register, approximately 275,000 cancer patients receive 5FU annually in the U.S. It is estimated that 3% of those receiving fluorouracil-based therapy experience toxicity, and as many as 1300 deaths occur yearly as a direct result of 5-FU overdose. 5-FU is administered at or near its maximum tolerated dose. Dihydropyrimidine Dehydrogenase enzyme (DPD) plays a significant role in the metabolism and clearance of 5-FU. It is thought that 3-5% of the population has partial or complete DPD deficiency. Toxicity due to DPD deficiency can be severe and may lead to death. Other factors leading to systemic overexposure include impaired metabolic clearance and medication errors. The symptoms of toxicity and overdose are often delayed and may take 3-4 days post-infusion to develop. It is vital that oncology nurses are educated to recognize the risk of overdose and to ensure treatment be initiated upon discovery of such event. Current literature does not contain readily available information for nurses to reference at this time.

**Methods, Intervention, and Analysis:** The subject of 5-FU safety was presented to two separate groups of oncology infusion nurses through a presentation and fact-filled handout. The general consensus among the groups was that there is a need and desire for additional education regarding toxicity, specifically DPD enzyme deficiency.

**Findings and Interpretation:** The primary educational objective is to educate the oncology nurse of the severity of 5-FU toxicities so that prompt intervention is made to promote optimal outcome. Oncology nurses in clinical areas that administer 5-FU should be targeted for educational sessions regarding 5-FU safety. This information has been shared with practitioners to promote collaboration among the multi-disciplinary team.

**Discussion and Implications:** The initiation of nursing education began with the informative handout. Continued education will include all nursing areas throughout the hospital by way of a travelling poster presentation. As more information

and new treatment options develop, the model used to educate staff will continue to evolve.

### #24

#### DECREASING COMPASSION FATIGUE IN ACUTE ONCOLOGY NURSES. Sarah Merkle, RN, MSN, CNS, OCN®, PIH Health Hospital, Whittier, CA

**Objective:** To decrease the perception of compassion fatigue in acute oncology nurses through education and socialization.

**Topic Significance and Study Purpose, Background, and Rationale:** Significance and Background: Compassion fatigue can be detrimental to nurses both professionally and personally. Compassion fatigue may result in loss of job satisfaction and professional confidence. Nurses who experience compassion fatigue may be less effective as they continue to care for patients potentially leading to poorer patient outcomes and decreased patient satisfaction. Oncology nurses are at high risk for compassion fatigue due to a continuous, high-level demand of their knowledge, compassion, and care of chronically ill patients. Nurses working in inpatient settings are more likely to experience compassion fatigue due to high acuity and experiences with patient complications and deaths. Newly graduated nurses are also at high risk to due to their lack of experience and high empathy levels. Providing oncology nurses with support through education and socialization is essential for compassion fatigue prevention and management. Purpose: (a) Increase awareness of risk factors for compassion fatigue, (b) Empower nurses to recognize the physiological and psychological signs of compassion fatigue, (c) Provide resources and education to improve overall job satisfaction, (d) Engage nurses in social activities to strengthen interpersonal relationships.

**Methods, Intervention, and Analysis:** A total of 48 acute care oncology nurses participated in this initiative, 49 were female and 2 were male. Ages ranged from 24–53, and experience from less than 1 year to over 22 years. Educational curriculum was designed to educate the oncology nurse on risk factors, physiological, and psychological signs of compassion fatigue. Resources including communication tool were provided to improve interpersonal relationships with patients. Nurses were coached on how to create moments of connection with their patients, making moments that contribute to professional fulfillment, and energizing moments of care. Additionally, two events were scheduled 4 weeks apart at off-site locations to encourage the nurses to socialize and foster collegial relationships. The Professional Quality of Life: Compassion Satisfaction and Fatigue Version 5 (ProQOL) scale was initially administered to all participants to obtain baseline data. The scale was administered prior to the intervention period and will be repeated at 3 months and then at 6 months to evaluate the effectiveness of the program.

**Findings and Interpretation:** Program will be complete January 2015.

**Discussion and Implications:** Compassion fatigue can lead to poor job satisfaction can be correlated with a decrease in patient satisfaction, staff performance and retention. Understanding compassion fatigue and devising and implementing interventions to prevent and treat compassion fatigue are important for nurses and patients.

### #25

#### LESSONS LEARNED: WHAT AN ACADEMIC MEDICAL CENTER CAN OFFER COMMUNITY ONCOLOGY PRACTICE.

Susan Riveiro, RN, OCN®, German Rodriguez, RN, MSN, Jean Caurant, RN, OCN®, Yayao Lo, RN, and Virginia Hamilton, RN, all at Perlmutter Cancer Center NYU Langone Medical Center, New York, NY

**Objective:** Incorporating academic standards in community practice settings brings value to patients and enhances professional practice.



**Topic Significance and Study Purpose, Background, and Rationale:** This private community oncology practice recently joined a large Academic Medical Center. It is important to examine the differences in nursing practice within the two settings and to determine the added value when adapting new standards. The academic medical center is accredited by The Joint Commission (TJC) and is required to follow their standards while private community practices are not accredited by TJC and therefore do not have the same requirements. During this presentation we will review one of the TJC's National Patient Safety Goals; "Improving the Accuracy of Patient Identification" and examine how the patient identification process evolved after becoming part of a large academic medical center.

**Methods, Intervention, and Analysis:** A new patient identification process was adapted. Nurses were now required to use double identifiers; patient name and date of birth. Identification bands were placed by our support staff on patients before entering our Infusion Center. Electronic scanning for all chemotherapy drugs to confirm patient identification was implemented. A final chemotherapy drug verification by two nurses at the chair side before each administration became part of our practice. In addition, we implemented a Hand Washing Monitoring Program and a Falls Prevention Program. Both demonstrated positive outcomes.

**Findings and Interpretation:** Nurses reported feeling safer when identifying patients, especially those with the same or similar names. We compared the number of patient identification errors prior and post implementation. During a 6 month period we had 2 near miss errors and 1 actual error. After a 6 month period we have had 1 near miss error and zero patient identification errors. We are at 85% compliance with hand washing and our fall rate today is 0%. Members of the interdisciplinary team have adapted our new "culture." It is evident that adapted standards to our clinical practice has enhanced patient safety.

**Discussion and Implications:** Standardized practice has value and can easily be incorporated into private community practice. Oncology nurses should adhere to evidence based practice regulations and guidelines that promote patient safety. By utilizing nursing skills like observation, analysis and team work, we can prevent harm to patients and promote quality care.

## #26

**MASTECTOMY CARE PROGRAM.** Alisa Domb, RN, and Paulla Miller, CN-BA, both at John C. Lincoln Breast Health and Research Center; and Susan Hoffmeister, RN, Scottsdale Lincoln Health Network, all in Phoenix, AZ

**Objective:** Develop and implement an educational program for patients and their caregivers that address the physical and emotional needs surrounding mastectomy.

**Topic Significance and Study Purpose, Background, and Rationale:** In the United States unilateral mastectomy and contralateral prophylactic mastectomy procedure rates are on the rise for women with early stage breast cancer. The Surveillance, Epidemiology, and End Results (SEER) National Database reports that from 2001-2005 mastectomy rates decreased from 40.2% to 35.6%, yet in 2005 they began to increase to rates of 38.4%. Although breast conservation treatment is an appropriate primary therapy for the majority of women with early stage (I and II) breast cancer, mastectomy rates continue to increase. Nurse navigators have a unique opportunity to provide pre-surgical education as they coordinate care and facilitate communication between care team and the patient and caregiver. In an effort to increase patient satisfaction, encourage patient empowerment and reduce pre-procedural anxiety, the navigators at the John C. Lincoln Breast Health and Research Center developed a Mastectomy Care Program (MCP) and guide.

**Methods, Intervention, and Analysis:** The education program standardizes pre and postoperative care instructions and

informs patients and their caregivers what to 'expect' before, during and after hospitalization. At the time of surgery scheduling, patients are invited to attend the MCP which is offered weekly. Patients are encouraged to bring a friend or family member that is supporting them through their care. A brief hospital tour is followed by a one and half hour educational and support program that addresses the pre/post surgical instruction, drain care, pain management, Lymphedema, and post-mastectomy support and wellness programs. A MCP patient satisfaction survey is mailed out to participants following their surgery. This survey provides descriptive, quantitative and qualitative program measurements and feedback.

**Findings and Interpretation:** Approximately 50% of patients offered the class participated and 75% of those completed the survey. Mean total satisfaction score was 24.7/25. Thirty three felt 'prepared' as compared to 97% post. Eighty percent reported feeling 'empowered' following the program.

**Discussion and Implications:** Since its implementation, surgeons are requesting our program guide to distribute to all of their mastectomy patients as an educational guide for surgery. Nurses, office staff and outside navigators have also requested to attend the program due to their patient's positive feedback and experience.

## #27

**SYSTEMATIC METHOD FOR ASSESSING AND ADDRESSING PSYCHOSOCIAL DISTRESS IN VETERANS LIVING WITH CANCER.** Janice Schwartz, RN, OCN®, Stacey Schneider, RN, Mel DeHerrera, RN, MSN, Sandee Razner, RN, BSN, Rebecca Chavez, RN, MSN, and Wehner Sharon, RN, MSN, all at New Mexico Veterans Health Care System, Albuquerque, NM

**Objective:** Implementing the DISTRESS System provides a standardized method to assess and address Veterans psychosocial well-being; improving multidisciplinary team communication and empowering the Veteran, while tracking response and compliance of care.

**Topic Significance and Study Purpose, Background, and Rationale:** Recognizing the impact of a cancer diagnosis and the accompanying psychosocial distress, Surgical Services at the New Mexico Veterans Health Care System (NMVAHCS) developed a system to improve Veteran-Centered cancer care. The DISTRESS system complies with Commission on Cancer (COC) standards addressing physical, psychological, social, financial, and spiritual issues, which complicate treatment plans and negatively affect outcomes ([www.facs.org](http://www.facs.org)).

**Methods, Intervention, and Analysis:** The DISTRESS system, incorporated into the NMVAHCS computerized patient record system (CPRS) Cancer Survivorship Care Plan, creates permanent data within the medical record. Veterans complete a DISTRESS screening tool during the post-surgical visit, "a pivotal medical visit," as required by the COC ([www.facs.org](http://www.facs.org)). Veterans, acknowledging distress and willing to seek assistance, are automatically referred to the appropriate psychosocial service.

**Findings and Interpretation:** The DISTRESS System incorporates monitoring fields triggering consultations through CPRS to Palliative Care, Behavioral Health Care, Social Work, and/or Chaplin services. Embedding the DISTRESS System in the Survivorship Care Plan, allows the multidisciplinary team access to assessment information, referral outcomes, and compliance of care: improving communication and continuity of care. It also serves to track and report psychosocial distress and referrals to the Cancer Committee as required by 2015 COC guidelines ([www.facs.org](http://www.facs.org)). This automated and systematic process within CPRS provides Veterans with consistent psychosocial care and enables self-awareness. Veterans empowered with resources experience improved mental health and social well-being through the identification of positive coping skills; promoting optimal

survivorship. Veterans lacking the ability to engage become dependent or noncompliant.

**Discussion and Implications:** The DISTRESS System provides a consistent psychosocial assessment incorporated into the CPRS Survivorship Care Plan, offering a systematic, standardized, and sustainable process for psychosocial assessments. Health factors built into the system provide ability to track missed appointments and outcomes of care; identifying patients otherwise lost in the transition of care.

## #28

**NURSING'S ROLE IN REDUCING LENGTH OF STAY IN BMT PATIENTS.** Kathryn Moreno, MS, RN, OCN®, BMTCN, Virginia Lesperance, MSN, RN, and Laura Brown, MSN, RN, NE-BC, Mayo Clinic Florida, Jacksonville, FL

**Objective:** To describe effective nursing interventions in the reduction of length of stay in BMT patients.

**Topic Significance and Study Purpose, Background, and Rationale:** Receiving a Hematopoietic stem cell transplant (HSCT) is a life altering event (Cooke, Gemmill, Kravits & Grant, 2011). Being well prepared and well educated can decrease stress and anxiety in both patients and families (Garcia, 2014). Both nurse coordinators and inpatient nurses play a huge role in patient education (Krususka, Dmoszynska, Daniluk & Stanislawek, 2002). Intervention was needed at a small HSCT program at a teaching hospital in Northeast Florida in order to drive down length of stay in multiple myeloma autologous HSCT patients. Many of these patients have never been in an inpatient setting or received high-dose chemotherapy in the past and are starting education at a true baseline.

**Methods, Intervention, and Analysis:** Historically, the first day of HSCT admission was used as an education day, with treatment beginning day after admission. In order to reduce the length of stay, several nursing interventions were put into place over a period of time, ultimately resulting in the loss of the education day; with the patient treatment beginning on day of admission. These interventions include close collaboration between HSCT coordinators and inpatient nursing staff; the use of patient education binders; educational DVDs viewed and discussed pre-admission, and pre-admission hospital orientation. Length of stay over time was used as the measurement tool. In addition, review of patient satisfaction surveys occurred for qualitative feedback.

**Findings and Interpretation:** Through the integration of these interventions over time there has been both a significant reduction in length of stay in this patient population, from 20 days at project baseline to current average length of stay of 15.3 days. Qualitative feedback related to patient satisfaction was also reviewed. Patients state feeling well prepared and informed prior to hospitalization.

**Discussion and Implications:** Reducing length of stay in order to save cost as well as limit risk for infection needs to be a goal of all healthcare workers. By beginning the patient education process earlier nursing is able to have a significant impact on this goal. The nursing education piece is a component in a multifaceted, multidisciplinary project to drive down length of stay in this patient population.

## #29

**PROMOTING ADHERENCE TO SKIN CARE PRACTICES AMONG RADIATION ONCOLOGY PATIENTS.** Pamela Laszewski, RN, OCN®, Karmanos Cancer Center, Detroit, MI; Carol Bauer, MSN, RN, ANP-BC, William Beaumont, Royal Oak, MI; and Morris Magnan, PhD, RN, Lena Andriths, RN, OCN®, Eva Vera Cruz, BSN, RN, OCN®, and Cindy Zelko, RN, OCN®, all at Karmanos Cancer Center, Detroit, MI

**Objective:** The participant will be able to discuss two ways of promoting patient adherence to a treatment regimen.

**Topic Significance and Study Purpose, Background, and Rationale:** Radiation dermatitis occurs in 95% of patients who receive radiation treatment. Research related to radiation dermatitis has focused mainly on comparing the effectiveness of topical products with little attention to adherence. Benefits accrued from using even the most efficacious skin care products will not be realized if adherence is poor. There is an assumption that non-adherence to a prescribed therapy is a patient-centered problem related to a lack of knowledge. Often, patient teaching is the only intervention used to promote adherence. While knowledge is necessary to promote adherence, knowledge alone is not sufficient to ensure adherence. The World Health Organization identified five interacting factors/dimensions that affect adherence: health-system, social economic, therapy-related, patient-related, and condition-related. Interventions to enhance adherence are more apt to be successful when using multidimensional approaches. It was observed that head and neck cancer patients receiving radiation treatment developed severe radiation dermatitis. This raised questions about whether the one-dimensional method of teaching self-care to prevent radiation dermatitis was sufficient to promote understanding and adherence. The purpose of this project was to determine if a multidimensional approach to skin care education would influence adherence and decrease severity of radiation dermatitis.

**Methods, Intervention, and Analysis:** Head and neck cancer patients undergoing radiation therapy alone or concurrently with chemotherapy were educated about skin care. Instructions about skin care were provided using a multidimensional teaching intervention before starting treatment (video, verbal, written). Reinforcement occurred on weeks 1 and 3 with patients choosing the method of teaching, as well as self-reporting of adherence and satisfaction.

**Findings and Interpretation:** Over 90% of patients reported full adherence to skin care after three weeks. In addition, a majority of patients reported satisfaction with the teaching methods.

**Discussion and Implications:** This multidimensional intervention yielded a high level of adherence among head and neck cancer patients receiving radiation. In addition, skin toxicities were delayed in onset and of lesser intensity among patients using this approach. The use of appropriate skin care products to prevent radiation dermatitis is important. If products for the prevention of radiation dermatitis fail to perform, the patient's adherence to the use of the products should be evaluated before deciding that the product is ineffective.

**Underwriting or Funding Source Name:** The ONS Foundation.

## #30

**STANDARDS OF NURSING CARE SURROUNDING INTRAPERITONEAL CHEMOTHERAPY ADMINISTRATION AND MANAGEMENT IN AN OUTPATIENT SETTING.** Patrice Lin, BSN, RN, and Brooke Liddell, BSN, RN, both at Stanford Health Care, Stanford, CA

**Objective:** To standardize and increase Medical/Oncology staff nurse knowledge and comfort regarding safe administration, management, and patient education related to intraperitoneal (IP) chemotherapy in an outpatient oncology setting.

**Topic Significance and Study Purpose, Background, and Rationale:** Intraperitoneal (IP) chemotherapy is a treatment offered to patients diagnosed with ovarian cancer. Ovarian cancer is the fourth leading cause of cancer deaths among women and is typically confined to the abdominal cavity. IP therapy allows chemotherapy direct contact with the cancer cells; therefore a higher concentration of the drug bathes and attacks cancer cells at the forefront. Proper administration and management of IP

chemotherapy is essential in the success of treatment. Therefore, nurses must standardize patient care based on evidence-based practice in order to ensure safe and effective treatment.

**Methods, Intervention, and Analysis:** A literature review was conducted, and various medical facilities' IP chemotherapy policies were reviewed in order to collect evidence-based practice guidelines regarding IP chemotherapy administration and management. An in-service was then provided for our nursing staff to standardize administration, management, and patient education according to the established evidence-based practice guidelines. These guidelines were formalized in conjunction with a Clinical Nurse Specialist and current Unit Nurse Educator. Pre- and post-in-service surveys were conducted with these nurses in order to qualitatively and quantitatively assess knowledge and competency levels relating to IP chemotherapy and the effect of the intervention.

**Findings and Interpretation:** Post-in-service survey results revealed a two-fold increase in comfort and knowledge regarding IP chemotherapy administration and management amongst staff nurses one month following the in-service.

**Discussion and Implications:** Existing research suggests that the top three reasons for discontinuing IP chemotherapy are catheter and infusion-related complications/issues with access device, complications during IP infusions, and complications after infusion/intolerance to higher doses of Cisplatin. By implementing standardized, evidence-based care on our unit, nursing staff can aid in the prevention of premature termination of IP chemotherapy treatment, improve patient quality of life through better symptom management, and ultimately provide consistent and quality nursing care surrounding IP chemotherapy administration, management, and patient education. Future oncology studies can study pre- and post-in-service patient satisfaction ratings to determine whether providing the same in-service to nursing staff can improve patient satisfaction surrounding their IP chemotherapy experience. Future studies can also study whether the frequency in which IP chemotherapy treatment is prematurely discontinued decreases with increased knowledge and comfort of nurses providing this specialized care.

**#31**  
**DEVELOPING CONTINUING EDUCATION PROGRAMS TO SATISFY THE INDIVIDUAL LEARNING NEEDS ASSESSMENT (ILNA) OCN® RE-CERTIFICATION UTILIZING THE OCN® TEST BLUEPRINT.** Brenda Howard, MA, BSN, RN, OCN®, Moffitt Cancer Center, Tampa, FL

**Objective:** Evaluate current learning opportunities for professional growth, identify knowledge and resource gaps, and develop continuing education programs to meet those needs.

**Topic Significance and Study Purpose, Background, and Rationale:** When oncology certified nurses took the initial Individual Learning Needs Assessment (ILNA) and received their scores, there was much concern voiced on how those hours could be accrued. Most conferences and continuing education programs provide a limited amount of contact hours. In addition, many hospitals are limiting or eliminating conferences with their attending costs. At our National Cancer Institute (NCI) designated facility the Clinical Nurse Specialists have traditionally sponsored a yearly oncology conference and there have been recurring oncology programs provided by the Nursing Professional Development (NPD) Department. These programs however, have not tailored educational content specific to the OCN® test blueprint.

**Methods, Intervention, and Analysis:** A member of the NPD staff, did a convenience survey of hospital Nursing Council members, Clinical Nurse Specialists and the Nurse Residency Program Coordinator to obtain feedback on what they felt were the biggest gaps in the current educational programs. Utilizing

that information, the annual nursing needs assessment, new requirements for the clinical advancement ladder, and the current OCN® test blueprint, several new educational programs were developed and implemented in 2014.

**Findings and Interpretation:** Feedback from program evaluations, attendance, and organizational needs will provide direction for future programs. Additionally, other available resources were evaluated to determine how much of their content would satisfy ILNA requirements. This information was categorized according to the test blueprint, put into a Word document, posted to the Nursing Professional Development webpage and shared with the appropriate nursing councils. Once that had been completed, it was sent to all nurses within the Cancer Center.

**Discussion and Implications:** Response has been very favorable with several nurses expressing gratitude that they will be able to meet all their continuing educational requirements without having to worry about conference costs or taking time off. By utilizing the constantly updated NPD calendar, the OCN® nurse can map out his/her learning for the next year " a winning situation for everyone!

**#32**  
**INCREASING PRODUCTIVITY THROUGH COLLABORATIVE RESPONSIBILITY AND STAFF ENGAGEMENT.** Buena-gracia Delacruz, MBA, RN, OCN®, Lourine Davis, RN, OCN®, Roxann Blackburn, MSN, RN, OCN®, Reji Jacob, MSN, RN, OCN®, and Myra Granada, MSN, RN, OCN®, all at University of Texas MD Anderson Cancer Center, Houston, TX

**Objective:** Provide innovative ways in improving staff participation in process improvement to increase staff satisfaction with decision making, confidence, trust among the team members, and belief in what they are doing.

**Topic Significance and Study Purpose, Background, and Rationale:** Increasing Productivity through Collaborative Responsibility and Staff Engagement Background: Staff involvement in a shared governance model using unit-based professional action coordinating teams (PACTs) on a 74-bed inpatient stem cell and cellular therapy unit at a comprehensive cancer center was noted to be minimal. A reduced unit leadership structure managing more than 250 staff required that less traditional methods of accomplishing the work of the unit needed to occur. Purpose: The primary aims of this project were to create an evidence based program that would develop and engage staff to become leaders of focused work groups within the PACT structure, and increase independence from leadership for improvement of unit practice and operations.

**Methods, Intervention, and Analysis:** Intervention: Individuals were given the opportunity to lead sub-groups and practice autonomously to develop unit projects. The focus of interventions included changing the non-engaged culture to a "can do" one through staff engagement using a team approach. An increased emphasis was also focused on succession planning through mentorship, and support of staff leaders to accomplish tangible, attainable process improvement projects. Staff was encouraged to speak freely, share ideas and make decisions to improve processes. PACT chairs were mentored and guided in acquiring skills to manage meetings effectively. Staff also received assistance in initiative selection, and thinking through the unit and patient impact of the process improvement projects.

**Findings and Interpretation:** Evaluation: In FY 2012 and FY2013 the number of unit PACTs doubled, 85% of the staff were involved in unit projects and initiatives. PACTs became more patient centered. Employee Opinion Survey scores indicate that staff satisfaction with decision making, individual confidence, trust among the team members, and belief in what they are doing, has increased. Additionally, because of staff involvement, a 95% compliance rate in unit competencies and regulatory inspections was achieved.

**Discussion and Implications:** Discussion: Supporting and mentoring staff members in leading unit PACTs enables them to take initiative and become proactive with unit quality improvement. Providing guidelines and assistance in creating smart goals for each PACT presents an opportunity to accomplish small but achievable changes that make difference in unit operations and patient care delivery.

### #33

**CHEMOTHERAPY/BIOOTHERAPY CALCULATION AND VERIFICATION TOOL.** Deanna Griffie, RN, BSN, OCN®, UNC Lineberger Comprehensive Cancer Center, Chapel Hill, NC, Melanie Lutz, RN, BSN, OCN®, Catawba Valley Medical Center—Comprehensive Cancer Center, Hickory, NC

**Objective:** Participants will understand how a rural community hospital created a tool to ensure appropriate and safe calculation, administration and documentation of chemotherapy in the absence of EMR and smart pumps.

**Topic Significance and Study Purpose, Background, and Rationale:** A chemotherapy verification and administration tool was created in the absence of any published tool. This tool guides nurses to perform independent chemotherapy dose calculations and verify safe administration. A literature review was conducted to ensure the tool was evidence based. Proper use ensures consistent adherence to best practice. The development of this tool was innovative in the setting where electronic medical record (EMR), electronic bedside medication verification (EBMV) and smart pump technology are not yet available to help safeguard patients and clinicians. The tool was created due to a nurse reported medication error. New to the infusion clinic, a nurse administered a medication at the wrong rate. In the report she acknowledged that if a more seasoned nurse had been present as a second check to verify drug, dose and rate at the time of administration the error could have been prevented. Upon further investigation, it was discovered that nurses were calculating doses, but relying solely upon the ordering practitioners and compounding pharmacists to ensure doses were appropriate and safe. It was evident that best practice was not being observed due to drift and/or lack of step-specific required documentation. Two nurses were signing that the medication was correct, but were simply checking the pharmacy applied label against the order. The department supervisor and Shared Governance Committee searched the literature for a tool to improve our practice and ensure the safety of patients. No such tool was discovered. It was evident we would have to create one. A literature search ensued to uncover best practice recommendations and requirements to ensure we had a complete understanding of standards, requirements and recommendations by ONS and ASCO. Our mission was to increase clinician knowledge, improve proficiency and provide a practice environment which placed patient safety as goal one. The tool was developed and trialed in January 2014. Clinic nurses were instructed in use of the tool and provided rationale and evidence supporting this practice change. Minor changes were made in response to recommendations by trial nurses to improve usability. In February 2014 all nurses in the infusion clinic began using the tool.

**Methods, Intervention, and Analysis:** Completed tools were filed and later compared to the clinic schedule to determine compliance and proper use. Data was collected to determine how many tools resulted in “catches” by nursing staff. Completed tools were evaluated on all clinic days with all patients receiving chemotherapy. Data was compiled in a simple excel spreadsheet and evaluated by a professional nurse and senior nursing students. Staff nurses using the tool were also asked to complete an anonymous short questionnaire after nine months of consecutive use to gather data regarding individual perception of knowledge, proficiency, and safety. The survey consisted of 5 questions with answers given on a 5 point scale.

**Findings and Interpretation:** Data shows improvement in compliance with the tool over time. In February 2014 tools were used less than 70% of the time. By April 2014 greater than 85% compliance was demonstrated and by September 2014 greater than 90% compliance was determined. Of surveyed nurses, 98% report increased knowledge of safe practice related to chemotherapy/biotherapy administration and 96% report improved proficiency with dose calculations of chemotherapy/biotherapy. At present there have been 6 occasions where dose adjustments were made based upon dosing errors “caught” by nurses using the tool. It is unclear how many “saves” have occurred due to the two nurse check of rate and volume at the bedside/chairside. However, 76% of surveyed nurses report at least one instance where the rate of administration was changed because of the two nurse bedside/chairside check. It is clear that safety has been positively impacted as a result of this implementation. It is also evident that our nurses are more confident and knowledgeable as a direct result of using the tool and being held accountable for consistent use. Our facility was so impressed with the desire of staff nurses to improve patient safety in this setting that a budget request was approved to purchase smart pumps. These are now in use in the infusion clinic for all medication administration and in the inpatient units for chemotherapy/biotherapy administration.

**Discussion and Implications:** This tool can be implemented in any practice, anywhere without extra cost to the organization. It guides nurses in correct dose calculation and safe administration of chemotherapy/biotherapy using best practice. It has dramatically impacted care in a positive direction at a small community hospital in rural NC and has the same potential at other like facilities. It also has possible implications for use at teaching institutions and in classes to ensure understanding and proficiency and offer practice without the dependence upon electronics. Furthermore, it can be used during computer downtime to ensure practice standards are not compromised in even the most technologically advanced centers and clinics in the country.

### #34

**A FUNDAMENTAL APPROACH TO PREPARE NURSES FOR THE ONS CHEMOTHERAPY/ BIOOTHERAPY ONLINE COURSE.** Katherine Walczak, BSN, RN, CMSRN, Lynn Czaplewski, MS, RN, ACNS-BC, CRNI, AOCNS®, Emily Giever, MSN, RN, ACNS-BC, AOCNS®, Shannon Beran, BSN, RN, OCN®, Alie Lesko, MSN, RN, ACNS-BC, AOCNS®, and Julianna Manske, MSN, RN, OCN®, all at Froedtert Hospital, Milwaukee, WI

**Objective:** Participants will obtain working knowledge to create a fundamentals course to prepare oncology nurses to take the ONS chemotherapy / biotherapy online course and properly administer chemotherapy.

**Topic Significance and Study Purpose, Background, and Rationale:** In accordance with the Oncology Nursing Society’s (ONS) standard for all oncology nurses to be chemotherapy/biotherapy certified, Oncology Clinical Nurse Specialists and Nurse Educators created a Fundamentals course to prepare new nurses to take the ONS Chemotherapy/ Biotherapy online course and learn to administer chemotherapy. The Fundamentals course offered basic information about chemotherapy administration, specific chemotherapy agents, proper documentation, extravasations, and infusion reactions.

**Methods, Intervention, and Analysis:** The Fundamentals course is an eight hour day with didactic content in the morning and hands-on stations in the afternoon to cater to multiple learning styles. Stations allowed small groups of nurses to learn proper Personal Protective Equipment (PPE) techniques, explore the chemotherapy spill kit, practice documenting in an

EMR training environment, and give a presentation about one chemotherapy regimen to simulate patient education teaching in a controlled environment. A written exam tested individual competence at the end of the course. The course was designed to accommodate inpatient, outpatient infusion, and clinic oncology nurses at three sister hospitals and an affiliated oncology clinic with offered contact hours. A post evaluation gave participants the opportunity to provide qualitative feedback about the course.

**Findings and Interpretation:** All nurses passed the written test with a score of 80% or higher at the end of the course and demonstrated competence at each skills station. Of participants who attend 95.2% rated the program excellent or very good. In addition, 95.2% of participants strongly agreed or agreed the teaching methods were appropriate for the program.

**Discussion and Implications:** Overall the Fundamentals course was successful at preparing new oncology nurses to take the ONS Chemotherapy/ Biotherapy online course and administer chemotherapy competently. Other institutions may find the adaption of a Fundamentals course beneficial to prepare nurses to take the online chemotherapy/ biotherapy course, keep administration practices standardized as new nurses are trained, and maintain all oncology nurses ONS chemotherapy/ biotherapy certification.

**#35**  
**TECHNOLOGY MEETS ONCOLOGY: UNDERSTANDING THE SCIENCE OF TUMOR TREATING FIELDS, A NOVEL ANTIMITOTIC THERAPY FOR SOLID TUMORS.** Laura Benson, RN, MS, ANP, Novocure, Portsmouth, NH

**Objective:** The objective is to provide an overview of Tumor Treating Fields (TTFields™) including mechanism of action, review the evidence to date, and identify areas of future nursing research.

**Topic Significance and Study Purpose, Background, and Rationale:** Tumor Treating Fields (TTFields™) use electric fields functioning at intermediate frequencies of 100–300 kHz and at an intensity of ~1v/cm to disrupt the mitotic process at several phases of cell division. The mechanism of action (MOA) is grounded in the properties of physics that exploit the inherent properties of cellular components. The MOA leads to apoptosis and cell death of select, actively dividing cells while sparing quiescent cells.

**Methods, Intervention, and Analysis:** Preclinical evaluations have defined the appropriate frequencies and intensity needed by histological subtype. The TTFields are then frequency tuned to the targeted histology.

**Findings and Interpretation:** TTFields are a therapeutic option that is prescribed to treat selected solid tumors. In addition to the current use in recurrent glioblastoma (initial approval in 2011), TTFields are being evaluated in multiple worldwide clinical trials. These trials are examining the use of TTFields as both monotherapy, and in combination with standard therapeutic options (chemotherapy, radiation therapy, surgery, biological etc.). These trials include brain metastases, lung cancer, ovarian cancer, and pancreatic cancer. This novel regional modality is delivered via a medical device that is applied on the surface of the skin and is non-invasive. Unlike drug therapy TTFields deliver therapy while activated but have no traditional half-life. Therapy is self-administered and is managed as an outpatient. The most commonly occurring adverse event is skin irritation, largely grade 2 (mild to moderate) and requires patient education for employing prevention and management techniques. Treatment compliance, or time on therapy with a goal of ~18 hours/day is closely monitored and has proven to be an important factor in treatment outcomes. The nature of the mode of delivery, via a device that is visible and a constant presence requires caregiver and patient support and dedication.

**Discussion and Implications:** As this modality widens in use outside of neuro-oncology it is imperative that oncology nurses understand the science, the delivery method and psychosocial/ management issues involved. An understanding of this therapeutic option and patient care issues are required in order to develop and implement plans of care. TTFields are a new modality with much needed education and nursing research to provide evidenced based practice recommendations.

**Underwriting or Funding Source Name:** The author is an employee of Novocure, Inc (Portsmouth, NH) Device manufacturer.

**#36**  
**PERSONALIZED SURVIVOR CARE PLAN POST-HEMATOPOIETIC STEM CELL TRANSPLANT.** MaryEllen Galiczynski, RN, BSN, OCN®, Cancer Treatment Centers of America, Philadelphia, PA

**Objective:** To develop a mechanism to ensure continuity and shared care between the stem cell transplant team and the hometown physician.

**Topic Significance and Study Purpose, Background, and Rationale:** With early intervention and advanced treatment of hematologic malignancies, there is an increasing population of cancer survivors who have received stem cell transplant. Our patients travel an average of 300 miles to receive treatment. While the attending oncologist is responsible for care during the transplant process, post-transplant care is transitioned to the hometown physician once the patient is clinically stable and able to return home. Due to the unique care needs of this patient population, early recognition of post-transplant issues and appropriate intervention are vital to obtain the best possible patient outcome. With the development of a new stem cell transplant program, a survivor care plan (SCP) program was implemented to provide the hometown physician with pertinent medical information.

**Methods, Intervention, and Analysis:** A literature review revealed evidence-based recommendations for post-stem cell transplant management. Using our hospital's mission and vision as foundation, a care plan template was developed based on these evidence-based practices. The SCP includes, but is not limited to: pre-transplant disease status, stem cell transplant treatment details and clinical course, and post-transplant care including assessment, recognition, and interventions for early and late complications. The SCP is sent to the patient's hometown physician upon discharge, and also contains contact information for the transplant team.

**Findings and Interpretation:** Sixty-three percent of hometown physicians surveyed noted the SCP was a vital component of the transition to outpatient post-transplant care. Because of the SCP, both patients and physicians have confidence that continuity of care will continue throughout the immediate and long-term post-transplant period. Hometown physicians follow a guide which includes a vaccination schedule and treatment by specialty physicians. To date, none of our transplant patients who received a SCP have had any serious short or long-term complications associated with their transplant.

**Discussion and Implications:** The personalized care plan provides an overview of the transplant process. It empowers both the patient and hometown physician to be an active participant in the post-transplant care.

**#37**  
**ADAPTATION OF INPATIENT DOCUMENT TO OUTPATIENT DOCUMENT YIELDS INCREASED PATIENT SATISFACTION SCORES.** Megan Nelson, BSN, RN, OCN®, Sue Singleton, BSN, RN, OCN®, and Lois Mangione, RN, all at Cleveland Clinic Foundation, Cleveland, OH

**Objective:** Increased patient satisfaction scores, above benchmark, by increasing patient education for newly initiated chemotherapy treatment patients.

**Topic Significance and Study Purpose, Background, and Rationale:** Patient satisfaction scores are a driving force in healthcare today. Oncology patients are given an abundance of information in a small period of time along with a new cancer diagnosis. Upon evaluation of patient surveys it became apparent that patient's satisfaction, in relation to understanding what happens after first chemotherapy treatment, was lacking.

**Methods, Intervention, and Analysis:** Through a collaborative effort at shared governance meetings and in small subcommittee meetings, the adaptation of an inpatient document to fit the teaching needs of the outpatient oncology patient was created.

**Findings and Interpretation:** The desired outcome was to increase patient satisfaction scores, as reported by Press Ganey surveys, above the national benchmark.

**Discussion and Implications:** By having a uniform teaching document to present to patients receiving first time chemotherapy treatments and/or new regimen treatments, employee satisfaction was also reported improved amongst the infusion suite nurses. Overall patient satisfaction scores from Gallop Surveys increased above benchmark for "Chemotherapy Suite" and "Personal Interest" section. Information was presented enterprise wide at OPEC—Oncology Education Committee and was adapted into additional Cleveland Clinic outpatient oncology settings.

### #38

#### **WEIGHING IN: ACTUAL VS IDEAL VS ADJUSTED BODY WEIGHT TO CALCULATE DOSE OF MELPHALAN IN PATIENTS WITH MULTIPLE MYELOMA UNDERGOING AUTOLOGOUS STEM CELL TRANSPLANTATION.**

Michelle Kopp, MSN, RN, AOCNS®, NE-BC, and Giampaolo Talamo, MD, both at Penn State Hershey Medical Center, Hershey, PA

**Objective:** Discuss the dosing implications based on different weight calculations for patients undergoing melphalan autologous transplant.

**Topic Significance and Study Purpose, Background, and Rationale:** High-dose melphalan (Mel) is the standard chemotherapy regimen used in autologous stem cell transplantation (ASCT) for multiple myeloma (MM). There are no established guidelines about the methods of calculating the final dose of Mel based on patients weight. This issue is of particular importance because of the current epidemic of obesity, and because of the known association between MM and obesity. Methods for calculating dose reductions also vary from the use of an adjusted weight, ideal weight, or a lean body weight. Our institution uses the adjusted body weight (AjBW) to calculate the final Melphalan dose, based on the formula  $AjBW = IBW + 0.25(ABW - IBW)$ , where IBW and ABW are the ideal and the actual body weights, respectively.

**Methods, Intervention, and Analysis:** We reviewed data of 30 consecutive Multiple Myeloma patients undergoing Autologous Stem Cell Transplant, and analyzed the variability of using Melphalan with their IBW, AjBW, and ABW.

**Findings and Interpretation:** The median body mass index (BMI) of our patients was 28.2 (range 17.4-39.7, S.D.  $\hat{A}\pm 5.2$ ). Mean final doses of Mel were 307 ( $\hat{A}\pm 58$ ), 321 ( $\hat{A}\pm 60$ ), 357 ( $\hat{A}\pm 71$ ) mg, using IBW, AjBW, and ABW, respectively ( $p = 0.008$ ). When compared with ABW dosing, we observed a >10% dose reduction of Mel using AjBW and IBW when BMI exceeded 29.8 and 27.4, respectively (Figure 1). BMI >34.5 led to a >20% dose reductions with both AjBW and IBW.

**Discussion and Implications:** The empiric AjBW formula leads to a significant reduction of the Mel dose in overweight/

obese patients. Further research is necessary to optimize dosing of Mel in these patients, and to establish whether the use of AjBW vs ABW negatively affects the ASCT efficacy in MM.

### #39

#### **DEVELOPING A TOOL FOR NURSES TO ASSESS INFECTION RISKS OF PEDIATRIC ONCOLOGY PATIENTS IN CHINA: A MODIFIED DELPHI STUDY.**

Yu-Feng Zhou, Hong Wang, and Yan Cui, all at Nanjing Medical University; and Fang Wang, RN, Yan Shen, RN, and Chao Lu, MD, PhD, all at the First Affiliated Hospital of Nanjing Medical University, all in Nanjing, China

**Objective:** To develop a nursing-work based, bio-psycho-social, and China-special tool to assess infection risks of pediatric oncology patients

**Topic Significance and Study Purpose, Background, and Rationale:** Malignant tumors are the second cause of death in children. Infections are main complications and main direct mortality cause of these children. Infections also cause more expenditure, anxiety, and depression of these children and their families. So prevention of infections means longer and happier lives for them. Assessing and stratifying of infection risks are essential to prevent these children from infection. Some tools were developed. But there were some questions among them. Briefly, they were mainly treatment-oriented, physical factor-focused. And there is no China-special tool developed by now.

**Methods, Intervention, and Analysis:** This study was a modified Delphi study. three steps were followed. First, through literature review and a face-to-face workshop, a 37-item questionnaire was developed depending on nursing-work and Chinese health system, 8 items were about social and psychological factors. Second, 24 experts of infection control professionals, pediatric oncologists and nurses were chosen from 8 hospitals in 6 provinces of China. Thirdly, a three-round consultation was done. What items that should be assessed were selected in the first and second rounds consultation, and how to assess these items was figured out in the third round consultation.

**Findings and Interpretation:** A tool named Nursing Assessment Tool of Infection Risks of Pediatric Oncology Patients was developed. It included 20 items. The items were thought to be suitable for Chinese special health system and 14 items were nursing-work based. But neither social nor psychological items were in this tool.

**Discussion and Implications:** 1. This tool was thought to be nursing-work based, China-special, but not bio-psycho-social. The influence of social and psychological factors on infection risks deserves further study. 2. For Chinese pediatric oncology nurses, this tool may be followed easily to assess and control infection risk of pediatric oncology patients. The efficacy of it needs to be confirmed. 3. For nurses of other countries, this research highlighted the importance to develop a nursing-work based tool.

**Underwriting or Funding Source Name:** This research was funded by Nanjing Medical University, the First Affiliated Hospital of Nanjing Medical University, and the Educational Department of Jiangsu Province.

### #40

#### **AMBULATORY NURSES PERCEPTIONS GLEANED FROM A COMMUNITY NEEDS ASSESSMENT.**

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**Objective:** Participants will be able to discuss the perceptions of ambulatory nurses regarding gaps in the care of oncology patients.

**Topic Significance and Study Purpose, Background, and Rationale:** The UVA Cancer Center provides world-class cancer care backed by cutting-edge research and innovative clinical trials. Our mission is to both reduce the burden of today's cancer patients through skilled, integrated, and compassionate care, and to eliminate the threat of cancer for future patients through research and education. In order to gauge our efforts, especially around supportive care services, we conducted a community needs assessment with internal cancer center informants, including nurses, and key external community informants. The purpose of this analysis was to explore ambulatory nurses perceptions of delivering supportive care in an academic medical center with a rural catchment area.

**Methods, Intervention, and Analysis:** Cancer center key informants (nurses, physicians, support staff), community partners (medical providers in the community who refer to the cancer center), and community members underwent in-depth interviews regarding an overall needs assessment for the cancer center. Interviews were transcribed verbatim and coded based on hermeneutic interpretation. Results were interpreted using content analysis.

**Findings and Interpretation:** Several themes emerged: (a) Patients need more supportive care post treatment, (b) More mental health support is needed to deal with social and emotional stressors, (c) Patients seeking care at affiliated sites in remote location require more support as they do not have ready access to services offered at the main location

**Discussion and Implications:** Due to the widespread nature of our Cancer Center, novel and innovative methodologies are being explored to bridge these gaps including telemedicine which can be used to provide supportive services to patients at off-site clinics. Additionally, adopting a standard survivorship plan that begins at diagnosis could help to integrate services more consistently throughout the continuum of care. Survivorship plans can also be shared post treatment with patients primary care physicians

#### #41 PATIENT EDUCATION FOR BETTER PAIN MANAGEMENT.

Aurora Davis, RN, BA, BSN, OCN®, University of Colorado Hospital, Aurora, CO

**Objective:** The objective of this quality improvement project was to improve patient satisfaction scores for pain management on two inpatient units in an acute care regional academic medical center.

**Topic Significance and Study Purpose, Background, and Rationale:** Improving patient satisfaction scores is of vital importance to all healthcare providers and is a current hot topic of discussion. Satisfaction scores are frequently tied to reimbursement and are used as a benchmark when determining where an increasingly educated populace wishes to receive care. The patient satisfaction scores for pain management were consistently below benchmark on two inpatient units in the acute care setting of a regional academic medical center. The purpose of this quality improvement project was to improve patient satisfaction scores for pain management on an oncology/medicine/ gynecological oncology (OMG) unit and a bone marrow transplant (BMT) unit. A literature search was performed to review current evidence. The search revealed that patient education is key to pain management. The lack of patient education can be a barrier to pain management, while proper patient education significantly increases overall patient satisfaction regarding pain management and also reduces barriers to adherence, which improves outcomes.

**Methods, Intervention, and Analysis:** An education tool was developed to teach patients about pain management. The tool was implemented on the target units (and later hospital-wide) and subsequently provided to every admitted patient upon

their arrival to the unit. The tool was given to patients by the bedside nurse and was accompanied by teaching.

**Findings and Interpretation:** Patient's satisfaction was measured using the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey. Satisfaction scores for each unit were examined pre- and post-intervention. Scores on the OMG unit increased, while scores on the BMT unit decreased. Additional factors may play a role in this discrepancy, such as the existence of a dedicated admission nurse on the OMG unit, who provides consistent pain management teaching upon admission. A larger sample size of post-intervention data would also be valuable.

**Discussion and Implications:** The literature shows that patient education can be helpful for improving patient satisfaction with pain management. Outcomes from this quality improvement project are mixed, which may be reflective of the multifactorial nature of pain management. Teaching tools must be accompanied by a thorough one-on-one teaching session to present the information and allow for an in-depth discussion.

#### #42 USING AN AUDITORY CUE TO INCREASE ADHERENCE TO TIMELY PAIN REASSESSMENT.

Clara Beaver, MSN, RN, AOCNS®, ACNS-BC, Sandra Randolph, RN, OCN®, and Brenda Kaufman, BSN, RN, OCN®, all at Karmanos Cancer Center, Detroit, MI

**Objective:** The learner will be able to identify one strategy to help increase adherence to timely pain reassessment.

**Topic Significance and Study Purpose, Background, and Rationale:** Institutional policy requires pain reassessment and documentation within 60 minutes of administering pain medication; but nursing adherence to this standard-of-practice is only 47%. The reasons for non-adherence are unclear. The literature suggests that poor recall may contribute to poor adherence and that adherence may improve if nurses are cued to action. Sutherland and Mather (2012) found when using auditory cues as a reminder to take action it did not matter what sound was used, it still had the positive effect of increasing recall. Pain assessment and documentation improves pain management. More favorable pain trajectories can be achieved when pain reassessment occurs within one hour of administering pain medication. Taking steps to improve nurses recall, documentation are needed to improve patient satisfaction with pain management. The purpose of this process improvement initiative was to improve patient satisfaction with pain management.

**Methods, Intervention, and Analysis:** Nurse used an auditory cue from a simple kitchen timer to stimulate recall to improve adherence to the pain reassessment and documentation standard-of-practice as well as patient satisfaction.

**Findings and Interpretation:** Outcomes evaluation showed improvement from 47% to 93.5% for pain reassessment and documentation. Patient satisfaction based on Press Ganey scores increased from a mean of 87.5% to 90.9%.

**Discussion and Implications:** Failure to adhere to pain reassessment guidelines often is attributed to nurses lack of understanding, undervaluing by nurses, or workflow. Results of this project suggest that poor adherence to documentation of pain reassessment may be attributable to something as uncomplicated as simple recall. Patient satisfaction with pain management is an important outcome of effective nursing care especially for oncology patients. The use of auditory cues offers a simple solution to improving care. Although the sample for this project was small, it has shown that an auditory cue can help increase the adherence to pain reassessment and improve patient satisfaction with pain management. Literature shows that most interventions related to increasing adherence to pain assessment/reassessment have been geared toward education. Researchers need to look at other barriers, such as nursing workflow and recall to help

determine the appropriate interventions to engage staff in recall of timing for assessment/reassessment of patient's pain level.

#### #43

**UTILIZATION OF A NEEDLELESS CLOSED BLOOD SAMPLING SYSTEM IN THE NEUTROPENIC POPULATION ON AN INPATIENT ADULT MEDICAL SURGICAL ONCOLOGY UNIT.** Dawna Barna, BSN, RN, Michele Long, MS, BSN, OCN® NE-BC, Joan Mervine, RN, CMSRN, CBN, and Margaret Reed, BSN, RN, OCN®, all at Geisinger Medical Center, Danville, PA

**Objective:** To discover if using a closed blood sampling device enhances or hinders practice with central lines and contributes to reducing central line blood stream infections.

**Topic Significance and Study Purpose, Background, and Rationale:** A spike in the number of central line associated blood stream infections was noted prompting process improvements and introduction of a closed blood sampling system on an inpatient medical surgical oncology unit. Data to support utilization included six diagnosed blood stream infections from July 2014 through September 2014 and a yearly total of eleven blood stream infections from October 2013 through September 2014 ranking the unit infection rate higher than any other unit in the hospital. The central line utilization ratio reflects 3,385 device days corresponding to 4,963 patient days for this unit with a rate of 0.68. Target rate has been established at 0.1 and alarm rate at 0.21 demonstrating a significantly high central line utilization rate.

**Methods, Intervention, and Analysis:** In collaboration with Infection Control education was rolled out to the unit by the clinical nurse educator and career enhancement nursing staff to train nurses on the system set-up and functionality of the closed blood sampling system. Hands-on demonstration and teach back methodology were used in order to optimize the education. A senior nursing student supported the learning process through conducting staff in-services and developed a post-test presentation quiz to determine effectiveness.

**Findings and Interpretation:** Evidence supports that using the closed blood sampling system allows for safe blood sampling, decreased infection rates, and minimal blood wasting in specific populations. Despite a variety of resources available for nursing to perform a literature search barriers were identified in locating evidence based research related to the ambulatory oncology patient population and utilization of a closed blood sampling system.

**Discussion and Implications:** Impacts on current practice reflect variable results in ambulatory oncology patients with single access devices. Team collaboration based on product use and outcomes can promote a positive culture of safety with respect to preventing central line associated blood stream infections. Much work remains to be done regarding the pros and cons of the closed blood sampling system for this level of care.

#### #44

**LOW VOLUME, HIGH RISK: IMPROVING COMPLIANCE OF EXTRAVASATION FOLLOW UP.** Leticia T. Smith, MSN, FNP-BC, OCN®, Jericho A. Garcia, MSN, RN-BC, Nilda E. De Jesus, MSN, RN-BC, Maryellen O'Sullivan, MA, RN, OCN®, Rosemary O. Semler, MA, RN, AOCNS®, and Diana Tam, BSN, RN, OCN®, all at Memorial Sloan Kettering Cancer Center, New York, NY

**Objective:** To improve patient outcomes post extravasation as evidenced by adherence to prescribed follow up policy and completed documentation in a newly designed electronic extravasation assessment form.

**Topic Significance and Study Purpose, Background, and Rationale:** Extravasation is an uncommon but potentially de-

bilitating side effect of chemotherapy administration, resulting in tissue, muscle and nerve injury, poor patient outcomes and decreased quality of life. On average, we administer approximately 74,000 prescribed vesicant and irritant chemotherapy doses in a year, of which approximately 94 result in suspected or actual extravasations. We continually strive to improve compliance to our policy for follow up of these events when they do occur, believing that conscientious monitoring can result in better patient outcomes. With that goal, in 2012 the Extravasation Assessment Form was amended to be more comprehensive and user friendly. Since its initiation, compliance rates for many aspects of the extravasation follow up policy have improved. In the past year, nurse clinicians have partnered with nursing informatics to convert this form to an electronic version.

**Methods, Intervention, and Analysis:** The electronic tool has multiple advantages: a copy forward feature for information surrounding the initial event provides ease of use and prevents errors in transcription assessments in flow sheet format track patient progress document connects to event reporting system via electronic order entry, nurses are alerted when follow up assessment must be made in compliance with the policy logic built into the form prompts nurses to document the requirements necessary for compliance.

**Findings and Interpretation:** Metrics include improved reporting, standardized data collection and analysis. After analyzing the data from 2012 to present, we have demonstrated improvements in the documentation of: interventions patient education assessments discharge from follow up.

**Discussion and Implications:** Changes to the standard Extravasation Assessment Form resulted in improved compliance to our follow up policy. Standardization of practice across the inpatient and outpatient care continuum through automation allows for less fragmented care and provides a process to measure compliance, nursing interventions and outcomes. The development of the form has linked nursing informatics and nursing quality to nursing practice, resulting in better care and more robust research. This presentation will demonstrate how such collaboration can be applied to other high risk, low volume procedures performed by nursing to improve patient care outcomes.

#### #45

**GETTING A PERIOPERATIVE RISK STUDY OFF AND RUNNING.** Marie Riehl, RN, BSN, OCN®, and Virginia Martin, RN, MSN, AOCN®, both at Fox Chase Cancer Center, Philadelphia, PA

**Objective:** To outline the role of a nurse coordinator in a randomized controlled trial of perioperative risk stratification and risk-based, protocol driven management in patients undergoing major cancer surgery

**Topic Significance and Study Purpose, Background, and Rationale:** Surgical resection is the cornerstone of therapy in patients with non-metastatic cancers, many who may have other co-morbidities and/or received chemotherapy and/or radiotherapy. At a comprehensive cancer center the physician principle investigator (PPI) of a large randomized trial planning to assess risk by stratification quickly realized that help was needed by nursing to help coordinate the many care areas involved in the study. The purpose of the trial is to evaluate whether the use of new tools to assess a patients risk of major complications or even death before and after surgery can be decreased by implementing a systematic assessment before resection and again immediately postoperatively. This clinical innovative program is the first surgical study that will examine the benefit of the use of a preoperative risk calculator and a postoperative surgical Apgar score. Nursing's role is an integral part of this assessment.

**Methods, Intervention, and Analysis:** The importance of multi-department participation was crucial as this is a study that involves care at multiple time points at consent, before



surgery, during pre-admission testing, preoperatively, post operatively, and post discharge. Working with the PPI in ambulatory care and having an established relationship because of a collaborative practice, the nurse colleague quickly became involved in the study deployment. The first focus was to help coordinate the education of the nurses during each data collection point. The PPI and the nurse met, outlining the education program and coordinated time frames to educate all departments and provide the staff with the scope of the study and its goals.

**Findings and Interpretation:** Coordination of care with the protocol staff, preadmission testing staff, physician and the patient is the clinical nurse's responsibility as they are often the frontline caregiver introducing the information about the study prior to the decision to participate. The nurse begins the process in the clinic with the initial visit, then the hand-off to the protocol nurse, preadmission testing nurse, PACU nurse and staff nurse at the bedside.

**Discussion and Implications:** The implementation of the study was a challenge and ongoing education continues for the staff and the patients. This is a pathway to implement and improve patient outcomes.

#### #46

**OBTAINING ORAL CHEMOTHERAPY: PERFECTING THE PROCESS.** Shannon LaRoche, RN, BSN, OCN®, Barbara Matthews, RN, BSN, OCN®, Jeanne Marie Wheatley, RN, BSN, Kaitlyn Miller, RN, BSN, and Virginia Martin, RN, MSN, all at Fox Chase Cancer Center, Philadelphia, PA

**Objective:** To outline the process for ordering, tracking and assisting patient's with Oral Chemotherapy in an ambulatory care genitourinary and hematology practice at a comprehensive cancer center.

**Topic Significance and Study Purpose, Background, and Rationale:** Oral Chemotherapies have moved treatment delivery away from intravenous therapy to a more convenient modality. With this new frontier of treatment follows adjusted practice management strategies for the outpatient nurse assisting in obtaining oral chemotherapy. The orders for the drugs cannot be processed as easily as handing the patient a prescription, complications in the processes include: investigation of insurance coverage, connecting with specialty pharmacies, cost assistance and communication with the patient and care-team lead to the need for development of a central accessing system. The outpatient nurse started the process and time was lost obtaining the drug due to a disconnect in the drug procurement process. Added nursing work burden was noted as many follow up calls from patients and family members were generated asking about the status of their medication. Occasionally patients presented at their next follow up visit and had not heard any updates regarding their medication from the clinic or the pharmacy.

**Methods, Intervention, and Analysis:** The nursing teams created an oral therapy log sheet including the patient prescription copy, the insurance and contact information, open issues were noted, who to call back, when last call was placed and whose drug shipped. Day to day updates were added in real times, all clinicians can access the file and communicate accurate information to the patient or family.

**Findings and Interpretation:** Nurses and physicians can easily access the timeline of processing oral chemotherapies. Anyone working on the team can provide up to the minute status report on process for an individual patient. Nurses are contacting patients every step of the way and communicating where we are in the process. Compliance with the newly ordered medication is improved.

**Discussion and Implications:** The explosion of oral medications for oncology treatment demands an organized and clear step by step process that saves valuable time and promotes patient safety with compliance. Implementation of a clear process

established a greater trust between the clinic staff team members and the patient.

#### #47

**ONCOLOGY NURSING'S IMPERATIVE ROLE IN THE EDUCATION, ENGAGEMENT AND NAVIGATION OF ADVANCE CARE PLANNING.** Jennifer Blissitt, BSN, RN, and Erin Young, BSN, RN, both at Froedtert Hospital, Milwaukee, WI

**Objective:** Participants will be able to identify the Registered Nurse's role in facilitating conversation centered on patient's values and experiences regarding advance care planning and coordinate efforts to initiate cultural change.

**Topic Significance and Study Purpose, Background, and Rationale:** In a surgical oncology practice, participation took place in the statewide Honoring Choices of Wisconsin pilot program to enhance advance care planning. Oncology nurses were imperative to the process as strong drivers regarding patient readiness and compliance as patients look to nurses for information and direction. Developing a system that embraces this approach allows for normalizing this challenging conversation and better decision making for patients and their families. This method ultimately leads to respecting and honoring their choices if and when they may be faced with end of life decisions.

**Methods, Intervention, and Analysis:** Data collection through sensing sessions of providers and nurses were completed prior to the start of the pilot. This revealed that gaps exist in our current process and culture. Also prior to the pilot, nurses prepared and led multidisciplinary teams that were trained in advanced communication skills to conduct the facilitated conversations. During the pilot, focused questionnaires were completed by patients and utilized as an introduction to the topic and recruitment strategy. Patients who then completed the process participated in a Likert survey measuring their level of satisfaction with the advance care planning discussion.

**Findings and Interpretation:** Approached were 295 patients with 95 agreeing to a conversation. A prior advanced directive was reported in 116 of those approached, and a total of 34 took the opportunity to have their previous document reviewed. In total, 41% completed the process. Registered nurses played a crucial role coordinating efforts to recruit and engage patients by providing education and the necessary navigation to complete the enhanced advance care planning process in this pilot.

**Discussion and Implications:** We identified that our current workflow is centered on the completion of the document and lacks a comprehensive discussion between the patient and provider about advance care planning. This can lead to potential confusion and conflict when a patient is no longer decisional at end of life. Oncology nursing involvement was paramount; illustrating the value of having a more robust, facilitated conversation centered on personal values, beliefs and experiences in regards to advance care planning. Furthermore, nurses play key roles in pushing for change in organizational culture to bring forth better outcomes.

#### #48

**DECREASING CHEMOTHERAPY DELAYS ON AN INPATIENT ONCOLOGY UNIT: NURSING USE OF A CHEMOTHERAPY TRACER CHECKLIST.** Karin Swiencki, MSN, RN, AOCN®, and Jennifer Rein, BS, RN, OCN®, both at New York Presbyterian Hospital, New York, NY

**Objective:** To implement the use of a chemotherapy tracer checklist to gather data about factors that lead to an increased length of stay for patients admitted for the (R)EPOCH chemotherapy regimen.

**Topic Significance and Study Purpose, Background, and Rationale:** The inpatient oncology bed is a valuable and

limited resource, and the specialized Oncology RN care provided is, as well. Unavailable beds on the Oncology Unit can lead to admissions of oncology patients off the Oncology Unit, or lead to delays in planned chemotherapy admissions. Delays in chemotherapy administration can lead to an increased length of stay. Optimizing patient throughput by decreasing chemotherapy administration delays can have a major impact on length of stay on the Oncology Unit. It was identified that some patients admitted for the (R)EPOCH chemotherapy regimen experienced delays in various areas of their treatment that increased their expected length of stay from five days to six. Tracking admissions for these patients could identify areas that could lead to improved throughput for these patients.

**Methods, Intervention, and Analysis:** The Chemotherapy Nurse reviewed the length of stay data for 20 patients who received the (R)EPOCH chemotherapy regimen in the three months prior to April, 2014. The Chemotherapy Nurse and the Clinical Nurse Specialist developed a Chemotherapy Tracer Checklist to track key time elements for patients receiving the "(R)EPOCH" Chemotherapy regimen. The (R)EPOCH treatment is planned for 6 cycles every 21 days, with an expected five-day length of stay. The Tracer Checklist was used by the bedside Oncology RNs to track admissions from April, 2014 through July, 2014. The first part of the checklist tracked pre-chemotherapy elements, and the second part enabled the RNs to track the times for chemotherapy administration each day through patient discharge.

**Findings and Interpretation:** The number admissions who experienced a 5-day length of stay Pre-tracer checklist implementation was 8, and the number during the use of the checklist was 14. The number of patients who experienced a 6-day length of stay or greater pre-checklist was 12, and the number during the use of the checklist was 6.

**Discussion and Implications:** The tool enabled the RNs to identify areas that they could focus on to facilitate timely start of chemotherapy. The results of the project were presented to the Oncology Care Team to allow an opportunity for the pharmacy and medicine teams to review areas to improve on their areas related to timely chemotherapy administration.

#### #49

**CALL CENTER CHALLENGE: IMPROVING THE PROCESS FROM THE FRIST CALL.** Virginia Martin, RN, MSN, AOCN®, Fox Chase Cancer Center, Philadelphia, PA

**Objective:** Describe a process improvement project at a nurse call center aimed to improve the triage phone call procedure and impact the patient satisfaction with call response time.

**Topic Significance and Study Purpose, Background, and Rationale:** Assessment, triage and management of patients experiencing cancer-related symptoms is an essential skill for the ambulatory oncology nurse. Telephone triage is a centralized model at a comprehensive cancer center with a staff of 7 RN's and 3 dispatchers who triage an average of oncology 350 patients calls each day. Implementation of an electronic documentation system for all ambulatory visits and phone encounters created new opportunities to revamp the current flow of a call, standardize the call handling from the beginning, and impact the patient satisfaction regarding the phone center response.

**Methods, Intervention, and Analysis:** Collaboration with the information technology team revealed that members of the team could be placed on a computerized call center program. With the addition of a data system, volumes, time to answer, abandon rates and length of time on a call was collected and monitored. A decision was made to change process, answer all calls LIVE and keep voice mail volume to a minimum. Additionally nurses who traditionally had called back all callers after receiving a typed message were directed to change the work flow and answer live from the dispatcher.

**Findings and Interpretation:** With data it became obvious that there were high volume days and hours for the call center. Abandon call rates did not meet the national benchmark and time callers were on hold also exceeded benchmark. The system has supplied data to support hiring another full time dispatcher. Nursing immediately saw an improvement in the workload at the end of the day since calls were answered quicker and resolutions to calls were completed earlier. Patients and families noticed the immediate change and were positive about the change.

**Discussion and Implications:** The call center continues to work on methods to improve the turnaround time of the call. Patient satisfaction data now includes a question specifically about call center satisfaction. Continued process improvement with call center processes are focusing on nursing assignments and strengthening competencies in telephone triage.

#### #50

**STAFF NURSES HAVE THE POWER TO CHANGE: VASCULAR ACCESS DEVICE (VAD) CHAMPION-DRIVEN CENTRAL LINE-ASSOCIATED BLOOD STREAM INFECTIONS (CLABSI) PREVENTION PROJECT.** Ikuko (Koko) Komo, MSN, CNS, RN, AOCNS®, Pensri Wanrakakit, BSN, RN, Michael Baron, BSN, RN, OCN®, Andrea Plati, MSN, RN, OCN®, and Lisa Jafari, BSN, RN, all at Stanford Hospital and Clinics, Stanford, CA

**Objective:** The participant will comprehend that evidence-based practice and a staff nurse driven team approach can lead to CLABSI reduction.

**Topic Significance and Study Purpose, Background, and Rationale:** CLABSI is one of the most deadly infections in immunocompromised cancer patients and can be incurred by a single practice deficit in central line (CL) maintenance. Diligent care following evidence-based hospital policies is essential to prevent CLABSIs. However, at a Magnet designated hospital where more than 90% of patients have a CL, there were inconsistent practices observed among nursing staff and a high rate of CLABSIs persisted on the Hematology/Oncology unit. The purpose of this evidenced-based practice project is to reduce the rate of CLABSIs with the lead of VAD Champions supported by a Unit Shared Leadership Council (SLC) consisting of staff nurses, a Clinical Nurse Specialist (CNS), a Unit Educator, a Management Team and an Infection Control Nurse.

**Methods, Intervention, and Analysis:** The Unit SLC set up the CLABSI project as one of the unit goals and disseminated it to nursing staff to increase awareness of the importance of prevention of CLABSIs. VAD Champions from each shift have attended bi-monthly educational meetings coordinated by VAD Committee to gain knowledge of CLs. They also review unit data of CLABSIs at the meetings and discuss intervention strategies with the CNS and Management Team. In the first quarter of 2014, the Champions initiated competency sign off on patients with a peripheral inserted central catheter. Dressing changes were observed by the Champions on all of the nursing staff as part of their annual competency check off. Hands-on education was conducted if practice deficits were observed. Nursing staff was engaged in dialogues to discuss findings in audits. Additionally, the number of CL audits that the Champions conducted monthly to assess compliance with CL maintenance bundle was increased to 30 from 5 following recommendations by the Center for Disease Control to more accurately reflect compliance rates.

**Findings and Interpretation:** Audit results and CLABSI rates were monitored by the CNS. CLABSI rates decreased from 2.00 to 0.00 per 1,000 CL days over the last three quarters.

**Discussion and Implications:** The VAD Champion-driven project helped reduce the rate of CLABSIs and increased awareness of the importance of evidence-based central line maintenance

care. This demonstrates that a team effort led by staff nurses can help prevent CLABSIs.

## #51

**APPROACHING “HOT TOPICS”: INTERNAL RADIATION EDUCATION FOR THE ONCOLOGY UNIT STAFF.** Joyce Lee, MSN, RN, OCN®, and Patricia A. Kelly, DNP, APRN, CNS, AOCN®, both at Texas Health Presbyterian Hospital Dallas, Dallas, TX

**Objective:** Describe the background, development, and evaluation of an internal radiation therapy educational program for oncology unit staff.

**Topic Significance and Study Purpose, Background, and Rationale:** Patients receiving internal radiation need specialized care with attention to radiation safety. Our inpatient oncology unit receives only 15-20 patients annually for Iodine-131, Cesium implants, and prostate seed implants. Because these are infrequent admissions, staff were uncomfortable caring for these patients and had difficulty identifying differences/similarities in the three therapies. Patient satisfaction scores indicated there were improvement opportunities. The American Brachytherapy Society and the Society of Nuclear Medicine have internal radiation therapy guidelines; however, we were unable to locate an educational program that addressed these three therapies. The purpose of this project is to improve staff knowledge and confidence in caring for patients receiving internal radiation therapy.

**Methods, Intervention, and Analysis:** Oncology nursing leadership reviewed the literature and consulted the education specialist, radiation physicist, radiation oncology nurse, and nuclear medicine supervisor to develop an in-person continuing education credit class. Content included classifications, indications, administration, side effects, patient/family teaching and discharge instructions as well as safe exposure times for staff and visitors. The content was compiled into an easy-to-read Excel table/handout comparing the three therapies. The team evaluated teaching and discharge instructions to ensure consistent education. We taught five classes with 99% participation (n = 25 RNs; n = 11 other staff). Participants completed a pre- and post-survey assessing knowledge (18 questions) and confidence in providing care (three self-assessment questions).

**Findings and Interpretation:** Mean knowledge scores were 33% pre- and 79% post-education. Mean confidence scores (1-4 scale, with four being “very confident”) were 2.38 pre- and 3.48 post-education. Staff reported the class prepared them to meet patients physical, emotional, and educational needs. We will monitor future patient satisfaction scores.

**Discussion and Implications:** Community oncology units have unique needs that may not be met with generic education programs. Modality-specific educational content provides nurses with essential information needed to care for our patient population. This project achieves two goals, an oncology unit educational goal, as well as qualifying for an American College of Surgeon’s (ACoS) quality improvement study. The Excel table/handout is a useful reference for patient care and teaching and for OCN® certification preparation. Targeted education, content expert input, and comparison handouts are valuable tools for increasing staff knowledge and confidence.

## #52

**OPERATIONAL IMPROVEMENTS TO CLINIC FLOW.** Katherine Gross, RN, MSN, Kelli Jacobs, RN, BSN, and Michael Romano, RN, MSN, all at Nebraska Medicine, Omaha, NE

**Objective:** Participants will be able to describe the benefit of level loading clinic days and the benefits of a clinic flow coordinator.

**Topic Significance and Study Purpose, Background, and Rationale:** With expanding clinic volume and future growth po-

tential, we face an issue of limited physical clinic capacity. This has resulted in extended patient wait times, physician idle time, and longer clinic days. Each of these issues adds to both provider and patient dissatisfaction and operational inefficiencies.

**Methods, Intervention, and Analysis:** Key operational metrics and through put data was analyzed with the oncology team. Agreements and goals for the process improvement were: no provider would be told they could not see a sick patient, patient’s time would be respected and maximize provider productivity. Data demonstrated that the current state would not accommodate future growth. Several operational changes were agreed upon by physician and administrative leadership: level load the days of the week, require several providers to move their clinic days; place structure and real-time discussion into how we manage same day and future “add-on” patients though setting clear expectations around clinician template times; assign a full time staff member to function as a “clinic flow coordinator” to triage same day add-ons, and facilitate provider room assignments, communicate with providers, and identify system or people barriers to clinic flow; provide each of the patients a “restaurant style” pager that will light up when they are ready to be taken to a room, allowing them the freedom to leave the waiting room without fear of missing their appointment time; implement a room-utilization manager software program allowing staff to see and collectively manage real time clinic flow and room utilization.

**Findings and Interpretation:** Provider feedback was very positive related to the flow and utilization of clinic rooms. The check-in staff described a less full waiting room even though volumes remained constant. We will monitor patient perception by patient satisfaction scores.

**Discussion and Implications:** To date, much of the results have been anecdotal. In order for these changes to become practice there is a clear need to tie in satisfaction and operational efficiency metrics. There will be ongoing coaching and feedback with providers and staff related to adherence to the new processes. As new providers are added to the practice, we will be very purposeful when adding their creating their templates and adding their clinic days.

## #53

**NURSING EVALUATION AND MANAGEMENT OF PERIPHERAL NEUROPATHY ASSOCIATED WITH NAB-PACLITAXEL (NAB-P) IN A PHASE III TRIAL OF CHEMOTHERAPY-NAIVE PATIENTS WITH METASTATIC ADENOCARCINOMA OF THE PANCREAS.** Maureen Lehner, ACNP, and Jan Hronek, MSN, ACNP, AOCNP®, both at Sarah Cannon Research Institute/Tennessee Oncology, PLLC, Nashville, TN; Stefano Ferrara, MD, and Brian Lu, MD, both at Celgene Corporation, Summit, NJ; and Jeffrey Infante, MD, Sarah Cannon Research Institute/Tennessee Oncology, PLLC, Nashville, TN

**Objective:** To characterize peripheral neuropathy (PN) in the phase III MPACT trial of nab-P plus gemcitabine (nab-P/Gem) in patients with metastatic pancreatic cancer (MPC) and review tools to assess/manage these patients.

**Topic Significance and Study Purpose, Background, and Rationale:** nab-P/Gem is a new treatment option for patients with MPC. PN was observed in patients treated with nab-P/Gem in the MPACT trial. Oncology nurses have a prominent role in identifying and assessing early signs and symptoms of treatment-related adverse events. Early recognition of PN allows for appropriate management so that patients may derive the maximum benefit of therapy.

**Methods, Intervention, and Analysis:** Patients (N = 861) were randomized 1:1 to nab-P 125 mg/m<sup>2</sup> plus Gem 1000 mg/m<sup>2</sup> weekly for the first 3 of 4 weeks (qw 3/4; n = 431) or Gem

1000 mg/m<sup>2</sup> qw 7/8 for cycle 1 followed by qw 3/4 (n = 430). PN was coded using Standardized Medical Dictionary for Regulatory Activities Query (SMQ; broad scope).

**Findings and Interpretation:** Most patients were male (58%), had a Karnofsky performance score of 90-100 (60%), and were aged < 65 years (58%). By SMQ evaluation, 54% of patients receiving nab-P/Gem had any-grade PN vs 13% receiving Gem. Most early-onset PN (at least cycle 3) was grade 1; 8% discontinued nab-P due to PN. Grade 3 PN occurred in 70 patients (17%) treated with nab-P/Gem vs 3 Gem-treated patients (1%). No patients experienced grade 4 PN. Among patients developing grade 3 PN, nab-P was delayed or reduced in 80% and 41%, respectively. nab-P-related grade 3 PN developed in a median of 140 days and improved by 1 grade or to grade 1 in a median of 21 and 29 days, respectively; 44% resumed nab-P treatment in a median 23 days. Patients with grade 3 PN did not have an excess of comorbidities, such as diabetes or renal impairment.

**Discussion and Implications:** Nurses play a pivotal role in monitoring patients with MPC who are at risk for PN. As shown in the MPACT trial, PN can be managed by dose interruptions and modifications, and many patients with PN continued to benefit from therapy even after dose delays and/or modifications. Therefore nurses should be aware of evidence-based tools to evaluate patients who develop PN during treatment with nab-P/Gem and educate patients about possible safety issues, such as falls and injuries.

**Underwriting or Funding Source Name:** Celgene Corporation.

#### #54

**PUTTING EVIDENCE INTO PRACTICE: USING TOOLS AND TECHNOLOGY TO PROMOTE ADHERENCE TO ORAL CHEMOTHERAPY.** Peggy Burhenn, MS, CNS, AOCNS®, City of Hope, Duarte, CA, and Josephine Smudde, RN-BC, MS, OCN®, Northwest Community Hospital, Arlington Heights, IL

**Objective:** To understand which tools to recommend to patients to enhance adherence to oral chemotherapy agent regimens.

**Topic Significance and Study Purpose, Background, and Rationale:** The use of oral chemotherapy has increased, it is estimated that more than one quarter of new anti-neoplastic agents in development are oral drugs. Oral chemotherapy is reportedly more convenient for patients, but with that convenience is a lack of professional oversight. Oral regimens have complicated dosing schedules or food and drug interactions that can compromise adherence. The evidence suggests that patient education, as part of a multi-component intervention, can impact adherence. Education alone is insufficient to impact adherence. Assistance from advancing technology may help conquer barriers that negatively affect adherence. Nurses, as front line caregivers, can aid patients in adherence measures. This presentation will focus on tools and technology that foster education and reminders that can be used to promote adherence.

**Methods, Intervention, and Analysis:** A literature search was performed to review tools and technology that are commonly used or recommended to promote adherence. Websites promoting tools and technology for medication adherence were investigated. Tools discussed include patient education plans and both manual and electronic reminders and alerts.

**Findings and Interpretation:** Many tools are available that can enhance oral cancer chemotherapy teaching by an oncology nurse. Some can be used to promote patient adherence, including electronic and non-electronic devices, smartphone applications (apps), and reminders. A chart outlining features of electronic devices as well as smartphone apps is offered. Patient lifestyle and preference are important considerations when making recommendations for tools to promote adherence. Evi-

dence from randomized controlled clinical trials is limited for these tools.

**Discussion and Implications:** Education alone is not sufficient to promote adherence to oral medication regimens. Multi-component interventions have demonstrated improved adherence. Patients have different learning styles and will respond differently to different interventions. Oncology nurses can advocate for patients taking oral chemotherapy medications by assessing the patient's learning needs, providing the appropriate education (including written materials), and suggesting tools and technology that will match the needs and lifestyles of the patient to promote adherence. Older adults may need additional teaching to ensure understanding and to select appropriate tools. As the oncology nurse becomes more familiar with the options that are available, they can be recommended for use in clinical practice.

#### #55

**INTERVENTIONS AIMED AT REDUCING CENTRAL LINE ASSOCIATED BLOOD STREAM INFECTIONS IN THE HEMATOLOGY/ONCOLOGY PATIENT.** Sandra Petigny, BSN, RN, OCN®, Ellie Umansky, BSN, RN, OCN®, Lauren Dicosimo, BSN, RN, CHPN, OCN®, and Klara Culmone, MSN, RN, OCN®, all at New York University Langone Medical Center, New York, NY

**Objective:** To change the practice of nursing management of central venous lines (CVLs) in order to reduce rates of central line associated blood stream infections (CLABSIs) in hematology/oncology patients.

**Topic Significance and Study Purpose, Background, and Rationale:** In oncology patients, proper management of central venous lines is critical to assure the long-term functionality of the line through the course of treatment. Additionally, proper care protects patients from the serious adverse effects caused by the occurrence of CLABSI. On review of the CLABSIs in our patients, it was found that the most probable cause of CLABSI was related to the nursing management of CVLs.

**Methods, Intervention, and Analysis:** We identified three points of nursing CVL management, that when performed improperly can lead to CLABSIs: dressing change, access of the line for blood draws/infusions, and needleless access valve change. Three hematology/oncology staff nurse champions were appointed to research the most current evidence based management of CVLs. After gathering data, we re-educated all nursing staff on the changes in nursing management of CVLs and reinforced proper technique. After educating the staff, we then observed nurses perform the three identified tasks.

**Findings and Interpretation:** To evaluate the change in practice, the nurse champions, nurse manager and assistant nurse managers audit patients with CVLs on the unit three times a week using an established CVL maintenance bundle. The five points of compliance of the bundle are: reason for CVL, appearance of dressing, date of dressing, date of needle less access valves, and presence of alcohol impregnated caps on ends of all points of access on IV tubing and CVL. Additionally, nurses from a neighboring unit, who are trained to audit using the same bundle, audit our central lines once a week. We started the bundle audits September 1st, 2014. As of October 17th, 2014, our preliminary data shows our CVL bundle compliance is at 69%.

**Discussion and Implications:** The nurse champions provided clarity about our current central venous line maintenance. Patient safety has improved by using both evidence based practice and recommendations from other specialty areas who were already implementing this change in practice (pediatrics). We are planning to reassess and refine the process as we move forward while evaluating our CLABSI rates.

## WHY SHOULD ONCOLOGY NURSES BE INVOLVED IN THE CREATION OF EMRS.

Tiffany Childress, MSN RN AH-CNS-BC OCN®, Community Health Network, Indianapolis, IN

**Objective:** The goal of this presentation is to show how oncology nurses need to be involved in the creation and optimization of the EMR within their healthcare institution.

**Topic Significance and Study Purpose, Background, and Rationale:** With the ever changing needs and requirements for documentation, there becomes evident a call for nurses to be engaged in decision making with the configuration of the EMR. With increasing regulatory requirements that healthcare systems are expected to meet, having a person with clinical experience increases in need as the EMR needs to also be a usable method for charting that is not a hindrance to the work being done but an aide. As nurses, we have the unique ability to understand multifaceted needs. We understand workflows and what needs to be seen throughout the patient chart to increase efficiency of our work. We can help decrease the amount of double charting that can be inadvertently created and increase the shared information so others caring for the patient can benefit as well. We can identify ways to share important information of the patient to help ensure that their needs are met long after our shift has finished. There are multiple different electronic medical records available for utilization, but there is not a standard approach to how these are being utilized. ONS states that it is the nurse's responsibility to maintain an accurate medical record for the patient (Polvich, Olsen, & LeFebvre, 2014). ASCO/ONS are increasing requirements of what is included not only within the IV treatment plan, but also with the oral chemotherapy treatment plan of the patient (Neuss, et al., 2013). With both of these requirements for nurses to ensure that they are following, the importance increases for the nurse to become more involved with the creation and improvement of the electronic medical record. Working with a multidisciplinary team, an oncology nurse can help collaborate with others to create a safe and easy to utilize EMR.

