

# 2016 Oncology Nursing Society Annual Congress: Podium, E-Poster, and Poster Session Abstracts

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## Clinical Abstract Podiums

### **IMPLEMENTATION OF FORMALIZED NURSING PRACTICE TO PROMOTE PATIENT SAFETY WITH ORAL CHEMOTHERAPY.**

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The purpose of this project was to develop a formal process for oral chemotherapy initiation, education, and monitoring that would promote patient safety and compliance with the 2013 Oncology Nursing Society and American Society of Clinical Oncologists safety standards. Currently, nearly 25% of the chemotherapy drugs in the research setting are believed to be oral agents. Unfortunately, the policies and practices relating to the use of oral chemotherapeutics differ in terms of what is considered safe. While the use of oral chemotherapy offers several potential benefits, there are some noteworthy misconceptions, risks, and safety issues associated with their use including challenges with patient responsibility, adherence, monitoring, and education. The goals of this project were to (1) develop a formal tracking system when initiating oral chemotherapy, (2) cultivate patient education standards specific to oral chemotherapy, (3) ensure individual patient education is provided by a nurse, and (4) to design a guided procedure for follow-up phone calls to monitor for side effects, toxicities, and compliance. A survey was distributed to the nursing leaders at 23 UPMC Cancer Centers to assess current practice for initiation, education, and monitoring of oral chemotherapy drugs. A taskforce of nursing leaders was established to review survey results and design guidelines based on the 2013 ONS and ASCO chemotherapy safety standards. The policy and guidelines were piloted at 5 centers for 90 days. Upon completion, minor revisions were made based on user feedback. The guidelines were then implemented throughout all 23 Cancer Centers. Since implementation, the Cancer Centers have demonstrated 100% compliance with the policy and guidelines. The main implication for practice is the inability to dedicate one nurse at each site whose sole focus is to educate and monitor patients who are prescribed oral chemotherapy. Additional implications include: (1) the critical role of incorporating pharmacists to assist in this process, (2) patient procurement of the drug, and (3) the indispensable role of the nurse in promoting adherence.

### **ADOLESCENT-YOUNG ADULT PATIENT SURVIVORSHIP PROGRAM: A JOINT EFFORT BETWEEN A CANCER INSTITUTE AND COMMUNITY ORGANIZATION.**

Alicia Coffin, MSN, RN, OCN®, University of Rochester/Wilmot Cancer Institute, Rochester, NY; Bethany Marsh, BSW, University of Rochester/Wilmot Cancer Institute, Rochester, NY; Lauren Spiker, M.Ed., Melissa's Living Legacy Teen Cancer Foundation, Rochester, NY; Joshua Lehman, University of Rochester/Wilmot Cancer Institute, Rochester, NY

The Wilmot Cancer Institute (WCI) created a survivorship program to educate patients about their oncologic history and after effects of therapy, and to organize or create resources to improve quality of life. Adolescent and young adult (AYA) cancer survivors are a vulnerable population because of deficiencies in health-related knowledge and poor adherence to health promotion and screening practices. The inferior outcomes and health care disparities observed have been attributed to their unique developmental challenges and distinctive styles

of learning and communication. Current recommendations for AYA survivors involve lifelong medical monitoring for late effects, impaired health status, and premature death; however, a survey of young adult cancer survivors showed in the previous two years, less than 1/2 had any cancer-related outpatient follow-up, less than 1/3 received survivor-focused care, and less than 1/5 received specific advice on risk reduction or screening tests. With this in mind, an AYA Program was developed within the survivorship program, utilizing a patient navigation approach spanning the cancer institute and a community program, Melissa's Living Legacy Teen Cancer Foundation (MLL). Purpose: To promote health adherence and satisfaction among AYA survivors by improving engagement in care and preparing them to advocate for themselves. By helping patients access community-based services through collaboration with MLL, the AYA patient will derive greater benefit from the continuous support. Interventions: The AYA Navigator assists the clinical team with survivorship planning, individual and group support, and coordinates age-appropriate financial, psychosocial, practical, and educational resources within WCI and community. Utilizing one-to-one meetings, the navigator improves the AYAs' ability to proactively manage their cancer experiences by identifying and meeting the unique needs of these patients and their families, ultimately improving patient satisfaction. Evaluation: Since implementation in Fall 2014, 90 AYA patients have enrolled. About 1/3 are involved in peer support programs at MLL. Participants have provided feedback that they are highly satisfied with program opportunities. Discussion: Maintaining normal living patterns, minimizing psychological trauma, and fostering normal development throughout the AYA cancer trajectory is a major priority. Ongoing evaluation will include compliance with follow up visits, patient surveys, focus groups, and monitoring WCI patient satisfaction.

### **REDUCING CLABSI ON AN INPATIENT ONCOLOGY UNIT BY IMPLEMENTING EVIDENCE BASED HYGIENE PRACTICE.**

Lauri Brunton, RN, OCN®, University of California, Davis Medical Center, Sacramento, CA; Valerie Sawhill, RN-BC, MSN, University of California, Davis Medical Center, Sacramento, CA; Nicole Mahr, RN, MS, OCN®, University of California, Davis Medical Center, Sacramento, CA; Wilson Yen, RN, MSN, NE-BC, University of California, Davis Medical Center, Sacramento, CA; Patricia Palmer, RN, CNS, MSN, APOCN, University of California, Davis Medical Center, Sacramento, CA

Central Line Bloodstream Infection (CLABSI) is associated with treatment delays and sepsis-related death in oncology patients. Infection prevention is paramount to the immunocompromised patient population and nursing is directly involved in this endeavor. In January 2015, the 35 bed Hematology/Oncology/Stem Cell Transplant Unit had CLABSI rates well above the National Healthcare Safety Network (NHSN) benchmark. A multidisciplinary team of clinical resource nurses, unit leadership, infection preventionist, and quality and safety champion was formed to address the problem. Three infection prevention practices were evaluated: hand hygiene, environmental cleaning and patient bathing. Hand hygiene and environmental cleaning compliance were each above 90%, but patient hygiene practices were inconsistent. After a review of the literature, the decision was made to implement the use of 2% chlorhexidine gluconate (CHG) wipes for all patients. The use of wash basins, soap and water for bathing was immediately discontinued. Nurses and physicians were educated about efficacy and importance of daily CHG bathing, and patient education was provided and reinforced by nursing. Posters demonstrating proper use were placed in each room as a visual aid. Bed-bound patients received daily baths using the CHG wipes. Ambulatory patients used the wipes after showering, allowing the CHG to dry on the

skin as recommended. CLABSI rates improved dramatically in the months following implementation. Prior to changing practice, temporary line infection rates were 7.09 and permanent line infection rates were 3.7; above the NHSN standard of 2.0. Post-implementation rates were dramatically lower in Quarter 2 with a temporary line rate of 1.63 and permanent line rate of 3.13. Preliminary results for Quarter 3 rates are promising. There also was a decrease in “preventable” CLABSI (not related to mucosal barrier injury) from an average of 3.5 infections in Quarter 1 and 2 to ZERO thus far in Quarter 3. Formation of a multidisciplinary team and a focus on evidence-based interventions successfully decreased CLABSI rates in the high-risk patient population. CLABSI is related to an average 7-day increase in hospital length of stay, and 20% mortality rate. The impact of these changes could dramatically change the course of recovery for these patients.

**UTILIZATION OF AN INNOVATIVE TOOL TO IMPROVE ONCOLOGY PATIENT OUTCOMES.** Dana McNeil, BSN, RN, HN-BC, Cancer Treatment Centers of America—Eastern Regional Medical Center, Philadelphia, PA; Jessica O’Driscoll, BSN, RN, HN-BC, Cancer Treatment Centers of America—Eastern Regional Medical Center, Philadelphia, PA; Joanne McGovern, MSN, RN, CCRN, Cancer Treatment Centers of America—Eastern Regional Medical Center, Philadelphia, PA; Marie Decker, MSN, RN, AOCN®, NE-BC, HN-BC, Cancer Treatment Centers of America—Eastern Regional Medical Center, Philadelphia, PA

Introduction of an electronic board can improve interdisciplinary communication to ensure early intervention and ultimately improve patient outcomes. Early detection and prevention is key to positive patient outcomes. The early stages of physiologic demise may be demonstrated only by subtle changes in the patient’s vital signs. The purpose of this study was to implement a visual tool, which would indicate and consistently update the acuity of patients on the oncology unit. The parameters displayed included vital signs, Hendrich score and the Braden scale. The goal of the electronic board was to create a continuously accessible resource for the interdisciplinary team to rapidly assess the patient’s current condition during rounds and throughout all shifts. This electronic board produces a color-coded alarm for abnormal parameters. Vital signs highlighted in red indicate the urgency for assessment and intervention. The Hendrich score displayed in yellow alerts all disciplines of high fall risk patients. The Braden scale, color-coded purple, identifies patients at high-risk for skin breakdown. Improvement in early and rapid identification of patient deterioration and risk was analyzed using two months of post-implementation data from the electronic health record. A survey was sent to all disciplines to qualitatively measure the value of this tool. Abnormal vital signs identified from the electronic board led to clinician interventions impacting 27% of admitted patients in the first two months. Falls decreased by 33% after the first month of implementation. The number of specialty beds ordered increased by 32% for patients identified at risk for skin breakdown. Twenty-five survey responses illustrated 71% of the interdisciplinary team that replied used the electronic board, and 68% confirmed improvement in interdepartmental communication. There is a significant association between early intervention and decreased hospital mortality rate in acutely ill cancer patients. The continuous display of pertinent patient data on an electronic board holds clinicians accountable to recognize and provide this early intervention, thus impacting oncology patient outcomes. This innovative tool will further enhance our outcomes as we move to interfacing our vital signs monitor into our electronic health record.

**NURSING SUPPORT OF SIBLING HEMATOPOIETIC STEM CELL DONORS: ARE WE DOING ENOUGH?** Linda Brand, RN, OCN®, Moffitt Cancer Center, Tampa, FL; Amy Patterson, MSN, RN, AOCN®, Moffitt Cancer Center, Tampa, FL; Dawn Cobb, RN, BMTCN™, Moffitt Cancer Center, Tampa, FL

BMT nurses typically focus on the patient’s education and support throughout the transplant experience. Nurses forget that transplantation is a complicated procedure that affects not only the patient but also the sibling donor. Nurses need to be aware of the unique worries, emotions, and educational needs of sibling donors. A literature review on donor quality of life identified psychosocial and clinical concerns related to the donation process. These may include: Will my cells work? What will happen to me? Will my health be at risk? Support and education will help minimize concerns and improve the overall donation experience. A questionnaire was developed to assess the BMT nurse’s satisfaction with current donor education materials and their comfort level in addressing donor emotional needs. A donor questionnaire was also developed to assess satisfaction with existing education and if emotional needs were met. Interventions were developed based on results of the surveys and included: journal club presentations on the emotional/educational needs of donors, development of an educational plan and tools including an information pamphlet mailed to the donor prior to their first visit, addition of a social work consult, and thank you gifts given to the donor post collection. The post intervention nurse questionnaire showed significant improvement in nurse satisfaction with the donor educational plan and tools and their ability to meet the emotional needs of the donors. A donor post intervention survey is pending and is being administered over the next three months. BMT nurses have a unique opportunity to provide holistic care. Lack of awareness of the educational and emotional needs of the donor can result in frustration and dissatisfaction and impact the nurse’s ability to provide support. By utilizing the new educational plan and tools, donors are provided systematic, consistent education. A social work consult as part of the donor workup provides a safe environment to voice concerns and doubts. Recognition of the donor as an important part of the transplant process and meeting their needs as well as the patient’s exemplifies patient- and family-centered care.

**CODE PURPLE: A NURSING STRATEGY FOR PROVIDING TIMELY PSYCHOSOCIAL SUPPORT TO PATIENTS.** Carol Tringali, MS, RN, AOCNS®, Penn State Hershey Medical Center, Hershey, PA; Martha Jansen, BSN, RN, Penn State Hershey Medical Center, Hershey, PA

A cancer diagnosis is often unexpected and makes one face their mortality, forcing reevaluation of goals and resources. When cancer patients are ready to talk about the impact of cancer on their life - their diagnosis, their fears, their mortality - they want nurses to sit, listen, and help them process the unexpected. When unanticipated symptoms, test results, or complications arise, patients have a strong need to talk through these events. As nurses, we strive to provide timely education and emotional support to patients and families. It is from this need that nurses developed Code Purple. Nurses desired to have uninterrupted time to discuss issues significant to their patient at a time important to the patient. A strategy was needed to facilitate providing psychosocial care on a busy oncology unit that would also provide coverage to other patients during these times. Code Purple was designed by staff nurses in response to the identified need to spend quality time providing emotional and psychological support to patients at the time when the patient indicated readiness to share feelings and concerns. When this opportune moment to provide psychosocial care is identified, the nurse contacts

the Charge Nurse. Recognizing that the nurse may be with the patient for an extended amount of time, patient assignments are redistributed temporarily to allow continuity of care to other patients. The one nurse can then give full attention to the one patient. Nurses expressed professional satisfaction regarding their ability to use the framework of Code Purple to provide psychosocial care at an opportune moment to the benefit of the patient. Nurse satisfaction and patient outcomes, as well as implementation challenges, will be discussed. Intervening to provide psychosocial care to patients in a timely manner when the patient expresses a need, either verbally or non-verbally, is an important part of oncology nursing care. The team approach outlined in Code Purple empowers nurses to dedicate uninterrupted time to meet patient psychosocial needs. Code Purple exemplifies a strategy designed by nurses to meet the patient's emotional and psychosocial needs at a time that is meaningful to the patient.

**START, PAUSE, STOP: A DEDICATED AMBULATORY PHASE I IMMUNOTHERAPY CLINIC'S APPROACH TO MANAGING PATIENTS ON IMMUNE MODULATORS.** RuthAnn Gordon, MSN, FNP-BC, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY; MaryKate Kasler, MSN ACNP-BC, DNP(c), Memorial Sloan Kettering Cancer Center, New York, NY; Kristen Stasi, BSN, RN, Memorial Sloan-Kettering Cancer Center, New York, NY

Advances in immunotherapy have demonstrated durable responses for oncologic patients. Human monoclonal antibodies such as ipilimumab and nivolumab stimulate a patients' immune system to recognize cancer cells and mount a response to decrease the presence of cancer. During this process, patients may experience immune related adverse events (irAEs) which differ dramatically from traditional chemotherapy. Without prompt intervention, these side effects can have life threatening consequences. The need for expert clinicians to properly assess and manage these patients and the irAEs prompted the development of dedicated ambulatory Phase I immunotherapy clinic. The intent is to describe the infrastructure of an outpatient Phase I immunotherapy clinic at Memorial Sloan Kettering Cancer Center (MSKCC), provide oncology nurses with a standard algorithmic approach to assess and manage irAEs and demonstrate the impact nursing provides in the management and coordination of care of patients participating in phase I immunotherapy clinical trials. Interventions: At MSKCC clinical research nurses use evidence-based algorithms to identify and manage irAEs. Implementation of an algorithmic intervention is established after clinical determination of patient's presentation and acuity of the event. Utilization of the start, pause, stop principle to guide their management is applied, and early intervention and prompt management are integral to addressing the irAEs. Education is given to the patient with instructions on the importance of promptly reporting symptoms and specific signs and symptoms to look out for. As a result of early intervention, patients have circumvented inpatient management and life threatening adverse events. The patient's ability to recognize and report irAE's in a timely fashion make patient education an essential part of the nurses' role. Early symptom detection, clinical assessment and close evaluation play a key role in successful patient management. Discussion: Patients receiving immunotherapy for anticancer therapy are at risk to experience irAEs. However, with the utilization of a dedicated collaborative team to provide education, thorough clinical assessment, early intervention and early algorithmic interventions, patients can be managed safely and successfully. Innovation: Prompt intervention using treatment algorithms within a designated immunotherapy clinic provides consistency with patient care throughout the inpatient and outpatient spectrum.

**QUALITY INITIATIVE AIMED AT REDUCTION OF PERIPHERALLY INSERTED CENTRAL CATHETER ASSOCIATED THROMBOSES AND LINE DYSFUNCTION.** Karen Abbas, MS, RN, AOCN®, URMC, Rochester, NY; Nancy Adair, MS, RN, URMC, Rochester, NY; Elizabeth Conderman, BSN, RN, OCN®, URMC, Rochester, NY; Jamie Oliva, MS, ANP, URMC, Rochester, NY; Michael Becker, MD, URMC, Rochester, NY; Michelle Miller, MSN, RN, ANP-BC, OCN®, URMC, Rochester, NY

At our cancer center, efforts to reduce and maintain CLABSI rates below NHSN benchmarks in our Adult Leukemia and Bone/Marrow Transplant (ALBMT) patients were successful. However, the rate of PICC-associated thromboses, use of alteplase to restore patency, and line dysfunction remained high. These factors cause delays in treatment, increase costs, and impact nursing time. The purpose was to see if the implementation of a new product would result in decreasing rate of thromboses and line dysfunction while maintaining the low rate of CLABSI. A PICC with pre-clinical data claiming antithrombotic and antimicrobial properties was identified. A nursing led prospective study was conducted in which 75 patients admitted to the ALBMT Services underwent placement of study PICC vs standard PICC in the upper forearm. Patients were identified based on existing criteria with the addition of exclusion for a known sensitivity to chlorhexidine. Variation to the current procedure for insertion was non-trimming of the study PICCs. Following removal of the PICC, charts were reviewed and data extracted. A retrospective chart review of 75 patients from the ALBMT services who received a standard PICC in the preceding two years was performed with the same data points extracted. Data points extracted were: (a) Frequency of line associated thrombosis (b) Frequency of line associated bleeding with insertion (c) Frequency of CLABSI as defined by the CDC for each cohort (d) Use of alteplase in each cohort. The CLABSI rate and the frequency of line associated bleeding was no different for either cohort. Fifty five percent of the study PICCs needed alteplase for occlusion compared to 59% of the nonstudy PICCs and 17% of the study patients developed catheter-related thromboses compared to 9% of the non-study patients. Based on the results, we could not recommend the study PICC as there was no apparent advantage and staff satisfaction was greater with the current PICC. Another available PICC with antithrombotic properties is being considered for trial. This study represents a robust interdisciplinary quality improvement project aimed at improving patient care and patient safety, while reducing costs, and impact on nursing resources.

**DEVELOPMENT AND EVALUATION OF CENTRAL VENOUS CATHETER SELF-MANAGEMENT EDUCATION PROGRAM FOR CANCER PATIENTS.** Jeong Yun Park, PhD, RN, APN, University of Ulsan, Seoul, South Korea; Hyun Lim Kim, RN, APN, Asan Medical Center, Seoul, South Korea; Soon Ja Shin, RN, Asan Medical Center, Seoul, South Korea

Changes in cancer treatment environment, excellent safety of systematic outpatient treatment and home care have been affecting on the increase of discharged cancer patients with central venous catheters (CVC). Cancer patients with CVC have many difficulties in practicing it due to lack of self-management knowledge and attitude. Therefore CVC S-MEP should be developed to provide cancer patients with self-management knowledge, attitude, and behaviors after discharge from the hospital. The purposes of this study were: to develop the central venous catheter self-management education program(CVC S-MEP) for discharged cancer patient; to determine its effects on self-management knowledge, self-management attitude, self-management behavior, catheter-related complications; and to compare these effects to usual patient education. The

intervention consisted of self-management education a week with each lasting 50 minutes for 4 weeks duration. The subjects of the study consisted of 45 patients who underwent cancer patient with CVC at A hospital in Seoul, from April 1 to December 31, 2011. The experimental group(21 patients) received the individual education based on their self-management needs and self-management knowledge and self-management attitude before discharge from hospital and at the 2nd week after discharge from hospital by researcher assistants. The results were summarized as follows; first, compared with control group, the subjects of the CVC S-MEP had significantly high mean levels of self-management knowledge( $p=.007$ ), attitude( $p<.001$ ), and behavior( $p=.002$ ). Secondly, the participants in the CVC S-MEP had significantly lower frequency of catheter-related complications ( $p=.030$ ); however, infection, occlusion, and catheter damage were not lower level with significant. Thirdly, the CVC S-MEP was found to be feasible in clinical setting for cancer patients with CVC. CVC S-MEP consisted of the individualized education and practicum with hand hygiene, aseptic technique, site dressing practice, heparinized solution flushing practice, site assessment, shower, and emergency coping. From these results, it can be concluded that the CVC S-MEP is an effective nursing intervention to promote self-management of long-term CVC of cancer patient, and leading to reduction of catheter-related complications. Nurses need to assess patients and their families' competency in self-management before providing CVC S-MEP.

**REGULATORY AND ONS STANDARDS RELATED TO HAZARDOUS DRUGS—ARE YOU AND YOUR PATIENTS SAFE?** Tiffany Achenbach, MSN, CMSRN, Lehigh Valley Health Network, Allentown, PA; Amy Yaple, RN, Lehigh Valley Health Network, Allentown, PA

Hazardous drugs are not solely cytotoxic medications administered in controlled oncologic settings, but include a multitude of medications used in diverse healthcare settings, affecting millions of workers. In April 2011, the National Institute for Occupational Safety and Health (NIOSH), the Occupational Safety and Health Administration (OSHA), and The Joint Commission provided notification to hospitals highlighting the importance of protecting healthcare workers from exposure to hazardous drugs. To strategize and implement interventions to protect employees in a large Magnet<sup>®</sup> health network, an interdisciplinary committee comprised of representatives from pharmacy, employee health, inpatient and outpatient oncology, and environmental safety was formed. Initial work focused on completing a gap analysis comparing current practice to NIOSH, OSHA, Oncology Nursing Society (ONS) and United States Pharmacopeia 800 standards. Subsequent actions included: an updated list and safety data sheets of cytotoxic and hazardous drugs based on NIOSH standards and prominent availability on the employee intranet; revised labels for hazardous and cytotoxic medications to more blatantly alert staff during administration; a revised medical surveillance process; implementation of a closed system device to prevent leaks of intravenous hazardous drugs; utilization of disposable chemotherapeutic gowns; and, education for over 3,000 registered nurses. Evaluating the goal to assure safe handling of hazardous drugs requires multifactorial and ongoing methods. A process is in place for pharmacy personnel to continuously review NIOSH and USP 800 hazardous drug recommendations drugs, update the organization's list, complete and post safety sheets, and revise drug labels. A method was devised, implemented and evaluated to assure 100% compliance of an annual cytotoxic assessment and baseline blood work and urinalysis for all staff administering cytotoxic drugs. Unit leaders play a pivotal role in real-time 'teachable moments' regarding staff protection of themselves and patients through utilization of appropriate personal protec-

tive equipment. This presentation provides an overview of the regulatory and ONS standards and associated rationale and evidence related to hazardous drugs, and details a variety of tactics to assure compliance based on a comprehensive gap analysis. Attendees will gain a collection of pragmatic strategies to enhance workplace safety in any environment in which hazardous drugs are administered.

**EVOLUTION OF A SKIN WOUND OSTOMY TEAM (SWOT) PROGRAM TO MEET THE CHALLENGES OF ONCOLOGY PATIENTS.** Stephanie Terry, BNS, RN, CWOCN, PCCN, HN-BC, Cancer Treatment Centers of America, Philadelphia, PA; Joe Rudolph, BSN, RN, CWOCN, DWC, Cancer Treatment Centers of America, Philadelphia, PA; Kristen Tinney, BSN, RN, HN-BC, Cancer Treatment Centers of America, Philadelphia, PA; Paul Gehringer, RN, Cancer Treatment Centers of America, Philadelphia, PA

This review highlights the multidisciplinary support needed to maintain successful Skin Wound Ostomy Team (SWOT) participation and development. In response to the high prevalence of pressure ulcers reported during inpatient stays at our facility, a SWOT team formed in 2013. The team successfully increased education, improved documentation on admission, improved patient outcomes, and increased overall awareness of available skin and wound care products. Since the inception of the SWOT, incidence rates of pressure ulcers have remained low: 1.025% in 2014, and 1% for 2015. Maintenance of excellent patient outcomes, coupled with top-notch stakeholder satisfaction, require identification of opportunities to continue to innovate. There are currently two team lead nurses and 35 members participating in SWOT from various departments which include inpatient, quality of life clinic, outpatient clinic and Operating Room. Incentives for stakeholders included recognition from fellow peers, contact hours for educational offerings, and points to be applied to their professional clinical ladder application within the hospital. Continued development of SWOT received significant support from administration as evidenced by good staffing ratios which facilitated floor nurses time to obtain appropriate training and education sessions. The SWOT reports a high satisfaction with their role as resources for staff, as well as their ability to immediately improve a patient's quality of life due to their specific knowledge of basis for odor, pain, drainage, and bleeding control. The floor nurses are a natural extension of the SWOT, with an ability to proactively screen patients for skin issues that may become problematic. New initiatives require continuous development, innovation, and administrative support. Improvement in stakeholder education, significant reduction in hospital acquired pressure ulcers, and improved quality of life for patients are a result of the SWOT initiative. This is paramount as pay for performance values improved outcomes. Moreover, SWOT members report high satisfaction with their role as resources, which may positively impact nursing retention.

**TRANSLATIONAL RESEARCH UNIT: DEVELOPING STAFF NURSES AND A MODEL OF CARE.** Curtis Tina, MSN, MBA, RN, NEA-BC, Froedtert & the Medical College of Wisconsin, Milwaukee, WI; Theresa Rudnitzki, MS, RN, AOCNS<sup>®</sup>, ACNS-BC, Froedtert & the Medical College of Wisconsin, Milwaukee, WI; Julianne Griffie, MSN, RN, AOCN<sup>®</sup>, ACNS-BC, Froedtert & the Medical College of Wisconsin, Milwaukee, WI

Objective: To create a research unit and train nurses to provide high quality care to patients on oncology clinical trials. Oncology clinical trial protocols are complex and detailed, requiring a different level of care; especially the early phase

studies. Tasks need to be completed in a timely manner and patients need to be watched with close attention to detail. There was dissatisfaction with the patient care process for patients enrolled in a clinical trial in the current model of care. Without an adjusted staffing ratio, it was difficult to meet the demands of each study, leading to deviations from the study protocol. With the development of an outpatient translational research unit (TRU) to treat patients on clinical trials, came the need for a more conducive workflow, staffing ratio, and staff education to care for this complex population. Education and models of care were researched, and included site visits to three other institutions with similar units. Most of the previous nursing education available for clinical trials was directed to the research nurse coordinator, not the direct care nurse. A workshop was created and formatted to be relevant to TRU nurses. Creation of on-unit orientation, a checklist/self-assessment and orientation guide was completed prior to opening the unit. A research flow sheet to document the frequent blood draws and other research related tasks was also created. Deviation data related to infusion nursing care was collected from ONCORE, a clinical trials management system, and evaluated quarterly from April 2013 to December of 2014. An acuity scale for nurse assignments was put in place. Since creation of the new RN orientation and care model there has been a decrease in the rate of deviations. Education on new protocols and procedures needed to implement more complex trials will continue. Deviation data will continue to be monitored and evaluated. Specialized care with improved nurse to patient ratios related to acuity makes it safer to care for the patient participating in early phase trials, allowing the nurse to complete all study related tasks and observations. This also ensures accurate results and looks attractive to study sponsors. Ultimately, the success of these changes will broaden the clinical trial choices available at our facility and give patients more care options.

**CHLORHEXIDINE GLUCONATE (CHG) BATHING FOR PORT AND TUNNELED CATHETER PATIENTS.** Helen Jackson, MSN, APRN-CNS, GCNS-BC, Nebraska Methodist Hospital, Omaha, NE

Oncology patients receive treatments that compromise the immune system and put them at a high risk for a central line bloodstream infection (CLABSI). A CLABSI is a preventable adverse event that can affect the patient's quality of life, cause an economic burden on the patient and the health care system and even result in death. The prevention of CLABSI is a front-line focus on the oncology unit at our facility. There are many evidence-based practices in place to help prevent CLABSI including the use of alcohol permeated caps, two person blood draw process, neutral displaced injection caps, and an IV Team that access all ports and change all central line dressings weekly. Despite these interventions there were 13 CLABSI on the oncology unit in 2014, the majority being ports. The infection often results from the ingress of skin organisms into the blood stream along the catheter or through breaks in skin integrity. Chlorhexidine Gluconate (CHG) is effective against many of the skin organisms. A literature review on CHG bathing for patients with central lines determined that most evidence-based literature supported daily bathing with CHG in the Intensive Care Units. There was scant literature in supporting daily bathing with CHG outside the ICU as a means to reduce CLABSI. CHG is supported by the Centers for Disease Control and Prevention as a category II recommendation for preventing CLABSI. After staff education, we implemented daily CHG bathing on all patients with ports and tunneled catheters starting the middle of August 2014. The change took about three months to become daily practice for nursing staff. Since the implementation of CHG bathing on patients with ports and tunneled catheters there have been three CLABSI.

Of these one, was gut epithelial disruption and translocation, one was associated with oropharyngeal translocation and one was gram-positive staph (none of these were ports or tunneled catheters). In July 2015 this practice was taken throughout the hospital for all central lines. Through EBP and education staff feels empowered by the significance in the decrease of CLABSI and strive to eliminate all CLABSI on the oncology unit.

**ADHERENCE TO ORAL CANCER THERAPIES IN THE ADULT ONCOLOGY/HEMATOLOGY PATIENT.** Whitney Perry, APRN, AOCNP®, Baptist Health CBC Group, Louisville, KY; Shana Cassady, APRN, AOCNP®, Baptist Health CBC Group, Louisville, KY; Katherine Mitchell, APRN, AOCNP®, Baptist Health CBC Group, Louisville, KY

There has been an increase in the development of oral cancer agents in recent years, creating a paradigm shift in the management of the adult oncology/hematology population. An area of interest for the Oncology Nursing Society (ONS) and the American Society of Clinical Oncology (ASCO) is oral chemotherapy adherence. The Quality Oncology Practice Initiative (QOPI) sets standards for certification of oncology practices based upon key outcome measures. One area of focus is improving continuity of care and adherence for patients prescribed oral agents. A team of advanced oncology nurses at a QOPI-certified institution created a standardized process to monitor adherence in adult oncology/hematology patients taking oral oncologic medications. We explored: (1) To what degree do patients adhere to the prescribed schedule taking oral agents; and (2) What percentage of patients require an intervention by the healthcare team due to side effects or patient concerns? To assess adherence, the validated eight-item Morisky Medication Adherence Scale (MMAS) was utilized to ensure standardization and to prompt routine follow-up phone calls with patients. Patients were called two weeks after initiating therapy, and either two weeks following the first call or two weeks after follow-up office visit. The need for intervention was determined based on discussion of tolerance, concerns, and side effects. Analysis of information obtained from phone calls showed a "high level adherence" (MMAS score 8/8) of 82% (N = 162) on the first follow-up call, and 86% (N = 123) on the subsequent call. Seventeen percent of patients required an intervention to address patient concerns or side effects. The MMAS score was independent of the need for intervention, with no correlation identified based on MMAS scores. A consistent systematic approach is necessary to assess adherence in patients taking oral oncologics. There appears to be no correlation between self-reported adherence and the need for clinician intervention. Our findings suggest that follow-up phone calls and clinician assessment may be an effective approach to identify which patients need support with adhering to therapy. Examination of MMAS scoring and the link to intervention is an area of interest for future study.

**IMPLEMENTATION OF A MULTIDISCIPLINARY PROGRAM TO DECREASE READMISSIONS IN BLADDER CANCER PATIENTS UNDERGOING CYSTECTOMY.** Julie Bluma, BSN, RN, Froedtert, Milwaukee, WI; Janice Erbe, BSN, RN, CWON, Froedtert, Milwaukee, WI; Alysha Riegert, BSN, RN, OCN®, Froedtert, Milwaukee, WI; Richella Singers, RN, OCN®, Froedtert, Milwaukee, WI; Susan Solverson, BSN, RN, CMSRN, Froedtert, Milwaukee, WI; Kathleen Sweeney, MS, RN, ACNS-BC, AOCNS®, Froedtert, Milwaukee, WI

The urologic oncology team noted bladder cancer patients who underwent neoadjuvant chemotherapy, followed by surgery, had more than a 25% readmission rate within the first

30 days following discharge. The most common reasons for readmission were dehydration and trouble managing their reconstructed urinary diversion. Research has shown that when patients are properly prepared prior to surgery, they experience fewer complications and unanticipated setbacks. A multidisciplinary group was put together that included dietitians, urologic oncologists, reconstructive surgeons, nurse coordinators, educators, APN staff, leaders, and inpatient and outpatient registered nurses to examine the issue. The group identified that current practice did not adequately prepare patients for their surgery, nor provide patients with a good understanding of their post-operative course. Based on this, the team met and came up with an algorithm listing everything they felt needed to happen during a patient's course of treatment. The following interventions were added: (a) additional pre-operative RN teaching visits, (b) dietary appointments at the start of chemotherapy, (c) home health care visit within the first 24 hours following discharge, (d) scheduled intravenous fluid visits post-discharge, (e) RN follow up phone calls post-discharge, (f) standardized, consistent education from the inpatient and outpatient areas. Patients were made aware of the plan of care at the onset of treatment and then the clinic nurses navigated patients through the new process. Initial analysis after implementation of the algorithm demonstrated a decreased readmission rate and an increase in patient satisfaction. Patients reported feeling well prepared postoperatively decreased anxiety, and a positive experience overall. Staff observed decreased patient phone calls after discharge and improved work flow and communication between inpatient and outpatient areas. By providing the necessary pre-operative preparation, consistent teaching materials, and clear patient expectations, patients were better able to understand and cope with their cancer treatment and manage complications post-operatively. This program has been so well received by practitioners and patients, expansion into other oncology programs is being considered. Continued analysis can demonstrate the correlation between patient preparedness, length of stay, readmission rates, and patient satisfaction in this program, as well as other programs.

**EARLY SEPSIS RECOGNITION IN AMBULATORY CARE FOR CANCER PATIENTS.** Debra Burgess, RN, BSN, MS HA, UCD Medical Center, Sacramento, CA; Kerri Stuart, RN, MSN, UCDMC, Sacramento, CA; Christine Fonseca, RN, BSN, UCDMC, Sacramento, CA; Esther Koulikov, RN, BSN, UCDMC, Sacramento, CA; Devon Trower, RN, BSN, UCDMC, Sacramento, CA; Judy Downing, RN, BSN, UCDMC, Sacramento, CA

Patients receiving chemotherapy or with prolonged neutropenia are at high risk of developing fever and serious infections leading to sepsis. Because of the risk of increased mortality or complications from untreated infections, prompt empiric treatment with antibiotics is critical. However, immunocompromised patients are often missed upon arrival to the Emergency Department where minutes count to stop the progression of sepsis. Mortality increases 7.8% for every hour antibiotics are delayed for severe sepsis or sepsis shock patients. Baseline review found it took over 1 hour to administer antibiotics to our cancer patients despite adoption of the Stop Sepsis in 60 Campaign. The purpose of this project was to raise awareness of the signs and symptoms of infection and sepsis for cancer center staff to ensure patients receive appropriate treatment and administration antibiotics within 1 hour of the sepsis trigger. A nurse driven ambulatory care protocol was developed and new workflow process for assessment and early recognition of SIRs/Sepsis. Medical assistants were educated to screen VS and report abnormal findings to the RN immediately. Patients at risk for infection/sepsis were either treated in the

Cancer Center (hydration, labs, and antibiotics) or directed to the Emergency Department for care. Report was given to the ED RN/MD to alert them of the patients pending arrival. Baseline study of 44 FN/Sepsis patients found the mean time to antibiotic administration was 2:53 hours. Our review found most often cancer patients only had fever, increased HR, and lactic acid <2.0. Following the early recognition project and development of new workflow the mean time to antibiotic administration decreased to 1:52 hours, a 39.5% reduction (post study 56 patients identified with FN/sepsis). Febrile neutropenia/sepsis is a concerning complication. It can cause treatment delays and dose reduction with chemotherapy. It can also be a significant cause of mortality. However, not all neutropenic patients present with fever and signs of infection can manifest with abnormal vital signs or evidence of new organ dysfunction such as lactic acidosis. Therefore, early recognition of neutropenia and SIRs/sepsis is important to provide a systematic approach for neutropenic patients with fever or other signs of infection.

**USING THE ONS SCOPE AND STANDARDS OF ONCOLOGY NURSING PRACTICE GUIDELINES: HOW DOES YOUR EMR STAND UP?** Deborah Allen, PhD, RN, CNS, FNP-BC, AOCNP®, Duke Cancer Center, Durham, NC; Giselle Boward, BSN, RN, CNIV, OCN®, Duke Cancer Center, Durham, NC; Laura Houchin, MSN, RN, CNS, AOCN®, Duke Cancer Center, Durham, NC; Pam Bowman, BSN, RN, CNIV, OCN®, Duke Cancer Center, Durham, NC; Nikki Brooksbank, BSN, RN, CNIV, OCN®, Duke Cancer Center, Durham, NC; Susan Bruce, MSN, RN, CNS, AOCN®, Duke Raleigh Cancer Center, Raleigh, NC

ONS recommends that oncology nursing practice, in 14 high-priority care areas (14-HPCA), should systematically and continually: collect and analyze data regarding patient's physical, psychological, social, spiritual, and cultural health status; identify expected outcomes; develop and implement an individualized holistic plan of care; and evaluate patient responses to interventions. Two years after electronic medical record (EMR) implementation, we began evaluating documentation performance. Using ONS' Scope and Standards of Oncology Nursing Practice (ONS-SOP) offers the opportunity to guide nursing practice and streamline documentation requirements. Purpose: Evaluate oncology nursing practice/EMR documentation, address strengths and gaps, and offer recommendations to the Health-system Oncology Clinical Practice Committee based on ONS-SOP. Nursing leadership identified staff representing every adult/pediatric oncology unit, encompassing inpatient/clinic settings across the health-system, to form an Oncology Documentation Workgroup. The workgroup examined current documentation practices which facilitated identification of similarities/differences, and persistent use of unit-specific "work arounds" developed during early EMR implementation. Next steps involved members to explore unit-specific daily nursing activities for categorization of care activities within the 14-HPCA (health promotion, patient education, comfort, coping, mobility, nutrition, complementary/alternative medicine, protective mechanisms, sexuality, gastrointestinal and genitourinary function, cardiopulmonary function, oncologic emergencies, palliative care and end-of-life, and survivorship) which led to the identification of 20 common nursing activities across the 14-HPCA. In order to facilitate standardization of nursing practice and documentation within 14-HPCA, each workgroup member anonymously voted on up to 4 nursing activities in each HPCA. While this resulted in a total of 56 nursing activities for the 14-HPCA, the overlap of activities across HPCA reduced this to 36 activities. The workgroup recommended that oncology nursing practice includes assessment, intervention, evaluation, and documentation on the identified activities for every oncology patient at least annually. Further,

the workgroup has continued to identify methods to reduce documentation “work arounds” so that all nurses document using standardized common fields which can be queried for examination of practice adherence. ONS-SOP provided unique opportunities to examine and standardize nursing practice and EMR documentation across all ages and practice settings at this academic health-system. Staff implementation and EMR improvements continue through workgroup intervention.

**HANDS IN HARMONY: A NURSE ADMINISTERED HAND MASSAGE PROGRAM IN AN OUTPATIENT CHEMOTHERAPY SUITE.** Caitlin Braithwaite, BAN, RN, OCN®, Holden Comprehensive Cancer Center University of Iowa Hospitals and Clinics, Iowa City, IA; Laura Cullen, DNP, RN, FAAN, University of Iowa Hospitals and Clinics, Iowa City, IA; Deborah Ringdahl, DNP, RN, CNM, University of Minnesota, Minneapolis, MN; Geri Quinn, RN, MSN, OCN®, Holden Comprehensive Cancer Center University of Iowa Hospitals and Clinics, Iowa City, IA

Chemotherapy infusions are scary. The combination of blood draws, IV starts, and chemotherapy can create an atmosphere of stress, fear, and pain. The touch that occurs in a chemotherapy suite to perform these procedures is often unpleasant. However, touch is a crucial element of nursing. Research shows that intentional touch is an essential element to the safe, trusting, and therapeutic nurse-patient relationship. There is evidence that touch in the form of hand massage provides a therapeutic decrease in patient blood pressure, pulse, respiration rate, epinephrine, norepinephrine, and cortisol levels while improving patient anxiety, stress, comfort, and satisfaction. To incorporate positive and therapeutic touch at an academic NCI designated chemotherapy infusion suite. The oncology nurses received training on administration of an evidence based nursing intervention in the form of a hand massage. Two of the most commonly used drugs in the chemotherapy suite carry a risk of anaphylaxis, requiring a nurse to sit at the bedside for the first 15 minutes of the first two infusions. This creates the ideal time period for “hands on” therapy in the form of a hand massage. Data collection included pre training perception and post program implementation satisfaction surveys for nurses. Patients were surveyed in two groups regarding their stress, comfort, satisfaction, and anxiety levels. The first group received the current standard of care. The second group received a 5 minute hand massage and also filled out a survey communicating their satisfaction with the hand massage program. Data collection for this project is currently underway. Initial data shows 100% of patients surveyed either agree or strongly agree that the hand massage program was relaxing and that it had a positive impact on their experience at the cancer center. Nurses comment that providing hand massages has allowed them to connect more deeply with their patients. Hand massage can be applied to all practice settings across the oncology care spectrum. A five-minute hand massage offers the nurse a nonverbal way to connect with patients and to communicate empathy, caring, affection and concern.