**Methods, Intervention, and Analysis:** This project was created as a result of finding that treatment plans were not standardized throughout the network. After review, treatment plans that were on paper were created from physician requests that did not follow specific requirements for evidence based practice. These plans were created from physician preference which often lead to multiple changes due to multiple opinions leading to inconsistent treatment of patients. The goal of this project was to standardize care across the continuum throughout the network so that we are speaking with one voice and the patient is receiving the most optimal evidence based care. The aim of this project was to engage a multidisciplinary team approach to treatment plan standardization and creation across CHNw. This team would include oncologist(s), oncology pharmacist(s), oncology nurse(s), and Beacon analyst(s). Baseline data includes 35 non-standardized treatment plans that were being utilized across CHNw as a result of multi-practice and multi-physician preferences. The situation was analyzed by completing a workflow analysis of the creation and review of treatment plans. The chemotherapy council team identified a need for agreement on approach to the development of the Beacon library. Chemotherapy Council was developed that incorporated oncologist(s), oncology pharmacist(s), oncology nurse(s), and Beacon analyst(s). This council met at least once per week (more as needed) to review and validate every treatment plan that prior to being available for use in treatment of a patient. After some consideration the decision was made to only have treatment plans that met at least one of the following criteria to be added to the Beacon library: approved by FDA, mentioned as an appropriate drug combination within the NCCN Guideline free access, or approved by MD Anderson Cancer Center.

**Findings and Interpretation:** The Chemotherapy Council met weekly, or more, prior to the Beacon go-live. There were several milestones leading to implementation of the new library, including development, training, and conversion. Implementation occurred on February 26th, 2013 with 226 treatment plans available in the Beacon library. At go live date of February 26th, 2013 there were 226 treatment plans available within the Beacon library. One year later on February 26th, 2014, there were 470 treatment plans available within the Beacon library. The standardization has helped to reduce the number of treatment plans that have been manipulated when applied to the patient. 99% of all chemotherapy orders are being ordered within treatment plans as of February 2014. This council continues to meet weekly to review and implement new plans within the Beacon library. All three outpatient cancer center locations and all four inpatient hospitals within CHNw have adopted this change. There are current discussions regarding spreading this standardization to other locations.

**Discussion and Implications:** This study has shown how the involvement of nursing within the multidisciplinary team while creating the EMR was essential. Having a nurse at the table, lead to improvement of nursing orders within the treatment plan. The orders also were geared towards nursing assessment of the patient. This lead to improved outcomes of the patient as the nurse was able to focus on the patient and caring for the patient instead of having to spend time charting unnecessary information. The collaborative effort also lead to integrated charting between medical oncology and radiation oncology to help show the complete picture of the patient within the EMR. This has also lead to better outcomes of the patient and increased collaboration among the different disciplines.

## #57

**A NURSE-LED QUALITY IMPROVEMENT PROJECT: A PCA PILOT TO IMPROVE PATIENT SAFETY AND REDUCE ERRORS IN THE ADMINISTRATION OF NARCOTIC PAIN MEDICATION VIA PATIENT CONTROLLED ANALGESIA.** Davina Kahlon, BS, BSN, PCCN, Melinda Leash, BS, BSN, Shannon Van Geffen, BS, BSN, OCN®, Virginia Pfeifer, BSN, CWOCN®, OCN®, and Meredith Peters, BSN, OCN®, all at Memorial Sloan Kettering Cancer Center, New York, NY

**Objective:** The objective is to improve patient safety and decrease errors in the administration of narcotic pain medication via patient controlled analgesia to oncology patients.

**Topic Significance and Study Purpose, Background, and Rationale:** Relieving pain in narcotic tolerant oncology patients requires exceedingly high doses of pain medication. Memorial Sloan Kettering Cancer Center noted their current policy of double checks for narcotics administered through patient-controlled analgesia (PCA) was ineffective. Hospital wide information on errors and near misses are recorded in an electronic Reporting to Improve Safety and Quality (RISQ) reporting system. PCA errors are prevalent according to trends captured by the RISQ system. The process of double checks are performed by one nurse who reads aloud the order for PCA settings and the "five rights" to a second nurse prior to initiation of the PCA as verification of the order. The purpose of this project was to improve patient safety in regards to PCA administration of narcotics.

**Methods, Intervention, and Analysis:** As part of this quality improvement project a council of nurses collaborated to review the current PCA policy and use an evidence-based process to revise the policy. A pilot policy was developed suggesting that independent double checks are more effective in reducing the probability of errors. Independent double checks are performed by two nurses who independently review the

PCA order and the “five rights” prior to administration of the medication as a verification of the order. Implementation of the pilot policy was performed on a unit with the highest frequency of PCA usage where impact could be measured. A survey was administered to nurses prior to initiating the pilot. Education was conducted on the pilot PCA policy with continued support provided to staff. Through staff surveys and RISQ evaluation, the pilot is being reviewed for consistency, ease of use, reduction in PCA errors and overall improvement of patient safety.

**Findings and Interpretation:** Preliminary results show a reduction in reported errors and improved staff satisfaction with independent double checks. Upon completion of the pilot, RISQ data will be analyzed in order to determine if there is a reduction in PCA errors.

**Discussion and Implications:** Identifying a clinical situation that has a high risk for error is the first step in improving patient care. This project outlines a process for quality improvement that enhanced patient safety when administering narcotic pain medication via PCA.

### #58

**SAFE IDENTIFICATION: A CHANGE IN CULTURE.** Janyce Sguassabia, Leila Oliveira, Ana Carolina Timotheo, and Ismene Leite, all at CLION Clinica de Oncologia, Salvador, Brazil

**Objective:** To reduce failures related with patient identification to prevent errors in antineoplastic administration.

**Topic Significance and Study Purpose, Background, and Rationale:** The significant risk of patient harm due to failures during chemotherapy drug administration led oncology care institutions to seek preventive actions to guarantee patient safety. In 2003 the Joint Commission International, in partnership with World Health Organization, developed six international safety goals to promote specific improvements in higher-risk care situations. Patient identification is one of these goals; at least two methods for identification are recommended (use of patients full names and medical record numbers) for double-checking drug administration. Health professionals understand that identification errors occur and that most of them can be avoided. We implemented a process of culture change at a private oncologic clinic, located in Bahia state, that provides care for an average of 550 patients monthly for antineoplastic drug treatment.

**Methods, Intervention, and Analysis:** An audit was previously conducted in November 2013 to determine the scenario. Results showed the need to develop a safe identification policy, implement wristbands to identify patients, and establish two methods for identification (full name and medical record number) in the double-checking process. After the audit, we promoted training from December 2013 to January 2014 for the reception, nursing, pharmacy, housekeeping and physician staff. Eighty-seven percent of clinical teams attended trainings. A clinical audit was done quarterly in January, April and July 2014 to follow up on reductions of failures in safe identification.

**Findings and Interpretation:** In the first clinical audit conducted in January 2014, 69% of the 13 items evaluated during patient care process (i.e., from admission to the end of drug administration) were in accordance with policies. In the April audit this percentage remained 69%, and the last clinical audit in July achieved 77% of overall accordance.

**Discussion and Implications:** The policies implemented promoted substantial changes in a short period; however, promotion of a safe culture must be continuous to enable wide involvement of teams. Stimulate awareness of institutional policy and attendance at training on patient safety are ways to maintain such involvement.

### #59

**THE USE OF A MEDICATION LOG AS A SAFE TOOL FOR ORAL CHEMOTHERAPY AND TARGETED THERAPY.** Fátima Youssefi, PhD, RN, OCN®, UT Southwestern University Simmons Cancer Center, Dallas, TX

**Objective:** It can be overwhelming for oncology patients to adhere to the complex regimen of medicine-scheduling, safe dosage, and management of side-effects. Proper patient-education and utilization of tools can alleviate obstacles.

**Topic Significance and Study Purpose, Background, and Rationale:** Background The use of oral chemotherapy and targeted therapy has significantly increased in recent years. The evolving science of targeted therapy, which focuses on individual cancerous-tumors and growth pathways, contribute to the rise of these therapies (Highland, Clemens 2012). Nevertheless, oncology discussions currently focus on the safe administration and usage of these medications. Purpose Nationally-acclaimed American Cancer Society of Clinical Oncology and Oncology Nursing Society developed guidelines for safe administration of hazardous drugs (Jacobson et al., 2012). However, the guidelines for oral chemotherapy and targeted therapy remain undeveloped. Researchers have suggested that specialty clinics should operate like anticoagulation clinics in order to manage the side-effects and patient adherence of the oral agents (Wong & Nguyen, 2012). Neuss et al, 2013 presented updated standards for administration of oral chemotherapy and biotherapy hazardous drugs. Currently, ONS-certified oncology nurses in an accredited cancer-center in Dallas follow an institutionalized policy for handling the administration of these therapies. However, the need for patient-education regarding oral agents remains a challenge. It is common for patients to return to the clinic with issues including confusion about their medication schedules, frustration with their insurance’s inability to obtain their drugs from a specialty pharmacy, and a lack of understanding of drug usage.

**Methods, Intervention, and Analysis:** Application to practice: The use of targeted therapy has been applied with diseases like Multiple Myeloma, Mantel Cell Lymphoma and lung cancer. After oncologists formulate a patient’s care-plan, educational literature regarding their medication is provided to the patient. Oncology nurses provide a medication-log to patients. The medication-log serves as a visual calendar for patients to minimize confusion or misuse of drugs, and as an opportunity to document side-effects. This tool also monitors the patient’s medication cycle. The medication log be in the form of an electronic spread-sheet or a printed calendar, whichever the patient prefers.

**Findings and Interpretation:** Evaluation: Patients who utilize a medication log have provided feedback regarding the tool’s effectiveness. The visual log is a simple way to monitor patient adherence.

**Discussion and Implications:** As usage of oral hazardous drugs increases, oncology nurses need to familiarize themselves with the guidelines of safe administration of these agents, and patient-education will need to be prioritized.

### #60

**REDUCING INCIDENTAL WORKTIME IN AN INPATIENT ONCOLOGY SETTING.** Jenny Zimmeran, RN, BSN, Penn State Hershey Cancer Institute, Hershey, PA

**Objective:** Review strategic and operational approaches to manage incidental work time; and evaluate incidental work time data to determine when and why the variances to scheduled time are occurring.

**Topic Significance and Study Purpose, Background, and Rationale:** Incidental worked time (IWT) refers to additional time a staff member is on the clock before or after the start or end of

their original shift or during a scheduled meal break. Most often associated with employees paid on an hourly basis, IWT occurs as a result of unplanned circumstances. Generally, in nursing, diagnostics or therapies, there is sound clinical justification for 40 percent of incidental worked time. The remaining 60 percent, however, represents a tremendous savings opportunity. As a clinical practice leader in oncology I have identified that oncology nurses are the leading professionals for incidental work time; by either skipping lunches or punching out late due to overdue charting.

**Methods, Intervention, and Analysis:** Cause: Action types that lead to incidental work time: Unscheduled-arriving for a complete shift that has not been scheduled Early Arrival- clocking in before the start of a scheduled shift unless requested by a leader Missed lunch-remaining on duty through a planned meal break Late departure- remaining on duty after the end of a scheduled shift unless requested by a leader Goals: Unpreventable circumstances create a need for incidental work time therefore goals are often associated with the opportunity to identify and eliminate preventable and/or repetitive circumstances. Ideally leadership needs to respond according to the category under which these circumstances fall: Unpreventable: Single incidents frequently represent unpreventable situational circumstances, often with a clinical cause and require little to no leadership action. Preventable: Repetitive incidents are entirely avoidable and therefore necessitate immediate leadership intervention.

**Findings and Interpretation:** Employee Actions: Unscheduled- Preventable-Employee arriving for an unscheduled shift is entirely preventable and especially an issue when repetitive. Early Arrival-Preventable: Arriving early for the shift is a habit among those who take the responsibility to be reliable very seriously. This tendency can have a highly negative impact on the labor budget as well as creating a disruption to the planned workflow. Missed lunch: Preventable-Employees deserve and need meal breaks. Leaders are responsible to examine incident rates by individual employees and take corrective actions. Late Departure: Unpreventable-critical patients and workload may prevent an employee from departing according to their scheduled time. Examining workflow to expedite smooth shift to shift transitions is one extremely effective method for eliminating preventable incidental work time. Other methods include; lunch buddies, power hours, bed side shift report, modifying staffing based on high chemotherapy admission days and review payroll when closing and having those 1:1 communications with staff. Morale: Employee satisfaction is clearly affected by scheduling incidences related to the opportunity to take an uninterrupted meal break or leave work at the expected time.

**Discussion and Implications:** In nursing and other therapies clinical justification exists for 40% of IWT. Reviewing the causes will give nursing leadership teams the ability to reduce the remaining 60%. A clear plan of action related to who will monitor IWT and holding staff accountable to scheduled time is essential. Discuss with clinical nurses why they feel they need to arrive early. Ensure all nurses take a lunch. Discuss with clinical nurses the reasons that cause them to be late leaving for home. Remind clinical nurses that nursing is a 24/7 job. As a team, we all pick up where our peers have left off.

**#61**  
**PATIENT-REPORTED EXPERIENCES WITH TREATMENT OF CHRONIC LYMPHOCYTIC LEUKEMIA (CLL) AND MANTLE CELL LYMPHOMA (MCL): RESULTS OF A QUANTITATIVE SURVEY.** Brad Schenkel, MS, Janssen Scientific Affairs, LLC, Horsham, PA; Ahmad Naim, MD, Incyte Corporation, Wilmington, DE; and Barbara Roland, MBA, and Susan Wyant, PharmD, both at the Dominion Group, Reston, VA

**Objective:** To explore patients experiences with, and preferences for, CLL/MCL therapies.

**Topic Significance and Study Purpose, Background, and Rationale:** The predominant treatments for CLL&MCL have included intravenous(IV) chemotherapeutic regimens, with rapid growth recently in new CLL/MCL treatment options, including oral agents. However, there is little information in the literature regarding patient experiences with CLL/MCL treatments. We explore patients experiences with, &preferences for, CLL/MCL therapies&provide oncology nurses with this knowledge of patient experiences.

**Methods, Intervention, and Analysis:** Data were collected from 27-May-30-June 2014 via a self-administered, online, quantitative survey based on qualitative interviews with CLL/MCL patients. Patients were eligible for the survey if they had been diagnosed with CLL or MCL by a physician, been treated for 2 weeks in the past 12 months, and were not a clinical trial participant. Quantitative data were collected: treatment history, factors influencing treatment selection, opinions of treatment, experiences with IV treatment,&patient-reported health&wellness.

**Findings and Interpretation:** 75 patients (52 with CLL, 23 with MCL)completed the survey;majority of patients were white(72%), aged < 65 years (92%), &privately insured (81%); 51% were female. Mean EQ-5D self-reported score for health state (0 = worst imaginable to 100 = best imaginable) was 61. The majority of patients had received one (44%) or two (40%) lines of treatment. Most common reasons for changing/stopping past CLL/MCL treatments were: too many side effects (38%), medication did not work to treat the disease (36%), symptoms were not relieved (33%),&work productivity declined because of side effects (26%). Most commonly reported reasons for dissatisfaction with CLL/MCL treatments were safety concerns (33%) &side effects (32%); 37% said none applied. Common reasons for satisfaction with CLL/MCL treatment were: medication is covered by my insurance (49%), convenient dosing schedule (39%), easy to use (33%), works most of the time (32%), works all of the time (31%), works better than other drugs I have tried (28%), and is affordable (28%). 65% of patients visited their doctor together with a spouse, family member, friend, or paid helper. Frequency of IV treatment was every 1-2 weeks for 67% of patients&required an average of 3 hours for infusion&4 hours overall, including travel&waiting time. Mean satisfaction with treatment (1 = extremely dissatisfied to 7 = extremely satisfied) was 5.3. Longer duration of effect was the most important treatment feature for CLL/MCL patients.

**Discussion and Implications:** The greatest source of patients dissatisfaction with their current or most recent treatment for CLL/MCL was the treatment's safety&tolerability. These survey results suggest that substantial unmet needs remain for the nursing care of patients with CLL&MCL.

**Underwriting or Funding Source Name:** Janssen Scientific Affairs, LLC provided support for this study.

**#62**  
**AN INNOVATIVE STRATEGY TO IMPROVE THE QUALITY OF CARE FOR PATIENTS AT END-OF-LIFE.** Deb Bohlken, RN, MSN, OCN®, University of Iowa Hospitals and Clinics, Iowa City, IA

**Objective:** Discuss outcomes related to a unique scholarship program that enabled 100 bedside nurses in a Midwest academic medical center to receive education on improving the quality of end-of-life care.

**Topic Significance and Study Purpose, Background, and Rationale:** End-of-life care is often fragmented and inconsistent, leading to poor quality of care provided to patients. Specific end-of-life curricula are not consistently used to train professional nurses and educational opportunities related to improving end-of-life care for cancer patients are limited. The purpose of our project was to improve the quality of care for patients at end-of-life through the use of an innovative strategy of providing

100 bedside nurses with scholarships to complete the online End-of-Life Nursing Education Consortium (ELNEC) program.

**Methods, Intervention, and Analysis:** In April 2013, the University of Iowa Hospitals and Clinics (UIHC) Palliative Care program provided scholarships for 100 nurses to complete the ELNEC program over the next year. The ELNEC content is divided into eight modules: Nursing care at the end of life, pain management, symptom management, ethical/legal issues, cultural considerations in end-of-life, communication, loss/grief/bereavement, and preparation for and care at the time of death. A pre- and post-knowledge based test and attitudinal survey were required to be completed by nurses participating in the ELNEC scholarship program.

**Findings and Interpretation:** After completion of the ELNEC curriculum, a 15.6% increase in the class score average was noted on the knowledge based post-test when compared to the pre-test. All of the scores on the post-attitudinal survey were significantly higher than on the pre-survey, indicating that the nurses felt better prepared to provide quality end-of-life care after completing the ELNEC program. HCAHPS patient satisfaction scores have also been followed over the past year. Since the initiation of the ELNEC program, the adult inpatient scores for the question "Was your pain well controlled?" have shown a 7.9% increase in the percentage of "Always" scores, raising the UIHC ranking for this question to the 71st percentile nationally.

**Discussion and Implications:** The knowledge that UIHC nurses gained from completing the ELNEC program has contributed to improvements in care for patients at end-of-life. The expectation of this program is that the ELNEC awardees will continue their commitment by providing excellent end-of-life care and by mentoring other health care professionals. Implications for broader implementation include that other healthcare organizations should consider providing scholarship support for nurses to enroll in the online ELNEC program.

### #63

**TACKLE THAT REACTION INCREASE PATIENT SATISFACTION.** Dorothy Mitchell, MSN, Cancer Treatment Centers of America, Philadelphia, PA

**Objective:** All oncologic agents may cause rare but often unpredictable infusion reactions. Successful management of an infusion reaction is dependent on a collaborative approach with available emergency resources.

**Topic Significance and Study Purpose, Background, and Rationale:** Nurses must know how to respond quickly and correctly to hypersensitivity and anaphylaxis. Should the physician not be available immediately, nurses are responsible for recognizing the symptoms of a hypersensitivity reaction and treating it promptly. Understanding the pathophysiology, signs and symptoms, and treatment of a hypersensitivity reaction will ensure quick and appropriate intervention. A significant barrier to timely treatment of adverse drug reactions is lack of proximity to supplies and medications.

**Methods, Intervention, and Analysis:** A hypersensitivity reaction "tackle box" was created by the infusion nurses. The tackle boxes were kept in the three sections of the infusion unit for easy access. The tackle boxes contained: emergency drugs including injectable corticosteroids, diphenhydramine, Pepcid, syringes with needles, alcohol wipes, tourniquets, and extra IV supplies. The oncologists and pharmacists endorsed the creation of the tackle boxes. Whenever chemotherapy was ordered for a patient, the oncologist entered standing orders for adverse reactions, which helped the nurses to provide immediate intervention and prevent delay.

**Findings and Interpretation:** After the initiation of the innovative hypersensitivity reaction "tackle box", there was a decrease in time to manage. Once resolved, cautiously restarting the infusion may result in completion of chemotherapy without further problems. Nurses have the opportunity to decrease the patient's anxi-

ety level by managing a hypersensitivity reaction immediately, which empowers the patient to continue their cancer treatment.

**Discussion and Implications:** Most chemotherapeutic agents have the potential to cause infusion reactions, including transient adverse effects and true hypersensitivity reactions. Although severe reactions are rare, mild to moderate reactions are common. Manifestations can range from pruritus and flushing to life-threatening hypotension and bronchospasm. The key to successful administration of chemotherapy agents is continuous monitoring and an order set that enables the early identification of hypersensitivity reaction and immediate initiation of appropriate therapy. Patient safety relies on collaborative continuous monitoring with one-to-one nursing and frequent assessments by treating physicians, as well as immediate access to all supportive medications.

### #64

**REDUCTION OF BLOOD VOLUME COLLECTED WITH THE IMPLEMENTATION OF A CLOSED BLOOD DRAW SYSTEM IN MEDICAL INTENSIVE CARE PATIENTS.** Elizabeth Mathew, MSN, RN, CCRN, Rhea Herrington, MSN, RN, CCRN, Mary Lou Warren, DNP, APN, CCRN, and Ron Phipps, MBA, all at the University of Texas MD Anderson, Houston, TX

**Objective:** The aim of this project was to improve patient outcomes by reducing blood loss and minimizing PRBC transfusions through the use of vascular arterial blood management protection (VAMP) system.

**Topic Significance and Study Purpose, Background, and Rationale:** Cancer patients are at high risk for anemia due to impaired hematopoiesis resulting from diagnosis or treatments. Frequent blood draws on patients in the Medical Intensive Care Unit (MICU), with 8 ml of blood discarded during each blood draw, may contribute to further lowering the hemoglobin, hematocrit, and platelet counts. The aim of this project was to evaluate the benefit of adopting the vascular arterial blood management protection (VAMP) system to improve patient outcomes by reducing blood loss and minimizing PRBC transfusions.

**Methods, Intervention, and Analysis:** A nurse-led, interdisciplinary committee was formed to review closed-blood draw systems from several vendors, select the product, develop a pilot implementation plan, and develop and implement a communication and education plan regarding the device and pilot process for patients and staff. Prior to implementation approval was obtained from the Quality Improvement Assessment Board at this institution. The (VAMP) system was piloted on 34 MICU patients. Data was collected on the amount of blood drawn over a 24-hour period from patients on whom the closed system and the open system were utilized. In addition, an evaluation was distributed to staff during the pilot phase to collect information on the device, its ease of use, and any operational challenges. Staff feedback indicated high satisfaction with the VAMP system.

**Findings and Interpretation:** During the pilot period, 729 blood draws were performed using the VAMP system. The total blood removed from the 34 patients using the VAMP device was 7,195 ml (mean of 40.1 ml per patient) as compared to 8566 ml in 53 patients using the open-system (mean 63.6ml per patient) in a 24 hour period. An average of 16% less blood was drawn using the VAMP system. In addition, we estimated a 40% decrease in the volume of blood drawn in the closed-system patients as compared to if they had 8ml of blood waste per draw.

**Discussion and Implications:** Implementation of the VAMP system for oncology MICU patients minimized the blood volume drawn for phlebotomy. Furthermore, the results indicated a possible reduction in the number of blood transfusions for MICU's oncology population, however further study with larger oncology populations is required.



## #65

### RETROSPECTIVE STUDY OF CLABSI IN INPATIENT ONCOLOGY UNITS. Erica Corcoran, MSN, RN, OCN®, AOCNS®, Florida Hospital, Orlando, FL

**Objective:** Identify root causes for CLABSIs in inpatient oncology units.

**Topic Significance and Study Purpose, Background, and Rationale:** According to the CDC there are an estimated 41,000 central line associated bloodstream infections (CLABSIs) annually. The estimated cost of each CLABSI ranges from \$7000-\$29,000. In addition to the financial impact, there is a significant increase length of stay and mortality rates. The purpose of this study is to identify root causes for CLABSIs occurring on inpatient oncology departments from 2013-2014. Oncology patients are at higher risk for sepsis due to their diagnosis and treatment and they are also more likely to have a central line inserted. This study helps guide education and clinical practice to keep our patients infection free.

**Methods, Intervention, and Analysis:** Each CLABSI is reviewed in-depth with a multidisciplinary team including, unit leaders, bedside RNs, clinical specialist and infection preventionist. The team reviewed all cases of CLABSI in three inpatient oncology departments. These units include: 39-bed GYN surgical, 33-bed medical and 16-bed BMT oncology units. An auditing tool was developed to identify each patients cancer diagnosis, admitting diagnosis, blood glucose levels 96 hours prior to infection (if applicable), line day of CLABSI identification, compliance with line maintenance protocol, type of line inserted and where the diagnostic blood cultures were collected from. Each component of the audit tool was selected based its potential impact on CLABSI incidences.

**Findings and Interpretation:** Each CLABSI is reviewed in-depth with a multidisciplinary team including, unit leaders, bedside RNs, clinical specialist and infection preventionist. The team reviewed all cases of CLABSI in three inpatient oncology departments. These units include: 39-bed GYN surgical, 33-bed medical and 16-bed BMT oncology units. An auditing tool was developed to identify each patients cancer diagnosis, admitting diagnosis, blood glucose levels 96 hours prior to infection (if applicable), line day of CLABSI identification, compliance with line maintenance protocol, type of line inserted and where the diagnostic blood cultures were collected from. Each component of the audit tool was selected based its potential impact on CLABSI incidences.

**Discussion and Implications:** The results did not show significant deficits in infection prevention practice but rather deficits in specimen collection practices. There are several cases where the patient met the criteria of a CLABSI, but presence of a true blood stream infection is questionable. These findings have led our team to focus on blood culture collections methods in addition to infection prevention measure. Specimen collection is one of our greatest opportunities in reducing CLABSI rates.

## #66

### PALLIATIVE MANAGEMENT OF SQUAMOUS CELL CARCINOMA USING ACTIVE LEPTOSPERMUM HONEY. Jerri Drain, BSN, RN, CWON, Amedisys, Inc., Bunch, OK

**Objective:** When other treatment modalities failed ALH was selected because it's safe for oral ingestion and addressed the wound needs which include antimicrobial activity, deodorizing, and anti-inflammatory activity.

**Topic Significance and Study Purpose, Background, and Rationale:** Squamous cell carcinoma of the oral cavity accounts for approximately 2-3% of all malignancies and typically are advanced stage at the time of diagnosis.<sup>1</sup> Malignant wound occur in approximately 5-10% of cancer patients.<sup>2,3</sup> These wound are often very friable, highly exudative, purulent, malodorous, and painful. Palliative management of malignant malodorous

wounds occurring in the oral cavity can be difficult due the limited dressing and products that provide symptom management and are safe for ingestion. Initially, the CWON was contacted for this case due to the patient and caregiver's complaint of distressing odor from the oral cavity. The smell was reported by the visiting nurse as a "rotting flesh smell that permeated the entire house" and the family stated if something could not be done to control the odor they would have to consider moving the patient from the home. Additionally, the nurse reported an external facial wound with bone protrusion that was "angry and inflamed" with "purulent drainage."

**Methods, Intervention, and Analysis:** In this case, Active Leptospermum Honey (ALH) was selected to try because it is safe for oral ingestion and it addressed the wound needs which include antimicrobial activity, deodorizing, and anti-inflammatory activity in the wound bed. 2.3.4.5 ALH paste was applied twice daily to the oral cavity and ALH impregnated calcium alginate was selected for the external facial wound.

**Findings and Interpretation:** After one week of ALH use, the nurse reported that the odor could no longer be detected and furthermore drainage from the external wound was no longer purulent and redness and inflammation was decreased. After 3 months, the patient was discharged to self management with ALH and continued to report no odor, no noted inflammation, and no purulence. Odor, pain, loss of function, and disfigurement associated with malignancies of this type can be devastating to the patient's quality of life and is distressing for both patients and caregivers.

**Discussion and Implications:** This one patient case series demonstrates the ability of ALH to provide a safe and effective treatment option to patients with malignant and difficult wounds that affect patient's quality of life. It offers oncology practices with a safe and easy to use product that provides wound healing benefits.

**Underwriting or Funding Source Name:** Derma Sciences.

## #67

### PALLIATIVE EDUCATION FOR ADVANCED PRACTICE REGISTERED NURSES. Shelley Stratford, BSN, MSNc, Annie Chisholm, BSN, MSNc, and Caryn MacDonald, BSN, MSNc, all at University of Pennsylvania School of Nursing, Philadelphia, PA; and Constance Dahlin, ANP-BC, ACHPN, FPCN, FAAN, Hospice and Palliative Nurses Association, Pittsburgh, PA

**Objective:** Explore the current state of primary palliative care, the role of APRNs within it, and the prevalence of hospice and/or palliative care educational opportunities for all ANPRs.

**Topic Significance and Study Purpose, Background, and Rationale:** As our population ages, and disease and symptom management become more prevalent, the need for advanced care-planning and palliative care services has never been more crucial. Many APRNs practice in settings where the diagnosis of cancer and other serious illnesses is made, and the initiation of advanced care-planning and palliative models of care is ideal. Advanced practice registered nurses, especially those with a focus in oncology, are uniquely qualified to provide this type of care because they are educated to anticipate, prevent, recognize, and manage physical and psychological symptoms. Current literature indicates that there is a shortage of palliative care providers across settings. Appreciating that many of the core concepts of palliative care are foundational to nursing practice, we believe that APRNs are a solution to the shortage of palliative care providers. Furthermore, we see that APRNs with specialty training or certification in oncology are uniquely qualified to serve as nurse leaders who contribute palliative care experiences and advocate for enhanced palliative care education in U.S. graduate nursing programs.

**Methods, Intervention, and Analysis:** A literature review was performed to gather information regarding the prevalence of palliative care providers, to explore the issues surrounding APRN scope of practice in the provision of primary palliative care, and to highlight the benefits of palliative care education for clinicians and patients.

**Findings and Interpretation:** The literature review revealed the following: there is a shortage of palliative care providers, palliative care education for APRNs is lacking, when given the opportunity to participate in palliative care educational activities APRNs gain confidence in their ability to be patient advocates, patient and families' experiences are improved when palliative care services are introduced, especially early in disease.

**Discussion and Implications:** Through this information, we shed light on the implications for patient care and future directions for graduate nursing education. Our recommendations emphasize the need for broader palliative care education across all graduate programs and the need to change to allow APRNs to practice to the full extent of their education and scope of practice. For APRNs with certification in oncology, we emphasize specific palliative care education focused on early palliative implementation to improve patient and family's experience.

## #68

**ENGAGING STAFF IN CRITICAL GROWTH INITIATIVES: THE FRED AND PAMELA BUFFET CANCER CENTER EXPERIENCE.** Theresa Woodrum, RN, BSN, OCN®, and Theresa Franco, RN, MSN, Nebraska Medicine, Omaha, NE

**Objective:** The participant will be able to describe the benefits of involving key stakeholders in the design of a new cancer center.

**Topic Significance and Study Purpose, Background, and Rationale:** The Fred and Pamela Buffet Cancer center currently under construction on the Nebraska Medical Center campus will house research and clinical facilities. The project includes 108 inpatient beds, seven surgical suites, radiation oncology, multidisciplinary clinics and a 24/7 infusion center. Successful design enhancements, increased efficiency of space and processes, and an elevation of our patient experience required a variety of strategies to secure buy in from key stakeholders.

**Methods, Intervention, and Analysis:** Consensus on design/improvement direction was initially achieved by visits to cancer, other healthcare, and hospitality industry sites. A summary was written on guiding principles and learnings. Seventeen multidisciplinary teams were established to represent cancer activities and patient flow throughout the care continuum. Physicians, staff, patients, families and community partners participated. All care aspects and support were explored from initial patient contact to end of life needs. The patient experience and process improvements were emphasized in the design phase. Recommendations surfaced on departmental adjacencies, changes to staff/patient traffic patterns, space revisions, equipment/technology needs and safety elements. Simulation modeling of flow in common bottleneck areas was performed, room mock-ups constructed, and creative ideas emerged to further impact patient satisfaction. Each team member was recruited with commitment to attend biweekly meetings for 4-6 months. Each was accountable for creating mechanisms for consistent communication /feedback on all decisions to reach broader audiences.

**Findings and Interpretation:** Improved patient and family area designs were achieved. Logical adjacencies, shortened distances for efficient work flow, patient experience enhancements, greater dissemination of information and stakeholder buy in for all decisions occurred.

**Discussion and Implications:** Creating a variety of approaches with broad stakeholder representation fosters improved decision making and acceptance of key organizational initiatives.

## #69

**IMPROVING PATIENT CARE IN THE AMBULATORY SETTING.** Brenda Kramer, RN, OCN®, Kay Carolin, MSA, RN, Ann Marie Payne, BSN, RN, and Kelly Meilink, RN, all at Karmanos Cancer Center, Detroit, MI

**Objective:** The learner will be able to identify one way to improve the patient experience in an ambulatory setting.

**Topic Significance and Study Purpose, Background, and Rationale:** Research has shown that clinic visits can be stressful and adversely affect the patient's overall experience, quality of life, and perceptions of their quality of care. In the literature, wait times and the appearance of the physical environment are cited as two areas that determine whether the patient experience is a positive one or a negative one. Timely access to care is an expectation of patients and an indicator of quality. The changing tides of health care quality have been well researched and the Institute of Medicines (IOM) report "Crossing the Quality Chasm" outlines a framework of guiding principles to stay ahead in a competitive economy. One of these 6 principles is the ability to provide timely care that reduces harmful delays (IOM, 2001). In our ambulatory clinic 190 (± 20) patients are seen daily. Press Ganey reports suggested that there was opportunity to improve patients experiences during clinic visits. Thus, a multidisciplinary team was convened to determine what could be done to improve the patient's clinic experience. Based on review of Press Ganey reports, time motion studies and an evaluation of the physical environment, it was determined that the patient experience might be improved if attention was given to: (a) upgrading the physical environment, (b) reorganizing clinic flow to reduce wait times, and (c) increasing timely access to care for new patients. The purpose of this process improvement initiative was to increase the overall patient experience (care, safety and satisfaction) by improving elements related to: clinic flow; physical environment; availability of new patient appointments

**Methods, Intervention, and Analysis:** Patient-flow was adjusted based on time-motion studies. Partial remodel/facelift to registration and waiting area was completed. Adjusting physician clinical templates reduced the time to first appointment to 48 hours.

**Findings and Interpretation:** Adjusted patient flow has patient from registration to health assessment area in 4-7 minutes. Feedback on physical upgrade mixed but mostly positive. 67% of clinics are seeing new patients within 48 hours of initial contact.

**Discussion and Implications:** Steps taken to improve the patient's clinic experience should be grounded in insights about what is important to patients, e.g. wait times and physical appearance of the clinic.

## #70

**PSYCHOSOCIAL DISTRESS SCREENING: APPLICATION OF THE ONCOLOGY STANDARD TO HCT PATIENT CARE.** Jackie Foster, MPH, RN, OCN®, Jill Randall, MSW, LICSW, Ellen Denzen, MS, Heather Moore, MPH, CHES, Stacy Stickney Ferguson, MSW, LICSW, and Elizabeth Murphy, EdD, RN, all at National Marrow Donor Program/Be The Match, Minneapolis, MN

**Objective:** The objective was to develop and implement a phone-based psychosocial distress screening process for patients and caregivers pre-hematopoietic cell transplantation (HCT).

**Topic Significance and Study Purpose, Background, and Rationale:** Maintaining a standardized process for psychosocial distress screening (PDS) for cancer patients is a 2015 standard for Commission on Cancer accredited hospitals. While many patients undergoing hematopoietic cell transplantation (HCT) have a cancer diagnosis, there are distinctions between the HCT process and oncology care, including the significant role of the

HCT caregiver and the treatment of non-cancer diseases. These variations require modification of PDS processes to fit the HCT setting. The objective was to develop and implement a phone-based PDS process for patients and caregivers pre-HCT.

**Methods, Intervention, and Analysis:** An evidence-based approach was used to apply an oncology-based PDS standard to HCT. This approach included: 1) review literature on PDS practices for HCT; 2) select and modify a screening tool; 3) develop a pilot program and evaluation plan; and 4) use preliminary results to guide program changes.

**Findings and Interpretation:** The literature review resulted in 359 abstracts (PubMed, 2009–2014); 41 relevant articles were synthesized. From among 16 screening tools, the Distress Thermometer was selected with associated problem lists and referral plans tailored to HCT. An implementation plan for the phone-based PDS pilot was developed. Program objectives were to: 1) design a standard process for PDS in HCT; 2) determine average PD score of pilot participants; and 3) provide participants with appropriate resources and/or referrals to address psychosocial needs. Preliminary results will be presented including: 1) baseline data for developing goals around number of PDS completed and referrals made; 2) mean PD score of pilot participants, 3) perceived helpfulness of PDS (staff); and 4) overall satisfaction with program (staff).

**Discussion and Implications:** These results will inform the comprehensive formative evaluation plan. Lessons learned from this evidence-based pilot program will provide relevant insight to nurses adapting this standard to their practice. 1. American College of Surgeons Commission on Cancer. Cancer Program Standards 2012, Version 1.1: Ensuring Patient-Centered Care. Available at: <http://www.facs.org/cancer/coc/programstandards2012.html>. Accessed February 20, 2014. 2. Ransom, S., Jacobsen, P. B., & Booth-Jones, M. (2006). Validation of the Distress Thermometer with bone marrow transplant patients. *Psycho-Oncology*, 15(7), 604–612.

## #71

**TRANSITION FROM WIRE LOCALIZATION TO RADIOACTIVE SEED LOCALIZATION IN A COMMUNITY HOSPITAL.** Kim Grindrod, BSN, RN, OCN®, CBCN®, CBPN-IC, Melissa Hulvat, MD, FACS, and Gordon Donald Stillie, MS, DO, MBA, FACRO, all at Kalispell Regional Healthcare; William Benedetto, MD, Northwest Imaging; Niccole Caban, RT(R)(M)(BD), the Women's Center at the Healthcenter Northwest; and Andre Vanterpool, BS, RT (N)(R), Kalispell Regional Healthcare, all in Kalispell, MT

**Objective:** Our objective was to transition from wire localization to radioactive seed localization offering a more comfortable and accurate procedure in our community setting.

**Topic Significance and Study Purpose, Background, and Rationale:** The standard for preoperative image-guided localization of non-palpable breast lesions has been wire localization (WL). The wire is placed the day of surgery occasionally delaying the surgical start time. The wire extends from the patients' breast often causing anxiety and risking dislodgement. In contrast, Radioactive Seed Localization (RSL) technique involves the injection of an I-125 (Iodine-125) seed up to 5 days prior to surgery. There is no wire that could be displaced and/or divided improving the accuracy of the localization and allowing for a more precise surgical procedure with lower re-excision rates.

**Methods, Intervention, and Analysis:** The first step in implementing this technique was working with our radiation safety officer to amend the United States Nuclear Regulatory Commission (U.S.NRC) license. This required the designation of authorized users, development and implementation of a policy and procedure for handling of the radioactive seeds and training of staff members. New forms were created for the proce-

dures. If RSL is to be used, the nurse navigator coordinates the implementation. We are a regional facility and considerations include patients distance from the hospital and time of surgery. We chose to ink and section the specimen in the operating room. After radiograph of the specimen the seed is removed and returned to the Nuclear Medicine Department for appropriate disposal eliminating handling by Pathology. This negated the need to amend our radioactive license or add the pathology department. Securing reimbursement was an obstacle as we began the process. There were no Current Procedural Terminology (CPT) codes so a miscellaneous code was used. As of January 1, 2014 the CPT code for wire localization was expanded to include RSL.

**Findings and Interpretation:** Our first RSL was on 8/21/2013 and to date we have completed over 80 procedures. Patients find the procedure to be comfortable, our surgeon is able to find the cancerous lesion quickly and there are less surgical delays.

**Discussion and Implications:** RSL is being used in larger hospitals and medical centers and we have shown it can be done in a community hospital.

## #72

**COMBATING COMPASSION FATIGUE BY CREATING MOMENTS THAT MATTER.** Nicole Reimer, BSN, RN, OCN®, Lehigh Valley Health Network, Allentown, PA

**Objective:** Participants will understand the impact of compassion fatigue by detailing interventions used to maintain the well-being of oncology nurses.

**Topic Significance and Study Purpose, Background, and Rationale:** Developing close interpersonal relationships with patients having life-threatening illnesses is a reality of oncology nursing. Over time, nurses begin to experience frustration, tension, emotional fatigue, defeat, and eventually, discontentment with nursing as a profession. This phenomenon, historically referred to as burnout, is defined as deep physical, emotional, and spiritual consumption accompanied by significant emotional pain by care providers. Therefore, it is in the best interest of nursing, and our patients, that nurses understand compassion fatigue and devise and implement interventions to address the subject.

**Methods, Intervention, and Analysis:** Clinical nurses on a 20 bed inpatient oncology unit in an academic, community Magnet®, hospital expressed frustration with the inability to fulfill their patient's psycho-social needs utilizing traditional resources. Although the literature was limited on proven interventions for nurses experiencing compassion fatigue, nurse leaders did not give up. They found a phenomenological study which identified three main themes related to compassion fatigue: creating moments of connection, making moments matter and energizing moments. These themes were adopted as a conceptual framework to focus actions to avoid and/or mitigate compassion fatigue among oncology nurses.

**Findings and Interpretation:** Recognizing a patient could be you, a family member or a friend; valuing opportunities to establish meaningful relationships; and providing a positive response in difficult circumstances may prompt better outcomes for caregivers. To address these themes, the following strategies have been formally implemented: activities which foster clinical nurses internal motivation to care, increased opportunities for socialization with colleagues, mentor-ship by senior nurses, enhanced education and training, and participation in self-care interventions such as mindfulness, meditation, and creative writing. However, no studies to date have been completed which prove interventions to alleviate compassion fatigue increase registered nurse job satisfaction.

**Discussion and Implications:** Through case studies, this presentation will demonstrate how to strategically support creative and innovative interventions that promote patient, family, and staff resiliency. Positive outcomes regarding increased patient

and staff satisfaction will also be discussed. Understanding the impact of compassion fatigue and implementing interventions to combat its effect are crucial in maintaining the well-being of nurses. Content detailed in this presentation can be replicated by oncology nurses in any setting.

### #73

#### **FINDING YOUR NICHE: PRACTICE AUTONOMY IN THE MULTI-MODAL ONCOLOGY ENVIRONMENT.**

Gail Davidson, MS, CNP, OCN®, Ohio State University Wexner Medical Center–The Arthur G. James Cancer Hospital and Richard J. Solove Research Institute, Columbus, OH

**Objective:** To envision opportunities for advance practice professionals to improve patient access and cancer management through independent encounters in collaboration with the multi-modal team

**Topic Significance and Study Purpose, Background, and Rationale:** Advance Practice Professionals (APPs) provide a valuable extension of medical services within the oncology setting. APP utilization within a practice can vary from physician extension to independent provider. Asserting a primary tenet in healthcare reform, APPs must practice to the fullest extent of their license. This can contribute to greater access and quality care. Provider satisfaction improves while providing optimal patient care. The Regional Liver Therapy Program at an academic comprehensive cancer center demonstrates how a specific, high acuity, high intensity patient population requiring skilled assessment, symptom and disease management, care coordination and collaboration with the multi-modal team can be a successful APP niche.

**Methods, Intervention, and Analysis:** Patient populations requiring rigorous medical management within the scope and expertise of the APP are identified while developing the support of collaborating, multi-modal team members. Process mapping across the disease trajectory addresses potential care needs, barriers and supports to treatment. Provider flexibility and impeccable care coordination to ensure access to the ‘right’ provider at the ‘right’ time is critical. Improving access while providing efficient, quality care must be a priority, as is establishing metrics to support change.

**Findings and Interpretation:** Formal and informal surveys of the multi-modal team, patients/families revealed a high level of satisfaction. Positive characteristics included accessibility, responsiveness, comprehensive care management, improved patient/family education and knowledge, single point of contact. Other favorable metrics included an increased number of patients seen, managed and treated, fewer readmissions, and improved revenue capture.

**Discussion and Implications:** Built on a foundation of mutual respect, trust and confidence in care, APPs can be cost-effective members of the team, improving access and quality care. A collaborative care approach allowing an ease of case review within an otherwise autonomous practice marries current clinical information with best practice treatment and support care decisions. In this example, high acuity patients requiring intense disease and symptom management benefit from APP-led care. Appropriate treatment of symptoms improves patient ability to tolerate treatment as well as improves quality of life. The oncology APP has many opportunities to manage the care of the complex patient. The APP can help to improve access and quality by managing a niche of patients.

### #74

#### **SAFE HANDLING TRAINING FOR NON-ONCOLOGY NURSES PROVIDING CANCER CARE.**

Barbara Milner, RN, MSN, AOCN®, CNS, Veterans Administration, Cleveland, OH

**Objective:** To learn of a multidisciplinary process endorsing safe handling by providing non-oncology nurses training in the use of Personal Protective Equipment (PPE) in the mixing and administration of leuprolide.

#### **Topic Significance and Study Purpose, Background, and Rationale:**

Prostate cancer is the most prevalent cancer at the Cleveland VA Medical Center (CVAMC), which serves 105,000 veterans in 24 counties. To ensure healthcare access, 13 Community Based Outpatient Clinics (CBOC) provide care within 30 minutes of every veteran residing in Northeast Ohio. At these sites, prostate cancer survivors routinely receive their semi-annual hormone agonist injection. In 2014 the oncology CNS noted that leuprolide (Eligard®) was a hazardous drug that required on-site mixing and was being given by non-oncology nurses. Furthermore, the Product Insert and pharmaceutical representatives, who provided in-services, did not incorporate PPE in the training. Data collected from July 2013 “ July 2014 noted 164 injections were given at the CBOCs by non-oncology nurses, without the benefit of PPE. This was reportedly also the practice at the CVAMC.

**Methods, Intervention, and Analysis:** An initiative was generated to gather the multiple stakeholders, garner consensus and develop a safe handling training process. In September 2014, meetings were held with the managers of the CBOCs, Specialty Clinics, Engineering Safety, Patient Safety, Pharmacy, Nursing Education, and Personnel Health. Current literature was reviewed, risk stratification discussed, and costs projected. Consensus was reached that the CVAMC and 6 of the 13 CBOCs would provide an injection room equipped with PPE, a chemotherapy waste receptacle and a chemotherapy spill kit. Only nurses trained and found clinically competent in the safe handling, mixing and disposal of the waste would be authorized to administer the medication. Training at the VAMC and six CBOCs will begin in November 2014.

**Findings and Interpretation:** Data will be collected the first quarter of 2015 to assess the number of leuprolide injections given at the CVAMC and 6 CBOCs. A telephone survey will question the nurses who had administered the medication, if training had been provided, if PPE was available, if PPE was used, and if there were any barriers experienced. Findings will be reported in the poster presentation.

**Discussion and Implications:** Hazardous drugs in cancer care are often administered by non-oncology nurses. It is incumbent upon oncology nurses to identify these nurses and provide training to ensure the safe handling of hazardous drugs.

### #75

#### **STANDARDIZING PATIENT EDUCATION: ENHANCING PROCESSES TO MEET THE NEEDS OF OUR PATIENT POPULATION AND IMPROVE PATIENT SATISFACTION.,**

Carol Blecher, RN, MS, AOCN®, APNC, CBCN®, Trinitas Comprehensive Cancer Center; and Timothy Clyne, RN, BSN, Aida Brito, RN, BS, and Allison Brown, MS, all at Trinitas Regional Medical Center, all in Elizabeth, NJ

**Objective:** The participant will identify steps in the development of a collaborative standardized approach towards patient education and will identify its effects on quality of care and customer satisfaction.

#### **Topic Significance and Study Purpose, Background, and Rationale:**

Cancer diagnosis and treatment is stressful. Literature on stress and coping indicates that patients cope more effectively when they are adequately educated about their diagnosis and treatment. Effective teaching benefits our patients by improving quality of life through side effect management, decreasing anxiety, promoting adherence and empowering them to be involved in their care. The International Council of Nurses has maintained that the nurse’s role as educator is an essential component of nursing care (Bastable, 2013). Development of

standardized processes that help nurses educate patients positively impacts on the delivery of quality nursing care. A number of accrediting organizations such as Joint Commission and NCAQ, as well as the updated ASCO ONS Guidelines identify patient education as a vital issue in quality care.

**Methods, Intervention, and Analysis:** This project was designed in part to increase patient satisfaction scores. After review of current patient satisfaction scores we identified a need for improved patient education surrounding medication, specifically chemotherapy. Historically, Chemotherapy and You (National Cancer Institute, 2011) was provided as an educational tool. A more readable pamphlet was developed. Readability of the pamphlet was assessed using the SMOG scale to ensure a sixth grade level. It was reviewed by nurse champions in the inpatient and outpatient settings and by English speaking patients for feedback. The tools were translated into Spanish and piloted in that population. Once completed, staff was educated regarding use of the module, as well as key items to include in patient education. A refrigerator magnet was developed to be reviewed and given to the patient during their education session. This magnet, which presents five pertinent self-care tips, was created in English with SMOG readability of 6th grade and translated into Spanish.

**Findings and Interpretation:** The baseline patient satisfaction scores were compared to satisfaction scores six months post intervention to evaluate the success of this chemotherapy education standardization project. The scores improved dramatically, so the next step in this project will be the development of chemotherapy cards in both English and Spanish.

**Discussion and Implications:** Patient education impacts on both satisfaction and quality care, so it is imperative that institutions standardize patient education to meet the needs of their populations.

**Underwriting or Funding Source Name:** Trinitas Regional Medical Center Foundation Grant

## #76

**OASIS FLUID ROOM.** Emily Zei, RN, BSN, Froedtert Hospital, Milwaukee, WI

**Objective:** An intravenous fluid room that was created within the clinics to reduce patient wait times and provide safe, cost effective care.

**Topic Significance and Study Purpose, Background, and Rationale:** The Cancer Center Day Hospital (outpatient chemotherapy infusion area) has a high patient volume, seeing an average of 103 patients daily, 8-9 of which receive intravenous fluids. Because of this, the average wait time patients experienced was upwards of 60 minutes and it became difficult to add patients on to the schedule who needed same-day fluid resuscitation. Clinic nurses gave intravenous fluids in clinic rooms, which was uncomfortable for patients sitting on exam tables and suboptimal, due to lack of equipment or call light. As a space became vacated in the clinics, an opportunity for an intravenous fluid room (named the "Oasis") was presented and approved.

**Methods, Intervention, and Analysis:** An empty space was renovated to house four treatment bays, allowing an RN to care for four patients simultaneously within the clinic. Two clinic nurses headed the project and created the parameters for patient care, workflow, charting requirements, and room design. The Oasis is staffed by rotating RNs from four clinics, to allow for adequate coverage. Oasis lead RNs worked closely with the Epic team to create encounters in the electronic medical record for efficient documentation. Clinic RNs were trained by the lead Oasis RNs in workflow and documentation.

**Findings and Interpretation:** It is widely documented that excessive patient wait times lead to patient dissatisfaction. Patient satisfaction and safety were positively influenced by this initiative. The median time from check-in to first medication

administration was about 20 minutes shorter for Oasis patients. When the provider has decided that patient in clinic would benefit from intravenous fluids, they can immediately go to the Oasis, rather than wait in the Day Hospital.

**Discussion and Implications:** The Oasis has been beneficial to our patient satisfaction, staff collaboration, and nurse job satisfaction. Members of our interdisciplinary teams collaborate to arrange fluids in the most appropriate environment for patient safety. Clinic RNs are able to maintain technical skills by providing treatment, as well as performing clinic duties. This nurse-driven initiative also optimized unused space for patient benefit and provided an opportunity for cost-effective patient care.

## #77

**BRINGING THE LEAN APPROACH TO THE PATIENT'S CHAIR-SIDE TO IMPROVE EFFICIENCY IN AN AMBULATORY NCI-COMPREHENSIVE CANCER CENTER.**

Carla Schaefer, BSN, RN, OCN®, Janet Gordils-Perez, MA, RN, ANP-BC, AOCNP®, and Jacquelyn Lauria, MSN, RN, APN-C, AOCNP®, all at Rutgers Cancer Institute of New Jersey; Michael Piagentini, Robert Wood Johnson University Hospital; and Kane Michael, RPh, BCOP, Rutgers Cancer Institute of New Jersey, all in New Brunswick, NJ

**Objective:** To describe Lean improvement methodology tools that can be used to guide a process improvement project in the ambulatory area.

**Topic Significance and Study Purpose, Background, and Rationale:** Health care facilities are now adopting lean methods developed in automobile manufacturing to improve operational efficiency, eliminate waste, and optimize the value of their services. At an NCI-CCC we found that missing orders, consents and/or laboratory results caused significant delays in patient throughput causing an average delay of 60+ minutes. Patients with signed orders took 90 minutes from time of check-in to time of chemotherapy dispensed as whereas, those without, took 158 minutes. These delays were seen in 33% of patients representing 23-staff hours of daily waste. The purpose of the project was to improve efficiency by reducing patient delays and increase patient satisfaction.

**Methods, Intervention, and Analysis:** A multidisciplinary team set out to improve chair utilization, reduce patient delays thus shorten the duration of patient visits, decrease the time from check-in to medication dispensing and improve policy compliance. A Lean approach was used and the project took 7 months to complete. Lean tools used included a fishbone diagram to map out current processes to determine factors contributing to inefficiencies, observations of processes, brainstorming sessions to dive into feasible and realistic solutions and piloting recommended changes.

**Findings and Interpretation:** The following changes were implemented during this Lean project: chair-side vital signs (previously done in a separate vital signs room), dedicated fax line to receive and facilitate laboratory results obtained in advance, daily audits for compliance of signed treatment orders with email reminders forwarded to noncompliant providers, chairside check-out ensuring patients receive all follow-up appointments/paperwork/prescriptions prior to discharge, and bundled scheduling via the EMR. A detailed control plan for sustainability of implemented changes was established with monthly metrics to ensure expected performance. Metrics (number of daily patients treated, Press Ganey scores, policy compliance) revealed substantial improvement in all areas compared to baseline.

**Discussion and Implications:** The use of lean methodology to identify non-value-added steps and the implementation of staff-recommended workflow changes resulted in improved patient throughput, increase patient satisfaction as well as a positive financial impact. Nurses and the health care team can utilize the

lean approach as a quality assurance method to focus on process improvement and change management to assure better patient outcomes, improved quality care and patient satisfaction.

#78

**BREATHE EASIER, A MULTIDISCIPLINARY PROGRAM TO REDUCE PULMONARY COMPLICATIONS FOLLOWING ESOPHAGECTOMY.** Jennifer Dennehy, RN-BSN, OCN®, and Mary Feng, RN-BSN, OCN®, both at Memorial Sloan Kettering Cancer Center, New York, NY

**Objective:** To demonstrate how nursing play a major role in conjunction with a multidisciplinary team in prevention of pulmonary complications in patients with esophageal cancer following an esophagectomy.

**Topic Significance and Study Purpose, Background, and Rationale:** Esophageal adenocarcinoma incidence rates are increasing, with the American Cancer Society predicting 18,170 new diagnoses of esophageal cancer in 2014. Esophagectomy, the only curative option, is a complex surgery that is associated with a high rate of post-operative complications, morbidity and mortality. Up to forty percent of patients develop pulmonary complications including atelectasis, pleural effusions, pneumonia and acute respiratory distress. These complications are associated with high mortality rates, longer hospital stays, increased healthcare expenditures and decreased quality of life. Nurses, as part of a multidisciplinary team, play a pivotal role in preventing post-operative complications and have the power to significantly decrease the rates of pulmonary complications after esophagectomy. The purpose of this abstract is to examine the multidisciplinary Postoperative Pulmonary Program (POPP) utilized at Memorial Sloan Kettering. POPP includes staff from physical therapy, respiratory therapy and nursing. Nurses on the Surgical Advanced Care and Thoracic Surgery unit play a pivotal role in preventing post-operative pulmonary complications by coordinating the multidisciplinary team members of POPP.

**Methods, Intervention, and Analysis:** The POPP program was created to shorten time to first mobilization and increase frequency of pulmonary toileting. The multidisciplinary team members are coordinated and implemented by nursing who spends the greatest amount of time at the bedside. Each POPP team member completes a thorough evaluation and provides an individualized care plan. Nurses initiate aggressive pulmonary toileting including early mobilization, progressive ambulation, coughing and deep breathing, splinting techniques, pain management, chest physiotherapy, and incentive spirometry within minutes postoperatively to prevent pulmonary complications. Bedside nurses play a pivotal role by treating all facets of the patient. Nurses provide emotional support, educate patients to promote independence, reinforce pulmonary toileting importance and assess multiple variables effecting pulmonary status including fluid balance, pain, and compliance. Nurses coordinate POPP program participants and provide pulmonary assessments and encouragement in between visits.

**Findings and Interpretation:** Collaboration between disciplines improves communication and improves patient outcomes.

**Discussion and Implications:** Aggressive pulmonary toileting and early, progressive ambulation is critical in the care of esophagectomy patients to promote adequate airway clearance and prevent pulmonary complications. POPP increases the frequency of pulmonary toileting while allowing each team member to enhance care with individual expertise.

#79

**PATIENT EXPERIENCE COUNCIL INCREASE PATIENT AND EMPLOYEE SATISFACTION SCORES.** Megan Nelson, BSN, RN, OCN®, Cleveland Clinic Foundation Fairview Hospital, Cleveland, OH

**Objective:** To show a multidisciplinary cancer treatment center's collaborative effort to increase patient satisfaction scores.

**Topic Significance and Study Purpose, Background, and Rationale:** The Cleveland Clinic Cancer Center at Fairview Hospital is a community based infusion, radiation and surgical oncology facility with approximately 175 patients seen daily. From the time of diagnosis, throughout treatment and during monitoring phase the patient deserves a comfortable treatment environment. As health care providers we often wish to do more to promote patient satisfaction outside of just treatment of the disease.

**Methods, Intervention, and Analysis:** The development of a multidiscipline committee was established with the primary goal to collaboratively improve the patient experience in our community based oncology center. A core patient experience council with representatives from all areas of the center meet monthly.

**Findings and Interpretation:** The committee was able to share and discuss patient satisfaction scores and develop patient driven programs in many areas of the cancer center. An increase in patient satisfaction scores from Press Ganey were reported, along with increased job satisfaction scores as reported by Gallop Survey.

**Discussion and Implications:** Patient satisfaction continues grow above and beyond the national benchmark in our out outpatient cancer center. We plan to continue to use the current scores, past programs, and new programs to continue to improve the patient treatment environment.

#80

**COMPLIANCE CORRELATES WITH OVERALL SURVIVAL IN RECURRENT GLIOBLASTOMA PATIENTS UTILIZING TUMOR TREATING FIELDS.** Sherry Greifzu, RN, MSN, AOCN®, Beth Kuchinka, MS, Lucianna DiMeglio, MSN, ANP-BC, AOCN®, Carly Bridge, ND, and Laura Benson, RN, MS, ANP, all at Novocure, Inc., Portsmouth, NH

**Objective:** This information will improve nurses understanding of the relationship between Tumor Treating Fields and treatment compliance; how it impacts patient teaching, patient care and patient outcomes.

**Topic Significance and Study Purpose, Background, and Rationale:** Overall survival (OS) for recurrent glioblastoma (GBM) is bleak. Once patients have progressed on standard front-line therapy OS is estimated around 5 months. This has led researchers to explore ways of improving outcomes in recurrent GBM. Unlike pharmaceutical treatment options, there is no half-life to TTFIELDS. The device is intended to be worn continuously by patients. Treatment compliance is recorded by the device on to internal log files. On a monthly basis a patient specific report is generated and provided to the treating health care team.

**Methods, Intervention, and Analysis:** The pivotal EF-11 trial (N = 237) resulted in the FDA approval of the TTFIELDS for recurrent GBM and revealed that patients utilizing the device 75% of the time (~18h/day) had a higher OS of 7.7 months versus 4.5 month for those utilizing it < 75%. This correlation was confirmed in a Patient Registry Dataset (PRiDe) that collected data in all TTFIELDS treated patients with recurrent GBM in the United States from October 2011 through November 2013. Compliance data was available in 287/457 patients in the registry and the analysis revealed that those utilizing the device 75% of the time also had a higher median OS than those who used <75% of the time (13.5 months versus 4.0, respectively). Other factors in the PRiDe registry that influenced the patient outcomes were treatment at first recurrence, patient performance status, and being bevacizumab naïve.

**Findings and Interpretation:** Compliance of 75% (~18h/day) was a clear predictor of survival and was confirmed in both the EF-11 phase III pivotal trial and the PRiDe registry.

**Discussion and Implications:** Raising awareness of this predictor of survival in patients utilizing the TTFIELDS is important

as oncology nurses are pivotal in patient teaching, ongoing assessment and continued motivation of the patients.

**Underwriting or Funding Source Name:** The studies were funded by and all authors are employees of Novocure, Inc. (Portsmouth, NH).

## #81

**INTEGRATING LITTLE PEOPLE INTO A BIG WORLD.** Anna Christofanelli, BSN, RN, Leah Scaramuzzo, MSN, RN-BC, AOCN®, and Jeannine Brant, PhD, APRN, AOCN®, FAAN, all at Billings Clinic, Billings, MT

**Objective:** Describe the process of integrating pediatric patients with cancer into an adult oncology unit in a hospital with no inpatient pediatric unit.

**Topic Significance and Study Purpose, Background, and Rationale:** Pediatric patients with cancer received outpatient care at a regional healthcare system in the northwest, but inpatient care was unavailable. Pediatric patients were travelling to surrounding metropolitan areas to receive treatment. This gap was presented to an onpatient unit caring for adult patients with cancer. With nursing education and identification of resources, these patients could be provided care closer to home. The purpose of this project was to prepare nurses on an adult oncology unit to care for pediatric patients with cancer by creating a set of educational standards, thereby addressing this underserved population.

**Methods, Intervention, and Analysis:** Once staff demonstrated a solid foundation of adult oncology knowledge, pediatric education was provided followed by education for pediatric oncology. Competencies developed by the pediatric nurse clinician were used to guide nursing education. Instructional methods included classroom education, knowledge assessments with written tests, online self-learning modules, and experienced shadowing nurses in the outpatient pediatric oncology clinic. Competency content included pediatric institutional protocols, cardio/pulmonary emergencies, developmental needs of pediatric patients, policies/procedures for medication administration, tips and tricks for assessing pediatric patients, and pediatric resources. An interdisciplinary team of pharmacists, nurse specialists and pediatric physicians provided the education. This education was optional for current staff and mandatory for staff newly hired. Pediatric specific education allowed staff to develop fundamental knowledge to care for pediatric patients.

**Findings and Interpretation:** A total of 77% of staff completed the education, 47% completed PALS certification, and 59% completed the APHON curriculum for pediatric chemotherapy/biotherapy administration. Pediatric patients aged nine and older are now cared for on the adult oncology unit. Feedback from physicians and patients/families has been positive following the integration. Some challenges that arose during implementation included consistent staffing of pediatric competent nurses, ensuring safe equipment conducive to pediatric needs, and availability of age-appropriate activities.

**Discussion and Implications:** This model of pediatric integration can easily be adapted in other adult oncology settings. This will help to improve patient and family satisfaction, and allow patients to receive care in their home community. Education for nurses can increase comfort level in caring for a new unit-based population.

## #82

**OPENING PANDORA'S BOX: MANAGING SUBSTANCE USE IN CANCER PATIENTS.** Amanda Choflet, MS, RN, OCN®, Sidney Kimmel Cancer Center at Johns Hopkins Hospital and Johns Hopkins School of Nursing, Baltimore, MD

**Objective:** To determine best practices for assessing and managing cancer patients with active substance use disorders who are receiving cancer treatment.

**Topic Significance and Study Purpose, Background, and Rationale:** Patients who present for cancer treatment with substance use issues are at risk for poor outcomes. Active substance use adds a layer of complexity to the treatment plan that increases morbidity and mortality and negatively impacts quality of life.

**Methods, Intervention, and Analysis:** A review of literature was performed utilizing several key databases, including PubMed, CINAHL®, Embase, and the Cochrane library. Search terms included "substance use," "addiction," "alcoholism," "drug use," "chronic pain," and "cancer." Inclusion criteria included publications since 2000 and peer-reviewed sources with texts available in English. Articles were excluded that pertained only to substance use causing cancer. This literature search resulted in thousands of returned articles (7,854). After title review for relevance, 794 articles remained. Abstracts were then reviewed and duplicates removed, resulting in 49 articles remaining for review.

**Findings and Interpretation:** The objective of this literature review was to determine the best method for assessing and managing substance use disorders (SUD) in cancer patients. There is a paucity of evidence in assessing and treating SUD in cancer patients. Education regarding substance use for oncology providers is inadequate and many have little experience managing patients with SUD. When evidence of SUD is apparent, there is little information and few resources to draw upon for support. Assessment tools are inconsistent and not widely utilized in the oncology setting, because differentiating problematic and therapeutic use of pain medications is complicated. Chronic pain and substance use literature yields validated assessment tools and management strategies that have not yet been used in oncology. Adaptation of assessment tools, such as the AUDIT and ASSIST and implementation of strategies like SBIRT may benefit cancer patients.

**Discussion and Implications:** As cancer survival improves, oncology patients with SUD will face acute and chronic toxicities from cancer treatment that will be exacerbated by continued substance use. Substance use threatens a cancer patient's quality of life, safety, and survivorship. Cancer treatment offers oncology patients with SUD an opportunity for health improvement that might otherwise be missed if their SUD is ignored. Although assessment and management strategies have been suggested by experts, there is little evidence that such practices have been widely adopted in the oncology field.

## #83

**RISK ASSESSMENT TO REDUCE OCCURENCE OF NEUTROPENIA IN ONCOLOGY PATIENTS.** Amanda Santini, RN, BSN, Donna Reinbeck, RN, MSN, OCN®, NEA-BC, Jacquelyn Koenig, RN, OCN®, and Alison Dunwald, RN, BSN, OCN®, all at St. Barnabas Health Community Medical Center, Toms River, NJ

**Objective:** A team of nurses from an inpatient oncology unit developed a process and plan of care to assess, educate and treat patients who are at risk of developing febrile neutropenia.

**Topic Significance and Study Purpose, Background, and Rationale:** Chemotherapy induced neutropenia is a life-threatening complication of cancer treatment. Febrile Neutropenia can delay cancer treatment, increase the risk of infection and prolong inpatient stays. Oncology nurses need to know how to properly assess and educate patients. In addition, a plan should be developed to quickly identify patients who present to the hospital with signs and symptoms of febrile neutropenia. The Emergency Department is often the entry point for many neutropenic patients, yet many staff members do not realize febrile neutropenia to be a life-threatening condition.

**Methods, Intervention, and Analysis:** A risk assessment tool was used to determine patient's susceptibility which include chemotherapy regimen, advanced cancer, comorbidities,

etc. Patients that are assessed to be at risk, are educated on signs and symptoms, such as fever of 100.4 or higher, chills, sore throat, shortness of breath, etc. Patients are educated on precautions such as good hygiene, avoiding crowds and sick people, eating only fruits and vegetables that can be washed or cooked, etc. Patients are also given an alert card to present on arrival to the Emergency Department that includes their diagnosis, chemotherapy regimen and the Oncologist providing care. Emergency nurses attended in-services hosted by oncology nurses, to raise awareness. Changes to the process includes private placement of the patient and using neutropenic precautions. Orders will be obtained for blood cultures, chest x-ray, and blood work along with stat antibiotics and a consult with an infectious disease physician. Transfer to an isolation room on the oncology unit should occur as soon as possible. Prior to discharge, the patient is given a plan to follow once at home to ensure that they are compliant with all of their office visits, medication refills, and laboratory work.

**Findings and Interpretation:** Patients and Emergency Department personnel had knowledge deficits related to neutropenia. Family members were included in the teaching to help support learning. Emergency staff was grateful for the education and additional sessions are being planned.

**Discussion and Implications:** In order to provide safe and competent care, nurses need to bring evidence based practice to the bedside. By using current guidelines and educating staff and patients, we are better able to care for our patients.

#### #84

**LIGHT YEARS AHEAD: USE OF LOW LEVEL LASER THERAPY FOR ORAL MUCOSITIS.** Annette Quinn, RN, MSN, Karen Holeva, BS, and David Clump, MD, all at University of Pittsburgh Cancer Institute, Pittsburgh, PA

**Objective:** Verbalize how low level laser therapy can be an effective treatment for oral mucositis in patients receiving mucotoxic chemotherapy and/or radiation therapy.

**Topic Significance and Study Purpose, Background, and Rationale:** Oral mucositis (OM) one of the most debilitating toxicities of cancer therapy. Nearly all patients with head and neck tumors treated with chemoradiotherapy, and 75% of patients undergoing stem cell transplantation with total body irradiation experience some degree of OM. Treatment is still essentially palliative utilizing pain medications to mask the effects of concurrent chemoradiotherapy. As a result, there are essentially no effective treatments that focus on this toxicity. A recent Cochrane review analyzed the prospective data assessing the management of OM. Here, thirty-two prospective trials including 1505 patients were analyzed. Three comparisons for mucositis treatment including two or more trials were assessed: benzydamine HCl versus placebo, sucralfate versus placebo and LLLT versus sham procedure. Interestingly, only LLLT showed a reduction in severe mucositis when compared with the sham procedure. The goal of this pilot project was to implement a low level laser therapy program at the University of Pittsburgh Cancer Institute to aid in the prevention and/or treatment of oral mucositis (OM) in patients receiving chemoradiotherapy for head and neck carcinoma or undergoing stem cell transplantation.

**Methods, Intervention, and Analysis:** Patients that were deemed to be high risk for developing OM were submitted to receiving LLLT 830 nm wavelength laser three times a week beginning the first week of treatment and continuing throughout their radiation therapy course or for stem cell transplant patients until their ANC was greater than 1000 cell/nm<sup>3</sup>. Patients were treated extra-orally to 5 sites and intra-orally to the tongue and soft palate. National Cancer Institutes Common Toxicity Criteria (NCI-CTC) was used to evaluate OM in each patient.

**Findings and Interpretation:** To date over 75 patients have received low level laser therapy for the prevention and/or re-

duction of their oral mucositis. In radiation therapy, 0/52 patient experienced a treatment break related to OM and in stem cell transplant only 2/23 patients developed a grade 3 oral mucositis.

**Discussion and Implications:** Low level laser therapy is an exciting new tool that significantly reduces the incidence and severity of OM in patients undergoing chemoradiotherapy for head and neck cancer or stem cell transplantation.

#### #85

**TRAINING SPECIAL PROCEDURE NURSES TO CHECK CHEMOTHERAPY AT BEDSIDE.** Ashley Mickiewicz, BSN, RN, OCN®, Donna Normann, RN, CRN, Lindsay Aliano, BSN, RN, OCN®, Denise Dessino, RN, CRN, and Carolyn Toal, BSN, RN, all at Robert Wood Johnson University Hospital, New Brunswick, NJ

**Objective:** The participant will be able to assess the process an institution used to train nurses in a specialty area to safe chemotherapy practices.

**Topic Significance and Study Purpose, Background, and Rationale:** Chemotherapy is a high risk medication that requires a double check at the bedside prior to administration. For patients receiving intrathecally administrations and chemotherapy embolization therapy for liver cancer in Special Procedures a nurse from the Oncology units would have to leave the floor to check the drug in the procedural area. This proved to be challenging at times with the nurse leaving a full assignment to go to another care area in the hospital.

**Methods, Intervention, and Analysis:** A group of Special Procedural nurses were identified to be trained to double check the medication with the physician as part of the procedure time out. A group of four nurses took the online Chemotherapy Biotherapy Certificate course thru Oncology Nursing Society to gain a background in chemotherapy knowledge. A special competency was created for the nurses to complete that focused on the second check at bedside for the procedures that they encounter.

**Findings and Interpretation:** The time for patients to receive their treatment has been reduced as there is no longer a wait for the Oncology unit RN to arrive in the procedural area. The Special Procedure nurses identified gaps in practice for safe handling of the medication and precautions to take in the procedural room. Spill kits were added to the rooms that the procedures take place, along with education on safe handling of the hazardous drugs.

**Discussion and Implications:** The special procedural nurses work closely with the Oncology clinical nurse educator for any questions and concerns. The change in process has led to a decrease in procedure wait time along with increasing the autonomy of the special procedure nurses practice. The Special Procedural nurses are aware of the full treatment orders and able to follow up with patients and assist with monitoring cumulative doses.

#### #86

**DEVELOPMENT AND IMPLEMENTATION OF CHEMOTHERAPY ADMINISTRATION, MANAGEMENT OF HYPERSENSITIVITY REACTION, EXTRAVASATION AND SPILL COMPETENCY FOR NURSES.** Heather Kennihan, MSN, RN, OCN®, Allegheny Health Network, Pittsburgh, PA

**Objective:** Develop and implement a didactic and hands-on clinical competency for nurses in chemotherapy administration, hypersensitivity reactions, extravasation and spill management.

**Topic Significance and Study Purpose, Background, and Rationale:** Abstract Validating clinical competence for nurses administering chemotherapy and managing chemotherapeutic emergencies is a critical component in increasing patient safety,



ensuring nurses preparedness, and to aide in the reduction of errors. Developing a program to determine clinical competence for nurses in the administration and management of chemotherapeutic emergencies is a time consuming and tenuous responsibility for institutions to carry out. This article describes one healthcare system's process in developing and implementing a didactic and hands on clinical competency for nurses to demonstrate administering a multi-chemotherapeutic regimen, managing a hypersensitivity reaction, recognizing and treating extravasations of a vinca alkaloid and anthracycline, and managing a chemotherapeutic spill. A train the trainer day was held to educate competency validators on the process that was involved to assess competency. During the competency, a pre- and post-assessment was given to each nurse, a patient scenario was provided including orders, consent, blood work, simulated chemotherapeutic agents, antidotes, PPE, yellow bin, and spill kit. This competency was implemented throughout five hospitals and 15 outpatient oncology clinics to 150 nurses that had been trained within the past 12 months using online simulated vignette's that utilized the 16 Standards of Practice (SOPs) that were created by a multidisciplinary oncology team. These SOPs reflected the recommendations of 31 Standards of Care recommended by the American Society of Clinical Oncology and the Oncology Nursing Society. The methods utilized to deem competence for each nurse was time consuming, validated, effective and could be implemented throughout other areas of practice. Keywords: Chemotherapy, competency, nurses

**Methods, Intervention, and Analysis:** A criteria checklist was created for each of the four scenarios that would be completed during the simulated R-CHOP administration. Each drug provided the unique ability to provide administration of IVP and short infusion, a hypersensitivity reaction, two types of extravasations, and a spill. Competency validators were trained along with having 3 core validators that completed the majority of the competency assessment for consistency purposes.

**Findings and Interpretation:** Scores from the pre-and post-assessment increased after completing the competencies skills checklist. Most evaluations stated that they learned something during the competency and appreciated the hands on approach.

**Discussion and Implications:** The method used to assess competency skills in 150 nurses could be implemented throughout any healthcare system in any nursing skill as long as the SOPs were the same in each institution.

## #87

**EHR EDUCATION: IMPROVING THE ONCOLOGY NURSE WORKFLOW.** Jenifer Arroyo, BSN, RN, and Tahitia Timmons, MSN, RN-BC, OCN®, VA-BC, both at Cancer Treatment Centers of America at Eastern Regional Medical Center, Philadelphia, PA

**Objective:** Participants will be able to identify innovative strategies to engage the Oncology nurse to utilize the EHR more effectively.

**Topic Significance and Study Purpose, Background, and Rationale:** Since passage of the Americans Recovery and Reimbursement Act of 2009, emphasis on healthcare informatics has grown. Nurses need to be familiar with effective documentation. In 2015, reimbursement for Medicare will be reduced by 1% for those who cannot demonstrate meaningful use. In the literature, Clinical Decision Support tools (CDS) increase effectiveness and efficiency of care by improving documentation. Although EHRs create standardized ways of reporting information they are not without their flaws, and require clear messaging regarding documentation. Even with an EHR, the nurses were not using it effectively or efficiently. The staff created many workarounds, creating confusion with various places to document the same information. Our goal was to teach the staff not to ignore the CDS, but rather to use them to improve workflow.

**Methods, Intervention, and Analysis:** The first step was a focus group brainstorming session with education and clinical informatics. To obtain compliance with the EHR, bi-monthly education on dedicated topics would occur. There was a meeting with all departments that would be affected. Included were nursing, quality, education and clinical informatics. The clinical informatics and education teams would work together to educate the staff on the system using case scenarios and handouts.

**Findings and Interpretation:** The staff was receptive to participating in the session. There was reinforcement of previous learning. Documentation compliance increases patient safety. One aspect we saw as a result was an increase in compliance related to SCD documentation. For oncology patients VTE prophylaxis is especially important due to their hypercoagulable state. This topic was discussed during our sessions and we were able to track this as an area that required improvement.

**Discussion and Implications:** EHRs are a necessary part of documentation. They help make healthcare safer however, they require surveillance. Being able to supply a detailed and accurate EHR is key in the field of oncology. The first step is to ensure the competency of your staff with the EHR through real time education.

## #88

**EFFICACY OF TOLVAPTAN IN CANCER PATIENTS WITH HYPONATREMIA DUE TO SIADH—POST-HOC ANALYSIS OF SALT (STUDY OF ASCENDING LEVELS OF TOLVAPTAN) AND THE POTENTIAL ROLE OF THE ONCOLOGY NURSE.**

Kimberly Lonergan, RN, MSN, and Fatima Ahmad, PharmD, both at Otsuka America Pharmaceuticals, Inc., Princeton, NJ; Jaime Blais, PhD, Otsuka Pharmaceutical Development and Commercialization, Inc., Rockville, MD; Linda Glaser, MD, PhD, Coastal Biomedical Research, Inc., Santa Monica, CA; Richard Gralla, MD, Albert Einstein College of Medicine, New York, NY; and Frank Czerwiec, MD, Otsuka Pharmaceutical Development and Commercialization Inc., Rockville, MD

**Objective:** To explore the clinical rationale for the oncology nurse (ON) to recognize and manage SIADH-related hyponatremia, and to understand tolvaptan as an alternate therapy to fluid restriction in this population

**Topic Significance and Study Purpose, Background, and Rationale:** Hyponatremia is common in oncology patients due to underlying SIADH.1 Fluid restriction (FR) is used to manage chronic SIADH, but has a slow onset and poor patient compliance.1,2 Hyponatremia can mimic side effects of chemotherapy and other neurological disorders; early symptoms include headache, confusion, and weakness.3 The role of the ON is critical in the early identification of hyponatremia in the oncology patient.4 The 2 identical RCT SALT studies evaluated the selective vasopressin V2-receptor antagonist tolvaptan for the treatment of hyper- or eu-volemic hyponatremia attributed to chronic heart failure, cirrhosis or SIADH.

**Methods, Intervention, and Analysis:** This post-hoc analysis evaluated a subset of SIADH patients (n = 110) with an etiology attributable to cancer (n = 28) to determine the efficacy of tolvaptan relative to the overall SIADH population. The change from baseline in serum sodium (SerNa) AUC between tolvaptan and placebo was derived from an ANCOVA model. The percentage of patients with normalized SerNa (>135 mEq/L), was also analyzed. Tolvaptan was given orally (15-60 mg) once daily for 30 days.