**RESOLVING INCORRECT CODING IN THE AMBULATORY INFUSION ROOM: DEVELOPING AND IMPLEMENTING THE “BLUE DOT DOUBLE CHECK.”** Erin Noel, RN, OCN®, Baylor Scott & White McClinton Cancer Center, Waco, TX; Joni Watson, MBA, MSN, RN, OCN®, Baylor Scott & White McClinton Cancer Center, Waco, TX; Melissa Alligood, RN, Baylor Scott & White McClinton Cancer Center, Waco, TX; Megan Fortenberry, BSN, RN, Baylor Scott & White McClinton Cancer Center, Waco, TX; Marcella Hill, CCS-P, Baylor Scott

& White McClinton Cancer Center, Waco, TX; Rene Willis, RN, Baylor Scott & White McClinton Cancer Center, Waco, TX

Within ambulatory infusion settings, nurses are responsible for appropriate treatment coding for billing purposes. Nurses may miscode treatment due to lack of knowledge regarding the oncologic and non-oncologic infusion CPT code hierarchy, busyness, or other human error. Incorrect coding can lead to increased workload for coding team members as well as significantly impact the healthcare system’s financial bottom line. Within the Baylor Scott & White; McClinton Cancer Center—a new community cancer center—infusion care volumes grew rapidly. The coding specialist identified infusion room nurses passed forward patient care records with incorrect code selections. While outpatient infusion coding education decreased some errors, miscodings continued, leading to additional work before accurate patient billing could occur. Utilizing the infusion room’s kaizen huddle board—a lean methodology concept—the coding specialist transparently tracked nurses’ daily coding errors. During huddles, the team generated the “Blue Dot Double Check” process idea to use the electronic medical record’s (EMR) colored dots within the patient schedule to ensure accurate coding before close of day. Upon discharging the patient, the primary nurse placed a blue dot next to the patient name in the EMR, indicating code selections were entered and ready for second-nurse verification. The second nurse would either agree with the initial coding to close the chart for charge filing or collaborate with the primary nurse to correct and/or verify the accuracy of the coding before closing the chart. The “Blue Dot Double Check” began June 2015 with baseline data of 37 miscodings per month. After three months of the “Blue Dot Double Check,” the incorrect code selections decreased to 10 miscodings per month. The “Blue Dot Double Check” system decreased monthly code selection errors by 73%, leading to an estimated \$18,500 in savings. Infusion nurses do not intend to miscode care, yet it occurs to the financial detriment of the organization. Just as double-checks are needed throughout the oncology care process, double-checks—such as the one implemented here—can continue to impact system health through nurse involvement and empowerment within the revenue cycle and proper charge capture.

**GOING BEYOND PATIENT SATISFACTION TO WHAT MATTERS MOST.** Janet Bagley, RN, MS, AOCNS®, NEA-BC, Dana-Farber Cancer Institute, Boston, MA; Katie Murphy, RN, BSN, Dana-Farber Cancer Institute, Boston, MA; Anne Gross, RN, PhD, FAAN, Dana-Farber Cancer Institute, Boston, MA; Belen Fraile, MD, Dana-Farber Cancer Institute, Boston, MA

Patient-centeredness is a core principle of our institution’s care model. Gastrointestinal (GI) oncology patients ranked satisfaction with “nursing concerns for questions and worries” at the 93rd percentile, slightly below the hospital mean. Patients reported high satisfaction with nursing care (4.8 out of a 5.0 scale), and belief that nurses meet their most important needs. Knowing the magnitude of cancer diagnoses and that patients’ dependencies on the clinical team can create overwhelming vulnerabilities, we hypothesized that an intervention probing further than surveys would yield greater understanding, laying the foundation for a deeper nurse/patient relationship. Additionally, infusion nurses reported less satisfaction with patient interactions and a desire for more time to understand and address individual patient’s needs. Focused on delivering safe, expert care, nurses can miss concerns that are most important to patients if they do not deliberately create space to inquire about them. Chart audits revealed nurses documented what was most important to patients only 20% of the time. Our aim was to have purposeful, patient-centered interactions with every patient and to document those interactions in the

record. We used a targeted inquiry consisting of RNs asking patients at each visit, "What is most important to you today?" RNs were free to put the question into their own words facilitating a comfortable conversation and to document their unique interaction in the medical record. Over six weeks, infusion nurses succeeded 56% of the time in specifically assessing, addressing, and documenting what was most important to their patients. The intervention proved feasible in a busy infusion suite and elicited patient concerns that otherwise might not have been voiced. Staff involvement in auditing charts, crafting the solution, and posting results weekly, helped create behavior change. Oncology nurses have spent decades hard coding safety steps into practice regarding chemotherapy administration, and have made great strides in patient teaching and symptom management. When we focus our efforts in a way that meets the patients' individualized goals, we deliver reliably on the patient-centered promise. This feasibility study laid the groundwork for spreading the 'what matters to patients' intervention across our institution.

**IMPACTS OF NURSING EDUCATION ON MUCOSAL BARRIER INJURY FOR INPATIENT HEMATOLOGY/ONCOLOGY.** Katie Ruefer, RN, BSN, University of Virginia Health System, Charlottesville, VA; Torey Murray, RN, BSN, University of Virginia Health System, Charlottesville, VA; Jeanne Cahan, RN, BSN, University of Virginia Health System, Charlottesville, VA; Lindsay Black, RN, University of Virginia Health System, Charlottesville, VA; Yi Qin, RN, MSN, University of Virginia Health System, Charlottesville, VA

MBI (mucosal barrier injury), particularly in the setting of neutropenia, can lead to life-threatening blood stream infections (BSI), resulting in increased length of stay, ICU admissions, and decreased quality of life among inpatient hematology/oncology patients. With the recent differentiation by the CDC between MBI laboratory-confirmed blood stream infection (MBI-LCBI) and central-line associated blood stream infection (CLABSI), MBI has become an issue of greater concern among this patient population. Purpose: Because of this, the University of Virginia Medical Center inpatient Hematology/Oncology RNs have committed to increasing their awareness of evidence-based practice (EBP) recommendations regarding the care of MBI patients, with the goal of significantly reducing MBI-LCBIs. Interventions: A literature review was conducted to find EBP related to nursing care of MBI patients. Following this review, a pre-test was offered to all unit RNs to measure understanding of MBI, appropriate treatment, and their overall comfort level regarding patient education. Extensive staff education was implemented via email, one-on-one discussion, and an in-service at a unit staff meeting. Finally a post-test was offered to assess for effectiveness of the implemented teaching and to determine further educational needs. Evaluation: The pre-test (37 total respondents) revealed 73% of RNs expressed a thorough understanding (selected "agree" or "strongly agree" on self-assessment survey) of MBI, while 27% felt they lacked understanding. Additionally 73% of RNs rated themselves as "confident" in providing education and treatment to MBI patients, while 27% did not. After unit education, a post-test (24 total respondents) showed that 100% of RNs expressed thorough understanding regarding MBI, and 89% felt confident in their practice. While the pre and post-tests produced success, further intervention and research is needed as the unit works towards zero MBI-LCBI. This will be pursued in the form of patient care "bundles" and implementation of the WHO Oral Toxicity Scale. The care bundles will include interventions/recommendations for oral hygiene, nutrition, and environmental sanitation. Unit RNs are also working to create educational resources appropriate for patients and families in addition to

options appropriate for regional rural care providers to ensure a strong continuum of care across multiple spectrums.

**DEVELOPING A SURVIVORSHIP PROGRAM WITH A LITTLE HELP FROM OUR FRIENDS.** Lori McMullen, RN, MSN, OCN®, University Medical Center of Princeton, Matthews Center for Cancer Care, Plainsboro, NJ; Karen Davison, RN, BSN, University Medical Center of Princeton, Matthews Center for Cancer Care, Plainsboro, NJ

The Matthews Center for Cancer Care (MCCC) is accredited by the American College of Surgeons Commission on Cancer (ACoS CoC). ACoS CoC Standard 3.3 requires accredited cancer programs to provide a treatment summary/care plan (TS/CP) to patients with stage 0-III cancer upon completion of treatment with a phase-in starting at 10% of abstracted cases in 2015 to 100% compliance over the next four years. The MCCC has 1000 abstracted cancer case per year. MCCC cancer program was faced with two challenges in implementing survivorship: time and money. The current staff did not have time to take on the added responsibilities and the cancer program budget did not include funding to support hiring a survivorship coordinator (SC). Our purpose was to develop a Survivorship Program by engaging our Princeton Healthcare System (PHCS) Foundation to request both internal and community grant funding to support a SC for 2015. Funding for the SC would be put into the operational budget in 2016. An outline for a survivorship program was presented to the potential funders. Using information from the NCI funded Preparing Professional Nurses for Cancer Survivorship Care and a literature review, a nurse-led, one time consultative model using Journey Forward software was designed. The SC would review the radiation therapy simulation schedule for eligible patients. The SC would prepare and meet with the patient to deliver the TS/CP at the 30 day follow up appointment, create two survivorship-focused smart goals with the patient and send the TS/CP to all collaborating physicians. The completed TS/CP will be posted on the PHCS Patient Portal. Follow up would be a 6-month phone call to evaluate if patients achieved their goals and a patient satisfaction survey. The program received funding from the PHCS internal grant process and Bristol-Myers Squibb. In 2015 the SC will successfully meet the ACoS CoC standard requirements by delivering TS/CP to 10% of abstracted cases. In today's fiscally challenged healthcare environment, nurses need to look beyond basic department budgets to provide seed money for expanded services with the ultimate goal to have the positions added to the operational budget.

**Underwriting:** Bristol-Myers Squibb

**BATTLING CANCER-RELATED FATIGUE: DESIGN AND IMPLEMENTATION OF THE CANCER WARRIOR EXERCISE PROGRAM.** Roseann Dougherty, BSN, RN, University of Maryland Medical Center, Baltimore, MD; Christine Cascio, BSN, RN, OCN®, University of Maryland Medical Center, Baltimore, MD

Cancer-related fatigue, which affects over 80% of cancer patients, can be reduced through exercise. However, oncology nurses are often challenged to provide appropriate information and opportunities to engage and motivate patients in exercise. An evidence-based program, the Cancer Warrior Exercise Program (CWEP) was co-developed by an oncology nurse and a cancer patient. The program has shown success in educating and engaging oncology patients in exercise during and following treatment. We will describe the components of the CWEP and its dissemination and implementation on an inpatient cancer unit. Early in care, oncology nurses educate patients and

families on the benefits of exercise, the CWEP, and encourage patients to participate. Patients begin by completing a Physical Activity Recommendation questionnaire to determine baseline exercise activity level. Patients are assisted as needed to register on the website, Team Inspiration, and set daily exercise goals using the ONS Fatigue Scale. When patients enter their activities on the website, progress is tracked and virtual races are created allowing patients to view the progress of their “teammates,” who are other cancer patients. Inpatients can also record their daily goal on a Results Board on the unit. This visible board inspires, motivates, and creates a sense of community among cancer patients while in the hospital. Patients who complete their goal are awarded a medal, which is donated by an athlete in honor of the cancer patient and given to them by the nursing staff. Patients are encouraged to wear their medals as public recognition of accomplishment. The CWEP began in 2013 and is ongoing. Early on, use of paper forms created challenges with enrollment and information management. Now, a webpage contains all information and materials needed. Online registration, data management, and visualization have become seamless. Previously < 5%, the new goal is to register 20% of patients and have 90% completion of goal event. A patient satisfaction survey has been added to evaluate the education, ability to motivate and inspire, and appropriateness of exercise resources and support. Finding methods to educate and motivate oncology patients to exercise can be addressed through implementation of CWEP.

**Underwriting:** Team Inspiration, Inc. provides funds for the CWEP program. The primary author of this abstract, is also the founder of Team Inspiration.

#### **DEVELOPMENT OF A FAST TRACK PROCESS WITHIN AN AMBULATORY CHEMOTHERAPY TREATMENT UNIT.**

**Sherry Looker, BSN, RN, OCN<sup>®</sup>, Mayo Clinic, Rochester, MN; Heather Stonelake French, APRN, CNS, AOCNS<sup>®</sup>, Mayo Clinic, Rochester, MN; Jessica Eastman, BSN, RN, Mayo Clinic, Rochester, MN; Kari Anderson, BSN, RN, OCN<sup>®</sup>, Mayo Clinic, Rochester, MN; Emily Smith, R.Ph, Mayo Clinic, Rochester, MN; Pat Jensen, MS, RN-BC, NEA-BC, Mayo Clinic, Rochester, MN**

Previously, a dedicated space for port-a-cath and peripherally insertable central catheter (PORT/PICC) blood draws and injections did not exist in this busy ambulatory chemotherapy unit. This resulted in increased wait times for patients and inefficiencies among nursing, laboratory and pharmacy staff. As patient volumes continue to increase, a need for dedicated space and relocation of laboratory services was deemed necessary. A recent remodel allowed for development of a “fast track” area adjacent to lab services. A multidisciplinary team led by nursing and pharmacy developed this process to better meet the needs of our patients. Our goal in exploring this “fast track” concept was to improve patient satisfaction through decreased wait times; gain efficiencies through new appointment codes which created increased access for patients; and improve process flow for nursing, lab services and pharmacy. A “fast track” process was piloted for 3 weeks in September, 2014. One room was dedicated as the “fast track” area for all PORT/PICC blood draws and cancer treatment injections. This focused the efforts of lab and nursing to one concentrated area within the unit. Length and type of appointment, patient wait times, and pharmacy “work ahead” efforts were tracked. The pilot demonstrated a need for a “Fast Track” process with dedicated space in the remodeled treatment unit, which opened in June 2015. Average wait times for PORT/PICC blood draws and injections both decreased significantly. New codes were created to correlate with the actual 15 and 30 minute injection appointments. The collaborative efforts between nursing, pharmacy, and lab has improved efficiencies for blood collections from PORTs/PICCs, decreased wait times

for injections, standardized appointments and process flows for our patients. In addition, pharmacy is able to work ahead, recognizing specific appointment codes and preparing medications in advance to have them ready when patients arrive for their scheduled appointment.

#### **TAKING STEPS: A SURVIVORSHIP PROGRAM IN A VOLUNTEER BASED CANCER CLINIC.** Benito Garcia, RN, Texas Health Presbyterian Dallas, Dallas, TX; Marilyn Garcia, RN, MSN, APRN, NP-C, OCN<sup>®</sup>, Texas Oncology PA, Dallas, TX; Cindi Bedell, RN, MSN, ANP-C, Texas Oncology PA, Plano, TX

There is strong evidence to suggest women who maintain a healthy BMI and exercise regularly after a diagnosis of breast cancer have improved outcomes and lower recurrence rates. Exercise has also shown to improve cognitive recovery and reduce the arthralgias and myalgias related to aromatase inhibitors. The Greater Dallas Arya Samaj (GDAS) Cancer Clinic is a volunteer based clinic that provides cancer to patients that are uninsured or underinsured. We have counseled 35 patients since the Survivorship Program GDAS was initiated in 2014. The goal is to provide culturally sensitive education so they can optimally manage their healthcare after completion of chemotherapy. We provide counseling at various follow up visits after completion of adjuvant treatment. Each patient receives a summary of treatment which includes date of diagnosis, stage of disease, chemotherapy and radiation treatment regimens as well as a follow-up care plan. The care plan includes target dates for health screenings such as mammogram, pap smears, bone density, colonoscopies and vaccines. At all survivorship visits the focus is providing information regarding the benefits of exercise, proper nutrition and importance of maintaining wellness. When they return their completed food and exercise diary they are provided a pedometer and gift card for shoes or exercise equipment. We have partnered with a local cancer center which provides a mobile survivorship unit providing health exams, diet and nutrition counseling, exercise support and psychological counseling. We also partnered with the local ONS chapter to obtain pedometers for those in the survivorship program. The ONS chapter sold pedometers to members which in turn provided a pedometer to a patient in their “One for Me and One for Thee” program. Our goal is to grow this collaboration in the coming years to provide other goods and services to the patients of the GDAS Cancer Clinic. Our ongoing evaluation process has identified the need to provide all education materials in the patient’s native language and to have additional survivorship counselors. We also hope to develop a measurement tool and long term follow up to assess the impact of these interventions on future health.

#### **“ELEMENTARY, WATSON”—NURSING ASSESSMENT SKILLS CAN DETECT INHERITED CANCER SYNDROME CARRIERS.**

**Catherine Belt, MSN, RN, AOCN<sup>®</sup>, Abramson Cancer Center, University of Pennsylvania Health System, Philadelphia, PA**

The discovery of the DNA structure by Watson and Crick in 1953 set the stage for scientific investigation of our human genome, further elucidated by the Human Genome Project in 2003. The early 1960s witnessed the identification of the genetic fingerprint of specific cancers and lead to evaluation of families plagued by multiple cancers particularly experienced at early ages of onset. Genetic and genomic evidence has rapidly expanded our understanding of the burden of inherited cancer syndromes. Knowledge of the characteristics of high risk inherited cancer syndromes has expanded significantly since the early 1990s. The 21st century has realized a better understanding of risk management approaches for carrier

families to reduce the inevitability of a cancer diagnosis. Syndromes such as Hereditary Breast and Ovarian cancer, Lynch Syndrome, Li Fraumeni syndrome have been described in terms of the importance of recognizing syndrome associated cancers in family history and the characteristic early onset of these cancers. Oncology nurses have been incorporating this knowledge into their clinical practice and referring appropriate patients for genetic risk evaluation. The evolution of understanding inherited cancer families has identified the presence of physical features or clinical findings that can also suggest an inherited cancer syndrome, even before a cancer occurs. Cowden's Syndrome and Peutz-Jeghers Syndrome for example have characteristic physical features demonstrated by mutation carriers, detectable many years prior to a cancer developing. Familial Adenomatous Polyposis carriers demonstrate abnormal clinical findings on colonoscopy as well as physical features that can lead to early recognition of the syndrome prior to a cancer diagnosis. Oncology nurses in all settings play a pivotal role in recognizing many of these physical findings detectable during routine physical assessments and history taking. Nursing assessment is an elementary skill learned by all nurses whatever their practice setting. A skillful nurse's eyes, ears and palpation technique can be the primary tools to help identify clues otherwise overlooked. This presentation will outline for oncology nurses the critical assessment skills that can help detect a potential inherited cancer gene carrier. Knowing what to look for and what those findings suggest is "Elementary, Watson."

**DISCHARGE PLANNING WITH THE PATIENT WITH A NEW DIAGNOSIS OF LEUKEMIA: TEACHING BEGINS UPON ADMISSION.** Juliana Brotz, RN, BSN, Roswell Park Cancer Institute, Buffalo, NY; Suzette Parent-Joachimi, RN, BSN, Roswell Park Cancer Institute, Buffalo, NY; Samantha West, RN, BSN, MHA, OCN®, Roswell Park Cancer Institute, Buffalo, NY; Judy Delmonte, Roswell Park Cancer Institute, Buffalo, NY

An effective, comprehensive nursing care plan in an inpatient setting should include robust discharge planning. This becomes especially important when considering a patient with newly diagnosed leukemia being treated with high dose chemotherapy and experiencing prolonged count recovery. These patients face long-term changes to their daily lives beyond the disruption caused by a long stay in the hospital. This project was developed after nurses recognized that many of their leukemia patients experienced a high level of anxiety and that this level of anxiety escalated as the patient's discharge date approached. The prospect of leaving the protective environment of the hospital and the "new life" they faced appeared to overwhelm patients. The staff wanted to develop a way to better prepare their patients. It was decided that a teaching pamphlet would be provided to each patient on the day of their admission and this would be used as a teaching guide and reinforcement and review would be ongoing throughout their stay. In order to ascertain what information to include in the teaching tool, a multidisciplinary approach was adopted. The team included RNs, Nurse Administrators, MDs, Discharge Planners and Social Workers. They determined what information was important to include in this pamphlet. Staff nurses then polled patients who had already received treatment and had been discharged. These patients were asked, "What are the things that you wish you had been told during your stay that would have better prepared you for your discharge? Was there anything that could have been better planned?" The responses were used to further develop the educational tool (pamphlet). The tool was implemented in 2015. Patients with a new diagnosis of leukemia were provided educational discharge planning pamphlets on the day that they were admitted. HCAHPS and Press

Ganey results were analyzed to determine if this tool was effective in improving satisfaction with discharge planning. Patients who have just received a diagnosis of Leukemia have an extraordinary amount of information to process and new challenges ahead. This discharge pamphlet provides useful information to the patient in a way that can minimize added anxiety and stress.

**NEUROENDOCRINE TUMORS AND INHERITED CANCER SYNDROMES: PHEOCHROMOCYTOMAS AND PARAGANGLIOMAS—RARE BUT RISKY.** Bonita Bennett, BSN, RN, University of Pennsylvania, Philadelphia, PA

Although pheochromocytomas and paragangliomas (PCC/PGL) are rare neuroendocrine tumors (NETs), occurring in 2 to 8 per million people, over 1/3 are reportedly associated with an underlying genetic etiology, which is more than any other cancer type. PCC/PGL tumors develop from chromaffin tissue in the adrenal medulla or extra-adrenal ganglia, respectively. Tumors are usually benign but associated with high morbidity and mortality due to hypersecretion of catecholamines, resulting in hypertension, stroke, even death, and mass effect. PCC/PGL are malignant in approximately 1/4 of cases and metastatic sites vary. To date, more than 10 susceptibility genes have been identified which confer an increased risk in the development of PCC/PGL: von Hippel-Lindau disease (VHL), Multiple Endocrine Neoplasia type 2 (MEN 2), Neurofibromatosis type 1 (NF1), 5 genes from the succinate dehydrogenase (SDH) complex—SDHA, SDHB, SDHC, SDHD, SDHAF2; TMEM127 and MAX. There are also a number of somatic mutations that have now been identified including HIF2-alpha, ATRX, KIF1Bb, and PHF2. It is anticipated that additional genes associated with PCC/PGL will be discovered since this aspect of genetics is advancing rapidly. Due to possible prognostic implications for patients with PCC/PGL and familial implications if positive, genetic testing is appropriate in all patients. Knowledge of genetic predisposition to developing PCC/PGL influences medical management, allowing for proper surveillance of recurrent or metastatic disease, development of additional primary tumors, and other possible associated malignancies. For those who test positive, family members should be referred to medical genetics for screening. Presenting signs and symptoms associated with PCC/PGL can be confused with other medical conditions and consequently patients may be undiagnosed for many years, particularly if classical symptoms of PCC/PGL are absent. If knowledgeable of PCC/PGL, Oncology nurses can play a pivotal role in narrowing the differential diagnosis. Since PCC/PGL can be benign or malignant, outcomes are impacted by the extent of the disease, location of the disease, and genetics. This lecture will seek to educate Oncology Nurses on the complexities of these two rare but risky neuroendocrine diseases, enabling them to make proper diagnoses and to plan appropriate interventions.

**DRIVING NURSING PROFESSIONALISM WHILE ACHIEVING CLINICAL EXCELLENCE IN ONCOLOGY.** Deborah Baldassarre, MSN, RN, OCN®, HN-BC, Cancer Treatment Centers of America, Philadelphia, PA; Gerry Finkelston, MSN, RN, CCRN, OCN®, HN-BC, Cancer Treatment Centers of America, Philadelphia, PA

The Achievement in Clinical Excellence (ACE) program assists our oncology nurses in the journey of professional development using Benner's framework novice to expert. The use of an evidenced-based program created a dynamic platform for nurses to be recognized and rewarded as they advance in their oncology profession. By participating in a clinical excellence program, an increased sense of empowerment and engagement impacts personal growth, which results in positive patient

outcomes. The purpose of the ACE program is to highlight the positive impact this structured program has had on the professional development of oncology nursing, the facility, and patient outcomes. The goals are three-fold: to recognize and promote clinical excellence that supports quality outcomes and patient safety; to acknowledge the contributions of our nursing staff to the dimensions of professional nursing practice; and to create a stimulating environment that provides opportunities to retain and attract expert nurses. In 2014, the ACE program was restructured to enhance professionalism among nurses by encouraging active participation in education programs, patient quality and safety initiatives, and volunteer opportunities in the community. The fresh, enthusiastic insight from front-line nurses propelled energy to the reframing process to include professional publications, presentations, and research. Since the start of the program, our facility has benefited from improved clinical outcomes, advancing nursing expertise through national certification, promoting leadership through transformational nursing councils, and expanded community outreach. Annual evaluation of the program addresses the continuing clinical development of our oncology nurses to provide quality patient-centered care. Nurse participation in the ACE program has increased 37% since implementation. In addition, prior to restructuring, nurse engagement was 63% in 2013, and increased to 83% in 2015. These exciting outcomes of the ACE program inspired us to begin the journey toward Magnet® designation. The ACE program guidelines are located on the nursing SharePoint site within the facility's Intranet. This year the nurses will have the option to submit their ACE portfolio electronically. The ACE program provides all oncology nurses with the infrastructure to attain professional development while achieving clinical excellence.

**SPIRITUALITY WORKSHOP FOR THOSE TOUCHED BY CANCER.** Kathy Seymour, BSN, RN, OCN®, PIH Health, Whittier, CA; Suzanne Barone, MA, RMT, PIH Health, Whittier, CA; Carla Guess, BSN, RN, CBCN®, CN-BN, PIH Health, Whittier, CA; Jessica Pechkam, MSN, RN, NP-C, OCN®, PIH Health, Whittier, CA

Cancer is a traumatic life event that causes significant distress leading to a potential disruption in spiritual wellbeing. Studies show that 40% of patients report a significant level of spiritual distress. Cancer patients with poor spiritual wellbeing are more likely to report hopelessness and desire hastened death. At the request of oncology support group members, Oncology Nurse Navigators together with the Complimentary Medicine Coordinator created a performance improvement, spirituality workshop. Studies have shown patients who manifest a strong spiritual connection or practice tend to be more positive and have better coping strategies. Patients whose spiritual needs are addressed report higher quality and improved satisfaction with cancer care. The goal was to improve spiritual wellbeing by providing techniques to enrich their spiritual development. Implementation of the project took place over a four week period with each interactive supportive session lasting 90 minutes with a 1:5 facilitator to patient ratio to provide ample support. Weekly topics explored spirituality, love, forgiveness, meditation and self-awareness. Individual and group exercise with a reflective take home assignment was provided weekly and participants shared their insights and growth at each subsequent workshop. Participants completed the Function Assessment of Chronic Illness Therapy for Spiritual Wellbeing (FACIT SP-12) before and after each session. The FACIT SP-12 assesses for three domains including meaning, peace and faith. Results from the FACIT SP-12 indicated a statistically significance in spiritual wellbeing with a p-value of 0.02. Average scores increased from 77% to 85% indicating participants experienced a greater sense of spiritual wellbeing as a result of the intervention. It is paramount to as-

sess and provide resources to enhance patient's spirituality. Participants who experienced increased spiritual wellbeing report greater sense of empowerment to participate fully in oncology treatments and survivorship challenges. Noting the lack of established spirituality program addressing the unique needs of cancer patients, we sought to pioneer, develop and implement a program that met the needs of patients.

**SAFETY AND EFFICACY OF SCALP COOLING FOR CHEMOTHERAPY-INDUCED ALOPECIA: FORTY YEARS OF LITERATURE.** Mikel Ross, RN, OCN®, CBCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Ashley LeWinn, BSN, RN, Hunter-Bellevue School of Nursing, New York, NY; Tricia Sarov, BSN, RN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Suzanne Tarplin, BSN, RN, Hunter-Bellevue School of Nursing, New York, NY; Denese Wilson, BSN, RN, Hunter-Bellevue School of Nursing, New York, NY; Erica Fischer-Carlidge, MSN, CNS, CBCN®, AOCNS®, Memorial Sloan Kettering Cancer Center, New York, NY

Over 75% of cancer patients cite alopecia as the most feared side effect of treatment affecting self-esteem and quality-of-life; up to 10% consider refusing chemotherapy. Despite wide acceptance in other countries, scalp cooling to reduce chemotherapy-induced alopecia (CIA) is uncommon in the U.S. This is due to longstanding safety concerns regarding scalp metastases and lack of consistent efficacy data. Growing patient demand due to recent scalp cooling clinical trials is rapidly changing the practice landscape. Oncology nurses need information on efficacy, safety and tolerability to remain current and prepare for imminent practice changes. This presentation will review and summarize forty years of efficacy, safety and tolerability literature on scalp cooling to prevent CIA. A literature review of PubMed and CINAHL databases using Boolean search terms "cooling caps and alopecia," "chemotherapy and cooling caps," and "cryotherapy and alopecia" was performed with data through August 2015; additional articles were identified from references. Systematic reviews, comparative trials and publications within the past five years were prioritized. Forty articles were ultimately reviewed; data saturation was achieved. Scalp cooling efficacy is dependent on the drug, dose and duration of treatment. Comparative trials consistently demonstrated better hair preservation with cooling than no cooling; approximately 50% of patients achieve satisfactory preservation. A retrospective safety review demonstrated no statistical significance in overall survival when cooling was utilized. Less than 15% of patients discontinued cooling early due to minor discomforts. The majority of research has been performed in the breast cancer population. Final presentation will discuss detailed review of the data. CIA may be the last major side effect of chemotherapy without an effective intervention. Based on a growing body of international data, a new consensus is emerging supporting scalp cooling in America. With cooling systems pending FDA approval and increased patient demand, knowledge of safety and efficacy of these innovative interventions is essential. Understanding this data can dispel myths about scalp cooling among oncology providers and provide nurses with a critical foundation for evidenced based practice and patient education.

**EVALUATING THE ON-BODY INJECTOR FOR NEULASTA® AS AN ALTERNATIVE TO MANUAL NEULASTA® INJECTION.** Carolyn Ruef, CRNP, AOCNP®, Cancer Treatment Centers of America, Philadelphia, PA; Lisa Sabol, BS, RN, HN-BC, Cancer Treatment Centers of America, Philadelphia, PA

Leukocyte growth factor decreases the incidence of infection from febrile neutropenia in patients receiving myelosuppressive

oncology medications. Neulasta prevents neutropenic events in 94% of patients, but requires the patient to return to the clinic 24 hours post-chemotherapy for an injection. The On-Body Injector for Neulasta® is an automatic, dose-regulated injection device that distributes the proper dose of Neulasta® at home 27 hours post application. This new delivery method has a reported 1.7% failure rate. As our patient population travels an average of 300 miles to receive oncology care, a pilot program was initiated to educate staff and evaluate the safety and efficacy of the On-Body Injector. In April of 2015, the Infusion Unit began a 25-patient pilot with patients who met a set of defined criteria. The nurses were challenged to learn to safely administer a familiar drug in a different application. The Lewin Model of change was incorporated to move and anchor a new approach into our culture. Competencies were met through a peer-to-peer, hands-on demonstration in filling the reservoir from the Neulasta syringe, and proper placement of the device. Patients were given a comprehensive booklet, and watched a 12 minute video. Patients that traveled by air were provided with a TSA card, information, and a prescription requiring Manual Pat Down. The Pharmacy Department drafted a protocol for procedure and direction for device failure. Patients were called within 48 hours post-injection to ensure successful injector performance, and labs were obtained a week later. The On-body Injector was successful in all 25 participants. An insufficient dose was delivered in one patient, and three patients were hospitalized within one week of Neulasta® injection. None of these events were deemed related to the injector. Patients reported restrictions of not showering, avoidance of microwaves and certain sleep positions, and “bumping” the device as limiting. The patients verbalized these were acceptable burdens given the ability to travel home on the day chemotherapy was completed. The Pilot Study tested the safety and efficacy of the On-Body Neulasta Injector in our unique population, while educating the Infusion staff on a novel administration technique.

**NCCN DISTRESS TOOL COMPLETION FOR PATIENTS NEWLY DIAGNOSED WITH CANCER.** Martina Hartwell, BSN, RN, OCN®, Froedtert and the Medical College of WI, West Bend, WI; Nancy Roecker, BSN, RN, OCN®, Froedtert and the Medical College of WI, West Bend, WI; Mary Jo Burgoyne, RN, CNS-BC, APNP, Froedtert and the Medical College of WI, West Bend, WI

Objective: To increase the completion rate of the NCCN Distress Tool for Patients Newly Diagnosed with Cancer. Psychological distress has been identified as having a negative impact on quality of life for patients dealing with cancer. In order to improve quality of life, patients’ psychological distress needs to be assessed and managed. Chart reviews in 2014 demonstrated that only 40% of newly diagnosed cancer patients seen at the Kraemer Cancer Center (KCC) completed the NCCN Distress tool to assess for psychological distress. Members of the KCC Cancer Committee identified this as a concern and initiated a quality improvement project. The project was presented to the nurses at the KCC shared governance council for next steps. Information was gathered by reading related articles and attending sessions on distress management at the 2014 ONS Congress. The current process for completing the distress scale was reviewed, which consisted of the RN giving the tool to new patients during their initial provider consult. The tool was often missed, and there was a lack of follow up with the patient. Additionally, referrals for supportive services to manage distress were not completed. The decision was made to improve the nursing process for distress tool assessment. The new process consisted of having an intake coordinator prepare the distress tool for every new patient. The form is placed in a folder with a letter explaining the tool and the reason for completing the document. The registration staff gives

the folder to the patient at check-in and asks them to complete the document while waiting. Once the patient is roomed, the RN reviews the completed form with the patient and makes referrals to manage patients’ distress. The changes were well-received by patients and providers. The RN’s were able to discuss psychological distress with the patients openly, and make referrals immediately, to improve quality of life during cancer treatment. The NCCN distress completion rate went up to 98% in June 2015, and referrals to support services increased. A social worker was added to the cancer center team, and hours for the psycho-oncology advanced practice nurse were expanded. The success of this effort has led to the need to also review the process for reassessing patient distress.

**NURSING CONSIDERATIONS FOR TITRATION OF FENTANYL SUBLINGUAL SPRAY TO EFFECTIVE DOSE.** Sheila Ayers, BSN, MSN, ACNP-BC, The West Clinic, Memphis, TN; Neha Parikh, INSYS Therapeutics, Inc., Chandler, AZ; Christina Cognata Smith, PharmD, INSYS Therapeutics, Inc., Chandler, AZ; G. Gary Tian, MD, PhD, The West Clinic, Memphis, TN

Breakthrough cancer pain (BTCP) treatment is an important component for improving patient quality of life (QoL) and should be considered in adults with persistent cancer pain. BTCP can be difficult to manage given its rapid onset, frequency, interpatient variability in pain intensity, and short duration. Transmucosal immediate-release fentanyl (TIRF) formulations are administered for BTCP and titrated to a dose that adequately balances efficacy and tolerability. We aimed to describe our clinic best nursing practices for the titration of the most recently approved TIRF. Fentanyl sublingual spray (FSS). Evaluation: Expert opinion and case review of dose titration of FSS for BTCP. Phase 3 data previously demonstrated that FSS produces a significantly greater reduction in pain intensity versus placebo as early as 5 minutes postdose. Rapid onset of pain relief is important to patients, and identification of an effective dose often requires individualized dose titration. Patient education and ongoing communication are important during FSS titration; healthcare providers should not immediately conclude that a lack of effect with a particular titration dose means a treatment is ineffective, but it may instead suggest that an appropriate dose for that individual has not been identified. Tied to individualized dose titration, it is important to consider comorbidities, such as neuropathies or arthritis, in which strategies should be devised to minimize the number of actuations or the benefit versus risk in patients with mucositis grade  $\geq 2$ . During the titration phase, we recommend telephone follow-up 3 to 5 days after titration initiation. Treatment of BTCP is an important component of care for patients with persistent cancer pain. Patient education, individualized FSS titration, and ongoing communication are essential for effective BTCP management in appropriate patient populations.

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**A CANCER PROGRAM COLLABORATIVE: INTRODUCING CANCER REHABILITATION TRAINING.** Carol Blecher, MS, RN, AOCN®, APNC, CBCN®, Trinitas Comprehensive Cancer Center/Trinitas Regional Medical Center, Elizabeth, NJ; James Dunleavy, PhD, Trinitas Regional Medical Center, Elizabeth, NJ; Juanita Fryar, MS, RN, AOCN®, Trinitas Comprehensive Cancer Center/Trinitas Regional Medical Center, Elizabeth, NJ

A diagnosis of cancer and its treatment can cause fatigue, depression, loss of body function, muscle weakness, and reduced range of motion. Research in both the nursing and

physical therapy literature related to fatigue and survivorship has demonstrated that exercise improves physical functioning, decreases fatigue and enhances quality of life. We now realize that exercise along the trajectory of the cancer care continuum is vital for improvement of physical health, decreasing the risk of osteoporosis, prevention of muscle wasting and fatigue. In 2007 our program developed a plan of exercise for those patients experiencing fatigue. With the increasing evidence regarding exercise and fitness for cancer patients over the past several years the director of Physical Therapy, Rehabilitation and Fitness initiated a dialogue with the Cancer Center and in collaboration with the Cancer Committee we launched a rehabilitation program for our cancer patient population. Patients are referred to the program by members of the health care team at the cancer center, where they are assessed for fatigue at every visit. Prescriptions are provided for physical therapy either for muscle strengthening, fatigue or conditioning and training. Separate evaluations are performed by physical therapists and the patients are monitored throughout the program using standardized assessments including fatigue evaluations. At the end of the treatment the patients are given a two month free membership for the fitness center and then they are welcome to continue their membership at a reduced cost. It is currently premature to have an assessment of the value of this program, but, clinically we have already seen a reduction in distress scores and fatigue ratings in patients who are receiving therapy. Much of the recent literature indicates that there are opportunities to use multiple rehabilitation interventions to decrease morbidity, improve physical and psychological health outcomes, decrease hospital readmissions, and reduce both direct and indirect healthcare costs attributed to cancer and its treatment. More research is needed in this area to see if we can establish patterns of increased adherence to treatment and improvement in overall survival.

### **SMOKING CESSATION: A PROCESS AND A PRACTICE CHANGE.** Rita Meitzner, BSN, Moffitt Cancer Center, Tampa, FL

Participants will be familiar with the 5 A's Model for assessment and smoking cessation interventions in the outpatient setting. Cancer patients who continue to smoke after diagnosis experience many adverse effects. Smoking increases their risk for treatment complications, reduces desired effects of treatments, prolongs recovery, and decreases survival. The nurse's role in smoking cessation includes assessing smoking status and willingness to quit, offering support to quit, and assisting with referrals to smoking cessation services. Nursing assessment and nurse-led smoking cessation interventions are limited in the clinic setting and smoking cessation services within the institution and community are under-utilized. The purpose of this abstract is to describe an evidence-based project to improve smoking cessation rates in cutaneous oncology outpatients. A review of the literature reveals practice guidelines for tobacco use and dependence, utilizing the 5 A's model. In this project the model was implemented on all new patients identified with a smoking history. Nurses documented utilizing the model's verbiage. Post-intervention telephone calls were made at 2-week and 3-month intervals to assess follow-through and cessation status. Primary outcomes were to increase the rate of sustained smoking cessation in those patients receiving intervention. Secondary outcomes included increasing nursing knowledge and confidence in providing cessation advice and interventions. Analysis of final results revealed that the identification of smokers in the clinic increased by 53% and the number of nurse-led referrals including giving brief advice to quit increased 48% from baseline. In addition, the cessation rate of identified smokers was 16%. A survey of nurse's attitudes and knowledge identified that experiential learning and education on smoking cessation substantially increased the nurse's confidence level in providing these types of interventions.

Successful smoking cessation programs begin with identifying patient's willingness to quit smoking, followed by education, referrals and other interventions. Using the 5 A's Model, nurses are in an ideal position to affect positive outcomes. This project supports the use of the 5 A's Model for smoking cessation in the outpatient cutaneous setting and can easily be incorporated into other clinics.

### **A NURSE DRIVEN STRATEGY TO REDUCE FALLS IN THE INPATIENT MALIGNANT HEMATOLOGY POPULATION.** Joel Stettler, BSN, RN, OCN®, Moffitt Cancer Center, Tampa, FL; Megan Hoffman, MSN, RN, CMSRN, AOCNS®, Moffitt Cancer Center, Tampa, FL

Falls in the malignant hematology population are a major concern due to prolonged side effects related to treatment and disease process. Hematology patients are at a higher risk toward the end of their treatment cycle due to impaired levels of physical functioning and physiological changes caused by polypharmacy during the inpatient stay. At our Magnet® recognized, NCI-designated Comprehensive Cancer Center, falls continue to be a major focus for our patient population due to increased risk of injury. The purpose of this abstract is to discuss an inpatient oncology unit's efforts to decrease falls related to high risk medications. As part of our shared governance model, the unit based Quality Improvement committee was created to facilitate staff nurses' involvement in patient safety recommendations. The Quality Improvement committee reviews safety reports to determine trends and make recommendations for improvement and prevention. In November 2014, the committee determined there had been a trend in falls related to medications known to increase fall risk. It was noted that Morse Fall Scale does not reflect potential complications from medications used to alleviate treatment related side effects. At this time, it was determined that any patient receiving intravenous Lasix, Ativan, or a first time administration of a sleep aid would be placed on a bed or chair alarm for the duration of drug effect. Emphasis was placed on communication from the RN to the Oncology Technician that a high risk medication had been administered and the importance of increased fall prevention strategies. After implementation of this initiative, fall rates decreased in the following two quarters up to 70% from the 12-month average rate. As a result of these improvements, high risk medications should be considered as a factor in fall risk assessment during the inpatient stay. Currently the unit is broadening the scope of this intervention to include other factors related to falls in the oncology population, such as fevers.

### **DECREASING LABOR AND COST OF CALCIUM IN APHERESIS AUTOLOGOUS AND ALLOGENEIC STEM CELL DONORS.** Jeannette Mastrovich, BSN, RN, OCN®, HP (ASCP), Baylor University Medical Center, Dallas, TX

Citrate is an anticoagulant used during apheresis procedures. It achieves anticoagulation of the extracorporeal apheresis circuit by temporarily binding to free calcium in the blood causing symptoms of hypocalcemia in some patients. Mild symptoms include perioral numbness and tingling. Moderate and Severe symptoms include non-cardiac chest heaviness, nausea, vibration sensation, and tetany. Current practice at our facility is to administer prophylactic intravenous calcium gluconate to every autologous and allogeneic donor harvesting stem cells for a stem cell transplant to prevent citrate reactions. There have been national shortages of intravenous calcium gluconate leading apheresis staff to seek alternative management strategies. This has led to time-consuming efforts for the apheresis nursing staff. Those efforts include additional communication with the

physicians, re-scheduling lower priority procedures, and coordinating with pharmacy. Are oral calcium carbonate supplements as effective as intravenous calcium gluconate in managing mild citrate reactions in apheresis donors? Interventions: Donor citrate reactions are managed based on clinical assessment of symptoms. Prophylactic intravenous calcium infusions were not given. Citrate reactions were assessed as mild, moderate, or severe. Oral calcium carbonate was administered for mild symptoms and intravenous calcium gluconate was reserved for moderate or severe reactions. Calcium cost decreased by 80% after eliminating the prophylactic calcium infusion. Donor safety and comfort were maintained while decreasing labor and cost of calcium infusions allowing these resources to be utilized more efficiently. The occurrence of moderate/severe citrate reactions did not increase above baseline during the trial period. Discussion: Literature synthesis reveals the following key points: (1) citrate reactions are uncommon and mild when they do occur and (2) consider prophylactic calcium in donors with low body weight, liver or kidney dysfunction, or those with a history of citrate reactions, and (3) intravenous calcium gluconate is associated with extravasation necrosis and multiple drug interactions. Prophylactic intravenous calcium is not needed in most cases and oral calcium is sufficient in managing mild reactions of apheresis donors.