**Findings and Interpretation:** Baseline SerNa levels were 130 and 128 mEq/L for tolvaptan and placebo, respectively. The mean change from baseline in SerNa AUC for tolvaptan vs. placebo was 5.02 vs. -0.26 (p = <0.0001) at day 4, and 6.94 vs. 1.03 (p<0.0001) at day 30. SerNa normalization occurred in 6/12 and 0/13 patients at day 4, and 7/8 and 2/6 at day 30 (tolvaptan

vs. placebo respectively;  $p < 0.05$ ). In the total SIADH population, the percentage of patients requiring FR was significantly less with tolvaptan (7.8%) vs. placebo (13.7%) ( $p < 0.05$ ).<sup>1</sup> While a statistically significant comparison could not be made due to small cohort numbers, results with tolvaptan were consistent to those previously reported in the total SIADH population. Common treatment emergent adverse events for tolvaptan were consistent with previously reported results.<sup>5</sup>

**Discussion and Implications:** It is important for the ON to recognize hyponatremia, to educate oncology patients/caregivers in recognizing early signs, and have knowledge of alternate management strategies to FR for its correction, in order to prevent possible delays/disruptions in anticancer therapies. Results of this post-hoc analysis support the use of tolvaptan for the treatment of SIADH-related hyponatremia in cancer patients.

### #89

**NURSING ROLES IN MANAGING CARDIAC SAFETY IN CANCER PATIENTS: CASE STUDY OF ROMIDEPSIN FOR THE TREATMENT OF T-CELL LYMPHOMA.** Jan Hronek, ACNP, and Maureen Lehner, ACNP, both at Tennessee Oncology/Sarah Cannon Research Institute, Nashville, TN

**Objective:** Review results from cardiac studies of romidepsin to highlight key issues for nurses in minimizing overall cardiac risks for their patients.

**Topic Significance and Study Purpose, Background, and Rationale:** Romidepsin is a histone deacetylase (HDAC) inhibitor indicated for the treatment of relapsed/refractory cutaneous and peripheral T-cell lymphoma. Several HDAC inhibitors in clinical development, including romidepsin, have been associated with electrocardiogram (ECG) changes. A class effect has been suggested, causing concern about the cardiac safety of these agents.

**Methods, Intervention, and Analysis:** Results from systematic cardiac studies of romidepsin are reviewed and key non-drug-related issues for nurses are highlighted.

**Findings and Interpretation:** Cardiac safety during treatment with romidepsin is multifactorial. Electrolyte deficiencies, which are associated with ECG abnormalities and dysrhythmias, are common among patients with T-cell lymphoma. For example, in a phase 2 trial of romidepsin for the treatment of relapsed/refractory cutaneous or peripheral T-cell lymphoma (N = 131), 92% of patients required replacement of potassium and/or magnesium at some time during the study. Maintaining consistently normal/high electrolyte levels is important during treatment to minimize the risk of ECG abnormalities and dysrhythmias. Prophylactic antiemetics administered before each romidepsin dose may also contribute to ECG changes. Currently, no standard antiemetic guidelines for romidepsin exist, and antiemetic selection is at the discretion of providers and/or dictated by pharmacy formularies. 5-Hydroxytryptamine 3 receptor antagonists are highly efficacious and thus commonly prescribed for oncology patients. However, changes in ECG parameters have been observed following their administration, particularly with ondansetron. In a post-marketing study of romidepsin, patients underwent ECG assessments at pre-antiemetic and post-antiemetic/pre-romidepsin baselines and at pharmacokinetic sampling time points to 24 hours. A preliminary assessment showed that romidepsin does not appear to have a concentration-dependent effect on the QTc interval, even at exposures more than 2-fold higher than the clinically recommended dose (14 mg/m<sup>2</sup> as a 4-hour intravenous infusion). Additionally, clinically insignificant changes in the QTc interval were primarily attributable to prophylactic antiemetics and likely exaggerated by transient increases in heart rate.

**Discussion and Implications:** Data support the cardiac safety of romidepsin while asserting the need for consistent electrolyte supplementation, appropriate antiemetic selection, and heart rate monitoring. By recognizing the influences on cardiac safety

during treatment with romidepsin, nurses can identify risks, report them, and recommend appropriate interventions, which facilitates improved outcomes.

**Underwriting or Funding Source Name:** Medical writing assistance provided by MediTech Media, funded by Celgene Corporation.

### #90

**TO IMPROVE CARE COORDINATION OF PATIENTS ADMITTED TO A HOSPITAL INPATIENT ONCOLOGY UNIT FOR SCHEDULED CHEMOTHERAPY/BIOOTHERAPY TREATMENT, TO DECREASE LENGTH OF STAY FOR COST AVOIDANCE AND IMPROVE STAFF EFFICIENCY.**

Lyn Zehner, MN, RN, AOCN®, AOCNS®, Inova Alexandria Hospital, Alexandria, VA

**Objective:** To Improve care coordination of patients admitted to a hospital inpatient oncology unit for scheduled chemotherapy/biotherapy treatment, to decrease length of stay for cost avoidance and improve staff efficiency.

**Topic Significance and Study Purpose, Background, and Rationale:** Care Coordination has been defined by numerous groups, including the American Nurses Association (ANA), the National Quality Foundation, and the Agency for Healthcare Research and Quality as “the deliberate organization of patient care activities between two or more participants involved in a patient’s care to facilitate the appropriate delivery of health care services” (ANA, 2012). Our community hospital oncology unit received faxed chemotherapy orders for patients to be admitted for treatment. There was no coordination between the hospital (unit, RN patient placement coordinator (PPC), and pharmacy) and the medical oncology practices requesting admission. Some patients receiving treatment are coded as ambulatory, thus there is no billing for the inpatient cost associated with their hospitalization. Study purpose included enhancing coordination among members of the interdisciplinary team and decreasing length of stay (LOS) as a cost avoidance strategy by improving time between admission and treatment initiation.

**Methods, Intervention, and Analysis:** Process improvement strategies were implemented, including development of a chemotherapy schedule. The schedule is managed by the Oncology CNS in coordination with oncology offices, and made available to the pharmacy, RN PPC, and unit charge RNs. Orders are sent from the MD office to the unit prior to day of admission. An oncology pharmacist was newly assigned to the oncology unit to review and clarify orders. On admission, orders are entered into the electronic medical record. For all patient treatment admissions, the admit time and chemotherapy initiation time was recorded. The time difference was calculated and median times for each treatment and the group were determined. This was done for 22 treatments prior to initiation of intervention strategies and for 84 treatments following initiation.

**Findings and Interpretation:** Prior to implementation of intervention strategies, median time to treatment initiation was 5 hours and 44 minutes. With care coordination, median time dropped to 4 hours and 44 minutes - an improvement of 60 minutes. Viewed as a Linear Time Line time to treatment initiation has gradually increased.

**Discussion and Implications:** Care coordination among the interdisciplinary team has improved. A relationship between nurse/patient staffing ratios (which increased in February 2014 to cut costs) and relationship to the Linear Time Line requires further study.

### #91

**CHEMOTHERAPY ORIENTATION CLASS EFFECT ON KNOWLEDGE ASSESSMENT: ONCOLOGY NURSING INTERVENTION.** Amy Rettig, MSN, MALM, RN, ACNS-BC,

PMHNP-BC, CBCN<sup>®</sup>, Michael Berger, PharmD, Nicole Muscari, BSN, RN, OCN<sup>®</sup>, Lindsey Radcliff, BSN, RN, and Donna LaBarge, BSN, RN, OCN<sup>®</sup>, all at the Ohio State University Wexner Medical Center–The Arthur G. James Cancer Hospital and Richard J. Solove Research Institute, Columbus, OH

**Objective:** Participants will discover the effect of a targeted intervention on knowledge assessment of newly prescribed chemotherapy patients with breast cancer.

**Topic Significance and Study Purpose, Background, and Rationale:** Patients and families often report that information needs are not met. Specific time points for education to best support patients across the continuum of breast cancer care is unknown. In a systematic review, Chan et al. (2012) concluded that orientation programs may or may not impact knowledge gained by patients. A purpose of this program was to determine the impact of an oncology nursing education intervention on patient knowledge at the chemotherapy treatment prescription time point.

**Methods, Intervention, and Analysis:** Newly diagnosed patients prescribed chemotherapy for breast cancer were referred (2012–2013) or registered (2013–present) for chemotherapy orientation class. Taught by medical oncology RNS, chemotherapy infusion RNs and clinical pharmacists, the class provided safety information about chemotherapy and basic symptom management. Initially, 2 true/false questions were asked pre/post class: Q1 “A single nurse is responsible for the preparation, cross-check, administration, and delivery of my chemotherapy” and Q2 “My chemotherapy is prepared specifically for me on the same day I arrive for treatment.” Based on feedback from the oncology RNs a third question was included (April 2013): Q3 “I need to call my doctor if I have a temperature of 100.4 degrees.” Attendance and assessment participation was voluntary.

**Findings and Interpretation:** Since its December 2012 inception, 218 persons, patients and their family members, signed in for the chemotherapy orientation class and 133 patients completed Q1 & Q2 and 105 patients completed Q3. Results showed correct responses were: Q1 56 pre-class and 107 post-class; Q2 91 pre-class and 130 post-class; Q3 80 pre-class and 105 post-class. Percentage improvement for Q1, Q2, and Q3 were 80%, 98% and 100% respectively.

**Discussion and Implications:** Results suggest an orientation class may help knowledge gain at the time of the class. It supports other findings that well-designed, high quality research on orientation classes would help oncology nurses determine best practices. Factors to include in future research are knowledge gained after chemotherapy initiation and admission rates.

**e#1**  
**PATIENT AND FAMILY EDUCATION IN A MULTI-MODAL WORLD: BRINGING EDUCATION HOME.** Ann Breen, APRN, MN, OCN<sup>®</sup>, Seattle Cancer Care Alliance, Seattle, WA

**Objective:** The participant will be able to identify multiple methods to share education with patients and family caregivers using website based manuals, social media, videos, and live streaming classes.

**Topic Significance and Study Purpose, Background, and Rationale:** Ambulatory Clinics are the primary setting for the majority of complex oncology care. The critical nature of patient education necessarily mandates effective models of information dissemination. The Patient Education Department in a large National Comprehensive Cancer Network (NCCN) Center has addressed this need for an annual population of over 5000 oncology patients. The need for education has been built progressively into a multi-platform program allowing immediate, personalized, and accessible education. The shift to ambulatory care has challenged educators to expand information accessibility from

onsite didactic and paper education alone to easily accessible internet resources. Patients and caregivers increasing use personal mobile devices which allow for immediate access to valuable guidelines and helpful safety hints. This presentation describes survey research and the design of a multiple-platform model to meet the educational needs of acute oncology patients treated in the ambulatory setting.

**Methods, Intervention, and Analysis:** Patients and caregivers provide ongoing survey data which facilitated new platform designs for the education program’s implementation. A multi-platform strategy utilizing social media, on line video library, live-streaming classes, online patient manuals, and a nurse monitored phone line augmented traditional education. The core videos include clinic orientation, managing cognitive changes, Central line care, food safety, disability insurance, symptom management, oral chemotherapy, sexuality and relaxation.

**Findings and Interpretation:** Multiplatform educational program is evaluated by social media analytics (3000 monthly interactions), and ongoing surveys. Results indicate preference for personalized instruction, relevant classes, and manuals (>4.5/5) over generic pamphlets (3.7/5). The multi-platform provides access to specific personalized information for patients and caregivers anywhere. These approaches allow accessibility to personalized education unimaginable previously.

**Discussion and Implications:** Effective education keeps patients safe by providing specific information. Cancer Centers should adapt a multi-platform educational model which addresses the growing computer literacy of patients while simultaneously addressing the wide range of learning styles.

**e#2**  
**IMPLEMENTING A PRACTICE CHANGE ACROSS A MULTI-SITE ORGANIZATION: IMPROVING CARE FOR PATIENTS AT RISK OF MUCOSITIS.** Erica Fischer-Carlidge, MSN, RN, CNS, CBCN<sup>®</sup>, AOCNS<sup>®</sup>, and Corey Russell, MSN, RN, OCN<sup>®</sup>, both at Memorial Sloan Kettering Cancer Center, New York, NY

**Objective:** To identify a systematic approach to implementing high impact practice changes in a complex healthcare network.

**Topic Significance and Study Purpose, Background, and Rationale:** Oral mucositis is one of the most common complications of cancer treatments, occurring in up to 85% of patients depending on treatment regimen. The oncology nurse plays a critical role in the prevention, early identification and management through evidenced-based supportive care and symptom management. At one comprehensive cancer center, current guidelines were outdated and audits of ordering practices showed high prescription volumes for non-evidenced-based agents. A baseline nursing survey found 70% of nurses felt they needed more education on mucositis management. Revision of the current guidelines and education of clinical staff was needed.

**Methods, Intervention, and Analysis:** Using the Iowa Model of Evidence-based Practice to Promote Quality Care and Roger’s Diffusion of Innovations, a nurse-led multidisciplinary team reviewed the literature and revised and restructured the guidelines. New evidenced-based guidelines were vetted through the nursing shared governance council structure and approved at the highest medical board. Guidelines are available on the Quality website as a resource. An education taskforce of advanced practice nurses from across the care-continuum developed an education plan for nurses and licensed independent practitioners (LIPs) across the institution. Standardized presentations and an interactive, online learning module with post-test were created; unit-based champions were identified and received training by the taskforce. Face-to-Face education sessions were completed with nursing staff on each unit prior to the release of the required online module. Education sessions were completed with LIPs. Content was added to new staff orientation

for sustainability. Champions continue to provide peer-to-peer reinforcement at the unit level.

**Findings and Interpretation:** 4,800 clinical staff from 13 sites, covering 2 states were educated within a 30 day time period. We are currently conducting an evaluation which includes assessment of nursing practice via survey, knowledge mastery via post-test, and audit of LIP ordering practices. This presentation will include a 6 month post-implementation data analysis, guideline development, and education planning and dissemination.

**Discussion and Implications:** Our systematic approach can be effective when implementing clinical practice changes across large complex organizations, such as policy changes, procedures, or guidelines. Similarly, other institutions can convene expert teams to implement and disseminate practice changes at their institutions for future initiatives with the same expectations of standardized, thorough, information distribution.

### e#3

**THE ADVOCACY CONNECTOR: BRIDGING THE KNOWLEDGE GAP.** Joanne Vanak, RN, MSN, and Ellen Ivey, BS, both at Janssen North America Pharma, Horsham, PA

**Objective:** Link health care providers to a variety of advocacy group capabilities that serve as a resource addressing a host of patient needs as they go through their cancer journey.

**Topic Significance and Study Purpose, Background, and Rationale:** There is a knowledge gap between the capabilities of advocacy groups and healthcare providers (HCPs) and patients. The need to create awareness about valuable resources, available through not-for-profit organizations, for HCPs, patients, and caregivers led to the creation of the "Advocacy Connector" ([www.advocacyconnector.com](http://www.advocacyconnector.com)). This web based resource links patients and HCPs to a variety of advocacy groups that serve to address a host of patient needs (e.g. emotional, educational and financial support). Initially, this resource will focus on the area of oncology & a rare disorder Castleman's disease.

**Methods, Intervention, and Analysis:** Not-for-profit state and national level advocacy groups focusing on services directed towards oncology patients across the United States were given a survey to complete. Information regarding state-level advocacy groups was gleaned from all 50 states. Individuals within the groups were asked if they would participate in an on-line resource that would highlight the capabilities of their respective organizations. The advocacy groups identified their key services, the results of which were then reviewed and validated by an independent vendor.

**Findings and Interpretation:** The Advocacy Connector is a compilation of information from both state and national level advocacy groups, specifically focused on the following cancer-related diseases: prostate, ovarian, breast, colorectal, and lung, as well as leukemia, lymphomas, and myelomas. Advocacy Connector is organized so that patients and HCPs can easily access information about each advocacy group according to the type of services they provide for each type of cancer. Available information includes: help-lines, alternative & complementary therapies, research, caregiver support, clinical trial information, counseling, end-of-life care, financial assistance, legal/insurance assistance, men's health, pain management & palliative care, screening and early detection, spiritual support, survivorship, travel services, veteran services, wellness, nutrition & exercise, women's health, and young adult cancer support. Materials may be printed for home-use by patients and caregivers. Telephone numbers for the resources are included in the printed information for those who have no access to computers. Information is also available in non-English languages (e.g. Spanish).

**Discussion and Implications:** We believe the Advocacy Connector will help bridge the knowledge gap by increasing awareness of the extent of services offered by oncology advo-

cacy groups and thereby increase patient knowledge, access to services, and overall satisfaction.

### e#4

**BEDSIDE SHIFT TO SHIFT REPORT.** Lindsay Cleveland, BSN, RN, BMTCN, Dina Abusalah, RN, Abigail Salogar, BSN, RN, Whitney Clarke, BSN, RN, Nicole DiNello, BSN, RN, OCN®, and Steven Pavloski, BSN, RN, OCN®, BMTCN, all at Karmanos Cancer Center, Detroit, MI

**Objective:** Describe a process improvement project using bedside reporting to increase nurses' perception of professional accountability, communication, and the value of patient and family involvement in the handoff process.

**Topic Significance and Study Purpose, Background, and Rationale:** Adequate and efficient patient handoff has captured the interests of clinical nurses (Maxson, 2012), nursing management (Cairns et al., 2013) and the Joint Commission (Riesenberg et al., 2010). The literature suggests that bedside reporting may be a more effective means of conducting patient handoffs. Notably a number of authors have reported improved patient satisfaction (Evans et al., 2012; Cairns et al., 2013) with bedside reporting. Similarly, research has shown that bedside reporting decreases report time and improves nurse satisfaction (Evans et al., 2012), nursing accountability and teamwork (Cairns et al., 2013; Mason et al., 2012). Resistance to shifting from the conventional handoff processes to a more visible, patient-centered process of bedside reporting should be anticipated. Nurses may be more open to initiating bedside reporting, if given rationale to support the change (Carlson, 2013) and frequent reinforcement from management regarding the positive benefits accrued by patients and staff (Evans et al., 2012).

**Methods, Intervention, and Analysis:** At a NCI designated Comprehensive Cancer Center, patient handoff is a conventional, behind the scenes approach. A process improvement project was conducted to pilot the use of bedside reporting on one oncology nursing unit. The pilot was designed to optimize staff participation through education, role modeling and immediate positive reinforcement. It was expected that a shift to bedside reporting would have measurable positive effects on the outcomes: nurses' perceptions of professional accountability, communication, and the value placed on involving the patient and family in the process. A survey instrument was developed to measure these outcomes. The Press Ganey survey patient satisfaction question was the initial patient measure used.

**Findings and Interpretation:** After two months, nurse survey responses indicated that additional orientation was required. A patient bedside reporting question was also added to the unit discharge survey. Final outcome data is pending.

**Discussion and Implications:** As care complexity increases oncology nurses must be well informed about their patients' plan of care. Furthermore, dynamic communication involving the patient and family is critical to formulating the plan of care. Institution-wide, nurse embracement of bedside reporting is the ultimate outcome desired. Oncology nurses may select bedside reporting over a conventional approach as a mean to accomplish this goal.

### e#5

**ADVOCATING FOR PALLIATIVE AND END OF LIFE CARE: THE ROLE OF COMMUNICATION AND MORAL COURAGE.** Maria Roesler, RN, MSN, CHPN, Ellen Coughlin, CHPN, MA, MPA, Raylene Langish, BSN, RN, OCN®, Leslie Wright-Brown, MS, RN, NEA-BC, and Maureen Bowe, RN, MSN, CNN, all at Barnabas Health, West Orange, NJ

**Objective:** Participants will identify associations between knowledge of hospice, communication barriers, moral distress

and the impact of advocacy to facilitate end of life communication in the oncology setting.

**Topic Significance and Study Purpose, Background, and Rationale:** The literature demonstrates that EOL Communication, although challenging, is an essential skill for the oncology nurse. Levels of Moral Distress may contribute to the nurse's ability to provide effective EOL communication. Barnabas Health System, consisting of seven hospitals in New Jersey, created an EOL Collaborative to establish Best Practice for Patients with Advanced Disease. Representatives brought forward their challenges and burning questions related to end of life care, communication and moral distress. Oncology nurses are in a unique role because of their long-term relationships with their patients/ caregivers. In the Oncology Setting, moral courage plays a vital role in advocating for optimal care of their patient population.

**Methods, Intervention, and Analysis:** Design: A descriptive study and a convenience sample. 227 surveys were collected from registered nurses at 2 system hospitals representing one teaching and one community hospital. Method, two instruments: Caring for Terminally Ill Patients Nurse Survey (Boyd, 2011) and Moral Distress Scale (Hamric et al.,2012) Both tools were valid and reliable. Data analysis: SPSS version 21 (SPSS Inc., Chicago, IL) was used to analyze the data. Themes and patterns were used to analyze open ended questions.

**Findings and Interpretation:** Analysis of the survey data revealed the following themes and patterns: More discussions with patients/families were initiated by RNs that received formal training in EOL Care 53% reported experiencing difficulty talking with patients and families about end of life issues Reported reasons for not discussing EOL/hospice were physician-related and family refusal Nurses stated physicians have difficulty talking about dying with their patients and families Nurses stated physicians are reluctant to have honest conversations at the EOL Nurses reported moral distress related to actual or perceived futile care

**Discussion and Implications:** Additional education that improves Oncology Nurse EOL communication is needed. Multidisciplinary perspectives and initiatives that involve the patient and family's values and goals will optimize preferred outcomes, improve communication an achieve higher levels of satisfaction for patient/family and health care team. Future studies may evaluate nurse's level of moral distress following formalized education.

## e#6

**SUSTAINING EVIDENCE-BASED NURSING PRACTICE FOR FALL PREVENTION IN HOSPITALIZED ONCOLOGY PATIENTS.** Janis Johnson, ADN, RN, BMT-CN, Deborah Sheikholeslami, BSN, RN, OCN®, RN-BC, Rhonda Evans, MSN, RN, OCN®, BMT-CN, Sharon Tucker, PhD, RN, PMHCNS-BC, Laura Cullen, DNP, RN, FAAN, and Michele Farrington, BSN, RN, CPHON, all at University of Iowa Hospitals and Clinics, Iowa City, IA

**Objective:** To identify factors that strengthen and sustain evidence-based fall prevention strategies for hospitalized oncology patients.

**Topic Significance and Study Purpose, Background, and Rationale:** Fall prevention is a key quality indicator and nursing concern for hospitalized oncology patients. Cancer patients who fall often experience severe injuries due to underlying medical conditions. Up to 50% of patients are at risk for falls and almost half who fall suffer injuries. There is limited evidence that specifically guide fall prevention strategies for oncology patients. Capturing patients' perspective is important but largely missing to help guide practice recommendations

**Methods, Intervention, and Analysis:** IRB approval was obtained. A convenience sample of 39 adult oncology patients who had been hospitalized less than 3 days, were receiving inpatient

cancer treatment participated in brief, structured interviews regarding beliefs about fall risk, fall prevention, asking for assistance, communication with the healthcare team, routine nursing assessment, and use of equipment to prevent falls. Oncology nursing staff completed a survey on self-efficacy and knowledge of fall prevention and an AHRQ context assessment. Descriptive statistics were used to summarize the findings. A thorough review of fall incident reports from 2009-2012 was analyzed to capture patient characteristics, risk factors leading to falls.

**Findings and Interpretation:** Patients averaged 58.9 years of age with 36% reporting falling in the past five years, 18% with injury; however, 56% reported they were not at fall risk while hospitalized. Yet, 77% reported being at risk of injury if they fell while hospitalized; and 36% reported assistance to the bathroom was not at all important. Patients' open-ended reports of one personal strategy to prevent falling were being careful (30%) and getting help (30%). Only 27% of RNs reported they are involved in interdisciplinary planning for fall prevention and no NAs reported this; 65-83% of RNs and NAs reported consistently using safe-handling equipment; 56-62% of RNs and NAs reported ambulating patients to reduce fall risk; and 72-87% indicated hospital leaders are engaged in fall prevention.

**Discussion and Implications:** Stronger and consistent fall prevention practices are needed for hospitalized oncology patients. Practices the engage patients in understanding their true risks of falling along with collaborative individualized fall prevention strategies are needed and effects of these practices need further study. More effective training in fall prevention practices for nursing and interdisciplinary team members.

**Underwriting or Funding Source Name:** Partial Funding provided by The DAISY Foundation's J. Patrick Barnes Grant for Nursing Research and Evidence-Based Practice Projects.

## e#7

**FULL PRACTICE AUTHORITY FOR ADVANCED PRACTICE REGISTERED NURSES: WHAT'S HAPPENING IN YOUR STATE?** Deborah Hanes, MSN, RN, CNS, ARNP, OCN®, and Aaron Begue, MS, RN, CNP, both at the Ohio State University Wexner Medical Center–The Arthur G. James Cancer Hospital and Richard J. Solove Research Institute, Columbus, OH

**Objective:** Participants will list two possible barriers to Advanced Practice Registered Nurse practice.

**Topic Significance and Study Purpose, Background, and Rationale:** Significance / Background Full Practice Authority (FPA) refers to APRNs working at full capacity of licensure and education. This was a mandate in the Institute of Medicine's "The Future of Nursing: Leading change, advancing health" report, October 2010. In preparation for implementation of the Affordable Care Act, the U.S. healthcare system must rethink how healthcare providers can more fully participate in providing care. The IOM pointed out the legal barriers that prohibit APRNs from practicing to their full education and training. Further, APRN professional and education organizations have worked to create a consensus model that "defined the individual roles, criteria for APRN recognition, definitions of specialty and subspecialty, and principles for the four prongs of regulation (licensure, accreditation, certification, and education" (Stanley, J. et. al.2009.). However, each state must adopt laws & rules facilitating FPA. These initiatives have empowered APRN organizations to lead their states' efforts in implementing FPA.

**Methods, Intervention, and Analysis:** Methods This presentation will provide information on each state and the work toward or adoption of FPA therein. States in which FPA is being addressed legislatively and the barriers being faced will be discussed. If selected for oral presentation, a panel of APRNs will discuss the status of FPA in their state.

**Findings and Interpretation:** Advanced Practice Registered Nurses need to be aware of the status of FPA in their states and implications to APRN oncology practice.

**Discussion and Implications:** Changing healthcare so that APRNs practice at full capacity of licensure and education requires engagement and support of the process by all APRNs.

#### e#8

**BENEFITS OF A PRE-TREATMENT CHEMOTHERAPY EDUCATION PROGRAM FOR NEW CANCER PATIENTS.** Debra Burgess, RN, BSN, MHA, Dale Johnson, RN, BSN, OCN®, and Laura Brennan, RN, BSN, RNP, AONP, both at UC Davis Comprehensive Cancer Center, Sacramento, CA

**Objective:** Participants will be able to evaluate if offering a structured education program is effective to improve patients' knowledge of chemotherapy, side effects, and reduce distress.

**Topic Significance and Study Purpose, Background, and Rationale:** Commission on Cancer Standards challenge cancer centers to provide patient centered care and measure the quality of care provided. Receiving a new cancer diagnosis can cause anxiety and starting chemotherapy raises questions about treatment. A literature review found that patient education provided before starting chemotherapy varied greatly and may not adequately prepare patients leading to more distress. Psychosocial studies suggest that adherence to treatment; satisfaction; and outcomes diminish for patient experiencing even moderate levels of distress. We found it was difficult for patients' to absorb information and have adequate time to ask questions when education was provided immediately before starting chemotherapy. To improve knowledge and reduce distress a pre-treatment chemotherapy class was offered in a small group setting prior to starting chemotherapy. A tour of the Infusion Center was included to help patients feel comfortable coming to the first visit.

**Methods, Intervention, and Analysis:** Studied 75 adult patients starting chemotherapy for the first time using a survey administered prior to and after attending chemotherapy class. Primary outcome measure was to identify if pre-treatment education class improved knowledge and reduced anxiety. An additional 68 patients not attending class were surveyed to help assess chemotherapy knowledge deficits. Variables included prior experience with chemotherapy; education given by MD/RN; stress level; general chemotherapy knowledge and side effects; and satisfaction with MD/RN communication. A multidisciplinary group was formed to work on the education program focusing on managing side effects.

**Findings and Interpretation:** Chemotherapy education was well received with improvement noted for all target topic areas. A notably 41% increase was seen for satisfaction with MD/RN communication. 37% reported a reduction in stress level, and 97% felt adequate chemotherapy instruction was provided prior to starting treatment. Successes lead to continuing the program on an ongoing basis.

**Discussion and Implications:** This study identified topics where more education was needed and empowered patients to actively participate in care. Nurses were also able to focus education during the first chemotherapy session on a patients' specific treatment protocol and not devote extensive time on introductory information. More studies are needed to evaluate if the pre-treatment education program leads to a reduction of chemotherapy side effects and preventable hospital admission, or improves treatment compliance.

#### e#9

**SAVING LIVES, ONE SCREEN AT A TIME.** Joy Octaviano, MS, RN, CNS, OCN®, Yiffa Elsea, RN, OCN®, Donna Hunter, RN, Rosita Gobbell, RN, BSN, Judy Laroche, RN, OCN®, and Angela Brooks, RN, BSN, OCN®, all at John Muir Medical Center, Concord, CA

**Objective:** Develop and implement an evidence-based initiative through early recognition of severe sepsis and septic shock in order to reduce the mortality rate related to sepsis.

**Topic Significance and Study Purpose, Background, and Rationale:** In 2012, John Muir Medical Center Concord Campus (JMMCC) sepsis mortality rate was 15.8%, which was consistently higher than three regional California hospitals. The Surviving Sepsis Campaign data reveals that it may take up to several hours or even days to recognize sepsis in unscreened patients, resulting in delays in early resuscitation and higher mortality rates. Evidence suggests that hospitals that have achieved the lowest mortality rates (<10%) screen patients for sepsis every 12-24 hours. In 2013, the Sepsis iLab Steering Committee was developed as a multidisciplinary team charged with decreasing mortality rate of sepsis at JMMCC. The committee partnered with two outside consulting organizations, the Altos Group and Wolters Kluwer (WK). B6 Medical Oncology was chosen as one of the two units to pilot the project. Unit team was created and the team leader participates in the steering committee meeting every week.

**Methods, Intervention, and Analysis:** Prior to this project there was very little knowledge on the medical oncology floor about sepsis. The Altos Group provided staff with sepsis education and team building strategies for effective change. Team members developed a paper sepsis screening tool, a med-surg sepsis order set and work processes in order to attain set goals for sepsis screening compliance. Daily sepsis screening of patients with audits and weekly feedback were performed. WK Point of Care Testing Advisor was implemented in tandem with paper screening to ensure that the electronic surveillance was in fact accurate. Sepsis Spotlight in monthly staff meetings, pocket size reference cards for the nursing assistants, sepsis board, and coffee gift cards were among the activities implemented by team to increase compliance in sepsis screening

**Findings and Interpretation:** The screening compliance has increased over 95% through paper screening tool and staff engagement. Compliance with early goal directed therapy through increased awareness and the use of the sepsis order set has also improved significantly. Sepsis mortality has decreased to 12.3% as of November 2013 and continues to trend down.

**Discussion and Implications:** Cancer patients are highly immunocompromised. Prompt identification and intervention of the oncology nurses, along with earlier ruling out of possible sepsis has a positive impact on patient care and reduces hospital mortality rate.

#### e#10

**PATIENT PERCEPTIONS OF POTENTIAL POSITIVE IMPACTS AND RISKS OF TREATMENT-FREE REMISSION IN CHRONIC MYELOID LEUKEMIA IN CHRONIC PHASE.** Jon Mickle, NP, the Ohio State University Wexner Medical Center, Columbus, OH; Carla Maria Boquimpani de Moura, MD, Hemocentro do Rio de Janeiro-HEMORIO, Rio de Janeiro, Brazil; Tomasz Szczudlo, MD, and Estella Mendelson, BSRN, MBA, both at Novartis Pharmaceuticals Corporation, East Hanover, NJ; Katy Benjamin, PhD, ICON Commercialisation and Outcomes, Bethesda, MD; and Tamás Masszi, MD, PhD, Department of Haematology and Stem Cell Transplantation, St. István and St. László<sup>3</sup> Hospital, Budapest, Hungary

**Objective:** To evaluate the patient perspective on the potential benefits and risks of treatment-free remission in chronic myeloid leukemia

**Topic Significance and Study Purpose, Background, and Rationale:** For patients with chronic myeloid leukemia in chronic phase (CML-CP), tyrosine kinase inhibitor (TKI) therapy can result in a life expectancy comparable to that of the general popu-

lation. Current treatment guidelines recommend that patients receive TKI therapy indefinitely; however, the feasibility of treatment-free remission (TFR) has been shown in clinical studies where some patients with deep, sustained responses have safely suspended TKI therapy.

**Methods, Intervention, and Analysis:** Patients with CML-CP in the United States (N = 40) were asked about their perspectives on TFR and the impact of TKI therapy on their lives using a standardized interview guide and open-ended questions.

**Findings and Interpretation:** Participants were currently receiving imatinib (53%), dasatinib (25%), nilotinib (15%), ponatinib (3%), or no therapy (5%). Side effects of TKI therapy were reported by 75% of study participants. The most commonly reported major impacts of treatment were financial burden (53%) and interference with social activities (25%). Overall, 58% of participants were cautiously positive about attempting TFR. The most common expected positive impacts of TFR were relief of side effects (75%), reduced financial burden (58%), positive emotional impact (43%), and convenience (43%). Participants wanted to see more long-term data regarding the safety and durability of TFR. Most (90%) were concerned that attempting TFR might result in resistance to TKI therapy. Other concerns included a low likelihood of success (45%), disappointment/frustration over having to reinitiate therapy (35%), fear of developing severe side effects when reinitiating TKI therapy (33%), and a desire for more frequent disease monitoring (33%). Many participants noted the importance of family input when considering TFR. While 35% of participants believed that their families would support their decision to attempt TFR, 28% believed their families would not want them to attempt TFR.

**Discussion and Implications:** This qualitative survey suggests that patients perceive several potential benefits of TFR and also have important concerns. Decisions about attempting TFR will involve open dialogue between patients, healthcare professionals, and in many cases, patients' families. In addition to a need for further global research, it will be important to provide clear, evidence-based education on the potential benefits of TFR so that informed decisions can be made.

**Underwriting or Funding Source Name:** Novartis Pharmaceuticals Corporation

#### e#11

**FLUSHING AWAY COMPLICATIONS: INTEGRATING SCHEDULED INTRAVENOUS HYDRATION TO PREVENT READMISSION IN PATIENTS RECEIVING MULTIMODALITY TREATMENT WITH PLATINUM-BASED CHEMOTHERAPY.** Katharine Derrico, RN, BSN, OCN®, Jonathan Bidey, RN, BSN, Anne McDermott, RN, Marie Festa, RN, OCN®, and Virginia Martin, RN, MSN, AOCN®, all at Fox Chase Cancer Center, Philadelphia, PA

**Objective:** Describe the process and clinical significance of integrating a nurse-run hydration clinic into the treatment plan of patients undergoing platinum-based chemotherapy with or without radiation.

**Topic Significance and Study Purpose, Background, and Rationale:** Patients receiving platinum-based chemotherapy, particularly with concurrent radiation, are at high risk for dehydration. Associated complications, including nephrotoxicity, nausea, and vomiting, often lead to an increased readmission rate, as well as an interruption in the treatment schedule. A nurse-run hydration clinic was developed in the ambulatory care department at this NCI-designated comprehensive cancer center to provide early intervention for these patients, with the goal of preventing treatment delays and reducing the burden of side effects.

**Methods, Intervention, and Analysis:** The hydration clinic was initially implemented to manage treatment side effects for

head and neck cancer patients receiving chemotherapy and/or radiation. Inclusion criteria was expanded to include any patient undergoing platinum-based chemotherapy, radiation, or with difficulty maintaining oral intake. Registered nurses collaborated with physicians and advanced practice clinicians to identify patients who would benefit from being followed in this clinic. Electronic documentation tools were designed to enhance continuity of care, improve communication, and ensure that appropriate charges were being captured.

**Findings and Interpretation:** Preliminary evaluation has shown positive feedback from both patients and staff. The implementation of this clinic has provided nurses with the opportunity to consistently assess and educate patients throughout the treatment process, which has led to improved communication between patients and their care team. It has also allowed for earlier intervention in management of symptoms, including administration of anti-emetics and electrolytes, while allowing patients to maintain independence and avoid unnecessary hospital stays.

**Discussion and Implications:** The development of the hydration clinic is an ongoing process, as the initial positive response has led to considerable growth within the first year. A comparison of first quarter data from 2013 and 2014 showed an increase of total hydration clinic visits from 286 to 347, with an increase of patients outside of the head and neck service comprising 16% and 44% of visits respectively. Continued assessment of patient needs, resources, and staff feedback has also expanded the scope of the clinic beyond administration of intravenous fluids, as well as supported nurses' ability to facilitate communication between patients and the interdisciplinary team. The outcome has been decreased readmissions, increased compliance to both standard treatment regimens and clinical trials, and an improved patient experience.

#### e#12

**EFFECTIVENESS OF FOCUSED FALL PREVENTION BUNDLE IN PATIENTS ADMITTED TO AN ADULT BONE MARROW TRANSPLANT UNIT- AN EVIDENCE BASED PROJECT.** Katherine Butler, BSN, RN, Kavitha Nair, BSN, RN, OCN®, University of Texas Southwestern Medical Center, Dallas, TX

**Objective:** "Will patients admitted to an adult BMT unit experience fewer falls, if cared for with a targeted fall prevention bundle in addition to standard fall precautions?"

**Topic Significance and Study Purpose, Background, and Rationale:** Problem/Intro: National hospital standards decrease inpatient falls and enforce safety as a daily priority. Patients who fall during their hospital admission can increase their risk of injury, overall medical expenses, hospital liability, and decrease their overall prognosis. Patients admitted to adult bone marrow transplant (BMT) units are particularly susceptible to falls due to intrinsic factors of their hematologic disease process and treatments received. These patients experience secondary consequences of chemotherapy that increase their risk of falling such as, increased sedation from analgesic and anti-emetic medications, thrombocytopenia induced dizziness and bleeding, neuropathy, and abrupt variability in physical status. Consistent annual incidences of patient falls in a BMT unit, despite enforcement of hospital fall precautions, resulted in an evidence-based project to answer: "Will patients admitted to an adult BMT unit experience fewer falls, if cared for with a focused fall prevention bundle in addition to standard fall precautions?" Evidence/Background: A literature review revealed multiple studies involving fall risk assessment and prevention. One study reviewed characteristics of falls in academic medical centers and identified the importance of assessing population specific risk factors in order to better predict a patient's risk of fall. Another

study advocated the use of population-specific interventions in order to decrease the incidence of inpatient falls based on subjective risk factors.

**Methods, Intervention, and Analysis:** Using the IOWA model of framework, a retrospective analysis of BMT inpatient falls revealed a statistically significant relationship between benzodiazepines and falls resulting in injury. A three month "BMT Fall Bundle of Interventions" was designed and piloted on all patients on a BMT unit, in addition to compliance with hospital wide standard fall prevention interventions.

**Findings and Interpretation:** Although there were assisted patient falls during this trial period, none resulted in patient injury. Based on preliminary results from the three month pilot period, targeted fall bundle is currently continued in the unit. Statistical analysis is pending and will be illustrated at the time of presentation.

**Discussion and Implications:** Initial analysis suggests that targeted interventions specific to patient population increased the effectiveness of general fall risk assessment.

### e#13

#### **ROLE OF NAVIGATION AND PATIENT EDUCATION: OUR EXPERIENCE WITH HEAD AND NECK CANCER PATIENTS.**

Sabrina Mosseau, BS, RN, OCN®, and Barbara McHale, BS, RN, OCN®, CBCN®, both at Samaritan Hospital Cancer Center, Troy, NY

**Objective:** Participants will be able to develop and implement a process to increase the percentage rate of patients undergoing successful treatment through a systematic approach to symptom management and care.

#### **Topic Significance and Study Purpose, Background, and**

**Rationale:** At Samaritan Hospital Cancer Treatment Center, we realized that patients with a diagnosis of Head and Neck cancer were having trouble navigating the healthcare system prior to starting treatment. In the past, these patients were overwhelmed with scheduling consults, tests and procedures before treatment could even begin. Many patients became frustrated, confused and did not show up for scheduled appointments or went to the wrong appointment. The goal of our mission driven organization is to keep patients appropriately educated so we can give them the best care they deserve. We started to streamline the process and developed a specific Head and Neck Cancer Patient Care Plan. At this time a navigator was assigned to work with these patients, families and physicians. Top areas of concern were: improving patient compliance in attending scheduled appointments, assigning a navigator as point of contact and care coordination, education of the patient/family in treatment plan, reinforcement of chemotherapy education and review of side effects and symptoms. Also noted to be of importance was incorporating detection and evidence based symptom management by the entire oncology team as part of the education. It was the goal of the nursing team to assist our patients in receiving treatment services in an equitable and timely manner, to remove barriers to their care and educate patients thereby improving outcomes

**Methods, Intervention, and Analysis:** A Patient care plan was developed for each Head/Neck cancer patient. A navigator was assigned to each patient. A chemotherapy education bag was developed and give to patients. The bags included information: Oral care protocol to promote early detection and management of stomatitis, education on chemotherapy induced neuropathy and recommendations for management including education on safety concerns and fall prevention, Skin care protocol to promote early detection and management of dermatitis secondary to chemotherapy/biotherapy and radiation therapy treatments, a nutritional tip sheet, and a Zone chart that visually cued patients and families on specific actions to take if they were in the green, yellow or red zones.

**Findings and Interpretation:** Implementation of the plan closed the information gap, coordinated care and decreased wait time for treatment initiation. Patient compliancy increased and appointments that were scheduled were attended. This enabled patients to complete recommended treatment. Involving the navigator at time of diagnosis further strengthened this process. The education material provided with protocols for detection and management of stomatitis, skin care, peripheral neuropathy and neutropenia provided patients with the tools they needed to be responsible for their own care. We also developed and implemented a pre and post chemotherapy class survey that further validated the importance of reinforced, standardized education to patients among all health care providers.

**Discussion and Implications:** With the creation of consistent messages/patient education and the development of specific head/neck cancer patient care plans leads to improved care coordination, evidence based protocol utilization, and better outcomes for our patients.

### e#14

#### **IMPLEMENTATION OF DAILY CHG BATHING FOR ZERO CLABSI IN NEUTROPENIC PATIENTS.**

Carolyn Paget, BSN, RN, OCN®, Julia Amundson, BSN, RN, Carolyn Smith, BSN, RN, OCN®, and Theresa Morrison, PhD, CNS, CNS-BC, all at NCH Healthcare System, Naples, FL

**Objective:** Participants will be able to conclude if CHG bathing, in neutropenic patients with central lines, will lead to zero CLABSI in their patient population.

#### **Topic Significance and Study Purpose, Background, and**

**Rationale:** Neutropenic patients with central lines are at an increased risk for central line bloodstream infections (CLABSI). From September 2009 to March 2014 the oncology unit had 27 CLABSI in the neutropenic population. 70% of infections came 12 hospitalized days after the line was inserted. Daily chlorhexidine gluconate (CHG) bathing has shown to be an effective intervention to reduce rates of CLABSI.

**Methods, Intervention, and Analysis:** A special CHG Bathing Neutropenic Precaution sign will be hung on the door indicating daily CHG bathing. Patients were offered four choices for AM care (as appropriate). Nurses and clinical techs were advised of CHG bathing practices for neutropenic patients. Signage and logs, kept in patient's room, validated type of care offered, received, and patient comments. Blood cultures were monitored. CHG bathing began May 2014. Several patients had missing data about bathing. Form was revised to request nurse notification of bathing refusal. Change resulted in increase patients requiring assistance, as fatigue progressed through hospital stay.

**Findings and Interpretation:** Patients with 0.0 absolute neutrophil count (ANC), were bathed or showered 147 times CHG bath wipe or solution. There were ZERO CLABSI and no positive blood cultures, from any origin, in neutropenic patients in 6 months. Cost was \$800. Cost savings based on 1.5 CLABSI per quarter = \$240,000. CHG bathing may have a role by reducing skin microbial counts, avoiding patient exposure to contaminated bath basins.

**Discussion and Implications:** Multiple tests of change have resulted in ZERO CLABSI in neutropenic patients in 6 months. CHG bathing was the last practice change implemented, taking the number of CLABSI from two a quarter to zero. Zero CLABSI was accomplished after the following changes were implemented: identifying the lived experience of the nurses through a qualitative study, line-care education focusing on the relationship of the nurse to understanding CLABSI; making dressing change check list and other venous access information readily available; redesign of dressing change trays; adding connector labels to daily practice, improving access to line-care supplies; and improving documentation of line-care. CHG bathing is one practice that should be considered.



## e#15

**HOW TO EAT AN ELEPHANT: THINKING GLOBALLY, ACTING LOCALLY FOR CANCER AWARENESS OUTREACH.** Devon Bandouveres, MSN, RN, OCN®, and Kara Scanlon, BSN, RN, both at Saint Francis Hospital and Medical Center, Hartford, CT

**Objective:** Participants viewing our abstract will walk away with knowledge of how our institution provided cancer awareness outreach education at the local level to our hospital colleagues.

**Topic Significance and Study Purpose, Background, and Rationale:** With increasing emphasis on early cancer detection, prevention and survival outcomes, oncology nurses are faced with the challenge of educating the public on the latest evidence-based cancer screening methods and risk reduction strategies. The oncology service line at our institution, as part of our Relationship Based Care model, implemented a cancer awareness outreach program within our city. The challenges of globally educating our large urban community were paralyzing the group to the point of inaction. Rather than staying stuck we decided it would be better to start small than not at all. Our vision narrowed and the group then decided to “eat the elephant one bite at a time” by educating locally within our workplace.

**Methods, Intervention, and Analysis:** Our method for spreading cancer awareness consisted of choosing a cancer topic associated with each month; for example, teal in September for Ovarian Cancer Awareness. We used the designated awareness colors as a backdrop for each month’s cancer awareness topic. Education materials written at the 3rd and 5th grade reading levels were created on colorful flyers containing information on screening for early detection and any potential evidence-based risk reduction techniques. We attached elastic ribbon bracelets in the associated awareness color to further involve community participation in our initiative. These bracelets were seen throughout the hospital community and sparked conversation allowing our campaign to reach more people.

**Findings and Interpretation:** Our local hospital-based awareness campaign reached an average of 850 people per month. We note a gap in the literature on this topic of co-worker focused cancer awareness outreach, therefore, were unable to compare our findings.

**Discussion and Implications:** Our findings have the potential to impact current practice by noting the large number of individuals that can be reached by utilizing a narrow, population-based target audience, in comparison to more daunting larger scale initiatives that may be resource and cost prohibitive. In addition, The Affordable Care Act has incentivized many institutions to promote health and wellness amongst employees. Human resources departments are utilizing health coaches to actively promote disease prevention in cardiac and endocrine diseases, while cancer-specific education is less prominent. Future studies can evaluate cancer prevention education and employee health outcomes.

## e#16

**IMPACT OF A HOSPITAL-WIDE COMPREHENSIVE PAIN MANAGEMENT INITIATIVE.** Janet Shehata, MSN, RN, OCN®, NEA-BC, Paula Lester, MD, Shahidul Islam, MPH, and Melissa Fazzari, PhD, all at Winthrop University Hospital, Mineola, NY

**Objective:** Participants will be able to enhance pain management skills through better pain assessment and improved management strategies, in order to ultimately increase patient satisfaction relative to pain management.

**Topic Significance and Study Purpose, Background, and Rationale:** The understanding and effective treatment of pain

is a major challenge in contemporary medicine, due to the combination of physical, emotional, and social aspects that often complicate patient management. Empirical literature supports that patients suffering from chronic pain experience poor health, quality of life issues, and consume a higher level of healthcare resources. This institution recognized the need to improve pain management and assembled a hospital-wide interprofessional Pain Reduction and Comfort Management committee.

**Methods, Intervention, and Analysis:** The committee collected baseline assessment data inclusive of publically reported data, institutional data, as well as, a patient survey of pain status utilizing a specialized dementia pain scale, and a hospital-wide survey measuring pain management knowledge and perceptions. The goal of this Evidence Based Quality Improvement project was to enhance pain management skills through better pain assessment and improved management strategies, in order to ultimately increase patient satisfaction relative to pain management. This was accomplished through interprofessional educational opportunities in order to expand clinical resources, to update clinical order sets, and to utilize computer physician order entry. A sample size of  $n = 125$  was examined via Wilcoxon-Mann-Whitney testing and changes in the proportion of correct responses on specific survey items assessed via chi-square testing.

**Findings and Interpretation:** Data analysis indicated significant improvement in the prescribing patterns. Post-survey results indicated statistically significant improvement on overall scores for those with the most extensive educational interventions. This project demonstrates that a comprehensive interprofessional educational strategy can have a significant impact on the effective treatment of pain and patient satisfaction.

**Discussion and Implications:** Better pain assessment and improved management strategies was accomplished through interprofessional educational opportunities in order to expand clinical resources, to update clinical order sets, and to utilize computer physician order entry. As a result of this quality improvement project, nurses are assessing pain utilizing validated evidence based pain assessment scales and through the collaboration with interprofessional disciplines( who are able to electronically access and utilize the latest evidence based protocols through clinical resources), are able to attend to patient’s pain in a more comprehensive and efficient manner; thereby increasing patient’s satisfaction with their pain management regimen.

## e#17

**NURSE DYADS: PARTNERING TO INCREASE CLINICAL TRIAL PARTICIPATION AND STAFF SATISFACTION.** Kathy Wilkinson, BSN, RN, OCN®, Tricia Montgomery, BSN, RN, OCN®, Leah Scaramuzzo, MSN, RN-BC, AOCN®, and Jeannine Brant, PhD, APRN, AOCN®, all at Billings Clinic, Billings, MT

**Objective:** Describe successful clinical trials enrollment program, which uses Cancer Clinical Trial Nurse and Nurse Navigator Dyads to increase enrollment and provide education regarding clinical trials at a community cancer center.

**Topic Significance and Study Purpose, Background, and Rationale:** This community cancer center has nine disease-specific Nurse Navigators and five disease-specific Clinical Trials Nurses. Competencies through the Oncology Nursing Society emphasize the importance of being aware of clinical trials, educating patients, caregivers and staff about clinical trials, and ensuring protocol compliance for patients enrolled in clinical trials. Clinical trials enrollment are critical for patients to access state-of-the-art treatment as emphasized in the National Comprehensive Cancer Network guidelines and to meet national standards such as the American College of Surgeons and National Accreditation Programs for Breast Programs.

**Methods, Intervention, and Analysis:** This organizational structure of nursing has led to close collaboration between the Nurse Navigators and the Clinical Trials Nurses. These dyads spend time together discussing all pertinent details about the patient while at the same time learning one another's role on the healthcare team. Navigators meet patients upon diagnosis, often during the surgical oncology visit, and continue interaction throughout the treatment trajectory. Nurse Navigators are key to informing patients that clinical trial enrollment is part of the standard of care, assisting to lessen patient fears about being a "guinea pig" and other misperceptions about clinical trials. Referrals from the Nurse Navigators allow the Clinical Trials Nurses to screen and identify eligible participants prior to physician visits. Meetings to discuss specific trials with the Navigators are held to establish how to assure eligibility and identify potential patients

**Findings and Interpretation:** Nurse Navigators referred 87% of the patients they navigated during the first seven months of this year. During this same time period, an average of 19 patients were enrolled in clinical trials. In 2013, 18% of newly diagnosed patients at this center were enrolled in a clinical trial, exceeding the national average.

**Discussion and Implications:** Disease-specific dyads provide a model for creating a successful clinical trial programs in cancer centers, but also may be responsible for the increased numbers of patients on trials. By adapting this model, cancer programs are able to identify patients early in their cancer care to assure eligibility for trials, provide support and education to patients, and families about clinical trials, and assist oncologists in identifying potential clinical trial patients prior to the clinic visit.

#### e#18

**ADVERSE EVENTS WORTH CAPTURING: PROMOTING SAFETY AND COMPLIANCE REPORTING FOR LEUKEMIA PHASE I RESEARCH PATIENTS.** Melanie Canlas, BSN, OCN®, and Diamond Zuchlinski, BSN, OCN®, both at Memorial Sloan Kettering Cancer Center, New York, NY

**Objective:** To illustrate the effectiveness of staff education regarding adverse event capture in clinical research patients, as evidenced by total decrease in protocol queries, with the goal of promoting patient safety.

**Topic Significance and Study Purpose, Background, and Rationale:** Traditionally, leukemia has been treated with the same conventional chemotherapy regimens discovered in the 1940's; however, disease recurrence is still prevalent. The exciting emergence of research indicates that targeted therapies inhibit the growth of cancer cells, calling for a major increase of phase 1, first-in-human, clinical research protocols in the leukemia population. In accordance with this increase of phase 1 studies comes a need for heightened awareness in capturing adverse events (AEs). As defined by the National Cancer Institute (NCI) Common Terminology Criteria for Adverse Events (CTCAE), an AE is "any unfavorable and unintended sign (including abnormal laboratory finding), symptom, or disease temporally associated with the use of a medical treatment or procedure that may or may not be considered related to the medical treatment or procedure." AEs, in the setting of clinical research, must be closely assessed in order to maintain both patient safety and compliance in data reporting. With these goals in mind, an audit of 52 open clinical trials was performed, showing 5,586 outstanding protocol queries for AE data collection. During informal discussion with staff members on the topic of protocol patient management, the clinical research nurses identified a knowledge deficit among outpatient clinicians in capturing AEs.

**Methods, Intervention, and Analysis:** In July of 2014, the clinical research nurses trained 8 outpatient nurses, 2 nurse practitioners, and 1 physician assistant in capturing AEs. Staff was trained to document AEs in accordance with NCI CTCAE

utilizing a new electronic documentation system provided by Sunrise Clinical Manager. Further education was accomplished with the use of a Powerpoint presentation and the provision of mentorship to individual nurses in clinic to support real-time documentation.

**Findings and Interpretation:** After the training program, the amount of queries for missing and poorly-defined adverse event reports was reduced by 92% from 2013 to 2014.

**Discussion and Implications:** Providing clinical staff with a comprehensive training program promotes greater compliance with adverse event capture, as evidenced by these findings. With the new wave of phase 1 targeted therapies in the leukemia population, emphasis on capturing adverse events will ultimately maintain patient safety in first-in-human clinical trials and lead to further advances in leukemia research.

#### e#19

**PROMOTING A PAIN PRACTICE CHANGE USING A MULTIMODAL APPROACH.** Clare Torres, BSN, RN, OCN®, RN-BC, PHN, Linda Lillington, DNSc, RN, and Mary Hersh, PhDc, RN, CHPN, FPCN, all at Torrance Memorial Medical Center, Torrance, CA

**Objective:** Describe the positive impact of a multimodal approach involving education of patients and nurses to increase knowledge and satisfaction with cancer pain management, and improve nurses' pain assessment and documentation.

**Topic Significance and Study Purpose, Background, and Rationale:** Pain is experienced by many cancer patients. Evidence-based practice (EBP) guidelines identify patient assessment, patient and staff education, and effective pain treatment as important factors in pain management. The purpose of this project was to use a multimodal approach involving patient and nurse education to improve cancer pain management and documentation.

**Methods, Intervention, and Analysis:** The setting was a 25-bed Oncology-Hematology unit. The process, guided by the Iowa Model, occurred over 12 months and involved revising the pain assessment and documentation policy/procedure, developing and providing patient and nurse education, obtaining patient feedback, coaching/mentoring using a champion model, and chart audits. Patient education involved 1:1 discussion with an RN, watching a new pain video and brochure. Nurse education included didactic presentation, visual cues (tip card and poster), and peer nurse champions providing coaching/mentoring to facilitate adoption. Chart audits and patient feedback evaluated outcomes. 32 patients pilot tested the pain education materials utilizing a pre/post-test knowledge questionnaire. Patient satisfaction was measured by 2 Likert scale items. Patient feedback (10/month) was obtained via semi-structured interview. Nurses' knowledge was determined by a pre/post-test. 20 chart audits/month assessed documentation of acceptable pain level, level of pain, and reassessment.

**Findings and Interpretation:** Using the video, brochure and 1:1 teaching resulted in a significant increase in patients' knowledge ( $p = 0.0002$ ). 109 patients provided feedback regarding pain control and management. At baseline, pain was reported being controlled at "somewhat acceptable" to "acceptable" levels. Overtime, patients reported pain control levels ranged from "acceptable" to "very well". Nurses' knowledge significantly increased (unit champions  $N = 8$  RNs,  $p = 0.0002$ , unit rollout  $N = 19$  RNs,  $p = 0.0001$ ). Chart audits showed improvement and sustained documentation compliance over 6 months: acceptable pain levels (34% improvement), pain score charted with pain medication administration (5% improvement), reassessment of acceptable pain level (82% of the time).

**Discussion and Implications:** Using a multimodal approach to change practice fostered improvement in pain assessment and documentation. We learned that nurse education alone is

not sufficient to promote and sustain practice change. Incorporating a patient education component, utilizing peer champions and visual cues highlighting key components of the practice change, and monitoring fidelity to the practice change proved to be effective strategies.

**Underwriting or Funding Source Name:** This project was funded through the Daisy Foundation's J. Patrick Barnes Evidence-based Practice Grant.

#### e#20

**PELVIC CANCER SURVIVORSHIP: CLINICAL EVALUATION AND MANAGEMENT OF RADIATION PROCTITIS.** Gloria Wood, BSN, RN, H. Lee Moffitt Cancer Center, Tampa, FL

**Objective:** To increase awareness about radiation proctitis and treatment options with argon plasma coagulation (APC) and hyperbaric oxygen therapy (HBOT).

**Topic Significance and Study Purpose, Background, and Rationale:** Chronic radiation proctitis (CRP) is a complication that occurs in patients who receive radiation therapy for pelvic malignancies. Symptoms of radiation proctitis may include tenesmus, rectal bleeding, feelings of rectal fullness, rectal pain, abdominal cramping, diarrhea, and the passage of mucus and can occur anytime in the months and years following treatment. With an increasing number of patients being cured of their pelvic malignancy, recognition of this condition is important for the radiation oncology nurse. Optimal treatment of bleeding due to chronic radiation proctitis remains unclear. Among various therapeutic options, medical management is generally ineffective and surgical intervention has a high incidence of morbidity. Purpose: To educate patients on how the biological and physiological effects of using argon plasma coagulation and oxygen under pressure can benefit patients with CRP and improve their quality of life.

**Methods, Intervention, and Analysis:** The nurses were educated on late side effects of pelvic radiation e.g. proctitis, and therapies which may be effective, e.g. APC or HBOT, if intrarectal or oral steroid formulations fails. Nurses educated patients prior to completion of therapy and included detailed handouts in their discharge instructions. Additionally, an educational tool was developed and is accessible on the patients' electronic portal to their medical records.

**Findings and Interpretation:** With this increased knowledge nurses were more comfortable with providing detailed discharge instructions. With education many patients who previously would have attributed bleeding to recurrent disease are less fearful of reporting symptoms knowing that effective therapies are available.

**Discussion and Implications:** Nursing education to patients about potential late radiation injury to the rectum is important. Patients often confused their symptoms with tumor recurrence, but by enhancing their ability to comprehend that their past treatment has potential lifelong effects and fostering their active participation in their own survivorship, oncology nurses can improve patients' quality of life.

#### e#21

**FOSTERING ONCOLOGY UNIT-BASED NURSING ETHICS DISCUSSIONS.** Pamela Bowman, BSN, RN, OCN®, Duke University Hospital, Durham, NC

**Objective:** Participants will be able to develop nursing ethics discussions into the structure of their oncology workplace.

**Topic Significance and Study Purpose, Background, and Rationale:** Nurses often experience ethical dilemmas within their practice settings. Particular to oncology nursing, the transition of care from curative to palliative/end-of-life goals can be difficult to navigate. Complex medical and social issues can compromise

a nurse's ability to practice effectively and may impact the occurrence of important conversations among healthcare providers. Thus, providing the opportunity to carry out these difficult conversations amongst peers through the development of communication skills, ethical knowledge, and use of the American Nurses Association (ANA) Code of Ethics as foundational ethical principles may reduce moral distress experienced among oncology nurses.

**Methods, Intervention, and Analysis:** In collaboration with the medical ethics committee chair and an ethics-trained oncology nurse, monthly nursing "Ethics Lunch & Learns" were initiated for all healthcare staff. Discussions involved recent patient cases that caused ethical dilemmas amongst staff. Topics addressing non-maleficence and beneficence included complex treatment decisions, escalating care in patients with poor prognoses, and difficulties in treating younger versus older patients. Fairness issues were discussed related to chemotherapy agent shortages and rationing of resources.

**Findings and Interpretation:** The monthly "Ethics Lunch & Learns" have allowed for rich discussions in a non-threatening environment. Attendance during the work shift has consistently been high with at least 2/3 staff attending. Topics and cases have been regularly recommended by staff. Cases that involve team members from other areas are facilitated with open and honest consideration. As staff are becoming more familiar with moral distress, they have begun to support each other through difficult cases and have less need to initiate a formal ethics consult. Using the ANA principles within the lessons learned in the ethics forums have allowed them to care for patients compassionately. Other nursing units have asked for guidance as they implement similar ethical forums which have furthered collaborative conversations.

**Discussion and Implications:** Fostering ethical conversations through a monthly unit-based forum with the healthcare team has improved patient-centered care and reduced moral distress. This intervention has been easily sustained for two years with the primary outcome that difficult conversations feel more comfortable. We will continue to explore ways to incorporate ethical discussions within oncology nursing by sharing ideas and processes with colleagues.

#### e#22

**HENDA'S LAW: ARE YOU IN THE KNOW?** Shawna Pryor, BSN, RN, CBCN®, and Kathryn Pratt, BSN, RN, OCN®, CBCN®, both at University of Texas Southwestern Medical Center, Dallas, TX

**Objective:** Participants will gain an understanding of the clinical and legislative implications of the enactment of "Henda's Law" in relation to dense breast tissue and increased risk for breast cancer.

**Topic Significance and Study Purpose, Background, and Rationale:** Mammographic density is known to decrease the sensitivity of mammographic imaging, with increased breast density increasing a woman's risk for breast cancer development. Ms. Henda Salmeron, a breast cancer survivor and Texas resident, was unaware of these facts when she herself was diagnosed with invasive breast cancer. Her determination that women should be educated about their breast tissue density and its relationship to mammographic sensitivity, brought about "Henda's Law" which was enacted in Texas 9/1/2011. Prior to the enactment of this legislation, patients were not notified or aware of their breast tissue density and breast cancer risk. Because of this legislation, surgical oncology nurses at our institution have learned more about this issue and have developed teaching methods to better educate their patients.

**Methods, Intervention, and Analysis:** Mammographic density is known to decrease the sensitivity of mammograms, placing patients at risk of presenting with large tumors, despite

being compliant with recommended screening. In addition, density can be an independent risk factor for breast cancer. Prior to Texas legislation being enacted, our University based breast center established a protocol that made the required changes in the written results given to the patients and developed patient education to be handed out. Teaching tools using different mammographic densities was also enacted to increase patient awareness and understanding.

**Findings and Interpretation:** Changes made to comply with Henda's Law did not adversely affect work flow or direct patient communication. There was not a noted increase in patient's anxiety when notified of breast density, nor patients requesting additional imaging

**Discussion and Implications:** Initial experience with mammographic density legislation has been favorable. The impact of this law on patient compliance with mammographic screening, anxiety levels, and its impact on nursing has been positive. Teaching tools developed have increased awareness and a better understanding.

### e#23

**NEW PATIENT RADIATION ONCOLOGY ORIENTATION PROGRAM TO INCREASE PATIENT SATISFACTION AND PATIENT PREPAREDNESS.** Sheryl Smolensky, RN, OCN®, Deborah Richey, RN, MEd, OCN®, and Tracey Leahey, BS, RT(T), all at University Medical Center of Princeton at Plainsboro, Plainsboro, NJ

**Objective:** To summarize the process of starting a new patient orientation class for patient's starting radiation therapy.

**Topic Significance and Study Purpose, Background, and Rationale:** Press Ganey® survey scores indicated that patients felt unprepared for radiation therapy and overwhelmed with what to do after initial simulation appointment. The radiation oncology team, consisting of nurses and radiation therapist created an orientation program that is open to anyone starting radiation and their families. The purpose of this project is to reduce anxiety by improving patient preparedness for radiation therapy thereby improving the overall patient/family satisfaction with their care experience.

**Methods, Intervention, and Analysis:** The team met and determined, that a weekly class, not mandated but open to all patients and families, was the most effective way of teaching. The patient is given an invitation to attend the class prior to first day of radiation, at the simulation appointment. The information is presented in a power-point format: all new patients are also given a Cancer 101 binder and information guide to the Matthews Center for Cancer Care. The programs goals are; review day to day experience, answer non disease specific questions, and a walking tour of all areas in the hospital that they will encounter. The class meets for sixty minutes. The team devised a post evaluation form that is given to patients on their last day of treatment. The evaluation form looks at, daily routine, privacy, effectiveness of orientation, and attentiveness of staff, the results are being analyzed in a quantitative and qualitative format.

**Findings and Interpretation:** Data analysis has shown that 25% of patients have attended the new patient orientation with positive results. Press Ganey survey scores have shown an upward trend close to 100%, this is compared to 88.5% at the start of the program six months ago.

**Discussion and Implications:** Though, we have only had 25% of patients to date participating in orientation class, we will continue to provide this service. The areas we continue to look at; time/day of the week of class, timing of start of radiation therapy, overall patient census. With contextual adaptations, this new patient orientation can be used in medical oncology arena in addition to radiation.

### e#24

**INCREASE GYNECOLOGICAL ONCOLOGY PATIENT SATISFACTION WITH PAIN MANAGEMENT THROUGH NURSE EDUCATION.** Susanne Suchy, MSN, RN, AOCNS®, Shannon Beagan, BSN, RN, Gale Williams, RN, Brenda Towers, RN, OCN®, and Carol Strong, BSN, RN, all at Karmanos Cancer Center, Detroit, MI

**Objective:** Describe a quality improvement project that increased patient satisfaction with pain management by bolstering nurses' knowledge, changing nursing behaviors and improving nurse advocacy skills.

**Topic Significance and Study Purpose, Background, and Rationale:** Literature reports that pain is present in 36-61% of oncology patients. Nurses play an important role in the management of patient pain (Cummings et al., 2011). Research has shown that using a systematic approach to managing pain results in better patient well-being and satisfaction outcomes (Oldenmenger et al., 2009). The Joint Commission included a pain standard in 2001, requiring inclusion of assessment and management processes. The Oncology Nursing Society identified oncology nurses as pivotal to the improvement of cancer pain management (2014). Research reported that care givers under estimate pain, under medicate, and fail to recognize the legitimacy of central nervous system responses (Pargeon & Hailey, 1999). Further, research suggests that the use of algorithms assists with effective pain management (Miaskowski, 2005). At a NCI designated Comprehensive Cancer Center, Press Ganey benchmarking data and C4QI ranking suggested that patient satisfaction with pain management was not optimal. According to the IOM, strengthening the capabilities of the work force is one way to promote quality care. Thus, it was conceived that patient pain management satisfaction might be improved by an algorithm-based, multifaceted educational program to increase nurses' pain management capabilities.

**Methods, Intervention, and Analysis:** A quality improvement initiative was designed to increase patient satisfaction with pain management through nurse: knowledge expansion, behavior modification, and improved advocacy skills. The educational program provided instruction to assist nurses to: (a) improve their pain assessment skills, (b) direct interventions using an institution-designed pain algorithm, (c) evaluate the adequacy of their pain interventions, and (d) develop pain management advocacy skills. The outcome measure of patient satisfaction with pain management was the Press Ganey pain satisfaction question. The study compared data for a three month period before the education with the three month period after implementation of the program.

**Findings and Interpretation:** The mean score for pre-intervention increased from 85.0 to 92.2 post intervention, increasing the C4QI percentile rank from 1 to 99.

**Discussion and Implications:** Results of this project suggest that a multifaceted program, strengthening nurses' pain management capabilities has potential for improving patient pain management satisfaction. Oncology nurses might consider introducing similar strategies into their practice, facilitating improved pain management interventions to enhance patient satisfaction.

### e#25

**POST IMPLEMENTATION OF STANDARDIZED SEPSIS SCREENING GUIDELINES: WHERE DO WE GO FROM HERE?** Janine Kennedy, MA, RN, OCN®, AOCNS®, Kaye Hale, MD, FCCP, and Jericho Garcia, MSN, RN-BC, all at Memorial Sloan Kettering Cancer Center, New York, NY

**Objective:** The participant will be able to discuss the process of implementing standardized sepsis screening protocols and the evaluation and revisions that occur post implementation.

**Topic Significance and Study Purpose, Background, and Rationale:** Sepsis is a highly life threatening emergency for the

oncology patient. A delay in diagnosis and treatment could lead to an increase risk of morbidity and mortality. The adoption of a standardized sepsis screening protocol at a national comprehensive cancer center aimed to expedite recognition, diagnosis, and intervention, thus improving patient outcomes.

**Methods, Intervention, and Analysis:** The implementation of standardized sepsis screening protocols in December 2013 occurred after an extensive multidisciplinary review of literature and evidence. After comprehensive education of nursing and medical staff, the sepsis screening alerts were activated. Based on clinical presentation of SIRS and pre-defined abnormal vital signs, nursing staff receive an electronic alert when documentation of the abnormal criteria is submitted. These electronic alerts guide the nurse to inform the LIP of a potentially septic patient. Pre-defined exclusion criteria or sepsis screening order sets are then placed electronically by the LIP to rapidly identify and treat patients prior to progression to severe sepsis or septic shock.

**Findings and Interpretation:** From December 2013 through July 2014, 5283 sepsis alerts were triggered in the inpatient setting based on the new protocol. Current data collection is identifying key elements such as compliance with screening, confirmed sepsis cases, time to various interventions, and utilization of resources. Additionally, we identified that ongoing education was necessary to enhance compliance. Clinical Nurse Specialists and Nurse Practitioners paired up to target education on a unit by unit basis towards specific health care providers when compliance was not met. Revisions of identified criteria remain ongoing based on data and evidence.

**Discussion and Implications:** Adoption of new standards in the identification and management of sepsis in the oncology patient remains challenging, yet rewarding. Standardizing the screening process for sepsis has given the nursing staff the knowledge and insight to advocate early for patients before they become severely septic. Ongoing evaluation of outcomes and process improvements continue to be at the fore front of this initiative. Through education, multidisciplinary teamwork and communication, early identification of sepsis can be achieved and outcomes can improve.

## e#26

**UPDATES IN PANCREATIC CANCER.** Carmela Hoefling, MSN, APN-C, AOCNP®, Rutgers Cancer Institute of New Jersey, New Brunswick, NJ

**Objective:** To obtain a basic understanding of pancreatic cancer, diagnosis, treatment and prognosis.

**Topic Significance and Study Purpose, Background, and Rationale:** The incidence of pancreatic cancer has markedly increased over the past several decades and is the 4th leading cause of cancer death in the United States. Despite the high mortality rate associated with pancreatic cancer, its etiology is poorly understood. The lack of initial symptoms has challenged early diagnosis with more than 50 percent of patients being diagnosed in the later stages of the disease. Only 10 percent who present with localized tumors are amenable to surgical resection. Identification of high risk factors such as environmental and genetic predisposition is essential for early detection. Early detection and resection of tumor is an important first step in pancreatic cancer treatment as most patients die due to metastatic disease. Increasing public awareness regarding prevention techniques including, smoking cessation, limited alcohol intake and a healthy weight is optimal to decrease a person's risk.

**Methods, Intervention, and Analysis:** Discuss the management of pancreatic cancer including surgical resection, chemotherapy, radiation therapy, targeted therapy and clinical trials. Using current literature, participants will become aware of standard treatment options and novel therapeutic approaches. Alternate treatments to help patients cope will be discussed in-

cluding exercise, art therapy and meditation. Additionally, oncology nurses will obtain knowledge on prevention techniques and screening tools to disseminate the information to their patients.

**Findings and Interpretation:** Unfortunately, there has been no significant change in the death rate in pancreatic cancer in recent years. Earlier detection will be important in decreasing deaths related to pancreatic cancer. Currently, more than half of cases are diagnosed at an advanced stage, which has a five year survival of only 2%. Therefore, it is imperative to begin a discussion to further the efforts of pancreatic cancer research, knowledge and treatment.

**Discussion and Implications:** Learning that you have an aggressive, terminal illness such as pancreatic cancer is devastating to patients. Oncology nurses can help patients understand and effectively cope with their disease when they have up to date information regarding their treatment options.

## e#27

**EVALUATION OF GROUP ACUPUNCTURE FOR CANCER RELATED SYMPTOMS.** Cindy Toftagen, PhD, ARNP, AOCNP®, FAANP, University of South Florida, Tampa, FL; and Sarah Boses, RN, BSN, Gene Healy, AP, DOM, and Nuruddin Jooma, MD, MPH, all at Florida Cancer Specialists, Largo, FL

**Objective:** In this retrospective study, we sought to evaluate the effects of group acupuncture on specific cancer related symptoms in persons receiving outpatient cancer treatment

**Topic Significance and Study Purpose, Background, and Rationale:** Acupuncture is being used for treatment of cancer related symptoms in numerous settings, yet empirical evidence supporting the effects of acupuncture in this setting is lacking. Group acupuncture is an economical way to provide acupuncture to patients at a reduced cost. In this retrospective study, we sought to evaluate the effects of group acupuncture on specific cancer related symptoms in persons receiving outpatient cancer treatment.

**Methods, Intervention, and Analysis:** Patients were receiving group acupuncture treatments through an Integrative Oncology Program in a large community oncology practice in West Central Florida. A short patient completed assessment of 7 basic cancer related symptoms, using a 0-10 numeric rating scale was completed at each acupuncture treatment. Basic demographic information, including age, gender, race/ethnicity, and cancer type was obtained from the medical record. Paired sample t-tests were used to evaluate differences in symptoms before the first treatment and at the fourth treatment.

**Findings and Interpretation:** Fifty patients completed at least 4 weekly acupuncture treatments in 2014. Forty-three of them completed symptom assessments and were included in this analysis. The mean age of participants was 66.4 years. The majority of patients were white, non-hispanic, and female. No significant improvement in symptoms were identified at the third treatment. At the time of the fourth group acupuncture, participants reported significantly less pain/numbness ( $p = .04$ ) and problems with digestion ( $p = .02$ ). No significant improvements in sleep, fatigue, dry mouth, headache, or nausea were identified, although trends toward improvement in all symptoms except headache were seen.

**Discussion and Implications:** The results of this study provide evidence to support the efficacy of group acupuncture for pain, neuropathy, and digestive problems in persons with cancer. A minimum of four weekly treatments may be necessary before improvements are noted. Limitations include a retrospective design, incomplete symptom evaluation, and possible response bias. Future studies of group acupuncture for cancer related symptoms should utilize a prospective, controlled design, use validated measures to thoroughly evaluate targeted symptoms, and include a more racially and ethnically diverse sample.

e#28

### EMPOWERING THE BEDSIDE NURSE: DEVELOPMENT OF AN END OF LIFE TOOLKIT.

Kastene Kunze, RN, OCN®, Kerry Nichols, BSN, RN, OCN®, Leah Scaramuzzo, MSN, RN-BC, AOCN®, and Jeannine Brant, PhD, APRN, AOCN®, FAAN, all at Billings Clinic, Billings, MT

**Objective:** Identify at least three interventions to prepare nurses to care for oncology patients at end of life.

**Topic Significance and Study Purpose, Background, and Rationale:** On an inpatient oncology unit in the northwest region of the U.S., nurses often felt inadequate and unprepared to provide end of life (EOL) care. While EOL training opportunities existed, they were not mandatory or regularly offered. Those attending trainings did not feel adequately prepared to translate newly learned skills into practice; for example what to say or provide, standards for comfort, and provision of community resources. Resources for EOL care and education were not readily available on the unit.

**Methods, Intervention, and Analysis:** An interdisciplinary team was formed with the goal to increase nurses' comfort level in providing EOL care, provide continuity of care, and enhance education for patients/families during the final stages of life. In order to develop an understanding of the unit's EOL patient population, demographic data was gathered including primary diagnosis that led to death and length of stay once transitioned to "comfort care (final stage of life). The team brainstormed gaps in care and developed a survey to assess staff knowledge and comfort with EOL care. Results were analyzed and tools/resources were then identified for staff/patients/families to enhance EOL care.

**Findings and Interpretation:** Survey results revealed that only 31% of nurses felt knowledgeable in delivering EOL care. The majority relied on other nurses as resources about EOL care, although 77% felt that lack of RN knowledge was a barrier in EOL care. 73% reported their own personal discomfort with death, a barrier noted to interfere with optimal EOL care. Gaps in care were addressed by creating patient/family education materials, providing community resources, and creating a box of "tools" to promote comfort and connection to the family. To address the gaps in staff knowledge, educational curriculum was developed. This course will be held in 2015 which will include interactive content, role play, and hands-on application of EOL knowledge.

**Discussion and Implications:** While current resources existed to educate nurses on EOL care, the challenge is translating these into clinical practice thereby increasing comfort with care and conversations about EOL. Oncology nurses can use this model to develop initiatives for staff to enhance comfort and knowledge in providing EOL care.

e#29

### CERITINIB FOR NON-SMALL CELL LUNG CANCER: UNDERSTANDING AND MANAGING ADVERSE REACTIONS FROM THERAPY TARGETING ANAPLASTIC LYMPHOMA KINASE.

Kristen Kreamer, CRNP, MSN, AOCNP®, APRN-BC, and Debbie Riordan, RN, BS, both at Fox Chase Cancer Center, Philadelphia, PA

**Objective:** Improve understanding of the mechanism of action and adverse event (AE) management of the targeted anaplastic lymphoma kinase (ALK) inhibitor, ceritinib, in the treatment of non-small cell lung cancer (NSCLC).

**Topic Significance and Study Purpose, Background, and Rationale:** Targeted therapies are designed to take advantage of specific molecular features of individual tumor cells. These drugs have side effects that are quite different from chemotherapeutic agents, which can have wide-ranging and nonspecific cytotoxic effects. One of the challenges of using these relatively

new targeted agents in the clinic has been educating patients and providers to recognize and proactively manage particular side effects. Ceritinib was approved in April 2014 for the treatment of NSCLC in patients with rearrangements that activate ALK-gene expression in patients who have progressed or are intolerant to crizotinib. AEs with ceritinib, a second-generation ALK inhibitor, are generally similar to those seen with other targeted agents for NSCLC, including crizotinib (a first-generation ALK inhibitor) and the EGFR inhibitors erlotinib and afatinib.

**Methods, Intervention, and Analysis:** Each agent has a distinct AE profile and participation in ceritinib clinical trials at our institution has provided valuable hands-on experience with this drug.

**Findings and Interpretation:** Updated efficacy and safety data was recently reported for the pivotal ASCEND-1 trial. For NSCLC patients (n = 246), median PFS was 18.4 months (95%CI: 11.1, non-estimable) in ALK-inhibitor-naïve patients (n = 83) and 6.9 months (95%CI: 5.6, 8.7) in patients previously treated with an ALK inhibitor (n = 163). Among 255 patients in the safety population treated with the approved dose of 750 mg/day, median duration of ceritinib exposure was 38.7 weeks. The most common AEs reported (of all grades) in this trial were diarrhea (221/255 or 87%), nausea (211/255 or 83%), vomiting (157/255 or 62%), and fatigue (109/255 or 43%). Grade 3/4 diarrhea, nausea, and vomiting were found in a small number (5%-6%) of patients in the trial. Given the incidence of gastrointestinal AEs in clinical trial patients, our approach has been both prophylactic and supportive. We instruct patients in proactive use of anti-emetics and anti-diarrheals, as well as in the timing of dose administration. Abdominal cramping, a relatively unique side effect of this agent, can be treated with some success with anti-spasmodic and pain medication interventions.