### **CONFRONTING COMPASSION FATIGUE: ASSESSMENT AND INTERVENTION IN THE ACUTE CARE ONCOLOGY SETTING.**

**Lisa M. Zajac, DNP, RN, ANP-BC, OCN<sup>®</sup>, Karmanos Cancer Center, Livonia, MI**

It is well noted that oncology nurses experience compassion fatigue, and that the phenomenon may impact patient satisfaction, but there is no literature to support this correlation. In 2012–2014 at the Karmanos Cancer Center (KCC), patient satisfaction scores were analyzed and there were significant negative correlations between the death rate and the surviving patients' satisfaction scores for nursing; affective measures were most impacted. The purpose of this project was to identify if staff (Nurses and Nursing Assistants) were experiencing compassion fatigue, and to determine if acknowledging the loss of the patient in real-time would assist them in delivering higher quality of care. Adapting Janice Morse's Praxis Theory of Suffering (2001), structured debriefings were designed to assist staff with their grief when a patient died. Using the Professional Quality of Life (ProQOL) scale, compassion fatigue was measured at baseline and at the completion of the intervention. Demographic data was obtained from the participants, and questions regarding the debriefings were included on the post-intervention survey. There was a 57.5% (n = 107) response rate for the pre-intervention survey and 74.3% (n = 136) for the post-intervention survey. Pre-intervention results revealed average compassion satisfaction (CS), low burnout (BO) and average secondary traumatic stress (STS). There were 16 patient deaths with 15 structured debriefings in April through June 2015. The majority of the staff who participated in the debriefings reported that they were helpful in acknowledging their grief/loss. Post-intervention results showed high CS, low BO and STS. Analysis of covariance was performed for patient satisfaction, controlling for the death rate, but no significant difference was seen pre-and post-intervention. While it may be too early to see a change in patient satisfaction scores, continuing to care for the staff will ultimately impact care delivery. This project was innovative in that it looked at patient satisfaction data through a different lens. No previous literature has linked death rates and patient satisfaction with compassion fatigue. Also, no literature could be found that designed an intervention specifically in acute care at a NCI-designated Comprehensive Cancer Center. Lastly, an innovative approach to participation methods yielded exceptional response rates.

### **DISCHARGE BEFORE NOON: A NURSE-LED CLINICAL QUALITY INITIATIVE THAT IMPROVES PATIENT EXPERIENCE.**

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Discharge Before Noon (DBN) is an interdisciplinary nurse-led initiative that promotes clinically safe quality patient care. DBN is associated with measurable improvements in patient satisfaction and a decrease in avoidable readmissions and hospital length of stay. The nurse who supports the patient around-the-clock collaborates with the health care team (HCT) to ensure that the discharge needs of clinically ready patients are met. This facilitates their arrival home earlier in the day when the caregiver can address any issues that arise. DBN creates capacity on the inpatient unit, expediting transfer from the emergency department. On inpatient units in a NCI-designated Comprehensive Cancer Center, competing priorities can inhibit timely discharge. Nursing leadership introduced the need for DBN at the daily discharge meeting. These collaborative interdisciplinary meetings focused on active-problem solving in "real-time." The interdisciplinary team developed a DBN checklist of daily responsibilities to address individual and system issues. Strategies implemented included, but are not limited to: daily interdisciplinary DBN rounds to provide a structured and timely venue for ongoing communication about patients' plan of care that remove barriers to discharge. A shared email is sent to track updates. Night nurses reinforce the plan with the patient and family and notify the HCT of any new clinical or other events that need to be addressed. A "DBN Escalation Tool" was developed for all team members to use to avoid delays. The baseline DBN rate was 6%. The DBN rate post project implementation is 16% with a rate of 33% at time of abstract submission. Six Press Ganey DBN patient satisfaction related metrics were identified: communication about medicine, nurses, discharge, pain, responsiveness of hospital staff, care transitions. All of these nursing sensitive indicators improved on both units for the quarter post implementation. Daily feedback, hospital "Executive Scorecard," and reward and recognition are used to motivate the team. The DBN initiative helped to build trust and to foster a collaborative team that became a part of the culture of the unit. Our initiative demonstrates that successful and sustainable improvements in DBN are possible. DBN is a win-win initiative.

### **TAKING HAP OFF THE MAP WITH A ROUTINE SCREEN.**

**Kerri Slavin, BSN, RN, HN-BC, Cancer Treatment Centers of America, Philadelphia, PA; Robyn Dunbar, BSN, RN, HN-BC, Cancer Treatment Centers of America, Philadelphia, PA; Margaret Bonawitz, RN, HN-BC, Cancer Treatment Centers of America, Philadelphia, PA; Cheryl Clements, BSN, RN, PCCN, Cancer Treatment Centers of America, Philadelphia, PA; Joanne McGovern, MSN, RN, CCRN, Cancer Treatment Centers of America, Philadelphia, PA**

Hospital Acquired Pneumonia (HAP) is a leading cause of prolonged hospitalization in patients. The oncology population is especially susceptible to critical illness related to an immunocompromised state. The purpose of this study is to implement the Massey Bedside Swallowing Screen upon admission to the oncology telemetry unit to detect any deficits that could potentially lead to HAP, in conjunction with strict oral care for identified high risk patients. Education through

lecture format on utilization of the Massey Bedside Swallowing Screen was provided to the nursing staff. Every patient admitted to the oncology telemetry unit was screened with this tool. Patients identified as high-risk were placed on nothing-by-mouth (NPO) precaution. A Speech and Swallow Evaluation was ordered to further evaluate the patient. Acutely ill oncology patients unable to perform their own oral care were placed on a strict oral care regimen performed by the nursing staff. The charge nurse audited compliance with this protocol. The pre-intervention phase of the study evaluated January–April 2015 included 1,605 patient days. The data revealed 4 HAPs acquired on the oncology telemetry unit, demonstrating 2.45 incidence/1000 patient days. Post-intervention (May–August 2015) indicated 2 HAPs acquired on that unit, signifying 1.35 incidence/1000 patient days. With the implementation of the Massey Bedside Swallowing Screen for each admission and strict oral care regimen for high-risk patients, the incidence of HAP on the unit decreased by 50%. Oncology patients assessed with the Massey Bedside Swallowing Screen upon admission to the oncology telemetry unit were noted to have improved outcomes and lower rates of HAP. Every oncology patient admitted to an acute care unit should have an admission screen in place to evaluate risk for aspiration. Early detection of patients at high-risk for aspiration and implementation of interventions to improve oral care in high-risk patients leads to improved patient outcomes through lower incidence of HAP in the acute care setting.

### **REALIZING A SUSTAINED DECREASE IN CATHETER ASSOCIATED URINARY TRACT INFECTION RATES AT AN ONCOLOGY HOSPITAL. Pamela McLaughlin, BSN, RN, OCN®, Roswell Park Cancer Institute, Buffalo, NY**

Catheter associated urinary tract infection (CAUTI) is an infection caused by the use of a urinary catheter. CAUTI is the most common type of healthcare associated infection accounting for 13,000 deaths per year, costing more than \$340 million in preventable costs. The immune compromised oncology population is at a particular disadvantage due to complicated treatment regimens and disease process. Nurses led a taskforce to implement a new CAUTI bundle including catheter removal algorithm, selection of improved products including bladder scanners. A multidisciplinary taskforce was formed by nurses to implement the CAUTI program to decrease the incidence of CAUTI in our oncology population as well as decrease the number of catheter days. With the ultimate goal of patient safety, several initiatives were introduced including: development of an IT prompt in the Electronic Medical Record (EMR) to assess daily medical necessity, update of EMR nursing flow sheets to capture accurate data, complete overhaul of catheter inventory, standardization of catheter supplies and catheter maintenance practices, bladder scanner protocol algorithm introduced and assessed for usability with input and revisions from nurses, educational blitz by Nursing Education, Infection Prevention and supply vendors on the entire CAUTI bundle over one month to educate RN's, ancillary departments and support staff, website for CAUTI prevention with links to all components of education and a checklist to ensure completion, inexpensive instructional videos created by staff, nurse champions of the CAUTI bundle were identified and received additional education. Our most recent innovation and modification is the implementation of CAUTI Root Cause Analysis (CAUTICA) for each CAUTI developed by a nurse, including the Urology physician champion, unit nurse administrator, nurse involved in the insertion, practitioners involved in documentation, and the quality nurse. Upon evaluation of the project we discovered a sustained decrease in CAUTI among our population. Data from 4th quarter of 2012 showed CAUTI rate at 3.8%

with most recent 2nd quarter 2015 at 0.9%. We looked at CAUTI Rate/1000 catheter days to calculate our rate. Device days data showed 1st quarter of 2014 at 2,887 device days with a decrease to 1,491 for 3rd quarter of 2015.

### **EFFECTS OF A PRE-CHEMOTHERAPY VIDEO ON PATIENT'S ANXIETY AND TREATMENT-RELATED INFORMATION RECALL. Kathy Keener, MSN, RN, OCN®, St. Joseph Hospital, Orange, CA**

The National Cancer Institute estimates the life time risk of developing cancer is approximately 39.6% with 1,658,370 new cancer diagnoses predicted in 2015. Cancer is a significant life event for patients and they often express feelings of anxiety and worry. In-depth chemotherapy teaching is an essential, but time consuming process in an environment where patient acuity is increasing and nursing time for teaching is diminishing. Often, the amount of pre-chemotherapy information is overwhelming to patients and retention of critical information can be challenging. Different teaching methods have been employed, but research has shown that multiple approaches to teaching may increase retention. The pre-chemotherapy teaching method utilized at a Southern California Community Infusion Clinic provided patients with written literature combined with one-on-one instruction given by chemotherapy-certified nurses. This study presents an alternative, instructional method using a more standardized approach of chemotherapy teaching that is predicted to be more effective, but less time consuming, than the current method. The new method contains a standardized pre-chemotherapy teaching video, in addition to the currently utilized written literature. 38 patients participate in the IRB approved study. Prior to the first chemotherapy treatment, patients were given a pre-survey instrument with anxiety and knowledge assessment followed by a customized, in-house video, then an identical post-survey. Findings demonstrate that the video teaching was effective in decreasing patient anxiety and worry, and increasing knowledge and recall of key information. Overall knowledge increased from 4.4 out of 5 to 4.6 while anxiety demonstrated a reduction from 6.6 out of 12 to 4.7. Interestingly, the study's results also demonstrated the level of pre-education knowledge was high for the entire group. The nurses unanimously expressed satisfaction with the video teaching process. Implications for the nursing were identified, including that nurses needed to be creative to effectively teach patients during a high-stress, time-constrained situation. Further research needs to be conducted to determine whether this method is effective for non-English speaking patients. This project could be easily replicated and expanded in other oncology settings.

### **QUALITY OF LIFE (QOL) MANAGEMENT OF GLIOBLASTOMA (GBM) PATIENTS TREATED WITH TUMOR TREATING FIELDS (TTFIELDS) AND CHEMOTHERAPY. Marlon Garzo Saria, MSN, RN, AOCNS®, FAAN, John Wayne Cancer Institute, Santa Monica, CA; Joshua Carter, BSN, RN, Moores Cancer Center, UC San Diego, La Jolla, CA; Santosh Kesari, MD, PhD, FANA, FAAN, John Wayne Cancer Institute, Santa Monica, CA; Heather Orosco, PA, Moores Cancer Center, UC San Diego, La Jolla, CA; Tiffany Turpin, PA-C, Moores Cancer Center, UC San Diego, La Jolla, CA; David Piccioni, MD, PhD, Moores Cancer Center, UC San Diego, La Jolla, CA**

Recurrent GBM patients have a dismal prognosis. Tumor Treating Fields (TTFields) are alternating electric fields treatment modality indicated for recurrent GBM patients. This treatment is an anti-mitotic focused treatment administered by a device, Optune, from Novocure. Patients wear the device

on their scalps for a minimum of 4 weeks, for 18–22 hours a day, while receiving this therapy. Their scalp must be shaved first in order to apply the ceramic disks on their heads, in specific positions predetermined by MRI. A post-hoc analysis of a phase 3 trial (EF-14) comparing TTFields with temozolomide (TTFields/TMZ) to temozolomide alone (TMZ alone) showed superior progression free and overall survival in patients with newly diagnosed GBM treated with TTFields. An analysis of baseline characteristics of the patients was carried out. Median follow up of patients (n = 204) was 12.6 months. Recurrent GBM patients treated with TTFields/chemotherapy lived significantly longer than on chemotherapy alone (median OS: TTFields/chemotherapy = 11.8 months; chemotherapy alone = 9.2 months; Hazard Ratio = 0.70 (95%CI 0.48–1.00); Log Rank p = 0.049). These patients were supported by a team of highly trained providers, including oncology nurses providing highly specialized nursing care. They were provided with a comprehensive education on the significance of the recommended minimum wear time on therapy and self-management of the most common device-related adverse events, i.e., skin reactions beneath the device's transducer arrays. This analysis suggests that management by trained nurses of recurrent GBM patients on TTFields with or without concomitant chemotherapy is critical. Since patients' compliance with TTFields therapy is correlated with their disease outcome, it is of utmost importance to have properly trained nurses and device specialists working together in enhancing the quality of life of these patients.

#### **QUALITY IMPROVEMENT PROJECT: NEW BREAST CANCER PATIENT EDUCATIONAL MATERIAL.** Cynthia Stevens, RN, BSN, CBCN®, ONS, Maine Medical Center, Portland, ME

Breast cancer patients arrive at treatment centers with many levels of literacy, interest, computer skills, and comprehension of written and verbal education. The current educational materials lack scope and individualization for the patient's diagnosis and treatment planning. By providing standardized vetted materials that are appropriately selected for each individual patient with a nurse navigator will decrease patients' need to seek alternative education. Purpose: To identify and establish comprehensive educational materials to reflect the individual patient needs. To improve decision making skills and patient satisfaction levels at different intervals during their diagnosis and treatment continuum. Conceptual Model: The Synergy Model® guides nursing practice at our facility. This study examines several nursing characteristics in this model: clinical judgment, caring practices, and systems thinking. A focus group of 6 patients at differing levels of literacy, age, and computer skills will review various educational materials. A qualitative study accomplished using short written questionnaire will be provided to rate the materials they received during their own cancer journey. Written materials will be mailed and links to internet sites will be provided to the patients to review with an attached 10 point rating scale. A sampling of information will include information on the following: general breast cancer triple negative disease, plastic surgery options, decision making tools, clinical trial options, young women psychosocial issues, genetic testing and community resources. Four group meetings for discussion will be facilitated by the breast nurse navigator to finalize a consensus. A trial period of the new process will be reviewed after six months by providing all new patients with a satisfaction survey at time of delivery of materials, at post op visit, and at first post completion survivorship visit. Anticipated findings will reveal an improved inventory of resources for individual patient needs during their diagnosis and treatment continuum. A standardized nursing documentation of patient education and interdisciplinary communication will improve patient satisfaction across all treatment modalities. This project will serve as a quality initiative for our NAPBC recertification.

#### **ABDOMINAL COMPARTMENT SYNDROME: REDISCOVERING AN OLD SYNDROME TO PREVENT FURTHER MORTALITY.**

Karshook Wu, RN, BSN, OCN®, MSKCC, New York, NY; Morie Davis, MSN, AGACNP-BC, OCN®, MSKCC, New York, NY; Julio Gonzalez-Diaz, RN, BSN, OCN®, MSKCC, New York, NY; Natasha Ramrup, MSN, RN, OCN®, AOCNS®, CNS, MSKCC, New York, NY

Compartment Syndrome is a rare but significant medical emergency that occurs when pressure within a limited space is increased. Abdominal compartment syndrome (ACS) is a potentially lethal condition caused by any event that produces intra-abdominal hypertension (IAH). Increased intra-abdominal pressure (IAP) causes hypoperfusion, ischemia of the intestines, and dysfunction of multiple organs. The symptoms of ACS may mimic other abdominal conditions making clinical diagnosis a challenge. Therefore, it is imperative that oncology nurses diligently assess for early ACS symptoms. This Disease Management Team (DMT) of Hepatopancreatobiliary Surgical/Gastrointestinal Medical Oncology patient population is at increased risk of developing ACS. Oncology patients may develop this syndrome due to their underlying conditions that predispose them to increase retroperitoneal (pancreatitis, hemorrhage) and intraperitoneal volume (bowel obstruction, tense ascites). In addition, they are at risk for sepsis, which requires fluid resuscitation that will further aggravate ACS. The oncology nurse plays a key role by focusing on risk assessment and early identification of clinical signs and symptoms. ACS patients may present with abdominal bloating and/or abdominal pain and dyspnea. Other physical symptoms included progressive oliguria, hypotension, tachycardia, increased jugular venous pressure and distention, acute pulmonary decompensation and lactic acidosis. However, physical signs and symptoms and imaging are not adequate to diagnoses ACS. The gold standard for a diagnosis is to measure the elevated IAP by indirect measurement (intra-vesical) via a urinary bladder catheter. An IAP greater than 25 mm/Hg may lead to a significant increased in mortality and morbidity. The objective of treatment is abdominal decompression through evacuation of intraluminal contents, intra abdominal space-occupying lesions and measures to increase abdominal wall compliance. Oncology nurses play a pivotal role in diagnosing, treating and vigilant monitoring of ACS. The ultimate goal of treatment is to decrease intra abdominal pressure to less than 15 mmHg which will increase tissue perfusion and improve organ function. Prevention of ACS relies heavily on the knowledge of the underlying cause of abdominal compartment syndrome. The rapid evolution of ACS can be reversed by understanding the pathophysiology of this syndrome. With education, we can minimize and prevent the complications of ACS.

#### **MOVING A BLOOD AND MARROW TRANSPLANT OUTPATIENT AREA FROM AN INPATIENT SETTING TO AN AMBULATORY INFUSION CENTER.**

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The Blood and Marrow Transplant (BMT) Unit of the Wilmot Cancer Institute (WCI) at Strong Memorial Hospital has provided inpatient and outpatient care to BMT patients since 1998. With the growth of the program there has been increased demand for inpatient beds and improved care efficiencies, which has been challenging. The purpose of this clinical practice abstract is to describe the successful move of an oncology nursing treatment area from a BMT inpatient unit to an ambulatory

infusion center. This move had several advantages: centralized outpatient care, provided three more inpatient BMT rooms and expanded infusion center hours to include weekends and optimize scheduling. A multidisciplinary committee was formed to evaluate logistics of this move. Once it was established that it was feasible, potential barriers and strategies were discussed. Some barriers considered were: maintaining the BMT expert care provided to the outpatients; patient concerns including perceived decrease in the level of care; the need for an isolated, low traffic area because of patient's compromised immune system, and maintaining the standards set by the Foundation for the Accreditation of Cellular Therapy (FACT) through which the BMT program is accredited. To maintain the BMT expert care, a BMT Certified Nurse from the BMT unit was transferred to the infusion area and a nursing education grant application was submitted to promote further BMT education to staff. To help alleviate patient concerns, two patients were invited to participate in the planning process. Within the infusion center, four private rooms with bathrooms were identified for BMT patients. Finally, the BMT quality manager was very involved to ensure all FACT standards were met. Central line blood stream infection (CLABSI) rates (0.49/1,000 line days, 4,044 total line days) and patient satisfaction (93.8% mean, n = 479) will be monitored ongoing. Overall the move was a success as measured by: patients have shared positive feedback about the environment and the expert BMT care they have received; staff are enjoying the opportunity to care for a new patient population; there have not been scheduling issues, and the inpatient unit is operating more efficiently since this transition.

**IMPROVING PAIN MANAGEMENT IN AN OUTPATIENT RADIATION ONCOLOGY DEPARTMENT—A MULTIDISCIPLINARY QUALITY IMPROVEMENT APPROACH.** Samantha Ganey, MSN, AGPCNP-BC, NYULMC, New York, NY; Beverly Smith, DNP, ANP-BC, NE-BC, NYULMC, New York, NY; Jennifer Brown, RN, BSN, OCN®, CNRN, NYULMC, New York, NY; Adelina Cabrera, RN, BSN, OCN®, NYULMC, New York, NY; Kathleen Gumbs, RN, BSN, NYULMC, New York, NY; Maureen Oliveri, RN, MSN, NYULMC, New York, NY

Evidence has demonstrated pain associated with cancer or cancer therapies is undertreated. This may be partly due to transitions in care from inpatient to outpatient settings and complex treatments from multiple healthcare providers. Oncology RNs play an important role in improving policies and practices for effective pain management by assessment, intervention and reassessment of pain at each patient interaction. Educating and communicating with the entire healthcare team, the patient and their caregivers may allow prompt and safe pain management interventions. Methods, Intervention, Analysis: (a) A needs assessment was conducted due to low Press Ganey scores regarding patients' pain management. This included MD/RN documentation of patients' pain and patient satisfaction scores. Several areas of improvement were identified. (b) A multidisciplinary team was assembled to initiate the Dartmouth Microsystem Improvement methodology. (c) Educated medical staff to World Health Organization guidelines and the medical center's evidenced based standard of pain management. (d) Educated professional and supportive staff to consistently ask patients about their pain at each episode of care using the Wong-Baker FACES Pain Rating Scale. (e) Revised all clinical templates in the electronic medical record to include assessment, intervention, and documentation of pain. (f) Distributed a patient education pamphlet regarding pain management prior to the initiation of radiation treatments. (g) Professional compliance was measured using monthly randomized chart reviews and professional feedback. Findings and implications: (a) Over a two year span, assessment, intervention, and documentation of patients' pain:

(1) RN: Increased from 36% to 100% (2) MD: Increased from 24% to 100%. (3) Patient satisfaction increased from 67% to 95% (PG question: How well was your pain controlled?). Discussion & Implications: (a) Our improvement goals have been achieved over the course of 2 years. (b) The Oncology nurse played a pivotal role in the successful outcome of this process. Nursing was empowered to use integrative pain management techniques and escalate pain ratings of 4 and above to licensed independent practitioners. (c) The probability of radiation treatment interruption decreases, with the improvement of pain assessment, documentation, and intervention.

**CHEMOTHERAPY ADMISSIONS: AN OPPORTUNITY TO IMPROVE THE PATIENT EXPERIENCE.** Elena Lubimov, RN, BSN, OCN®, MSKCC, New York, NY; Caroline Srikumar, RN, BSN, OCN®, MSKCC, New York, NY; Carlos Rojas, RN, OCN®, MSKCC, New York, NY; Diane Llerandi, RN, MA, AOCNS®, MSKCC, New York, NY; Donna Miale-Mayer, RN, BSN, MSN, CNML, MSKCC, New York, NY; Mary Dowling, RN, MSN, OCN®, CENP, MSKCC, New York, NY

Our 43-bed hematology oncology unit provides comprehensive cancer care to patients with leukemia, lymphoma, and multiple myeloma. This population makes up 53% of the institution's chemotherapy admissions. The Leadership Safety Committee (LSC) and our unit's interdisciplinary team were charged with identifying priority issues for improving patient safety and patient experience. Wait times for elective chemotherapy was identified as a priority. The average wait time from patient's admission to 1st dose administration was 9.7 hours. Delays in admission included bed availability (36%), input delay of electronic treatment orders (ETO) (12%), PICC line placement on day of admission (98%), no blood work available within 72hrs of admission (36%), and drug preparation to delivery time taking 1 hour and 47 minutes. In collaboration with the LSC and Nursing Leadership our inpatient hematology unit piloted the Chemotherapy Admissions Unit (CAU). The purpose of this pilot unit was to improve patient safety and experience by decreasing wait time for chemotherapy administration and improve admissions to the inpatient hematology unit. The CAU was staffed with three Chemotherapy Certified Clinical Nurses and one Unit Assistant from our hematology unit. Responsibilities included collaborating with physicians to ensure ETO was submitted before and blood work available within 72 hours of admission. They consulted with outpatient LIPs to confirm pre admission PICC line placement and chemotherapy pharmacy to ensure delivery before patient arrival to the CAU. Once first dose administration began, they coordinated with the unit's charge nurses to ensure bed availability. The pilot began January 26, 2015 with data collection from February through April. In that time, there were 192 chemotherapy admissions. ETO submission improved from 12% to 84%. Blood work availability increased from 36% to 60%. Pre admission PICC placement went from 0% to 98%. Drug delivery improved from 1 hr 47 mins to 0. Bed availability due to quicker discharges increased from 34% to 46%. Finally, wait time from admission to 1st dose administration improved from 9.7 hrs to 2.1 hrs, decreasing patients treated after day of admission due to delays, from 17% to 8%, saving 18 patient days. Due to the pilot's success, CAU will expand to include all elective chemotherapy hospital-wide.

**IMPROVING PATIENT WAIT TIME IN BLOOD TRANSFUSIONS.** Cristy LePori, MSN, RN, OCN®, Texas Health Harris Methodist Hospital, Fort Worth, TX; Joy Daniel, MT(ASCP), Texas Health Harris Methodist Hospital, Fort Worth, TX

Blood transfusion patients in Outpatient Medical Service (OPMS) wait for hemoglobin (Hgb) results from the laboratory

after receiving their first unit of blood (UOB) to determine if a second UOB is required. Our guidelines state the patient may receive a second UOB if their Hgb is less than 8 after the first UOB. The patient waits an average of 73 minutes between the first UOB and second, resulting in poor patient satisfaction and staffing issues. Significant delays often meant the patient had to return the following day for the second UOB. The purpose was to address the patient dissatisfaction with the amount of time they had to wait for post transfusion Hgb results. The project also addressed the current blood collection process and the nurses' perception of slow lab reporting. Data was collected and analyzed. There was no delay found in reporting Hgb results. Other variables contributed to delays: the pneumatic tube system for specimen delivery and the lab collection process. The lab department recommended OPMS use a point of care (POC) equipment called HemoCue, which provides immediate results. After approval by administration, lab correlated the HemoCue, trained the nurses, and verified competency. Data was collected again to evaluate wait time of the patients receiving a transfusion. The HemoCue provided Hgb results within seconds; therefore, the patient had less wait time before discharge and receiving a second UOB. The wait time from Hgb collection to patient discharge after the first UOB was decreased by 17 minutes and by 27 minutes between UOB. All patients who received two UOB were able to do so on the same day. Patient wait time for second UOB transfusions was decreased through the use of the HemoCue. Patient safety was increased because labeling of specimens was eliminated and results were automatically loaded in the electronic medical record. In the process, nursing time was decreased through the elimination of order entry, specimen delivery with pneumatic tube system, and result notification checks. By using the HemoCue, the nurses were able to decrease the patient's length of stay in the OPMS, thus, increasing patient satisfaction.

**UTILIZING PATIENT SATISFACTION SCORES TO DRIVE ONCOLOGY NURSING PRACTICE.** Carol Barczak, BSN, RN, OCN®, Froedtert and Medical College of Wisconsin, Menomonee Falls, WI; Laura Knoke, BSN, RN, OCN®, Froedtert and The Medical College of Wisconsin, Menomonee Falls, WI; Kimberly Felton, BSN, RN, OCN®, Froedtert and The Medical College of Wisconsin, Menomonee Falls, WI; Elizabeth Wilson, BSN, RN, Froedtert and The Medical College of Wisconsin, Menomonee Falls, WI; Jean Jensen, RN, OCN®, Froedtert and The Medical College of Wisconsin, Menomonee Falls, WI

Patient satisfaction can be a reflection of the quality of nursing clinical practice in the outpatient setting. Nursing staff at the Community Memorial Hospital cancer center (CMH), a community-based clinic, strives for high scores to reflect best practice and a level of loyalty that a patient has in returning to the facility for future care. The cancer center at CMH noticed lower scoring items on the survey questions impacted by clinical staff. The cancer center nursing shared governance committee was tasked to improve the survey scores through specific clinical practice interventions. The shared governance committee reviewed the survey scores from July 2014 to January 2015, and chose the lowest scoring clinically-impacted categories: patient wait-times, patient education, and pain management. Each of the categories was assigned to a nurse chairperson who developed an interprofessional team to brainstorm ways to improve scores. The wait-times group utilized support staff to keep patients informed of delays and to plan ahead with scheduling. The patient education group developed a form with all the commonly ordered tests listed along with a description of what the test entails. The pain group developed strategies to meet the needed pain control. Two documents were developed

for patient education regarding pain control-cancer pain and a constipation protocol algorithm. The survey results from each of the interprofessional group projects revealed scores trending upward in all three categories, which reflected the positive impact of the chosen interventions. The results provide staff with the most accurate reflection of how they are meeting the needs of the patient. The upward trend in all the selected areas demonstrated to staff that the interventions made an impact towards meeting patient's needs and promoted best clinical practice. All cancer center staff was asked to participate in this shared project to improve patient satisfaction with the care received. Through the collaboration of the interprofessional groups, low scoring survey questions were improved. The department worked together and realized the impact they all share in caring for a patient in an outpatient cancer setting. The projects also emphasize the importance of shared governance, collaboration, and nursing leadership.

**ERASING PATIENT ANXIETY AND INCREASING NURSE-PATIENT COMMUNICATION THROUGH WHITEBOARD UTILIZATION IN AN AMBULATORY INFUSION ROOM.** Sheila Hunt, BA, RN, CEN, Baylor Scott & White McClinton Cancer Center, Waco, TX; Andrea Vranich, BSN, RN, Baylor Scott & White McClinton Cancer Center, Waco, TX; Julie Pederson, BSW, RN, OCN®, Baylor Scott & White McClinton Cancer Center, Waco, TX; Joni Watson, MBA, MSN, RN, OCN®, Baylor Scott & White McClinton Cancer Center, Waco, TX

A cancer diagnosis is distressing, and ambulatory cancer treatment regimens can be long and complicated. Knowing the day's agenda, and medication names, purposes, and side effects can give patients a sense of control and reduce anxiety. Whiteboards have been used successfully in the acute care setting as an effective communication tool, but literature is lacking on whiteboard use in the ambulatory setting to improve nurse-patient communication, increase patients' sense of control, and decrease patient and family anxiety. Patients within the Baylor Scott & White McClinton Cancer Center ambulatory infusion room often express anxiety and lack of knowledge about their care plan. Though treatment has been explained in clinic and written treatment information provided, patients' questions when arriving in the infusion room reveal they do not have a full understanding of the treatment plan. Infusion nurses collaborated to reduce anxiety caused by patient lack of understanding, recognizing an opportunity to communicate care and also include the patient in the treatment team using dry erase whiteboards. Whiteboards were placed in each infusion pod, and nurses were instructed how to use them throughout the patients' treatment time to more effectively communicate the treatment plan. Infusion timeline, categories of premedication, hydration, and chemotherapy, as well as medication names and approximate infusion times were recorded and checked off the whiteboard when completed. Nurses developed a 9-item Likert survey scale to track patients' responses and noted an increase in patient understanding about treatment, often resulting in decreased anxiety. Of 25 patients surveyed, 80% indicated the whiteboard was an effective coping tool, and 88% expressed the whiteboard helped them feel less tense about treatment. On average, patients showed a 2.65-point reduction in anxiety levels after whiteboard implementation. Patients learn in different styles and in progressive stages. Seeing, hearing, repeating medication names and discussing their purposes through use of whiteboards in the ambulatory infusion room helps patients internalize information, which increases familiarity and confidence in understanding of the treatment plan, reducing anxiety. Limiting patient anxiety is an important component of holistic cancer care and can result in improved patient satisfaction and higher recommendations of cancer care delivery.

## **INTEGRATION OF DATA COLLECTION INTO THE ELECTRONIC HEALTH RECORD EPIC: A COMPREHENSIVE APPROACH TO IMPROVING NAVIGATION OUTCOMES AND REPORTING.**

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Patient Navigation, although relatively new, has exploded into the ever changing, complex health care system. Cancer care navigation programs have been established in local hospitals, community agencies, and large health care systems across the country. The benefit of these programs is recognized by the Commission on Cancer and has led to an additional standard requiring accredited cancer programs to provide navigation services. Data collection is important to measure outcomes, show return on investment, and to accelerate program development and expansion. Our goal is to create a data collection tool that is timely, efficient, and comprehensive to support outcome reporting and analysis at Vidant Health, an academic, tertiary care facility with 6 regional hospitals. Prior to the development of our tool, data was collected and entered manually into spreadsheets, which was time consuming and cumbersome to navigators and administrative support. Inaccuracies and duplication of data entry were noted with that process. We spent a year streamlining the data elements to align with outcome measures incorporating timeliness of care, return on investment, and improved patient satisfaction. Navigation specific software systems were considered cost prohibitive; therefore, we explored developing a customized tool in Epic to be used by Vidant Health for inpatient and outpatient documentation. In collaboration with our information system staff, a documentation tool embedded in the navigation note was created. The tool allows navigators to enter real-time data during patient encounters, and create data reports quickly. Data entry is streamlined and standardized, allowing for accurate, comprehensive analysis. The new tool was implemented in July 2015 with the navigators continuing to collect the data manually as well. Feedback from the navigation team favors the flowsheet tool for ease of use, timeliness, and improved productivity. Preliminary analysis reveals consistency when comparing the manual versus the electronic health record data reports. This data collection tool will be beneficial to the growth and sustainability of navigation. The flowsheet can easily be modified and adapted to fit any program's specific needs. We anticipate this tool may lead to standardizing navigation data collection, defining research areas, and comparing navigation outcomes nationally.

## **TAKING IT HEAD ON: AN ONCOLOGY NURSE-LED TEAM APPROACH TO DECREASE TREATMENT DELAYS AND HOSPITALIZATIONS IN OUR HEAD AND NECK CANCER PATIENTS.**

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Patients with head and neck malignancies frequently have complex psychosocial and medical issues. It is imperative to provide ongoing evaluation and resources to this high-risk population. In April 2014, oncology nurses in our practice identified concerns about profound treatment related sequelae which resulted in significant treatment delays and hospitalizations. This effect was even more pronounced when the patient was receiving concomitant radiation and chemotherapy. This premise was validated when nursing initiated a 1.5 year review of our morbidity and mortality records. This review of 74 consecutive

patients revealed a 59% risk of significant treatment delay (> 3 days) with or without hospitalization. Research has shown nursing interventions can help minimize treatment delays and hospitalizations. In June 2014, oncology nurses in our facility created a multidisciplinary team which included social workers, dietitians, speech therapists, and palliative care nurses as well as the treating physicians. Our purpose was to identify interventions to limit treatment delays and interruptions. The team developed and implemented an algorithm with our nursing colleagues in the surgery department ensuring timely referral to home care services for gastric tube management as well as early referral for swallow and speech therapy. We established a protocol for bi-weekly oncology nursing visits during radiation to assess and manage side effects in a timely manner. Detailed educational materials for oral care and symptom management were developed for distribution to the patients and family care givers. Aggressive supportive measures were instituted both during and after treatment. In May 2015, a six-month review and evaluation of 28 patient records after implementing these interventions demonstrated a 34% absolute reduction in hospitalization and treatment delays. The team continues to meet on a monthly basis with quarterly chart reviews to further improve this process. This collaboration of expert clinicians has improved the quality of care for patients with head and neck cancer and has decreased hospitalizations and treatment delays.

## **PARTNERS IN CARE: ONCOLOGY 101.**

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In December 2014, New York Presbyterian/Weill Cornell Oncology service line welcomes a brand new medical oncology unit (10 North). The opening of 10 North has created great opportunities for ancillary support staffs. Hence, providing education to all onboarding staff and current staff will be effective in providing safe care to all patients. The fact that cancer can only be managed with minimal chances of treatment contributes to psychological issues. Therefore, patients and family members needs optimal care and support during this difficult time. Oncology units should demonstrate optimal care and love for the patients. This cannot be achieved without cooperation of the supportive staff working in the oncology unit. Consequently, a study evaluating the level of understanding of oncology ancillary support staff and their perception towards oncology care is vital. The main purpose of the study was to teach the oncology ancillary support staff on aspects pertaining to oncology care. The ancillary support staffs have a considerable impact towards achieving quality and safety care for patients with cancer. A survey was conducted to evaluate the need for education on how to take care of oncology patients. The results indicated a need for knowledge on time management, pain, response, fall prevention and cancer symptoms care. Thus empowering ancillary support staff can help the health professional in the oncology department to manage cancer patients better. Based on the findings, there is a need to provide education for all oncology ancillary support staff. The survey reveals the imperativeness of ensuring that ancillary support staffs are incorporated effectively in the care for patients in their respective units. Discussion: Working in an oncology unit with inadequate knowledge on pain management, fall prevention, cancer symptoms management, and handling cancer patients and their relatives can be harmful. Having adequate knowledge has improve our HCHAPs scores, improving patient satisfaction and delivering a safe working environment for cancer patients. Innovation: To incorporate Partners in Care:

Oncology 101 for all new ancillary support staff during orientation for the oncology service line.

**MOVING OUT: TRANSITIONING AN INPATIENT CHEMOTHERAPY REGIMEN TO THE OUTPATIENT SETTING.** Jayme Cotter, MS, RN, AOCNS®, ACNS-BC, Froedtert & Medical College of Wisconsin, Milwaukee, WI; Mindy Waggoner, PharmD, BCOP, Froedtert & Medical College of Wisconsin, Milwaukee, WI; Stacie Lahr, RN, OCN®, Froedtert & Medical College of Wisconsin, Milwaukee, WI; Steven Kluck, RN, Froedtert & Medical College of Wisconsin, Milwaukee, WI; Jennifer Loyda, RN, Froedtert & Medical College of Wisconsin, Milwaukee, WI; Felicia Zook, PharmD, BCOP, Froedtert & Medical College of Wisconsin, Milwaukee, WI

Many chemotherapy regimens have been administered exclusively in an inpatient setting to support long infusion times and allow close monitoring of lab values post-infusion. High dose cytarabine (often referred to as HiDAC) is one of these regimens. As inpatient areas are pressed for bed availability and more care is transitioned to outpatient, the idea of requiring regimens to be given in one care setting needs re-evaluation. To effectively eliminate this belief, careful consideration must be given to the medication-specific issues, patient-specific requirements, and processes of care. The purpose of this project was to transition a chemotherapy regimen that has traditionally been given on the inpatient unit to the outpatient setting, creating a new standard for how to provide care for these patients. This project was completed at an academic, tertiary medical center in Milwaukee, Wisconsin. A multi-disciplinary group was assembled and existing orders, materials, and processes were evaluated. Interventions: (a) Creation of a program overview that included specific time points for provider communication to the team, lab appointments, a chemotherapy teaching appointment, treatment days, and follow-up monitoring days. (b) Standardized teaching plan designed as a co-teaching appointment with a nurse and pharmacist, with each accountable for distinct, specific elements. (c) Modifications to the treatment plan orders for use in the outpatient setting including changing the time between the twice daily infusions, and devising a plan to obtain labs only on treatment days while maintaining patient safety. (d) Documents were created and education was provided for the outpatient infusion nurses who had not previously administered this regimen. (e) Follow-up plan to monitor patient post-treatment with pre-made appointments. This project resulted in a comprehensive plan for patients receiving this regimen. Results included moving an inpatient regimen to the outpatient setting, decreasing infusion visits for patients from 5 to 3 days, and standardizing teaching, allowing for emphasis of the patient as a partner in their plan of care. Project replication will likely result in cost savings, with the advantage of outpatient medication pricing and a decrease in the length of stay for patients. It also allows for a standardized, team-oriented, comprehensive approach for how to care for patients.

**BREAKTHROUGH CANCER PAIN (BTCP): PUTTING EVIDENCE INTO PRACTICE.** Jeannine M. Brant, PhD, APRN, AOCN®, FAAN, Billings Clinic, Billings, MT; Karen McLeod, MSN, RN, OCN®, CNL, Malcolm Randall VA Medical Center, Gainesville, FL; Lisa Keller, RN, OCN®, MS, Memorial Sloan Kettering Cancer Center, New York, NY; Julie Summers, RN, BSN, OCN®, Harris Methodist Fort Worth, Fort Worth, TX; Tahitia Timmons, MSN, RN-BC, OCN®, VA-BC, Cancer Treatment

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Estimates suggest that 21% to 70% of patients experience BTCP on a daily basis. BTCP is usually severe, peaks rapidly, and can occur spontaneously. Studies indicate the majority of BTCP is incident pain (44%), followed by spontaneous pain (41.5%), or a combination (14.5%). BTCP negatively impacts mood, activity, relationships, sleep, and overall quality of life in patients with cancer. A systematic review was conducted to examine pharmacologic treatment for BTCP. Studies were included (2007 to August 2015) if they specifically measured pain intensity and outcomes for BTCP. Studies were divided among team members. One team member reviewed each study using a standardized review form that included details about the intervention, sample, study design, findings, and study limitations. A second member verified the review. Discrepancies were discussed between the two members. All studies were then discussed with a team of 20 oncology nurses with experience in systematic reviews and pain management. Through consensus, the team categorized the entire body of studies into one of five Putting Evidence into Practice (PEP) categories: Recommended for Practice, Likely to be Effective, Benefits Balanced with Harms, Effectiveness not Established, or Not Recommended for Practice. Findings: Three meta-analyses, three systematic reviews, 21 research studies, and 2 guidelines were included in the review; over 10,000 patients participated. The majority of studies were randomized-controlled trials that examined use of transmucosal immediate-release fentanyl (TIRF); two studies examined morphine for BTCP. The team established all opioids as Recommended for Practice. TIRFs show more rapid onset of relief and tend to closely mimic BTCP episodes. Study limitations include lack of long-term follow-up, small sample sizes, lack of control group in some studies. The majority of recent studies for BTCP examine TIRF efficacy. Seven TIRF opioids now exist and are efficacious in treating BTCP. Studies are now needed that compare traditional opioids such as morphine or oxycodone to TIRF opioids; comparison trials of TIRFs are also warranted. Innovation: Currently, all opioids are recommended for BTCP and clinicians use opioid of choice. Future directions include comparing opioids and routes for BTCP efficacy, potentially setting a new direction for PEP recommendations.