**Discussion and Implications:** In our experience, AEs can be effectively managed in order to maintain most patients on the recommended dose, with a good performance status and quality of life.

**Underwriting or Funding Source Name:** Editorial assistance was provided by QXV Communications, and was funded by Novartis Oncology.

e#30

### EFFECTS OF STRESS APPRAISAL ON THE QUALITY OF LIFE OF KOREAN ADULT PATIENTS AND THEIR PRIMARY FAMILY CAREGIVERS WITH MULTIPLE MYELOMA.

In Seo La, RN, and Eun Kyoung Yun, PhD, both at Kyung Hee University, Seoul, South Korea

**Objective:** By September 30, 2014, 102 Korean patient-caregiver dyads with multiple myeloma participated in our survey. The data shows dyadic associations between stress appraisal and quality of life.

**Topic Significance and Study Purpose, Background, and Rationale:** Since modern treatment has improved disease control and prolonged survival, maintenance of quality of life is considered a great concern among many myeloma patients and their caregivers. However, little information about the effects of multiple myeloma on the quality of life of patients and their family caregivers is available. Thus, this study examined dyadic associations between stress appraisal and the quality of life of patients and carers with multiple myeloma.

**Methods, Intervention, and Analysis:** A total of 102 patient-caregiver dyads participated in this study. A stress appraisal model guided the study and analyses. The stress appraisal of patients was measured using the Brief Illness Perception Questionnaire (Brief IPQ) and a modified version of a standard self-efficacy scale. The stress appraisal of caregivers was measured using a short version of the Zarit Burden Interview (ZBI) and a modified version of a standard self-efficacy scale. Quality of life was measured using the Medical Outcomes Study SF-36.

**Findings and Interpretation:** Data analyses revealed correlation between Quality of life related physical and mental health for patients and caregivers. Patients' perceived severity of multiple myeloma influenced patients' own physical and mental health as well as caregivers' mental health. Furthermore, caregivers' burden was related with their own physical and mental health as well as the patients' mental health. The self-efficacy of patients was associated with patients' own physical and mental health. However, there were no significant relations between caregivers' self-efficacy and the quality of life of patients and caregivers.

**Discussion and Implications:** Results suggest that stress cognitive appraisal plays an important role in quality of life during the treatment experience for both patients and caregivers with multiple myeloma. Interventions designed to reconstruct positive appraisal for both patients and caregivers may help them improve their quality of life.

### e#31

**ONCOLOGY LEADERSHIP COLLABORATIVE: A MULTI-DISCIPLINARY APPROACH TO CARE.** Raylene Langish, BSN, RN, OCN®, and Donna Reinbeck, RN, MSN, OCN®, NEA-BC, both at Barnabas Health, West Orange, NJ

**Objective:** Improve the quality of oncology nursing care by working closely with other oncology professionals in a formal multi-disciplinary collaborative.

**Topic Significance and Study Purpose, Background, and Rationale:** Nursing has an important role in oncology care. We are relied upon not only for our compassion, knowledge and skills, but also to help set standards of education, policies, practices and research. When New Jersey's largest hospital system recognized the need to standardize oncology practices system-wide, they looked to oncology nurses. The initial grass roots committee was solely made up of nursing representatives from each of the system's medical centers. The oncology nurses recognized the need to incorporate the skills of other disciplines such as pharmacy, nutrition, finance, social service and physicians. This collaborative approach acknowledged that other disciplines have different views, and each view has a benefit in the comprehensive management of oncology patients. Learning from each other has broadened our viewpoints and garnered mutual respect and teamwork among disciplines.

**Methods, Intervention, and Analysis:** Committee accomplishments were measured through a variety a methods, such as evaluations for the committee's interactive chemotherapy competency program and oncology courses. The courses have been groundbreaking in that they have been made accessible for other disciplines to attend. Survey feedback from pharmacists and physicians who attended the nursing chemotherapy and biotherapy certification course has been consistently excellent.

**Findings and Interpretation:** The accomplishments of the committee have been extensive. One highlight includes the creation of a formal education and competency program which has produced significant outcomes. These outcomes encompass: a standardized approach to oncology care, improved competence in the delivery of care and improved staff confidence and leadership. Another accomplishment of the collaborative is the creation of a comprehensive, standardized oncology patient education book and Telly-Award winning video. The concerted effort has standardized policies, conducted research and transformed the way care is provided to our oncology populations.

**Discussion and Implications:** Throughout the course of the Oncology Leadership Collaborative, nursing has maintained a front-row seat and continues to lead and facilitate each meeting. The teamwork and the accomplishments of this collaborative have not only improved oncology care, but created a shared vision and mission to create a culture of excellence throughout the Barnabas Health System. This united undertaking serves as a

model for future committees, not only in Oncology, but in other disciplines as well.

### e#32

**ADVANCING NOVICE TO EXPERT: EXAMINING THE EVIDENCE.** Elisabeth Wall, PhD, RN, AOCNS®, Mallory Bowker, BSN, RN, OCN®, Christopher Brooks, MSN, RN, AOCNS®, Debra O'Shea, MSN, RN, OCN®, Annette Roman, MSN, RN, OCN®, and Megan Stasi, BSN, RN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY

**Objective:** To outline the process that a Staff Development Task Force employed to develop, implement and evaluate a forum for staff nurses to conduct their evidence-based presentations.

**Topic Significance and Study Purpose, Background, and Rationale:** This NCI designated cancer center enhanced its nursing clinical ladder to require that all Clinical Nurse III's present an annual evidence-based inservice to their unit. Our Ambulatory Staff Development Council formed a task force to create a forum where staff could present these in-services to a broader audience, thereby, increasing educational opportunities for nurses. The forum also served as a platform for individuals to further develop their presentation skills.

**Methods, Intervention, and Analysis:** An application process and selection criteria were developed. Applicants were asked to identify their topic, provide a brief statement describing their goals, and submit a completed power point presentation and reference list. Each presentation was critiqued based on the caliber of evidence used and overall quality of the presentation. Feedback was given to all applicants. An open-ended critique form was developed for the audience to share their feedback to individual presenters. To determine if the objectives of our forum were achieved, all ambulatory nurses were surveyed to evaluate the merit of the program and identify facilitators and barriers to participation.

**Findings and Interpretation:** Seven applications were received; three were accepted. A forum was held in June 2014 and attended by 42 nurses. Six weeks later, the survey was emailed to all ambulatory nurses and yielded a 29% response rate. The inability to get clinical coverage was the most frequently cited barrier to attending (57%). Other barriers included day off (28%), conflicting meeting (9%) and lack of interest (6%). Of those that attended, 100% rated the session "excellent" (80%) or "good" (20%), and 92% of responders indicated they would participate in future sessions. Finally, 96% of staff reported that this forum provided educational benefit, an opportunity to develop presentation skills (50%), and/or meet role maintenance criteria (33%).

**Discussion and Implications:** It is concluded that the task force met its objectives as staff valued their colleagues' educational presentations and saw these forums as an opportunity to learn and/or to enhance presentation skills. Findings from our survey are being incorporated into building future sessions. In addition, those presentations that had broad implications for nursing practice will be shared with our Practice Council to help guide updating our standards of care.

### e#33

**QUALITY OF LIFE IMPACT OF FACE-TO-FACE SURVIVORSHIP INTERVIEW.** Jennifer Witt, RN, MSN, OCN®, and Carol Frazell, RN, MA, OCN®, both at John Stoddard Cancer Center at UnityPoint Health, Des Moines, IA

**Objective:** Participants will demonstrate understanding of how facilitating a post treatment survivorship interview enhances the cancer survivor's QOL. Participants will identify three survivorship tools reviewed during a survivorship interview.

**Topic Significance and Study Purpose, Background, and Rationale:** (a) By, 2015, American College of Surgeons Commission on Cancer (CoC) will require cancer centers "...provide written survivorship care plans to survivors completing treatment" (Rosenthal, 2014). (b) A pilot survivorship program was conducted to demonstrate the value of how a survivorship program can improve the QOL of cancer survivors. An extensive body of research exists providing evidence that cancer survivors frequently experience late and long term effects from their cancer and its treatment (Hewitt, Greenfield, & Stovall, 2005; Lester & Schmitt, 2012; Sprague et al, 2013; Digiulio, 2014). Cancer survivors report both ongoing struggles to achieve balance in their lives, a sense of wholeness, and renewed life purpose. (c) Cancer patients can face unique physiological and psychosocial needs post cancer treatment. This survivorship concern was addressed by Ferrell and Grant at the IOM Committee on Cancer Survivorship in Irvine, CA in 2010. Oncology certified nurses are in an ideal position to (a) facilitate survivorship interviews, (b) empower survivors through education, (c) identify and connect survivors with appropriate resources, and (d) make appropriate referrals to the Cancer Survivorship Survivorship Team (CSPT) with physician orders where needed.

**Methods, Intervention, and Analysis:** IRB approval obtained. In addition to demographic data, researchers collected number of referrals made as a result of interviews, referral participation rates, and survivor subjective responses returned on 6 and 12 month evaluations. Data gathered supported the value added benefit of a cancer survivorship interview.

**Findings and Interpretation:** Thirty-eight referrals were generated from 11 cancer survivorship interviews in the four month pilot study. A total of 202 referrals were generated from the 68 cancer survivorship interviews in the formal study.

**Discussion and Implications:** Current implications of the study include (a) collaboration of CSPT to meet survivors diverse financial needs, (b) addressing adult and young adolescent survivor's unmet medical, psychosocial, and practical needs, (c) addressing sexuality and body image issues, and (d) integrating gerontology and oncology research for older adult cancer survivors. Results of study confirm survivors experience a better QOL post treatment when their physical, emotional, social, and spiritual needs are addressed by the CSPT.

#### e#34

**ASSESSING FOR L'HERMITTE'S SIGN.** Patricia Horace, MSN, MS, MCHES, RN, JoAnn Shank, MS, Shryll Turner, BSN, RN, and Bouthaina Dabaja, MD, all at University of Texas MD Anderson Cancer Center, Houston, TX

**Objective:** Upon completion participants will be able to assess for L'hermitte sign during routine nursing visits in patients who have received combined chemotherapy radiation therapy to the mediastinum.

**Topic Significance and Study Purpose, Background, and Rationale:** L'hermitte's sign is described as an electric shock like feeling that starts in the neck or chest and radiates to the extremities, most times provoked by exercise or a stretching activity. The pain is strongest when the neck bends forward, placing the chin on the chest. Although the shock only lasts seconds and occurs intermittently, the sensation is powerful and concerning for patients. Lhermitte's sign is a known, rare complication that is commonly identified in lung cancer patients however it is seldom discussed with the Lymphoma patient population and they should be considered as well.

**Methods, Intervention, and Analysis:** A hundred and forty eight patients treated with chemotherapy and IMRT (intensity modulated radiation therapy) to the mediastinum with or without neck included from July 2011 to April 2014 were contacted. Information was obtained through a detailed face to face or by phone questionnaire for all but 42 patients.

**Findings and Interpretation:** Lhermitte's sign developed in one-third of the treated patients. It seems to be radiation dose and technique independent, and more commonly associated with other treatment related toxicities such as Bleomycin lung toxicity.

**Discussion and Implications:** It is important for the nurse to identify and educate patients about these symptoms; especially those coming for radiation therapy after completing chemotherapy. At the completion of radiation, nurses should follow patients by phone and clinic visits to again assess symptoms and assure them that these symptoms can be managed. Most patients only need counseling and caution to resume activities slowly, however those with severe symptoms can receive medication and referrals to specialists.

#### e#35

**IMPROVING DISCHARGE COORDINATION WITH A CLINICAL NURSE LEADER (CNL) ON AN ONCOLOGY UNIT.** Katherine Sciandra, MSN, RN, CNL, and Mary Ellen Pritchard, MSN, RN, CNL, both at UPMC Shadyside, Pittsburgh, PA

**Objective:** Describe the Clinical Nurse Leader (CNL) role on an oncology unit as a way to improve care coordination and discharge planning, which may prevent readmissions.

**Topic Significance and Study Purpose, Background, and Rationale:** To enhance patient care coordination across the continuum and reduce avoidable 30 day readmissions, the CNL role was implemented on a 29 bed oncology unit at a hospital in Pittsburgh, Pennsylvania. Discharge from an oncology unit is one of the predictive factors for readmission (Donze, Aujesky, Williams, & Schnipper, 2013). Integrating evidence-based practice on the unit, the CNL prioritizes care coordination based on the needs of patients and their daily readmission risk score to improve discharge planning. Poor care coordination and inadequate discharge planning may cause 30 day readmissions (RWJF, 2013). One in six Medicare patients is readmitted within 30 days of receiving medical care (RWJF, 2013). Fragmented care delivery increases costs with Medicare spending 17 billion dollars annually on avoidable readmissions (Bipartisan Policy, 2012; RWJF, 2013).

**Methods, Intervention, and Analysis:** The hospital's quality improvement committee approved a CNL pilot to coordinate care for 12 patients daily on an oncology unit while other patients receive the standard of care. The CNL rounds with oncology teams, collaborates with the interdisciplinary team, educates patients and families on discharge planning, and mentors new staff. The CNL also communicates with outpatient nurses and providers for continuity of care. The CNL conducts follow-up phone calls within 72 hours to patients discharged home using a modified Agency for Healthcare Research and Quality's RED sample script (AHRQ, 2011). The CNL provides medication counseling, symptom management, and appointment reinforcement, ensuring home care services have been initiated and equipment delivered.

**Findings and Interpretation:** Over the first seven months, the CNL patients' rate of readmission was 13.7% lower than the standard of care patients. This outcome suggests there may be an association between the CNL's intervention and the decreased 30 day readmission rate. Additional outcomes being analyzed are length of stay, fall rates, and CAUTIs.

**Discussion and Implications:** The CNL role can be implemented as a model of care coordination for oncology patients. The CNL should follow patients at home with phone calls within 72 hours of discharge. This intervention may be crucial to preventing readmissions as patients and families are empowered to manage their care, adhere to medications, attend follow-up appointments, and receive timely home care services.

**Underwriting or Funding Source Name:** The Shadyside Hospital Foundation.



### e#36

**CAMP OASIS: IMPLEMENTING A DAY OF SUPPORT FOR CHILDREN WHO HAVE A PARENT DIAGNOSED WITH CANCER.** Jacqueline Miller, RN, BSN, OCN®, Virtua Fox Chase Cancer Program, Voorhees, NJ

**Objective:** Participants viewing this abstract will be able to verbalize 2 goals of offering a one day camp for children who have a parent diagnosed with cancer

**Topic Significance and Study Purpose, Background, and Rationale:** A cancer diagnosis can set off a cascade of emotional turmoil for patients and their families. During a busy time of a parent's multiple appointments and treatment schedules, children often do not receive the support they need to cope. Offering a one day camp is a welcomed spirit-lifting day. It provides a supportive environment, an educational opportunity, and allows children to recognize they are not alone. Camp goals: (a) Provide a supportive environment to children (8-18yrs) who have a parent diagnosed with cancer at any stage, (b) Provide a supportive session by an oncology LCSW to teach coping skills that can be adapted and applied as needed during difficult times, (c) Provide a folder for each camper to take home containing community resources, and (d) Have fun.

**Methods, Intervention, and Analysis:** Intervention: Children arrive in limousines. Participation in archery, canoeing, relay races, art therapy, and coping session with OSW is encouraged. Activities include a demonstration from police canine team and a DJ pool party. All campers leave with a folder of resources to share with parents, and a variety of donated gifts. Camp Oasis is funded by a grant from the Virtua Foundation for \$2,000 in addition to donated items and services from local vendors. Evaluation: Each team is led by nurses who monitor campers to assure camp goals are met and the children receive an evaluation after camp. They have the opportunity to express why they came to camp, if we met our goals, and can add comments. Parents can add their feedback.

**Findings and Interpretation:** Review of returned evaluation forms show that Camp Oasis is meeting the goals of providing support and education. In addition, multiple parents added positive feedback and appreciation. All campers who completed an evaluation responded they would be willing to be contacted for a newsletter article to encourage other children and teens to attend camp.

**Discussion and Implications:** Discussion: Each year Camp Oasis forms a community of struggling children, volunteers, certified camp staff, and professional counselors. Parents provide on-going feedback on their child's progress and are appreciative for the opportunity, their family had, by attending Camp Oasis.

### e#37

**PREPARATION OF THE NEW GRADUATE RN FOR CARE OF THE HEMATOPOIETIC CELL TRANSPLANT PATIENT.** Kelly Colvin, RN, BSN, OCN®, Ashley Farmer, RN, BSN, OCN®, Teresa Kam, PharmD, CPP, Tippu Khan, PharmD, Christina Davis, RN, MSN, OCN®, and Susan Mason, RN, MSN, OCN®, University of North Carolina Hospital, Chapel Hill, NC

**Objective:** The learner will be able to identify 3 areas of the orientation process for new graduate nurses that were identified for improvement

**Topic Significance and Study Purpose, Background, and Rationale:** Caring for patients undergoing hematopoietic cell transplantation (HCT) is a complex endeavor and requires an understanding of diverse clinical situations. Nurses at the University of North Carolina Hospital care for a mixed population of adult and pediatric patients in a 16 bed unit. This care can be

particularly challenging for new graduate nurses, as it requires managing chemotherapy, biotherapy, rare diseases and infectious complications. In an effort to better prepare new graduate nurses to care for this complex patient population, nursing leaders collaborated with a multidisciplinary team to evaluate the current orientation process and identify opportunities for improvement.

**Methods, Intervention, and Analysis:** Subject matter experts were interviewed. Three key areas for improvement were identified: streamline the orientation checklist, improve front end education, and preceptor development. Although educational opportunities were offered during the first year, these were often months after orientation ended. Orientation checklists were restructured to concurrently lay the foundation for both the basics of nursing care, as well as the fundamentals of HCT management. The multidisciplinary team identified a need for certain topics to be covered earlier on in the orientation process, while more complex issues (such as management of steroid refractory GVH) were delayed. A weekly pathway was created to cover specific diseases, medications and infectious complications of transplant. Subject matter experts from all disciplines within the program were recruited to facilitate these sessions. Preceptors were identified based on completion of preceptor development course and personal desire. Nurse leaders met with each preceptor to review the orientation checklists, expectations and new educational offerings.

**Findings and Interpretation:** Assessment of checklist revisions and weekly pathway are measured by an individual survey upon completion of orientation and verbal feedback at monthly intervals during orientation. Additionally, an activity evaluation is completed at the end of each weekly lecture. Feedback is collected by nurse leaders and modifications made based on these findings.

**Discussion and Implications:** Orientation of the new graduate nurse to HCT requires comprehensive education of complex topics. Ongoing evaluation and feedback must be collected and modifications to the orientation program considered. Current resources for preceptors are being explored and enhancements to preceptor development will be ongoing.

### e#38

**CHEMOTHERAPY TREATMENT: COLORECTAL CANCER PATIENTS' PERCEPTIONS.** Sonia Betzabeth Ticona Benavente, MSC, and Ana Lucia Siqueira Costa, PhD, both at University of Sao Paulo, Sao Paulo, Brazil

**Objective:** To know the meaning of chemotherapy treatment for patients with colorectal cancer.

**Topic Significance and Study Purpose, Background, and Rationale:** Oncological patient experiences situations that cause distress symptoms, such as fear, sadness, anxiety and depression, and other ones, during all the illness process. Although the chemotherapy treatment contributes to a better patient's survival, the quality of life may be affected for the frequent side effects derived from the different drugs used in the treatment. Thus, it is necessary that the nursing team knows the impact that chemotherapy treatment plays from patients' perspective.

**Methods, Intervention, and Analysis:** It is a qualitative study, with analysis of content based in Bardin. Sample was composed by 100 patients under chemotherapy treatment for colorectal cancer, who were enrolled in A.C. Camargo Cancer Center, SÃ£o Paulo, Brazil. Individuals of this study came from a bigger study that evaluated psychological stress and coping. Data were collected using an interview conducted with a question about the perception of patients concerning chemotherapy treatment. Answers were registered through a voice recorder. For analysis, we followed three steps: transcription, codification and answers categorization.

**Findings and Interpretation:** The perceptions of patients were grouped in four categories: "necessary for disease control",

"treatment of cure", "negative experience" and "positive experience in life". As negative experience, they referred worsening in emotional level, once they reported sadness, loss of wish to perform daily activities, side effects of drugs (hair loss, nausea, diarrhea, and weakened immune system), and administrative difficulties of supplementary health service. On other hand, we observed that patients point the treatment as a life experience spiritually positive, that allows the learning and the strengthening of familiar union.

**Discussion and Implications:** For patient with colorectal cancer, the chemotherapy treatment causes negative experiences that may contribute for abandoning treatment. However, they refer to be more strengthened and develop the capability of learning through a painful experience as the chemotherapy. Nurses are responsible by valuing the patient's perception in order to make that his/her experience of illness and treatment can be reversed in a positive way to have a better quality of life.

#### e#39

**SHH! SEEKING QUIET IN AN ONCOLOGIC EMERGENCY ROOM.** Deirdre Casey, MSN, RN, AGACNP-BC, Memorial Sloan Kettering Cancer Center, New York, NY

**Objective:** Identify sources of unwanted noise in an emergent-care setting and evidence-based techniques to reduce this noise.

**Topic Significance and Study Purpose, Background, and Rationale:** In the cacophony of a busy oncologic emergency room, noise can detract from care for both patients and providers. From sleep disturbances to impaired pain tolerance, studies have demonstrated that noise can have undesirable effects on patient healing. Health care providers may also suffer the effects of noise with increases in communication errors and reduced ability to perform complex tasks. The Urgent Care Center (UCC) of Memorial Sloan Kettering Cancer Center (MSK) provides emergent and urgent oncologic care to over 24,000 patients each year. With a planned expansion underway, unit leadership desired an evaluation of ways to reduce noise in the department. The purpose of this research was to identify sources of noise in the UCC and to synthesize existing methods of noise reduction in other emergency departments, developing a noise reduction plan for the UCC.

**Methods, Intervention, and Analysis:** A review of the evidence revealed sources of noise common to emergency departments and strategies to reduce noise. These strategies were evaluated for feasibility within the UCC environment under current construction constraints. UCC nurses, physicians, administrative staff, and patients were interviewed to determine areas in need of noise reduction. A comprehensive plan was developed to target environmental and communication changes that would reduce noise on the unit. All staff received educational sessions outlining new approaches for reducing noise.

**Findings and Interpretation:** Environmental strategies discovered and implemented in the comprehensive plan included establishing a "Quiet Hour", limiting visitors, and installing sound-masking machines. Any alarming monitor was deemed a "No Pass Zone" (prompting an immediate physician or nurse response). Monitor parameters were customized to individual patient needs. Communication strategies included using portable devices for staff (rather than overhead paging) and establishing a call bell triage script to reduce repeat calls. The comprehensive plan was implemented over the course of several months as physician, nurse, and administrative staff attended educational sessions tailored to their roles.

**Discussion and Implications:** The existing literature demonstrates that noise has the potential for patient harm and provider error. The comprehensive noise reduction plan implemented in UCC combined patient and staff input with studied interventions to create a novel noise reduction strategy. Further

research is needed to establish individual and combined efficacy of the methods used to reduce noise on the unit.

#### e#40

**THE ROLE OF "CARE" MANAGEMENT IN THE PATIENT EMPOWERED CARE (PEC) MODEL.** Evelyn Dobson, RN, BSN, Cancer Treatment Centers of America—Eastern Regional Medical Center, Philadelphia, PA

**Objective:** The purpose of this abstract is to show how effective and responsive management goes a long way in the outpatient setting; helping the oncology patient obtain necessary support and assistance.

**Topic Significance and Study Purpose, Background, and Rationale:** Standard "case" management models often facilitate discharge planning, and redirect outpatient concerns to primary care physicians. When patients are discharged from the hospital they often encounter barriers with filling prescriptions, obtaining appointments. When delayed or unaddressed, emergency room visits and/or hospital readmissions occur. Nurse "Care Managers" are utilized for assisting patients with outpatient needs at Cancer Treatment Centers of America at Eastern Regional Medical Center (ERMC). The care managers at CTCA are part of the Patient Empowered Care (PEC) model of care.

**Methods, Intervention, and Analysis:** Under the PEC model of care, the outpatient is prepped, roomed and each discipline meets the patient. The physician, dietician, naturopathic oncology provider, and the care manager meet the patient in the same room at their designated appointment times. This eliminates the need for the patient to have to navigate from one location to another. After the physician and other disciplines have evaluated and offered treatment options, the care manager confirms the patient's understanding of their treatment plan, and addresses both expressed and unexpressed needs. As a patient advocate, they operate proactively on behalf of the patient and caregiver to address all concerns prior to departure. The care manager is the point of contact when the patient leaves the center. Patient calls are answered by a "live" care manager to provide immediate assistance while the patient is at home. After normal business hours and weekends, we have a Call Center that supports all five CTCA hospitals.

**Findings and Interpretation:** Between July 2013 and June 2014, an average of 6,659 calls were placed to care management, 99% of which were answered directly. Patient satisfaction for this time period averaged 80% complete satisfaction with their Care Managers, and 77% of patients were completely satisfied with the Care Manager's effectiveness at home. Patient retention rates were 96% during this time period. The PEC model of care, including the unique support of outpatient care management, is perceived as a contributing factor to increased retention of patients receiving care at ERMC.

**Discussion and Implications:** The above practices continue to evolve to ensure the oncology patient is rallied around, delivering compassionate, integrative cancer care for body, mind and spirit.

#### e#41

**POTENTIAL PREDICTORS OF PERCEIVED COGNITIVE IMPAIRMENT FOR BREAST CANCER SURVIVORS.** Jamie Myers, PhD, RN, AOCNS®, University of Pittsburgh School of Nursing, Pittsburgh, PA; and Jo Wick, PhD, University of Kansas Medical Center, and Jennifer Klemp, PhD, MPH, University of Kansas Cancer Center, both in Kansas City, KS

**Objective:** Discuss the study implications to further investigate exercise interventions for cognitive complaints experienced by breast cancer survivors who receive chemotherapy.

**Topic Significance and Study Purpose, Background, and Rationale:** Cognitive impairment is a major concern for breast

cancer survivors before/during/following chemotherapy. Knowledge of predictors of cognitive impairment are critical to the development of pertinent assessment and interventional strategies. This cross-sectional/descriptive study was conducted to explore potential predictors of perceived cognitive impairment (PCI) for breast cancer survivors compared to healthy controls and gain insight into perceived levels of severity for cognitive complaints.

**Methods, Intervention, and Analysis:** Women with ( $n = 317$ ) and without ( $n = 46$ ) breast cancer completed: demographics/MD Anderson Symptom Inventory/Attentional Function Index/Functional Assessment for Cancer Therapy-Cognition and were classified into seven "time since chemotherapy" groups: controls, pre-, current-, and post-chemotherapy ( $< 12$ ,  $> 12$ – $< 2$ – $> 5$  years). Data analyses included: ANOVA, correlation, general and forward-selection multiple linear regression. Self-report of height/weight/exercise frequency were collected. Body mass index (BMI) was calculated.

**Findings and Interpretation:** One-way ANOVA identified a significant overall group effect for the relationship between time since chemotherapy and PCI ( $F_{6,355} = 7.01$ ,  $p < 0.0001$ ). Healthy controls reported significantly less PCI than any other group ( $p < 0.0001$ ). PCI was greater for those currently receiving chemotherapy and less for subjects who were 5 or more years post chemotherapy. No significant interactions were seen for education level, menopausal status, time since general anesthesia/radiation, or disease stage with PCI. No interaction was seen for exercise frequency and PCI in healthy controls or participants in the pre-chemotherapy group. A significant association was found between exercise frequency and PCI in the women exposed to chemotherapy ( $F = 3.78$ ,  $p < 0.05$ ). Regression modeling explained 24% of the variance (adjusted  $R^2$ ) for PCI in breast cancer participants and included: time since chemotherapy, BMI, exercise, fatigue, and distress. BMI inversely correlated with PCI ( $r = -0.2$ ,  $p = 0.2$ ). Exercise frequency moderated the relationship between BMI and PCI for breast cancer participants ( $F_{3,198} = 2.4$ ,  $p = 0.07$ ). More frequent exercise reduced the negative effects of high BMI on PCI. The moderating effect of exercise increased ( $F_{3,133} = 3.1$ ,  $p = 0.03$ ) when limited to participants exposed to chemotherapy.

**Discussion and Implications:** PCI decreased for participants  $> 5$  years post-chemotherapy. Overweight survivors who exercised frequently reported less PCI than sedentary survivors. Further investigation of the influence of weight and exercise on cognitive function is warranted.

#### e#42

**USE OF SURVIVORSHIP CARE PLANS TO IMPROVE COST EFFECTIVE CARE FOLLOWING ADJUVANT TREATMENT FOR BREAST CANCER.** Jean Rosiak, DNP, RN, ANP-BC, AOCNP®, CBCN®, Aurora UW Medical Group, Milwaukee, WI, Lois Seefeldt, PhD, RN, Concordia University Wisconsin, Mequon, WI, and Judy Tjoe, MD, FACS, Aurora Health Care, Milwaukee, WI

**Objective:** To use the Survivorship Care Plan to communicate ASCO recommendations for follow up after primary treatment for breast cancer in order to improve cost effective care.

**Topic Significance and Study Purpose, Background, and Rationale:** Coordination of care has been noted to vary in the follow-up of breast cancer patients after completing treatment, which can affect cost of care. The Institute of Medicine recommends that each cancer patient receive a Survivorship Care Plan (SCP) at the end of treatment summarizing their disease and treatment, outlining recommended follow-up care, and lifestyle modifications to reduce recurrence and new disease. The American Society of Clinical Oncology (ASCO) has developed evidence-based guidelines for care of these patients. The purpose of this project was to develop a SCP for breast cancer survivors

completing treatment to communicate these guidelines to the patient and providers.

**Methods, Intervention, and Analysis:** Fourteen patients who had completed treatment for non-metastatic breast cancer were provided with a SCP including recommendations for follow-up based on ASCO guidelines. Six months later records were reviewed to determine if follow-up adhered to ASCO recommendations, and cost associated with care. Records of 16 patients completing treatment the previous year, who had not received a SCP, were similarly examined and the groups compared.

**Findings and Interpretation:** The primary outcome was cost of care. Average cost of care per patient for the project group was \$308.50, and \$545.48 for the pre-implementation group. This difference was not statistically significant. Secondary outcomes included time necessary to prepare the SCP (48.5 minutes), timing of delivery of the SCP (22.3 weeks after treatment), patient ability to identify their follow-up plan before receiving the SCP ( $< 30\%$  were able to do so), patient satisfaction with the SCP (100% found it helpful/very helpful), and provider satisfaction (70% found it helpful/extremely helpful, 25% found it of no help).

**Discussion and Implications:** Providing a SCP at the end of breast cancer treatment will help communicate evidence-based recommendations for follow-up and direct cost effective care. A longer follow-up period may show significance in decreasing cost. Length of time to prepare the SCP is a barrier to widespread implementation. Patients are overwhelmingly satisfied with the SCP and it should be incorporated into follow-up care. Provider satisfaction needs to be evaluated to determine how best to incorporate the SCP into clinical practice.

#### e#43

**THE CREATION OF THE HAZARDOUS DRUG COMMITTEE.** Katie Holling, BSN, OCN®, Cheryl Bohacek, MSN, OCN®, Helen Jackson, MSN, APRN-CNS, GCNS-BC, and Kim Bland, MSN, APRN, AOCN®, all at Nebraska Methodist Health System, Omaha, NE

**Objective:** The objective of the Hazardous Drug Committee is to ensure our health system follow the best practices of protection of the patient, employee, and environment when handling hazardous drugs.

**Topic Significance and Study Purpose, Background, and Rationale:** Handling and administering hazardous drugs greatly affects all nursing practice. Nurses are exposed to countless hazardous drugs that have the potential to cause harm to themselves if precautions for handling and administering these drugs are not followed. The Oncology Nursing Society (ONS) states in their Chemotherapy and Biotherapy Course that all nurses administering hazardous drugs should follow their institutional guidelines. Our health system, as a whole, did not have cohesive, evidence-based policies and procedures related to hazardous drugs. Oncology nurses created the Hazardous Drug Committee (HDC) and recruited pharmacy, safety and compliance officers, and management to develop standardized evidence-based policies and procedures to use across the health system.

**Methods, Intervention, and Analysis:** The HDC reviewed the most recent National Institute for Occupational Safety and Health, Occupational Safety and Health Administration, and ONS guidelines to determine the best process of protection for the patient, employee, and the environment in the handling of hazardous drugs. Nurses working with pharmacy developed a two-tier system to separate hazardous drugs in different classes dependent on the personal precaution equipment (PPE) needed. New policies and procedures were developed based on the most evidence-based practice to be standardized across the entire health system.

**Findings and Interpretation:** The HDC identified areas where hazardous drugs were given without using current

evidence-based practice for handling and administration. All healthcare workers received education about proper PPE based on the two-tier system. Hazardous drugs are now identified by tier system in our electronic medical record. The HDC implemented stocking all units with nitrile gloves, chemotherapy gowns, masks and face shields. All units now have access to the best PPE based on the drugs they are giving and health care staff are educated on the hazardous drugs they are handling.

**Discussion and Implications:** The HDC has empowered nurses by providing the latest education, safety standards, and collaboration with other disciplines throughout the health system. These findings enrich quality patient care by raising awareness for staff to educate patients about the potential of the hazardous drugs they are receiving and precautions they need to take. The HDC continues to meet monthly to evaluate our education and guide future practices.

#### e#44

**BREAST CANCER, SO MANY CHOICES, SO LITTLE TIME. A NEW APPROACH, INTEROPERATIVE RADIATION THERAPY.** Kimberly Drewry, RN, MSN, FNP-C, AOCNP®, CBCN®, Donna Lash, RN, and Adrienne Banavage, RN, MSN, OCN®, all at University of Virginia Health System, Charlottesville, VA

**Objective:** Oncology Nurses will be able to identify novel treatment for early stage invasive breast cancer and the role of the nurse in this treatment modality.

**Topic Significance and Study Purpose, Background, and Rationale:** Background: About 232,670 new cases of invasive breast cancer will be diagnosed in 2014. One in eight women will be diagnosed with invasive breast cancer in their lifetime. How can we effectively advocate for our patients if we are unaware of the treatments available?. The TARGIT-A trial lacked imaged based planning and also provided lower dose radiation 5-7 Gy. At the University of Virginia a pilot study is on-going looking at the safety and feasibility of single fraction interoperative radiation treatment with CT-On-Rails guided brachytherapy for the treatment of early stage breast cancer. UVa is unique in being able to offer women a treatment modality not available anywhere else in the United States. IORT has been criticized for its inability to directly image the lumpectomy cavity, "one size fits most" radiation dose planning, and the poor dosimetry provided by superficial photons. UVa has a unique integrated CT-On -Rails brachytherapy suite to bring CT imaging, multi-channel applicators, and high speed computerized treatment planning to the delivery of breast IORT that will improve upon current IORT options for breast cancer patients. In central Virginia patients may have to travel several hundred miles to receive treatment for their breast cancer. Often times they chose mastectomy over breast preservation treatments based on geography. In an effort to meet these patient's needs, while providing state of the art care, an IORT (intraoperative radiation therapy) program was implemented. IORT allows for patients to receive surgical and radiation therapy simultaneously yet requires special equipment not available at all facilities. At the University of Virginia Health System this novel therapy was introduced in December of 2013.

**Methods, Intervention, and Analysis:** Intervention: A multidisciplinary team implemented a plan of care utilizing the CT on rails. This technology allows for precise treatment planning and delivery of radiation concurrent with surgical excision. Patients must meet specific criteria including age, mass size and location of mass to be considered. The treatment occurs in the brachytherapy suite as a planned outpatient procedure under general anesthesia. A full multidisciplinary team cares for these patients including physician, physicists, nurses, dosimetrists and anesthesiologists throughout the peri-procedural continuum.

**Findings and Interpretation:** To date the University of Virginia has completed IORT on 15 patients. Many of our patients

are much like we are, women with careers, families, and numerous obligations. This is a very time efficient treatment which is worth consideration. In time, we hope to establish outcomes measured by cosmesis, quality of life, safety and toxicity.

**Discussion and Implications:** Our experience shows that IORT for breast cancer is a viable treatment option allowing for an enhanced patient experience while offering similar outcomes to conventional treatments. Hope is that by increasing nurses' awareness of treatment options will allow better care for our patients and us.

#### e#45

**TEACHING CHECKLIST IMPROVES CONSISTENT TEACHING ON A BLOOD & MARROW TRANSPLANT UNIT.** Gina Quinlan, BSN, RN, CCM, and Sara Orndoff, MSN, RN, OCN®, both at UPMC Shadyside Hospital, Pittsburgh, PA

**Objective:** Development of a teaching tool to improve consistency of patient education on an inpatient Blood and Marrow Transplant unit.

**Topic Significance and Study Purpose, Background, and Rationale:** The literature finds that patient education is the responsibility of the health care provider. Management of the oncology patient requires nursing to provide education everywhere a patient is treated. Blood and Marrow transplant patients on an inpatient unit have complicated education needs. Approximately 40% of the inpatient nursing staff at our facility has less than 24 months of clinical experience making it necessary to encourage consistent patient education.

**Methods, Intervention, and Analysis:** The need to improve teaching consistency was identified through a staff survey to guide the project. 95% disagreed that patient education was consistent among nurses. Comments revealed a need for "Standardized material. Just so people are getting consistent information. A way to eliminate teaching gaps" and "a huge variation in the teaching that patients receive and they are often told conflicting things." Through a collaborative approach with oncology floor nurses, clinic nurses and the Professional Practice & Development Committee (PPDC) a Teaching Checklist was developed. The Checklist is available in all patient rooms. The tool was successfully developed and implemented on the inpatient unit.

**Findings and Interpretation:** "Teaching checklists have helped me to know what the nurses before me have taught the patient and what still needs addressed" is a pointed comment from post survey data. The follow-up survey revealed that 95% of respondents agree to having the tools they need to provide consistent patient education and 68% of respondents agree that the Teaching Checklist helps to identify and address patient education gaps. Benefits of this project include consistency of education provided by nursing staff, identification of topics covered, identification of teaching gaps and staff accountability.

**Discussion and Implications:** Empowering nursing staff with a teaching tool to increase consistency encourages communication and fosters the best possible patient experience. The ability of an oncology patient to managing his or her own health and wellness starts with education. Healthcare decisions and lifestyle changes are initiated by the education that nurses deliver to patients. A Teaching Checklist that encourages consistent education from the nursing staff can in turn benefit patients by increasing self-efficacy outside of the hospital setting.

#### e#46

**CREATING COMFORT ZONES BY ADMINISTERING THE RIGHT PRESCRIPTION OF PATIENT EDUCATION.** Leah Scaramuzzo, MSN, RN-BC, AOCN®, Billings Clinic, Billings, MT

**Objective:** Identify three strategies to increase nurses' comfort level in patient teaching sessions.

**Topic Significance and Study Purpose, Background, and Rationale:** Oncology nurses play a critical role in ensuring that patients receive the right amount of evidence-based information at the right time. At an NCI-affiliated healthcare system, a quality project was initiated to streamline the process of chemotherapy patient education. Inventory of patient education materials on the inpatient unit revealed outdated resources. Materials were stored in file cabinets, waiting areas, and counters. Nurses often “googled” topics and printed Internet information as unit-based resources were not readily accessible. Pre-survey data revealed nurses’ concerns about the variability of information between inpatient and outpatient settings and difficulty finding time to locate materials and teach. The survey indicated many nurses were uncomfortable teaching patients, unfamiliar with and how to use adult-learning principles, and overloading patients with information.

**Methods, Intervention, and Analysis:** After meeting with key stakeholders, electronic and print resources were approved. A dedicated inpatient room accessible to staff, patients, and families was stocked with patient education materials. A link was created on the hospital’s intranet with evidence-based nursing interventions and patient education resources. A patient education interactive software program was introduced to inpatient staff as an educational method; many previously relied heavily on one-time verbal teaching. Using adult-learning principles, a tool-guide for patient teaching sessions is being created. Formatted as an algorithm, it begins with a needs assessment regarding preferred learning methods, amount of information preferred, and topics to cover, which guides staff to “chunk” teaching sessions throughout the patient’s hospitalization. Mock scenarios will be developed for staff to practice using the tool-guide. A health literacy educational event is scheduled for January 2015 with the objective of identifying opportunities where nurses can use health literacy principles to make practice changes which can optimize patient outcomes.

**Findings and Interpretation:** Nursing feedback has been extremely positive. A post-survey will be administered to assess improvements in nurses’ comfort level with patient teaching. Responses will be reviewed and appropriate modifications will be made.

**Discussion and Implications:** This project raises awareness about avoiding patient information overload and identifying opportunities for reinforcement of teaching concepts using multi-media methods. Oncology nurses might consider a similar project to standardize patient education and increase nurses’ comfort level with patient teaching.

#### e#47

**EXPERIENCE OF SUCCESSFUL SURVIVORSHIP CARE PLANNING IN A COMMUNITY CANCER CENTER.** Mary Ann Heddon, RN, MSN, OCN®, South Georgia Medical Center, Valdosta, GA

**Objective:** Participants will be able to describe three models for creation and delivery of treatment summaries and survivorship care plans.

**Topic Significance and Study Purpose, Background, and Rationale:** Survivorship care planning is a topic of significant concern for cancer centers across the country. The American College of Surgeons Commission on Cancer requires survivorship care planning compliance by accredited cancer centers beginning in 2015.

**Methods, Intervention, and Analysis:** Our cancer center has been offering care plans to patients since early 2012. Since that time, we have prepared over 400 treatment summaries, care plans, and provider summaries. While the treatment summary and care plan can be a combined document, we chose to create two separate documents geared to the distinctly different audiences “ providers and patients. The treatment summary is a compact, 1-2 page document that succinctly summarizes all

pertinent details of the patient’s cancer experience, along with contact information for all providers involved in the patient’s care. We pair this with a LIVESTRONG care plan that addresses long term and late effects of treatment, wellness recommendations, and follow-up care based on NCCN guidelines.

**Findings and Interpretation:** We offer a consultation appointment with the Nurse Practitioner (NP), Social Worker, and Dietitian four weeks after completion of treatment. The NP is responsible for creation and delivery of all survivorship documents. During the past 2 ½ years, for extended periods, we have been without an NP. During this time, our clinical trials coordinator, who co-developed the survivorship program, was responsible for creation of the documents. A clinic nurse met with the patient and sent copies of the documents to the primary care physician and other physicians involved in the patient’s care. This model has also worked well. A third model, which we tried before hiring an NP, was to parcel the sections of the treatment summary out to various staff. The nurse navigator completed the portion that addresses demographics, past medical history, pathology and staging, and surgery details. The radiation section was assigned to the nurse in that area, and another nurse completed and delivered the documents. While this approach can work, it lacks oversight of a model in which fewer staff are responsible.

**Discussion and Implications:** Multiple models for creating and delivering survivorship documents are available. Our experience demonstrates that survivorship care planning is feasible, even in smaller cancer centers with limited resources.

#### e#48

**REIGNITING THE SPIRIT OF AN ONCOLOGY UNIT: A TEAM BUILDING APPROACH.** Deborah Lorick, RN, MSN/MHA, CMSRN, OCN®, Camille Laurilla, RN, BSN, and Rebecca Hoh, RN, BSN, OCN®, all at UCLA–Santa Monica Medical Center, Santa Monica, CA

**Objective:** Staff will identify having a positive work culture in the unit, increased support from management and receive praise and recognition for their work.

**Topic Significance and Study Purpose, Background, and Rationale:** Based on the 2013 NDNQI RN Survey Results, the UPC saw an area that needed to be improved. Nurse Manager and Staffing/ Resources Adequacy scored lowest on the Practice Environment Scale. This has greatly impacted staff morale and has become a barrier in creating healthy, interdependent, collegial relationships. The UPC recognized the significance of aligning the organizational goals with the unit goals while emphasizing the principles of Relationship Based Care.

**Methods, Intervention, and Analysis:** The NDNQI RN Survey results for 4 Southwest Oncology demonstrated the mean scores of 2.7 on Nurse Manager Ability, Leadership and Support of Nurses and 2.59 for Staffing and Resources Adequacy. It was identified that recognition, communication, resources/staffing, interpersonal relationships, and professional respect were areas that needed more focus. A plan was created to utilize a retreat as a venue to address these needs as well as improve team building among staff and boost morale. During the retreat emphasis was placed on the nursing professional practice model and Relationship Based Care model. At the end of the retreat, each staff signed Marie Manthey’s “Commitment To My Co-worker” A contract which is on the unit as a reminder.

**Findings and Interpretation:** Staff will be resurveyed at 3 and 6 months and 1 year post intervention to identify areas for further improvement. At 3 months-3 questions were asked: I receive praise and recognition? (Yes, 46%; No, 54%); Do you feel supported by the management team on 4SW? (Yes, 40%; No, 58%); The culture of 4SW is one of positive work relationships (Yes, 40%; No, 52%).

**Discussion and Implications:** Throughout the retreat, discussions involving trust, mutual respect, consistent visible support

and open honest communication became revolving themes used as a foundation in creating a positive culture. Team building activities offered insight on how to deal when there is a breakdown in trust among peers. A game called “buckets of love” instilled encouragement among staff - hearing positive remarks from a fellow colleague. Role playing boosted the staff’s skills in addressing challenging situations. Creating a safe environment during the retreat made staff feel accepted and respected for who they are and not by what they represent by title, position, or educational level.

#### e#49

**PATIENT REPORTED OUTCOMES RESEARCH: LESSONS LEARNED FROM LAUNCHING A NOVEL ELECTRONIC PLATFORM (ONQ).** Kellie M. Phillips, AS, Montana State University, Bozeman, MT; and Jeannine M. Brant, PhD, APRN, AOCN®, FAAN, and Judy Miller, RN, CCRP, both at Billings Clinic, Billings, MT

**Objective:** To share lessons learned with launching a novel electronic platform that supports patient-reported outcomes (PROs) for cancer symptom management.

**Topic Significance and Study Purpose, Background, and Rationale:** Software platforms which support PROs are of breakthrough importance for patients with cancer across the nation. Current research has shown significant discrepancies regarding symptom assessments reported by patients themselves and clinicians. Clinicians tend to rate symptoms with less severity and distress compared to patients, and the number of symptoms reported is also discrepant.

**Methods, Intervention, and Analysis:** A novel electronic platform (OnQ) was launched in two ambulatory oncology clinics in the U.S.; patients with gynecologic malignancies are enrolled at this site. Patient-reported symptoms within the last two weeks and top three visit concerns are entered on an iPad in the ambulatory clinic prior to provider visits. Symptoms are then reviewed by the provider and a supportive care plan is generated specific to patients concerns. Research Nurses and Assistants (RAs) are available during each scheduled visit to assist or answer questions during interaction with the software platform. RAs keep field journals throughout the study, which are brought to weekly team meetings for discussion and reflect patient, provider and RA feedback. Functionality of the software platform, platform reconstruction, and workflow using the novel electronic technology are also discussed.

**Findings and Interpretation:** Nineteen women are currently enrolled in the study. The women vary in age (37-79) and have diverse perspectives and experience with the use of computer technology. Some women, regardless of age, require more assistance with the functionality of software and iPad. Comfort is highly related to previous computer experience. Considerations need to be made for patients with low vision. While electronic care plans with links to online and clinic information are offered to all women, some continue to prefer materials on paper.

**Discussion and Implications:** Feedback from patients is a vital part of the construction of an electronic platform. While most patients are excited to embrace new technology, individual guidance and support is critical for successful implementation.

#### e#50

**URONAV: A NEW TECHNOLOGY FOR PROSTATE CANCER DIAGNOSIS.** Susan Smolenski Burke, RN, BSN, OCN®, and Lisa Campopiano-Hicks, RN, BSN, OCN®, both at Temple Fox Chase Cancer Center, Philadelphia, PA

**Objective:** Participants will be able to describe the impact of Uronav technology on Oncology nursing practice.

**Topic Significance and Study Purpose, Background, and Rationale:** A new technology for prostate biopsy is the Uronav procedure which was developed in 2013 out of necessity for better screening for prostate cancer. The procedure offers a more targeted approach to identifying potentially cancerous lesions by fusing MRI and ultrasound images. Nurses and physicians trained side by side in real time to understand and perfect this new technology.

**Methods, Intervention, and Analysis:** The nursing team in urology at a comprehensive cancer center was challenged with learning new technology for a prostate biopsy, developing new procedures and educational materials for the patient undergoing the biopsy and continuing to maintain patient comfort and safety with the new procedure. The new procedure extends the length of time the patient remains on the table with the rectal probe in place, thus requiring additional comfort measures when positioning the patient. Pre and post procedure preparation has increased with the use of new machinery. The amount of time spent educating patients has increased as a result of this new technology.

**Findings and Interpretation:** Identify potential adverse reactions associated with the procedure such as vasovagal, increased bleeding, and urinary retention which may require hospital admission. To date, greater than 40 patients have undergone this procedure. Pathology results have led to patients choosing treatment options: prostatectomy, radiation or active surveillance.

**Discussion and Implications:** The evidence based practice project will help Oncology staff understand Uronav biopsies and the rationale for utilizing the new technology as well as impact on patient safety and outcomes.

#### e#51

**WORKING AHEAD OF THE AFFORDABLE CARE ACT CURVE—CARE DELIVERY INNOVATIONS IN A LARGE URBAN NCI COMPREHENSIVE CANCER CENTER.** Wendy Rowehl Miano, MSN, DNP, AOCN®, University Hospitals Seidman Cancer Center, Cleveland, OH

**Objective:** Inpatient oncology care delivery innovations improve patient care outcomes and address resource allocation and cost savings opportunities.

**Topic Significance and Study Purpose, Background, and Rationale:** In 2012-2013 and 2013-2014, University Hospitals Seidman Cancer Center (UH SCC), a large urban academic NCI Comprehensive Cancer Center analyzed inpatient average length of stay (ALOS) and resource utilization in an effort to align strategies with the Affordable Care Act’s focus on health care cost containment and superior patient outcomes. Specifically, inpatient services ALOS was the targeted area of focus. The inpatient services administration (Chief Medical Officer and Director of Nursing) provided oversight in care delivery innovations.

**Methods, Intervention, and Analysis:** The UH SCC inpatient care delivery innovation objective has been defined as reducing hospital ALOS to achieve institution based budget target and University Hospitals Consortium benchmarks. The Chief Medical Officer and Director of Nursing convened the leadership team in a 116 bed inpatient division (4 divisions), consisting of Head Nurse Managers and Medical Directors to refine objectives into actionable, sustainable care delivery standards. ALOS by division and service line was reviewed in weekly inpatient leadership meetings. Discharge coordination barriers were addressed in real time. Abdominal surgery care paths were developed by an interdisciplinary team to reflect best practices, reduce practice variation, and decrease ALOS.

**Findings and Interpretation:** ALOS targets have demonstrated a reduction in both 2013 and 2014 fiscal years with a potential expense savings of two million dollars. Discharge coordination and abdominal surgery care paths adherence metrics have been

refined over the last eighteen months, providing leadership team data that drives performance improvement and sustains ALOS reduction over time.

**Discussion and Implications:** Resource allocation and coordinated oncology patient care delivery is highly relevant to oncology nursing leaders. Oncology nursing and medical leadership is critical to the developing care delivery focus area priorities, leveraging innovation, collaboration, and a shared vision to provide superior patient care outcomes in an efficient, cost effective, and sustainable model.

## Research Podium Sessions

**CANCER RISK MANAGEMENT DECISION MAKING FOR BRCA+ WOMEN (PREVIVORS).** Terri Jabaley, PhD, RN, Emmanuel College, Boston, MA

**Objective:** Participants will describe 4 major themes that characterize the experience of cancer risk management for BRCA+ women.

**Topic Significance and Study Purpose, Background, and Rationale:** Women with pathogenic BRCA genetic mutations face dramatically higher risks than the general population for development of breast and ovarian cancer over their lifetime. Emerging research continues to refine the clinical and psychosocial factors applicable to cancer risk management decision making. Current options for BRCA+ women have life-altering implications. This qualitative study explored the experience of cancer risk management decision making for women who are unaffected carriers of a BRCA mutation (previvors).

**Methods, Intervention, and Analysis:** A phenomenological design was used in the study. A convenience sample of 15 previvors was recruited through Facing our Risk of Cancer Empowered (FORCE), an online informational and support group. Informed consent was obtained, and interviews were audiotaped. Data were organized and classified using NVivo software. Phenomenological analysis was conducted using Moustakas's (1994) method. Epoche, bracketing, maintenance of an audit trail of data, and consultation with an expert qualitative researcher for validation of themes were methods used to facilitate rigor in the study. The Institutional Review Board (IRB) of the University of Massachusetts Lowell and the Executive Director of FORCE approved the study.

**Findings and Interpretation:** The final sample included women from all four regions of the United States and Canada. Findings consisted of four major themes: the early previvor experience, intense emotional upheaval; the decisional journey, navigating a personal plan for survival; lack of knowledge and experience among health care providers; and support is essential. Findings highlight the different decisional perspectives of previvors based on age and individual factors and the need for increased resources and competence among health care providers, particularly in rural communities.

**Discussion and Implications:** With continued advancements in genetic testing, increased availability, and decreased cost of BRCA mutation testing, increasing numbers of BRCA+ women will be identified. Competency in the care of previvors requires knowledge of the clinical guidelines for hereditary breast and ovarian cancer risk management and awareness of the decision making experience. Oncology nurses specializing in genomics are key members of multidisciplinary teams that provide care for previvors and their families. This study provides valuable insight into the decisional journey for previvors.

**Underwriting or Funding Source Name:** The Pi Epsilon at Large chapter of Sigma Theta Tau International Honor Society for Nursing provided funding for the study.

**PERSISTENT FATIGUE IN STEM CELL TRANSPLANT SURVIVORS: A BIOBEHAVIORAL PERSPECTIVE.** Eileen Hacker, PhD, RN, AOCN®, FAAN, Anne Fink, PhD, RN, Tara Peters, BS, Chang Park, PhD, Giamila Fantuzzi, PhD, and Damiano Rondelli, MD, all at University of Illinois at Chicago, Chicago, IL

**Objective:** To compare fatigue, physical activity, sleep, emotional distress, cognitive dysfunction, and biological measures in hematopoietic stem cell transplant survivors with persistent fatigue versus matched healthy controls with occasional tiredness.

**Topic Significance and Study Purpose, Background, and Rationale:** Fatigue is a highly prevalent symptom following hematopoietic stem cell transplantation (HCT) that has been described as intense and lasting for years following treatment. It is not known why some HCT survivors continue to experience persistent fatigue in the absence of cancer/cancer treatment and how this fatigue compares to occasional tiredness found in the general population. In order to gain an understanding of persistent fatigue as a biobehavioral phenomenon, this pilot study compared fatigue, physical activity, sleep, emotional distress, cognitive dysfunction, and biological measures in HCT survivors with persistent fatigue (n=25) to matched healthy controls (HC) with occasional tiredness (N=25).

**Methods, Intervention, and Analysis:** This comparative, descriptive study collected data using a multi-pronged approach: (1) computerized real-time assessments of fatigue over 7 days; (2) objective, real-time assessments of physical activity and sleep over 7 days; (3) patient-reported fatigue assessment using a psychometrically sound questionnaire (Chalder Fatigue Scale) and computerized Adult Short Forms of the PROMIS system (fatigue, sleep disturbances, and emotional distress); (4) computerized objective testing of cognitive functioning to assess sustained attention, memory and executive function; and, (5) biological measures (CBC/Differential, CRP, TNF alpha, and IL-6). Descriptive statistics were calculated for all measures. Differences between the HCT survivors and HC were examined using MANOVA.

**Findings and Interpretation:** The HCT survivors with persistent fatigue reported increased physical fatigue ( $p < .001$ ) mental fatigue ( $p < .001$ ), and overall fatigue ( $p < .001$ ) as well as increased anxiety ( $p < .05$ ) and depression ( $p < .01$ ) compared to the matched HC group with occasional tiredness. The magnitude of differences corresponds to clinically important changes. RBC levels were significantly lower in the HCT survivors although levels for both groups were in the normal range. TNF alpha was significantly higher in the HCT survivors ( $p < .001$ ).

**Discussion and Implications:** These findings provide preliminary evidence for a biobehavioral model of persistent fatigue in HCT survivors. Persistent fatigue reported by HCT survivors is accompanied by increased anxiety and depression along with decreased RBC levels. Elevated TNF alpha levels may represent an important biomarker. The role of physical activity, sleep, and cognitive functioning is less clear. This may have important implications for interventions designed to reduce fatigue in HCT survivors.

**Underwriting or Funding Source Name:** Hacker, E. (PI), Persistent Fatigue in Stem Cell Transplant Survivors: A Biobehavioral Perspective. Funded by the National Cancer Institute, Alliance for Clinical Trials in Oncology. (CA037447).

**PSYCHO-EDUCATIONAL INTERVENTION TO REDUCE PSYCHOLOGICAL DISTRESS IN BREAST CANCER AND CERVICAL CANCER PATIENTS UNDERGOING CHEMOTHERAPY.** Ariesta Milanti, BSN, RN, MSc, University of Indonesia, Depok, Indonesia; and Eija Metsälä, PhD, and Leena Hannula, PhD, both at Helsinki Metropolia University of Applied Sciences, Helsinki, Finland

**Objective:** After reading the abstract, the participants should be able to understand the effect of the psycho-educational intervention on the psychological distress in breast cancer and cervical cancer patients undergoing chemotherapy.

**Topic Significance and Study Purpose, Background, and Rationale:** Psychological distress is a common problem among patients with cancer, yet it mostly goes unreported and untreated. Studies reported that in spite of being at the closest contact with the patients, nurses still lack of confidence and capacity to deal with the psychological issues and commonly are overburdened with the physically oriented nursing care. Thus, it is important to tailor a format of intervention into the nursing care that is interesting, easily understandable and accessible for the patients. This study examined the effect of a multimedia based psycho-educational intervention on the psychological distress levels of breast cancer and cervical cancer patients undergoing chemotherapy.

**Methods, Intervention, and Analysis:** This study used a quasi-experimental, pretest post-test design with a comparison group. 100 patients were purposively selected from a cancer hospital in Jakarta, Indonesia. Fifty patients in the intervention group were given a psycho-educational video with positive re-appraisal, education and relaxation contents, while receiving chemotherapy. The comparison group received standard care. Patients in both groups completed Distress Thermometer and Problem List tools before and after chemotherapy. These tools were shown to be valid and reliable to measure distress in female patients with cancer in Indonesia. Nonparametric tests were used as the data were not normally distributed.

**Findings and Interpretation:** Patients who received the psycho-educational intervention had significantly lower distress levels compared to those in the control group. This finding was consistent with the result of a Cochrane review done by Galway et al (2012) regarding the nurse-delivered psychosocial interventions. Another finding was the patients who were experiencing higher distress levels tend to report more family problems, emotional problems, and physical problems than the patients with lower distress levels.

**Discussion and Implications:** The psycho-educational intervention was associated with lowered psychological distress levels of the breast cancer and cervical cancer patients undergoing chemotherapy. Patients with psychological distress in this study were likely to benefit from the psycho-educational intervention. Media-assisted psycho-educational intervention should be incorporated as a basic intervention for the cancer patients. Further collaborative studies should be done with more robust design to develop the psycho-educational materials to meet the needs of the patients at a particular setting.

## COMPARISON OF CHAMOMILE AND BRASSICA OLERACEA EXTRACT IN PREVENTING RADIODERMITIS IN WOMEN WITH BREAST CANCER: A CLINICAL TRIAL.

Daleté Mota, PhD, Federal University of Goiás; Bruno Martins, RN, Graziella Machado, RN, and Raíssa Dias, RN, all at Hospital Araujo Jorge/Associação de Combate ao Câncer em Goiás; Karina Siqueira, PhD, Federal University of Goiás; and Nilceana Freitas, MD, Hospital Araujo Jorge/Associação de Combate ao Câncer em Goiás, all in Goiania, Brazil

**Objective:** Compare the effect of chamomile and Brassica oleracea extract in the prevention of radiodermatitis in women with breast cancer.

**Topic Significance and Study Purpose, Background, and Rationale:** Skin toxicity related to radiotherapy still has no solid intervention for its prevention. In Brazil, chamomile has been used due to its calming and anti-inflammatory effect, besides its low cost. On the other hand, Brassica oleracea extract has been indicated for radiodermatitis due to its healing effect.

**Methods, Intervention, and Analysis:** This was a randomized clinical trial, conducted between October 2013 and September 2014, after approval by the Ethics Committee, at an oncology reference hospital in the Midwest of Brazil. Women in radiotherapy for breast cancer, aged 18 years or older, without previous history of radical mastectomy or breast reconstruction, and without tumor infiltration of the skin were included. They were randomly allocated in: Group 1 (n=23): chamomile; Group 2 (n=20): Brassica oleracea. Both groups received general instructions for preventing radiodermatitis. The first assessment was conducted in the first radiation session and at every five sessions until the last day of therapy. Skin toxicity was measured using the RTGO tool. Mann-Whitney test was used to assess the homogeneity between groups. Comparison of the skin toxicity between groups was performed by Chi-square or Fisher's exact test.

**Findings and Interpretation:** Groups 1 and 2 were homogeneous in age, educational level, family income, and performance status. All women were evaluated for 25 sessions, 30 were evaluated after 30 sessions and 3, after 35 sessions. There was no statistically significant difference between groups in all evaluations, indicating that regardless of the product used, the skin toxicity evolved the same way. Treatment compliance was assessed and all the women referred adherence to the guidelines in more than 80% of the time.

**Discussion and Implications:** The result obtained shows that both interventions tested were satisfactory for the prevention of radiodermatitis, since no woman developed grade 3 or 4 skin lesion. However, the cost-benefit issue reinforces the use of chamomile in the radiotherapy service practice considering that the women are referred by the public health system in Brazil and have low income.

## ACTIVATION FOR HEALTH MANAGEMENT IN PATIENTS WITH COLORECTAL CANCER AND THEIR FAMILY CAREGIVERS.

Susan Mazanec, PhD, RN, AOCN®, Case Western Reserve University and University Hospitals Seidman Cancer Center, University Hospitals Case Medical Center; and Abdus Sattar, PhD, Sarah Miano, MN, RN, and Barbara Daly, PhD, RN, FAAN, all at Case Western Reserve University, all in Cleveland, OH

**Objective:** Describe characteristics associated with activation for health management in colorectal cancer patients and their family caregivers at the transition to post-treatment survivorship.

**Topic Significance and Study Purpose, Background, and Rationale:** Activation, the state of possessing the skills, knowledge, and confidence to manage one's own health, is critical for patients with colorectal cancer as studies have stressed the importance of health promotion behaviors in reducing mortality for colorectal cancer survivors. Oncology nurses are in a key position to promote activation at the transition to post-treatment survivorship. However, evidence-based interventions are lacking because little is known about the role of activation along the cancer trajectory and activation of family caregivers for their own health management is virtually unstudied. The aims of this study were to: (1) describe activation in patients with colorectal cancer and their family caregivers, (2) examine the relationship between patient and caregiver activation, and (3) determine whether activation is related to symptom distress, depression, anxiety, fatigue, physical activity, and work productivity.

**Methods, Intervention, and Analysis:** A longitudinal, correlational design was used. A convenience sample of 63 patients with newly-diagnosed stage I, II, or III colorectal cancer treated with surgery and 43 family caregivers completed surveys during postoperative hospitalization, and at 6 weeks and 4 months post-op. Measures included: the Patient (or Caregiver) Activation



Measure; the Caring for Oneself subscale of the Caregiver Inventory; PROMIS measures for depression, anxiety, and fatigue, the International Physical Activity Questionnaire; the Memorial Symptom Assessment Scale, and the Work Productivity and Activity Impairment Questionnaire. Linear mixed effects models were used for analysis.

**Findings and Interpretation:** Activation scores for both patients and caregivers were stable over three time points, were not correlated, and were at the third level of activation, indicating confidence in managing their health and a readiness to make health behavior changes. Patient activation was inversely and significantly associated with patient fatigue, depression, and anxiety. Caregiver self-efficacy for caring for oneself was inversely and significantly correlated with anxiety and depression in both the patient and caregiver.

**Discussion and Implications:** The finding that negative emotions are associated with less patient activation and lower caregiver self-efficacy suggests that managing one's health is likely a predominantly psychodynamic phenomenon, rather than a disease or treatment-related one. Strategies to reduce anxiety and depression at the post-surgical transition are needed to increase activation in both patients and caregivers.

**Underwriting or Funding Source Name:** Partial funding from: NIH/NCI R25T CA 090355-Prevention Research Educational Postdoctoral Training Program

## DEVELOP CANCER SELF-MANAGEMENT INTERVENTION FOR PATIENTS WITH LIMITED-ENGLISH PROFICIENCY.

Fang-yu Chou, PhD, RN, School of Nursing, San Francisco State University, San Francisco, CA

**Objective:** To discuss the common barriers and challenges of cancer care for patients with language and cultural barriers.

**Topic Significance and Study Purpose, Background, and Rationale:** This paper presents a pilot project to develop a self-management intervention handbook for Chinese American cancer patients with limited-English-Proficiency (LEP). Studies have suggested that LEP seems to be associated with symptom distress, reduced cancer screening, delays in seeking health care and lack of appropriate health seeking behaviors among cancer patients. Health care providers (HCP) also report feeling that they are unable to communicate as effectively with LEP clients and admit to providing less patient-centered care due to language barriers. Language Barriers and cultural differences in the illness perception may be also at play when discussing diagnoses with patients with LEP.

**Methods, Intervention, and Analysis:** A prototype of self-management intervention handbook was developed based on the conceptual and research literature by a team of interdisciplinary content experts. The handbook includes self-care strategies on symptom management, physical activity, and communication. The English version was reviewed by eight interdisciplinary health care providers for content review and validation. Online survey was distributed to the expert panel for additional feedback. The Chinese version was then developed with the forward-and backward-translation process. Sixteen female monolingual/bilingual Chinese American cancer survivors were invited to provide feedback of the handbook. The reported feedback was analyzed by the content analysis method.

**Findings and Interpretation:** The health care provider expert panel considered the bilingual self-management handbook is a useful and feasible tool for patient self-management. The reported challenges and experiences giving care to LEP patients included: patients do not engage in discussion; different cultural health beliefs; unable to speak to patients in their primary language; patients are less likely to discuss emotional and social challenges during treatments. The reported feedback from the cancer survivor panel considered the Chinese version handbook is a useful and feasible tool as well. The common reported bar-

riers and experiences during their treatment included: limited understanding about treatment/medication and side effects; unable to communicate in order to make decision; language barriers; unable to understand information related to resources and do not know what to ask.

**Discussion and Implications:** The finding provides preliminary data of the feasibility and need of cancer self-management for culturally-diverse LEP cancer patients. Further research includes testing and applying the intervention.

**Underwriting or Funding Source Name:** Office of Research and Sponsored Programs and Academic Affairs, San Francisco State University, 2013-2015 (PI: F.Chou)

## EVALUATION OF AN INTERVENTION FIDELITY-MONITORING PLAN FOR A PALLIATIVE AND END-OF-LIFE COMMUNICATION INTERVENTION DELIVERED TO PARENTS OF CHILDREN WITH A BRAIN TUMOR.

Verna Hendricks-Ferguson, PhD, RN, CHPPN, Saint Louis University, School of Nursing, St. Louis, MO, Javier Kane, MD, Scott and White Children's Hospital, Temple, TX, and Joan Haase, PhD, RN, FAAN, Indiana University, Indianapolis, IN

**Objective:** To describe lessons learned and evaluation of our intervention-fidelity monitoring plan for a early palliative and end-of-life communication intervention delivered to parents of children with a brain tumor.

**Topic Significance and Study Purpose, Background, and Rationale:** Implementation of an intervention-fidelity plan is an essential investigator responsibility during delivery of behavioral intervention studies. This responsibility is especially important when a new intervention is being evaluated. Behavioral intervention fidelity examples focused on adult cancer patients have been reported by investigators. However, intervention fidelity examples to evaluate palliative and end-of-life (PC/EOL) communication interventions for parents of children with cancer is lacking. Our purpose is to describe an intervention-fidelity monitoring plan of a nurse and physician (RN/MD) delivered PC/EOL-communication intervention to parents of children with brain tumors.

**Methods, Intervention, and Analysis:** A prospective repeated-measure, one-group design was used with a convenience sample of 13 parents of children newly diagnosed with a high risk brain tumor. We evaluated intervention fidelity for all intervention sessions delivered by RN/MD dyads to parents (3 sessions delivered at diagnosis and two treatment-response meetings). Data used to evaluate intervention fidelity was the audio-recorded sessions. We used a protocol-specific checklist to evaluate essential protocol content, including (a) assessing parental preferences to receive information about PC/EOL care; (b) advance-care planning options (c) assessment of parental hope related to child's condition and understanding of child's condition ; (d) providing information on child's prognosis and with related percentages; and (d) integration of hope and non-abandonment "we messages.

**Findings and Interpretation:** Using our protocol intervention fidelity checklist, we found 86-92% of essential protocol-specific content was integrated into parent meetings. During evaluation of recordings, we gained additional insights to improve our training for PC/EOL communication skills, specifically on (a) use of active listening, silence and empathic statements and (b) organization of discussion topics to enhance parental understanding of received information.

**Discussion and Implications:** Through review of our pilot study audio-recordings for intervention-fidelity, we gained key information to improve the intervention training and also to improve our tools for future intervention-fidelity monitoring for PC/EOL communication intervention studies. A key implication is the need to evaluate the quality of communication skills, in addition to evaluating the content.

**Underwriting or Funding Source Name:** This research was funded by an exploratory/development grant, awarded under the American Recovery Act of 2009 by the National Institutes of Health and National Institute of Nursing Research (R21N-RO11071-O1A1) to Verna Hendricks-Ferguson (2009-2012). The content is the sole responsibility of the authors and does not represent official views of the National Institutes of Health.

**PATIENT/FAMILY EDUCATIONAL PRACTICES IN PEDIATRIC ONCOLOGY: A REPORT FROM THE CHILDREN'S ONCOLOGY GROUP (COG).** Janice Withycombe, PhD, RN, MN, CCRP, Palmetto Health, Columbia, SC, Rachel Andam-Mejia, MSN, RN, Children's Hospital of the King's Daughters, Norfolk, VA, Annie Dwyer, RN, Children's Hospital at Westmead, Westmead, Australia, Katherine Windt, BSN, RN, CPHON®, Rady Children's Hospital, San Diego, CA, Abigail Slaven, RN, BSN, CPHON®, Cohen Children's Medical Center, New Hyde Park, NY, and Wendy Landier, PhD, RN, City of Hope Comprehensive Cancer Center, Duarte, CA

**Objective:** Participants will gain knowledge related to the current state of practice across Children's Oncology Group institutions regarding the delivery of patient/family education to newly diagnosed pediatric oncology patients.

**Topic Significance and Study Purpose, Background, and Rationale:** An estimated 10,450 children 0-14 years are diagnosed with cancer annually in the United States; 90% are cared for at Children's Oncology Group institutions. Although patient/family education is acknowledged as a core component of nursing practice, and is essential prior to discharge of newly diagnosed patients, there remains a deficit of evidence regarding educational practices within pediatric oncology. This study aimed to understand current patient/family education practices across all Children's Oncology Group member facilities.

**Methods, Intervention, and Analysis:** IRB exempt status was received. Each Children's Oncology Group facility (N=223) was asked to select one nurse representative who was actively engaged in patient/family education for newly diagnosed patients. Data were collected via SurveyMonkey, and analyzed using descriptive statistics and multivariable logistic regression.

**Findings and Interpretation:** 130/157 (82.8%) surveys have been completed to date; 66/223 (29.6%) COG sites are pending selection of a survey nurse. Site characteristics: Specialized pediatric oncology unit (55.4%); RN:patient day shift ratio <3 (59%); >25% non-English speaking families (31.5%); Nurse primarily responsible for education: Advanced practice (30%), Bedside (20%), Educator (19%), Other (30%). Topics rated mandatory for newly diagnosed patients by >90% of sites include: Diagnosis (96.2%); Chemotherapy/side effects (90.8%); Signs/symptoms of infection (96.9%), Fever (98.5%), Home medications (94.6%) and How/when to call treatment team (97.7%). Nursing was rated as having primary responsibility for teaching all mandatory topics except Diagnosis (Medicine: 97.7%). Barriers included: Inadequate nurse time for education (65%) and lack of clear communication among team members (57%). In a multivariable logistic regression model, after controlling for inpatient unit type (general pediatric vs. specialized pediatric oncology), RN:patient ratio, and nurse responsible for education (bedside vs. other), a lack of clear communication among team members (Odds Ratio [OR] 2.8, 95% Confidence Intervals [CI] 1.2-7.0, p=0.023) and having >25% non/limited-English speaking families (OR 3.4, 95% CI 1.5-7.8; p=0.004) were significantly associated with discharge delays due to non-completion of teaching.

**Discussion and Implications:** This is the first study to examine educational practices in pediatric oncology across Children's Oncology Group institutions. Findings support the need for

evidence-based interventions to improve delivery of education and determine its impact on knowledge acquisition, resource utilization, and pediatric oncology nursing practice.

**Underwriting or Funding Source Name:** National Clinical Trials Network Grant-Children's Oncology Group (U10CA180886)

## **SOCIAL WELL-BEING AND CYTOKINE GENE VARIATION IN CANCER PATIENTS AND FAMILY CAREGIVERS.**

Kimberly Alexander, RN, PhD, Queensland University of Technology, Brisbane, Queensland, Australia; Bruce Cooper, PhD, University of California, San Francisco, San Francisco, CA; Patsy Yates, RN, PhD, Queensland University of Technology, Brisbane, Queensland, Australia; and Bradley Aouizerat, MAS, PhD, and Christine Miaskowski, RN, PhD, both at University of California, San Francisco, San Francisco, CA

**Objective:** To identify trajectories of physical, psychological, social, and spiritual well-being of radiotherapy patients and their family caregivers, and to evaluate for demographic, clinical, and genetic characteristics that distinguish these trajectories.

**Topic Significance and Study Purpose, Background, and Rationale:** Not all cancer patients and their family caregivers (FCs) experience the same quality of life (QOL). This study investigated differences in demographic, clinical and genetic characteristics among patient and FC subgroups differing in their QOL. Identification of patients and FCs at risk of poorer outcomes may inform individualized approaches to assessment and supportive care.

**Methods, Intervention, and Analysis:** Data from 167 outpatients with breast, prostate, lung, or brain cancer undergoing radiotherapy and 85 of their FCs were analyzed. Growth mixture modelling identified latent classes of individuals based on Quality of Life - Patient/Cancer Survivor physical, psychosocial, social and spiritual well-being scores obtained immediately prior to, during, and for four months following radiotherapy (taking the potential influence of patient-FC dyad into account). Demographic, clinical and genetic characteristics (single nucleotide polymorphisms (SNPs) and their haplotypes among 15 cytokine candidate genes) were investigated for differences between the classes identified using chi-square, t-tests and logistic regression.

**Findings and Interpretation:** No latent classes were identified for spiritual well-being. Two latent QOL groups were found across the other three dimensions. Across these dimensions, the largest percentage of participants had better well-being (58.5% to 64.0%) and a smaller percentage had worse well-being (36.0% to 41.5%). Consistent with other cancer patient and FC QOL literature, age, comorbidities, gender, Karnofsky Performance Status, and having children at home were associated with QOL, often across multiple dimensions. Between group differences in social well-being was also associated with SNP variation in nuclear factor kappa beta 2 (NFKB2, p=.049). This study is the first to identify an association between NFKB2 and social well-being.

**Discussion and Implications:** Patients and FCs should be evaluated for changes in physical, psychological and social well-being during treatment. This study suggests those who are younger or have lower functional status are at greatest risk of worse physical, psychological and social well-being. Understanding genetic determinants of QOL may lead researchers to develop molecular tests that can be used by clinicians to identify high risk patients prior to treatment initiation, enabling preventive intervention and supportive care.

**Underwriting or Funding Source Name:** This research was supported, in part, by the ONS Foundation Genentech Research

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## Research Poster Sessions

### #1

#### **SUPPORTIVE-EDUCATIVE NURSING THERAPY, HEALTH-RELATED QUALITY OF LIFE, SELF-CARE, AND TREATMENT ADHERENCE OF WOMEN RECEIVING OUTPATIENT BREAST CANCER CHEMOTHERAPY IN TWO TEACHING HOSPITALS IN SOUTHEASTERN NIGERIA.**

Agnes Anarado, PhD, RM, RN, FWACN, University of Nigeria Nsukka, Enugu Campus, Enugu; and Bola Ofi, PhD, RM, RN, FWACN, Odunayo Akinyemi, MSc, B.Tech, Michael Asuzu, DOH&S, MSc, MBBS, FMCPH, FFPHM, FCPHM, and Oladapo Campbell, MD, FWACS, FMCR, all at University of Ibadan, Oyo State, Ibadan, all in Nigeria

**Objective:** Effect of a supportive-educative nursing therapy (SENT) on health related quality-of-life (HRQOL), self-care and treatment adherence of breast cancer women receiving outpatient chemotherapy in two teaching hospitals in South-eastern Nigeria.

**Topic Significance and Study Purpose, Background, and Rationale:** Breast cancer is the most common female malignancy worldwide. Chemotherapy is cost-effective, and improves survival, but side effects can increase patients's distress, impair quality-of-life, and threaten treatment adherence. In Nigeria, despite poor chemotherapy adherence, interventions to enhance patients's coping with chemotherapy have not been vigorously studied.

**Methods, Intervention, and Analysis:** This quasi-experimental study cluster randomized two teaching hospitals to treatment and control groups. Eligible subjects were prospectively recruited into treatment (58) and control (31) groups over 18 months. Both groups received routine clinic care; the treatment group also received weekly SENT over the six primary courses of chemotherapy. Validated European Organization for Research and Treatment of Cancer Questionnaires (EORTC QLQ-C30 and QLQ-BR23) were used to measure HRQOL at four treatment points. A 32-item researcher-developed self-care inventory scale (SCIS) was used to measure self-care pre and post intervention. Data were analyzed using non-parametric statistical tests. Level of statistical significance was  $p < .01$ , while clinical significance of HRQOL parameters was set at mean difference 10points.

**Findings and Interpretation:** Subjects's mean age was 46.2 years (SD  $\pm 10.9$ ); 90.7% earned less than \$200/month; 59.6% were pre-menopausal; 83.8% were diagnosed with advanced disease, with 61.8% on neo-adjuvant chemotherapy. At baseline, there were no statistically significant differences between the groups but the control group had a clinically significant higher mean breast symptom score (36.9 $\pm$ 25.4) than the treatment group (25.2 $\pm$ 25.5). At the 2nd and 6th chemotherapy cycles, the treatment group had better HRQOL with higher mean scores in role functioning ( $p=0.007$ ;  $p=0.005$ ) and lower mean scores for nausea and vomiting ( $p=.010$ ), pain ( $p=0.002$ ), breast symptoms ( $p=0.002$ ;  $p=0.005$ ) and hair-loss upset ( $p=0.010$ ). The treatment group reported significantly greater self care knowledge ( $p=0.000$ ) and exercise of self care actions ( $p=0.000$ ) post intervention. The control group had significantly higher overall treatment attrition (64.5%) than the treatment group (37.5%). Financial constraints were a major barrier to treatment adherence in both groups.

**Discussion and Implications:** SENT enhanced adjustment to chemotherapy and improved some HRQOL parameters, self-care and adherence to chemotherapy. Capacity building of nurses, implementation of SENT for breast cancer patients on chemotherapy and shared economic cost of cancer therapy may enhance chemotherapy adjustment and adherence in low resource settings.

### #2

#### **COMPARING QUALITY OF LIFE IN HOSPICE PATIENTS WITH LUNG OR OTHER TYPES OF CANCER.**

Li-Ting Huang, MSN, RN, and Susan McMillan, PhD, ARNP, FAAN, both at University of South Florida, Tampa, FL

**Objective:** Quality of life (QOL) is a major concern in end of life. The purpose of the study was to compare QOL of patients with lung and other types of cancer.

**Topic Significance and Study Purpose, Background, and Rationale:** Quality of life measures need to be valid as well as reliable. One way to assess QOL is via Measurement invariance (MI), which refers to the extent to which each item is being interpreted and responded to in the same way across samples. Without MI, it is difficult to determine whether observed difference between groups are due to true difference on the underlying constructs or merely due to group-specific response biases. MI is an extension of construct validity and helps to augment the generalizations as we rely heavily on utilizing questionnaires to investigate characteristics of interest.

**Methods, Intervention, and Analysis:** This cross-sectional descriptive design included 145 lung cancer patients (34%) and 279 non-lung cancer patients (66%) receiving hospice care. The Hospice Quality of Life Index-14 (HQLI-14), a 14-item self-report instrument, was used to evaluate the effectiveness of hospice care. Configural, metric, and scalar invariance of the HQLI-14 were tested using LISREL 9.1. In addition, multiple fit indices including absolute, incremental, residual-based, and population-based were utilized to evaluate the model fit.

**Findings and Interpretation:** A total of eight models was estimated from examining the underlying constructs across two groups. The result was supported with desired values of fit indices. The next restrictive MI was estimated by imposing equivalent factor loadings across groups. The favorable results indicated that the factor loadings were invariant with the evidence of  $\chi^2(11) = 12.16, p > .05$ . The most restrictive requirement of MI requiring equal intercepts across groups was not achieved, showing Item 2, breathless, was problematic. When comparing construct means of the HQLI-14, the results revealed the overall quality of life in the non-lung cancer patients was slightly worse when compared to the lung cancer patients but not statistically significant in this sample.

**Discussion and Implications:** The results of the study reveal similar QOL across diagnostic groups and shed light on the effective measurement of HQLI-14 with strong MI even though Feeling breathless was higher in the lung cancer group. The HQLI-14 is valid for both lung cancer and non-lung cancer patients.

### #3

#### **FROM PRESCRIPTION TO ACTION: A PATIENT'S PERSPECTIVE OF ORAL TREATMENT FOR CANCER.**

Pamela K. Ginex, EdD, RN, OCN®, Mikel Ross, RN, BSN, OCN®, and Tracy Lugar, RN, OCN®, all at Memorial Sloan Kettering Cancer Center, New York, NY

**Objective:** Nurses will be able to describe several techniques to facilitate patient adaptation to oral chemotherapeutic treatment.

**Topic Significance and Study Purpose, Background, and Rationale:** Adherence to oral cancer treatment has been identified as a nursing-sensitive patient outcome and research priority by

the Oncology Nursing Society (2009-2013 ONS Research Agenda). Oral agents account for 50% of oncolytics in development and represent a changing paradigm in patient care. With IRB approval, our purpose was to qualitatively explore medication-taking behaviors among a sample of individuals taking an oral chemotherapeutic agent.

**Methods, Intervention, and Analysis:** Using qualitative methods, a sample of adults with breast or gastrointestinal cancer (N=11) was interviewed to elicit their experiences and perspectives regarding treatment with the oral chemotherapy capecitabine (Xeloda,<sup>®</sup>). Key questions were What makes it harder (easier) for you to take your Xeloda regularly? and Tell me how you felt when you learned that you would be taking a pill to treat your cancer? Interviews were conducted until data saturation. Data was analyzed to discern common themes, unique experiences and generate future research questions.

**Findings and Interpretation:** Themes coalesced into three main categories individual, disease and health system. Individual themes included concern about efficacy of an oral agent versus intravenous chemotherapy, prioritization of medications, using pillboxes as reminders, and adaptation to the treatment schedule and side effects. Within the disease category, results showed patients with prior intravenous chemotherapy strongly prefer oral therapy for convenience, side effect profile, and improvement in quality of life. Additionally, meals served as cues aiding adherence. The health system themes revealed the need for reassurance that the oral treatment was effective and ongoing communication with the treatment team. These findings suggest that nurses should ensure patients have a specific cue identified to remind them to take their oral chemotherapy and that adaption to the responsibility of administering their own treatment is a process in which nurses may assist. Additional clinical implications will be presented.

**Discussion and Implications:** This study provides insight into the patient experience of being prescribed an oral treatment for their cancer and the lifestyle changes that arise as a result. The themes identified will help nurses understand the multifaceted phenomena of adherence and help design ways in which to facilitate patient adaption.

**Underwriting or Funding Source Name:** The Geri and ME Nursing Fund

#### #4

**UVIGILANT: ILLUMINATING SKIN CANCER PREVENTION AND SCREENING THROUGH A MULTICOMPONENT COMMUNITY-WIDE INTERVENTION.** Adrienne Banavage, MSN, RN, OCN<sup>®</sup>, BC-N, Lindsey Hauser, MS, Melissa Grossman, MPH, Vanessa Sturz, MS, and Jody Reyes, BSN, MSBA, RN, OCN<sup>®</sup>, University of Virginia Health System, Charlottesville, VA

**Objective:** Participants will be able to identify components of a successful community outreach regarding sun safety.

**Topic Significance and Study Purpose, Background, and Rationale:** Skin cancer is the most common form of cancer in the United States. Charlottesville, Virginia, located in the Thomas Jefferson Health District, has the second highest incidence of melanoma in the state. In 2007, nearly a third of TJHD adults reported having a sunburn in the past 12 months. This education project, led by UVA Cancer Center nurses, will increase public awareness about skin cancer prevention, the dangers of over-exposure to sunlight/UV radiation, as well as increase sun-protective knowledge, attitudes, and intentions.

**Methods, Intervention, and Analysis:** Multicomponent community-wide interventions to prevent skin cancer are proven interventions to increase UV-protective behaviors. UVigilant was implemented monthly at Charlottesville's farmers markets and with employees and students at the University

of Virginia for a total of four different sites. An evidence-based curriculum was used by Cancer Center nurses to educate participants about skin cancer, prevention measures, and screening recommendations. Participants received printed educational materials, sun protective gear, and the opportunity to have their photo taken with a UV-exposure camera, which could be shared with their doctor. A pre-post intervention survey measured participants's risk perception, current prevention measures, and whether seeing UV damage motivated the use of sun protection measures.

**Findings and Interpretation:** There were a total of N = 344 participants across the four sites. 74% of these participants were female and 26% were male (N = 250 and 90, respectively). There was a relatively even age distribution with 50% of the participants in 18 to 35 years age category. Analysis of the pre and post intervention surveys indicates showing participants underlying sun damage via personalized UV-exposure photos can produce immediate, statistically significant improvements in intentions to use sun protection measures (Wilcoxon signed rank analysis, all p-values <.0001). For example, 41% of respondents, pre-intervention, always or nearly always use sunscreen while post-intervention results showed 72% intend to always or nearly always use sunscreen. Over two-thirds (70%; N= 234) of the participants report planning to talk to their doctor about their risk for skin cancer, and over half (58%; N = 194) plan to have a skin cancer screening done with their doctor

**Discussion and Implications:** An education component led by nurses combined with seeing personalized UV damage motivated participants intentions to actively engage in sun protection measures.

**Underwriting or Funding Source Name:** ONS Foundation

#### #5

**PSYCHOLOGICAL DISTRESS AMONG GYNECOLOGIC CANCER SURVIVORS: IS THERE A ROLE FOR ILLNESS PERCEPTION AND FEAR OF CANCER RECURRENCE?**

Annamma Sam, PhD, RN, WHNP-BC, University of Texas MD Anderson Cancer Center, Houston, TX

**Objective:** An exploration of the relationship between psychological distress, illness perception, and fear of cancer recurrence among gynecologic cancer survivors.

**Topic Significance and Study Purpose, Background, and Rationale:** Gynecologic cancer survivors account for approximately 9% of survivors and among this group, about 40% are reported to experience psychological distress. Further, fear of cancer recurrence is a problem among gynecologic cancer survivors, and illness perceptions influence psychological distress among cancer patients in general. Although studies have been done on psychological distress among cancer survivors, it is unclear how illness perception and fear of cancer recurrence play a role among gynecological cancer survivors's psychological distress. Purpose of this study was to explore the relationship between psychological distress (PD), illness perception (IP), and fear of cancer recurrence (FCR) among gynecologic cancer survivors.

**Methods, Intervention, and Analysis:** An exploratory, descriptive approach using a web-based survey was used for data collection. IRB approval was obtained from the University of Texas Medical Branch at Galveston, Texas. A survey link was created in Survey Monkey using a demographic questionnaire, the Brief Illness Perceptions Questionnaire, Fear of Recurrence Scale, and the Impact of Events Scale. Sample consisted of survivors of ovarian, uterine/endometrial and cervical cancer, and at least 2 years disease-free since treatment completion. Variables included age, diagnosis, race/ethnicity, number of disease-free years, PD, IP and FCR. Descriptive statistics, Pearson correlation coefficient, t-tests, and a stepwise forward and backward multiple regression were used for data analyses.

**Findings and Interpretation:** Final analysis was done using 352 women who completed all four questionnaires. Average age was 57±10.116 years, non-Hispanic White (88.9%), Hispanic White (3.7%), African American/Black (1.4%), Hispanic (2.3%) and Asian (3.7%), survivors of ovarian cancer (59.7%), uterine/ endometrial cancer (31.3%), and cervical cancer (9.1%). Higher levels of PD, IP and FCR were seen among younger- aged and early survivors, but slightly lower among non-Whites than Whites. Negative correlation was noted between PD, IP and FCR with age and survivorship duration among Whites and non-Whites. IP and survivorship duration were the best predictors for PD among White participants. For non-Whites, IP alone was the best predictor for PD.

**Discussion and Implications:** As increasing numbers of advanced practice nurses participate in cancer care, a better understanding of PD and related variables can assist with the development of interventions to address PD. Future research using a direct data collection is recommended.

**#6**  
**INVESTIGATING THE IMPACT OF AN EDUCATIONAL PROGRAM ON NURSE'S ATTITUDES TOWARDS SEXUAL HEALTH CARE.** Julie Cronin, MSN, RN, OCN®, and Frances Searle, RN, both at Massachusetts General Hospital, Boston, MA

**Objective:** Understand how implementation of a brief educational program can increase nurse's comfort level, knowledge and improve attitudes regarding sexual health care

**Topic Significance and Study Purpose, Background, and Rationale:** Sexual health disturbances are common in female oncology patients, especially those undergoing or having undergone one or more treatment modality. Research shows that about 50% of women suffer from lasting sexual dysfunction following treatment of a gynecologic malignancy. Many providers and even fewer patients bring up sexual health concerns during care. Therefore, understanding attitudes of nurses' providing sexual health information and training of nurses for purposes of initiating conversations about sexuality and evaluating needs is essential.

**Methods, Intervention, and Analysis:** A literature review of sexual health concerns for female oncology patients yielded limited findings. An investigation of the intranet at a large academic medical center also yielded no educational materials for patients or healthcare providers. Through collaboration with experts, a patient education handout tool was developed, now available on institutions intranet. The 17 item Sexual Health Care Attitude Scale for Nurses (SHCS-A) Tool was provided as pre-survey. A demographic survey and five multiple choice questions were given to measure knowledge pre and post intervention. A 30 minute in-service was provided to nurses which included explanation of the educational handout. Time was allotted for questions. Post surveys of the SHCS-A were e-mailed to all participants.

**Findings and Interpretation:** Pre test n = 15. Post test n = 12 Examples from data: 20% of nurse's uncomfortable discussing sexual issues pre-survey; 8% in post survey. 26% of nurse's uncomfortable discussing sexual activities pre-survey; 16% post survey Data of survey results suggests providing education has a positive effect on the attitudes and comfort levels of nurses in addressing sexual health care with oncology patients.

**Discussion and Implications:** This study highlights the importance of understanding nurses comfort levels with addressing sexual health care with patients. Because many oncology patients experience sexual dysfunction, it is essential to address these issues with patients and include this education as part of individual patient care plans. This study elucidates the need for further investigation into the attitudes of nurses and patients in

addressing sexual health. Further research may substantiate the need for resources and programs for patients and clinicians to address their unique sexual health needs.

**#7**  
**CHRONIC COMORBID CONDITIONS AND CHEMOTHERAPY-INDUCED FEBRILE NEUTROPENIA (FN) IN PATIENTS WITH LUNG CANCER IN KAISER PERMANENTE SOUTHERN CALIFORNIA (KPSC).** Chun Chao, PhD, Kaiser Permanente Southern California, Pasadena, John Page, MD, PhD, Amgen Inc., Thousand Oaks, Su-Jau Yang, PhD, Kaiser Permanente Southern California, Pasadena, Roberto Rodriguez, MD, University of California, Los Angeles, Los Angeles, and Victoria Chia, PhD, Amgen Inc., Thousand Oaks, all in California

**Objective:** To evaluate the effect of a number of chronic comorbid conditions on the risk of febrile neutropenia, grade 3/4 neutropenia, and grade 4 neutropenia in patients with lung cancer.

**Topic Significance and Study Purpose, Background, and Rationale:** FN can be a life-threatening side effect of myelosuppressive chemotherapy. Oncology nurses play a central role in assessing FN risk, which depends on chemotherapy regimen, dose intensity, and patient risk factors such as age and performance status. However, the impact of specific chronic comorbidities on risk of neutropenia and FN remains largely unstudied.

**Methods, Intervention, and Analysis:** This study included adult patients diagnosed with lung cancer at KPSC from 2000-2009. We performed multivariable Cox proportional hazards regressions to examine relationships between risks of FN, grade 3/4 neutropenia, and grade 4 neutropenia and chronic comorbidities (diabetes, anemia, hypertension, cardiovascular disease, cerebrovascular disease, thromboembolic events, COPD/emphysema, previous cancer, liver disease, renal failure, autoimmune conditions, thyroid disorder, peptic ulcer disease, dementia, osteoarthritis, connective tissue disease, and HIV infection). Propensity scores were used to account for potential confounding factors. Comorbidities were identified by ICD-9 codes or disease registries. FN (first chemotherapy cycle only) was identified by absolute neutrophil count (ANC), ICD-9 codes, or hospitalization with bacterial/fungal infection. Grade 3 and 4 neutropenia were identified by ANC.

**Findings and Interpretation:** This study included 4,251 patients with lung cancer. Median (range) age was 66 (18-94) years; 67.6% had distant disease; mean (SD) number of comorbidities was 1.7 (1.7). In the first chemotherapy cycle, 4.2%, 10.0%, and 8.1% of patients experienced FN, grade 3 neutropenia, and grade 4 neutropenia, respectively. After adjusting for the propensity score of the respective comorbidity, COPD/emphysema (HR=1.61 [95%CI 1.17-2.20]), diabetes with treatment (HR=1.77 [1.20-2.57]), renal disease (HR=2.28 [1.42-3.56]), and autoimmune diseases (HR=1.92 [1.25-2.84]) were significantly associated with FN risk. Similar results were seen with grade 3/4 and 4 neutropenia. Our results identify novel risk factors and confirm previously identified risk factors (ie, renal disease and diabetes) that are associated with increased FN risk.

**Discussion and Implications:** These results can be used to help determine individual FN risk and guide appropriate FN prophylaxis. These results, along with other research, suggest that neutrophil function (impaired by diabetes, renal disease, and autoimmune diseases), drug clearance (impaired by renal disease), and the skin/mucosal barrier (disturbed by COPD) are important in mediating FN risk. Further research is needed to develop FN risk prediction equations that include comorbidities.

**Underwriting or Funding Source Name:** Amgen Inc.

## #8

**RELIABILITY AND VALIDITY OF A TOOL TO ASSESS ONCOLOGY NURSES'S EXPERIENCES WITH PROGNOSIS-RELATED COMMUNICATION.** Amy Newman, RN, MSN, CPNP, Medical College of Wisconsin, Milwaukee, WI; Paul Helft, MD, Indiana University School of Medicine, Indianapolis, IN; and Marianne Weiss, DNSc, RN, and Margaret Callahan, CRNA, PhD, FNAP, FAAN, both at Marquette University, Milwaukee, WI

**Objective:** Upon review of the poster, participants will be able to identify a valid and reliable instrument to measure nurses' experiences with prognosis-related communication.

**Topic Significance and Study Purpose, Background, and Rationale:** Communication with patients and families regarding a cancer diagnosis generally includes a discussion regarding prognosis. Prognosis-related communication incorporates the revelation of likelihood of cure, how long the patient is expected to live, and the kind of life the patient is expected to have. The way in which this delicate information is presented is critical. Helft, Chamness, Terry, and Urich (2011) describe oncology nurses's experiences with prognosis-related communication. In the article, the authors report the results of a mailed survey, which was administered to members of the Oncology Nursing Society (ONS). While content validity was established, no further psychometric testing was reported. In order to grow the body of knowledge regarding this topic and better elucidate the role of nurses in this process, more qualitative and quantitative research must be performed. Quantitative research requires validated measures to document the phenomenon. The purpose of this project was to analyze the survey instrument, Ethical Dilemmas and Prognosis-Related Communication in Oncology Nursing: A Survey of Oncology Nursing Professionals, in an effort to establish the instrument as a robust measure of nurses's experiences with prognosis-related communication.

**Methods, Intervention, and Analysis:** Ethical Dilemmas and Prognosis-Related Communication in Oncology Nursing: A Survey of Oncology Nursing Professionals is a 34-item instrument, consisting of Likert-type scales. Of the returned surveys, 242 were eligible for inclusion in the current analysis. Exploratory factor analysis via principal components was performed to assess construct validity. Cronbach's alpha, inter-item correlations and item-total statistics were utilized to measure internal consistency reliability of the survey.

**Findings and Interpretation:** A five-factor structure emerged, of which, three factors had acceptable reliability and validity: MD Communication, RN Role, and Decision Making. Contrast-ed group comparisons revealed differences in prognosis-related communication by nurses's years of experience with cancer patients, level of education, and extent of education about prognosis-related communication. The final 3 factor instrument, Prognosis-Related Communication in Oncology Nursing, was found to have acceptable reliability and validity with this sample of oncology nurses.

**Discussion and Implications:** With initial reliability and validity established, the instrument can be utilized in future research including potential intervention work with nurses and their physician colleagues to improve methods for delivering prognosis-related communication.

## #9

**SYMPTOM CLUSTERS OVER A SINGLE CYCLE OF CHEMOTHERAPY: CAN YOU SPARE SOME CHANGE?** Catherine Cherwin, MS, RN, and Kristine Kwekkeboom, PhD, RN, both at University of Wisconsin-Madison, Madison, WI

**Objective:** Participants will be able to describe stability of symptom clusters in hematology patients receiving chemotherapy over a single cycle of chemotherapy

**Topic Significance and Study Purpose, Background, and Rationale:** Symptom research has expanded away from focusing exclusively on individual symptoms to include groupings of co-occurring symptoms called symptom clusters. For symptom clusters to be clinically useful, core symptoms of the symptom cluster should be stable across time. Indeed, research into the stability of symptom clusters has increased in recent years but most of this research focuses on stability between intervals separated by many weeks or even months and there is conflicting evidence as to the stability of symptom clusters over these longer periods of time. New empiric data supports previous anecdotal evidence that symptoms in patients with cancer can vary in time spans as short as a week, though few studies have explored how the labile nature of symptoms over short periods of time affects the stability of symptom clusters. Purpose: To identify symptom clusters and examine their stability in patients with hematologic cancers receiving chemotherapy over a single cycle of chemotherapy.

**Methods, Intervention, and Analysis:** This descriptive study uses symptom data provided by adults with leukemia, lymphoma, or myelodysplastic syndrome, receiving IV chemotherapy in 3- or 4-week cycles, and who have received at least 2 full cycles of chemotherapy. At four time points over a cycle of chemotherapy (Day 1, Day 7, Day 14, and Day 21), participants are asked to complete a modified version of the Memorial Symptom Assessment Scale (MSAS) that assesses 41 common cancer-related symptoms.

**Findings and Interpretation:** Data collection will conclude in December 2014. Currently, we have N=92 participants with an anticipated final sample size of at least N=100. Exploratory factor analysis will be used to identify symptom clusters using symptom severity data provided at Day 1. Confirmatory factor analysis using symptom severity data provided at Day 7, Day 14, and Day 21 will examine the stability of the symptom clusters over the chemotherapy cycle.

**Discussion and Implications:** Core symptoms of a symptom cluster must be stable across a short time frame for knowledge of symptom clusters to be clinically useful (i.e., to drive targeted multi-symptom interventions). If the symptom clusters are not stable in the short-term, then researchers would have to examine how to implement interventions designed to hit an ever moving target.

**Underwriting or Funding Source Name:** American Cancer Society - Doctoral Degree Scholarship in Cancer Nursing (121310-DSCH-11-278-01-SCN) National Institute of Nursing Research - National Research Service Award (1F31NR014062) Eckburg Research Award - University of Wisconsin-Madison School of Nursing

## #10

**EFFECTS OF EDUCATIONAL INTERVENTION FOR NURSES ON WOMEN'S KNOWLEDGE AND WILLINGNESS TO UPTAKE CERVICAL CANCER SCREENING IN SELECTED HEALTH FACILITIES IN IBADAN, NIGERIA.** Chlzoma Ndikom, BSN, MSN, DPhilN, Bola Ofi, BSN, MSN, PhD, and Folashade Omokhodion, MBBS, PhD, FWACP, all at University of Ibadan, Ibadan, Nigeria

**Objective:** To communicate the effects of an educational intervention (EI) for nurses on women's knowledge and willingness to uptake Cervical Cancer Screening services in Ibadan, Nigeria.

**Topic Significance and Study Purpose, Background, and Rationale:** Cervical cancer (CC) is a major cause of cancer mortality among women especially in developing nations. Low

awareness and uptake of Cervical Cancer Screening (CCS) has been implicated. Nurses are in vantage position to provide CC information and services. This study evaluated the effects of an educational intervention (EI) for nurses on women's knowledge and willingness to uptake CCS services.

**Methods, Intervention, and Analysis:** This quasi experimental study was conducted in selected health facilities in Ibadan, Nigeria. These were randomly divided into four different facilities each in intervention and control groups. A total of 133 consented nurses [60 in the Intervention-Group (IG) and 73 in the Control-Group (CG)] participated. Also, 904 women attending antenatal clinics in the facilities were selected using systematic random sampling at baseline and same number at Post-Intervention (PI). Baseline data were collected from nurses and women using different validated structured questionnaires. Interventions were conducted for the nurses in the IG and they were followed up for six months. Post-test questionnaires were administered to the nurses and women in IG and CG. Data were analysed using Chi square, Student's t-test and logistic regression at  $p=0.05$ .

**Findings and Interpretation:** Nurses's mean age was  $41.6i, \pm 9.1$  years while those of the women were  $27.9i, \pm 5.8$  years at baseline and  $28.0i, \pm 5.3$  years at PI. The nurses's knowledge scores for the IG ( $11.8 \pm 3.3$ ) and CG ( $11.7 \pm 3.3$ ) were comparable at baseline but was significantly higher among nurses in the IG ( $14.6i, \pm 3.1$ ) than those in CG ( $12.7 \pm 3.5$ ) at PI. The women's mean knowledge score was comparable at baseline IG ( $2.9 \pm 1.3$ ) and CG ( $2.9 \pm 1.9$ ) but was significantly higher among women in the IG ( $3.4 \pm 3.2$ ) than CG ( $2.0 \pm 3.1$ ) at PI. Willingness to utilise CCS services significantly increased from 75.0% (IG) and 70.0% (CG) at baseline to 90.0% (IG) and 85.3% (CG) at PI. Uptake of CCS increased from 1.4% at baseline to 3.6% in the IG and 2.1% to 2.3% in the CG. The major factor that influenced uptake among women was non-availability of CCS services (OR=0.482, CI=0.353-0.659).

**Discussion and Implications:** Cervical cancer screening uptake was low but improved slightly with the intervention. Educational intervention is a useful tool for improving knowledge and uptake of Cervical Cancer Screening.

## #11

**CANCER PATIENT TRACKING AND JOURNALING: OPPORTUNITY FOR TARGETED EDUCATION AND PRACTICE INNOVATION.** Mary Anne Purtzer, PhD, RN, and Carol Hermansen-Kobulnicky, PhD, RPh, both at University of Wyoming, Laramie, WY

**Objective:** The study objective was to investigate oncology clinician perspectives about, experience with and envisioned feasibility of, incorporating cancer patient-generated self-monitoring data into a patient-centered practice.

**Topic Significance and Study Purpose, Background, and Rationale:** Self-monitoring includes the intentional recording of thoughts, symptoms and daily activities. Research supports that nurses are strategically positioned to facilitate self-monitoring as part of self-management. Although about one-third of cancer patients self-monitor, what nurses and other oncology professionals perceive and experience in practice, and what collaborative innovations self-monitoring offer are not known.

**Methods, Intervention, and Analysis:** Semi-structured interviews were conducted with oncology professionals from four health systems and five cancer centers, located in three neighboring states. Participants included infusion and radiation nurses, nurse practitioners, a nurse administrator, physician assistants, and medical and radiation oncologists. Key interview questions were: What does self-monitoring mean to you? What is your experience with self-monitoring? What is the exchange like between you and your patients regarding self-monitoring?

What could you envision the potential to be for self-monitoring? Clarification questions contributed to validity. All interviews were digitally audio-recorded and professionally transcribed verbatim. Analysis by both authors was based on transcripts, observation notes, and post-interview debriefings. Between group constant comparative analysis was conducted.

**Findings and Interpretation:** Participants ( $n=38$ ) were not familiar with the term self-monitoring but reported using tracking and journaling. Participants found the term and the opportunity to discuss this patient behavior validating, noting self-monitoring can improve clinical decision making. Results also show facilitating patient self-monitoring practices is not intentional nor role specific. Incorporating patient-generated self-monitoring data is seldom systematic, presenting challenges for clinicians. When self-monitoring education is provided, it is typically limited to what to self-monitor (e.g., symptom occurrence). How and when to self-monitor is rarely addressed apart from the use of standardized materials.

**Discussion and Implications:** Results reveal clinicians's responses to self-monitoring necessitate a new approach to optimize clinical decision making. Findings demonstrate limited integration of clinicians's priorities with patients's self-monitoring preferences, and ill-defined clinicians's educational roles within the process of care. Findings support the need for oncology teams to re-envision patient education efforts to ensure self-monitoring is clinically useful while addressing patient preferred approaches. Future research should examine how to better incorporate patient self-monitoring into team-based care processes to improve patient-centered care.

**Underwriting or Funding Source Name:** Funding was provided by a University of Wyoming Faculty Grant-in-Aid.

## #12

**FEASIBILITY OF A TEXT MESSAGING INTERVENTION TO PROMOTE SYMPTOM MANAGEMENT AND MEDICATION ADHERENCE FOR PATIENTS PRESCRIBED ORAL ANTI-CANCER AGENTS.** Sandra Spoelstra, PhD, RN, Charles Given, PhD, Alla Sikorskii, PhD, Constantinos Cour-saris, PhD, Monica Schueller, BA, and Barbara Given, PhD, RN, FAAN, all at Michigan State University, East Lansing, MI

**Objective:** To describe feasibility, proof-of-concept, and preliminary efficacy of a text message intervention to promote symptom management and adherence in cancer patients prescribed oral anti-cancer agents.

**Topic Significance and Study Purpose, Background, and Rationale:** When taking oral anti-cancer agents (OAs), patients need to manage symptoms so that they do not become so severe that it leads to reducing or stopping the medication, rendering the cancer treatment ineffective. Cancer rates are increasing, as is the number of cancer patients treated with OAs. Therapeutic effect of the cancer treatment may depend on medication adherence. The purpose of this paper is to report on proof-of-concept and preliminary efficacy of a mHealth intervention using text messages to improve symptom management and medication adherence among cancer patients prescribed OAs.

**Methods, Intervention, and Analysis:** Framework: Principles of Self-Efficacy Theory underpinned the intervention for this study. Methods: Eighty patients were enrolled in a randomized controlled trial at two community cancer centers and a large specialty pharmacy. The intervention group received text messages timed to their medication regimen for up to 28 days for adherence and weekly for symptom management. Data were collected on adherence and symptoms weekly for 10 weeks in both groups and on satisfaction with the text messages after the completion of the intervention.

**Findings and Interpretation:** Mean age was 58.5 years (standard deviation=10.7), 60% ( $n=48$ ) female, 84% ( $n=67$ ) Caucasian,

11% (n=9) African American, and 8% (n=6) Hispanic. Of eligible, 57.2% (83 of 145) consented. A total of 1,359 text messages were sent, with 98% (n=39) completing the intervention, 86% (n=30) reading all the messages, 95% (n=38) were highly satisfied, and 94% (n=34) found messages helpful. The text message group had fewer symptoms (3.86, standard error [SE] 0.05 to 5.26, SE 0.46), a moderate effect size (ES 0.50). Relative Dose Intensity was greater in text message group, with a moderate to large ES (0.62). Physical function was better in the text message group (47.6, SE 1.2 to 44.9, SE 1.1; a moderate ES 0.40).

**Discussion and Implications:** Proof-of-concept of text messages to promote symptom management and medication adherence for patients prescribed OAs was demonstrated. Text messages were feasible, with most patients reading the text messages and having high satisfaction. Text messages show promise for cancer patients who must adhere to OAs and manage symptoms. Additional research is needed prior to use in practice.

**Underwriting or Funding Source Name:** This research was supported by a grant entitled: Text Messaging to Improve Symptom Management and Adherence to Oral Chemotherapy Agents from the McKesson Foundation Inc., Mobilizing for Health Grant Program, in San Francisco, California

### #13

**A BIOBEHAVIORAL APPROACH TO STUDYING THE MEANING OF SYMPTOMS IN PATIENTS WITH ADVANCED CANCER.** Stephanie Gilbertson-White, PhD, ARNP, University of Iowa, Iowa City, IA; and Heidi Donovan, PhD, RN, and Paula Sherwood, PhD, RN, FAAN, both at University of Pittsburgh, Pittsburgh, PA

**Objective:** Participants will be able to identify the most severe and most noticed cancer symptoms and the associated cognitive appraisals and cytokines in patients with advanced cancer.

**Topic Significance and Study Purpose, Background, and Rationale:** The long-term goal of this research is to enhance understanding of the interaction between cognitive appraisals of symptoms and inflammatory processes in patients with advanced cancer receiving palliative care (PC). The conceptual framework for this study is based on Lazarus and Folkman's theory of Stress, Appraisal, and Coping, Leventhal's Common Sense Model of Illness Representations, and the Pittsburgh Mind Body Center Biobehavioral Pathway of Stress. The purpose of this study is to explore the relationships among cognitive appraisals of common cancer symptoms and inflammatory response. The aims of this pilot study are to: 1) evaluate the feasibility and acceptability of using a biobehavioral approach to study the multiple symptoms in a sample of patients with advanced stage cancer over time, and 2) describe how patients' symptom cognitive appraisals and biological responses (e.g., cytokines) change over time.

**Methods, Intervention, and Analysis:** Patients (N=20) with advanced cancer newly referred to PC were recruited. Feasibility was determined by evaluating recruitment and retention rates. Data was collected baseline (within 1-week of first PC referral), 6-weeks, and 12-weeks from PC referral. Severity scores of 22 common cancer symptoms and threat appraisal scores were obtained for the three most noticed symptoms. A multiplex bead-based immunoassay testing platform simultaneously measured 12 inflammatory cytokines.

**Findings and Interpretation:** The sample had a mean age of 60.8(±5.4) years and was predominantly white (93%) males (57%). Forty patients were approached, 20 enrolled, 15 completed baseline measures. There was 50% attrition rate due to becoming too ill to participate or death. At baseline: mean scores for the most severe symptoms were pain 6.9(±3.1), fatigue 5.3(±3.3), and bowel disturbances 4.7(±3.1) on a 0-10 scale, mean threat

appraisal scores were 3.5(±1.0); individual responses ranged from 1 to 5 (with 5 indicating greater threat). Inflammatory cytokine levels for IL-8, IL-1ra, and IP-10 were measured, all other cytokines were out of range. Data collection rates for 6-weeks and 12-weeks were not adequate to evaluate temporal changes.

**Discussion and Implications:** Advanced cancer patients newly referred to PC are willing to participate in longitudinal biobehavioral research. Late referral to PC continues to be a challenge in this population. Symptoms were moderate in severity. The wide range of threat appraisals indicates a subgroup of patients find their symptoms highly threatening. Future research should evaluate the interaction among cancer symptoms, cognitive appraisal, and inflammatory cytokines over-time.

**Underwriting or Funding Source Name:** Sigma Theta Tau International / Hospice and Palliative Nurses Foundation

### #14

**EXPLORING COGNITIVE REPRESENTATION OF TREATMENT-RELATED SYMPTOMS IN OLDER ADULTS WITH CANCER.** Victoria Loerzel, PhD, RN, OCN®, University of Central Florida, and Patricia Geddie, MS, CNS, AOCNS®, Orlando Health, both in Orlando, FL

**Objective:** Participants will gain understanding about older adults symptom beliefs

**Topic Significance and Study Purpose, Background, and Rationale:** Older people (age 65 and older) with cancer are part of an age cohort that is less likely to report treatment-related symptoms (TRS) and may forgo active self-management of symptoms. Left untreated, TRS can have a serious negative impact on overall health and increase risk for physical and functional limitations and unplanned hospital admissions. At this time, it is not known why some older people with cancer choose not to manage their TRS. However, understanding older adult's cognitive representation (beliefs about symptom identity, cause, time line, consequences and cure/control) about TRS is critical to helping them take action to improve a symptom. The aim of this study is to understand cognitive representations of TRS in older people with cancer in order to develop relevant self-management interventions for this population based on their beliefs.

**Methods, Intervention, and Analysis:** Older adults were recruited from a community cancer center during a chemotherapy treatment appointment. Demographic data was collected. The Symptom Representation Questionnaire (SRQ) was used to assess presence and cognitive representation of specific symptoms. Data were analyzed using descriptive statistics and independent t-tests to examine group differences.

**Findings and Interpretation:** 100 older adults (mean age 72 years) participated. The majority of the sample was Caucasian, married, spoke English and had at least a high school education. Participants reported an average of 2.73 comorbid illnesses (range: 0-7) and 7.15 symptoms (range 2-16). The most noticed symptom was fatigue (n=94) followed by bowel disturbances (n=57), and lack of appetite (n=55). Overall, older adults believe symptoms are short-term, caused by their cancer/treatment, and unsure about symptom consequences and the ability of symptoms to be cured or controlled. Older adults who report more comorbid conditions and a higher number of symptoms believe TRS have higher consequences. Those who report a higher number of TRS are more distressed by them.

**Discussion and Implications:** Findings suggest that older adults are unclear about TRS-related consequences and their ability to self-manage symptoms. This may contribute to older adult's lack of active symptom self-management. Patient education strategies need to address these representations and new interventions may be needed to reinforce symptom consequences and empower older adults to self-management symptoms.

**Underwriting or Funding Source Name:** University of Central Florida, Office of Research and Commercialization



## #15

**BIOEQUIVALENCE OF OCTREOTIDE LONG-ACTING REPEATABLE RECONSTITUTED IN A NEW VEHICLE VERSUS OCTREOTIDE LONG-ACTING REPEATABLE IN THE CURRENT VEHICLE: OPEN-LABEL, RANDOMIZED, PHASE I STUDY.** Guoxiang Shen, PhD, and John Roberts, PhD, both at Novartis Pharmaceuticals Corporation, East Hanover, NJ; Katja Roessner and Antje Brueck-Scheffler, both at Novartis AG, Basel, Switzerland; Anadya Tripathi Prakash, MSc, Novartis Healthcare Private Limited, Hyderabad, India; and Severine Sarp, MD, PhD, MS, Novartis AG, Basel, Switzerland

**Objective:** To educate nurses on octreotide long-acting repeatable reconstituted in a new vehicle (OCT-LAR-NV) and the new injection preparation kit, which improves the convenience and safety of the administration of OCT-LAR.

**Topic Significance and Study Purpose, Background, and Rationale:** Octreotide, a commonly prescribed somatostatin analogue for the treatment of acromegaly and diarrhea/flushing associated with carcinoid syndrome, is available as a long-acting formulation administered intragluteally every 4 weeks. With OCT-LAR-NV, octreotide microparticles are reconstituted in an NV. In contrast with OCT-LAR in the current vehicle (OCT-LAR-CV), the NV allows for shaking during the suspension process and vial inversion for withdrawal into the syringe before injection. The reduced injection volume (2 mL vs 2.5 mL) delivered through a safety-engineered needle of smaller diameter (0.9 mm vs 1.1 mm), provided in the new injection preparation kit with a vial adapter, allows nurses to draw the suspension into the syringe more easily and in a single movement. The safety needle and vial adapter provide for greater patient safety and convenience during administration. This phase I study was designed to confirm the bioequivalence of OCT-LAR-NV 30 mg and OCT-LAR-CV 30 mg.

**Methods, Intervention, and Analysis:** This was a single-dose, parallel, single-center study involving 2 treatment arms in healthy male volunteers. Over 14 weeks, subjects underwent pharmacokinetic (PK) and safety assessments, with a final visit at week 18.

**Findings and Interpretation:** 106 subjects were randomized to OCT-LAR-NV (n=54) or OCT-LAR-CV (n=52). OCT-LAR-NV and OCT-LAR-CV displayed similar PK release profiles, with an initial peak 1 hour postdose and a second peak approximately 4 weeks postdose. The 90% CI for geometric mean ratio of primary PK parameters (C<sub>max</sub>, AUC<sub>0-d98</sub>, AUC<sub>0-inf</sub>) after single-dose administration were within predefined boundaries (0.80, 1.25), confirming bioequivalence of the 2 formulations. Reported adverse events (AEs) were consistent with the established safety profile of OCT-LAR; for the 2 treatment groups, the most commonly reported AEs suspected to be related to study drug were diarrhea (41%), headache (25%), and abdominal pain (19%). Importantly, no differences in the frequency of injection site pain/injection site discomfort were observed (OCT-LAR-NV, 12 subjects [22%]; OCT-LAR-CV, 12 subjects [23%]).

**Discussion and Implications:** OCT-LAR-NV 30 mg is bioequivalent to OCT-LAR-CV 30 mg, with no new safety signals observed. OCT-LAR-NV and the new injection preparation kit (vial adapter; needle of smaller diameter) enhance the convenience and safety of the reconstitution and administration of OCT-LAR.

**Underwriting or Funding Source Name:** Funded by Novartis Pharmaceuticals Corporation. Previously presented at ESMO; September 26-30, 2014; Madrid, Spain.

## #16

**WII FIT PHYSICAL ACTIVITY INTERVENTION AMONG HEAD AND NECK CANCER PATIENTS: A PILOT STUDY.** Hsiao-Lan Wang, PhD, RN, CMSRN, HFS, University of South Florida, Tampa, FL, Richard Reich, PhD, University of South Florida Sarasota-Manatee, Sarasota, FL, Marcus Kilpatrick,

PhD, University of South Florida, Tampa, FL, Heather Jim, PhD, Moffitt Cancer Center, Tampa, FL, and Constance Visovsky, PhD, RN, ACNP-BC, University of South Florida, Tampa, FL

**Objective:** To describe a pilot study testing a 10-week physical activity intervention that incorporated the Wii Fit and visits along with calls from a personal trainer/nurse among head and neck patients.

**Topic Significance and Study Purpose, Background, and Rationale:** Nurse-led intervention to promote physical activity among cancer patients is a priority topic on the Oncology Nursing Society Research Agenda. Head and neck cancer (HNC) patients frequently experience fatigue, reduce their activity, and remain sedentary. Clinical guidelines suggest physical activity for cancer patients who suffer from fatigue. The Wii Fit Plus (Wii Fit) meets HNC patients' preferences for physical activities that can be done in a comfortable environment and on a flexible schedule. The aims of this study were (1) to determine its feasibility and acceptability, and (2) to examine changes in fatigue and physical function over 10 weeks among HNC patients who received the intervention.

**Methods, Intervention, and Analysis:** The study was a single-group design. A 10-week physical activity intervention that incorporated the Wii Fit and 9 visits along with 3 calls from a personal trainer/nurse was pilot-tested with 9 HNC patients with moderately severe fatigue. Data were collected via an Internet survey at the baseline (T1), at 6 weeks (T2), and at 10 weeks (T3). Fatigue and physical function were measured by the Brief Fatigue Inventory (range, 0-10) and Lawton Activities of Daily Living Scale (range, 8-37). Descriptive statistics were used to present the preliminary data.

**Findings and Interpretation:** Ten patients (20%) agreed to be screened for their eligibility among the 51 patients approached. Nine of the 10 were eligible (90%) and enrolled into the study (100%). Four participants (44%) withdrew from the study, 3 for personal reasons and 1 due to cancer recurrence. The remaining 5 included 4 males (80%) and 1 female (20%), with ages ranging from 58 to 72 years. Three (60%) had laryngeal cancer and 2 (40%) had oral cancer. Positive perceptions of the intervention and the personal trainer were reported. Improvement was found in fatigue (T1: 5.19±2.79; T2: 4.20±2.59; T3: 4.80±3.56) and physical function (T1: 27.00±5.06; T2: 27.80±3.42; T3: 28.40±3.78).

**Discussion and Implications:** Our head and neck cancer participants showed some improvement in fatigue and physical function. A larger randomized trial to test the efficacy of this innovative intervention is necessary. If efficacy is supported, providers can offer this intervention to reduce fatigue and to improve physical function among HNC patients.

## #17

**TAILORING EDUCATION TO PERCEIVED RISK FOR FALLS IN HOSPITALIZED ONCOLOGY PATIENTS: A RANDOMIZED CONTROLLED TRIAL.** Megan Kuhlenschmidt, RN,BSN,OCN®, Christina Reeber, RN,BSN,OCN®, and Christine Wallace, MSN, RN, PCCN-CMC, all at University Hospitals Seidman Cancer Center; and Yanwen Chen, PhD, MS, and Jill Barnholtz-Sloan, PhD, both at Case Western Reserve University; and Susan Mazanec, PhD, RN, AOCN®, University Hospitals Seidman Cancer Center and Case Western Reserve University, all in Cleveland, OH

**Objective:** The learner will identify components of a tailored educational approach to increase patients awareness of falls risk.

**Topic Significance and Study Purpose, Background, and Rationale:** Oncology patients are at a high risk for sustaining an injury from a fall, potentially resulting in increased morbidity, mortality, financial costs and lower quality of life. Although nurses

play a key role in screening and educating patients about their risk for falling, there are few evidence-based interventions tailored to the patient's perception of falls risk. The purpose of this study was to determine the effect of a tailored nurse-delivered intervention as compared to a control group on perceived risk for falls, confidence to prevent falls, and willingness to ask for help.

**Methods, Intervention, and Analysis:** A two-group, prospective, randomized control design was used to test the intervention in a convenience sample of 91 patients on an adult bone marrow transplant unit. Prior to randomization, patients rated their perception, confidence, and willingness on an eight-point scale and completed a knowledge assessment. The intervention group received education based on the risk category assigned by the nurse and the patient's perception of risk. This consisted of an investigator-developed video, printed education sheets targeted to patient's misconceptions about risk, and discussion with the research nurse. The control group received the standard education. Both groups completed surveys to measure perceived risk, confidence, and willingness at 24 and 72 hours post-education. The analysis consisted of a paired McNemars test to examine differences between the groups.

**Findings and Interpretation:** Approximately one-third of patients perceived themselves to be at low risk for falls, despite a nurse rating of high risk. There was a statistically significant difference in the proportion of patients who perceived themselves to be at high risk for falls pre- and post-intervention,  $p = .01$ . Confidence and willingness to call for help did not change. There were no significant changes in the control group over time. The results suggest that tailoring patient education to the patient's perceived risk for falls can help patients become more aware of falls risk.

**Discussion and Implications:** Oncology nursing falls assessment must incorporate a structured evaluation of patient perception of their risk factors. This would allow for an education approach that is tailored to risk perception. Future research is needed to refine the perceived risk evaluation tool and educational materials.

## #18

**PATIENT USE OF SUPPORTIVE COMPLEMENTARY MODALITIES DURING TREATMENT FOR ADVANCED LUNG CANCER.** Rebecca Lehto, PhD, RN, and Gwen Wyatt, PhD, RN, FAAN, both at Michigan State University, East Lansing, MI

**Objective:** The learner will be able to describe the type and frequency of CAM use among patients undergoing treatment for advanced lung cancer and implications for clinical practice.

**Topic Significance and Study Purpose, Background, and Rationale:** Increasing attention has been paid to patients' undocumented use of complementary and alternative medicine (CAM) therapies during conventional treatment for cancer. One source reported up to 80% of breast cancer patients use complementary modalities to self-manage symptoms, promote health, and enhance quality of life. Less is known about CAM use among patients with advanced lung cancer, especially those that could impact medical treatment. The study purpose was to examine the prevalence and types of CAM used among patients undergoing radiation and/or chemotherapy for advanced lung cancer.

**Methods, Intervention, and Analysis:** The study was guided by Wilson and Cleary's (1995) model with Ferran's (2005) adaptation of health related quality of life (HRQOL) for symptom management. 57 patients with lung cancer [mean age: 64.37 + 9.3 (range 44-87 years); sex: 39(68%) females, 18(32%) males; education: 13.6 + 3.1 (range 8-20 years); disease stage: III, 16(28%); IV, 41(72%)] receiving radiation and/or chemotherapy were assessed for CAM use with the standardized 24-item Complementary Therapy Utilization Questionnaire. The questionnaire includes an open-ended response area for CAM modalities not captured in the forced choice section. Data were analyzed using SPSS for descriptive results.

**Findings and Interpretation:** Overall mean use of CAM was 1.49 + 1.59 (range 0-6 types). 36 patients (63%) reported use of at least one CAM modality with 29 (52%) reporting from 1-3 different types. The most frequently used CAM was prayer ( $n=23$ , 40%). In addition, 19 participants (33%) reported use of vitamins, 11 (19%) identified exercise, 10 (18%) reported use of music therapy, and 7 (12%) used herbal remedies. CAM modalities that were not selected by any participants included hypnosis, therapeutic spas, therapeutic touch, and medications not prescribed in the United States.

**Discussion and Implications:** It is essential that oncology nurses assess for CAM use among patients undergoing medical treatment for advanced lung cancer. Some CAM modalities used by lung cancer patients such as vitamins and herbs could potentially interfere with medically prescribed regimens. As bio-psycho-social-spiritual beings, patients with advanced lung cancer may gain strength from use of prayer and other self-management strategies to cope with the stressors imposed by cancer and its treatment.

**Underwriting or Funding Source Name:** MSU CTSI Grant-GA013811

## #19

**A DESCRIPTIVE, LONGITUDINAL STUDY OF QUALITY OF LIFE AND PERCEIVED HEALTH NEEDS IN PATIENTS WITH HEAD AND NECK CANCER.** S. Kate Sandstrom, RN, MSN, APRN-BC, AOCN®, University Hospitals Seidman Cancer Center; Susan Mazanec, RN, PhD, AOCN®, University Hospitals Seidman Cancer Center and Case Western Reserve University; Nancy Tamburro, LISW-S, University Hospitals Seidman Cancer Center; and Jill Barnholtz-Sloan, PhD, Haley Gittleman, MS, and Barbara Daly, RN, PhD, FAAN, all at Case Western Reserve University, all in Cleveland, OH

**Objective:** To identify demographic and treatment characteristics, health-related quality of life and perceived health needs of patients receiving radiation therapy for head and neck cancers.

**Topic Significance and Study Purpose, Background, and Rationale:** Survivors of head and neck cancers have unique and often debilitating consequences of cancer treatment, significantly impacting quality of life. Despite the complexity of these patients and the often time-consuming care they require, there is little empirical evidence supporting the role of the APN in managing these patients in survivorship. The primary objective of this study was to describe the symptom experience and health needs of patients receiving radiation for head and neck cancer to support the establishment of an APN clinic for head and neck cancer survivors.

**Methods, Intervention, and Analysis:** A convenience sample of 60 patients with newly diagnosed head and neck cancers, stage II-IVB, were prospectively enrolled. Interviews were conducted at 6 time points: at start of radiation treatment, end of treatment, 1, 3, 6, and 12 months post-treatment. Patients completed standard socio-demographic questions, the Profile of Mood Survey (POMS)-brief, the University of Washington Quality of Life questionnaire, symptom distress scale, and a question of perceived health needs at all 6 time points. Longitudinal, random-intercept models were used to examine relationships between variables.

**Findings and Interpretation:** Quality of life (QOL) at the end of treatment was significantly lower than baseline ( $p < 0.001$ ). Low scores persisted through one month with gradual recovery by 12 months. Of the POMS subscales, fatigue and anxiety had the highest mean scores, yet anxiety improved with time, fatigue did not. Positive HPV status was statistically associated with higher anxiety. Socioeconomic status negatively impacted QOL. Although the most frequent concerns were related to saliva, taste, swallowing and pain, there was variability in symptoms

across all time points. Themes of perceived health needs were: management of oral symptoms, returning to a normal life, and regaining energy.

**Discussion and Implications:** Patients with head and neck cancer have numerous concerns and symptoms in the first year of post-treatment survivorship and are especially vulnerable at the end of treatment and one month post-treatment. The radiation oncology APN plays a pivotal role in providing comprehensive assessments, symptom management, health education, and supportive counseling. Future research is needed to evaluate cost effectiveness and utilization in an APN-run survivorship clinic as a model of care for this challenging population.

## #20

**SOCIAL DETERMINANTS OF HEALTH AND SYMPTOM BURDEN IN PALLIATIVE POPULATIONS: PRACTITIONERS' PERSPECTIVES.** Anna Santos Salas, RN, PhD, University of Alberta, Edmonton, Canada

**Objective:** To present palliative care practitioners's perspectives concerning the relationship between social determinants of health and symptom burden in palliative populations and outline practice strategies practitioners employ to lessen symptom burden.

**Topic Significance and Study Purpose, Background, and Rationale:** In cancer care, disparities are a rising concern that affects individuals from low socio-economic status, rural and remote areas, and ethnic minorities. This is a pressing issue given that cancer represents a significant health burden throughout the world. Although global advances have been made in cancer symptom relief, studies report disparities associated with the social determinants of health. This issue is highly relevant to oncology nursing given that nurses play a key role in the provision of symptom relief. Understanding practitioners's perspectives concerning how social inequalities may affect symptom relief is critical to the development of effective interventions. Research purpose: to explore palliative care practitioners's perspectives concerning the relationship between social determinants of health and symptom burden. A related aim was to initially outline practice strategies that practitioners employ with palliative care individuals with complex symptom burden.

**Methods, Intervention, and Analysis:** Research methodology includes a combination of both interpretive inquiry and critical theory. Interpretive inquiry assists in the understanding of human experience and critical theory directs attention to the socio-economic, historical, and political elements that affect people's experiences. This study involves a palliative care team in an acute care setting. A convenience sample of five participants is anticipated. Research activities include in-depth interviews with palliative care practitioners and follow up conversations. Participants are invited to share their practice knowledge and understanding, and to talk about strategies they employ to enhance symptom relief. Data analysis: Van Manen's thematic analysis and Freire's critical reflection are being followed in the analysis of transcripts.

**Findings and Interpretation:** Data analysis is currently underway. Research data shows commonalities related to practitioners's views about the impact of social determinants of health on symptom severity. A number of clinically relevant strategies are identified by practitioners to approach patients with complex symptom experiences. Participants have shared poignant stories of working with highly vulnerable individuals and their grounded understanding of how patients's life struggles affect their symptom experiences.

**Discussion and Implications:** This research study sheds light concerning the views of palliative care practitioners with regards to how living conditions relate to patients's symptom burden. Initial insight into successful practice strategies with vulnerable populations is also provided.

**Underwriting or Funding Source Name:** University of Alberta Endowment Fund for the Future

## #21

**PSYCHOLOGICAL PERSPECTIVES ON CERVICAL HEALTH BEHAVIORS AMONG ASIAN AMERICAN WOMEN.** Jongwon Lee, PhD, RN, University of New Mexico, Albuquerque, NM; and Mauricio Carvallo, PhD, and Stephanie Lee, both at the University of Oklahoma, Norman, OK

**Objective:** Learners will have a better understanding of psychological factors (e.g., attitudes) underlying Korean and Vietnamese American women's cervical cancer screening behaviors.

**Topic Significance and Study Purpose, Background, and Rationale:** Cervical cancer is one of the common health problems among Vietnamese American women (VAW) and Korean American women (KAW). The incidence rates for invasive cervical cancer for VAW and KAW (11.9-18.9/100,000) are among the highest in the nation. These rates are much higher than those of non-Hispanic White (7.1-7.8/100,000) and African American (9.9-10.4/100,000) women. Despite these high incidence rates, both groups consistently report much lower rates of cervical cancer screening (68%-81%) than other major Asian subgroups (75%-89%) and non-Hispanic Whites (88%). Research shows that attitudes play a significant role in cervical cancer screening behaviors in these populations. However, this research has not integrated the dimensions of affect and cognition of attitudes to explore barriers to cervical cancer screening in VAW and KAW. To address this gap, the current study explored factors influencing cervical health behaviors of VAW and KAW within the affective and cognitive aspects of attitudes.

**Methods, Intervention, and Analysis:** A convenience sample of 30 participants was recruited from Vietnamese and Korean beauty salons in Albuquerque, NM. Semi-structured interviews were conducted in participants's native language by two bilingual research coordinators, along with the primary investigator. A 40-60 minute interview was tape-recorded and transcribed verbatim in Vietnamese or Korean by transcriptionists who were fluent in those languages. Translators then interpreted the transcriptions into English for analysis. A semantic content analysis was used to identify major codes, categories, themes, and patterns across the transcripts.

**Findings and Interpretation:** The study revealed both negative and positive affective and cognitive components of attitudes that influenced VAW and KAW's cervical health behaviors. Especially, the study revealed that beliefs such as health is a priority, perceived empowerment of health status, and feelings of comfort and reduced anxiety are essential factors motivating them to get screened.

**Discussion and Implications:** Quantitative research needs to be further conducted to help determine whether cervical health behaviors of these populations are based more on affect than cognition, or vice versa. Ultimately, such information will provide health care providers with in-depth insight into whether cervical cancer prevention programs should emphasize changes in affective or cognitive aspects of attitudes.

## #22

**SENSE OF COHERENCE, SYMPTOM DISTRESS, COPING, AND QUALITY OF LIFE AMONG PATIENTS WITH FIRST DIAGNOSIS OF HAEMATOLOGIC MALIGNANCIES.** Min-Chen Lee, RN, MS, and Lih-Mih Chen, RN, PhD, both at Kaohsiung Medical University Chung-Ho Memorial Hospital, Kaohsiung, Taiwan

**Objective:** The purposes of this study were to evaluate the characters of symptom distress, coping styles, sense of coherence

and quality of life from adults having first diagnosis hematologic malignancies

**Topic Significance and Study Purpose, Background, and Rationale:** Even the incidence and mortality of hematologic malignancies are not the highest in all cancers, patients may experience extremely serious symptoms distress and decreasingly quality of life. It correlated among sense of coherence, coping styles and quality of life from several studies. The purposes of this study were to evaluate 1) the characters of symptom distress, coping styles, sense of coherence and quality of life, and 2) the relationships among symptom distress, sense of coherence, coping styles and quality of life from adults having hematologic malignancies in Taiwan

**Methods, Intervention, and Analysis:** A total of 70 patients with leukemia and lymphoma were recruited. Four self-reported questionnaires were completed by the participants (i.e., RSC, SOC-13, Brief-COPE, EORTC QLQ-C30). Data was analyzed by descriptive statistics, t-test, ANOVA, and Pearson's correlation coefficient

**Findings and Interpretation:** Results highlighted that: 1) the most common symptoms for patients were fatigue, dry mouth, sleep disturbances, worries and lack of appetite; 2) the mean score of SOC for the participants was less than the healthy population; 3) significantly negative correlation between sense of coherence and symptom distress ( $r = -.352, p = .003$ ), positive correlation between sense of coherence and approaching coping style ( $r = .327, p = .006$ ) and positive correlation between sense of coherence and quality of life ( $r = .274, p = .022$ ) and negative correlation between symptom distress and quality of life ( $r = -.452, p < .01$ ).

**Discussion and Implications:** The findings from this study is the first report to contribute to the literature for the sense of coherence, symptom distress and quality of life among patients with first diagnosis leukemia and lymphoma in Taiwan.

## #23

**COGNITIVE FUNCTION: DIFFERENCES AND SIMILARITIES IN PATIENTS SUBMITTED TO ONCOLOGIC AND NON ONCOLOGIC SURGERIES.** Silvana Vieira, PhD, Maressa Paz, RN, and Dalete Mota, PhD, all at Federal University of Goias, Goiania, Brazil

**Objective:** To compare the cognitive function of patients undergoing oncological and non oncological surgery.

**Topic Significance and Study Purpose, Background, and Rationale:** Hospitalization for surgery can lead to a sensory overload due to hostile characteristics of the hospital environment (noise, light, immobilization), sleep deprivation, pain, which can lead to cognitive impairment. Cognitive impairment is one of the factors that contribute to perioperative complications. Therefore, it is necessary to assess the cognitive function before surgery to know the baseline of cognition, minimize risks in the operating room and postoperative periods, and identify the main dysfunctions resulting from the surgical aggression.

**Methods, Intervention, and Analysis:** This was a longitudinal study, conducted between April and October 2014, in two large hospitals in the city of Goiania, Goias (Brazil). Patients were included if underwent conventional, elective surgery, ASA I or II. They were divided in oncologic (OG) and non-oncologic (NG) surgery, and responded to the Mini Mental State Examination (MMSE) between 36 hours and 2 hours before surgery and between 12h and 36h after surgery. Comparisons between groups were performed using the Mann Whitney test. Comparison within groups was performed using Wilcoxon test.

**Findings and Interpretation:** The groups were homogeneous for sex, skin color, educational level, family income, smoking, pain, and performance status. No statistical differences were observed between groups in the MMSE preoperative assessment (OG=26 x NG=25), and postoperative assessment (OG=26

x NG=26). Likewise, there was no intra-group difference. This result suggests that there was no impact of surgery on cognitive function and cognitive processes in patients undergoing cancer surgery is similar to patients undergoing other surgeries.

**Discussion and Implications:** Different tests for cognitive examination should be performed to validate the findings of this study. Yet, cognitive efficiency must be observed postoperatively, in order to point the need to adjust strategies for patient discharge education.

**Underwriting or Funding Source Name:** National Council for Scientific and Technological Development (CNPq) and Coordination of Improvement of Higher Education Personnel (CAPES)

## #24

**DELIVERING CARE THAT SUPPORTS CANCER SURVIVORS WORKING FOR NORMALCY POST-TREATMENT.**

Rachel Walker (Klimmek), PhD, RN, OCN®, University of Massachusetts-Amherst, Amherst, MA; and Sarah Szanton, PhD, ANP, FAAN, and Jennifer Wenzel, PhD, RN, CCM, both at Johns Hopkins School of Nursing, Baltimore, MD

**Objective:** Participants will be able to discuss at least three potential applications of theory to the design of nursing care that supports survivors working for normalcy post-treatment.

**Topic Significance and Study Purpose, Background, and Rationale:** Although they might continue to receive medical care, survivors and their support persons often value a sense of normalcy in their lives and actively work to achieve this in the wake of cancer treatment. Therefore the purpose of this study was to identify theoretical knowledge that could guide the design of survivorship care that supports efforts to achieve a sense of normalcy following primary cancer treatment.

**Methods, Intervention, and Analysis:** An intensive, multiple case study design using grounded theory techniques was used to explore the work of cancer recovery. Eleven older (age 60+) patients and their support persons (n=22) were closely followed from early-stage diagnosis through 3+ months following primary treatment for early-stage breast or prostate cancer. Questionnaires, biweekly phone calls, daily written journals, and in-depth interviews were used. Through constant comparative analysis, we evaluated the fit and potential utility of existing theoretical knowledge drawn from nursing and other disciplines to explain case findings. Theories with potential to guide practices that supported participants's efforts to achieve normalcy were retained.

**Findings and Interpretation:** "Working for normalcy" was a core process of recovery from cancer treatment that involved multiple overlapping strategies resulting in movement along a continuum of perceived normalcy from feeling less "normal" to "back to normal" (or a "new normal"). Among other experiences, interactions with the medical system and others where survivors were made to feel like a patient or less capable had the potential to make them feel less normal. This backwards movement was associated with reported feelings of illness, lack of control, and disability. Several existing theories fit case findings and might be used to guide development of practices that support working for normalcy post-treatment. Examples included Activity Theory and the Theory of Inner Strength.

**Discussion and Implications:** Findings supported the importance of respecting survivors's need for normalcy. We provide specific suggestions for applications of identified theories to practice. While numerous studies have evaluated a wide variety of nursing efforts to assist survivors post-treatment, relatively little attention has been paid to development of best practices to assist survivors in their desire to achieve normalcy. This constitutes an important gap in oncology nursing knowledge with opportunities for targeted interventions.

**Underwriting or Funding Source Name:** National Institute of Nursing Research, John A. Hartford Foundation, National Office for Clinical and Translational Science

## #25

**EFFECTS OF MUSIC AND NATURE SOUNDS ON PAIN AND ANXIETY IN HOSPICE CANCER PATIENTS.** Ling-Chun Chiang, PhD, RN, Hungkuang University, Taichung, Taiwan; Marion Good, PhD, RN, FAAN, Barbara, J. Daly, PhD, RN, FAAN, and Christopher, J. Burant, PhD, Case Western Reserve University, Cleveland, OH; Deforia Lane, PhD, MT-BC, University Hospitals Case Medical Center, Cleveland, OH

**Objective:** Participants will be able to understand the effects and principles of using music and nature sounds on pain and anxiety in hospice cancer patients

**Topic Significance and Study Purpose, Background, and Rationale:** Cancer has been the leading cause of death in Taiwan for almost three decades. Cancer patients who receive hospice care frequently suffer from pain and anxiety in the dying process. Analgesics are needed but their side effects can increase suffering and decrease quality of life. The purpose of this study is to test the effectiveness of sedative music, nature sounds, and combined-music and nature sounds for mitigating pain and anxiety in hospice cancer patients in Taiwan.

**Methods, Intervention, and Analysis:** A four-group randomized controlled trial was used with 117 cancer patients in hospice units of two large hospitals. Participants in three experimental groups received preselected sedative music, nature sounds, or the combination once a day for three days, using MP3 players and earphones or speakers. Participants in the control group lay or sat quietly for 20 minutes, but received a CD of their choice when the data collection process was completed. Pain and anxiety were measured before and after each treatment with 100-mm Visual Analogue Scales. Data were analyzed by multiple regression and repeated measures ANCOVA, using contrasts.

**Findings and Interpretation:** The results showed that while controlling for Day 1 pretests, the three intervention groups had significantly less pain and anxiety than the control group,  $p < .001$ . Music and combination had medium to large effect sizes on pain and anxiety. Nature sounds had small to large effect sizes for pain and small to medium for anxiety. Participants selected Taiwanese folk music and forest sounds most frequently and used the interventions independently for an average of four hours.

**Discussion and Implications:** The interventions provided hospice cancer patients's physical comfort, decrease emotional distress, and add to their pleasure, as the end-of-life approaches. Sedative effects plus having preferred music and nature sounds may increase the relaxing and distracting effects and contribute to decreased pain and anxiety. Nurses can select cultural and age appropriate music and nature sounds and offer choices to hospice patients. Portable, light weight and easy to use equipment will facilitate their use for pain and anxiety along with medication. Recommendations are to test the interventions for four or more days and to extend the study to families and home settings.

**Underwriting or Funding Source Name:** Oncology Nursing Society Foundation/Purdue Pharma Trish Greene Pain Assessment and Management Research Grant

## #26

**ENHANCING HEALING IN THE BREAST CANCER PATIENT WHILE IN THE SURVEILLANCE PHASE OF RECOVERY USING NARRATIVE INQUIRY.** Patricia Amado, Rn,MS(ed),CNS, University of Miami, Coral Gables, FL

**Objective:** The learner will be provided a method of narrative inquiry which will enhance gathering patient lived experience of the actual illness with regards to individual physical, emotional, and spiritual needs.

**Topic Significance and Study Purpose, Background, and Rationale:** Abstract Background: Breast cancer is one of the most prevalent types of cancer today among women of all ages. Many women are being diagnosed each year and learning to cope with a chronic illness. Accompanying the victory of survivorship, however, are challenges in the surveillance phase of recovery. Surveillance is the time after surgery, chemotherapy and /or radiation is complete and the patient is continues to be receiving regular scheduled check-ups by the oncologist. Each individual's care plan for surveillance may be different depending upon the stage and the treatment received. Breast cancer survivors face many fears during this period of time, including fear of recurrence, loss of health, or fear of dying from the disease to name a few. Purpose: The purpose of this study was to illuminate the lived experience of women after they have undergone their treatment regime for breast cancer and have entered the surveillance phase of recovery. This study gave a voice to the women's experience through their life story and the resiliency they demonstrated while transitioning to a new life within the context of illness. Philosophical Underpinnings: This study was guided by Max van Manen's hermeneutic phenomenological perspective. Methods: A purposive sample of 10 women ages 25-75 years old from survivorship clinics in south Florida was selected to explore the question: What is the lived experience of women with breast cancer in the surveillance phase of recovery? Data collection was gathered with one-hour semi-structured interviews and was audio- taped, transcribed for verification, and member checked by the researcher. Data analysis included interpretation and description of textual writing guided by van Manen's six activities of research methodology. Results and Conclusions: The themes that arose from the study were an increased conscious awareness of time, memory, faith, and meaning which all connected to the essence of building resiliency. Research that applies a resilience framework will have common characteristics that can be replicated across populations and contexts and will contribute more broadly to our understanding of the processes by which people overcome adversity (Rutter, 1987). The perception of time was a major theme throughout all the narratives with memory as an expression of the time lived during this phase of recovery, along with faith, and placing meaning to the illness. When the association of spirituality and meaningful living was examined there existed a vast amount of research linking spirituality to meaning. This aligns this study well with current research on the importance of the perception of time, memory, faith, and spirituality in which healing and moving forward with a chronic illness is paramount. Resiliency was the foundational essence of the themes in this study which provided a theoretical framework.

**Methods, Intervention, and Analysis:** A qualitative methodology of Hermeneutical Phenomenology stated above. It is a narrative approach to learning the importance of illness narrative in the continuum of a chronic illness.

**Findings and Interpretation:** The findings from the study were premised upon thematic clusters which concluded the importance of narrative sharing within a semi- structured environment for the patients. This method also gave insight into understanding how the ambiguous theory of resiliency can be possibly taught in an outpatient setting to improve a survivor's quality of life.

**Discussion and Implications:** Implications for Nursing Practice This study highlighted the need for understanding the role of resiliency and facing illness. Nurses have an important role on the medical advice and can have a direct impact on how the patient understands the disease process. Increased knowledge in the clinical arena may allow for a customized plan of care for each woman who is facing a life with breast cancer. The

improvements for treating a survivor increases awareness of the individual's needs and provides important information for the practitioner's knowledge about the health challenges that a survivor faces and reduce unwarranted fears of the disease. When the patient is under surveillance, the in-between time may not warrant an oncologist appointment for every health issue. A better informed nursing community such as an oncology nurse at an outpatient clinic or a family nurse practitioner in the community setting may be better equipped to address latent effects that may otherwise not be recognized. The meaning attached to their illness manifested in their spirituality and enabled them to make sense of a life threatening disease. Therefore, in nursing practice, incorporating spirituality in the history and improved, accurate physical assessments of this population is an essential part of their ongoing plan of care. This study enhances the knowledge base of nurses and advanced practice nurses to provide thorough, holistic care for those women who are sometimes unable to navigate the complex healthcare system.

## #27

**HOW WOMEN DECIDE: A BREAST CANCER STUDY.** Gayle Wilkins, MSN,RN,OCN®, Dana McGuirk, BSN,RN,CBPN-C, Dianna Miller, RHIT,CTR, Kimberly Rodriguez, RHIT, CTR, and Patricia Newcomb, PhD, RN, CPNP, all at Texas Health Harris Methodist Hospital, Fort Worth, TX

**Objective:** This is a retrospective evaluation of factors affecting women electing to have a bilateral mastectomy as their treatment for breast cancer when there is only known cancer in one breast.

**Topic Significance and Study Purpose, Background, and Rationale:** The percentage of women electing to have a contralateral prophylactic mastectomy (CPM) has greatly increased in numbers across the country as well as at our own hospital. With recent awareness of prophylactic mastectomy and CPM being selected by celebrities, there is a concern women are electing this option unnecessarily. A decision was made to survey women that had CPM in our facility, to try to determine the motivating factors for their decision. A research team including hospital Cancer Registry staff, Oncology Nurse Navigators and a Nurse Scientist evaluated published studies and developed a tool for this study. Primary endpoint of the study was identification of key factors influencing the decision making process when considering CPM. The tool had 40 questions with multiple choice options for objective questions and a 5 item Likert-scale of options for subjective questions addressing quality of life and fear of cancer recurrence.

**Methods, Intervention, and Analysis:** Using cancer registry data, 156 women having CPM between January 2011 and June 2013 were identified as meeting the criteria to receive the survey. Following IRB approval a packet was sent to the participants that included a cover letter which explained that returning the survey implied consent, the survey, and a small gift. 90 surveys (57%) were returned within 3 months. Preliminary findings include a strong correlation (92%, n=71) between CPM and reconstruction. Most women (>90%) reported either the breast surgeon or plastic surgeon as one of their primary sources for information about CPM. Cancer survivors (28%) were a secondary source. No woman reported being influenced by celebrity cases.

**Findings and Interpretation:** The majority of the responders listed physicians for their primary source of information with cancer survivors as a secondary influence. The high percentage of women having reconstruction as part of the initial CPM procedure may indicate a source of influence. Fear of recurrence may be identified as a significant influencing factor.

**Discussion and Implications:** The results of our study will help providers know how to address the issues of anxiety and fear of recurrence when providing education about breast cancer treatment options. Reconstruction availability may also prove to be a major influencer for CPM.

## #28

**WHO NEEDS AN ONCOLOGY EMERGENCY DEPARTMENT?** Miranda Gill, MSN, RN, The Ohio State University Comprehensive Cancer Center–Arthur G. James Cancer Hospital and Richard J. Solove Research Institute, Cynthia Moore, MBOE, BBA, RN, CSSBB, The Ohio State University Wexner Medical Center, and Emily Graham, RHIA, The Ohio State University Comprehensive Cancer Center–Arthur G. James Cancer Hospital and Richard J. Solove Research Institute, all in Columbus, OH

**Objective:** To define the need for a cancer emergency department, at a large tertiary academic medical center where hematology and oncology patients will receive dedicated, specialized care in an emergency setting.

**Topic Significance and Study Purpose, Background, and Rationale:** 13.7 million Americans are living with active cancer, or a history of the disease. The American Cancer Society projects an additional 1,665,540 cases will be diagnosed this year. While survival rates are increasing related to breakthroughs in treatment, conditions resulting from metabolic, neurologic, cardiovascular, hematologic changes caused by malignancy or its treatment require immediate intervention. The Ohio State University Comprehensive Cancer Center- Arthur G. James Cancer Hospital and Richard J. Solove Research Institute strives to create a cancer-free world. During fiscal year 2014 our patient's required 11,262 hospital admissions, and 336,695 outpatient visits. Throughout that period, an average of 700 cancer patients per month sought emergency medical attention at the university's regular emergency department. While the patients were well managed, one might wonder if their treatment or outcomes would differ if the care they received was delivered by specialized, multidisciplinary clinicians with hematology and oncology training. Would it be significant enough to warrant an oncology emergency department?

**Methods, Intervention, and Analysis:** This retrospective descriptive study utilized a quantitative analysis which included reviews of electronic hospital records on patients with an oncology diagnosis that presented to the emergency department seeking emergency care. The review was relevant in assessing and projecting volume as well as trending peak arrival day of week and time, arrival mode, acuity, and presenting diagnosis. Top diagnoses included leukemia, lung, breast and gastrointestinal cancers. Volume was highest on Mondays, and between the hours of 1200 and 1600.

**Findings and Interpretation:** It is apparent from the measures found that oncology patients require frequent emergency department visits. It is yet to be determined if treating patients in an oncology specific emergency department will affect outcomes such as admissions, length of stay, infection rates and satisfaction. The James Cancer Hospital has decided to launch the first fully integrated oncology emergency department in the country. Because there is a lack of literature on this topic we look forward to collaborating with emergency medicine and oncology professionals to create exceptional outcomes for our patients.

**Discussion and Implications:** We foresee great opportunity in creating a subspecialty within the practice of Oncology Nursing, and know it will benefit patients, families, and clinicians.

## #29

**SLEEP QUALITY REPORTS FROM PATIENTS DIAGNOSED WITH GASTROINTESTINAL CANCER: CHEMOTHERAPY VIA HOME INFUSION PUMP.** Rebecca Thome, BSN, RN, Paula Dahlman, LPN, Megan Jilling, BSN, RN, OCN®, and Paul Freeman, BSN, RN, OCN®, all at Froedtert Hospital Cancer Center; Jane Leske, PhD, ACNS-BC, University of Wisconsin–Milwaukee; and Katherine Klink, PhD, RN, CNL, Froedtert Hospital, all in Milwaukee, WI

**Objective:** The reader will be able to list three patient-reported fears associated with wearing the home infusion pump and will be able to list three patient-reported interventions.

**Topic Significance and Study Purpose, Background, and Rationale:** The prevalence of sleep disorders in the cancer patient population is twice that reported by the general population, with disturbed sleep being one of the most common symptoms reported. Based on anecdotal reports, it is assumed that patients wearing a home infusion pump are experiencing disturbed sleep. A paucity of studies exists on the effect of the wearing of a chemotherapy-filled home infusion pump to changes in a gastrointestinal (GI) oncology patient's established sleep patterns.

**Methods, Intervention, and Analysis:** A descriptive design was used, with a convenience sample of GI patients (n=35) receiving 5FU via pump recruited. Participants were treated at a major Midwestern 460 bed, level 1 adult trauma, ANCC Magnet® designated academic medical center's outpatient cancer treatment center. The Richards-Campbell Sleep Questionnaire (RCSQ) was issued to participants. Two additional questions were read and the patient's verbal responses were written verbatim. Sleep quality reports were completed by 51% males and 49% females. Scores from the RCSQ ranged from 17-44 out of a possible 50. Descriptive statistics were used to answer the research question. Reliability analysis of the RCSQ was computed for this sample. Interview data was analyzed by content with two qualitative experts. Categories were created through the process of inductive analysis and open coding. Issues of rigor and trustworthiness were addressed.

**Findings and Interpretation:** Of thirty five participants, 74% reported self-initiated interventions, 60% reported fears of chemotherapy spills, 48.5% reported pump noise distractions, and 25% reported fears of port needle displacement.

**Discussion and Implications:** Based on the patient reports of fears and interventions, it is recommended that a sleep assessment be done for all pump patients in clinical and infusion areas and that nursing education be standardized, specific to this population. Recognition of patient concerns may lead to the testing of specific nursing education, of interventions and of the development of nursing sleep assessment tools directly related to pump use. This information may have broader implications for other uses of home infusion pumps.

**#30**  
**MANAGEMENT OF GASTROINTESTINAL AND GENITOURINARY MORBIDITY ONE WEEK POST STEREOTACTIC RADIOTHERAPY (SBRT) FOR PROSTATE CANCER.** Thomas Yung, BSN, MSN, CRNP, Sean Collins, MD, PhD, Simeng Suy, PhD, Robyn Cyr, BA, John Lynch, MD, and Anatoly Dritschilo, MD, all at Medstar Georgetown University Hospital, Washington, DC

**Objective:** To determine the most appropriate time to manage gastrointestinal and genitourinary morbidity for prostate cancer patients after stereotactic radiotherapy

**Topic Significance and Study Purpose, Background, and Rationale:** Stereotactic body radiotherapy (SBRT) has become a standard treatment for localized prostate cancer with morbidity profiles similar to conventional radiation therapy. In previous studies, post-radiation morbidity was assessed as early as one month after SBRT, but our experience suggest that symptoms peak at one week following treatment. Determining when gastrointestinal (GI) and Genitourinary (GU) morbidity peak is critical to providing good nursing care and improving quality of life (QOL) for the patient.

**Methods, Intervention, and Analysis:** 103 patients with clinically localized prostate cancer were treated with SBRT (35 Gy or 36.25 Gy in five fractions). Quality of Life was assessed using the EPIC Short Form questionnaire (EPIC-26) before, one week, one

month and three months after treatment. Responses to the questionnaire were grouped by physiologic domains and assigned numerical scores with lower scores correlating with increased symptoms. The multi-item scale scores were transformed linearly to a 0-100 scale according to scoring instructions for the EPIC-26. At one week, the nurse practitioner (NP) called the patient to assess and manage symptoms. The one and three month follow up involved a visit to be evaluated by the NP and physician.

**Findings and Interpretation:** 103 patients received SBRT with a follow up of three months. EPIC urinary summary score and bother declined at one week and one month before returning to near baseline three month post-SBRT. EPIC bowel summary score showed a greater decline at one week that improved gradually at one month and returned to near baseline at three months. EPIC scores for bowel bother initially declined at one week and improved gradually at one month and returned to near baseline at three months.

**Discussion and Implications:** Our findings show that urinary and bowel acute dysfunction and bother peak as early as one week after SBRT treatment requiring intervention with alpha-antagonists, steroids and anti-diarrheas. Nurses providing education to the patient to anticipate peak symptoms after one week post radiation may help them with concerns and feelings of bother from SBRT treatment. Telephone triage at one week after treatment, are necessary and provide timely management to the patient at their peak morbidity.

**Underwriting or Funding Source Name:** The Department of Radiation Medicine at Medstar Georgetown University Hospital receives a grant from Accuray to support a research coordinator.

**#31**  
**NURSE-MANAGED INSOMNIA TREATMENT IN LUNG CANCER SURVIVORS: PILOT STUDY TO IMPROVE QUALITY OF LIFE.** Carleara Ferreira da Rosa Silva, RN, MS, Michelle Klimpt, BSN, RN, Johanna Demey Zambrano, BS, Suzanne Dickerson, DNS, RN, Carla Jungquist, PhD, RN, and Grace Dean, RN, PhD, all at the University at Buffalo, Buffalo, NY

**Objective:** Explore feasibility, adherence and preliminary efficacy of Brief Behavioral Therapy-Insomnia1 (BBTI) delivered by baccalaureate prepared registered nurses via group education and telephone therapy for lung cancer survivors with self-reported insomnia.

**Topic Significance and Study Purpose, Background, and Rationale:** Sleep disturbances occur in more than 50% of lung cancer survivors. Improving sleep in this population has the potential to improve daytime sleepiness, mood and quality of life. Cognitive behavioral therapy (CBT-I) is the standard treatment for insomnia; however the length of treatment and the insufficient number of psychologists trained to deliver CBT-I make this unrealistic. Oncology nurses are uniquely positioned to deliver a modified version of CBT-I, i.e., Brief Behavioral Therapy, with group education and brief telephone therapy.