**MORE THAN SKIN DEEP: ASSESSING THE DERMATOLOGIC TOXICITIES OF EPIDERMAL GROWTH FACTOR RECEPTOR INHIBITORS.** Sonia Sims, BSN, RN, OCN®, Arlington Cancer Center at Texas Health Dallas, Grand Prairie, TX

Epidermal growth factor receptor inhibitors (EGFRIs) are an important targeted therapy for oncology patients with solid tumors. The most common EGFRi toxicities are papulopustular eruptions on the face and upper body occurring in 85% of patients. Skin toxicities may cause erythema, pain, and pruritus with resulting effects on quality of life (QOL). At our infusion center, we noted with the current chart-by-exception electronic health record (EHR) that skin assessments and supportive care were infrequently recorded. Current literature supports using an evidence-based tool, the Multinational Association of Supportive Care in Cancer (MASCC) grading tool, for assessing EGFRi toxicities and QOL. PICO: For patients receiving EGFRIs in the outpatient infusion center, what is the effect of using a modified MASCC skin assessment tool compared with the current EHR assessment for identifying and grading skin toxicities and QOL issues? We did a baseline chart review of patients receiving EGFRIs (January to April 2015) (n = 70 patient visits), educated staff about EGFRi toxicities, and piloted the MASCC tool (May-June, 2015), (n = 52 patient visits). Results: Pre-project, 18.5% (13:70) of skin assessments were documented with no

information about pain, pruritus or QOL. Post-implementation, skin assessments were completed on 48% (25:52) of visits and included toxicity grading and effects on physical and social functioning. Nurses commented: "Patients are disclosing more, and we are providing more education." We have incorporated the MASCC tool into our EHR system. Using the MASCC tool, we are improving our skin assessments and identifying opportunities for patient education and supportive care.

### **INTEGRATIVE ONCOLOGY—A MULTIDISCIPLINARY TEAM APPROACH TO PATIENT SUPPORT DURING CANCER CARE.**

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Worldwide, an estimated 33%–47% of individuals diagnosed with cancer use complementary, alternative or integrative therapies during cancer treatment. People touched by cancer commonly complain of difficulty finding appropriate guidance, information, and sense of what comes next as they navigate the physical, emotional and existential challenges of cancer. Integrative therapies can be effective in helping patients surpass the challenges of cancer, but limitations exist regarding the adoption of integrative care in conventional oncology care. Bauer-Wu & Decker (2012) found "Cancer patients are among the top consumers, with several studies indicating that at least one out of every two cancer patients integrate such therapies into their traditionally prescribed cancer treatment regimens." The IO program was designed to provide an oncology subspecialty service dedicated to integrative care. The program provides patients with a customized care plan that is symptom driven and evidence based. Patients discuss their cancer diagnosis, treatment, symptoms and side effects, chronic medical problems, medications and supplements with a physician/nurse team. Patients are then connected with specialized providers who can address and improve symptoms and quality of life through movement, touch, nutrition, and mindfulness. Statistics gathered from the first 17 months of the IO program show a steady rise in referrals. Over 100 new patients have been seen and many continue in follow-up consultation. Physicians from behavioral medicine, palliative care, surgical oncology, gynecologic oncology, radiation oncology and medical oncologists that focus on all types of cancer have all utilized this service for their patients. The patient-centered approach of the IO program serves as an innovative model of support for patients and caregivers supplying what are often felt to be missing in conventional cancer care. There is a clear need, a strong demand, and a cultural and operational complexity that is best addressed by the IO physician/nurse team. As the program has expanded, the largest obstacle remains expense of high quality services with insurance coverage as a challenge. The program aims to create longitudinal therapeutic relationships that can cross the spectrum of cancer outcomes including cure, survivorship, palliative, and end-of-life care.

### **ONCE, TWICE, THREE TIMES TOO MANY: PREVENTING FALLS AND RELATED COMPLICATIONS IN ONCOLOGY PATIENTS WITH THROMBOCYTOPENIA . . . UTILIZING AN ADVANCED NURSING INTERVENTIONS APPROACH.**

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Thrombocytopenia is a frequent complication of cancer and its' treatment. Some of the goals of therapy for thrombocytopenic patients with cancer is to prevent bleeding complications and minimize the risk of injury to patients with cancer. These patients

experience the third highest number of hospital falls compared to patients without cancer. 70% of falls result in an injury, 1 in 5 result in an injury such as traumatic brain injury and every 29 minutes an older adult dies from a fall. Therefore, it is important to take an innovative approach to Fall Prevention. Initial Evaluation of the historical trends in falls at Memorial Regional Hospital yielded the need to develop a novel approach to fall prevention and management. Accountability of Fall Assessment is shared amongst the Interdisciplinary team at MRH through comprehensive continuous assessment and reassessment, where all patients are a risk for falls rather than utilizing a stratified Risk Assessment Tool. Fall Prevention became the 6th Vital sign, requiring every member of the team to be a participant in ongoing assessment. An Autumn Alert, an immediate Post Fall Huddle to evaluate factors which may have contributed to the fall has since been implemented in 2014 with the goal of preventing a fall recurrence in that particular patient and to identify trends and interventions which may prevent falls in other patients. Because of an injury sustained on the Oncology unit, Advanced Nursing Interventions such as an Adult Fall with Injury Protocol was implemented. An RN may implement an approved protocol along with a corresponding order set without a physicians order to facilitate rapid treatment of a patient who sustains a fall with a witnessed or reported head injury. Therefore decreasing time to diagnosis and treatment. Pre and Post programmatic falls analysis was conducted after implementation in 2010, with a 9–17% year over year reduction in patient fall rates from 2010–2013, representing an innovative approach with successful results that has not been currently documented in the literature.

### **USING A LOCATOR SYSTEM TO MEASURE PURPOSEFUL HOURLY ROUNDING ON AN INPATIENT ONCOLOGY UNIT.**

Laurie Bryant, RN, MSN, OCN®, ACNS-BC, SKCCC, Johns Hopkins, Baltimore, MD

Objective: Utilize a locator system to determine compliance with purposeful hourly rounding (PHR) and provide feedback to staff. Determine whether implementation of PHR decreases call bell usage and improves staff responsiveness scores, fall rates on an inpatient oncology unit. Researchers suggest that PHR can improve quality of care, patient and nurse satisfaction. Based on the strength of the evidence, PHR was implemented on two inpatient units at this NCI designated cancer center. This effort was led by the unit based clinical nurse specialist in collaboration and consultation with staff. Staff were presented with supporting evidence to establish a foundation for implementation of PHR. Staff received education including using purposeful language in patient communication and PHR implementation and measurement plan. A patient education handout was developed to inform patients and families about the new initiative. Rounding compliance was originally tracked on paper, but ultimately monitored by the staff locator system. Staff wear badges that locate their whereabouts on the unit. Reports are generated indicating length of time spent in patient rooms along with number of visits per hour. Locator reports, quarterly Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) scores and falls data are shared with staff via email and during bimonthly meetings. Findings/Interpretation: Hourly rounding compliance rates ranged from 60-80%. Fall rates decreased by 77% post-PHR implementation and call bell rates by 40%. Pre-PHR our HCAHPS patient satisfaction scores for staff responsiveness were below average and post initiative they have consistently shown improvement. The locator system had challenges measuring PHR compliance which included the inability to identify when rounds weren't required, such as when patients were discharged or out of their rooms for a procedure. The goal of PHR is to improve quality of care. Compliance monitoring via a locator system with feedback to staff, along with staff and patient education, have resulted in positive outcomes. Innovation: Partnering with

patients and their caregivers to ensure satisfaction and efficiency of PHR along with advances in call bell and locator technology will improve PHR monitoring.

**HOW TELEHEALTH SERVICES CAN DECREASE EMERGENCY ROOM VISITS IN AN AMBULATORY NCI-COMPREHENSIVE CANCER CENTER.** Terryann Fagbewesa, RN, Rutgers Cancer Institute of New Jersey, New Brunswick, NJ; Terry Capanna, RN, BSN, OCN®, Rutgers Cancer Institute of New Jersey, New Brunswick, NJ; Cheryl Poli, RN, BS, OCN®, Rutgers Cancer Institute of New Jersey, New Brunswick, NJ; Carla Schaefer, RN, BSN, OCN®, Rutgers Cancer Institute of New Jersey, New Brunswick, NJ

Telehealth is the delivery, management, and coordination of health services that integrate electronic information and telecommunications technologies to increase access, improve outcomes, and reduce costs of health care. At an NCI-designated Comprehensive Cancer Center, our designated telephone triage line is staffed by experienced oncology registered nurses. The purpose is to provide care to patients and families through assessment of actual or potential health needs; health promotion, education, counseling and decision support, and help avoid inappropriate emergency room (ER) utilization. Nurses view real-time data from the electronic medical record (EMR), providing consistent, standardized, and timely symptom management information that prevents time-consuming ER evaluations and unnecessary hospital admissions. Patients call the triage line when experiencing cancer-related symptoms or treatment-related side effects. Nurses triage patients based on the type of symptoms using the patient EMR to track reasons for phone calls as well as the prescribed interventions. A successful cancer telenursing program helps bridge the gap of communication between health care providers and members of the community and serves as a building block in the foundation of any cancer care delivery system. ER waiting rooms are not the ideal setting for immunocompromised oncology patients. Most patients are seen and assessed by physicians who lack oncology-specific training and experience may order inappropriate diagnostics and treatments which add avoidable costs. Two important metric improvements were accomplished by utilizing three triage nurses in the telehealth service call center. Telephone data from six months prior to the addition of the triage nurses was compared to six months after orientation was completed. First, approximately 1,300 additional calls were answered live while the number of calls abandoned decreased by over 200. Second, the number of emergency room visits by oncology patients from the center at our flagship hospital during this time decreased by five percent. Competencies have been developed to enhance the patient experience and evaluate nursing performance; nurses are observed frequently; and calls are monitored. Future directions planned for the telehealth services will include electronic algorithms with evidence-based oncology specific pathways; follow up calls for new patients, and extending the hours of operation.

## LEADERSHIP/MANAGEMENT/ EDUCATION ABSTRACT PODIUMS

**BRIDGE TO PRACTICE: INTEGRATING THE ONS/ONCC ONLINE CHEMOTHERAPY AND BIOTHERAPY CERTIFICATE COURSE WITH INSTITUTIONAL SPECIFIC POLICIES AND PROCEDURES.** Sharon Flynn, MS, RN, ANP-BC, AOCNS®, BMTCN™, National Institutes of Health, Bethesda, MD; Megan Mikula, RN, BSN, OCN®, National Institutes of Health, Bethesda, MD; Mary Fleury, RN, BSN, OCN®, National

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In 2014 the Oncology Nursing Society (ONS) and Oncology Nursing Certification Corporation (ONCC) redesigned the ONS Chemotherapy/Biotherapy provider course program. In response to this redesign, our Nursing Department developed and implemented an educational plan incorporating the ONS/ONCC course with institute specific policies and procedures. This program is used at our institution by our nurses' to acquire/maintain knowledge related to chemotherapy/biotherapy prior to demonstrating hands-on competency. After piloting the new ONS/ONCC online course, a workgroup convened and utilized the Plan-Do-Check-Act model to analyze occurrence reports involving chemotherapy/biotherapy, assess current chemotherapy/biotherapy practices on all oncology units, and identify areas for improvement. "Bridge to Practice" (BTP) sessions were developed to close the gap between online content and application of the course principles within our institution. We offered BTP as five 4-hour long sessions in a computer lab with 45-minutes dedicated to didactic instruction and 3.25-hours for on-line learning. In-person sessions provided opportunity to dialogue, reinforce best practice and created a quiet space away from the unit to complete online requirements. This hybrid format between BTP and the online course offered a unique opportunity for hands-on, small group instruction to every chemotherapy nurse provider prior to validating/revalidating competency at the unit level. BTP gave a shared meaning to safe handling practices, independent verification processes, extravasation management, documentation, and patient education. Sessions helped participants identify resources and apply them to their practice. Expert facilitators were present to clarify chemotherapy/biotherapy misconceptions, standardize administration procedures from many different practice areas, and help learners navigate the online learning environment. Group discussions provided for exchange of ideas and patient treatment experiences. Nurses were able to practice with PPE, spill kits, and closed system transfer devices. From June 2014 to September 2015, 230 nurses attended BTP. Evaluations were collected after each BTP session and at the end of the online course. Participants reported the in-person discussion, hands-on practice, and facilitator support enhanced their online learning experience. They appreciated time to synthesize new knowledge in the context of institution policy and the focus on institutional practice. Next steps include employing the above process to the upcoming ONS/ONCC new online renewal course.

**FROM NOVICE TO EXPERT: SIMULATION BASED LEARNING RAISE CONFIDENCE AND COMPETENCY LEVELS OF ONCOLOGY NURSES IN CHEMOTHERAPY-BIOTHERAPY ADMINISTRATION.** Wendy Ness, BS, RN, OCN®, BC, Regions Hospital, St. Paul, MN; Mary Holland, BSN, RN, OCN®, Regions Hospital Cancer Care Center, St. Paul, MN; Diana Christensen Johnston, RN, OCN®, Regions Hospital Cancer Care Center, St. Paul, MN; Monique Giordana, PharmD, BCOP, Regions Hospital Cancer Care Center & Regions Hospital, St. Paul, MN; Stephanie Kroon, PA-C, MPAS, Regions Hospital Cancer Care Center, St. Paul, MN; Randy Hurley, MD, Regions Hospital Cancer Care Center & Regions Hospital, St. Paul, MN

With recent advancements in the use of technology, simulation training provides a safe environment to enhance skills. Chemotherapy administration is considered high-risk therefore simulation based education and competency may provide value in ensuring the oncology nurse is extensively trained

on the safe administration of chemotherapy. We piloted a feasibility study using simulation based learning to improve nurses' confidence, knowledge, and skills in 4 core areas including chemotherapy/biotherapy administration, management of chemotherapy/biotherapy hypersensitivity reactions, management of chemotherapy extravasations, and management of chemotherapy spills. The secondary objective was to measure the impact of simulation training and competency on chemotherapy near misses and errors 1 year pre and post implementation. A baseline survey and online education were required. The nurses then received live education in the 4 core areas over 3 hours utilizing interactive simulation mannequins. Simulation based competencies were conducted within 2 months of training and nurses were required to complete the competency within 90 minutes in 3 core areas (excluding spills). We measured self-rated confidence in the 4 core areas at baseline, 3 months, and 9 months using a 5 point continuous scale from extremely NOT confident to extremely confident. A total of 40 oncology nurses completed the interactive simulation based competency. At baseline 57.6% rated themselves as confident or extremely confident in the 4 core areas versus 97.06% at 3 months. In regards to chemotherapy extravasations, 26.19% rated themselves as confident or extremely confident at baseline vs 94.12% at the 3 months post survey. Furthermore, self-reported confidence in skills as an oncology nurse improved from baseline with 65.12% reporting confident or extremely confident in skills vs 95.83% at 8 months. Interactive skill based education utilizing a simulation mannequin improved the confidence, knowledge, and skills of the oncology nurses. Secondary endpoints on the impact of enhanced training and competencies on chemotherapy errors and near misses will be evaluated at 1 year pre and post implementation. There is limited information in the literature with oncology based simulation competencies; our data demonstrates the utility of the program in improving oncology nursing confidence and skills.

**HEALTH INFO ON THE GO: NEW INNOVATIVE APPROACH TO CANCER AWARENESS.** Nora Katurakes, RN, MSN, OCN®, Christiana Care Health System–Helen F. Graham Cancer and Research Institute, Newark, DE; Charlene Marinelli, RN, BSN, OCN®, Christiana Care Health System–Helen F. Graham Cancer Center and Research Institute, Newark, DE

Traditionally community outreach and health promotion education is structured around community events coordinated with grassroots or faith based organizations. New strategies are needed to reach participants not connected by traditional methods. An innovative approach to reach minorities "Health Info on the Go" was designed to integrate a combination screening (cancer risk assessment, cholesterol, blood sugar, and blood pressure testing) with the delivery of health information by a dedicated outreach team at a non-traditional venue. The Christiana Care Health System, Helen F Graham Cancer Center and Research Institute's Community Health Outreach & Education (CHOE) team consists of multicultural and bilingual staff, oncology certified nurses, and certified medical interpreters. The team's purpose is to provide public education and community-based screenings promoting cancer awareness, prevention, and early detection impacting disparities. Annually, the CHOE program reaches over 12,000 participants through activities including health fairs, presentations at high rise residences, libraries and faith communities. The local New Castle Farmer's Market was selected as a non-traditional place to offer monthly public awareness. The market has over 75 vendors some who are Asian, African American, and Hispanics. Having a diverse team engages vendors and the 75–100 shoppers per event access the cancer experts, get connected to local resources, learn about our Cancer Center programs and the importance of screenings, all while

shopping. Since 2009, (through December 2014) we have offered forty-four events based on the cancer health observances. The combination screenings was offered at 25 events and screened 804 individuals. This type of combination screening helps initiate the "cancer screening" conversation with individuals who are uninsured or otherwise would not discuss cancer screenings. Of the participants, 72% were minorities, 35% were uninsured, 22.2% had not seen a doctor in the last two years, and 17% required referral for cancer screenings. Results indicate that many did not have access to local primary care and lack the financial resources to return if medical care is needed. Other referrals were made to genetic counselors. Through this innovative approach we are reaching more of our neighbors with information, connecting them to resources and screenings that may save lives.

### **THE ONCOLOGY NURSES' PERSPECTIVE OF THE EFFECTIVENESS AND IMPLEMENTATION OF THE RESPIRATORY DISTRESS OBSERVATION SCALE IN PATIENTS AT END OF LIFE.**

Kerstin Scheper, RN-BC, OCN®, Overlook Medical Center, Summit, NJ

Patients at end of life experience cognitive impairment which may interfere with the assessment of dyspnea leading to under recognition and under or over medication of symptoms. The nurses on the oncology unit at Overlook Medical Center have been using the Respiratory Distress Observation Scale (RDOS) since September 2013. A nurse focus group was formed and elicited discussion, information, and opinion of the implementation and effectiveness of the RDOS on their unit. The results were then used to promote house wide implementation of the RDOS by oncology nurses on all inpatient units. The nurses were tasked with identifying if the RDOS has improved their ability to assess and manage respiratory symptoms for this patient population. The focus group consisted of eight oncology nurses who shared a passion for end of life care, but varied in levels of expertise and years of experience. The participants answered questions relating to the implementation and effectiveness of the RDOS, its use in communicating with patient's family, and their experiences with end of life care both on their unit and throughout the hospital. Fifty six patients were evaluated with the RDOS by these nurses prior to the focus group meeting. Participants reported the RDOS was easy to use, took two minutes to perform, improved their ability to assess and manage dyspnea, and enhanced their ability to effectively communicate with physicians and the patient's family. The participants were passionate in their belief that the RDOS validates their decision to medicate and facilitates teaching towards families that may be resistant to pharmacological intervention. The participants also discussed instances when the RDOS would have been helpful to the nurses on other units caring for end of life patients. Studies have established the RDOS as an effective tool for this patient population. Our nurse focus group reported similar results and all participants advocated its use and supported the initiative for house wide implementation which completed in 2015. RDOS is now integrated in the AHS system wide Adult Comfort Care Order Set with the newly established cut points for pharmacological intervention.

### **COMMUNITY INTERACTIVE RESEARCH WORKSHOP SERIES—COMMUNITY MEMBERS ENGAGED AS TEAM TEACHERS TO CONDUCT RESEARCH.**

Connie Nguyen-Truong, PhD, RN, PCCN, Washington State University Vancouver, College of Nursing, Vancouver, WA; Chiao-Yun Hsiao, BS, Asian American Community, Portland, OR; Joannie Tang, BS, Asian American Community, Portland, OR

Vietnamese women are diagnosed with cervical cancer twice that of non-Hispanic White women and the highest

compared to Chinese, Filipino, Korean, and Japanese women. The Vietnamese Women's Health Project, a community-based participatory research (CBPR) partnership, was developed to address this concern. In the first 2 phases of the Vietnamese Women's Health Project, community members were recipients of research training. In phase 3, community members developed their own learning goals and activities alongside those developed by a nurse scientist. Purpose: To describe how community members developed and co-taught alongside a nurse scientist, and were also participants in the community interactive research workshop series as part of the Vietnamese Women's Health Project III, a qualitative CBPR on cervical cancer screening. Popular education principles were used to guide team teaching. Topics, learning goals, lesson plans, and an evaluation were developed together. Three, four-hour workshops were hosted. Topics included: Qualitative Research, Art of Hearing Data, Reflexivity, Analysis, Validity, and Dissemination. Community members and a nurse scientist co-constructed knowledge with each other and with other workshop participants through participatory methods: dialogue, socio drama, mock interviewing, live coding, and artistic teaching modalities (e.g., qualitative Zumba dance). The series was carried out concurrent to the study timeline to inform community members' cervical cancer screening research activities. Evaluation: A range from 6 to 19 participants attended the workshops, of which six were team teachers. The plus/delta evaluation on the strengths, utility, and improvement was conducted. Team teachers reported strengths of the workshops included an empathetic and trusting learning environment where it felt safe to be vulnerable; having a sense of ownership in the learning process; were able to apply learning activities to study roles; and did not feel intimidated to conduct cancer control/ early detection research with nurse scientists. Improvements included increased mentoring meetings. Discussion: Nurse scientists need to be aware that co-constructing knowledge is foundational to long-term sustainability of CBPR partnerships. Innovation: Working with community members as team teachers who are from the community that are most affected by the cancer screening health disparity, helped to further build team capacity to conduct research.