**Methods, Intervention, and Analysis:** A prospective randomized controlled design was used. Eligibility included > 6-weeks post-operative for stage I/II non-small cell lung cancer with self-identified insomnia. Pre-screened for sleep apnea and, if positive, were referred for definitive diagnosis and became ineligible for the study. Eligible participants's insomnia was rated by the Insomnia Severity Index >7, 14 day sleep diaries, and actigraphy. Quality of life, fatigue, anxiety and depression were assessed at baseline. Participants were randomized into two groups: BBTI (experimental) or healthy eating (attention control) group intervention, followed by two individual therapy telephone calls. Surveys, sleep diaries and actigraphy were repeated post-intervention.

**Findings and Interpretation:** To date, 15 patients, at least 6-weeks post-operative were recruited; 13 completed baseline

assessments; 2 were referred for apnea treatment, 3 have completed treatment. Thus far to data collection adherence and retention has been 100%. Preliminary results of efficacy revealed improvements in all self-report sleep measures in the experimental group and no improvement in attention control. Interestingly, neither group had an improvement in daytime sleepiness scores.

**Discussion and Implications:** This pilot study demonstrated preliminary feasibility and adherence to BBTI with group education and brief telephone therapy delivered by baccalaureate prepared registered nurses. Further research into the dissemination and translation into practice is warranted.

**Underwriting or Funding Source Name:** National Institute for Nursing Research

### #32

#### **MITOCHONDRIAL BIOENERGETICS AND CANCER-RELATED FATIGUE IN PATIENTS WITH PROSTATE CANCER UNDERGOING LOCALIZED RADIATION THERAPY.**

Chao-Pin Hsiao, PhD, Barbara Daly, RN PhD, and Charles Hoppel, MD PhD, all at Case Western Reserve University, Cleveland, OH

**Objective:** Identify mitochondrial bioenergetics mechanism of cancer-related fatigue

**Topic Significance and Study Purpose, Background, and Rationale:** Purposes: To determine the associations between mitochondrial bioenergetics and fatigue in non-metastatic prostate cancer patients receiving localized radiation therapy (XRT). This project is designed to identify a molecular-genetic mechanism for impaired ATP production as a consequence of XRT that leads to debilitating radiation-induced fatigue, and to provide convincing evidence for a link to changes in mitochondrial bioenergetics as a cause of cancer-related fatigue, controlling for relevant covariates.

**Methods, Intervention, and Analysis:** Methods: This is a prospective, hypothesis testing project with a longitudinal research design. Fatigue will be measured using the validated questionnaires—the revised Piper Fatigue Scale (r-PFS) and Patient Reported Outcomes Measurement Information System for Fatigue (PROMIS-F). Biological measures include mitochondria-related gene expression and mitochondrial bioenergetics profile (e.g. oxidative phosphorylation rate, electron respiratory chain complexes activity, and ATP amount). Peripheral blood samples and questionnaires will be collected from each patient at 3 time-points (baseline, midpoint, and endpoint).

**Findings and Interpretation:** Anticipated Results: An increased fatigue score will be observed at midpoint of XRT and will remain elevated. Differentiated mitochondria-related genes ( $p < 0.05$ ,  $> 2.0$  fold change) and decreased mitochondrial bioenergetics profile will be detected in lymphocytes of prostate cancer patients receiving XRT at midpoint and endpoint of XRT. Furthermore, increased fatigue scores will be associated with differentiated genes and decreased mitochondrial bioenergetics in fatigued prostate cancer patients undergoing XRT.

**Discussion and Implications:** Conclusion/Implications: The results have the potential to identify targets for pharmacological and, in particular, nutraceutical interventions and initiate a new direction for design of nursing interventions for cancer-related fatigue.

**Underwriting or Funding Source Name:** ONS Foundation

### #33

#### **INCORPORATING INTERVENTION FIDELITY IN A CARE-GIVER DELIVERED REFLEXOLOGY STUDY FOR WOMEN WITH ADVANCED BREAST CANCER.**

Dawn Frambes, RN, BSN, MSA, Gwen Wyatt, PhD, RN, FAAN, Rebecca Lehto, PhD, RN, OCN®, Alla Sikorskii, PhD, and Irena Tesnjak, PhDc, all at Michigan State University, East Lansing, MI

**Objective:** Participants will be able to identify the importance of including key elements of intervention fidelity when lay providers are trained to deliver reflexology to breast cancer patients in the home.

**Topic Significance and Study Purpose, Background, and Rationale:** Women undergoing breast cancer treatment frequently use complementary and alternative medicine (CAM) for symptom management. Little has been published on the delivery of these therapies by lay providers such as friend/family caregivers. Inclusion of the elements of fidelity (dose, provider training, intervention delivery, intervention receipt, and enactment of intervention skills) is essential to ensure accuracy and consistency in the protocol.

**Methods, Intervention, and Analysis:** A focused review of literature referencing the use of reflexology delivered by a lay provider was conducted using the CINAHL, PubMed, and Cochrane Library databases. A search of combinations of the key words reflexology, reflex therapy, foot massage, feet and massage, zone therapy, and intervention, cancer, neoplasm, oncology, palliative, terminal, hospice, and symptoms was performed. Inclusion criteria were RCTs involving patients with cancer who received reflexology delivered by a lay provider. Identified articles were reviewed for utilization of the elements of intervention fidelity. Findings of the literature review regarding intervention fidelity are compared with an exemplar study of reflexology delivered to advanced breast cancer patients by friend/family caregivers.

**Findings and Interpretation:** Only four of 11 identified studies meeting the inclusion criteria reported the use of a lay provider for the delivery of reflexology, and included complete descriptions of incorporation of elements of fidelity. Preliminary data from the exemplar study reflect average to good adherence among participants, demonstrating the feasibility of including fidelity in a study utilizing lay providers of a reflexology intervention.

**Discussion and Implications:** Research supporting the use of reflexology delivered by a lay provider for symptom management has been reported but in many cases, lacks inclusion of the elements of intervention fidelity. While there are challenges associated with the inclusion of fidelity elements in intervention protocols, the exemplar study demonstrates how this can be accomplished. Establishing not only efficacy evidence but also strong protocol fidelity for CAM therapies such as reflexology with the support of lay providers will give clinicians confidence to recommend their use.

**Underwriting or Funding Source Name:** This research is supported by funding from the National Institutes of Health, National Cancer Institute 1R01CA157459-01.

### #34

#### **THE TRAJECTORY AND RELATED FACTORS OF ORAL MUCOSITIS AMONG LEUKEMIA PATIENTS UNDERGOING CHEMOTHERAPY.**

Hsiu-yun Huang, RN, MS, Lih-Mih Chen, RN, PhD, and Ching-I Yang, RN, MS, Kaohsiung Medical University Chung-Ho Memorial Hospital, Kaohsiung, Taiwan

**Objective:** Leukemia patients received specific chemotherapy regimens have higher incidence of oral mucositis. Lack of database of oral mucositis for leukemia patients in Taiwan was noted.

**Topic Significance and Study Purpose, Background, and Rationale:** Oral mucositis may result in lesions which cause pain, impaired chewing and swallowing, and subsequently have an impact on the nutritional status, quality of life and may develop life-threatening sepsis. The purposes of this study are: 1) to investigate the trajectory of oral mucositis of leukemia patients undergoing chemotherapy; 2) to find the relationships between



patient's characteristics/medical records and oral mucositis; and 3) to identify significantly related factors of oral mucositis of leukemia patients undergoing chemotherapy.

**Methods, Intervention, and Analysis:** Retrospectively longitudinal study designs are tried to use existing demographic/medical information and oral mucositis scores that have been recorded and to repeatedly observe of the oral mucositis during chemotherapy. 95 leukemia patients received chemotherapy were selected by reviewing charts at a medical center. Patients's documents were retrospectively collected including a demographic information, a medical records, and an Oral Assessment Guide (OAG) records from the first day to 20th day of chemotherapy. Mixed model had been used to estimate the trajectory of oral mucositis, the associations among oral mucositis and demographic information/ medical records, and the significant related factors of oral mucositis under chemotherapy.

**Findings and Interpretation:** The results indicated 1) the trajectory of oral mucositis for leukemia patients can be significantly changes over time ( $P=.0100$ ) with the peak on 14.6th day after chemotherapy; 2) oral mucositis may be associated with specific medicine(i.e. antidepressant and narcotic analgesics ), alcohol usage, smoking, body mass index, creatinine level ,absolute neutrophil count undergoing chemotherapy, and pre-chemotherapy hemoglobin level; 3) the significant related factors of oral mucositis during chemotherapy can be smoking, creatinine level, absolute neutrophil count undergoing chemotherapy, and pre-chemotherapy hemoglobin level.

**Discussion and Implications:** The findings from this study would contribute to the knowledge of the changes of oral mucositis during chemotherapy and provide the guidelines for setting the criteria for detecting patients at high risk for having oral mucositis in Taiwan.

### #35

**USING TECHNOLOGY TO ENHANCE THE TRANSITION FROM ACTIVE CANCER THERAPY TO HOME-BASED PALLIATIVE CARE AND HOSPICE.** Suzanne Walker, CRNP, MSN, AOCN®, BC, Elizabeth Prechtel Dunphy, CRNP, MSN, AOCN®, BC, Meghan O'sRegan Coleman, DNP, CRNP-BC, AOCNP®, and Christina Bach, MBE, MSW, LCSW, OSW-C, all at University of Pennsylvania Health System, Philadelphia, PA

**Objective:** To explore a telehealth intervention during the transition from active cancer therapy to home hospice by linking the oncology provider with the home palliative care provider and patient/caregiver.

**Topic Significance and Study Purpose, Background, and Rationale:** Numerous barriers to hospice care have been identified. Recently, the concept of abandonment at the end of life has emerged as a concern of both patients and providers. Specifically, concerns surrounding the lack of continuity when transitioning to hospice, as well as the lack of closure at the time of death have been identified as key thematic issues from both patient and provider perspective (Back et al, 2009). Attachment theory (Bowlby, 1977) can help explain why the ending of that relationship through the transition to hospice care can be traumatic for patients and leave them with feelings of isolation, abandonment and insecure attachment. Maintaining secure attachment in the patient/clinician relationship can decrease distress experienced by patients and their caregivers as well as improve outcomes (Hunter, et. al., 2006, Hooper, et.al. 2012). The purpose of this pilot project is to explore the effects of a telehealth intervention during the transition from active cancer therapy to home hospice, utilizing a unique approach to link the oncology provider with the palliative care/hospice provider and patient/caregiver unit.

**Methods, Intervention, and Analysis:** This quality improvement pilot project seeks to target 10-20 patients who have been diagnosed with a thoracic or gastrointestinal malignancy and who are eligible to receive home palliative care/ hospice services. The initial accrual period will take place over a 3-6 month period. Utilizing IPAD FaceTime technology, the oncology APRN will complete regular tele-encounters with the home palliative care/hospice APRN and patient/caregiver unit. Recognizing the importance of a multidisciplinary approach, the oncology social worker will be incorporated into these encounters as indicated. Patient/caregiver satisfaction with this intervention will be explored via a Likert scored tool, and metric data will also be collected. Feasibility and barriers to implementation will also be examined.

**Findings and Interpretation:** Findings will be reported in the final published abstract.

**Discussion and Implications:** This pilot project has the potential to impact the transition from active cancer treatment to hospice care, and highlights the role of the APRN in a collaborative multidisciplinary process. Discussion will focus on parameters being explored, including patient/caregiver satisfaction, metrics such as hospitalizations and length of stay on palliative care/hospice services, and any identifiable barriers to implementation.

### #36

**NON-PHARMACOLOGICAL CANCER PAIN INTERVENTIONS IN POPULATIONS WITH SOCIAL DIPARITIES: A SYSTEMATIC REVIEW AND META-ANALYSIS.** Anna Santos Salas, RN, PhD, University of Alberta, Edmonton, Canada; Jorge Fuentes, PT, PhD, Universidad Catolica del Maule, Talca, Chile; and Susan Armijo-Olivo, PT, PhD, Sharon Watanabe, MD, FRCPC, Greta Cummings, RN, PhD, and Thane Chambers, MLSc, all at University of Alberta, Edmonton, Canada

**Objective:** To report findings from a systematic review and meta-analysis of the effect of non-pharmacological cancer pain interventions in cancer populations identified on the basis of income, gender, and ethnic disparities.

**Topic Significance and Study Purpose, Background, and Rationale:** Cancer pain is one of the most disturbing symptoms that affects people's health and quality of life. Although global advances have been made in cancer pain relief, studies report disparities in cancer pain associated with poverty, ethnicity, and gender. To date, no systematic review of studies examining the effect of cancer pain interventions in populations affected by these disparities has been identified. This knowledge is relevant to nursing given that nurses work with many populations affected by social disparities. Research purpose: To report findings from a systematic review and meta-analysis of the effect of non-pharmacological cancer pain interventions in cancer populations identified on the basis of income, gender, and ethnic disparities.

**Methods, Intervention, and Analysis:** Methods: Randomized Controlled Trials, Controlled Trials, and Before and After studies were targeted. Databases included Medline, Cochrane Central Register of Controlled Trials, Embase, CINAHL, and Proquest Dissertations and Theses. No date limitations were applied. Two reviewers independently screened titles and abstracts and the full text of retrieved articles. Data extraction was carried out by one reviewer and verified by two reviewers using a standardized form. Quality assessment of selected studies was completed by four independent reviewers following standardized tools. Data analysis was conducted based on type of intervention and population selected. Studies investigating similar interventions and those providing clear quantitative data were grouped, evaluated for heterogeneity and pooled.

**Findings and Interpretation:** Search strategy returned 5219 potential records. Twenty-six reports were retrieved for detailed evaluation of which three studies met inclusion-exclusion criteria. Selected studies included three RCTs and targeted a combination of ethnic minorities and underserved populations, and/or women. Interventions included education, coaching, and on-line support groups. Research studies found no significant differences between intervention and control groups in cancer pain intensity reduction levels after the intervention. A high risk of bias was found in all three studies.

**Discussion and Implications:** Results show the need to continue investigate the effectiveness of cancer pain interventions in reducing cancer pain disparities in populations affected by social disparities. The need to develop comprehensive pain interventions and explore practice-based strategies is stated.

**Underwriting or Funding Source Name:** University of Alberta Establishment Grant

### #37

**PROGRESSION OF WEIGHT LOSS ASSOCIATED WITH THE DIFFERENT TYPES OF GASTROINTESTINAL (GI) CANCERS AND RELATIONSHIP TO FALLING RISKS.** Chau Nguyen, BSN student, Saunjoo Yoon, PhD, RN, and Cynthia Garvan, PhD, all at University of Florida, Gainesville, FL

**Objective:** To provide essential information related to the progression of weight loss associated with the different types of GI cancers and fall risks among hospitalized patients to promote earlier interventions.

**Topic Significance and Study Purpose, Background, and Rationale:** Unintentional weight loss and anorexia are common symptoms in GI cancer. However, the severity of weight loss in relation to fall risks among patients with GI cancers has not been widely investigated. Examining the relationship between weight loss and fall risks can determine whether safety measures need to be implemented earlier for patients at high risk for fall due to unintentional weight loss. The purposes of this study are to: 1) describe the type of cancer based on patient demographics, 2) describe the amount of weight loss amongst the different types of GI cancers, and 3) examine the relationship between weight loss and the Morse Fall Scale.

**Methods, Intervention, and Analysis:** Descriptive design was utilized for analysis of a de-identified dataset, which was obtained from the University Health Integrated Data Repository (IDR) honest broker and approved by the IRB (#201400215). Eligible patients included in the secondary analysis are the persons who were: 1) 18 years or older at time of visit, and 2) Diagnosed with GI tract cancer including esophageal, gastric, biliary, colorectal, pancreatic, and small intestinal cancers (ICD-9 codes: 150-159). Variables for the analysis are two points of weight measurement, demographics (age, gender, and ethnicity), types of GI cancer and Morse Fall Scale. The 966 subjects are included in the analysis.

**Findings and Interpretation:** Of those 966 subjects, the average age was 66 years old, and 58% was male. Majority of subjects was white (79%). Subjects with esophageal cancer lost the most weight (average 14.01lbs), followed by cancer in small intestine (average 12.67lbs). Findings indicated the highest prevalence of colon cancer (28%) and liver cancer (21%) in the study cohort. Further analysis of correlations between unintentional weight loss and fall risks based on Morse Fall scale will be completed for presentation.

**Discussion and Implications:** The results will provide essential information related to the progression of weight loss associated with the different types of GI cancers and to fall risks among patients who were hospitalized in North Central Florida. The information will offer insight to indicate which patients would require earlier interventions to reduce weight loss and fall risks, which will further improve overall survival.

### #38

**EXPLORATORY STUDY TO UNDERSTAND AUTOLOGOUS HEMATOPEOITIC STEM CELL TRANSPLANT PATIENTS' EXPERIENCES OF HATHA YOGA.** Jennifer Brock, BSN, RN, OCN®, RYT, Massachusetts General Hospital, and Anne-Marie Barron, PhD, RN, PMHCNS-BC, Simmons College and Massachusetts General Hospital, both in Boston, MA

**Objective:** This pilot research study will help oncology nurses understand the use of the complementary intervention of Hatha yoga as a potential strategy to relieve suffering and improve quality of life.

**Topic Significance and Study Purpose, Background, and Rationale:** Autologous hematopoietic stem cell transplant (AH-SCT) refers to the use of stem cells collected from the patient to be reinfused, or transplanted at a later date, following myelo-suppressive high dose chemotherapy and sometimes total body irradiation. Multiple Myeloma is treated with this modality. The American Society of Clinical Oncology recognizes that AH-SCT is an intensive treatment with significant burden of associated short-and long-term morbidity, and potential threats to health-related quality of life. Patients who undergo AH-SCT experience suffering and distress due to the effects and side effects of the procedure, hematologic and infectious complications post transplantation, and a prolonged hospital stay. The purpose of this qualitative study is to explore and understand AH-SCT recipients's experiences of Hatha yoga.

**Methods, Intervention, and Analysis:** Ten participants from an oncology unit received the Hatha yoga intervention one time pre-stem cell transplant and twice post transplant. The participants were interviewed following each intervention, the interviews were audio recorded, transcribed, and the data continues to be analyzed using content analysis.

**Findings and Interpretation:** Thus far, five categories have been identified based on the trends in patients's responses. Categories include: Breathing; Relaxation; Symptom Management; Positive Experience in the Hospital; and Cognitive Psychological/Emotional Impact.

**Discussion and Implications:** Hatha yoga integrates awareness of breath, relaxation, exercise, and social-support elements that could provide AH-SCT patients with comfort and coping strategies to manage unpleasant side effects thereby enhancing quality of life during their hospitalization. The highest priority of oncology nurses is to respond to suffering and distress of their patients. This pilot research study will help oncology nurses begin to understand more fully the use of the complementary intervention of Hatha yoga as a potential strategy to relieve suffering and improve quality of life.

**Underwriting or Funding Source Name:** Research support was provided by the Yvonne L. Munn Nursing Research Award and the Yvonne L. Munn Center for Nursing Research, Institute for Patient Care, Massachusetts General Hospital

### #39

**MYELODYSPLASTIC SYNDROME TERMINOLOGY: PERCEPTION DISPARITIES BETWEEN ONCOLOGY NURSES AND PATIENTS WITH MDS.** Joan Latsko, DNP, FNP-BC, OCN®, AOCNP®, Innovative Wellness Solutions, Pittsburgh, PA; Betsy Dennison, MS, RN, Clarity Communications, Pompton Lakes, NJ; Alice Houk, MS, and Stephanie Chisolm, PhD, Aplastic Anemia and MDS International Foundation, Rockville, MD; Aaron Gerds, MD, MS, Cleveland Clinic, Cleveland, OH; and John Huber, MS, Aplastic Anemia and MDS International Foundation, Rockville, MD

**Objective:** To better understand the oncology nurse's and patient's perceptions regarding a MDS as a cancer diagnosis in

order to provide accurate terminology education to current and future MDS patients.

**Topic Significance and Study Purpose, Background, and Rationale:** Myelodysplastic Syndromes (MDS) are a complex, diverse and incurable collection of myeloid malignancies characterized by progressive bone marrow failure, cytopenias and increased risk of acute myeloid leukemia (AML) transformation. MDS terminology can be confusing for patients promoting a misunderstanding of their overall disease state as well as adherence to treatment and future outcomes. The current study examined perceptual gaps in education of MDS terminology amongst nurses and MDS patients.

**Methods, Intervention, and Analysis:** Online surveys were conducted between February and April 2014 of physicians, oncology nurses and MDS patients registered with the AAMDSIF. Physician, oncology nurse and patient surveys were 67, 49 and 61 questions, respectively, assessing understanding of MDS, communication, education, treatment interventions and barriers to adherence. The protocol and consent were approved by a central IRB. The oncology nurse and MDS patient responses were extrapolated out of the total survey for analysis.

**Findings and Interpretation:** The MDS patient respondents totaled 314 complete responses, while 165 oncology nurses responded with 23 respondents being APNs and 142 being non-APNs. Oncology nurses and MDS patients both reported high rates of education about MDS being provided at the time of diagnosis and throughout the course of the disease. However, 81% of oncology nurses reported describing MDS as a cancer, while 22% of the patients recall MDS being described as a cancer. The nurses (19%) not using the cancer diagnosis chose alternative terminology as blood disorder (81%), pre-leukemia (53%) or isolated cytopenia (53%, 50% and 53%). The MDS patients recall the disease description as bone marrow failure (70%), blood disorder (58%), pre-leukemia (43%) or an isolated cytopenia (48%, 27% and 24%). This represents a disconnection in accurate communication of information during disease state education.

**Discussion and Implications:** Oncology nurses and MDS patients have a disparate understanding of MDS as a cancer, neoplasm or malignancy. Enhanced education of MDS patients with proper terminology by oncology nurses will expand overall communication, elicit understanding of the disease complexity, promote adherence and potentially achieve better outcomes.

**Underwriting or Funding Source Name:** A research grant from Celgene Corporation was utilized by the Aplastic Anemia & MDS International Foundation to conduct the study.

#### #40

**USE OF THE APLASTIC ANEMIA AND MDS INTERNATIONAL FOUNDATION'S TREATING MDS TOOLKIT CAN INCREASE THE FREQUENCY OF MDS EDUCATION AND SIDE EFFECTS BY ONCOLOGY NURSES.** Joan Latsko, DNP, FNP-BC, OCN®, AOCNP®, Innovative Wellness Solutions, Pittsburgh, PA; Betsy Dennison, MS, RN, Clarity Communications, Pompton Lakes, NJ; Alice Houk, MS, and Stephanie Chisolm, PhD, Aplastic Anemia and MDS International Foundation, Rockville, MD; Aaron Gerds, MD, MS, Cleveland Clinic, Cleveland, OH; and John Huber, MS, Aplastic Anemia and MDS International Foundation, Rockville, MD

**Objective:** To better understand the impact of the AA&MDSIF's Treating MDS Toolkit on frequency of MDS patient education and treatment side effects by oncology nurses.

**Topic Significance and Study Purpose, Background, and Rationale:** Myelodysplastic Syndromes (MDS) are a complex, diverse and incurable collection of myeloid malignancies characterized by progressive bone marrow failure, cytopenias and increased risk of acute myeloid leukemia (AML) transformation. Lack of understanding of MDS and management of treat-

ment side effects can be overwhelming and distressing to the patient leading to poorer adherence and overall outcomes. The current study examined the frequency of MDS patient education and treatment side effects by oncology nurses.

**Methods, Intervention, and Analysis:** Online surveys were conducted between February and April 2014 of physicians, oncology nurses and MDS patients registered with the AAMDSIF. Physician, oncology nurse and patient surveys were 67, 49 and 61 questions, respectively, assessing understanding of MDS, communication, education, treatment interventions and barriers to adherence. The protocol and consent were approved by a central IRB. The oncology nurse and MDS patient responses were extrapolated out of the total survey for analysis.

**Findings and Interpretation:** The oncology nurse respondents totaled 165 complete responses, with 24% reporting having a toolkit. Comparison of the responses regarding frequency of education by oncology nurses in possession of the tool kit to those without are as follows: For MDS Education, oncology nurses reported on education at the following times: During the diagnostic workup (53% vs 41%); at each follow-up appointment (75% vs 51%); prior to a change in treatment (85% vs 74%); at completion of treatment (53% vs 33%) and at the time of disease progression (78% vs 68%). For side effect education, respondents reported the following: Prior to administration of each treatment (93% vs 86%); at each treatment appointment (75% vs 70%); at the completion of each treatment (50% vs. 39%); and during follow-up calls after treatment (45% vs 40%). These data represent an increase in the frequency of patient education by nurses with a toolkit.

**Discussion and Implications:** Oncology nurses that use the toolkit report more frequent MDS patient education to patients which can enrich overall communication, promote adherence and potentially achieve better outcomes for MDS patients.

**Underwriting or Funding Source Name:** A research grant from Celgene Corporation was utilized by the Aplastic Anemia & MDS International Foundation to conduct the study.

#### #41

**NURSES' INTENT TO LEAVE AND JOB SATISFACTION IN HEMATOLOGY/ONCOLOGY (HO) AREAS: IMPLICATIONS FOR POLICY AND PRACTICE.** Mohammad Dagameh, RN, BSN, MSc, King Faisal Specialist Hospital and Research Center, Riyadh, Saudi Arabia

**Objective:** After attending the presentation, the audiences will be able to identify the eight scales that measure nurses's intent to leave HO area and the major factors affecting their job satisfaction.

**Topic Significance and Study Purpose, Background, and Rationale:** Expatriate nurses are the vast majority of the nurses's manpower working in the Kingdom of Saudi Arabia. With the difficulty to recruit new nurses, it is obligatory to find effective strategies to keep nurses in their profession. Up to date, few researches have been conducted on the expatriate nurses's job satisfaction who decided to work outside the frontiers of their countries of origin. Little is known about nurses's job satisfaction in the hematology/ Oncology areas, and how it affects their intention to leave or stay in their current jobs. The aim of this study is to find how satisfied are the nurses in the hematology/ oncology areas, to which extent the expatriate nurses intend to leave their jobs, and to find the relationship between job satisfaction and turnover intention in Hematology/ Oncology units.

**Methods, Intervention, and Analysis:** A quantitative descriptive cross sectional design was utilized in order to answer the research questions. Study instruments included questions related to demographic characteristics, intent to leave, and the McCloskey Mueller Satisfaction Scale. Data were extracted and analyzed using Statistical Package for Social Scientists (20.V).

**Findings and Interpretation:** A total of 223(68.6% response rate) expatriate nurses employed in the Hematology/Oncology

units were surveyed. 104 (46.6%) of the participants reported intent to leave within the next 1-3 years. Leavers were less satisfied in all satisfaction subscales than the stayers. Significant Differences were found between marital status and nationalities on one side and intention to leave on the other side (P value= 0.027, 0.014 respectively). Predictors of intent to leave were dissatisfaction with different job aspects.

**Discussion and Implications:** Study results predict relationships between job satisfaction and intent to leave the work at Hematology/Oncology areas or the organization. Findings can be utilized by nursing managers and policy establishers to enhance job satisfaction and use it as predictor for intent to leave.

#### #42

**ONS PUTTING EVIDENCE INTO PRACTICE: EVIDENCE SYNTHESIS OF FACTORS INFLUENCING ORAL ADHERENCE.** Lee Ann Johnson, RN, PhD(c), and Margaret Irwin, RN, PhD, Oncology Nursing Society, Pittsburgh, PA

**Objective:** Participants will be able to identify factors that inhibit and promote adherence to oral medications.

**Topic Significance and Study Purpose, Background, and Rationale:** The increased use of oral chemotherapies has brought concerns about adherence to oral anti-cancer agents to the forefront of cancer care. Identification of factors that inhibit and promote adherence aids nurses in the identification of patients at-risk for non-adherence and can facilitate the design of effective nurse-led interventions to encourage adherence. The purpose of this work was to synthesize the evidence regarding factors that inhibit and facilitate medication adherence in patients with chronic disease and cancer.

**Methods, Intervention, and Analysis:** Literature searches were conducted in PubMed, CINAHL, and Cochrane Collaboration reviews to retrieve qualitative, mixed method, and quantitative studies that addressed medication adherence and factors influencing adherence. Factors were identified and catalogued in all studies included. Qualitative metasummary was used to calculate the frequency effect size and the intensity effect size of identified factors in qualitative and mixed method studies. These findings were then triangulated with quantitative results.

**Findings and Interpretation:** After review, 155 studies were included in the analysis. Samples included patients on oral medications for HIV, diabetes, coronary artery disease, congestive heart failure, osteoporosis, hypertension, chronic obstructive pulmonary disease, tuberculosis, patients using inhaled steroids for asthma, and cancer. Forty-five discrete factors were identified. The factors with the highest frequency data which showed convergence with the quantitative findings were 1) relationship with the provider (42%), 2) side effects (40%), 3) forgetfulness (38%), 4) necessity (35%), 5) routinization of the medication (34%), 6) social support (32%), 7) lifestyle fit (31%), 8) cost and insurance coverage (26%), 9) medication knowledge (25%), 10) pill burden (25%), and 11) regimen complexity (22%). Findings in the oncology only literature were similar with the exception that depression was also identified as negatively influencing adherence.

**Discussion and Implications:** These findings can be used to identify patients who may be most at risk for non-adherence. Findings regarding factors that facilitate adherence suggest content for relevant patient education and care planning.

#### #43

**CANCER PATIENTS RECEIVING CHEMOTHERAPY: DO PREVIOUS ORAL HEALTH PRACTICES CORRELATE WITH ORAL COMPLICATIONS DURING TREATMENT?** Paige Nichols, BSN student, Elaina Weiss, BSN student, Julie Otte, PhD, RN, OCN®, Diane Von Ah, PhD, RN, and Janet Fulton, PhD, RN, all at Indiana University School of Nursing, Indianapolis, IN

**Objective:** To describe oral health practices among patients receiving chemotherapy and correlation with oral complications during treatment.

**Topic Significance and Study Purpose, Background, and Rationale:** Approximately 40% of patients undergoing chemotherapy experience oral complications that lead to pain, infection, impaired nutrition, decreased quality of life, increased cost of care, and in severe cases, delayed or terminated treatment. Effective preventative measures have not been developed and there is lack of agreement on management of oral complications. The purpose of this study was to 1) explore oral health practices among patients receiving chemotherapy 2) identify reported oral complications and 3) explore the relationship between oral health practices and treatment-related complications.

**Methods, Intervention, and Analysis:** A cross-sectional, descriptive design was used. The Health Promotion Model guided this study. 50 cancer patients at least 18 years of age and receiving chemotherapy for cancer treatment are being recruited to complete a one-time questionnaire. Subjects with a history of oral cancer or oral surgery are excluded. Patients are recruited from a Midwest cancer clinic and pre-screened by nursing staff to identify eligibility and interest in participating. Research staff present the study information to those interested and obtain verbal consent to participate. The investigator-developed questionnaire has 3 parts: Oral Health Practices (e.g. tooth brushing, flossing, dental visits, and use of oral rinses); Treatment-related Oral Complications (e.g. pain, bleeding, difficulty swallowing, and taste alterations); Demographic Data. Data from this ongoing study will be analyzed using descriptive statistics and frequencies. Spearman's rho and/or Pearson's correlation coefficients will be used to examine the relationships between oral health practices and oral complications.

**Findings and Interpretation:** Findings will describe 1) mean age, race, gender, education, type of cancer and cancer treatment, 2) oral health practices before starting the current cancer treatment, 3) current state of oral health and oral complications. Data collected will be used to examine relationships between self-reported oral care practices of cancer patients before having been diagnosed with cancer and complications during treatment.

**Discussion and Implications:** Expected findings will 1) identify oral health practices that lead to oral complications during treatment; 2) inform development of practice guidelines for appropriate prophylactic and therapeutic interventions for oral complications.

#### #44

**USE OF WRITTEN EDUCATIONAL INSTRUCTIONS BY ONCOLOGY NURSES CAN IMPROVE TREATMENT RELATED SIDE EFFECT REPORTING BY MDS PATIENTS.** Joan Latsko, DNP, FNP-BC, OCN®, AOCNP®, Innovative Wellness Solutions, Pittsburgh, PA; Betsy Dennison, MS, RN, Clarity Communications, Pompton Lakes, NJ; Alice Houk, MS, and Stephanie Chisolm, PhD, Aplastic Anemia and MDS International Foundation, Rockville, MD; Aaron Gerds, MD, MS, Cleveland Clinic, Cleveland, OH; and John Huber, MS, Aplastic Anemia and MDS International Foundation, Rockville, MD

**Objective:** To better understand the oncology nurse's method of education on the reporting of treatment related side effects by MDS patients.

**Topic Significance and Study Purpose, Background, and Rationale:** Myelodysplastic Syndromes (MDS) are a complex, diverse and incurable collection of myeloid malignancies characterized by progressive bone marrow failure, cytopenias and increased risk of acute myeloid leukemia (AML) transformation. Current MDS treatments remain limited, while management of side effects can be overwhelming and distressing to the

patient leading to poorer adherence and overall outcomes. The current study examined oncology nurse's educational methods and the reporting of side effects by MDS patients.

**Methods, Intervention, and Analysis:** Online surveys were conducted between February and April 2014 of physicians, oncology nurses and MDS patients registered with the AAMDSIF. Physician, oncology nurse and patient surveys were 67, 49 and 61 questions, respectively, assessing understanding of MDS, communication, education, treatment interventions and barriers to adherence. The protocol and consent were approved by a central IRB. The oncology nurse and MDS patient responses were extrapolated out of the total survey for analysis.

**Findings and Interpretation:** The MDS patient respondents totaled 314 complete responses, while 165 oncology nurses responded with 23 respondents being APNs and 142 being non-APNs. The oncology nurses reported sharing MDS side effect education with the physician (61%) at each patient appointment (62%), at each treatment appointment (71%) and prior to administration of each treatment (87%). However, the MDS patient's reported receiving verbal instructions (45%) and written instructions (37%) from the oncology nurse. Of the MDS patients who received active treatment, 86% reported experiencing some type of side effect, for which 30% reported to the oncology nurse and 23% reported to the physician immediately. However, side effect reporting was not reported in 2% of the MDS patients, with 52% conveying them at the next appointment and 14% attempted to treat them with over the counter medications. This represents a disconnection between the oncology nurse's method of MDS side effect education and reporting by MDS patients.

**Discussion and Implications:** For many MDS patients, the diagnosis and treatments can be very overwhelming and confusing with little retention of verbal instructions. Written instructions by oncology nurses can improve the reporting of treatment related side effects by MDS patients as well as enrich overall communication, promote adherence and potentially achieve better outcomes.

**Underwriting or Funding Source Name:** A research grant from Celgene Corporation was utilized by the Aplastic Anemia & MDS International Foundation to conduct the study.

#### #45

**IS THERE A ROLE FOR SURVIVORSHIP CARE PLANS IN CHRONIC CANCER?** Carolyn Vachani, RN, MSN, AOCN®, Margaret Hampshire, RN, BSN, Karen Arnold-Korzeniowski, RN, BSN, Christina Bach, MBE, MSW, LCSW, OSW-C, Christine Hill-Kayser, MD, and James Metz, MD, all at University of Pennsylvania Health System, Philadelphia, PA

**Objective:** Describe the use of a survivorship care plan by patients with chronic cancer and how nursing practice can support the needs of these patients.

**Topic Significance and Study Purpose, Background, and Rationale:** Of the 12 million cancer survivors in the US, many are living with a chronic cancer (CC), including metastatic solid tumors, leukemias and lymphomas. These cancers can be successfully treated, and may wax and wane for many years. Patients with CC have been left out of the Commission on Cancer's mandate for providing survivorship care plans, yet their survivorship needs are critical to their quality of life. Primary care models promote self-management for patients with chronic disease, with nurses assuming a major role in educating patients. Survivorship care plans (SCPs) can assist oncology nurses in a taking on a similar role.

**Methods, Intervention, and Analysis:** We examined the use and satisfaction of an online care plan tool for patients with CC. Of 13,213 users during the study period, a total of 19% (n=2549) were developed by patients with CC: 9% (n=1235) reported living with metastatic cancer; 9% (n=1231) having a recurrence of a

previous cancer or 2nd diagnosis of cancer; 0.9% (n=128) a diagnosis of chronic lymphocytic leukemia or chronic myelogenous leukemia. A total of 54% (n=1368) of users with CC were at least 1 year from diagnosis. When healthcare providers used the tool, 13% of care plans were prepared for patients with CC.

**Findings and Interpretation:** Of the CC users, 411 completed an optional satisfaction survey. When asked how satisfied they were with the information provided, 31% (n=127) selected good, 32% (n=131) selected very good, and 17% (n=69) selected excellent. When asked about the quantity of information provided, only 2% (n=10) selected too much information and 61% (n=251) reported they would share the information with their healthcare provider.

**Discussion and Implications:** This tool was not developed to meet the needs of CC patients, however, it is clear that these patients are seeking survivorship information and support. Only 10% of CC users reported receiving survivorship information previously. Nurses have an important role in helping these patients navigate life with a chronic cancer and a survivorship care plan can be used to guide the education provided. As survivorship care evolves, the needs of patients with CC should not be overlooked and nurses can play a key role in making this happen.

#### #46

**RE-CHALLENGE AFTER PACLITAXEL-RELATED INFUSION REACTIONS IN AN ONCOLOGY INFUSION UNIT.** Nicola Gribbin, BSN, RN, OCN®, and Cynthia Bowes, MSN, RN, AOCNP®, both at Massachusetts General Hospital, Boston, MA

**Objective:** Determine rate of successful re-challenge after paclitaxel infusion reaction

**Topic Significance and Study Purpose, Background, and Rationale:** Paclitaxel is a highly effective chemotherapeutic agent given to treat a variety of malignancies. Paclitaxel holds a high risk for infusion reaction; rates as high as 41% have been reported. Infusion reactions can lead to drug discontinuation, reducing the ability to provide preferred treatment to cancer patients. The literature lacks guidelines for attempting to re-challenge after a paclitaxel-related infusion reaction. The goal was to determine success rates for re-challenge after a paclitaxel reaction, and to describe best practices for re-challenge. This is a topic of interest to oncology nurses, oncologists, and allergists, as the care team often collaborates when creating a plan for future treatment after reaction.

**Methods, Intervention, and Analysis:** The method used in this study was a retrospective record review of 109 reported paclitaxel reactions, performed by an RN familiar with chemotherapy-related infusion reactions. The longitudinal medical records of patients, who were identified by the use of infusion reaction safety reports which were filed between 2007 and 2011, were comprehensively evaluated with a focus on nursing documentation. Data collected included pre-medications and rescue medications administered, severity of reaction, whether the patient was re-challenged on the same day or on a different day as their initial infusion reaction, and whether re-challenge was successful. Ninety-two percent of patients who had an initial reaction to paclitaxel were successfully re-challenged. Further, four of five patients who had a severe initial reaction were able to tolerate the re-challenge without reaction.

**Findings and Interpretation:** Nearly all patients who were re-challenged were able to tolerate the infusion with no further reaction. The knowledge that four of the five patients with severe initial reactions were successfully re-challenged is reassuring. Slowly titrating infusion rates and giving additional pre-medications are common approaches when re-challenging after a reaction. We will need to further explore characteristics of patients who were not re-challenged.

**Discussion and Implications:** Nurses who understand that most paclitaxel re-challenges are completed safely will be empowered to advocate for the re-challenging of patients, thus allowing patients to receive the preferred therapy. This may also reduce the number of referrals for desensitization.

#### #47

**TIMING OF THE FIRST DOSE ANTIMICROBIALS IN A COMMUNITY CANCER HOSPITAL.** Inna Tsuker, BS, PharmD, BCPS, and Joanne McGovern, RN, BSN, CCRN, Cancer Treatment Centers of America—Eastern Regional Center, Philadelphia, PA

**Objective:** The goal of the study is to administer the first dose antimicrobials within one hour from the time the order was initiated by a physician in the Community Cancer Hospital.

**Topic Significance and Study Purpose, Background, and Rationale:** This collaboration between the Departments of Pharmacy and Nursing aimed to improve compliance with timely administration of first dose antimicrobials at a cancer hospital to facilitate the treatment for infection in the immunocompromised patient population. The goal for the Department of Pharmacy was to deliver antimicrobials in %00930 minutes from the order entry. For the Department of Nursing, the goal was to administer first dose antimicrobials within %00960 minutes from the time of the order entry. There are currently no previous studies addressing these outcomes in the oncology patient population.

**Methods, Intervention, and Analysis:** Prospective, observational study included all first dose antimicrobial cases over a period of 12 months. The times of order entry, order verification, delivery, and administration were collected via data collection form. The times were analyzed for all orders administered and for the first antimicrobial order administered.

**Findings and Interpretation:** A total of 472 antimicrobial start cases were reviewed. Antimicrobials were ordered STAT in 20.8%. Majority of the orders (82%) were initiated between 7 am and 10 pm. Pharmacy met this goal 6 months out of a year, with more consistent results in the end of the year. Hospital goal was met 9 months out of a year. Average time from order entry to delivery was 32 minutes for all orders and 27 minutes for STAT orders. Average time from order entry to first antimicrobial administered was 55 min for all orders and 43 minutes for STAT orders. For STAT orders, order entry to delivery time ranged from 2 minutes to 90 minutes, with the majority of the cases falling within 30 minutes. Average time from delivery to administration of first doses was 23 and 17 minutes for all and STAT orders respectively. Efficiency flow charts were developed and shared with staff for further improvement.

**Discussion and Implications:** Both Departments' goals were met by the end of the study. Further interdisciplinary education raised staff awareness about STAT orders, antimicrobial compatibility, and departmental policies about STAT medications turn around times. Currently, Department of Pharmacy is working with Clinical Informatics to assure a continual monitoring of the proper antimicrobial timing in the hospital.

#### #48

**DEVELOPMENT OF THE JAPANESE VERSION OF THE FUNCTIONAL ASSESSMENT OF CANCER THERAPY-COGNITIVE FUNCTION (FACT-COG) VERSION 3.** Mika Miyashita, RN, PhD, and Hitoshi Okamura, MD, PhD, both at Hiroshima University, Hiroshima; Naoko Tsukamoto, RN, PhD, Sophia University, Tokyo; Michiyo Hashimoto, RN, and Tsuyoshi Kataoka, MD, PhD, both at Hiroshima University, Hiroshima; and Naoki Kagawa, MD, PhD, Kagawa Breast Clinic, Hiroshima, all in Japan

**Objective:** To develop and validate a brief instrument to evaluate cognitive function in patients with cancer in Japan.

**Topic Significance and Study Purpose, Background, and Rationale:** Cognitive impairment related to cancer therapy can negatively impact on patients's quality of life. Oncology nurses have to identify the patients with cognitive impairment, and care them with interdisciplinary approach to mitigate adverse effects on their quality of life. A lack of standardized brief instrument makes an evaluation of cognitive function in patients with cancer difficult. The purpose of this study is to develop and validate the Japanese version of the measure of cognitive function in patients with cancer, the Functional Assessment of Cancer Therapy-Cognitive Function (FACT-Cog) version 3.

**Methods, Intervention, and Analysis:** A cross-sectional descriptive research design was used. Breast cancer survivors, aged 20 to 64 years, who have received or are receiving chemotherapy or hormonal therapy were recruited at the hospital and the clinic. After study participants answered the questionnaire containing the Japanese version of the FACT-Cog version 3 (FACT-Cog), FACT-G which evaluated general QOL, medical and demographic information, they mailed it to the researcher. The FACT-Cog containing 37 items on a 5-point Likert scale is constructed 4 subscales; Perceived cognitive impairments, Impact of perceived cognitive impairments on quality of life, Comments from others, and Perceived cognitive abilities. Higher score indicate better cognitive function. To confirm the concurrent validity of the scale, correlation coefficients between the total or subscales of the FACT-Cog and the total or subscales of the FACT-G were calculated. Internal consistency was evaluated by calculating Cronbach'ss coefficient alpha of the total and subscales.

**Findings and Interpretation:** Thirty two (45.7%) patients with a mean age of 51.5±7.2 years completed the questionnaire. The correlation coefficient between two total scales is 0.54 (p=0.002). There were significant correlations in the subscales of the two scales. For example, the correlation coefficient between Perceived cognitive impairments and Functional well-being was 0.45 (p=0.009). Most of the participants didn't receive comments from others. The Cronbach'ss coefficient alpha of the total and subscales without Comments from others was 0.86-0.95.

**Discussion and Implications:** The Japanese version of the FACT-Cog was developed with fairly good validity and internal consistency. Oncology nurses should assess cognitive function of patients with cancer appropriately, share the information with medical staff, and support patients to enhance their QOL.

#### #49

**FEELINGS OF DIFFICULTY EXPERIENCED BY BREAST CANCER PATIENTS IN THE TREATMENT PROCESS AND PERCEPTIONS OF INTERACTIONS WITH BREAST CANCER SURVIVORS IN JAPAN.** Miwa Yamate, PhD, RN, and Nozomi Iwasaki, RN, both at National College of Nursing, Kiyose-shi; Sachiko Kawakami, RN, Cancer Net Japan, Bunkyo-ku; Sугuru Hatae, RN, OCNS, Kanagawa Prefectural Federation of Agricultural Cooperatives for Health and Welfare, Sagamihara Kyoudou Hospital, Sagamihara-shi; Megumi Umeda, RN, OCNS, Palliative Care Partners Company Limited; and Minato-ku, Japan, Satoru Iwase, MD, PhD, University of Tokyo, Institute of Medical Science, Minato-ku, all in Japan

**Objective:** The purpose of this study is to clarify feelings of difficulty experienced by breast cancer patients in the treatment process and perceptions of interactions with breast cancer survivors in Japan.

**Topic Significance and Study Purpose, Background, and Rationale:** The Breast cancer patients of the 40-50 years old had a lot of roles at the home and the work. Breast cancer patients need long-term treatment and follow-up. It has been reported

that interaction with other cancer survivors reduces anxiety and may encourage them to fight the disease. The purpose of this study is to clarify feelings of difficulty experienced by breast cancer patients in the treatment process and perceptions of interactions with breast cancer survivors in Japan.

**Methods, Intervention, and Analysis:** Breast cancer patients undergoing outpatient chemotherapy or radiotherapy were recruited for this study. Data was collected from five hospitals in two Japanese cities. Subjects were surveyed using a self-administered, anonymous questionnaire created by the researchers. Questionnaires were collected by post or with the placement method. An outline of each subjects' answers underwent descriptive analysis and free answer question items underwent qualitative analysis. The results of analysis were discussed between study collaborators.

**Findings and Interpretation:** Questionnaires were distributed to 98 individuals and collected from 80 individuals (recovery rate: 81.6%). The majority of subjects were in their 40's to their 50's and more than half were stage I or II at the time of diagnosis. Answers indicated that 44% felt difficulty in the treatment process. These difficulties included worrying about being seen by people at hot springs or public baths, whether or not to undergo breast reconstruction, child-related matters, work, remarriage, anxiety regarding treatment and worry about recurrence. Answers indicated that 51% of subjects had experienced an opportunity for interaction with a cancer survivor. Of the subjects surveyed, 53% answered that they wanted to interact with cancer survivors.

**Discussion and Implications:** Answers related to worries about hot springs and public baths reflected Japanese culture and therefore suggest the importance of offering support that takes ethnicity and culture into consideration. And, Breast cancer patients were hoping to ask cancer survivors about their experiences. For Breast cancer patients, these will sharing the experience of living with cancer, and the sense of loneliness. It was considered that there is behavioral characteristics of typical Japanese of obtaining a sense of peace by taking the same action with others.

**Underwriting or Funding Source Name:** This study was supported by grant funding from Grant-in-Aid for Young Scientists(B).

## #50

### **INTRALESIONAL THERAPY IN MELANOMA: TALIMOGENE LAHERPARAPVEC (T-VEC) PROVIDES DURABLE RESPONSES WITH NOVEL NURSING CONSIDERATIONS.**

Brianna Hoffner, MSN, RN, ANP-BC, AOCNP®, Angeles Clinic, Santa Monica, CA, Gail Iodice, BSN, RN, Columbia University, New York, NY, and Eduard Gasal, MD, Amgen Inc., Thousand Oaks, CA

**Objective:** To describe considerations for nurses and nurse administrators of potential use of the novel intralesional therapy T-VEC in patients with metastatic melanoma.

**Topic Significance and Study Purpose, Background, and Rationale:** Intralesional therapy for metastatic melanoma has historically included agents such as Bacille Calmette-Guérin (BCG), interferon and IL-2, although clinical trials have not substantiated clinically significant responses. T-VEC is an oncolytic immunotherapy derived from herpes simplex virus type-1 designed to selectively replicate in tumors and produce GM-CSF to enhance systemic anti-tumor immune responses. The phase 3 OPTiM study evaluated T-VEC versus GM-CSF in patients with unresected stage IIIB/IV melanoma.

**Methods, Intervention, and Analysis:** 436 patients were randomized 2:1 to receive intralesional T-VEC or subcutaneous GM-CSF. T-VEC was injected every 2 weeks into cutaneous, subcutaneous or nodal lesions until complete response, disap-

pearance of injectable lesions, clinically significant disease progression or intolerability. The primary endpoint was durable response rate (DRR). Overall response rate and overall survival were key secondary endpoints. T-VEC required freezer storage at ~70°C or below; biosafety level 1 containment procedures were recommended.

**Findings and Interpretation:** DRR was significantly improved with T-VEC versus GM-CSF (16% vs 2%,  $P < 0.0001$ ). Overall response rate was 26% with T-VEC versus 6% with GM-CSF. Responses occurred in both injected and non-injected lesions including visceral lesions. Median overall survival was 23.3 months with T-VEC versus 18.9 months with GM-CSF (HR=0.79,  $P = 0.051$ ). No treatment-related fatal adverse events were observed. Most common adverse events in the T-VEC arm were fatigue (50.3%), chills (48.6%), pyrexia, (42.8%), nausea (35.6%), influenza-like illness (30.5%), injection site pain (27.7%), and vomiting (21.2%). The most common grade 3 adverse event in the T-VEC arm was cellulitis (2.1%).

**Discussion and Implications:** T-VEC is a novel oncolytic immunotherapy improving DRR in a disease with poor prognosis. As the FDA reviews this therapy for potential approval, we must recognize the crucial need for associated nursing education. T-VEC has demonstrated systemic antitumor effects, inducing responses in uninjected (including visceral) lesions. T-VEC has a tolerable safety profile and can be administered in the outpatient setting. As an attenuated virus therapy, T-VEC has administration/handling procedures that differ from current therapies. Nurses and nurse administrators will be key for appropriate integration and administration of this unique and effective therapy in the clinical setting.

**Underwriting or Funding Source Name:** Amgen Inc.

## #51

**PRACTICAL MANAGEMENT OF ADVERSE EVENTS ASSOCIATED WITH AFATINIB.** Rebecca Sipples, DNP, APRN, ACNP, AOCNP®, University of Alabama at Birmingham, Birmingham, AL, Christine Andan, BSN, RN, Dana Farber Cancer Institute, Boston, MA, Beth Eaby-Sandy, MSN, CRNP, OCN®, Abramson Cancer Center, University of Pennsylvania, Philadelphia, PA

**Objective:** To characterize best practices and practical approaches for management of adverse events (AEs) associated with afatinib treatment among patients with EGFR mutation-positive nonsmall cell lung cancer (NSCLC).

**Topic Significance and Study Purpose, Background, and Rationale:** Afatinib is an irreversible ErbB family blocker indicated for first-line treatment of NSCLC harboring del19/L858R EGFR mutations. Careful monitoring and proactive management of common AEs will allow responders to remain on treatment. Management of afatinib-associated AEs was explored in patients with EGFR-mutant NSCLC in 2 phase III trials (LUX-Lung 3 [LL3] and 6 [LL6]).

**Methods, Intervention, and Analysis:** LL3 and LL6 were randomized, open-label, phase 3 studies that compared the efficacy and safety of afatinib monotherapy versus chemotherapy in advanced NSCLC. Patients received once-daily 40 mg afatinib. Patients who experienced certain defined drug-related grade 2/3 AEs followed a recommended dose-modification scheme: afatinib treatment was paused and supportive care was administered until the AE fully resolved, returned to baseline, or improved to grade 1. Afatinib was subsequently reinstated at a dose reduced by 10 mg from the prior dose. Incidences of AEs, dose reduction, and discontinuation due to AEs were monitored.

**Findings and Interpretation:** Among patients treated with afatinib in LL3 (n=229) and LL6 (n=239), the most common afatinib-related AEs (all grades) were diarrhea (95.2%/88.3%),

rash/acne (89.1%/80.8%), stomatitis (72.1%/51.9%), and paronychia (61.1%/33.9%). Among non-Asian, Asian, and Japanese patients in LL3, respectively, afatinib-related grade 3 diarrhea was 11%, 16%, and 20%, while afatinib-related grade 3 rash/acne was 17%, 14%, and 20%. 45%, 61%, and 74% underwent 1 dose reduction, respectively. Drug-related discontinuation due to diarrhea was low: 3.1%, 0.6%, and 0%. No patients discontinued afatinib due to afatinib-related rash/acne. Despite occurrence of common grade 3 AEs, the median treatment duration was prolonged when appropriate dose reductions were implemented: 261, 338, and 400 days, respectively. AE-related dose reductions did not reduce efficacy. Similar trends were also observed for stomatitis and paronychia. Supportive measures included tetracycline-class antibiotics (rash); Imodium, Lomotil and dietary changes (diarrhea); clobetasol/viscous lidocaine/magic mouthwash (stomatitis), topical clobetasol (paronychia).

**Discussion and Implications:** The low discontinuation rates due to these common AEs indicate that careful monitoring, proactive management, and adherence to the recommended dose-reduction scheme allow patients with clinical benefit to remain on afatinib therapy. Early diagnosis and nursing interventions optimize symptom management, reinforce compliance with supportive measures and dose reduction schemes, thus helping patients manage AEs and remain on afatinib therapy.

**Underwriting or Funding Source Name:** Boehringer Ingelheim

## #52

**THE EFFECTS OF NURSING WORKLOAD AND JOB STRESS ON THE COMMITMENT.** You-Ru Hou, RN, MS, and Chao-Sung Chang, MD, PhD, both at Kaohsiung Medical University Hospital, Kaohsiung, Taiwan

**Objective:** The purpose of this study aims to explore the impact of nursing workload and job stress on commitment, and identify significant predictors for commitment in Taiwan.

**Topic Significance and Study Purpose, Background, and Rationale:** Under a “low-cost, high-quality” concept pushed by the National Health Insurance, and in order to achieve high utilization of hospital beds, shorter length of stay and higher turnover of beds are implemented to accomplish cost-effectiveness of hospitals, while early discharge, immediate refilling and demanding multidisciplinary nursing are overwhelming to the existing shortage of nursing manpower. The purpose of this study aims to explore the impact of nursing workload and job stress on commitment, and identify significant predictors for commitment.

**Methods, Intervention, and Analysis:** This study was a prospective, cross-sectional one, involving 554 nurses, who were enrolled from 35 general wards of a medical center in southern Taiwan. Data collection were made through survey by structured questionnaire; Scoring for questionnaire is based on Likert scale, either in five-point scale or in nine-point scale. Four dimensions of questionnaires comprise personal attributes, nursing workload, job stress, and commitments, where Cronbach’s  $\alpha$  is 0.73-0.93. Time interval for data collection spanned from January to February in 2013. With a total of 600 subjects surveyed, we obtained 568 responses, of which 554 questionnaires were valid, the effective rate being 92.5%. SPSS for window 20.0 was employed for statistical analysis, covering frequency distribution, percentage, mean, and standard deviation for descriptive statistics, and then, independent t-test, one-way ANOVA with post hoc Scheffé’s test, Pearson product-moment correlation and hierarchical multiple regression analysis for inferential statistics.

**Findings and Interpretation:** Compared with those who are unmarried and childless, those who are married with children have significantly higher job stress and significantly higher scoring, especially, in the questions about “personal response,” “work concerns,” “competency,” but significantly lower scoring for professional commitment and organizational commitment. For nurses, seniority is positively associated with job stress. Level

Three Nurse (N3) has significantly higher professional commitment than Level Two Nurse (N2), and N3 and Level One Nurse (N1) have significantly higher organizational commitment than N2. Working in wards where services of three or more disciplines are offered, nurses have significantly higher workload, “personal response”, and “work concern” in dimension of job stress, and higher organizational commitment than those working in wards where services of two or less disciplines are needed. For professional commitments, there is no difference between them of different seniority. There are significant higher workload and job stress for those who have overtime work and lack of family support for their nursing work. There is no association between commitment with overtime work, but commitment is positively associated with family support. Personal attributes, nursing workload and job stress have significant impact on professional commitment and organizational commitment as well ( $p < 0.001$ ). Family support has significant positive impact on commitment, but job stress has significant negative impact on commitment. Through job stress as a moderator, workload has significantly negative impact on commitment.

**Discussion and Implications:** The study found that through job stress as a moderator, workload has significantly negative impact on commitment. Family support has significantly negative impact on workload and job stress but significantly positive impact on commitment. Overtime work is worse in this study, compared to reports previously made, in Taiwan and abroad as well. Therefore, it is suggested that supervisors of medical institutions and nursing department actively investigate nurses’ workload of different disciplines in the organization, take appropriate steps to reduce overtime work and boost family support for nurses, reduce job stress, and encourage commitment in order to help nurses keep moving on.

## #53

**IMPROVING WORKFLOW AND JOB SATISFACTION AMONG NURSING STAFF WITHIN A NEWLY DEVELOPED CLINICAL RESEARCH DEPARTMENT.** Sandra Rubio, RN, BSN, OCN®, CCRN, and Amy Malensek, RN, OCN®, CBCN®, both at Cancer Treatment Centers of America—Western Regional Medical Center, Phoenix, AZ

**Objective:** Implementation of a standardized rating scale allows for even distribution of workload, as well as, justified staffing preparation within a newly developed Clinical Research Department.

**Topic Significance and Study Purpose, Background, and Rationale:** Recent stakeholder satisfaction survey results showed decreased satisfaction rates among clinical research nursing staff related to unjustified staffing balance and uneven workload distribution, as well as decreased peer-to-peer engagement. The current assignment process is subjective, and based on a nurse’s experience of a particular study type and phase. This process can increase the potential of protocol error, allow for protocol deviation, and decrease the quality of data collection. The Ontario Institute for Cancer Research worked with the Clinical Trials Network to develop a mechanism to measure the workload involved with each clinical trial protocol. This scale was designed to capture the individual needs of each protocol, the complexity of the protocol, and the workload involved in order to better prepare for staff with an objective perspective. The result of this collaboration was the Ontario Protocol Assessment Level (OPAL).

**Methods, Intervention, and Analysis:** Clinical Research Leadership developed a plan to implement the use of the OPAL tool in order to capture and evenly distribute daily workload assignments, as well as to assess the need for additional staffing or reallocation of staffing resources. A randomized survey will be distributed to stakeholders rating workload, staff engagement, peer-to-peer engagement, and overall job satisfaction. This survey will be given prior to the implementation of



the OPAL tool, at 3 months of implementation, at 6 months, at 9 months, and at the end of the fiscal year. Results will be measured based on the survey results, peer-to-peer engagement, and quality of protocol data collection.

**Findings and Interpretation:** Preliminary results have already shown an increase in job satisfaction and peer-to-peer engagement by evidence of staff openly relying on each other for support and resources. Evenly distributed workloads have decreased the potential for data collection error and protocol deviation, thereby increasing overall stakeholder job satisfaction.

**Discussion and Implications:** Utilization of the OPAL scale of clinical research protocol complexity allows for appropriate workload distribution resulting in overall staff nursing job satisfaction and increased peer-to-peer engagement.

#### #54

**EFFICACY OF A TRANSDERMAL GRANISETRON PATCH IN CONTROLLING CHEMOTHERAPY-INDUCED NAUSEA AND VOMITING (CINV) IN HEAD AND NECK CANCER PATIENTS.** Doris Wong, BA, Prostrakan, Inc, Bridgewater, NJ, Gary Shelton, DNP(c), MSN, NP, ANP-BC, AOCNP®, New York University Clinical Cancer, New York, NY, and Deborah Braccia, RN, MPA, PhD, Prostrakan, Inc., Bridgewater, NJ

**Objective:** To examine the efficacy of a transdermal granisetron patch for controlling CINV in head and neck cancer patients.

**Topic Significance and Study Purpose, Background, and Rationale:** Head and neck cancer patients can experience mechanical obstruction or dysphagia making adherence to oral medications, including common oral antiemetics, very difficult. A granisetron transdermal system (GTS) has been shown to be as effective as oral granisetron in controlling CINV across multiple tumor types. This post-hoc, retrospective analysis specifically examined the efficacy and safety of GTS in difficult to treat head and neck cancer patients.

**Methods, Intervention, and Analysis:** A randomized, phase 3 study has been published comparing GTS (7 day application) to oral granisetron (2 mg/day) in patients receiving either moderately or highly emetogenic chemotherapy for 3-5 days. Data for this analysis were limited to patients with head and neck primary tumors.

**Findings and Interpretation:** 71 patients (38 GTS, 33 oral granisetron) were included. The complete control (CC; no vomiting, mild nausea, no rescue medication) rate of 66% and complete response (CR; no vomiting, no rescue medication) rate of 68% in the GTS group were similar to rates in the overall population. There was no difference in CC, CR, and use of rescue medication between GTS and oral granisetron ( $P=0.94$ ,  $0.91$ , and  $0.57$ , respectively). Patient assessment of overall response to therapy was not different between arms ( $P=0.26$ ). GTS was well tolerated and treatment related adverse events were mild.

**Discussion and Implications:** This retrospective analysis suggests GTS may be an appropriate option for prevention of CINV in head and neck cancer patients at high risk of dysphagia treated with chemotherapy.

**Underwriting or Funding Source Name:** Prostrakan, Inc

#### #55

**A PILOT RANDOMIZED, CONTROLLED TRIAL TO ASSESS THE IMPACT OF ACUPUNCTURE ON POST-MASTECTOMY PAIN, NAUSEA, ANXIETY AND ABILITY TO COPE.** Jessica Quinlan-Woodward, RN, BSN, and Sue Sendelbach, PhD, RN, CCNS, both at Abbott Northwestern Hospital; and Jeffery Dusek, PhD, Alison Kolste, BS, Adam Reinstein, LAc, MAOM, and Desiree Trebesch, MA, all at Penny George Institute for Health and Healing, all in Minneapolis, Minnesota, MN

**Objective:** Effect of acupuncture on post-mastectomy pain, nausea, anxiety and ability to cope.

**Topic Significance and Study Purpose, Background, and Rationale:** Approximately 1 in 8 (12%) women in the United States will develop breast cancer, making it the second most diagnosed cancer in women. Mastectomy is one of the standard surgical treatments for breast cancer. Post-surgical symptom management, i.e., pain, nausea, and anxiety, is of utmost importance in providing nursing care for these women. Acupuncture has shown promise for postoperative nausea, and it may be helpful for postoperative pain management. The purpose of this pilot study was to evaluate the acceptability, feasibility, and effectiveness of postoperative acupuncture compared to usual care on pain, nausea, anxiety, and coping in women undergoing mastectomy. The study team included a nurse principal investigator, acupuncturist, clinical nurse specialists, and psychologist.

**Methods, Intervention, and Analysis:** A randomized, controlled trial was conducted to evaluate the feasibility of using post-surgical acupuncture for symptom management in the hospital setting. Thirty women undergoing unilateral or bilateral mastectomies were randomized to acupuncture or usual care. Acupuncture, delivered by a licensed acupuncturist, was delivered on postoperative day 1 and/or 2, at least 12 hours apart. Participants self-entered pre- and post-intervention pain, nausea, anxiety, and coping scores into an electronic tablet. Scores were reported on 0-10, 11-point numerical rating scales.

**Findings and Interpretation:** We will present the percentage of enrolled patients, out of all eligible patients (acceptability, preliminarily 68%), percentage of patients receiving 0, 1, or 2 acupuncture visits (feasibility, currently 86% have received two visits), and the efficacy of symptom management from acupuncture compared to usual care. Efficacy will be analyzed through repeated measures and t-tests. Repeated measures will be used to evaluate pain, anxiety, ability to cope and nausea over time within and between groups. T-tests will be used to compare the differences, if any, between groups.

**Discussion and Implications:** This study explored whether postoperative acupuncture was feasible and effective in women undergoing a unilateral or bilateral mastectomy. Care teams for breast cancer patients will be able to use this information in deciding optimal care for symptom management, especially if a patient is interested in non-pharmacologic options. Based on the study's feasibility and effectiveness, future research should replicate this study with a larger sample and in additional oncology populations.

**Underwriting or Funding Source Name:** Abbott Northwestern Hospital Foundation

#### #56

**ROLAPITANT, A NOVEL NK-1 RECEPTOR ANTAGONIST (NK1-RA), PHASE 3 TRIAL RESULTS IN THE PREVENTION OF CHEMOTHERAPY-INDUCED NAUSEA AND VOMITING (CINV) IN SUBJECTS RECEIVING HIGHLY OR MODERATELY EMETOGENIC CHEMOTHERAPY (HEC AND MEC).** Rebecca Clark-Snow, RN, BSN, OCN®, University of Kansas Cancer Center, Westwood, KS, Cindy Nagy, RN, CCRP, Indiana University School of Medicine, South Bend, IN, Sujata Arora, MS, Arora Consulting Group LLC, Minneapolis, MN, Allen Poma, MD, TESARO, Inc., Waltham, MA, and Rudolph Navari, MD, PhD, FACP, Indiana University School of Medicine, South Bend, IN

**Objective:** To determine whether administration of rolapitant with granisetron and dexamethasone improved prevention of CINV in the delayed phase of CINV compared to control in subjects receiving emetogenic chemotherapy.

**Topic Significance and Study Purpose, Background, and Rationale:** Background: CINV is frequently under-reported

to healthcare providers, particularly in the delayed phase. As symptom managers, nurses are primarily involved with identifying and initiating treatment of CINV. The success of antiemetic prophylaxis of CINV has increased with the addition of NK1-IRAs. Active management of CINV improves quality of life (QoL) and increases the likelihood that patients will continue to receive appropriate cancer treatment. Rolapitant is a highly-selective NK-1RA that unlike other NK-1RAs, does not require dose adjustment of concomitantly administered drugs metabolized by CYP3A4. Additionally, rolapitant has a long half-life and is active for the entire 120 hours a patient is at risk for acute and delayed CINV. Recently three completed trials demonstrated the efficacy and safety of rolapitant for the prevention of CINV in a broad cancer population.

**Methods, Intervention, and Analysis:** Methods: Three global phase 3 double-blind, active-control trials were conducted. In >2,450 subjects receiving MEC (including cyclophosphamide, doxorubicin, epirubicin and carboplatin) or HEC (cisplatin 60 mg/m<sup>2</sup>) randomized 1:1 to either oral rolapitant 200mg + granisetron + dexamethasone or placebo + granisetron + dexamethasone on Day 1 of their chemotherapy regimen. Subjects recorded emesis, severity of nausea, use of rescue medication(s) and impact on daily life during Cycle 1 on a daily diary.

**Findings and Interpretation:** Results: Subjects in rolapitant group had a statistically significant higher complete response rate (CR, no emesis and no use of rescue medication) for the primary trial endpoint during delayed (>24 to 120 hours) phase vs. control in all three trials (MEC: 72.7% vs. 58.4%,  $p < 0.001$ ; HEC1: 71.3% vs. 61.6%,  $p < 0.001$ ; HEC2: 70.1% vs. 61.9%,  $p = 0.043$ , respectively). Additionally, subjects in rolapitant group achieved statistically or numerically higher CR rates in the acute and overall phases vs. control. QoL scores were higher with rolapitant than in the control group. Most common adverse events included fatigue, constipation, neutropenia and decreased appetite and were considered by investigators to be related to chemotherapy or underlying cancer and not to rolapitant.

**Discussion and Implications:** Conclusions: Rolapitant plus a 5-HT<sub>3</sub> RA and dexamethasone was well-tolerated and demonstrated superior efficacy over control for the primary endpoint of the prevention of delayed CINV and improved QoL in subjects receiving emetogenic chemotherapy.

## #57

**MYELODYSPLASTIC SYNDROME SIDE EFFECT REPORTING PERCEPTION DISPARITIES BETWEEN ONCOLOGY NURSES AND PATIENTS WITH MDS.** Joan Latsko, DNP, FNP-BC, OCN®, AOCNP®, Innovative Wellness Solutions, Pittsburgh, PA; Betsy Dennison, MS, RN, Clarity Communications, Pompton Lakes, NJ; Alice Houk, MS, and Stephanie Chisolm, PhD, Aplastic Anemia and MDS International Foundation, Rockville, MD; Aaron Gerds, MD, MS, Cleveland Clinic, Cleveland, OH; and John Huber, MS, Aplastic Anemia and MDS International Foundation, Rockville, MD

**Objective:** To better understand the oncology nurse's and the MDS patient's perceptions regarding MDS education and side effect reporting.

**Topic Significance and Study Purpose, Background, and Rationale:** Myelodysplastic Syndromes (MDS) are a complex, diverse and incurable collection of myeloid malignancies characterized by progressive bone marrow failure, cytopenias and increased risk of acute myeloid leukemia (AML) transformation. Current MDS treatments remain limited, while management of side effects can be overwhelming and distressing to the patient leading to poorer adherence and overall outcomes. The current study examined perceptual gaps in MDS side effect education amongst oncology nurses and MDS patients.

**Methods, Intervention, and Analysis:** Online surveys were conducted between February and April 2014 of physicians, oncology nurses and MDS patients registered with the AAMDSIF. Physician, oncology nurse and patient surveys were 67, 49 and 61 questions, respectively, assessing understanding of MDS, communication, education, treatment interventions and barriers to adherence. The protocol and consent were approved by a central IRB. The oncology nurse and MDS patient responses were extrapolated out of the total survey for analysis.

**Findings and Interpretation:** The MDS patient respondents totaled 314 complete responses, while 165 oncology nurses responded with 23 respondents being APNs and 142 being non-APNs. Oncology nurses and MDS patients both reported high rates of education about MDS being provided at the time of diagnosis and throughout the course of the disease. The oncology nurses reported sharing MDS side effect education with the physician (61%) at each patient appointment (62%), at each treatment appointment (71%) and prior to administration of each treatment (87%). Of the MDS patients who received active treatment, 86% reported experiencing some type of side effect, for which 30% reported to the oncology nurse and 23% reported to the physician immediately. However, side effect reporting was not reported in 2% of the MDS patients, with 52% conveying them at the next appointment and 14% attempted to treat them with over the counter medications. This represents a disconnection between the oncology nurse's MDS side effect education and reporting by MDS patients.

**Discussion and Implications:** Oncology nurses and MDS patients have a disparate understanding of MDS side effect education and reporting. Enhanced side effect education by oncology nurses and reporting by MDS patients will enrich overall communication, promote adherence and potentially achieve better outcomes.

**Underwriting or Funding Source Name:** A research grant from Celgene Corporation was utilized by the Aplastic Anemia & MDS International Foundation to conduct the study.

## #58

**INCIDENCE AND MANAGEMENT OF INTERSTITIAL LUNG DISEASE IN PATIENTS WITH ADVANCED CANCER TREATED WITH ANTI-PROGRAMMED DEATH RECEPTOR 1 LIGAND PEMBROLIZUMAB.** Melanie Albano, BSN, MSN, APN-BC, Ruth-Ann Gordon, RN, Naiyer A. Rizvi, MD, and Jedd D. Wolchok, MD, PhD, all at Memorial Sloan Kettering Cancer Center, New York, NY

**Objective:** To educate nurses on the incidence of interstitial lung disease (ILD) in patients with advanced cancer treated with pembrolizumab and to provide nurses with management strategies to optimize patient outcomes.

**Topic Significance and Study Purpose, Background, and Rationale:** Pembrolizumab, recently approved in the United States for treating unresectable or metastatic melanoma that progressed following ipilimumab and, if BRAFV600 mutation positive, a BRAF inhibitor, has shown acceptable safety and tolerability in patients with advanced cancer. One potentially immune-mediated event of particular interest to nurses is ILD because of diagnostic difficulties and its potentially serious consequences.

**Methods, Intervention, and Analysis:** The databases for 3251 patients enrolled in 9 clinical trials of pembrolizumab were analyzed for ILD incidence and management. ILD event terms were based on the ILD Standard MedDRA Query.

**Findings and Interpretation:** Overall, 91 (2.8%) patients experienced ILD of any attribution, including 42 (1.3%) grade 3-5. Incidence was higher in the 914 NSCLC patients compared with the 1660 melanoma patients (any grade: 4.2% vs 2.4%; grade 3-5: 2.4% vs 0.9%). Among the 64 ILD cases considered to be

serious adverse events or events of clinical interest and regardless of attribution, current or former smoking was more common in those with NSCLC compared with melanoma (81% vs 0%), as were baseline respiratory disease (61% vs 32%) and thoracic radiation (35% vs 12%), although it is not clear that these factors predispose patients to ILD. Corticosteroids were used in 95% of these 64 patients and were initiated a median of 1 day after onset in patients with NSCLC and a median of 3 days in patients with melanoma. No specific baseline characteristic appeared to be associated with an increased ILD risk. ILD recurred in 2 of 14 patients with an initial grade 2 event who were rechallenged after improvement; ILD resolved in both cases following corticosteroids and permanent pembrolizumab discontinuation. Two patients with grade 3 ILD were rechallenged with pembrolizumab and both experienced recurrence. These observations suggest rechallenge is appropriate for patients with grade <2 ILD, whereas grade 3 ILD necessitates permanent discontinuation. Detailed management guidelines will be presented.

**Discussion and Implications:** The incidence of ILD in pembrolizumab-treated patients is low, with a slightly higher incidence in patients with NSCLC. The inability to identify risk factors associated with an increased risk of ILD and the importance of early intervention underscore the importance of nurses in monitoring patients for ILD.

**Underwriting or Funding Source Name:** Funding for all pembrolizumab studies and editorial support for abstract preparation was provided by Merck Sharp & Dohme Corp., a subsidiary of Merck & Co., Inc.

## #59

**ENSURING PATIENT CENTERED EDUCATION IN A BLOOD AND MARROW TRANSPLANT SETTING.** Denise Kramer, RN, OCN®, and DeAnna Brown, BSN, RN, both at Texas Oncology Blood and Marrow Transplant Services; and Mary Stonebridge, RN, Baylor Medical Center, all in Dallas, TX

**Objective:** The purpose of this project was to identify the learning needs of the blood and marrow transplant patients and caregivers and evaluate the effectiveness of current methods.

**Topic Significance and Study Purpose, Background, and Rationale:** Recently patients and caregivers have verbalized a fear of unclear expectations and lack of preparedness for their transplant experience. Recent nursing literature speaks to the relationship between patient education and patient satisfaction (Murdock and Griffen, 2013). Our transplant education process has had little update in the last several years and a lack of assessment related to the effectiveness from patient/caregiver perspective. The purpose of this project was to identify the learning needs of the blood and marrow transplant patients and caregivers and evaluate the effectiveness of current methods.

**Methods, Intervention, and Analysis:** Eight patients and eight caregivers attended the blood and marrow transplant journey class prior to transplant. This population included autologous and related and unrelated allogeneic recipients. The patients and caregivers were given a guidebook prior to the class but inconsistencies remained regarding timing of the distribution of transplant educational materials. During the transplant consult and work up visit, the patient and caregiver are provided with consultative services from our multidisciplinary team. The Transplant Journey Class is currently scheduled just prior to the transplant event. There is a power point presentation on the transplant continuum presented by an experienced transplant coordinator or nurse. The patient and caregivers are allowed to ask questions throughout the class. The class is structured to address pre and post transplant care and what to expect during the transplant event.

**Findings and Interpretation:** A pre and post education class survey was recently introduced to participants, to assess effectiveness of teaching methods and materials. Questions were asked to identify any further information needed. Participants

rated prior knowledge 1-5, five being most knowledgeable; open ended questions were asked to identify areas of additional need. Post class ratings revealed increased preparedness among all participants.

**Discussion and Implications:** Additional participants should be evaluated to confirm current findings. Questions should be framed in such a way as to encourage maximum participation. Issues of timing of education and timing of provision of transplant education materials are still to be addressed since some participants may prefer additional reinforcement.

## #60

**COMPARISON OF ORAL AND TRANSDERMAL GRANISETRON IN CONTROLLING CHEMOTHERAPY-INDUCED NAUSEA AND VOMITING (CINV) IN PATIENTS WITH LUNG CANCER (LC) GIVEN MULTI-DAY CHEMOTHERAPY.** Doris Wong, BA, and Deborah Braccia, RN, MPA, PHD, both at Prostrakan, Inc., Bridgewater, NJ; and Vanna Dest, MSN, APRN-BC, AOCN®, Smilow Cancer Hospital, New Haven, CT

**Objective:** To compare complete control rates, complete response, need for rescue medication and patient-reported assessment in a post-hoc analysis of LC patients randomly assigned to either GTS or oral granisetron.

**Topic Significance and Study Purpose, Background, and Rationale:** Chemotherapy for small cell (SCLC) and non-small cell lung cancer (NSCLC) frequently requires platin-based regimens likely to cause emesis. Adherence to antiemetic regimens over several days is difficult for many patients. A granisetron transdermal system (GTS) has been shown to be as effective as oral granisetron (OG) in controlling multi-day CINV across multiple tumor types. The GTS patch is applied 24 to 48 hours prior to chemotherapy and delivers an average daily dose of 3.1 mg granisetron per day. This analysis examined the efficacy and safety of GTS specifically in LC patients.

**Methods, Intervention, and Analysis:** A randomized phase 3 study (N=641, clinicaltrials.gov NCT00273468) compared GTS (7-day application) to OG (2 mg/day) in patients receiving moderately or highly emetic chemotherapy for 3-5 days. This post hoc analysis examines results only in patients with LC as primary tumor.

**Findings and Interpretation:** 128 patients (64 GTS, 64 OG) were included. 94% received cisplatin for  $\geq 3$  days. 51 patients given GTS (80%) and 41 on OG (64%) received chemotherapy with a Hesketh score of 5. Rates of complete control (no vomiting, mild nausea, no rescue), complete response (no vomiting, no rescue), the use of rescue medication, and patient assessment of response were not significantly different between GTS and OG. Constipation was more frequent with GTS; all treatment related adverse events were mild.

**Discussion and Implications:** This retrospective analysis indicates that the convenient single application of GTS can be an effective option for preventing CINV in lung cancer patients treated with highly-emetic multi-day chemotherapy.

**Underwriting or Funding Source Name:** Prostrakan, Inc

## #61

**TREATMENT OF ORAL MUCOSITIS IN HEAD AND NECK CANCER PATIENTS WITH LOW LEVEL LASER THERAPY.** Jeannie Woith, BSN, RN, LMT, Erin Bixby, BSN, RN, AOCN®, Kim Catania, MSN, RN, AOCN®, and Joni Lutman, MSN, RN, NP, all at Ohio State University Wexner Medical Center—The Arthur G. James Cancer Hospital and Richard J. Solove Research Institute, Columbus, OH

**Objective:** To establish low level laser therapy (LLLT) as evidence based practice (EBP) for the prevention and treatment of

oral mucositis thereby effectively reducing associated pain and improving quality of life.

**Topic Significance and Study Purpose, Background, and Rationale:** Significance and Background This year, an estimated 55,070 people will develop head and neck cancer. Among these patients approximately 85 100 % who receive chemoradiation therapy will develop oral mucositis (OM). Oral mucositis is the inflammation of the mucous membrane of the oral and oropharyngeal region characterized by ulceration. This results in intense pain, infection, impaired nutrition, decreased quality of life and delay and/or discontinuation of treatment OM has a significant health and economic impact on head and neck cancer patients. Currently there is no universal treatment recommendations for OM. Most treatments are based on expert opinion and few are evidence based. Nursing plays a significant role in early detection, evaluation and implementation of treatment for OM. Early detection and nursing intervention can greatly improve quality of life for our patients. Low Level Laser Therapy (LLLT) has shown positive clinical and functional responses in the treatment of OM, bringing about relief of pain, tissue repair and acceleration in healing due to reduction in the duration of acute inflammation. Purpose The aim of our team is to establish LLLT as evidence based practice (EBP) with a nurse run low level laser therapy clinic focused on the prevention and treatment of oral mucositis for patients receiving treatment for head and neck cancer. In collaboration with Dr. Meade VanPutten to gather insight on laser treatment and information on results obtained utilizing LLLT, a literature review was completed.

**Methods, Intervention, and Analysis:** A literature review was completed on the use of low level laser therapy in the prevention and treatment of mucositis. The fifteen articles identified included nine randomized controlled trials, five systematic reviews or meta-analysis and one co-hort study. Utilizing evidence and outcome synthesis tables we were able to determine the strength of evidence and measure outcomes.

**Findings and Interpretation:** Results revealed decreased severity of mucositis, pain, minimal side effects and high patient tolerance to treatment with low level laser therapy. Best evidence supports the use of low level laser therapy in the prevention and/or treatment of oral mucositis.

**Discussion and Implications:** Implementing the use of LLLT to treat oral mucositis for our head and neck oncology patients will have a positive impact on quality of life by decreasing associated pain and severity of mucositis. Determining educational and staffing needs, treatment protocol, patient education, referral base, equipment purchase, collaboration with treatment teams and analysis of reimbursement is being completed in order to successfully implement a nurse administered low level laser therapy clinic. Outcomes to be studied include pain scores, treatment delays due to OM and patient satisfaction.

## #62

**SAFETY AND TOLERABILITY OF FENTANYL SUBLINGUAL SPRAY DURING THE TITRATION PHASE OF TWO PHASE 3 CLINICAL TRIALS: A POOLED ANALYSIS.** Richard Rauck, MD, Center for Clinical Research, Winston-Salem, NC; Lisa Stearns, MD, Center for Pain and Supportive Care; Scottsdale, AZ; and Nicole Forman, MD, and Neha Parikh, both at Insys Therapeutics, Chandler, AZ

**Objective:** The objective of this pooled analysis was to further evaluate the tolerability and safety profile of fentanyl sublingual spray titrated for the management of breakthrough cancer pain.

**Topic Significance and Study Purpose, Background, and Rationale:** Breakthrough cancer pain (BTCP) is ideally managed with the class of opioids known as transmucosal immediate-release fentanyl (TIRF). Sublingual delivery of a TIRF provides rapid onset of effect with a noninvasive and nonoral adminis-

tration route. Fentanyl sublingual spray is indicated for BTCP in adults already receiving, and who are tolerant to, opioid therapy for underlying persistent cancer pain. One randomized study and 1 open-label study have been conducted. Here, we present a pooled safety and tolerability assessment of fentanyl sublingual spray during the titration phase of these 2 trials.

**Methods, Intervention, and Analysis:** Data from opioid-tolerant patients in 1 randomized, placebo-controlled pivotal trial (Study 001) and 1 open-label trial (Study 007) of fentanyl sublingual spray were analyzed. Both studies employed an initial titration phase (21 and 21-26 days) designed to allow each patient to achieve an optimum fentanyl dose based on effective pain relief with acceptable tolerability.

**Findings and Interpretation:** Daily doses of fentanyl sublingual spray ranged from 100 µg to 1600 (2 Å— 800) µg. During the titration phase, the safety population received a daily mean dose of 378.1 µg and a cumulative mean dose of 12,440.9 µg. During the titration phase in the 359 patients in the safety population, 213 patients (59.3%) experienced adverse events. Adverse events that occurred in 5% of patients during this phase included nausea (13.1%), vomiting (10.3%), and constipation (5.0%). The only serious adverse event that occurred during the titration phase in 1% of patients was malignant neoplasm progression (1.7%).

**Discussion and Implications:** Data support that adverse events that occurred during the titration phase in both studies of fentanyl sublingual spray were those expected to be experienced by patients who have cancer or are receiving fentanyl therapy. This safety evaluation did not identify any new toxicities associated with fentanyl products in this patient population and suggests that optimization of the dose of fentanyl sublingual spray during a titration phase is not accompanied by untoward or unexpected adverse effects. This is particularly important to oncology nurses who care for patients with cancer and BTCP who need well-tolerated treatment options to manage these episodes.

**Underwriting or Funding Source Name:** Technical editorial and medical writing assistance was provided by Synchrony Medical Communications, LLC, West Chester, PA. Financial support for this study was provided by Insys Therapeutics, Inc., Chandler, AZ. The studies were supported by Insys Therapeutics, Inc.

## #63

**PSYCHOSOCIAL STRESS IN ONCOLOGY NURSES: AN ANALYSIS CONSIDERING THE EFFORT-REWARD IMBALANCE MODEL.** Graciela Piereck de Sá, National Institute of Cancer; Sheila Farias, Federal University of Rio de Janeiro; Luciana Portela and Lucia Rotenberg, both at Oswaldo Cruz Foundation; Norma Souza, State University of Rio de Janeiro; and Rosane Griep, Oswaldo Cruz Foundation, all in Rio de Janeiro, Brazil

**Objective:** The main study aim was to identify the factors (demographic, occupational and health) associated to psychosocial stress in oncology nurses.

**Topic Significance and Study Purpose, Background, and Rationale:** Considering the complexity of health care demands of cancer patients, a number of studies have investigated some health problems associated to the health care work in oncology care - especially nursing workers that deal with this group of patients. Several studies have focused on the shortage of qualified professionals and also examined the prevalence of occupational stress on this special group of workers. The present study addresses the psychosocial occupational stress in registered nurses from the National Cancer Institute, a prestigious institution specialized on cancer care and research. Psychosocial stress was evaluated according to the effort-reward imbalance model.

**Methods, Intervention, and Analysis:** This research is part of a census conducted in the 18 largest public hospitals in the municipality of Rio de Janeiro/Brasil in 2011. Results presented here refer to the data collection conducted in one of these hospitals and included 211 subjects. Data collection was performed based on a comprehensive self-applied questionnaire. The outcome variable, psychosocial stress, was assessed according to the Brazilian short version of the effort-reward imbalance scale translated and adapted to Portuguese. This instrument included 16 items and three dimensions: effort (3 items), reward (7 items) and overcommitment (6 items). The present analyses do not consider the overcommitment dimension. Data analysis was based on a hierarchical model that describes the relationships between exposure variables and outcome. The hierarchical model included 3 groups of variable: Group#1 (socio-demographic factors); Group#2 (occupational factors). Group#3 (health related factors). The variables included in the hierarchical model were those that in the bivariate analysis presented  $p$ -value = 0.20. Group#1: sex, age, marital status; Group#2: type of Logistic regression analysis of socio-demographic, occupational and health conditions associated with higher ERI at work. Rio de Janeiro, 2011 employment contract, work schedule, management positions, have more than 10 people under supervision; to seek a new job; sickness absenteeism, thinking of leave nursing practice; Group#3: self-reported musculoskeletal disorders, sadness/depressive feelings.

**Findings and Interpretation:** The association between age and intention to leave nursing and high ERI remained significant throughout the hierarchical logistic regression model. In Group#1, it was observed that younger nurses are approximately three times more likely to have high ERI when compared to older nurses. The results were similar when the variables were adjusted for occupational characteristics (Group#2), showing that young people have the greatest chance of presenting high imbalance. Individuals who reported intention to leave nursing are approximately 12 times more likely to have high ERI when adjusted for occupational characteristics. When adjusting for variables related to health at Group#3, nurses who had the intention to leave nursing had approximately 13 times more likely to have high ERI.

**Discussion and Implications:** Our results show that younger nurses who reported intention to leave nursing are more likely to have psychosocial stress at work. The initial contacts of young professionals should include guidance to cope on emotional distress, commonly faced by nurses in oncology. In addition, they should be well trained to deal in daily care with the cancer patient. Stressors at work are risk to health, so many individual and organizational efforts should be considered to deal with such situation in the area of oncology.

## #64

**EXPLORING CANCER PATIENT'S SEXUAL HEALTH INFORMATION NEEDS.** Barbara Wenger, MS, RN, AOCNS®, CRNI, Kristin Leonardi-Warren, RN, ND, CNS, Regina Fink, RN, PhD, AOCN®, FAAN, Ian Neff, RN, BSN, OCN®, Michael Galbraith, PhD, RN, and Mary P. Mancuso, MA, all at University of Colorado Hospital, Aurora, CO

**Objective:** To identify three sexual health needs of cancer patients and describe two interventions that will address cancer patient's sexual health concerns.

**Topic Significance and Study Purpose, Background, and Rationale:** Many cancer patients and survivors experience physiological/psychological sexual health problems. Estimates range from 30-100% depending on cancer type and treatment. Sexual health concerns are frequently under diagnosed due to health care provider (HCP) lack of concern, information, or knowledge. Patients/family members are reluctant to raise

sexual health concerns due to fear, lack of knowledge, or embarrassment. A recent survey of our RNs indicated that 84% of respondents reported importance of discussing sexual concerns with patients, 80% lacked sexual health training, and 72% were uncomfortable discussing sexual health with patients. This knowledge gap prompted a sexual health needs assessment of cancer patients. The purpose is to explore and describe cancer patients' attitudes, beliefs, and informational needs about sexual health. Findings will be used to develop and implement culturally-competent resources to improve sexual health information access.

**Methods, Intervention, and Analysis:** A qualitative exploratory design was used to capture ambulatory adult oncology patient perspectives. After IRB approval, three 90-minute focus groups (male, female, and BMT) were facilitated using six qualitative questions. Participants were recruited through flyers, provider and self-referral. Focus groups were audiotaped and transcribed with participant permission. Qualitative responses were analyzed using content analysis. The research team combined responses into thematic groups, reconciled rival explanations achieving consensus.

**Findings and Interpretation:** Qualitative data were collected from 12 focus group participants. Common themes emerged: lack of psychological support from HCPs, uncertainty about treatment options, experiencing multiple losses (sexuality, body image, libido, "the way it was"), feeling rushed and unable to address sexual health concerns, and disappointment with HCPs not treating the whole person. Participants wanted access to timely information during treatment (start of new treatment, recurrence); involvement of significant others, support from peers and survivors; and educational webinars and brochures/handouts; and expert consultation (psychologist or sex therapist).

**Discussion and Implications:** As cancer survival rates improve, it is essential to address patient's concerns throughout the cancer experience making resources readily available. Study results are guiding comprehensive sexual health educational material development. Patients's sexual health information needs will be addressed by creating a public webpage and informational handout on available sexual health resources comprising print, online (YouTube), and reputable national/local sources.

**Underwriting or Funding Source Name:** University of Colorado Hospital Colleen Goode Foundation Grant

## #65

**EXTRAVASATION MEASUREMENT OF A NURSING SENSITIVE QUALITY OUTCOME FOR AMBULATORY ONCOLOGY NURSING PRACTICE.** Jeannette Jackson-Rose, RN, BSN, Roswell Park Cancer Institute, Buffalo, NY, Lisa Roman-Fischetti, RN, MSN, OCN®, Children's Hospital of Philadelphia, PA, and Judy Delmonte, MS, CPHQ, Roswell Park Cancer Institute, Buffalo, NY

**Objective:** Establish a national benchmark across participating cancer centers to identify the incidence of vesicant chemotherapy extravasations and develop best practices for patient care and staff, patient and family education.

**Topic Significance and Study Purpose, Background, and Rationale:** Chemotherapy Extravasation and its related tissue damage is identified in the ONS category of safety/preventable events. A Multi-center oncology consortium, the Comprehensive Cancer Centers for Nurse Sensitive Indicators (C3NSI), joined in a collaborative effort to identify the incidence and characterize chemotherapy extravasations which occur in the outpatient setting. The purpose is to develop best practices and establish a benchmark.

**Methods, Intervention, and Analysis:** The study was a quantitative retrospective analysis of intravenous extravasation

events which occurred in the ambulatory infusion centers of C3NSI facilities. Utilizing a structured data collection tool with defined definitions and drugs, de-identified information from clinical charts was extracted to include four Patient Outcomes: Intravenous extravasation occurrences, severity of extravasation, route of drug administration and patient follow-up. Data were submitted from participating facilities on a quarterly basis to one cancer center which manages the database. Descriptive statistical tools were used to analyze the data, providing graphical summaries which categorize and compare variables.

**Findings and Interpretation:** Currently there is no benchmark for chemotherapy extravasations with literature indicating a frequency of less than 1% of vesicant drug administrations. The aim of the study is to reduce patient harm by establishing best nursing practice for the prevention of extravasation among the cancer centers and create a national benchmark. Eleven NCI designated comprehensive cancer centers submitted data between October 2011 and June 2014. 24 chemotherapy drugs were included in the study. There were 376,447 doses administered and 342 extravasations. The overall extravasation rate was 0.09% with a range by individual hospital of 0.02% to 0.22%. Rate by individual drug was 0% to 0.39%. The highest number of extravasations (104) occurred with the drug paclitaxel, with 80,836 doses administered (0.13%). 94% of the extravasations occurred via peripheral route.

**Discussion and Implications:** The multi-center oncology consortium has succeeded in establishing a benchmark for vesicant chemotherapy incidence and demonstrated less than one-tenth incidence of the previously recommended threshold, the only measure which existed in the literature before the study. Future steps for this study include uniform classification of Vesicant and Irritant chemotherapy drugs, a preferred administration route, and a unified plan of action for staff and patient education.

## #66

**EDUCATIONAL NEEDS OF NON-ONCOLOGY NURSES REGARDING THE CARE OF CANCER SURVIVORS.** Joan Such Lockhart, PhD, RN, CORLN, AOCN®, CNE, ANEF, FAAN, Duquesne University, Pittsburgh, PA, Melinda Granger Oberleitner, DNS, RN, University of Louisiana at Lafayette, Lafayette, LA, Toni Felice, PhD, Oncology Nursing Society, Pittsburgh, PA, and Anna Vioral, PhD, RN, MEd, OCN®, BMTCN, Allegheny Health Network, Pittsburgh, PA

**Objective:** Describe five potential gaps in cancer care knowledge of non-oncology nurses (medical-surgical RNs) who care for cancer survivors in clinical settings not designated as oncology units.

**Topic Significance and Study Purpose, Background, and Rationale:** The literature lacks sufficient evidence regarding knowledge levels of non-oncology nurses regarding care of cancer survivors in non-oncology settings. This study, an extension of previous research investigating cancer content in nursing school curricula, examined potential gaps in cancer knowledge of non-oncology nurses (medical-surgical RNs) who care for cancer survivors in non-oncology settings as a first step in establishing educational and training needs.

**Methods, Intervention, and Analysis:** A cross-sectional non-experimental survey design was used with three phases: Phase 1 established content validity of a modified Cancer Nursing Curriculum Survey (CNCS) (ONS Project Team, 2010) to rate the depth/importance of 32 cancer concepts for clinical nurses. Phase 2 obtained CNCS input from a national pool of 331 oncology RNs who provided their perspective regarding the cancer survivor learning needs of medical-surgical RNs. Phase 3 obtained CNCS input from a national pool of 320 medical-surgical RNs who provided their perspective regarding their own cancer

survivor learning need and barriers. Data were analyzed using descriptive statistics to calculate mean concept scores with Kruskal-Wallis used to determine group differences.

**Findings and Interpretation:** Overall, cancer concept means were surprisingly similar between RN groups regarding depth (3.19/3.2) and importance (3.42/3.42) and interpreted as moderate/good depth and moderately important/important. Significant differences (0.00 to 0.04) were noted for 4 concepts for depth (diagnosing cancer; cancer surgery; radiation; oncological emergencies) and 8 for importance (cancer development; cancer biology; cancer statistics; cancer surgery; chemotherapy; radiation; major cancers; oncologic emergencies). Medical-surgical RNs rated all but two concepts (chemotherapy & oncological emergencies) higher than oncology RNs. Medical-surgical RNs (88.1%) cited top three barriers: cost of patient education resources (80%); cost of nurse CE (67%); and not a priority (61%).

**Discussion and Implications:** Results help to inform our understanding of gaps in survivor care knowledge in order to design and prioritize evidence-based educational resources for non-oncology nurses. As a result of the changing health care environment, the majority of long-term survivors are likely to transition to care provided by clinicians (physicians and nurses) with little experience in oncology. Implications related to the demands placed upon nurses regarding the needs of cancer survivors with concurrent chronic illnesses are staggering. Previous research validates survivors expect and want involvement from nurses in planning, communicating, and executing their care. Future research will focus on identifying educational needs of non-oncology nurses as perceived by cancer survivors themselves.

**Underwriting or Funding Source Name:** Supported by external funding obtained by the Oncology Nursing Society Education Department

## #67

**THE NEUROENDOCRINE TUMOR PATIENT EXPERIENCE: DATA FROM THE FIRST GLOBAL NEUROENDOCRINE TUMOR PATIENT SURVEY: A COLLABORATION BETWEEN THE INTERNATIONAL NEUROENDOCRINE CANCER ALLIANCE AND NOVARTIS PHARMACEUTICALS.** Catherine Bouvier, RN, NET Patient Foundation, Godalming, United Kingdom, John Leyden, MD, Unicorn Foundation, Mosman, Australia, Maia Sissons, MS, NET Patient Foundation, Godalming, United Kingdom, Teodora Kolarova, MS, APOZ and Friends, Sofia, Bulgaria, and Grace Goldstein, MA, Carcinoid Cancer Foundation, Inc., White Plains, NY

**Objective:** To raise awareness of the health burden of a neuroendocrine tumor (NET) diagnosis and to share patients' perspectives regarding their disease, interactions with health care professionals (HCPs), and educational needs.

**Topic Significance and Study Purpose, Background, and Rationale:** NETs remain poorly understood because of their rare presentation and heterogeneous nature. Although incidence is increasing, only a few small qualitative studies (N<20) document the NET patient experience. The International Neuroendocrine Cancer Alliance and Novartis collaborated on the first global NET patient survey. We present data on QoL and the NET patient perspective.

**Methods, Intervention, and Analysis:** A 25-minute online anonymous survey of NET patients from the Americas, Europe, Asia, and Oceania was conducted by Hall & Partners Health (February-May 2014) regarding NET diagnosis, disease impact/management, medical team interactions, knowledge/awareness levels, and information needs.

**Findings and Interpretation:** 1928 NET patients from >12 countries participated. NET types included gastroenteropancreatic (76%), lung/thymic (13%), and other/unknown (13%).

Most patients had G1/G2 (58%) functional (44%) disease. 71% reported moderate to significant negative impact of NETs on QoL, including overall energy levels (70%) and emotional health (60%). 52% were concerned about their NETs, and 47% reported being anxious/worried. NET patients felt well supported by their HCPs, particularly by nurses/nurse practitioners (NPs) (78%), although only 28% listed nurses/NPs as part of their medical team. Patients reported making several lifestyle and work changes following diagnosis, including diet modifications (58%), time/money for medical appointments (52%/51%), limited physical activity/social life (49%/43%), and days off work (49%). Of 22% of participants not employed because of medical disability, 82% stopped working because of NETs. 54% felt only somewhat or not at all knowledgeable about NETs, while 49% felt they did not have sufficient information regarding NETs after their diagnosis. Information regarding treatment side effects (80%) and appropriate management (78%) was seen as the most useful, along with resources for talking with HCPs (78%). Key improvements to help patients live with NETs included expanded access to a NET medical team/treatments (43%/46%), increased awareness of NETs (42%), and better understanding of how to manage disease/treatment-related symptoms (41%/37%).

**Discussion and Implications:** The first global NET patient survey demonstrated the significant burden of NETs and identified improvements to enhance patient care. Nurses/NPs are an underutilized resource for NET patients. The development of nursing skills/education in NETs is a priority anticipated to have a positive impact on patient QoL along with improved nurse/NP access.

**Underwriting or Funding Source Name:** Funded by Novartis Pharmaceuticals Corporation.

## #68

**PERFORMANCE STATUS, DISTRESS, QUALITY-OF-LIFE, AND SURVIVAL IN PATIENTS WITH ADVANCED CANCER REFERRED TO PALLIATIVE CARE.** Stephanie Gilbertson-White, PhD, ARNP, University of Iowa, Iowa City, IA, Heidi Donovan, PhD, RN, University of Pittsburgh, Pittsburgh, PA, Michelle Weckmann, MD, University of Iowa, Iowa City, IA, and Paula Sherwood, PhD, RN, FAAN, University of Pittsburgh, Pittsburgh, PA

**Objective:** Participants will be able to describe the performance status, distress levels, and quality of life scores of patients with advanced cancer 12-weeks after referral to palliative care.

**Topic Significance and Study Purpose, Background, and Rationale:** Patients with advanced cancer often need specialized palliative care (PC) for aggressive symptom management as their cancer progresses. The purpose of this study is to evaluate the feasibility of following patients with advanced cancer referred to PC for symptom management. The aims of the pilot study are to: 1) describe survival status at 12-wks post PC referral, and 2) compare time to PC referral, performance status, distress levels, and quality-of-life (QOL) at baseline across survival status groups.

**Methods, Intervention, and Analysis:** Patients (N=20) with advanced cancer newly referred to PC for symptom management were recruited. Date of cancer diagnosis, date of referral to PC, and survival status were abstracted from the medical record. The number of weeks was calculated from the date of cancer diagnosis to the date of PC referral. Palliative Performance Status (PPS) scale was used to measure performance status. Higher % scores indicate better performance status. Distress thermometer scores from 0-10 were assessed. Higher scores indicated higher distress. SF-36 was used to measure QOL. Higher scores indicate higher perceive QOL.

**Findings and Interpretation:** At 12-weeks post initial PC referral, 6 patients were alive, 8 patients were lost to follow-up,

and 6 patients had died. Missed appointments with PC or cessation of cancer treatments were primary reasons patients were lost to follow-up. Patients alive at 12-wks had the best PPS scores at baseline (mean=58%) and the shortest length of time between cancer diagnosis and PC referral (mean=81.5 wks). Patients lost to follow-up had the worst PPS scores at baseline (mean=44%) and the longest time to PC referral (mean=745 wks). Patients who died by 12-weeks had the highest distress scores at baseline. No differences were found on the SF-36 subscale scores or any clinical or demographic characteristics.

**Discussion and Implications:** Performance status was a strong predictor of survival status at 12-wks post PC referral. Patients with the longest time between diagnosis and PC referral were most likely to be lost to follow-up. All patients with advanced cancer reported significant declines in QOL. Further research is needed to understand how time to PC referral is associated with missed appointments or decisions to stop cancer treatments. Prospective research from the time of diagnosis with advanced cancer through the end-of-life is needed to better describe how performance status and QOL change over time as well as how PC can maintain performance status and QOL for as long as possible.

**Underwriting or Funding Source Name:** Sigma Theta Tau International / Hospice and Palliative Nursing Foundation

## #69

**TRANSLATING THE PATIENT REPORTED OUTCOMES MEASUREMENT INFORMATION SYSTEM (PROMIS) FROM THE BEDSIDE TO THE BENCH IN UNDERSTANDING CANCER-RELATED FATIGUE.** Chao-Pin Hsiao, RN PhD, Case Western Reserve University, Cleveland, OH; and Dan Wang, PhD, and Leorey Saligan, RN PhD, both at National Institute of Nursing Research, Bethesda, MD

**Objective:** Use PROMIS-F as a tool to measure fatigue symptom in a clinic setting.

**Topic Significance and Study Purpose, Background, and Rationale:** The Patient Reported Outcomes Measurement Information System (PROMIS) is a National Institutes of Health-funded initiative aimed to provide clinicians with state-of-the-art assessment of self-reported well-being. This prospective study explored the translational potential of PROMIS by investigating the association of PROMIS-fatigue scores reported by prostate cancer men receiving external beam radiation therapy (EBRT) and mitochondria-related gene expression.

**Methods, Intervention, and Analysis:** Fatigue and gene expression were measured before, at midpoint, and at completion of EBRT using the 7-item PROMIS-Fatigue short form and from whole blood cell RNA. The human mitochondria RT2 Profiler<sup>™</sup> PCR array system was used to identify differential expression of mitochondria biogenesis/bioenergetics-related genes. Mixed linear modeling estimated the changes in fatigue and gene expression over time and associations between gene expression and fatigue.

**Findings and Interpretation:** The mean PROMIS-Fatigue T-score of 25 subjects significantly increased at midpoint (49.02 + 5.29, p = 0.01) and completion of EBRT (48.22 + 6.84, p = 0.06), compared to baseline (44.87 + 5.89). Differential expression of four genes involved in mitochondrial fission (FIS1,  $\hat{\beta}^2 = -2.35$ , p < 0.001), bioenergetics (BCS1L,  $\hat{\beta}^2 = 1.30$ , p = 0.002), mitochondrial heme synthesis (SLC25A37,  $\hat{\beta}^2 = -2.44$ , p < 0.001), and mitochondrial outer membrane integrity (BCL2L1,  $\hat{\beta}^2 = -1.68$ , p = 0.002) were significantly associated with fatigue overtime during EBRT.

**Discussion and Implications:** PROMIS fatigue scores were associated with the genes of mitochondrial biogenesis and bioenergetics in prostate cancer patients during radiation therapy. Further investigation of the association of genetic-molecular

pathways and fatigue is warranted to establish the role of PROMIS-F as a tool for translational science and as an outcome measure for nursing intervention studies.

**Underwriting or Funding Source Name:** NIH NINR Intramural Research Program

## #70

**A RANDOMIZED TRIAL OF INTEGRATIVE IMAGERY TO REDUCE PAIN AND ANXIETY IN ADULT HEMATOLOGIC PATIENTS UNDERGOING BONE MARROW ASPIRATION AND BIOPSY.** Audrey Weisman, DNP, RN, ANP-BC, OCN®, North Shore University Hospital, Manhasset, NY, Denise Ramponi, DNP, FNP-BC, ENP-BC, FAANP, FAEN, Robert Morris University, Moon Township, PA, Nancy Mishanie, RN, North Shore University Hospital, Manhasset, NY, and Thomas W. Cline, MBA, PhD, Robert Morris University, Moon Township, PA

**Objective:** To determine the effectiveness of integrative imagery on pain and anxiety during a bone marrow aspiration and biopsy (BMAB) procedure.

**Topic Significance and Study Purpose, Background, and Rationale:** A bone marrow aspiration and biopsy (BMAB) is an invasive procedure commonly used for diagnosing and monitoring many hematological disorders. Pain is associated with the procedure, despite the standard use of local anesthetic. Anxiety prior to the BMAB can intensify the pain. Ensuring adequate management of pain and anxiety is a challenge. Complementary therapies such as integrative imagery, a specialized way to work with guided imagery where participants are involved in eliciting their own images while engaging in dialogue with the practitioner, may enhance the overall experience. The purpose of this study was to determine the effectiveness of integrative imagery on pain and anxiety.

**Methods, Intervention, and Analysis:** Anxiety was measured using the State Trait Anxiety Inventory (STAI). Pain was evaluated using the short-form McGill pain questionnaire (MPQ-SF), which included sensory and affective pain dimensions, present pain intensity (PPI) scale and a visual analogue scale (VAS). This study used a randomized controlled design. Thirty-five participants were randomized to one of two groups: patients who received the intervention with the standard procedure (I+S), or standard procedure alone (S). All participants completed the questionnaires before and after the procedure. Eligible subjects were 18 years of age and older with a hematological disorder requiring a BMAB.

**Findings and Interpretation:** Results showed no between group differences for anxiety, nor was pain level associated with anxiety. While it is expected that pain gets worse during a BMAB, between group differences are approaching significance related to pain. The visual analog scale (VAS) approached significance,  $t=1.63$ ,  $df=34$ ,  $p=0.10$ . VAS increased marginally less in the I+S group ( $M=4.75$ ) compared to S group ( $M=20.2$ ). Present pain intensity (PPI) did not quite reach significance,  $t=1.59$ ,  $df=33$ ,  $p=0.138$ . The increase in PPI was lower in I+S ( $M=0.250$ ) compared to S group ( $M=1.0$ ). However, repeat-procedure patients in the I+S group reported significantly less increase in VAS ( $M=6.89$ ), than those in the S group ( $M=27.25$ ), thus integrative imagery appears to differentially benefit repeat procedure patients.

**Discussion and Implications:** This study demonstrated the need to ensure proper management of pain and anxiety during BMAB to increase patient satisfaction. Integrative imagery did not eradicate pain, but it did reduce it in certain instances. Once patients are taught to utilize integrative imagery, the patient can safely return to their imagery process during subsequent procedures. This is a simple, effective and noninvasive way for nursing to encourage patients to relax during a stressful, uncomfortable procedure. Given the optimal environment,

integrative imagery can be an effective strategy for improving patient care. Patients's perspective of the intervention plays a key role in increasing patient satisfaction.

## #71

**EVALUATION OF ANOREXIA-CACHEXIA SYMPTOMS/ CONCERNS FROM ROMANA 2, A PHASE III TRIAL OF ANAMORELIN IN NON-SMALL CELL LUNG CANCER PATIENTS WITH CACHEXIA.** Cheryl Brewer, PhD, MSN, RN, and Amy Abernethy, MD, PhD, both at Duke University Medical Center, Durham, NC; David Currow, MD, Flinders University, Adelaide, Australia; Kenneth Fearon, MD, FRCS, Western General Hospital, Edinburgh, United Kingdom; John Friend, MD, Helsinn Therapeutics, Inc., Bridgewater, NJ; and Jennifer Temel, MD, Massachusetts General Hospital, Boston, MA

**Objective:** Participants will be able to describe efficacy and safety of the investigational ghrelin receptor agonist anamorelin in treating cancer anorexia-cachexia and improving quality of life in NSCLC patients with cachexia.

**Topic Significance and Study Purpose, Background, and Rationale:** Cancer-related anorexia-cachexia syndrome (CACS) is a multifactorial condition with high prevalence in non-small cell lung cancer (NSCLC) patients. CACS, characterized by decreased body weight (mainly lean body mass [LBM]) and appetite loss, can interfere with patients's tolerance/response to chemotherapy and leads to diminished quality of life and survival. Oncology nurses play a pivotal role in providing optimal assessments, symptom management and medication administration related to CACS. Standard effective treatments are lacking. Anamorelin HCl (ANAM), a novel investigational selective ghrelin receptor agonist, improved LBM, body weight, and symptoms in phase II trials. ANAM has the potential, as an integral part of the patient's treatment regimen, to significantly improve health-related quality of life (HR-QoL) outcomes.

**Methods, Intervention, and Analysis:** ROMANA 2 (NCT01387282) was one of two global, double-blind, phase III trials assessing ANAM efficacy/safety in NSCLC. Patients with unresectable stage III/IV NSCLC, ECOG 0-2 and cachexia (5% weight loss within prior 6 months or BMI <20 kg/m<sup>2</sup>), were randomized (2:1) to 100 mg ANAM or placebo, given daily orally for 12 weeks. Co-primary endpoints were change from baseline over 12 weeks in LBM (measured by DXA) and hand-grip strength (HGS). Secondary endpoints included change in body weight and assessment of HR-QoL including the anorexia-cachexia domain of the Functional Assessment of Anorexia/Cachexia Treatment (FAACT) and the Simplified Evaluation of Appetite (SEA; comprising 4 questions from FAACT).

**Findings and Interpretation:** ANAM increased LBM vs placebo (0.75 kg vs -0.96 kg;  $p<0.0001$ ) and mean body weight (0.95±0.4 vs -0.57±0.4 kg;  $p<0.0001$ ) but not HGS. Over 12 weeks, symptoms/concerns related to anorexia-cachexia were significantly improved in the ANAM vs placebo arm (change in FAACT anorexia-cachexia domain score: 3.48±0.9 vs 1.34±1.0;  $p=0.0016$ ; change in SEA score: 1.08±0.4 vs 0.41±0.435;  $p=0.0192$ ). Post-hoc analysis revealed that each individual item of the FAACT anorexia-cachexia domain favored ANAM vs placebo at Week 12, including symptoms of early satiety and appetite, and concerns related to weight and body image. In the ANAM arm, most frequent drug-related AEs included hyperglycemia (4.2%) and diabetes (2.1%).

**Discussion and Implications:** This phase III study demonstrated that ANAM treatment for 12 weeks was well-tolerated and improved LBM, body weight, and patient's symptoms/concerns related to anorexia-cachexia.

**Underwriting or Funding Source Name:** Helsinn



#72

**PREVALENCE AND IMPACT OF COMORBIDITY AMONG PATIENTS WITH BREAST CANCER.** Horng-Shiuann Wu, PhD, RN, and Jean E. Davis, PhD, RN, Goldfarb School of Nursing at Barnes-Jewish College, St. Louis, MO

**Objective:** To understand types of comorbid conditions commonly co-existing with breast cancer and the impact of cancer comorbidity on individuals's quality of life.

**Topic Significance and Study Purpose, Background, and Rationale:** Individuals with cancer are at higher risk for multiple comorbid medical conditions. Although the prevalence and impact of comorbidity vary by cancer type, studies consistently show the negative impact of comorbidity on cancer survival. It was found that comorbidity decreases the likelihood of receiving or completing cancer treatment and increases the risk of treatment complications. Relatively few studies have examined how comorbidity impacts these factors other than treatment decision and/or mortality among individuals who are undergoing cancer treatment. This analysis aimed to describe comorbidity occurrence and to investigate the impact of comorbidity on quality of life in a sample of breast cancer patients undergoing chemotherapy.

**Methods, Intervention, and Analysis:** This cross-sectional descriptive study enrolled 114 chemotherapy outpatients from urban and rural settings. Mean age was 51.3 ( $\pm 9.4$ ) years and majority were Black (63%) with stage I-III breast cancer (81%). Comorbid conditions were identified by chart review. Quality of life was self-reported using the European Organization for Research and Treatment of Cancer Quality of Life Questionnaire (EORTC QLQ-C30). A linear transformation was performed to standardize the raw scores. Descriptive statistics described the prevalence of co-existing conditions. Pearson correlations examined the associations between numbers of comorbidities and quality of life.

**Findings and Interpretation:** The majority (84%) of the participants had comorbid conditions (mean =  $2.5 \pm 2.1$  comorbidities). Among those who had comorbidities, most of them had 2 (26%) or 3 (25%) concurrent medical conditions other than cancer. The most common comorbid conditions were hypertension (prevalence 53%), following by gastrointestinal disorders (prevalence 24%), and hypercholesterolemia (prevalence 22%). Psychiatric comorbidities (anxiety or depression) were also common (prevalence 24%). Comorbidity was significantly associated with levels of functioning ( $p < 0.05$ ) and symptomatology ( $p < 0.01$ ). A greater number of comorbidities were associated with lower functioning, especially physical functioning ( $r = -0.31$ ,  $p = 0.001$ ). More comorbid conditions were associated with worse symptoms, especially fatigue ( $r = 0.26$ ,  $p = 0.007$ ) and dyspnea ( $r = 0.34$ ,  $p = 0.000$ ).

**Discussion and Implications:** This study showed that comorbidity is highly prevalent among breast cancer patients receiving chemotherapy. Information on comorbidities provides important information to facilitate individualized care planning for cancer patients who receive chemotherapy. Understanding how comorbidity affects individuals undergoing cancer treatment is needed to guide clinical practice.

**Underwriting or Funding Source Name:** Oncology Nursing Foundation/Novartis Nursing Research Grant

#73

**ELECTRONIC PRO-GENERATED SUPPORTIVE CARE PLANNING: PATIENT PERSPECTIVES.** Jeannine M. Brant, PhD, APRN, AOCN®, FAAN, Billings Clinic, Billings, MT, Karen Hirschman, PhD, MSW, University of Pennsylvania, Philadelphia, PA, Paul Jacobsen, PhD, Moffitt Cancer Center, Tampa, FL, Carrie Stricker, PhD, RN, University of Pennsylvania, Philadelphia, PA

**Objective:** To describe patient perspectives about a novel electronic platform, which generated an individualized supportive care plan based on patient-reported symptoms and clinical data.

**Topic Significance and Study Purpose, Background, and Rationale:** Evidence-based supportive care should be integrated across the cancer continuum, and include proactive symptom assessment and management strategies. Electronic patient-reported outcome (ePRO) platforms have proliferated, but adoption has been slow. Supportive care pathway technologies are only just emerging. The goal of this study was to explore patient experiences with a novel electronic platform (On Q Care Planning System) that collects ePRO and clinical data to generate a personalized, algorithmically-driven supportive care plan (CP). Plans are tailored to the patient's symptoms and localized healthcare resources to promote self-management and patient-provider communication. Usability, SCP perceptions, and overall satisfaction were explored.

**Methods, Intervention, and Analysis:** Qualitative interviews were conducted with 12 patients (6 breast, 6 gynecological cancers) selected from convenience samples at two NCI-affiliated institutions: one in the Western U.S., one in the Southeastern U.S. Each patient received a CP at one or more time points during and after cancer treatment. Content analysis was conducted by two trained qualitative researchers; codes were generated, cross-checked and revised as needed; themes were identified and emerged with ongoing discussion.

**Findings and Interpretation:** Using the CP as a Resource was a predominant theme. Patients referred back to the plan to remember provider recommendations, manage symptoms, review CP suggested websites and resources, and share with other health care providers. Timing of CP delivery was an important theme, especially for those who received the CP after start of treatment; these women expressed preference for having it earlier. Utility for Severe Symptoms was another theme; women stated that CPs would be most useful if they experienced severe or bothersome symptoms. Research Nurse Guidance to assist filling out the electronic questionnaires was listed as highly important in adapting to the technology. Women provided feedback for platform enhancement including visual appeal and readability, care plan elements, and tailoring to rural community resources. Satisfaction was high overall.

**Discussion and Implications:** The On Q CPS is a novel technology developed to improve supportive care in patients with cancer. Satisfaction with and use of the platform was high, but further studies are needed to determine the right timing and dose of the supportive care plans and whether CPs improve patient outcomes.

#74

**COMMUNICATION BETWEEN THE PATIENT, CAREGIVER AND PHYSICIAN IN TREATMENT DECISION MAKING FOR LOCALIZED PROSTATE CANCER: DEVELOPING A THREE-DIMENSIONAL CODING SYSTEM.** Jinbing Bai, PhD(c), MSN, RN, Lixin Song, PhD, RN, and Merle Mishel, FAAN, PhD, RN, all at University of North Carolina at Chapel Hill, Chapel Hill, NC

**Objective:** Learn about the coding system to assess the communication between the patient, family caregiver(s) and physician(s) during treatment decision-making consultations for newly diagnosed localized prostate cancer (LPCa).

**Topic Significance and Study Purpose, Background, and Rationale:** Patient-physician communication during the treatment decision-making consultation for LPCa influences patients' understanding of treatment options and their expression of values and preferences and, ultimately, the type of treatment they choose/receive. Analysis of real-time treatment consultations

can more accurately assess communication elements relevant to patient participation in decision-making. Yet coding of patient-physician communication is lacking for LPCa. Therefore, we developed and pilot tested a new coding system that captures the patient-physician communication during treatment decision-making consultations.

**Methods, Intervention, and Analysis:** To develop this new coding system, we followed the 5-step procedure recommended by Backman & Gottman (1997): defining the purpose; deciding the feature of codes; formulating the preliminary coding system and constructing operational definitions; staff training and preliminary testing; and finalizing and testing the coding system in actual dataset. We used inductive and deductive methods to develop and refine the coding system. We first deductively developed preliminary coding system based on the National Comprehensive Cancer Network guideline for LPCa and decision-making and communication literature. We then reviewed 13 audiotaped interviews of men in the control group of a larger study to examine the codes and refined the system inductively. Finally we tested the refined coding system and its reliability using 53 transcribed consultations.

**Findings and Interpretation:** A three-dimensional communication coding system was developed: (1) The communication content dimension included 5 domains with 23 codes relevant to treatment decision-making for LPCa: patient's health history (4 codes), patient's survival/mortality (2 codes), treatment options (4 codes), potential treatment-related risks (12 codes) and patient treatment preference (1 code); (2) the communication behavior dimension included 3 codes: information giving, information seeking, and information verifying and/or clarifying; and (3) the communicator dimension included 3 codes: patient, physician, and family caregiver(s). The inter-rater coding agreement for the 53 consultations was 95%, indicating excellent reliability.

**Discussion and Implications:** The new coding system is a reliable tool to assess the communication between patients, family caregivers and physicians in treatment decision-making for LPCa, i.e., communication contents, behaviors and interactions between communicators. Given these are important components of treatment decision-making consultations, this coding system can be used to examine patient participation in clinical encounters.

#### #75

**PATIENT PARTICIPATION IN TREATMENT DECISION MAKING FOR LOCALIZED PROSTATE CANCER.** Lixin Song, PhD, RN, Jibing Bai, MS, Mark Tole, PhD, RN, and Merle Mishel, PhD, FAAN, all at University of North Carolina at Chapel Hill, Chapel Hill; and Chip Bailey, PhD, RN, Duke University, Durham, all in North Carolina

**Objective:** Describe patient participation in decision-making related to treatment for localized prostate cancer (LPCa) and identify strategies to enhance participation for newly diagnosed men.

**Topic Significance and Study Purpose, Background, and Rationale:** Evidence suggests that patients with LPCa who participate in consultations with their treating physicians make more informed treatment decisions and achieve higher satisfaction and quality of care. The purpose of this study was to analyze transcripts of real-time LPCa treatment consultations and to describe the degree of patient participation in five domains of treatment decision-making, including health history, survival/mortality, treatment options, treatment risks, and treatment preferences.

**Methods, Intervention, and Analysis:** This qualitative study was part of a randomized trial that focused on decision-making for newly diagnosed men with LPCa. Data for this study included transcribed audiotapes of treatment consultations for the

53 men enrolled in the control group of the larger study. Using manifest content analysis, fragments of data in each transcript were categorized by the five domains of treatment decision making and four categories of patient participation, including ~none,<sup>TM</sup> defined as treatment topic not discussed; ~low,<sup>TM</sup> defined as patient listening only; ~moderate,<sup>TM</sup> defined as patient asking questions, and ~high,<sup>TM</sup> defined as patient and physician actively interacting. When all data were coded, thematic analysis was used to cross-tabulate data coded by decision making domain and patient participation. The full research team resolved coding discrepancies.

**Findings and Interpretation:** Patient participation was: 1) ~moderate to high<sup>TM</sup> in discussions of health history; 2) ~low to moderate<sup>TM</sup> in discussions of survival/mortality; 3) mixed in discussions of treatment, where it was ~moderate to high<sup>TM</sup> in discussions of surgery and radiotherapy but ~none to low<sup>TM</sup> in discussions of watchful waiting and hormonal therapy; 4) ~low<sup>TM</sup> in discussions of treatment risks, though discussions of hormonal and bowel side effects were often not observed; and 5) ~moderate<sup>TM</sup> in discussions of treatment preferences.

**Discussion and Implications:** Findings suggest opportunities for increasing patient participation in treatment decision-making. Research is needed to confirm these findings in a larger sample to better understand the treatment decision-making process and improve patient participation and clinical outcomes.

**Underwriting or Funding Source Name:** UNC Lineberger Comprehensive Cancer Center CTSA/TraCS KL2TR00110

#### #76

**AN ANIMAL-ASSISTED INTERVENTION PILOT PROGRAM IN AN AMBULATORY ONCOLOGY CLINIC SETTING.** Marie Swisher, DNP, RN, APRN-CNS, CWCN, AOCNS<sup>®</sup>, Johns Hopkins Hospital, Baltimore, MD

**Objective:** Readers will be able to state at least two benefits to patients participating in an animal assisted intervention.

**Topic Significance and Study Purpose, Background, and Rationale:** Cancer patients can experience distress and anxiety from being diagnosed with a life threatening disease, prolonged cancer treatments, and impairment of physical functioning from their disease and this can negatively affect their comfort. Research findings and anecdotal reports support that Animal Assisted Interventions (AAI) are beneficial for patients with non-cancer health issues and for patients with cancer. Animals historically have been incorporated into support programs for humans in healthcare settings, i.e., hospitals, nursing homes, and rehabilitation facilities. Nurses use their knowledge of evidence based practice (EBP) to translate research findings into practices that can benefit their patient populations. The primary objective of this research was to assess the satisfaction of adult solid tumor oncology ambulatory care patients following participation in an AAI pilot.

**Methods, Intervention, and Analysis:** The Institutional Review Board-approved research project used a non-experimental design with convenience sampling. Fifty-six subjects were approached from the ambulatory cancer center treatment area waiting rooms. Subjects wishing to participate were screened and consented (n=15). The AAI activities were determined by the patient within the current approved Hospital AAI policy. The individual AAI sessions were planned for up to ten minutes per patient preference. The subjects were asked to perform hand hygiene using soap and water before completing pre- and post- AAI surveys. Patient satisfaction was measured using a Likert scale. Quantitative data were analyzed using a paired-samples t-test to determine the effect of the AAI on subjects<sup>TM</sup> scores on the modified state-six question State Trait Anxiety inventory (6-STAI) that has documented reliability and validity. Qualitative data regarding the perceived benefit of an AAI pre- and post-intervention was collected using a tool with reported validity and reliability.

**Findings and Interpretation:** All subjects stated that they were satisfied following the AAI, with 87% of subjects stating they would again participate. There was a statistically significant decrease in 6-STAI scores. These findings were consistent with prior published research.

**Discussion and Implications:** Integrating an EBP-supported activity, such as an AAI for adult solid tumor cancer patients in an ambulatory healthcare setting, can have a positive effect on patient satisfaction and anxiety levels in this population.

**Underwriting or Funding Source Name:** American Cancer Society

#77

**DEVELOPING AN INSTRUMENT THAT MEASURES ADOLESCENT READINESS TO ENGAGE IN END-OF-LIFE DISCUSSIONS.** Cynthia Bell, PhD, RN, Wayne State University, Detroit, MI, and Pamela Hinds, PhD, RN, FAAN, Children's National Health System, Washington, DC

**Objective:** Describe the process of generating items for a preliminary Readiness Instrument from conceptually organized qualitative data and evaluate item and scale validity based on the content validity index.

**Topic Significance and Study Purpose, Background, and Rationale:** For the one in five adolescents living with incurable cancer, providing quality care and effective support involves ongoing communication with health care providers; however, the dualism of hoping for a cure while confronting the possibility of death creates a changing level of adolescent readiness to engage in end-of-life (EOL) discussions. Likewise, initiating ongoing EOL discussions can be difficult for clinicians who fear upsetting adolescents or are uncertain of the best timing to initiate such conversations. EOL preparedness, although not fully explicated in pediatric literature, is an iterative process of becoming cognitively and emotionally ready for the possibility of death through ongoing communication and activities. Methodological challenges exist in EOL research including the lack of valid, reliable patient-reported outcome measures, responsive to change across time. The purpose of this study is to develop items for a valid and reliable readiness instrument that captures the dynamic nature of adolescent readiness to engage in EOL preparedness discussions in a clinical setting.

**Methods, Intervention, and Analysis:** A thorough literature review of Readiness (awareness, acceptance, and willingness) was conducted. Items were generated from conceptually organized qualitative data from interviews with seriously-ill adolescents. Two nurse researchers independently extracted data to form instrument items, guided by conceptual definitions as described by Hinds (1988, 1990 & 1999). Items were evaluated for representativeness, clarity and comprehensiveness to determine content validity (Grant & Davis, 1997).

**Findings and Interpretation:** Seven content experts provided expertise on structural elements and suggested item revisions to increase clarity. Items were deleted if Content Validity Index was lower than 0.78 resulting in an acceptable interrater agreement. The Scale Content Validity Index (S-CVI) was calculated by averaging the proportion of items rated relevant across experts divided by the number of experts. The average congruency percentage should be .90 (Polit & Beck, 2006). For the three domains of Readiness the S-CVI were: Awareness .91 (14 items), Acceptance .94 (15 items), and Willingness .96 (26 items).

**Discussion and Implications:** Determining adolescent readiness to engage in discussions is an important oncology skill and could be best supported by having a clinically useful research instrument. Adolescent input and interdisciplinary collaborations are needed to examine how the instrument will guide actual communication.

**Underwriting or Funding Source Name:** ONS Foundation through unrestricted Grant from Genentech, Inc.

#78

**ASSESSING DISTRESS IN HOSPITALIZED CANCER PATIENTS.** Heather Stonelake-French, MS, APRN, CNS, AOCNS®, Brent Moos, LICSW, Carol Brueggen, MS, APRN, CNS, AOCNS®, Erin Gravemann, LICSW, Amy Hansen, MS, APRN, CNS, OCN®, and Jeanne Voll, MS, APRN, CNS, Mayo Clinic, Rochester, MN

**Objective:** Describe categories of distress experienced by the hospitalized adult patient with cancer.

**Topic Significance and Study Purpose, Background, and Rationale:** Higher levels of distress in cancer patients correlate with decreased medical adherence, reduced quality of life, greater desire for death, reduced survival and increased length of hospital stay. While the prevalence of distress has been estimated at 40% or greater, we know little about the level of distress in hospitalized cancer patients or factors that exacerbate or alleviate it. To better address the needs of these hospitalized patients, a research team consisting of Clinical Nurse Specialists and Social Workers characterized patients' level of distress and explored strategies that patients currently use to manage distress, as well as desired resources.

**Methods, Intervention, and Analysis:** We conducted a survey of adult cancer patients hospitalized at a large Midwestern tertiary hospital using the National Cancer Care Network® (NCCN®) 10-point Distress Thermometer and problem checklist at one random point in time during patients' hospital stays. We collected demographic data and responses to open-ended questions regarding present and future distress management strategies. Open-ended question responses were analyzed using content analysis. A team approach was used to develop and validate themes, reaching consensus on themes. Specific comparisons among qualitative categories and distress scores and demographics will be detailed.

**Findings and Interpretation:** 185 patients participated over a 7-month period. 38% rated their distress at 0-3, 33% at 4-6, and 29% at 7-10. Strategies patients currently used to manage distress were categorized as Taking Charge (gathering information, self-care, self-talk, normalizing, and distraction) and Embracing Help (people/support system and spirituality). Strategies patients would find helpful involved Quality of Life (symptom management, integrative therapies, distraction, sleep/rest, physical activity, psychosocial support) and Relationship with Care Team (communication/information, care compliments, care concerns). Findings resonate with current practice.

**Discussion and Implications:** Study results will assist in implementing practices that enhance patient care, as well as address nationally established psychosocial care objectives and NCCN® distress screening standards. By assessing distress and categorizing open-ended responses, nurses and others can develop and refine specific patient-centered interventions to alleviate distress in the hospitalized cancer patient. These findings could serve as a template for focused distress assessment and research identifying specific interventions to provide evidence for best practices.

**Underwriting or Funding Source Name:** Funding: Saint Marys Hospital Sponsorship Board

#79

**CULTURAL SENSITIVITY IN ACTION: RESULTS AND REALITIES OF LEADING AN ONCOLOGY NURSE-SPONSORED SUPPORT GROUP FOR KOREAN WOMEN.** Jane Choi, RN, and Keum Rah, RN, both at UC Irvine Health Chao Family Comprehensive Cancer Center, Orange, CA

**Objective:** Delineate our ten-year experience in facilitating a unique support intervention for Korean-speaking women with cancer.

**Topic Significance and Study Purpose, Background, and Rationale:** The United States cultural mosaic is undergoing dramatic change. In the coming decades, it is projected that the number of Caucasians will decrease and there will be a doubling of both Asians and Hispanics. Hence, as the U.S. demographic becomes increasingly diverse, so will the face of cancer. Support services must always be tailored to the unique needs of the patient and family. Patients who are recent immigrants are highly vulnerable, hence culturally sensitive cancer care must address language, information-giving, health beliefs, treatment acceptance, use of complementary approaches, nutrition, family roles, and relationships with health care providers.

**Methods, Intervention, and Analysis:** In 2004, acknowledging the isolation that many Korean women felt during chemotherapy, two Korean oncology nurses began a monthly support initiative. Sensitive to cultural beliefs, they chose to call the meeting a ~Korean Tea Party™ rather than a support group. Each one and a half hour meeting (usually with 6 to 8 women) consists of time for the women to share their treatment experiences and guest speakers are invited (i.e., pharmacists, oncologists, dieticians, art therapist) as are the women's spouses.

**Findings and Interpretation:** Since the program's inception, 955 women have participated. Success factors include: the women who participate are highly engaged by giving each other reminder calls prior to meetings and arranging carpools; when a member dies, flowers are sent and the entire group of women survivors attend the funeral together; food sharing, a phenomenon central to Korean culture, is included; social times (i.e., holiday parties) are planned; a nurse and one of the attendees co-facilitate meetings; by having sessions at the cancer center, the women feel highly supported by the organization. Participants complete evaluations and results have focused on three themes: peer support from other women was invaluable; discussions with other enhanced confidence in managing symptoms; and, information shared was very practical and hence highly useful outside of the group setting.

**Discussion and Implications:** By sharing our enduring experience with the provision of this support resource for Korean women with cancer, other oncology nurses may be empowered to initiate a similar intervention in their respective communities.

## #80

**ADHERENCE TO ORAL ANTINEOPLASTIC AGENTS IN A DIVERSE PATIENT POPULATION.** Jean Ellsworth-Wolk, MS, RN, AOCNS®, Susan Dunson, MSN, RN, OCN®, Barbara Thoman, BSN, RN, OCN®, Patricia O'Reilly, MSN, RN, ANP, Mary Smekar, MSN, RN, NP, and Sandra Siedlecki, PhD, RN, CNS, all at the Cleveland Clinic at Fairview Hospital, Cleveland, OH

**Objective:** To identify individual patient factors that affect adherence of oral antineoplastic agents in a community cancer center.

**Topic Significance and Study Purpose, Background, and Rationale:** There is a change in paradigm from chemotherapy administered in infusion centers or physician offices to oral antineoplastic agents self-administered by patients at home. Many established safeguards for infusion chemotherapy are lacking for oral agents. Adherence is a particular challenge with published rates as low as 20%. Much of the adherence research in oncology has focused on hormonal agents in breast cancer treatment. There is minimal research focusing on the increasing numbers of antineoplastic and biotherapy agents. The purpose of this study was to determine individual patient factors impacting oral antineoplastic adherence. This study addresses the ONS Research Agenda by attempting to understand predictors of adherence. The responsibilities of coordinator and educator of oral antineoplastic agent therapy have become integral to the role of oncology nurse.

**Methods, Intervention, and Analysis:** This descriptive correlational study included a convenience sample of 100 patients on oral antineoplastic agents for at least 6 weeks. Adherence was assessed using the Modified Morisky Adherence Questionnaire. Independent variables included mood, health literacy, medication regimen complexity, medication satisfaction and demographic variables. Quantitative data analysis included simple descriptive statistics, chi-square analysis to examine differences in adherence scores for demographic variables and multiple regression to determine what factor or combination of factors are most predictive of adherence to an oral antineoplastic agent regimen. All tools had acceptable validity and reliability.

**Findings and Interpretation:** Major findings included evidence of a positive association between medication satisfaction and adherence and a significant negative association between the depression and adherence as measured by the Modified Morisky Questionnaire ( $p=0.024$ ). Demographics, health literacy, and medication regimen complexity were not associated with adherence.

**Discussion and Implications:** The study findings indicate that the presence of a depressed mood may impact a patient's adherence with their oral antineoplastic agents. This variable is identified as a potential barrier to medication adherence in many research studies. Assessment of a patient's mood prior to and during oral cancer treatment may be necessary to support adherence. Future studies could address outcomes from the appropriate psychosocial management of patients during cancer treatment.

**Underwriting or Funding Source Name:** NURF award from Cleveland Clinic Nursing Research Department

## #81

**AN ONCOLOGY NURSE-LED CLINICAL TRIAL REFERRAL SYSTEM: A PARADIGM TO OPTIMIZE INTERDISCIPLINARY COLLABORATION, COMMUNICATION AND INTEGRATION OF INFORMATION SYSTEMS TO ENHANCE EFFICIENCY AND PATIENT CONVENIENCE.** Jennifer Winkelmann, RN, BSN, OCN®, CCRP, Megan Stasi, RN, BSN, OCN®, Katherine Kargus, RN, BSN, OCN®, RuthAnn Gordon, RN, MSN, OCN®, and Dorothy Dulko, PhD, AOCNP®, all at Memorial Sloan Kettering Cancer Center, New York, NY

**Objective:** Research has demonstrated that determining trial eligibility is associated with significant non-reimbursable time, effort, and cost. Integrating Information Systems and virtual assessment may decrease lost resources and increase trial accrual.

**Topic Significance and Study Purpose, Background, and Rationale:** Successful clinical trial accrual requires sites to identify and screen patients within specific time frames. Screening is still done primarily by manual data review. Oncology nurses are integral in ensuring accurate eligibility evaluation.

**Methods, Intervention, and Analysis:** A pilot of virtual eligibility screening at an NCI-designated Cancer Center was planned for August 1, 2014-January 30, 2015. A referral team of three oncology research nurses, a research operations manager, and a medical oncologist was formed. Referrals were made via computerized physician order entry. In collaboration with Information Systems, key data elements were identified and collated into a daily automated report including co-morbidity, performance status, labs, and tumor mutations. Virtual assessment was performed by research nurses and confirmed by the principal investigator. Once a patient met initial eligibility review, the research nurse informed the referring physician and the patient was offered an appointment to discuss the trial. A limited waiver from the Institutional Review Board was obtained to allow for screening.

**Findings and Interpretation:** There were 194 referrals from August 1, 2014-November 30, 2014 resulting in 100 clinic

visits (52% of referrals). There were 206 visits for 242 referrals (85%) during the prior seven months. Preliminary data shows although there were less visits, there was an increase in percentage of patients (31% versus 47%) who consented and started on protocol during the pilot. The average number of days from first visit to consent decreased from an average of 18 to 4 days and the number of days from consent to starting treatment decreased by 50%. The percentage of patients with genetic profiling at the time of clinic appointment increased from 30% to 35%, with this number trending up to 50% for December 2014.

**Discussion and Implications:** Identifying eligible patients represents an essential part of the protocol accrual process. Oncology nurses are integral to this effort. They provide clinical insight, patient care expertise and are well positioned to optimize interdisciplinary communication and streamline eligibility screening. Virtual assessment of key eligibility criteria with integration of electronic data capture represents a new paradigm to enhance expeditious recruitment, completion, and translation of evidence and optimizes finding trials appropriate to patients'™ medical and personal condition.

## #82

**SAFETY AND COMPASSION: CHEMOTHERAPY TRAINING AND COMPETENCY WITH SIMULATION WITH ACTOR PATIENTS.** Melissa Jo Powell, BSN, MS, MHPE, RN-BC, Northside Hospital, St. Petersburg; William Troy, BSN, OCN®, and Dragica Katic, BSN, OCN®, both at Doctors Hospital, Sarasota; and Andrew Upton, MSN, CEN, RN, and Tammy Cole, RN, both at Northside Hospital, St. Petersburg, all in Florida

**Objective:** Evaluate the benefits, challenges, and opportunities associated with conducting chemotherapy simulation with standardized patient actors for training and competency validation.

**Topic Significance and Study Purpose, Background, and Rationale:** Small community based hospitals that administer chemotherapy often find themselves struggling to train and validate competency in chemotherapy administration with nurses. Simulation-based nursing education and training is a widely accepted way of teaching nurses. Questions remain unanswered as it relates to using simulation for validation of competency in chemotherapy administration and communication skills with patient's with cancer (Crannell, 2012 and Carreon, 2012). Having multiple learners in single events may also make it difficult to validate 2 learners at a time (Muehlbauer, Parr and Perkins, 2012) As a hospital of 288 certified beds seeking to improve the training and validation of nurses administering chemotherapy, an interdisciplinary team developed an innovative clinical skills education and competency program using high fidelity simulation with standardized patients. To enhance training and verify nursing competency in the ONS standards for safe chemotherapy administration. Additional topics included communication tools on relationship centered care.

**Methods, Intervention, and Analysis:** A total of 20 RNs were trained using a blended approach of online oncology nursing content and two 8 hour simulation sessions. The simulation and skills lab included standardized patient simulations with learning objectives centered around and including key safety skills, communication skills and competencies needed for the practice of oncology nursing. The nurses practiced chemotherapy administration and newly learned communication tools for improving the patient experience. Students were challenged to apply safety principles in every simulation encounter. The stations consisted of the following theme: A chemo spill station with Cytosan, rituximab with a hypersensitivity reaction, infusion of Adriamycin, and first time administration of cisplatin. Throughout the stations the students were assessed with a chemotherapy simu-

lation checklist based on the learning objectives. Program evaluation: Students exhibited measurable growth in safety awareness and competence to administer chemotherapy as assessed by station subject matter experts. Student reflections in debrief comments demonstrated a greater awareness of the safety steps needed in chemotherapy administration. In debrief a consistent theme was considered by learners that caring behaviors towards patients was an important aspect of chemotherapy as well as an important skill to grow with the clinical skills of chemotherapeutics.

**Findings and Interpretation:** While most learners demonstrated empathy and understanding, there were some learners who struggled with responding therapeutically to patients who verbalized anxiety or cried. It is unclear if this exercise truly identified learners who do not possess the ability to communicate empathetically under real bedside situations. The simulation events were constructs that may or may not be valid in the real setting. Therefore using these as competency verification would not be valid (Decker et al., 2011) until more rigorous validity testing is done to use for competency validation. In the debrief learners were encouraged to identify areas of opportunity and growth. Some expressed a desire to have more communication skill training.

**Discussion and Implications:** Using simulation to validate chemotherapy competence is a future area of development in this area of specialty nursing. Little work has been done to assess and develop communication skills in terms of competency. Developing a validated standardized patient simulation checklist for chemotherapy administration performance is important to the specialty (Crannell, 2012). Once there is agreement across oncology nurse educators of what are specific critical communication behaviors necessary for oncology nurses, an approach can be used to assess and provide training scenarios designed to meet this performance feature in oncology nurses. Valid competency assessment would follow as a means to ensure that oncology nurses are competent to provide therapeutic communication. Carreon, N., Sugarman, C., Beener, E., & Agan, D. (2015). Creating and Standardizing Annual Chemotherapy Competencies Throughout a Healthcare System. *Journal for Nurses in Professional Development*, 33(1), 35-39. Crannell, C. (2012, January). Chemotherapy administration: Using simulation case-based scenarios to assess chemotherapy competency. *In Oncology nursing forum* (Vol. 39, No. 1, pp. 19-22). Oncology Nursing Society. Decker, S., Utterback, V. A., Thomas, M. B., Mitchell, M., & Sportsman, S. (2011). Assessing continued competency through simulation: A call for stringent action. *Nursing education perspectives*, 32(2), 120-125. Muehlbauer, P. M., Parr, M. B., & Perkins, A. K. (2013). Using simulation to assess chemotherapy competency. *Clinical journal of oncology nursing*, 17(4), 392-396.

## #83

**AN EVALUATION OF NECESSITY OF PRE-MEDICATION FOR BLOOD TRANSFUSION.** Yuki Asakura, PhD, RN, CNS, OCN®, University of Colorado Hospital, Aurora, CO, Kirby DiBerardino, RN, BSN, San Juan Regional Medical Center, Farmington, NM, and Mary Hendrickson, RN, BSN, OCN®, University of Colorado Hospital, Aurora, CO

**Objective:** To be able to understand risks of premedication for blood transfusion, prevalence of occurrence of blood transfusion reaction in patient with cancer, and un-necessity of pre-medication prior to blood transfusion.

**Topic Significance and Study Purpose, Background, and Rationale:** Blood transfusions are an essential part of cancer treatment, including treatment for patients receiving bone marrow transplants. Specifically, bone marrow transplants are not possible without blood transfusions. While frequent transfusions are unavoidable, minimizing the chance of transfusion reaction is of

particular concern for oncology nurses. Empirically, pre-medication prior to blood transfusions has been used for oncology patients much more frequently than for other patient populations ( $p < 0.001$ ). However, side effects of frequently used pre-medications, such as acetaminophen and diphenhydramine, increase risks for fall from somnolence and masking fever, which can be the only sign of infection for neutropenic patients. These adverse effects are a major concern because of oncology patients' low platelet and neutrophil counts. The purpose of this review was to determine the necessity of pre-medication prior to blood transfusions to justify its use or non-use.

**Methods, Intervention, and Analysis:** We reviewed the prevalence of transfusion reaction before and after the discontinuation of protocol to use pre-medication for our patients, to evaluate efficacy of pre-medications. Data were obtained from the University of Colorado Hospital blood bank. Number of transfusions dispensed and number of transfusion reactions were obtained from the blood bank. Additional chart review was performed for patients who had transfusion reaction. Total sample size was  $N = 34337$ , and 0.003% of patients had reaction ( $n = 103$ ). Among those who had transfusion reaction, 64.4 percent of the patients were oncology or bone marrow transplant patients, and it is obvious that preventative and intervention skills are more important for oncology nurses. Chi-square statistics were calculated for the data analysis due to the large sample size.

**Findings and Interpretation:** This analysis revealed that prevalence of adverse reaction to transfusion did not change ( $p = 0.23$ ) while patients received much less pre-medication after the protocol change ( $p = 0.006$ ). This result indicates the evidence does not support efficacy of pre-medications.

**Discussion and Implications:** The implication for oncology nurses would be that no use of pre-medication prior to blood transfusion is recommended because it is not effective in preventing transfusion reaction. Also, avoiding use of these pre-medications can reduce risk of side effects that can be especially harmful for oncology patients.

## #84

**PICTURES WORTH THOUSANDS OF WORDS: SYMPTOM PERSPECTIVES OF ADOLESCENTS AND YOUNG ADULTS WITH CANCER.** Jeanne Erickson, PhD, RN, AOCN®, University of Wisconsin–Milwaukee, Milwaukee, WI, Kristin Stegenga, PhD, RN, CPON, Children's Mercy Hospital, Kansas City, MO, Catherine Macpherson, PhD, RN, CPON, Seattle Children's Hospital and University of Washington, Seattle, WA, Lauri Linder, PhD, APRN, CPON, University of Utah and Primary Children's Hospital, Salt Lake City, UT, Suzanne Ameringer, PhD, RN, Virginia Commonwealth University, Richmond, VA, and Nancy Woods, PhD, RN, FAAN, University of Washington, Seattle, WA

**Objective:** Describe how an iPad app based on a heuristic approach can be used by adolescents and young adults with cancer to self-report symptoms and symptom clusters.

**Topic Significance and Study Purpose, Background, and Rationale:** Oncology nurses need resources and evidence to prevent and relieve multiple co-occurring symptoms in adolescents and young adults (AYAs) with cancer. The symptom experiences of AYAs are likely to be different from older and younger patients because of the unique cancer epidemiology of this age group as well as their developmental stage. The Computerized Symptom Capture Tool (C-SCAT) is an iPad app that was developed by nurses to explore symptoms from the unique perspective of AYAs through a combination of graphical images and free text responses, based on a heuristic approach. With C-SCAT, AYAs can report symptoms, indicate relationships between symptoms, group symptoms together in clusters, and indicate priority symptoms. The purpose of this study was to

describe symptoms and symptom clusters from the perspectives of AYAs with cancer using the C-SCAT.

**Methods, Intervention, and Analysis:** In this cross-sectional, descriptive study, data were collected from a convenience sample of 72 AYAs with cancer (57% male, median 18.5 years, range 13–29 years) who were receiving chemotherapy at 5 clinical sites. Data from the C-SCAT were analyzed using descriptive statistics, visual analysis techniques, and content analysis to reveal symptoms and symptom clusters. Research team members reached consensus on identification of themes and codes.

**Findings and Interpretation:** AYAs reported a median of 8 symptoms (range 1–21), and 90% identified a total of 83 symptom clusters, most frequently comprised of 3 symptoms (range 2–12). Common symptom clusters were related to nausea and eating problems, lack of energy/fatigue, difficulty sleeping, and sadness. The top five priority symptoms named in clusters were nausea, feeling drowsy, lack of energy, pain, and "don't look like myself." Graphical images illustrate a range of symptom complexity and suggest clusters that are both the same and different as those found by quantitative analyses. Despite common themes, AYAs' symptom experiences are unique, personal, and affect all aspects of quality of life.

**Discussion and Implications:** The C-SCAT uses an innovative approach to gain insight into the AYA symptom experience, yielding information that may be useful to guide understanding of and self-management of symptoms. Findings from this study reveal that AYAs commonly experience symptom burden from multiple related symptoms, especially nausea, lack of energy, and sleep-wake disturbances. This iPad app has potential for use as a communication tool between AYAs and their providers and may translate for use with other highly symptomatic patient populations across other age groups.

**Underwriting or Funding Source Name:** St. Baldrick's Foundation Supportive Care Grant University of Utah College of Nursing Faculty Research Grant Hyandai Hope on Wheels at Children's Mercy Hospital University of Virginia School of Nursing Center of Excellence for Biobehavioral Approaches to Symptom Management at Virginia Commonwealth University

## #85

**EVALUATION OF PILLARS4LIFE: AN ONLINE, EDUCATIONAL GROUP CURRICULUM FOR ONCOLOGY PATIENTS.** Sophia Smith, PhD, MSW, Jon O'Donnell, BS, and Amy Abernethy, MD, PhD, all at Duke University, Durham, NC; Kristin MacDermott, LMFT, Reimagine, Inc., Los Angeles, CA; Tina Staley, MSW, Denver, Colorado; and Gregory Samsa, PhD, Duke University, Durham, NC

**Objective:** Participants will be able to assess how participation in Pillars4Life is associated with key outcomes such as depression, anxiety, and quality of life and targeted resources.

**Topic Significance and Study Purpose, Background, and Rationale:** Psychosocial distress is a prevalent outcome of the cancer experience (e.g., diagnosis, treatment, survivorship); new interventions are needed. Pillars4Life is an online educational program that teaches coping skills in a group format. This presentation will report on the impact of participation in the LiveStrong-funded Pillars4Life program on key psychosocial outcomes and resources targeted by the intervention.

**Methods, Intervention, and Analysis:** Cancer patients were recruited from 17 hospitals that received the LiveStrong Community Impact Project Award to enroll in a pilot study of Pillars4Life. Consenting participants participated in 10 weekly sessions and completed surveys at Baseline, post-intervention, and follow-up. Surveys were administered electronically to assess for distress (DT, PCM v2), depression (PHQ-9), anxiety (GAD-7), posttraumatic stress (PCL-C), quality of life and despair (PCM v2), fatigue (FACIT-Fatigue), and cancer-related wellbeing

(FACT-G) outcomes. In addition, instruments were used to examine the Pillars4Life intervention's targeted resources such as coping (Brief COPE), self-efficacy (Self-efficacy for Managing Chronic Illness Scale and Preparedness for Caregivers Subscale), and spirituality (FACIT-SP).

**Findings and Interpretation:** Participants (n=130) were: mean age 56±11, 87% female, 11% non-Caucasian, 77% college degree. At post-intervention (3 months) and follow-up (6 months), mean scores improved on all key outcome measures such as depression (PHQ-9), anxiety (GAD-7), posttraumatic stress (PCL-C), fatigue (FACIT-Fatigue), and well-being (FACT-G) from Baseline (all P<.01); results were most pronounced among participants who reported 4/10 on the Distress Thermometer at Baseline (all P<.001). Changes in each targeted resource were associated with 3-month improvements in at least one outcome.

**Discussion and Implications:** Participation in the Pillars4Life program was associated with statistically and clinically significant improvements in scores on key psychosocial and QOL outcomes and targeted resources. Given the findings of strength of association between participation in Pillars4Life and improvement in outcomes, additional research is recommended to establish causality. Results from this Phase II study of the Pillars4Life program indicate that the administration of an online, group educational program is feasible and participants found it to be helpful.

**Underwriting or Funding Source Name:** National Cancer Institute (KM1-CA156687) LiveStrong Community Impact Project Award

## #86

**PILOTING A FLIPPED CLASSROOM FOR ONCOLOGY NURSING EDUCATION.** Beth Faiman, PhD, RN, APN-BC, AOCN®, Cleveland Clinic Taussig Cancer Institute, Cleveland, OH; and Elaine S. DeMeyer, RN, MSN, AOCN®, Davecia R. Cameron, MS, Andrew D. Bowser, ELS, CCMEP, and Kevin Kevin Obholz, PhD, all at Clinical Care Options, Reston, VA

**Objective:** Objective: To pilot a flipped classroom program comprised of self-directed online pre-work followed by a live educational meeting with multiple myeloma nursing experts.

**Topic Significance and Study Purpose, Background, and Rationale:** The flipped classroom is an innovative new teaching model that is especially applicable to oncology nursing education where an understanding of rapidly evolving clinical data must be combined with practical management of patients. Clinical Care Options piloted a flipped classroom program entitled Nursing Considerations in the Care of Patients with Multiple Myeloma (MM), designed to include self-directed online pre-work allowing nurses to build a foundational knowledge of MM in order to improve their mastery of clinical skills and maximize learning opportunities with nursing experts in a live education setting.

**Methods, Intervention, and Analysis:** Oncology nursing experts developed four short, interactive continuing education (CE) 30 minute online video segments that served as the foundational pre-work activities. Each video included interactive learning elements to engage and challenge participants. The live educational component included 1-hour CE live workshops, conducted at local and regional nursing meetings. The workshops were led by recognized experts and allowed nurses opportunity to apply information from the pre-work activities to clinically-relevant MM cases. The live education participants received a reference sheet containing key information to reinforce foundational concepts for those who completed the pre-work and as an aid for those who were not able to complete the pre-work.

**Findings and Interpretation:** Of the 222 nurses that have participated in the ongoing live workshop series, 45% indicated

that they completed the pre-work activities. Over 90% of nurses that participated in the live events stated that the live activity provided appropriate and effective opportunities for active learning. To date, a total of 1173 nurses have participated in the foundational online activities demonstrating additional value in providing education to nurses outside of the live workshops.

**Discussion and Implications:** The final analysis of changes in competence among the nurses who completed the pre-work education before participating in the live workshops vs those who did not will be presented. Our interim analysis of this pilot program suggests that a flipped classroom educational model can prepare nurses with a foundational knowledge of a rapidly advancing therapeutic field to maximize learning opportunities and clinical skill development with experts and peers in a live education setting.

**Underwriting or Funding Source Name:** Educational funding was received from Celgene, Millennium, Takeda, Onyx.

## #87

**VALIDATION OF PREDICTORS OF FALL EVENTS IN HOSPITALIZED PATIENTS WITH CANCER.** Samantha Weed-Pfaff, BSN, RN, Taussig Cancer Center, Cleveland, OH; and Nancy Albert, PhD, CCNS, CCRN, NE-BC, and Benjamin Nutter, MS, both at Cleveland Clinic Health System, Cleveland, OH

**Objective:** In previous research, a cancer-specific fall risk tool (CC-CA Fall Risk Score) had a strong concordance index (0.91). Tool validation and comparison with the Morse Falls Risk Scale was needed.

**Topic Significance and Study Purpose, Background, and Rationale:** In 2011, the National Quality Forum listed falls related injuries as a never event, defined as universally preventable, adverse occurrences that should never occur in the hospital setting (The Joint Commission, 2014). In previous research, cancer patients had an increased risk for falls compared to non-cancer patients (Capone, Albert, Bena, & Morrison, 2010). There are no validated cancer-specific falls risk tools currently available. To improve fall risk assessment in cancer care, and increase nurses™ ability to intervene for high risk patients, healthcare providers must have an accurate assessment method.

**Methods, Intervention, and Analysis:** This was a prospective, observational cohort study comparing two fall scales. Electronic medical records were reviewed to determine the incidence of the 7 CC-CA and 6 Morse Fall Risk Tool variables both on admission and again at discharge to reflect the occurrence of the variables during the stay. Data was extracted from The Cleveland Clinic Safety Event Reporting System (SERS) and used to learn about fall events in Subjects.

**Findings and Interpretation:** Of 1748 patients, 42 falls occurred (2.4%). Mean (SD) age was 60.4±15 years and 50.8% were female. Patients who fell had longer median hospital lengths of stay; p<0.001. Concordance indexes for patient falls by CC-CA Fall Risk and Morse tools were 0.78 and 0.60, respectively. Combining the two tools to assess falls risk did not increase the concordance index (0.78). In conclusion, compared to the Morse Fall tool, the CC-CA Cancer tool was better able to discriminate patients at risk for falls and is acceptable for clinical use.

**Discussion and Implications:** The aim of this study was to validate a derivation model of six factors that predicted falls in acute care patients with cancer. Although the concordance between predicted-to-actual fall risk using the CC-CA Fall Risk Tool was less accurate in the validation sample, it performed much better than the Morse Tool in promoting awareness of fall risk. Clinical use of the CC-CA tool may increase nurse awareness of patient's risk and promote early intervention.

## #88

**WHAT ARE THE EXPERIENCES OF NURSE PRACTITIONERS WHEN COMMUNICATING BAD NEWS TO CANCER PATIENTS?** Virginia Ruth Corey, DNP, ARNP-BC, FNP, Florida Hospital and Gage Gwyn, PhD, ARNP-BC, CNS, OCN®, Adventist University, both in Orlando, FL

**Objective:** Participants will be able to discuss nurse practitioners™ experiences of delivering difficult or painful news to cancer patients when they utilize the SPIKES Six-Step Protocol for Delivering Bad News.

**Topic Significance and Study Purpose, Background, and Rationale:** How oncology nurse practitioners communicate with patients has a strong impact on quality health care. Good communication facilitates positive experiences, yet many nurse practitioners report they are inadequately prepared for delivering bad news to cancer patients, and often have negative experiences due to poor communication (Rosenzweig, 2012; Warnock, Tod, Foster, & Soreny, 2010). Additionally, Baile et al. (1997) and Baile et al. (1999) found that less than 10% of providers were trained to deliver bad news in a manner that supported the cancer patients™ needs, leading to their suffering significantly when they are the recipients of poor communication during their cancer trajectory (National Cancer Institute, 2012; Thorne et al. 2013).

**Methods, Intervention, and Analysis:** Using a qualitative exploratory descriptive design to generate an understanding of oncology nurse practitioners™ experiences, this study was based on the framework the National Cancer Institute's "Conceptual Framework for Patient-Centered Communication in Cancer Care". Methodology consisted of two steps. First, five Florida licensed nurse practitioners with at least two years of oncology experience were educated on the use of the SPIKES Protocol and asked to use it in clinical practice for 30 days. Secondly, semi-structured individual interviews were conducted with the participants to record their perceptions of the SPIKES Protocol and its use. Triangulation and saturation were used to facilitate validity and bias was minimized using bracketing.

**Findings and Interpretation:** Analysis revealed seven global themes including: establishing a relationship, promoting emotional support, supporting patient problem-solving and decision-making, providing a positive environment, providing for human dignity, supporting self-management, and providing holistic patient care. This may be the first study to add to the body of knowledge in this area.

**Discussion and Implications:** Thematic findings support the concept "experiences of the nurse practitioner when delivering bad news to oncology patients are shaped by their own communication skills." Training oncology professionals in using the SPIKES protocol has the potential to positively impact everyone's experience. Studies of patients™ perceptions of the encounter and experience are needed, as is research examining other methods of delivering "bad news" and comparing them to the SPIKES Protocol.

## #89

**EFFECTIVE ALLEVIATION OF PEGFILGRASTIM-INDUCED PAIN WITH HIGH-DOSE LORATADINE IN BREAST CANCER PATIENTS.** Jodi Klemm, RN, OCN®, Vicki Harris, RN, OCN®, Elizabeth Parra, LPN, Ashish Sangal, MD, and Jiaxin Niu, MD, PHD, all at Cancer Treatment Centers of America, Goodyear, AZ

**Objective:** To understand the therapeutic benefits of high-dose loratadine in breast cancer patients with pegfilgrastim-induced pain.

**Topic Significance and Study Purpose, Background, and Rationale:** Pegfilgrastim is widely used clinically in breast cancer

patients receiving myelosuppressive chemotherapy. The incidence of pegfilgrastim-induced bone pain (PIP) was reported ranging from 26% to 59%<sup>1,2</sup>. Severe PIP may impair patients™ quality of life, leading to dose reduction, interruption or even discontinuation of chemotherapy. There have been some anecdotal reports regarding the use of loratadine to prevent PIP. Intriguingly, loratadine failed to decrease the incidence of PIP in a randomized phase II study<sup>3</sup>. Nevertheless, loratadine has been commonly used in clinical practice despite lack of high-level evidence.

**Methods, Intervention, and Analysis:** We first identified eligible breast cancer patients on planned multiple cycles of chemotherapy who developed clinically significant PIP requiring rescue use of analgesics after receiving an initial dose of pegfilgrastim (6 mg subQ on the day after chemotherapy) and standard prophylactic dose of loratadine (10 mg po daily beginning on the day of pegfilgrastim administration and continuing for 7 days). After that, all the eligible patients were invited to receive higher-dose loratadine (10 mg po three times a day beginning on the day of pegfilgrastim administration and continuing for 7 days) with the subsequent cycles of the same chemotherapy and other supportive care as the previous cycle. Patients were advised to report any unexpected adverse events promptly. Each patient was assessed at the beginning of each following cycle by the treating physician; pain scale with duration and analgesic use was documented. Significant PIP, assessed by Worst Pain Scale (0-10) of the Brief Pain Inventory, was defined as worse pain score > 5 during the 7 days after pegfilgrastim administration. Significant improvement was defined as 3-point decrease in pain scale and/or decreased analgesic use.

**Findings and Interpretation:** A total of 20 female breast cancer patients (15 patients receiving adjuvant chemotherapy, 5 patients receiving palliative chemotherapy) with significant PIP volunteered to receive off-label dose of loratadine in our observational study. In the following cycle, 2 patients (2/20, 10%) had complete resolution of pain, 11 patients (11/20, 55%) had significant improvement, and 7 patients (7/20, 35%) did not benefit from the higher dose of loratadine. No unexpected adverse events were reported. The results were reproducible in the remaining cycles of the same chemotherapy.

**Discussion and Implications:** Administration of loratadine 10 mg po three times a day for 7 days appears to be safe, and very effective to alleviate PIP in this observational study. Prospective studies are warranted to confirm this finding in order to address this crucially important clinic issue.

## #90

**EVIDENCE-BASED PAIN MANAGEMENT: DO BARRIERS, FACILITATORS, AND IMPLEMENTATION STRATEGIES DIFFER FOR ACADEMIC AND COMMUNITY-BASED INPATIENT ONCOLOGY SETTINGS?** Linda Eaton, PhD, RN, AOCN®, University of Utah, Salt Lake City, UT; and Ardith Doorenbos, PhD, RN, FAAN, and Alexa Meins, BS, both at University of Washington, Seattle, WA

**Objective:** To describe barriers, facilitators and implementation strategies for evidence-based cancer pain management practices among nurses in inpatient oncology settings.

**Topic Significance and Study Purpose, Background, and Rationale:** Pain is a significant problem among patients with cancer. Quality cancer care, especially achieving adequate pain relief, depends on nurses using evidence-based practice (EBP). This study aimed to describe barriers, facilitators, and strategies for sustaining evidence-based cancer pain management in academic and community-based settings.

**Methods, Intervention, and Analysis:** This dissertation research used a descriptive cross-sectional design at two inpatient oncology units (one academic, one community).



Semi-structured interviews were conducted with twelve staff nurses to understand nurse perspectives about evidence-based pain management. Nurses belonging to a larger sample (n=40) of a mixed-methods study were invited to participate based on their medical record documentation of evidence-based pain management practices (six with low practice; six with high practice). Documentation was evaluated by the investigator and a DNP student using the modified Cancer Pain Index. Semi-structured interviews with two nurse managers, two advanced practice nurses (APNs), and two chief nursing officers provided context for pain management practices. Transcribed interview data were analyzed using content analysis. Two researchers assigned codes created from categories developed from the data and based on relevant literature. Direct quotes exemplifying key concepts were identified. The researchers compared individually assigned codes until agreement was obtained.

**Findings and Interpretation:** The most common barrier at both settings was lack of time. The most common facilitators were information technology systems and APNs. APNs at both settings tailored strategies to overcome barriers and enhance facilitators. Common strategies included posters, one-to-one teaching, and patient rounds. When comparing settings, nurse administrators in the academic setting perceived nurses as practicing EBP at a fairly high level while in the community setting, EBP was based on nurses following evidence-based policies and procedures. Inadequate nurse knowledge of best practices and patient reluctance to try new interventions were additional barriers at the academic setting; an additional strategy implemented there was electronic practice reminders.

**Discussion and Implications:** The findings provide an understanding of similarities and differences in cancer pain management practices at two settings. Tailored strategies to overcome barriers and enhance facilitators are critical to ensuring nurses'™ success at providing evidence-based pain management. APNs are essential for developing and implementing these strategies in the inpatient oncology setting.

**Underwriting or Funding Source Name:** Research reported in this abstract was supported by a Doctoral Degree Scholarship in Cancer Nursing, DSCN-12-201-01-SCN from the American Cancer Society; Oncology Nursing Society Foundation Doctoral Scholarship; University of Washington McLaws Nursing Scholarship; and National Institute of Nursing Research of the National Institutes of Health under award number R01NR012450. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.

## #91

**PATIENT'S PRIORITY SYMPTOM: EXAMINATION IN ADVANCED LUNG CANCER.** Marie Flannery, PhD, RN, AOCN®, University of Rochester, Rochester, NY, and Nancy Wells, DNSc, RN, Vanderbilt University, Nashville, TN

**Objective:** Attends will identify three characteristics of patients self identified priority symptom.

**Topic Significance and Study Purpose, Background, and Rationale:** Patients with advanced lung cancer experience multiple symptoms. In order to provide quality patient-centered care it is essential to elicit the patient's priorities. While the importance of the patient's priority symptom is acknowledged, there is limited empirical examination to guide practice. As part of a pilot randomized clinical trial of a symptom management intervention, we asked patients with advanced lung cancer receiving treatment to identify their priority symptom.

**Methods, Intervention, and Analysis:** Patients identified their priority symptom using an open-ended question at entry and exit (week9). We intentionally asked as the initial question so responses would not be influenced by completion of a symptom inventory. Additional prompts were provided if

needed but examples were not provided. Subsequently, patients completed the MD Anderson Symptom Inventory-Lung Cancer (MDASI), a 16 item numeric rating scale, with severity of 0-10. We conducted a case by case within subject analysis and report descriptive findings.

**Findings and Interpretation:** 39 patients with advanced lung cancer receiving treatment responded at entry (23 at exit), age M=62 years, 55% male. Patients reported 4-16 symptoms, M=9.8. All but one patient reported a physical symptom as their priority and only 4 answers were not a symptom (ill, sick, quality of life, limited use of arms). 31% of patient identified priority symptoms that were not captured on the MDASI (i.e.: rash, diarrhea, balance, blurred vision). For priority symptoms that were on the MDASI, the priority symptom was not rated as the most severe symptom 47% of the time. The symptoms most often reported as a priority were pain (n = 17) and tiredness (8) / fatigue (3). From entry to exit 70% of patients reported different symptoms as their highest priority.

**Discussion and Implications:** Priority symptoms elicited with an open-ended question, were overwhelmingly physical symptoms; patients may not think of emotional reactions as symptoms. A priority symptom for patients with advanced lung cancer is often not rated as most severe, is not always captured in a symptom inventory, and changes over time. Findings indicate the need for clinicians to directly ask the patient about their priority when multiple symptoms are reported.

**Underwriting or Funding Source Name:** Oncology Nursing Society Foundation

## #92

**PREHABILITATION DEMONSTRATES DECREASED HOSPITAL LENGTH OF STAY IN A SMALL SAMPLE OF THORACIC ONCOLOGY PATIENTS.** Messina Corder, RN, BSN, MBA, Regina Kenner, RN, J. Timothy Sherwood, MD, FACS, Chris Kusmierczyk, PT, DPT, MPT, and Kathryn Duval, MS, CCC-SLP, all at Mary Washington Healthcare, Fredericksburg, VA

**Objective:** To compare the average length of stay (LOS) in one surgeon's thoracic oncology patients who received prehabilitation (n=6) to the average LOS for this population in the cancer registry (n=339)

**Topic Significance and Study Purpose, Background, and Rationale:** Mary Washington Healthcare is a fully integrated, regional medical system in Virginia that provides inpatient and outpatient care through Mary Washington Hospital, a 437-bed regional medical center, and Stafford Hospital, a 100-bed community hospital. The organization became STAR Program Certified in 2013. The STAR Prehabilitation Program for the lung cancer population was implemented in October 2013 with the goal to improve patient outcomes by demonstrating increased strength and endurance with a decreased length of acute care stay.

**Methods, Intervention, and Analysis:** Oncology patients were referred by a single thoracic surgeon for prehabilitation prior to surgery. Prehabilitation interventions included physical therapy (PT) with general exercise conditioning and targeted respiratory and strengthening exercises prior to surgery. Stress reduction strategies and nutritional counseling were discussed with the patient. Smoking cessation was required prior to surgery. Interventions were individualized based on patient need with an average of 2 or 3 visits per week for 3 to 4 weeks. The average hospital LOS of the prehabilitation intervention group was compared to the control group in the cancer registry.

**Findings and Interpretation:** The average hospital LOS for patients undergoing surgery for lung cancer is 5 days based cancer registry data from 2009-2014. The average thoracic oncology patient receiving prehabilitation demonstrated a 3 day

LOS. A retrospective review of LOS demonstrated that patients enrolled in the STAR prehabilitation lung cancer program had a decreased hospital LOS by 40%. The prehabilitation program includes general and targeted exercise along with stress reduction strategies, nutritional counseling and smoking cessation. Patients' progress was tracked with standardized testing pre and post prehabilitation.

**Discussion and Implications:** A focused program of targeted and general exercises coupled with nutritional support and stress reduction strategy demonstrates a positive impact on length of stay. The patients who were physically stronger and mentally prepared prior to surgery healed faster after surgical intervention.

### #93

#### **COGNITIVE DYSFUNCTION AND COMPLAINTS IN WOMEN TREATED FOR THYROID CANCER: A BIOPSY-CHOCULTURAL APPROACH.**

Eun Ju Kang, RN, Chungnam National University Hospital; Heeyoung So, PhD, RN, Chungnam National University and Swaziland Christian University; and Hyunli Kim, PhD, RN, and Mi Sook Jung, PhD, RN, Chungnam National University, all in Daejeon, South Korea

**Objective:** To compare neurocognitive performance and complaints between thyroid cancer survivors and healthy controls and to examine the associations of cognitive dysfunction with treatment-related symptoms, women's role-associated burden, and thyroid hormones

**Topic Significance and Study Purpose, Background, and Rationale:** Reduced cognitive function particularly attention and memory has been reported in patients with various cancer such as breast, prostate, and ovarian cancer. Changes in thyroid function were associated with poor cognition in individuals with mild cognitive impairment (Quinlan et al, 2010). Regardless a high prevalence of thyroid cancer in Korea, cognitive health in this group of cancer patients has been still unexplored. Thus, the purposes of this study were to compare cognitive function between cancer patients and healthy controls and to determine predictors of cognitive dysfunction.

**Methods, Intervention, and Analysis:** Ninety women treated for thyroid cancer and 90 healthy controls who received negative cancer screening tests were recruited. Both groups were similar in age (mean=48 years) and education (mean=13 years). Cognitive function was assessed with standardized neurocognitive tests and the Attentional Function Index. Fatigue, sleep, worry, housework burden, childrearing burden, and thyroid function test data were included as possible covariates. Independent t-test, univariate analyses, and multiple linear regression analyses were conducted.

**Findings and Interpretation:** The cancer group significantly showed poorer neurocognitive test performance and greater complaints than the healthy group. Significant differences in objective performance and subjective dysfunction between groups still persisted even when controlling for age and education. Multiple regression models showed a difference in predictors of objective versus subjective cognitive function. Poorer neurocognitive performance was significantly explained by thyroid cancer membership, older age, and lower educational level while greater cognitive complaints was predicted by greater fatigue and greater childrearing burden when controlling for other covariates. Additional multiple regression analyses revealed that T3 was a significant factor for explaining neurocognitive performance but not for cognitive complaints.

**Discussion and Implications:** This study showed that Asian women treated for thyroid cancer may suffer from cognitive dysfunction compared to healthy women. Cancer treatment-related cognitive dysfunction seems to be represented by poor neurocognitive performance rather than by subjective complaints which was associated with perceived fatigue and childrearing

burden. This study also suggests a clinically usable biomarker of detecting cognitive dysfunction following thyroid cancer treatment. Fatigue management, cognitive trainings, and social support can be considered as effective interventions to reduce cognitive dysfunction in Asian women with thyroid cancer.

### #94

#### **PREVENTATIVE PRACTICES AMONG BRCA MUTATION CARRIERS.**

Rebecca McLamara, BSN, OCN®, Florida Hospital Celebration Health, Celebration; Sue Friedman, DVM, Facing Our Risk of Cancer Empowered, Tampa; Aileen Caceres, MD, MPH, FACOG, and Cynthia Buffington, PhD, both at Florida Hospital Celebration Health, Celebration, all in Florida

**Objective:** Attendees will recognize the trends in preventative practices of BRCA mutation carriers to include preventative surgery, chemoprevention, and preventative surveillance.

**Topic Significance and Study Purpose, Background, and Rationale:** Background. Without intervention, the majority of women with inherited mutations in BRCA1 and BRCA2 will develop breast and/or ovarian cancer. Preventative treatments include risk-reducing surgeries (double mastectomy, oophorectomy, hysterectomy), chemotherapy (i.e. estrogen receptor modulators, aromatase inhibitors, metformin, more), and routine screening (yearly mammograms and MRI's, transvaginal ultrasound + CA125, screening for other increased risk cancers (melanoma, colorectal, prostate). Oncology nurses encountering BRCA mutation carriers should understand these measures and trends in surveillance preference. Purpose. In this study, we have examined the preventative practices of BRCA mutation carriers, including both cancer survivors and those without cancer diagnosis (previvors).

**Methods, Intervention, and Analysis:** Methods. The study involved an online survey sent to members of FORCE, the international support group for women and men who have BRCA and other gene mutations that increase cancer risk. The survey included questions pertaining to patient characteristics, surveillance testing and frequency, and preventative procedures.

**Findings and Interpretation:** Results. Among 1000 respondents, 82% had a BRCA mutation; 46% of whom were cancer survivors and 64% were previvors. According to the survey data, the majority of BRCA survivors (93%) and previvors (62%) had undergone risk-reducing surgery while considerably less BRCA carriers had selected chemotherapy (37% survivors; 8% previvors) for preventative care. As regards surveillance testing, the online data showed among BRCA mutation previvors who had not had a bilateral mastectomy that only 18% were having annual MRIs and 15% were NOT having any mammograms. Ovarian surveillance was also poor, i.e. a respective 51% and 87% of carriers failing to have CA125 assessment or a transvaginal ultrasound. The majority of survivors and previvors were also not being tested for melanoma or other forms of cancers at increased risk among BRCA carriers.

**Discussion and Implications:** Conclusions. FORCE online survey data show that the majority of BRCA mutation carriers have preventative surgery while only a few have preventative chemotherapy and a far less than desirable percentage of carriers have routine preventative screening. Oncology nurses must understand these trends to ensure informed patient education.

### #95

#### **SUPPORTIVE INTERVENTION PROGRAM TARGETING PARENTS TO CHILDREN UNDERGOING ALLOGENEIC HEMATOPOIETIC STEM CELL TRANSPLANTATION (HSCT): A CONTROLLED STUDY.**

Hanne Baekgaard Larsen, PhD, Lis Adamsen, PhD, Anders Tolver, PhD, Christoffer Johansen, PhD, and Carsten Heilmann, PhD, all at University Hospital of Copenhagen, Copenhagen, Denmark

**Objective:** In a controlled study to examine if a supportive family navigator nurse intervention decreased the parents'™ levels of anxiety and depression during their child's HSCT

**Topic Significance and Study Purpose, Background, and Rationale:** Background: At admission for a child's Allogeneic Haematopoietic Stem Cell Transplantation (HSCT), 15-66% of parents experience an elevated level of depression and anxiety This has been linked to the threat that HSCT poses on the child's life, and to witnessing treatment related side-effects and complications. Furthermore, the complex treatment, the transition in the parents'™ daily life, the expectations of their caregiving performance combined with the high prevalence suffering from depressive and anxiety symptoms, implies unmet psychosocial needs that warrant testing and development through a support intervention program. Purpose: Anxiety and depression were investigated in a controlled nine-hour/week intervention program targeting parents with their children who were undergoing HSCT. The program included daily family navigator nurse support (medical information relay, social counselling, emotional support), educational and physical activity sessions.

**Methods, Intervention, and Analysis:** Patient and methods: The parental intervention group (N=25) was compared with two parental control groups receiving standard care: I) a consecutive prospective group (N=8), and II) a retrospective group (N=57). At admission, the intervention and the prospective control groups completed weekly evaluations to time of discharge and at day 100, using HADS and BASES questionnaires. The retrospective control group performed the same evaluation once, by mail.

**Findings and Interpretation:** Results: No significant difference was observed between the groups at day 100, however the level of anxiety decreased significantly during admission in the intervention group, and the same level of decrease was first observed in the control group at day 100. On admission, the parents displayed a moderate to severe level of anxiety (39%) and depression (24%), at day 100 parents level of anxiety (22%) and depression (11%) decreased significantly in both groups ( $p < 0.01$ ). In particular, parents with a relatively low-level of anxiety benefited from the intervention program.

**Discussion and Implications:** Discussion and Implications: During the child's HSCT the parents experienced a considerable level of anxiety and depression, which decreased following the HSCT, however this level is above the level in the general population. The support care interventions benefitted especially parents with a low level of anxiety at baseline. Future studies may apply this intervention model as an outset for further development of intervention models to benefit the parents.

**Underwriting or Funding Source Name:** Danish Cancer Foundation for Children, Danish Health Foundation, Lundbeck Foundation, Gangsted Foundation, Copenhagen University Hospital [Rigshospital] supported this study

## #96

**THE RELATIONSHIP AMONG UNCERTAINTY, BODY IMAGE, SOCIAL SUPPORT AND QUALITY OF LIFE OF YOUNG BREAST CANCER SURVIVORS.** Jihye Kim, RN, OCN®, Asan Medical Center; Sue Kim, Associate Professor, and Hyangkyu Lee, Assistant Professor, both at Nursing Policy Research Institute, Yonsei University; and Soo Hyun Kim, Associate Professor, Inha University, all in Seoul, South Korea

**Objective:** This descriptive survey aimed to investigate the relationship among uncertainty, body image, social support, and quality of life of young breast cancer survivors aged 35 years or younger.

**Topic Significance and Study Purpose, Background, and Rationale:** Breast cancer is the second most common cancer in women in Korea and especially more prevalent in women 35

years of age and younger than other countries. Many prior surveys investigated physical and psychosocial problems of breast cancer survivors. However, there is a lack of research on young breast cancer survivors' psychosocial issues such as dating, marriage, childbirth, academic performance, and employment. This descriptive survey aimed to investigate the relationship among uncertainty, body image, social support, and quality of life of young breast cancer survivors aged 35 years or younger.

**Methods, Intervention, and Analysis:** Data were collected from women 35 years of age and younger diagnosed with breast cancer recruited from a Young Breast Cancer Clinic, oncology outpatient clinic, and breast & endocrine surgery outpatient clinic of 'A' hospital in Korea. Informed written consent was obtained from 137 participants. The survey questionnaires consisted of Mishel's Uncertainty in Illness Scale (1981) with 5 items added for uncertainty according to young breast cancer, a body image tool (Jun, 1996), Perceived Social Support Scale (Blumenthal, 1988), and the QOL-Cancer Survivorship Scale (Ferrell & Dow, 1995) to determine quality of life. Additional uncertainty items are young breast cancer survivors' uncertainty items related to dating, marriage, pregnancy, childbirth, sexual relations, academic performance, and employment. The data were analyzed with descriptive statistics, t-test, one-way ANOVA, and Pearson's correlation using SPSS 19.0 program.

**Findings and Interpretation:** The results of this study were as following: 1. The level of physical QOL differed by the state of menstruation ( $p = .009$ ). The level of spiritual QOL differed by the dating and married status ( $p = .012$ ). The level of uncertainty of additional 5 items differed by dating and married status ( $p = .002$ ), children or no ( $p = .006$ ), the state of finances ( $p = .028$ ). The level of body image differed by dating and married status ( $p = .015$ ), children or no ( $p = .020$ ). The level of social support differed by dating and married status ( $p = .045$ ). The level of family support differed by survival time ( $p = .033$ ). The level of significant other's support differed by dating and married status ( $p = .000$ ), the state of finances ( $p = .006$ ), present age ( $p = .019$ ). 2. Quality of life had highly significant correlation with body image ( $r = .701$ ,  $p < .01$ ), original uncertainty ( $r = -.554$ ,  $p < .01$ ), additional uncertainty ( $r = -.513$ ,  $p < .01$ ), social support ( $r = .438$ ,  $p < .01$ ).

**Discussion and Implications:** Korean young breast cancer survivors are in need of help especially in psychosocial issues. This survey can be used as basic data to develop educational programs for young breast cancer survivors. Body image and uncertainty are areas that require special attention from health care professionals in practice, education and clinical research. The health care team should support young breast cancer survivors by providing anticipatory guidance and supportive counseling to improve their QOL.

## #97

**QUALITY OF LIFE WITHIN THE FIRST YEAR FOLLOWING LUNG RESECTION FOR NSCLC.** Kathleen Hopkins, PhD, RN, Carlow University, Pittsburgh, PA

**Objective:** Identified 2 types of surgical treatments for lung cancer patients and their implications regarding patient quality of life.

**Topic Significance and Study Purpose, Background, and Rationale:** Introduction: In 2014, it was estimated that newly diagnosed cases of lung and bronchus cancer would exceed 220,000 and over 150,000 deaths. Typically, surgery is their first option and there are two standard surgical procedures, video-assisted thoracic surgery (VATS) and conventional thoracotomy. While VATS offers an advantage in regards to perioperative outcomes, it is unclear which procedure offers better quality of life outcomes. Purpose: The purpose of the study was to investigate the post-operative quality of life (QoL) following video-assisted thoracic surgery (VATS) and conventional thoracotomy.

**Methods, Intervention, and Analysis:** Methods: Using the Theory of Unpleasant Symptoms Model, this study recruited ninety-seven consecutive patients agreeing to study participation. Forty-four patients had traditional thoracotomies and 53 patients had VATS resections. All patients were clinically staged (I – IIIA) and consented between August 2010 and December 2012. Participants were given 2 self-report standardized instruments and the 0 to 10 Numeric Pain Assessment Scale (NAS). The instrument Hospital Anxiety and Depression Scale (HADS) and Functional Assessment of Cancer Therapy-Lung (FACT-L) have been shown to be historically reliable and valid measures. This study was approved by the Institutional Review Board.

**Findings and Interpretation:** Results: There were no statistically significant demographic differences between groups. Pain ( $p = 0.429$ ), anxiety HADS ( $p=.953$ ) and quality of life differences (FACT-L  $p=.779$ ) between the thoracoscopic or thoracotomy groups. Thoracoscopic or thoracotomy patients had a mean pain level of 1.6 and 2.0 out of a 10 point pain scale, respectively. For the FACT-L questionnaire, VATS patients scored a mean of  $106.4 \pm 20.9$  compared to  $102.9 \pm 23.3$  for thoracotomy ( $p = 0.580$ ).

**Discussion and Implications:** Conclusion: Because VATS offers an advantage in regards to perioperative outcomes and VATS and thoracotomy patients have the same quality of life outcomes, VATS may be the more optimal procedure. Implications for Nursing Practice: Regardless of the type of surgery, all patients should be screened for pain, anxiety, depression and quality of life.

**Underwriting or Funding Source Name:** Pauline Thompson Clinical Nursing Research Award (Nursing Foundation of PA, PA Nurses Association) Title: Management of Pain Following Lung Cancer Surgery. 11/10-11/11 Award: \$2,000 Small Grant Award (Oncology Nursing Association) Title: Management of Pain Following Lung Cancer Surgery. 02/2011-02/2012 Award: \$9,912 Ruth L. Kirschstein National Research Service F31 Award (NIH NRSA grant#1 F31 NR0131114-01A1) Title: Symptom Experience Following Lung Cancer Surgery. 4/2012-3/2014 Award: \$84,000

## #98

### ASSESSMENT OF JORDANIAN PATIENT'S KNOWLEDGE AND PREFERENCES TOWARD CRC SCREENING: ARE JORDANIANS READY TO EMBRACE CRC SCREENING?

Suha Omran, DNSC, Jordan University of Science and Technology, Irbid, and Husam Barakat, MD, Ibn AlHaytham Hospital, Amman, both in Jordan

**Objective:** The participants will be able to determine Jordanian outpatients level of knowledge about colorectal cancer and screening

**Topic Significance and Study Purpose, Background, and Rationale:** Colorectal cancer survival is closely related to the clinical and pathological stage of the disease at time of diagnosis. Evidence exists that screening can reduce CRC mortality by 16% to 33%. Colorectal cancer screening can prevent the development of CRC, reduce risk of death, and reduce the cost of care. Screening rates are affected by the knowledge of people about CRC, and the lack of access to screening tests. The level of awareness among the Jordanian public regarding colorectal cancer remains undetermined. Also, it is unknown to what extent Jordanian patients would embrace CRC screening. The aim of this study is to assess colorectal cancer (CRC) knowledge levels among Jordanian patients.

**Methods, Intervention, and Analysis:** A survey was designed to assess knowledge of various aspects of CRC. The survey was given to 10 experts to review it for accuracy, face and content validity. Adjustments based on the experts comments (where necessary), were made. The survey was distributed to all patients attending outpatient gastroenterology clinics in all Pub-

lic Jordanian hospitals over six consecutive months. At the time of registration for the clinic, each participant was offered the option of completing the survey while awaiting their appointment. SPSS version 20 was used for data analysis. Descriptive and inferential statistics were carried out as appropriate.

**Findings and Interpretation:** In total, 800 surveys were distributed of which 713 (89.1%) were returned. Twenty-two percent of participants correctly judged CRC to be the commonest cause of cancer related deaths among the choices provided, while 26.8% correctly judged the life time risk for CRC, 5% overestimated the risk, and 68.3% underestimated the risk. Two third of participants (66%) were willing to pay 500 JD for a prompt colonoscopy if recommended by their doctors, while 25.5% chose to wait 6 months for a free colonoscopy.

**Discussion and Implications:** There is a willingness not only to embrace the concept of CRC screening but also to bear some of the financial burden that this demands. Awareness of these participants' attitudes will be important as the Jordanian health system is moving forward in promoting CRC prevention initiative.

**Underwriting or Funding Source Name:** This study was funded by Deanship of Research/Philadelphia University, Amman Jordan.

## #99

### PATIENTS' PERCEPTIONS OF A HEALING ENVIRONMENT IN A NEWLY CONSTRUCTED CANCER HOSPITAL.

Eileen Kennedy, BSN, RN, CHPN, CPHIMS, Melissa Gutknecht, AD, RN, OCN®, Maureen McGlennon, BSN, RN, OCN®, Anne O'Connor, MS, RN, and Janet Parkosewich, DNSc, RN, FAHA, all at Yale-New Haven Hospital, New Haven, CT

**Objective:** To understand how a healing environment positively influences the experiences and perceptions of patients with malignant hematological cancers at a new cancer hospital.

**Topic Significance and Study Purpose, Background, and Rationale:** Patients undergoing cancer treatment may experience psychological/physical stressors. Healing environments (HE) help patients cope with hospitalizations and ongoing treatments. HEs positively influence clinical quality and patients' psychological well-being and healthcare experiences, although research in the oncology setting is limited. Oncology nurses collaborated with architects and other design experts to plan a HE in our new cancer hospital. The purpose of this study was to examine perceptions of patients with malignant hematological cancers regarding the new hospital environment of care.

**Methods, Intervention, and Analysis:** This descriptive-correlational institutional review board approved study was conducted at a 1,541-bed hospital. A convenience sample of 92 adult English-speaking patients [age 58 years (mean), 79% Caucasian, 46% female] who experienced care in inpatient (32%), ambulatory (11%) or both (58%) settings, were interviewed using a 16-item survey developed from Ulrich's Theory of Supportive Design. The mean duration of care (DOC) was 15 months. Associations between demographic and care-related factors and HE variables were examined using bivariate analyses. Logistic regression was used to determine factors independently associated with HE.

**Findings and Interpretation:** Most patients (97.8%) strongly agreed/agreed that overall, the hospital provided a HE. Women and patients with longer (DOC) found room temperatures less comfortable than men and those with shorter DOC ( $p=.003$ ,  $p=.05$ , respectively). Similarly, longer DOC was associated with the lobby piano creating a relaxing environment compared with patients having a shorter DOC ( $p=.01$ ). After adjusting for demographic factors, DOC, and care setting, patients with longer DOC were 1.6 times (95% confidence interval 1.03-2.41) more likely to experience a serene effect from the healing garden,

compared with patients having shorter DOC. These findings validate that HEs, especially exposure to nature and music, influence positive perceptions of the care environment. The effect is greatest in patients who have longer DOC.

**Discussion and Implications:** All patients, regardless of DOC, should be exposed to HE features, such as healing gardens and relaxing music. Design features, namely individual room temperature controls would allow nurses to improve patient comfort. This study was limited to a hematological cancer population. Future studies should focus on other oncology populations to exam correlations between HE and patients<sup>TM</sup> perceptions, care experiences, and clinical outcomes.

## #100

**JORDANIAN PHYSICIANS' ATTITUDES TOWARD INFORMATION DISCLOSURE AND PATIENT PARTICIPATION IN TREATMENT DECISION MAKING.** Rana Obeidat, RN, CNS, PhD, Zarqa University, Zarqa, Jordan

**Objective:** Describe Jordanian physicians' attitudes toward disclosure of cancer information and patient participation in treatment decision making

**Topic Significance and Study Purpose, Background, and Rationale:** There is growing evidence in the literature that information exchange and patient involvement in treatment decision making may positively influence his/her well-being. Provider's motivation has been reported as an important facilitator to shared decision making among Western health care providers. Information is especially lacking on Jordanian physicians<sup>TM</sup> attitudes toward truthful disclosure of cancer information, information provision and involvement in decision making. Thus, the purpose of this study was to determine Jordanian physicians<sup>TM</sup> attitudes toward disclosure of cancer information, comfort with and use of different decision-making approaches and their attitudes toward treatment decision making.

**Methods, Intervention, and Analysis:** A descriptive comparative research design was used. Thus far, a convenience sample of 62 Jordanian medical and radiation oncologists and surgeons practicing mainly in oncology was recruited for the study. A modified version of a structured questionnaire which was extensively used in the literature and found to be a valid measure of physicians<sup>TM</sup> views of shared decision making was used for data collection. Data were analyzed using the SPSS for windows version 19.0. Descriptive and Inferential statistics were carried as appropriate.

**Findings and Interpretation:** Almost 91% of all physicians indicated that the doctor should tell the patient and let him/her decide if the family should know of a new diagnosis of early stage cancer and 75% indicated that the doctor should tell the patient and let him/her decide if the family should know of a new diagnosis of advanced stage cancer. Almost 51% of participating physicians reported using shared decision making as their usual approach to treatment decision making and 37% reported being most comfortable with this approach. Physicians gave the most information about extent of the disease, side effects and benefits of treatment and treatment procedures; they gave the least information on effects of treatment on sexuality, mood, and family.

**Discussion and Implications:** Information obtained from this study can be used by health care organizations and policy makers to establish systematic guidelines to facilitate shared decision making as a means of improving patient and physician satisfaction. In addition, findings of this study will support future research, and culturally sensitive interventions and instruments which would ultimately add to the body of scientific literature.

**Underwriting or Funding Source Name:** Denaship of Scientific Research, Zarqa University, Jordan

## #101

**IDENTIFYING PATIENT FACTORS THAT IMPACT ADHERENCE TO ORAL CHEMOTHERAPY: A QUANTITATIVE RESEARCH STUDY.** Pamela K. Ginex, EdD, RN, OCN®, Tracy Lugar, RN, OCN®, Mikel Ross, RN, BSN, OCN®, and Kay See Tan, PhD, all at Memorial Sloan Kettering Cancer Center, New York, NY

**Objective:** Participants will be able to identify individual patient factors that impact adherence to oral agents for cancer.

**Topic Significance and Study Purpose, Background, and Rationale:** Ensuring safe, accurate administration of oral agents for cancer (OAC) poses a challenge for oncology nurses. Non-adherence is particularly challenging with published adherence rates often below 80%. The first step in improving patient care is to understand the variables which impact adherence. Identifying determinants of adherence may provide direction for the development of screening tools to identify at risk persons and nursing interventions to promote adherence. The purpose of this study was to quantitatively identify individual variables that facilitate or impede adherence to oral chemotherapy.

**Methods, Intervention, and Analysis:** Patients prescribed capecitabine for breast or gastrointestinal cancer were eligible for this IRB-approved research study. Validated questionnaires related to adherence, beliefs about medications, satisfaction with education, self-efficacy, and side effects were completed between 4 and 12 weeks of starting capecitabine. Adherence was measured with the Morisky Adherence Scale (MAS) as well as patient self-report. Based on their response to the MAS patients were categorized as having complete adherence or not-complete adherence. The characteristics of those with complete adherence were compared to those with not-complete adherence using logistic regression.

**Findings and Interpretation:** Patients (N=76) with breast (N=32) or gastrointestinal cancer (N=44), including 25 women and 51 men, were consented. Twenty-one (28%) patients reported missing or skipping a dose of their capecitabine. Forty-nine (64%) patients reported using a specific technique (e.g. a calendar) to help them remember their medication. Older age (OR 1.11), having children (OR=3.14), having higher self-efficacy (OR=1.15) and having greater satisfaction with the education they received about their treatment (OR=1.16) each significantly increased the odds of complete adherence (all p values < .05). Therapy type (single or combination therapy) and whether a technique was used to help with adherence were not found to be associated with complete adherence.

**Discussion and Implications:** Strategies to improve adherence need to be multi-dimensional and practical. Given limited time and resources, strategies and interventions should focus on drivers of adherence that have the greatest impact on patient outcomes. Screening tools and educational interventions that include factors identified from this study (i.e., older age, higher self-efficacy, living alone) hold promise to support patients on a treatment regimen that includes oral agents for cancer.

**Underwriting or Funding Source Name:** The Geri and ME Nursing Research Fund

## #102

**PHASE 1 BIOAVAILABILITY STUDY COMPARING TWO DIFFERENT SUBCUTANEOUS ROUTES OF ADMINISTRATION FOR APF530.** Yvette Payne, APRN, MSN, MBA, Heron Therapeutics, Inc., San Diego, CA; Amber Anderson, BS, and Mark Slama, BS, QPS Bio-Kinetic, LLC, Springfield, MO; Brock Guernsey, BS, PharmD, QPS, LLC, Newark, DE, Michael Klepper, MD, Drug Safety Navigator, LLC, Durham, NC, ChauHwei Fu, PhD, QPS, LLC, Newark, DE

**Objective:** The objective of this study was to demonstrate the safety and bioequivalence of two different subcutaneous routes of administration of extended-release granisetron (APF530).

**Topic Significance and Study Purpose, Background, and Rationale:** Nurses provide essential care for cancer patients experiencing chemotherapy-induced nausea and vomiting (CINV), which is often poorly controlled. APF530 is a new polymer-based formulation of granisetron providing controlled sustained delivery for longer therapeutic activity. In a large, randomized, double-blind, phase 3 noninferiority trial, APF530 was non-inferior to palonosetron in preventing acute (0-24 hours) and delayed (24-120 hours) CINV in patients receiving moderately emetogenic chemotherapy (MEC), and acute CINV in patients receiving highly emetogenic chemotherapy (HEC). Presented here are the safety profiles of two APF530 subcutaneous routes of administration.

**Methods, Intervention, and Analysis:** In this phase 1 two-sequence crossover study, healthy male and female subjects were randomized to receive APF530 500 mg subcutaneously via the nondominant upper arm or upper left quadrant (ULQ) abdomen on day 1, then crossed over on day 15 to receive APF530 via the other route. Plasma samples were obtained to assess the granisetron pharmacokinetic profiles comparing administration routes. Safety was assessed by evaluating adverse events (AEs), including injection-site reactions (ISRs), treatment-emergent AEs (TEAEs), serious AEs, and AEs causing discontinuation.

**Findings and Interpretation:** 111 of 120 randomized subjects completed the study. The two routes of administration were shown to be bioequivalent. The majority of TEAEs were mild or moderate. ISRs accounted for most TEAEs and occurred in 89.2% of subjects. ISRs occurred in 84.5% of subjects receiving abdominal injections and in 69.2% receiving arm injections. 91.4% of 116 subjects receiving abdominal injections and only 76.9% of 117 subjects receiving arm injections experienced TEAEs. Consistent with AE profiles observed in APF530 phase 3 studies, the most common TEAEs were ISRs of pain (75%), bruising/hematoma (52.5%), nodule (48.3%), erythema (30.8%), induration/swelling (15.0%), headache (35.8%), constipation (9.2%), and nausea (7.5%). No subject discontinued because of an AE.

**Discussion and Implications:** Bioequivalence across routes of administration is an important therapeutic consideration for nurses. APF530 administration in the nondominant upper arm and ULQ abdomen were bioequivalent. The AE profile was similar to that of previous studies. Single subcutaneous injections of APF530 may provide a convenient outpatient treatment option for preventing CINV following MEC or HEC.

**Underwriting or Funding Source Name:** Heron Therapeutics, Inc.

### #103

**ENSEMBLE: CREATING A HEALTHY WORKPLACE FOR CANCER SURVIVORS.** Dawn Aubel, EdD(c), MS, MPH, APN-c, Novartis Oncology, East Hanover, NJ, Megan Thacker, BSN, RN, CBCN®, Quintiles, White Hall, MD, and Andrea Waldt, RN, BSN, MHA, CCM, Quintiles, Abington, MD

**Objective:** Educate participants about innovative practice models in the workplace by presenting a supportive program led by nursing and using a navigation process, along with recommendations for future practice and research.

**Topic Significance and Study Purpose, Background, and Rationale:** Improved diagnostics and treatments allow nearly two-thirds of people with cancer to return to work. Cancer survivors value work to gain normalcy, social support, and purpose for the future. Not only do these individuals face threats to all facets of their well-being, but also experience unique challenges in the workplace as they strive to maintain work and career goals. Whereas health professionals must address cancer and treatment-

related issues, employers should address occupational wellness. A dedicated workplace program offers a significant resource for cancer survivors.

**Methods, Intervention, and Analysis:** Spearheaded by the nurse clinician in Employee Health and Wellness, a collaborative team from the human resources, communications, information technology, medicine, nursing, and legal functions formed "Ensemble", signifying coming together to support employees affected by cancer. This innovative workplace intervention for survivors, caregivers, and managers features oncology nurse navigators. Ensemble launched May 2014 with great endorsement of the employer leadership team and enthusiasm of employees. Ensemble is a multi-faceted navigation program, aiming to provide personalized support to those in the workplace affected by cancer. Nurse navigators assess, coach, and coordinate resources available to employees journeying with cancer. An online resource hub is also available through the Ensemble intranet site. It includes links to pertinent company human resources, benefits, policies, cancer resources, current topics, and navigator information. A quantitative study in 2015 will employ validated patient-reported outcomes. Hypotheses are that the Ensemble intervention will improve communication and attitudinal self-efficacy, as well as social health as it relates to the quality of social support. Additionally, the relational alliance with the navigator will be assessed since high satisfaction correlates positively with overall satisfaction with cancer care.

**Findings and Interpretation:** The literature is lacking in regard to effective and sustainable solutions for cancer survivors in the workplace. It is imperative that new approaches be created and evaluated. Effective solutions will benefit multiple stakeholders, from the individual cancer survivor to larger systems in society.

**Discussion and Implications:** Nurses can create, implement, and research interventions in the workplace that have traditionally been limited to healthcare settings. Collaboration with employers can result in valuable workplace support. More research is needed to evaluate workplace interventions for people with cancer.

### #104

**SIMULATION AS A TOOL TO INCREASE NURSES' CONFIDENCE LEVEL TO PERFORM ONCOLOGY SKILLS AND PROCEDURES.** Maria Foley, BSN, RN, OCN®, Jeanene Robison, MSN, RN, AOCN®, and Andrea Cline, BSN, RN, OCN®, The Christ Hospital, Cincinnati, OH

**Objective:** Describe two clinical outcomes related to using simulation as a tool for teaching oncology skills and procedures.

**Topic Significance and Study Purpose, Background, and Rationale:** SIGNIFICANCE: In the oncology setting, nurses require comprehensive education in chemotherapy/biotherapy administration, which is a high risk procedure, and in specific clinical skills. Educators need an effective way to measure oncology nurses' competency. PURPOSE: To measure the effectiveness of simulation as a teaching method to improve nurses' confidence to perform IV skills and oncology procedures. BACKGROUND: In addition to classroom education, nursing staff verbalized the need to feel more confident in managing specific procedures with oncology patients. Simulation allows repetitive and deliberate practice in a realistic and interactive environment, and helps minimize risk to patients. RATIONALE: To provide oncology staff members with a realistic environment to safely practice clinical and critical thinking skills.

**Methods, Intervention, and Analysis:** METHOD: Simulation exercises were used during three classes (n= 82). Participants ranked their confidence to perform select oncology skills before and after training. INTERVENTION: Simulation focused on chemotherapy/biotherapy administration during two courses, and oncology procedures (Pleur-X catheter care, trach care,

Code Blue) in third course. Communication and collaboration were critical components of simulation. ANALYSIS: Using a Likert scale (1-5, with 5=very high level of confidence), nurses self-rated confidence (pre- and post-simulation) to perform specific nursing responsibilities in oncology setting.

**Findings and Interpretation:** FINDINGS: First course: nurses (n=59) rated their confidence to perform multiple oncology procedures (3.07 pre-simulation; 4.55 post-simulation). Second course: nurses (n=10) rated their confidence to administer IL-2 and IVP chemotherapy (3.23 pre-simulation; 4.06 post-simulation). Third course: nurses (n=3) rated their confidence to administer chemotherapy (3.33 pre-simulation; 4.45 post-simulation). Literature reviews advantages of using simulation to assess chemotherapy competency, including safe environment for participants and consistency with competency ratings (Muehlbauer, Parr, Perkins, 2013). Significant improvement in RN knowledge related to sterile technique has been described following simulation-based education (Gerolemou, et al, 2014).

**Discussion and Implications:** Simulation provides a consistent method for assessing RN competency in oncology skills in a safe environment. Study results suggest simulation-based education may be effective in improving RN confidence to administer chemotherapy/biotherapy and perform select clinical oncology procedures. Future studies could include effect of simulation-based education on knowledge level, and comparisons of self-perceived confidence level and actual demonstrations of competency using larger sample sizes.

#### #105

### BREAST CANCER PATIENT ADHERENCE TO AI/SERM HORMONAL THERAPY IN ONE PRIVATE PRACTICE.

Camille Servodidio, RN, MPH, OCN®, CBCN®, CCRP, Deborah Pantalena, RN, BS, OCN®, Susanna Hong, MD, Andrea Malon, MD, and Kathleen Gould-Mitchell, RHIA, CTR, all at Middlesex Hospital, Middletown, CT

**Objective:** Oncology nurses' awareness of breast cancer patient adherence to AI and SERM hormonal therapy can be used as a foundation for patient education and communication.

**Topic Significance and Study Purpose, Background, and Rationale:** Background: Adherence to prescribed Aromatase Inhibitors (AI) and Selective Estrogen Receptor Modulators (SERM) hormonal therapy in estrogen receptor positive and progesterone positive breast cancer patients impacts recurrence of disease and survival. National Comprehensive Cancer Network guidelines encourage five years of adjuvant treatment with AI/SERM for this patient population.

**Methods, Intervention, and Analysis:** Methods: Women diagnosed with Stages I - III and estrogen receptor positive and progesterone receptor positive invasive breast cancer in the years 2006 or 2007 were identified through the tumor registry at a comprehensive community cancer program. A retrospective quality improvement chart review was conducted on 141 electronic medical records and paper charts in a private medical oncology practice and surgical practice affiliated with a community hospital. Chart review included physician and APRN documentation of patient's self-reporting of adherence of AI or SERM and length of time for adherence. For patients who were later followed outside the private practice, letters were sent to the appropriate physicians to assess adherence.

**Findings and Interpretation:** Results: Eighty-seven (63 %) medical record notes documented by self-report that women adhered to 5 years of AI or SERM hormonal therapy. Fifty-one (37%) patients did not adhere to their AI/SERM therapy for the following reasons: patient refused: 18/51 (35%), side effects: 12/51 (24%), unknown: 10/51 (20%), disease progression: 8/51 (16%), deceased: 2/51 (4%), and contraindication: 1/51 (2%).

**Discussion and Implications:** Conclusions: An adherence percentage of 63% for 5 years for AI/SERMs at the practice is

comparable to the published literature (Caitlin et al., 2012: 41-72%, Doggrell, 2011: 15 - 50%, and Hershman et al., 2010: 49%). Further exploration for reasons patient refused and rationale for unknown (lack of chart documentation) would be beneficial. Oncology nurses and physicians can use this information to work collaboratively to increase communication about the importance of adherence, enhance patient education and identify and manage side effects and toxicities for patients who are prescribed AI/SERMs for their breast cancer treatment.

#### #106

### NO DIFFERENCES IN THE SEVERITY OF COMMON SYMPTOMS BETWEEN PATIENTS WITH COLORECTAL CANCER WHO ARE AND ARE NOT RECEIVING TARGETED THERAPY.

Ilufredo Tantoy, RN, MSN, Steven Paul, PhD, Bruce Cooper, PhD, Laura Dunn, MD, Bradley Aouizerat, PhD, and Christine Miaskowski, RN, PhD, FAAN, all at University of California, San Francisco, San Francisco, CA

**Objective:** The objective of this study was to evaluate for differences in symptom severity scores.

**Topic Significance and Study Purpose, Background, and Rationale:** Colorectal cancer (CRC) is the third most frequently diagnosed form of cancer and the second leading cause of cancer deaths in the United States. Patients with CRC are treated with surgery, radiation therapy, chemotherapy (CTX), and newer targeted therapies. While some studies suggest that the administration of targeted therapies may reduce symptom severity in patients with CRC, no studies were found that evaluated for differences in the severity of common symptoms in patients who are and are not receiving targeted therapies with concurrent CTX. The purpose of this study was to evaluate for differences in symptom severity scores for anxiety, depressive symptoms, diurnal variations in fatigue and energy, sleep disturbance, and alterations in attentional function.

**Methods, Intervention, and Analysis:** A total of 258 patients with CRC were enrolled in the study prior to their next cycle of CTX. Patients completed the following self-report measures to assess symptom severity: Spielberger State-Trait Anxiety Inventory, Center for Epidemiological Studies-Depression Scale, morning and evening assessments of fatigue and energy using the Lee Fatigue Scale, General Sleep Disturbance Scale, and Attentional Function Index. Independent Student's t-tests were used to evaluate for differences in symptom severity scores between the two patient groups.

**Findings and Interpretation:** Of the 258 patients, 25.2% were receiving CTX and a targeted therapy. Compared to the patients receiving only CTX, patients on CTX + targeted therapy were significantly younger, had a higher number of metastatic sites, and were more likely to be receiving treatment with palliative intent. No differences were found between the two groups in any of the symptom severity scores. Both groups of patients reported low levels of morning and evening energy; moderate levels of morning and evening fatigue; high levels of sleep disturbance, and moderate decrements in attentional function.

**Discussion and Implications:** Whether or not a patient with CRC receives a targeted therapy, they warrant careful assessment of symptoms associated with CTX.

**Underwriting or Funding Source Name:** National Cancer Institute (CA134900).

#### #107

### CANCER CLINICAL TRIAL ENDPOINTS AND EXTENSIVE FOLLOW-UP DATA COLLECTION: A REVIEW OF PERSONNEL EFFICIENCIES IN A SINGLE CENTER.

Kathleen Frisby, BSN, OCN®, and Lori Meyer, BSN, OCN®, both at Gunderson Health System; and Angela Smith, MA, and Andrew Borgert, PhD, both at Gunderson Medical Foundation, all in La Crosse, WI

**Objective:** The purpose of this study is to examine the 'value' of extensive follow-up data collection and the best use of research nurse time.

**Topic Significance and Study Purpose, Background, and Rationale:** Overall survival (OS) has long been considered the gold standard for measuring efficacy in clinical cancer trials. Extensive follow up periods are associated with trials using OS as the primary endpoint. A recent hot topic of discussion surrounds the use of surrogate endpoints for OS which could reduce resources involved in implementing clinical cancer trials. With the current state of reduced budgets for clinical trials we sought to look at the ~value™ of extensive follow-up data collection and the best use of research nurse time.

**Methods, Intervention, and Analysis:** A convenience sampling of clinical trials implemented at Gundersen Health System was used for review. The number of events recorded per patient follow-up visit, designated by the term ~assessment efficiency,™ was used for comparison. Non-parametric statistical tests including the Wilcoxon rank sum and signed rank tests were utilized. A threshold of  $p < 0.05$  was used to establish statistical significance.

**Findings and Interpretation:** 23 breast cancer, 15 lymphoma and 3 myeloma trials were selected for analysis. In trials where Gundersen personnel participated in both on-treatment and off-treatment follow up periods (14/23 breast cancer trials and 15/18 distributed cancer trials) assessment efficiency was significantly lower in the off-treatment period compared to the on-treatment period (mean difference [95% CI]: 2.8 [1.5 " 4.1] events/assessment for breast cancer trials,  $p = < .001$ , 4.0 [3.0 " 5.0] events/assessment for distributed cancers,  $p < .001$ ). Across all cancer trials there were no significant differences in assessment efficiency in either the on-treatment period or off-treatment period.

**Discussion and Implications:** : Inconsistencies exist in follow-up terms between clinical trials. Many breast trials following patients until death, regardless of cause. As new treatment research has evolved toward targeted therapies; the focus of follow-up is now progression and molecular responses of disease and away from OS" yet, follow-up terms don™t reflect this change. In this era of reduced budgets and funding for clinical trials the endless reporting of data seems an ineffective use of research coordinator time. The significant efficiency differences that resulted from our review triggered many questions for future studies and/or practices. What are the advantages associated with long term follow-up? Is the information being analyzed, and where is it available?

## #108

**MEASURING CLINICAL DECISION SUPPORT INFLUENCE ON ONCOLOGY NURSING PRACTICE.** Susan Cortez, BSN, MBAHCM, PhD, and Nancy Wells, DNSc, FAAN, both at Vanderbilt University Medical Center, Nashville, TN

**Objective:** This study measured the effect of clinical decision support (CDS) on oncology nurse evidence-based practice (EBP) documentation.

**Topic Significance and Study Purpose, Background, and Rationale:** The rate of oncology nurse evidence-based practice was measured at less than 50% (Saca-Hazboun, 2009) despite the availability of evidence-based interventions for symptom management. The Health Information Technology for Economic and Clinical Health (HITECH) Act and the 2012 Institute of Medicine (IOM) report recommend implementing CDS and other technologies to assist clinicians in delivering evidence-based care and (HITECH Act, 2009).

**Methods, Intervention, and Analysis:** DESIGN: Quasi-experimental longitudinal cluster randomized design SETTING: Four distinctly separate oncology clinics associated with an academic medical center. SAMPLE: Nurse documented

symptoms and associated interventions. The sample data were pulled electronically from the enterprise data warehouse (EDW) with the inclusion, exclusion, and randomization criteria. The interventions were scored as evidence-based or not evidence-based according to the Oncology Nursing Society (ONS) Putting Evidence Into Practice (PEP) guidelines. The total sample observations were 600, derived from a baseline sample of 200, post-education sample of 200, and a post-intervention sample of 200. MAIN RESEARCH VARIABLES: The intervention was CDS in the form of evidence-based drop-down boxes in the electronic nursing documentation system. The dependent variable was nurse documented evidence-based interventions to manage selected cancer-related symptoms (constipation, diarrhea, fatigue, and pain).

**Findings and Interpretation:** The average EBP rate at baseline for both groups was 27%. After education on the PEP guidelines, the average EBP rate increased to 36.5%, and then decreased to 26% in the post-CDS intervention sample. Mixed model linear statistical analysis revealed no significant interaction of group by sample time ( $F(df=2,593) = 1.37, p = .255$ ). The CDS intervention did not result in an increase in nurse EBP documentation.

**Discussion and Implications:** CDS may have a different effect on EBP documentation for nurses, physicians, and other medical professionals. More research is needed to understand the complex relationship between CDS and Nursing practice.

## #109

**ROLE OF NURSES IN IMPLEMENTATION OF PHYSICAL ACTIVITY IN PATIENTS UNDERGOING ALLOGENEIC STEM CELL TRANSPLANTATION.** Mary Jarden, MScN, PhD, Kristina Thygesen, RN, MSc, Frederikke Bardram, RN, Thilda Aarup, RN, Frederik Bartel, and Janne Due Sommer set, RN, MPH, all at Copenhagen University Hospital, Copenhagen, Denmark

**Objective:** To reflect on the role of nurses in a nurse-led implementation project within a collaborative clinical team

**Topic Significance and Study Purpose, Background, and Rationale:** State of the art evidence concerning the importance of physical activity as a complementary intervention in patients with hematological disease during allogeneic stem cell transplantation (allo-SCT) is emerging. The purpose of this project is to optimize treatment and prevent and/or minimize loss of physical capacity and functional performance, reduce the symptom burden and maintain quality of life in patients undergoing allo-SCT. Further, to discuss the registered nurses unique collaborative role in implementing a physical activity intervention into clinical practice.

**Methods, Intervention, and Analysis:** The implementation process is nurse-led and based on the RE-AIM model that integrates a systematic analysis of current practice, identification of factors that impact change in clinical practice, adoption and implementation of physical activity and evaluation to ensure future sustainability. Patients included are hospitalized for allo-SCT at the Department of Hematology, Copenhagen University Hospital. This ongoing implementation project was initiated May 2013.

**Findings and Interpretation:** The preliminary results from an analysis of current practice based on the RE-AIM models ADOPTION phase found the patients are inactive during hospitalization for allo-SCT. A medical record audit among allo-SCT patients show that nursing practice and documentation regarding mobilization is both lacking and inconsistent, and that clinical practice is not guided by evidenced based physical activity recommendations. The interdisciplinary staff's knowledge, role and attitude towards physical activation during allo-SCT measured by a survey, show that there is a lack of knowledge regarding physical activity during allo-SCT. Assisting patients



in physical activity among nurses is not incorporated in daily clinical practice. The majority of nurses and physicians feel responsible for patients' physical activity level and find it an important aspect of care and treatment, but do not prioritize it in their clinical work with patients undergoing allo-SCT.

**Discussion and Implications:** There is an imminent need for systematic implementation of evidence based physical activity guidelines in clinical practice to reduce treatment related side effects and symptoms during allo SCT, and lessen late effects and complications. Nurse led implementation strategies, as RE-AIM is a relevant and useful implementation framework for planning, designing, carrying out, maintaining and evaluation of interventions in the clinical setting. Nurse-led collaborative strategies for successful implementation are emerging and call for new nursing roles and responsibilities requiring effective and ongoing communication, education, supervision and leadership in clinical practice.

#### #110

### INVESTIGATOR-INITIATED PROTOCOL FOR MEDICAL RECORD, DATABASE STUDY OF NATIONAL INDIO CO-OPERATIVE ENTERPRISES (NICE)—CAMDEN COUNTY CANCER SCREENING PROJECT, MD ANDERSON CANCER CENTER AT COOPER, CLINIC PATIENT OUTCOMES.

Sharon K. Byrne, DrNP, APN, NP-C, AOCNP®, CNE, Evelyn Robles-Rodriguez, RN, MSN, APN, AOCN®, and Yogini Patel, BA, Camden County Cancer Screening Project, MD Anderson Cancer Center at Cooper, Camden; and Dilek Reisoglu, BS, MPH, Rutgers University, New Brunswick, all in New Jersey

**Objective:** To discuss outcomes and lessons learned related to cancer screening, diagnosis, and referral of uninsured Asian-Indio women participating in a dedicated outpatient oncology clinic over a seven year retrospective timeframe

**Topic Significance and Study Purpose, Background, and Rationale:** According to the National Action Plan for Cancer Survivorship (2014), culturally competent collaborative community-based care is a priority. The Camden County Cancer Screening Project (CCCSP), MD Anderson Cancer Center at Cooper, has provided culturally and linguistically appropriate cancer screening to underserved Asian Indio women through the use of a dedicated outreach worker and Nurse Practitioner coordinated clinic in order to provide early detection of breast, cervical and colorectal cancer since 2007. A relationship was built and continues between the CCCSP and National Indio Cooperative Enterprises, Inc., a non-profit organization dedicated to service of the Asian Indian community in Southern New Jersey to provide sustainable education and cancer screening to non or underinsured women. Services include clinical breast examination, screening mammography, Pap smear and pelvic exam, fecal immunochemical testing (FIT) and referral for colonoscopy as per American Cancer Society guidelines. Patients with abnormal findings are referred for diagnostic services to collaborating healthcare professionals at no cost through grant funding.

**Methods, Intervention, and Analysis:** A retrospective study was completed utilizing a sample of patients seen in the clinic over a seven year timeframe. Data collected included demographics, medical- surgical and family history, participation in self breast examination and screening. Data on referrals for follow-up studies for inconclusive or abnormal results related to mammography, Pap smear and pelvic examination, and digital rectal examination and fecal occult immunological testing were also reviewed. Basic descriptive statistics such as measures of central tendency i. e. frequency tables, means and standard deviations were utilized in analysis of findings.

**Findings and Interpretation:** Findings related to malignant and benign conditions of 248 Asian-Indio women with a me-

dian age of 53 years will be shared. Lessons learned related to program participation and growth is highlighted and compared and contrasted to current literature and practice.

**Discussion and Implications:** Identification of facilitators and barriers related to participation in cancer screening within the Asian Indio female population has implications for practice. Strategies such as a dedicated clinic and culturally tailored program are noted to influence initial and on-going early detection behaviors. Knowledge shared from this research may benefit other healthcare providers interested in developing sustainable cancer screening services for this select population.

**Underwriting or Funding Source Name:** This program was supported by grants from the Susan G. Komen Philadelphia and Central & South Jersey Affiliates and new Jersey Cancer Education and Early Detection Program (NJCEED)

#### #111

### OVARIAN CANCER: GI SYMPTOM MANAGEMENT AND QUALITY OF LIFE OUTCOMES.

Elaine Zapata, MSN, ARNP, AOCNP®, and Saunjoo "Sunny" Yoon, PhD, RN, both at University of Florida, Gainesville, FL

**Objective:** Evaluate the efficacy of interventions introduced to ovarian cancer patients at time of treatment to help reduce GI symptom-related distress and improve overall Quality of Life outcomes.

**Topic Significance and Study Purpose, Background, and Rationale:** Ovarian cancer is the second most common gynecologic cancer and most patients experience late stage diagnosis. The swift onslaught of medical management that follows, coupled with the high probability for disease recurrence, often results in high symptom-related distress for patients and a substantial decrease in their overall Quality of Life (QOL) outcomes. Research regarding nursing interventions aimed at improving symptom distress is both significant and relevant to oncology nursing practice because it addresses specific research priorities by both the ONS and the NINR to improve QOL outcomes for cancer patients by promoting symptom relief throughout the disease trajectory. The National Cancer Institute recently established a core set of symptoms and QOL domains to measure in ovarian cancer clinical trials. Gastrointestinal symptoms (anorexia, constipation, diarrhea and nausea) comprised 40% of core symptoms. The purpose of this study addresses two key questions: 1) which interventions aimed at reducing GI symptom distress among ovarian cancer patients are most efficacious? 2) can early nursing interventions that reduce GI symptom distress among newly diagnosed ovarian cancer patients help improve QOL outcomes from outset of diagnosis and throughout treatment? Review of the literature demonstrates ovarian cancer patients experience significant gastrointestinal symptoms. While some of these relate to disease pathophysiology, there is also evidence suggesting standard-of-care chemotherapy (taxane and platinum-based doublet,) may damage intestinal innervation and consequently contribute to long-term gastrointestinal dysfunction. In addition, bevacizumab, a monoclonal antibody directed against vascular endothelial growth factor, has demonstrated activity in recurrent ovarian carcinoma and is a recently approved standard of care agent in recurrent disease. However, an associated incidence of bowel perforation of 11% was reported in a recent phase II trial. Despite the strong link that exists between symptom distress relief and QOL outcomes, no study has specifically targeted early nursing interventions aimed at improving GI symptoms from the outset of diagnosis. A collaborative effort between the nursing scientists/nurse clinicians conducting the study and the ovarian cancer patients themselves can help empower these women by helping them understand their disease and its symptom management, facilitate communications with their healthcare providers and improve overall QOL throughout the disease trajectory.

**Methods, Intervention, and Analysis:** We plan to identify predictors of gastrointestinal symptom distress, identify time intervals symptoms are most likely to present, and identify specific interventions utilized. A retrospective cohort study design will analyze risk factors for gastrointestinal symptom distress (anorexia, constipation, diarrhea, nausea) and associated interventions employed among ovarian cancer patients diagnosed between 2010 and 2015 at a Gainesville, FL surgical-based gynecology-oncology practice setting. Outcomes will be measured using the Functional Assessment of Cancer Therapy (FACT) " Ovarian (FACT-O), comprised of the FACT-General (FACT-G) and a 12-item ovarian cancer-specific scale. Symptom Distress will be measured using the Memorial Symptom Assessment Scale (SAS) and the Evaluation of the Symptom Representation Questionnaire (SRQ). Validity in the study is strengthened due to the potential subject bias in this research setting is predicted to be minimal, because patients are rarely lost to follow-up; they're followed on an every 3-month bases sometimes, indefinitely.

**Findings and Interpretation:** Study findings will be disseminated to scientific communities through presentations at professional conferences and publications in academic journals within 6 months following study completion.

**Discussion and Implications:** Evaluating the efficacy of gastrointestinal symptom distress management interventions has potential to immediately impact current clinical practice in terms of designing and implementing nursing interventions aimed at improving overall QOL outcomes for ovarian cancer patients. Knowledge from this study could guide interventional research related to other patient-reported core set of symptoms. This proposed study can help identify and clarify specific factors affecting symptom distress in newly diagnosed ovarian cancer patients and lead to the development and testing of nursing interventions and complimentary therapies that will improve symptom distress management and result in overall improved QOL outcomes.

## #112

**EARLY INITIATED EXERCISE AND ACTIVATION OF PATIENTS (EEX-ACT) IN CANCER TREATMENT—A NURSING RESEARCH CONCEPT INCORPORATED IN THE INTERDISCIPLINARY RESEARCH PROGRAMME IN COPENHAGEN CENTRE FOR INTEGRATED REHABILITATION OF CANCER PATIENTS (CIRE).** Lis Adamsen, RN, PhD, Hanne Baekgaard, RN, PhD, Tom Moller, RN, PhD, Christina Andersen, RN, PhD, and Mary Jarden, RN, PhD, University Hospitals Centre for Health Research—Rigshospitalet, Copenhagen, Denmark

**Objective:** The objective is to optimize the efficacy of nurse led early initiated exercise interventions following a cancer diagnosis as a preventive and adjunct strategy on physical, emotional, social outcomes.

**Topic Significance and Study Purpose, Background, and Rationale:** Background: With the steadily increasing number of cancer survivors, nurse led evidence-based interventions have a key role in helping patients returning to everyday life. Rehabilitation efforts within cancer fall short of living up to their potential which is illustrated by the disruption of the physical, emotional and social identity that cancer patients currently face. During the last decade, there has been a significantly increased interest in the role of exercise therapy following a cancer diagnosis inspired by the American nursing pioneers Winningham and McVicar. Therefore, in 2011, twenty eight researchers (oncology, paediatric oncology, haematology) in fourteen collaborative teams formed the Centre for Integrated Rehabilitation of Cancer Patients™ (CIRE). Purpose: The research programme's main hypothesis is that interventions based on the concept EEX-

ACT: 1) Early initiation during cancer treatment; 2) EXercise/physical activity; and 3) Patient ACTivation can improve/maintain the physical, emotional and social capacity of cancer patients. The purpose of the programme is to identify and target those cancer patients (in terms of diagnosis, treatment regimen and stage of disease), who would benefit most from the exercise-based interventions and to determine whether the intervention trials have clinical significance in reducing symptoms of fatigue, pain and depression.

**Methods, Intervention, and Analysis:** Methods: The CIRE-research group constitutes a cross-scientific, cross-sectoral and interdisciplinary platform (n= 1300 adult/children) conducting clinically controlled exercise oncology studies that apply both quantitative and qualitative research methods.

**Findings and Interpretation:** Findings: Six (PhD, Postdoc) studies within nursing science have been published focusing on feasibility, safety and clinical meaningfulness. The studies provide findings within the field of symptom control, exercise oncology and supportive adherence strategies as well as individual patient experiences regarding sense of control, confidence during treatment, ability to manage adverse affects and evaluation of own physical strength and well-being are important measurements of success.

**Discussion and Implications:** Discussion & implications: The CIRE-programme will contribute to new theoretical and clinical strategies -along the cancer continuum- within the field of nursing and exercise integrated in an interdisciplinary context. Nurses™ knowledge, competence, attitude towards and role in cancer patients participating in early initiated exercise-based rehabilitation are key elements for successful patient adherence and sustainable implementation in the clinical context.

**Underwriting or Funding Source Name:** The Centre for Integrated Rehabilitation of Cancer Patients (CIRE) - A center established and supported by The Danish Cancer Society and The Novo Nordisk Foundation.

## #113

**A LONGITUDINAL STUDY OF THE CANCER CLINICAL NURSE SPECIALIST WORKFORCE IN ENGLAND (2007–2014).** Paul Trevatt, MSc, BSc (Hons), RN, NHE England (London Region) and Alison Leary, PhD RN, London South Bank University, both in London, United Kingdom

**Objective:** participants viewing abstract will be able to map how the English cancer clinical nurse specialist workforce has developed over the past seven years, and identify trends and findings

**Topic Significance and Study Purpose, Background, and Rationale:** English cancer policy assures that patients with cancer will have access to a specialist nurse. Cancer incidence and survival are increasing but to deliver on policy it is necessary to know if the specialist nursing workforce is also increasing at the same rate. There have been five national cancer specialist nurses census between 2007 "2014. Data was collected across England on location, area of practice, role title, gender, age, salary, and whole time status. This study looks at the number and area of practice of the principle subset of this census- the role clinical nurse specialists by population and area of practice over time.

**Methods, Intervention, and Analysis:** A census of the English cancer clinical nurse specialist workforce was carried out in 2007,2008,2010,2011 and 2014. These results have been re-examined using descriptive statistics to reveal any trends.

**Findings and Interpretation:** Between 2007 and 2014 there has been a 28% (548) increase in whole time equivalent (WTE) CNS numbers overall. However the growth is not evenly distributed. Lung and urology gained 17% increase in CNS WTE (38.4 and 44 respectively) between 2007 and 2014 however breast gained 0.1% (0.5 WTE) and colorectal lost 2.2% of its CNS workforce by WTE (6.6) between 2007 and 2014. The majority of

the rise in CNS WTE is acute oncology which had 0 posts in 2007 and 154.2 WTE CNS posts in 2014

**Discussion and Implications:** Over the course of 5 cancer clinical nurse specialist censuses carried out in England 2007-2014 a number of the original key findings have not changed in relation to variation in geographical distribution of post distribution and / or tumour speciality. It would appear that the data collected here has not supported workforce commissioning. While some cancer clinical nurse specialists post have increased cancer incidence alone does not appear to have driven the workforce increase alone. The commissioning of specialist cancer nurses still appears inconsistent and reactive, driven by multiple complex factors including policy dictates, charitable funding, patient voice, and consultant needs. Such inconsistency is likely to maintain an unequal cancer nurse specialist workforce.

#### #114

**NURSE-LED MULTIPROFESSIONAL TEAM TO IMPROVE ADHERENCE TO TREATMENT FOR PATIENTS WITH HEAD AND NECK CANCER RECEIVING RADIATION THERAPY IN A COMMUNITY HOSPITAL.** Josephine Smudde, RN, BC, MS, OCN®, Karen Ottaviano, RN, BSN, OCN®, Aesoon Hong, RN, and Catherine Johnson, RN, BSN, all at Northwest Community Hospital, Arlington Heights, IL

**Objective:** Identify method to improve adherence to treatment for patients with head and neck cancer

**Topic Significance and Study Purpose, Background, and Rationale:** The purpose of this project was to identify a protocol using a nurse led multiprofessional team that would be used for all patients with head and neck cancer. This protocol is individualized based on patient stage and diagnosis. Incidence of head and neck cancer has increased in white males associated with human papillomavirus (HPV). This community hospital has seen an increase in this population. Baseline data for the first half of 2014 revealed 53% of patients experienced treatment interruption and 31% had weight loss >5kg. Combined treatment modalities including radiation, surgery, and chemotherapy and targeted agents has improved outcomes and survival. Despite these advances this population remains challenging for the health care team due to significant toxicities from treatment which affects the patient's quality of life and hence adherence to treatment.

**Methods, Intervention, and Analysis:** As a department quality improvement project the team met to discuss the issues. A literature search defined best practice. A checklist was created for the patient and the health care team along with an education packet for the patient. Key components included: team members defined; dental care recommendations for the dentist with a faxed return document for care received (new process); feeding tube placement education and care of tube; weekly dietician consultation; prehabilitation speech therapy to teach swallow exercises (new process); tobacco cessation specialist consultation; oral protectant prescription to start with treatment; social work screening and counseling; nurse twice weekly assessments and evaluation of oral cavity; and radiation, medical and surgical oncologists™ oversight of the combined modality treatment. Adherence was assessed by no interruptions in treatment and the patient's weight maintained.

**Findings and Interpretation:** The project was implemented fall 2014. Initial data is promising and suggests effectiveness. Third and fourth quarter 2014, 29% of patients had treatment interruptions and weight loss affected 21%, both improved from baseline data.

**Discussion and Implications:** Future monitoring of adherence will evaluate the success of this team approach for patients with head and neck cancer. This is an example how a nurse led team used data to organize care for the patient with head and

neck cancer to improve quality of life and impact adherence to treatment.

#### #115

**DIFFERENCES IN THE SEVERITY OF COMMON SYMPTOMS BETWEEN PATIENTS WHO DO AND DO NOT EXPERIENCE NAUSEA PRIOR TO THEIR NEXT CYCLE OF CHEMOTHERAPY.** Komal Singh, RN, MS, Paul Steven, Bruce Cooper, Laura Dunn, MD, Bradley Aouizerat, PhD, and Christine Miaskowski, RN, PhD, FAAN, all at University of California, San Francisco, CA

**Objective:** Objective: To determine the occurrence of nausea in patients prior to their next chemotherapy cycle and to evaluate for differences in symptom severity.

**Topic Significance and Study Purpose, Background, and Rationale:** Background: The management of chemotherapy-induced nausea and vomiting has improved over the past 20 years. Despite the availability of a variety of pharmacologic agents, patients continue to experience nausea during and following CTX administration. Less information is available on the occurrence of nausea prior to the next cycle of CTX and its relationship with other common symptoms associated with CTX administration. Purpose: The purpose of this study were to determine the occurrence of nausea in patients prior to their next chemotherapy cycle and to evaluate for differences in symptom severity scores for anxiety, depressive symptoms, diurnal variations in fatigue and energy, sleep disturbance, and alterations in attentional function between patients who did and did not report nausea.

**Methods, Intervention, and Analysis:** Methods: A total of 932 patients with breast, gastrointestinal, gynecologic, or lung cancer were enrolled in the study prior to their next cycle of CTX. Patients indicated the occurrence of nausea using the Memorial Symptom Assessment Scale. Patients completed the following self-report measures to assess symptom severity: Spielberger State-Trait Anxiety Inventory, Center for Epidemiological Studies-Depression Scale, morning and evening assessments of fatigue and energy using the Lee Fatigue Scale, General Sleep Disturbance Scale, and Attentional Function Index. Independent Student's t-tests were used to evaluate for differences in symptom severity scores between the two patient groups.

**Findings and Interpretation:** Results: Of the 932 patients, 45.5% reported the occurrence of nausea prior to their next cycle of CTX. Compared to the patients who did not report nausea, patients with nausea were significantly younger, more likely to be Non-White, had a higher comorbidity score, and reported a poorer functional status score. In addition, patients who reported the pre-CTX nausea had significantly higher state and trait anxiety scores, depressive symptom scores, higher sleep disturbance scores, higher morning and evening fatigue scores, and lower morning energy and attentional function scores.

**Discussion and Implications:** Discussion: Findings from this study suggest that a relatively high percentage of patients (45.4%) have nausea prior to their next cycle of CTX. It is not clear if these patients have nausea for the entire time between cycles or whether this symptom may be better named anticipatory nausea. Additional research is warranted to investigate this symptom further and to assess the anti-emetic regimens these patients are taking during and after CTX. Conclusions: These findings suggest that pretreat nausea is a common symptom in oncology patients undergoing CTX. In addition to nausea, these patients experience high levels of concurrent symptoms. Implications for practice: Oncology nurses need to assess patients for pretreatment nausea as well as other co-occurring symptoms. Reasons for pretreatment nausea warrant additional investigation.

**Underwriting or Funding Source Name:** National Cancer Institute, American Cancer Society.

#116

**RESPONDING WITH MULTI-FACETED TEACHING PLAN AND INTERPROFESSIONAL TEAM TO TEACH IDENTIFICATION, RISKS AND RESPONSES FOR ADDRESSING FEBRILE NEUTROPENIA IN THE ADULT ACUTE HEMATOLOGY/ONCOLOGY PATIENT POPULATION.** Tanya Thomas, BA, BSN, RN, Tri Le, MD, and Michael Keng, MD, all at University of Virginia Health System; and Regina DeGennaro, DNP, RN, CNL, AOCN®, University of Virginia, all in Charlottesville, VA

**Objective:** To improve quality and safety through the development of an interprofessional guideline for standardized care of adult oncology patients with febrile neutropenia in an academic medical center.

**Topic Significance and Study Purpose, Background, and Rationale:** The goal was to reduce time between identification of a febrile neutropenic episode and appropriate treatment in acute oncology setting. Knowledge deficit was identified regarding 1) timely notification of fever in neutropenic patients and 2) immediate actions for patient safety. Confusion existed related to timing of events and necessary actions, including: 1) definition of fever and identification of febrile neutropenia; 2) when to notify physician, and 3) when to initiate treatment response for febrile neutropenic patients. Initial steps included formation of an interprofessional team to examine current evidence and practice. Response included: 1) development of Clinical Practice Guideline; 2) development of Case-Based Learning Scenarios for Simulation Education and 3) development of Computer Based Learning Modules. Interventions included: defining fever, teaching and identifying response and process. National Clinical Guidelines were implemented (Freifeld, A.g., Bow, E.J., Sepkowitz, K.A., Boeckh, M.J., Ito, J.I., Mullen, C.A., Raad, I.I., Rolston, K.V., Young, J.H., Wingard, J.R. (2010)). ISDA guidelines: Clinical Practice Guideline for the Use of Antimicrobial Agents in Neutropenic Patients with Cancer: 2010 Update by the Infectious Diseases Society of America.

**Methods, Intervention, and Analysis:** Chart audits occurred for patients presenting with febrile neutropenia between 1/1/2012 and 12/31/2014. Time between temperature 38.0, cultures and antibiotic administration in pre-intervention phase was compared to the same data for post-intervention phase. Increased compliance occurred with 1) obtaining blood cultures within 20 minutes of febrile episode and 2) initiating antibiotics within 45 minutes of febrile episode. Increased knowledge occurred regarding importance of identification and management of neutropenic fever and correlation to patient safety.

**Findings and Interpretation:** Outcomes included: 1) decreased delays initiating antibiotics for febrile neutropenic patients; 2) increased compliance with practice standards, and 3) decreased failure to rescue cases related to delayed treatment of febrile neutropenia. Participants provided positive feedback reporting that simulation increased understanding of importance of prompt management of febrile neutropenic patient by providing a safe learning environment to practice technical skills and professional communication.

**Discussion and Implications:** Development of a Clinical Practice Guideline will standardize practice related to care of adult oncology patients with febrile neutropenia. This process and collaboration is a model for future quality improvement projects in the inpatient adult oncology population.

#117

**A PILOT STUDY TO VALIDATE THE PREPARATORY GRIEF IN ADVANCED CANCER PATIENTS (PGAC) INSTRUMENT IN A U.S. CANCER POPULATION.** Beverly Bishop, RN, BSN, MS, OCN®, Elizabethtown, KY

**Objective:** To increase knowledge and understanding of conducting a pilot study for instrument validation.

**Topic Significance and Study Purpose, Background, and Rationale:** Mystakidou et al. (2005) developed and used the Preparatory Grief in Advanced Cancer (PGAC) self-rating scale for advanced cancer patients in Athens, Greece, to measure the amount of preparatory grief they may be experiencing. Although studies for this measure have been conducted in Greece, there is no data available regarding reliability or validity in a US population. The primary purpose of this study is to determine the reliability and validity of the PGAC instrument in patients in the United States. The secondary purpose of the study was to obtain sociodemographic information and information pertaining to Advance Care Planning knowledge and beliefs.

**Methods, Intervention, and Analysis:** In addition to the PGAC instrument, the survey included demographic information, and questions about knowledge, choices, and beliefs about end of life care and Advance Care Planning. The Hospital Anxiety and Depression scale (HADS) is included as used in the original study to validate the PGAC instrument. The Patient Health Questionnaire (PHQ-9) was added for additional comparison to the HADS scale. A power analysis identified the minimum number of subjects necessary to adequately assess reliability and validity as 200; however accrual is allowed up to 1000 subjects. IRB approval was received to recruit subjects via two separate online communities. The first online community will be via Facebook, specifically with postings on the Livestrong and American Cancer Society Facebook pages. The second online community is through the Announcement page on the American Cancer Society's Cancer Survivors Network page. SPSS will be used to assess content validity, factor analysis, convergence and discriminative validity, inter-scales correlations, concurrent validity with the HADS and PHQ-9 instruments.

**Findings and Interpretation:** The study is currently accruing and results are pending.

**Discussion and Implications:** The researcher hopes that results will validate the use of the PGAC instrument for future studies with cancer patients in the United States. This pilot study will additionally be used to gather preliminary information to see if individuals diagnosed with a late stage cancer who receive Advance Care Planning have decreased preparatory grief compared to those who have not had Advance Care Planning discussions.