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**NURSING ROLE IN IMPROVING SAFETY AND QUALITY WITH ORAL CHEMOTHERAPY.** Mandeep Smith, BSN, RN, Smilow Cancer Hospital YNHH, New Haven, CT; Stephanie Buia Amport, MBA, CPHQ, Smilow Cancer Hospital YNHH, New Haven, CT; Monica Fradkin, BSN, MPH, OCN®, Smilow Cancer Hospital YNHH, New Haven, CT; Roberta Sterling, MSN, MPH, RN, Smilow Cancer Hospital YNHH, New Haven, CT; Suzanne Hinman, BA, RN, OCN®, Smilow Cancer Hospital, New Haven, CT; Maureen Allen, RN, OCN®, Smilow Cancer Hospital YNHH, Waterbury, CT

The rapid development of oral chemotherapy agents, while convenient for patients, carries risks and must be treated with the same vigilance as parenteral chemotherapy. A standardized program is required to monitor and improve patient outcomes. We acknowledged the oral chemotherapy system was not fully optimized or integrated across the Hospital and Cancer Care Network. Our purpose was to develop and implement an innovative system for management of oral chemotherapy. A multidisciplinary task force was chartered to review existing practice, develop a program to identify all patients, standardize prescription and consent process, ensure access to clinical support, education and counseling,

administration monitoring, on-going regimen specific adherence, dose monitoring and toxicity assessment with early identification of side effects, and a system to address patient concerns. The team conducted a gap analysis, developed an ideal state process map and tools to mitigate all risk points. We are now implementing a nurse-facilitated care model which includes: (a) MD/APRN orders via standardized and clinically reviewed treatment plan (b) Prescription fulfilled by our specialty pharmacy which serves as the hub for all prescriptions (c) Nursing and clinical pharmacist review, verification and release of treatment plan to ensure accuracy (d) "Pill in hand" patient/caregiver education (e) Day 1, 5 and 21 patient adherence phone calls by pharmacist (f) Use of a multidisciplinary EPIC flowsheet to document all process steps. Tools created to support implementation include contact lists, calendars, EPIC tips and tricks and video e-learning, standardized patient education, EPIC reports to track patients, a one-page process summary, and an oral chemotherapy patient satisfaction question integrated into our Press Ganey Survey. To date, 25 oral chemotherapy treatment plans have been created. Overall turn-around time is within 72 hours. A multidisciplinary team addresses process challenges and implements fixes. A nursing workgroup shares best practices, updates education tools and standardizes the role of the nurse within the program. Our novel multidisciplinary, nursing-led patient-centered model incorporates clinical, operational, financial, and information technology. The oral chemotherapy care model has created a new opportunity for collaboration between pharmacists, physicians and nurses and has elevated the practice of nursing within our institution.

**"AM I DYING?" WHAT TO SAY WHEN YOU DON'T KNOW WHAT TO SAY: AN EDUCATIONAL APPROACH TO ANSWERING CHALLENGING PATIENT QUESTIONS.** Ann Brady, MSN, RN-BC, Huntington Hospital Cancer Center, Pasadena, CA; Francie Bakar, RN, BSN, Huntington Hospital, Pasadena, CA

"Am I dying?" may be one of the most heart wrenching questions a patient asks. As oncology nurses, it is one we encounter on a regular basis. How do we even begin to answer this question and the many other challenging questions our patients may ask us? They picked you!! Our patients ask difficult questions and they choose a person they trust to answer those challenging questions. If the patient chooses you, will you know what to say? Because of the relationship we develop with our patients, nurses are in a unique position to answer difficult questions. How we answer is a skill we can learn to effectively incorporate into our practice. Utilizing Center to Advance Palliative Care (CAPC) FastFacts, Missoula Vitas Quality of Life (QOL) index and Coda Alliance Go Wish cards as well as a comprehensive review of current literature, presenters will educate nurses on tools for effective communication with patients experiencing a life threatening illness. Role playing scenarios, case studies, and interactive discussion will be incorporated into the presentation to demonstrate efficacy of material presented. As with many nursing skills, practicing new skills and concepts is an essential component to integrating new knowledge into our nursing practice. How often do we pass on the opportunity to answer a patient's challenging question because we doubt our ability, skill, and/or knowledge? What happens if what you say makes the patient change their mind about treatment? This presentation is designed to equip, empower, validate and teach oncology nurses how to address those perplexing queries. Innovation: To teach practical applications of new knowledge is always a challenge. This presentation provides innovative strategies—for example the use of CAPC FastFacts as a smart phone app—toward implementing effective communication in an oncology setting.

**OPTIMIZING CLINICAL RESEARCH PRACTICE, PROCESS AND COMMUNICATION IN AN NCI-DESIGNATED ACADEMIC CANCER CENTER.** Monica Fradkin, BSN, MPH, OCN®, Smilow Cancer Hospital at Yale New Haven, New Haven, CT; Constance Engelking, RN, MS, The CHE Group, Inc., Old Lyme, CT

Anticipating significant growth in its clinical trials portfolio, an NCI-designated academic cancer center and its partner cancer hospital embarked on a project to examine, standardize and strengthen cross organizational research-related operating procedures and communication processes among and between its 12 Disease Teams, university and hospital-based staff. The call to action was a combination of factors including inconsistent workflows, frequent documentation-related deviations, staff and manager dissatisfaction with current practice and process, and siloed communication patterns. The goals of this initiative were to ensure patient safety, optimize both patient and investigator experiences, maximize the utilization of electronic medical record capabilities, enhance alignment with regulatory requirements and proactively minimize risk of deviations. The initial step in this multi-phased project was to convene a retreat involving staff and management representatives of both organizations to build familiarity, discuss current state and collaboratively identify opportunities for performance improvement. Subsequently, three Working Groups were organized to address and develop detailed recommendations for improving: (1) operating procedures, (2) documentation processes and (3) staff education associated with clinical research. Evaluation: Fifty four group meetings involving 36 staff members resulted in enhanced cross organizational dialogue, a current state workflow summary including process maps, a Best Practices Playlist, tools for improved communication and documentation, educational curricula and a series of collaborative recommendations for implementation including the designation of a Clinical Research Optimization Task Force charged with carrying forward the implementation phase of the project. Creating reliable cross organizational communication patterns in a blended workforce is a challenge in large academic cancer centers. The most important return on investment in this project thus far is enhanced familiarity with and strengthening of relationships between university and hospital staff. Improved communication and collaborative problem-solving have already eliminated barriers that impeded efficient and effective patient care delivery. This presentation will provide a detailed description of the change process, novel tools to facilitate proactive identification of deviation risk, handoff and electronic communications, staff education templates and resulting outcomes.

**ESTABLISHING A NEW FAST TRACK DEPARTMENT TO DECREASE PATIENT WAIT TIMES IN THE INFUSION CENTER.** Monette Santos-Moss, RN, MSN, OCN®, UCSD Moores Cancer Center, La Jolla, CA; Aileen Ewin, RN, MSN, OCN®, UCSD Moores Cancer Center, La Jolla, CA

UCSD Moores Cancer Center in La Jolla, California is one of 44 NCI-designated Comprehensive Cancer Centers in the United States and a member of the National Comprehensive Cancer Network (NCCN). The UCSD Moores Infusion Center (IC) consists of 58 treatment chairs. Approximately 44,000 patient treatment visits are scheduled per year. The large volume of IC patient visits has contributed to increased patient wait times from the time of scheduled appointment to the start of treatment. Purpose: This project evaluated IC patient flow with the intent to decrease patient wait time from appointment check-in to start of treatment. Based on a thorough review of IC patient flow and the linear scheduling of patients, the IC established a separate Fast Track department. In the new Fast Track, patients needing pretreatment labs were scheduled with separate appointments.

In addition, patients who only required “quick” appointments were scheduled in Fast Track. (“Quick” appointments = < 30 minutes for injections, dressing changes, port access). Prior to establishing a new Fast Track department in the IC, the average patient wait time to start of treatment was 45 minutes (January 2014). Fast Track opened in February 2014. By March 2014, the average wait time decreased to 29 minutes. In 2015, the average wait time was 18 minutes—a 43% decrease in wait time from baseline. Discussion: Before creating a separate IC Fast Track department, patients were not scheduled for pretreatment lab draws. Patients arrived at various times for their IC appointments, resulting in disrupted patient flow, chaotic and unrealistic scheduling and considerable wait time to start of treatment. Establishing the Fast Track—allowing pretreatment and “quick” infusion appointment scheduling—smoothed IC patient flow. Establishing Fast Track allowed more disciplined and realistic patient scheduling, improving patient flow and reduced patient wait times to treatment. Additional scheduling strategies are being evaluated to further decrease patient wait times in the IC.

**IMPLEMENTATION OF A PRECISION CANCER TREATMENT EDUCATION RESOURCE CENTER.** Cheryl Lynn, BSN, RN, HNB-BC, Cancer Treatment Centers of America, Philadelphia, PA; Deborah Selm-Orr, MS, DNP, CRNP, AOCN®, Cancer Treatment Centers of America, Philadelphia, PA

Genetics and genomics are rapidly changing health care by making it more personalized than ever before. Precision medicine evaluates differences in a patient’s genetic makeup to aid in the development of individualized treatments. Our goal is to incorporate precision medicine testing, and subsequent targeted therapy treatment, to both deliver the most effective treatment while minimizing use of treatments of lesser benefit. This paradigm shift necessitated a need for education for patients, their caregivers, and our own stakeholders. We created a Precision Medicine Resource Center managed by a nurse, with a focus on patient outreach and education. All patients with molecular test orders are contacted, and large panel genomic test orders trigger an automatic consult to the center. Since opening in 2014, over 300 patients have utilized the general educational materials on genomic testing and precision cancer treatment. We collaborate with the oncology team to provide the information to develop an optimal treatment plan based on results. Acquisition of recommended therapies and clinical trial consideration when no FDA approved drugs are identified are central to our program. Coordination of care and educational support provided by the Center’s staff streamlined the process from the initial test order to developing a treatment plan based on test results. Patient education on cancer genomics and precision medicine empowers patients to participate in their own care. Continuing education for stakeholders is necessary to remain leaders in precision medicine. Cancer treatment as an individualized approach is radical change in healthcare delivery. Data is accumulating to support incorporating Precision Medicine into regular clinical practice. In this rapidly emerging field of practice the need for education will continually be present. Having a dedicated center to meet this need is a necessary and welcomed addition to the healthcare team.

**COMPASSION FATIGUE INTERVENTION PROGRAM: A SELF “CARE PLAN” FOR THE ONCOLOGY NURSE.** Jeannie Wirth, MSN, RN, CNS, AOCN®, PinnacleHealth System, Harrisburg, PA; Cindy Hallman, BSN, RN, CMSRN, PinnacleHealth System, Harrisburg, PA; Kelly Kuhns, PhD, RN, Millersville University, Millersville, PA

Compassion fatigue (CF) is a growing concern among oncology nurses. The particular stressors of this nursing specialty

may place oncology nurses at risk of experiencing CF and related complications. As the need for oncology nurses continues to grow, it is imperative to find ways to mitigate the potential negative consequences of CF and help nurses find positive ways to cope with CF. In order to investigate the efficacy of an educational intervention for CF, a randomized trial, employing pre-post-intervention design was undertaken. Inpatient and outpatient oncology nurses working at least 16 hours per week at one healthcare system were recruited to participate in the study and randomized into treatment or control groups. All subjects completed the Professional Quality of Life (Pro-QOL) Tool and a demographic survey prior to any intervention. The Pro-QOL is a well-validated tool to measure compassion fatigue in healthcare workers, consisting of three sub-scales—compassion satisfaction, professional burnout, and secondary traumatic stress. The experimental group participated in a 3.5 hour educational self-care program and committed to engaging in self-care activities three times per week. Alternately, the control group received a one-hour educational intervention focusing on the concept of nurse and patient suffering. Eight (8) weeks following the initial interventions, the experimental group participated in a second 3.5 hour workshop. All study participants then completed the post-intervention Pro-QOL. Inferential statistics demonstrated that pre-intervention, there were no significant differences between the two groups on any of the sub-scales. Post-intervention, significant differences ( $p < 0.05$ ) were noted on the sub-scales of compassion satisfaction and secondary traumatic stress, with the experimental group demonstrating higher compassion satisfaction and decreased feelings of secondary traumatic stress. These results were consistent with the conventional wisdom that acknowledging the potential for compassion fatigue and presenting positive coping mechanisms may be effective in the treatment and prevention of CF. While this study was limited to oncology nurses, the benefits of the educational intervention may extend to other nursing specialty areas. Nurses in the present study clearly benefited from the intervention, demonstrating improved compassion satisfaction and lower incidence of secondary traumatic stress.

**THE ADVOCACY ROLE OF THE CASE MANAGER FOR BONE MARROW TRANSPLANT PATIENTS THROUGHOUT THE CARE CONTINUUM.** Carmen Castillo, RN, BSN, CCM, Memorial Sloan Kettering Cancer Center, Manhattan, NY; Mary McDonough, RN, MSN, CCM, Memorial Sloan Kettering Cancer Center, Manhattan, NY

Patients undergoing a bone marrow transplant (BMT) require long term care treatments and complex discharge needs as they move throughout the care continuum. Communication lapses are frequent when transitioning from inpatient, outpatient, home care and skilled nursing facilities (SNF). Our Case Manager (CM) role was changed to meet the needs of this vulnerable population. To streamline patient support services, one CM follows the patient throughout the care continuum. This results in improved care coordination and communication amongst acute and post acute care settings. Identification of medication coverage issues prior to admission has limited the financial burden to patients and increased their overall quality of life (QOL). The CM now meets patients when they are first identified for transplant and educates families/patients about assistance programs for medication access and advocates with third party payers. At discharge, the same CM acts as the care coordinator between home care agencies, SNFs, insurance companies and pharmaceutical companies. A pharmacist was added to the team to work with the CM on medication issues that included coverage and teaching. High co-pays and negotiation with insurance companies to carve out medication costs

at SNFs are handled by the CM. The CM works with post care providers to ensure continuity of care and pharmaceutical companies to create better programs to increase financial assistance. The improved CM role permits following the patient at any site of care to intervene when issues arise. Since this change was implemented, medication access and adherence has increased, hospital length of stay has decreased, readmissions have been prevented, patient financial burden has decreased and QOL has improved. Discharge planning for the BMT population starts prior to admission in the outpatient setting. A multi-disciplinary approach is crucial in helping with medication assistance, access and other potential discharge issues. Changing our CM role has allowed better management of patients receiving complex treatments and during end of life care. Active involvement by the multidisciplinary team made our program successful and we hope to expand to other areas of oncology.

**THE CLINICAL NURSE SPECIALIST PRACTICUM AND BEYOND: A NOVEL APPROACH TO CONTINUED MENTORSHIP FROM CLINICAL NURSE SPECIALIST GRADUATE SCHOOL TO PROFESSIONAL PRACTICE.** Kristen F. Bink, MSN, RN, AGCNS-BC, Hospital of the University of Pennsylvania, Philadelphia, PA; Carrie Marvill, MSN, RN, AOCNS®, Hospital of the University of Pennsylvania, Philadelphia, PA; Amy Moore, MSN, RN, ACNS-BC, Hospital of the University of Pennsylvania, Philadelphia, PA

The Hospital of the University of Pennsylvania currently utilizes unit-based oncology Clinical Nurse Specialists (CNS) that serve as consultants for the growing cancer population throughout the health system. Current state law requires a CNS to graduate from an accredited program and obtain licensure and certification. In general, the focus of core curriculum of graduate level nursing programs is population based. However, the individual seeking a CNS position at this institution must demonstrate expertise in the specialty field. In this current model, the specialty knowledge is acquired in the graduate practicum, while combining clinical experience with application of the CNS role. The authors identified a gap between the requirements of an entry level CNS position and the offerings of graduate programs. The authors' purpose is to bridge this gap through a unique model that engages CNS students in the role while providing continued mentorship. A relationship was established between several graduate students and an experienced oncology CNS. The objectives of the practicum were aligned with ongoing initiatives in oncology nursing on the unit level. The students participated in education of new to practice bedside nurses, patient and family education, policy revision, review and analysis of nursing sensitive indicators such as infection rates, falls, and patient satisfaction. In the duration of the practicum, the students were active participants in the development of a database used to analyze the clinical characteristics of oncology patients transferred to intensive care units. The students were exposed to original grant-funded research examining the patient experience undergoing bone marrow aspiration and biopsy. This model was evaluated with formal feedback obtained at the mid-point and the conclusion of the clinical practicum. Journaling by the student allowed for purposeful reflection of project involvement and professional growth. Informal feedback was obtained as the mentorship continued in the year following graduation. In order for the oncology CNS to be an effective leader in this rapidly evolving specialty, it is imperative to seek out innovative educational and mentoring opportunities. Ultimately, this model allows the CNS to be best prepared to improve outcomes for oncology patients.

**IT ONLY TAKES FIVE MINUTES: HOW ONE OUTPATIENT INFUSION CENTER IMPLEMENTED FIRST FIVE TRAINING FOR NURSING STAFF.** Kyle Wojciechowski, RN, BSN, Lancaster General Health, Lancaster, PA

The first five minutes of a cardiac event are crucial to patient outcomes however routine training within the outpatient oncology setting is not often implemented. Lancaster General Health has implemented “First Five Drill,” training with the goal of improving outcomes of the cardiac arrest patient by decreasing times to initiation of chest compressions and defibrillation. The American Heart Association sets goals for time to first defibrillation and beginning of chest compressions in order to improve survival however these skills are hard to master without consistent practice. Our infusion center implemented “First Five Drills,” which are practicing the first five minutes of a code, to help reduce time to initiation of chest compressions and defibrillation of patients. The goal was to educate the staff on the necessity of early compressions and defibrillation, and to develop the confidence within the team to initiate an immediate response to a cardiac event. Our institution’s standard is to initiate chest compressions within one minute and initial defibrillation within two minutes of identifying a cardiac event. Since initiation of First Five Drills, our preliminary data shows the average time for the initiation of chest compressions reduced from 27.5 seconds to 16.5 seconds. The average time for initial defibrillation of the patient decreased from 3 minutes and 44 seconds to 2 minutes and 36 seconds. The knowledge and skills in handling a code situation are important for any oncology setting to master so these drills are applicable to all settings. Our unit continues to run the drills and consider ways to further refine emergency skills.

**DEVELOPMENT OF A CULTURAL SENSITIVITY PROGRAM AT AN ONCOLOGY HOSPITAL TO BETTER SERVE INTERNATIONAL PATIENTS WITH CANCER FROM THE MIDDLE EAST.** Sarah Erickson, BSN, Cancer Treatment Center of America, Philadelphia, PA; Michelle Niesley, ND, MS, Cancer Treatment Center of America, Philadelphia, PA

This review highlights lessons learned in establishing an International Patient Program at a private cancer hospital in Philadelphia, Pennsylvania. With the market for innovative cancer care becoming global, patients from the Middle East frequently seek care in the United States. To improve the patient experience for international patients at Eastern Regional Medical Center, we developed a program to prepare our staff to adequately address cultural differences. This pilot program educated staff to facilitate real-time continued improvement within the International Patient Program (IPP). The IPP was established in 2013 with the hiring of two interpreters, who spoke not only Arabic, but other languages to facilitate communication. They held in-services for cultural competency with departments such as Nursing, Physical Therapy, and Culinary, to provide basic training on cultural differences. One physician Patient Empowered Care® (PEC) team was specifically designated to see all patients from the Middle East to establish consistent flow. Real-time training often occurred ‘in the moment’ with the PEC team, the patient, and interpreter. Collaborative relationships were established with other local hospitals also establishing international programs, which included site visits to observe these programs. One of the monthly multidisciplinary Schwartz Rounds focused on international patient needs. Our Culinary / Nutrition team was educated regarding serving sizes and customs surrounding food preparation and presentation in the Middle East. Religious needs were addressed specifically with each patient by two full-time staff members. While our general international population is Muslim, there are religious sects within this population that demand

particular consideration, specifically with regards to traditions surrounding death and dying. Modifications to the program were made in real-time in response to patient and employee feedback. Patient and provider engagement increased as infrastructure provided unique support to all departments involved in patient care. As medical care for patients with cancer becomes more global, it is important that hospitals are adequately prepared to meet more than just the medical needs of international patients traveling abroad for state-of-the-art cancer care.

**A PICTURE IS WORTH A THOUSAND WORDS: CHOICES IN BREAST CANCER RECONSTRUCTION.** Kimberly Drewry, MSN, RN, FNP-C, CBCN®, AOCNP®, University of Virginia Health System, Charlottesville, VA

Women facing breast cancer are expected to make life-long decisions at a time of significant stress. Unless referred to Plastic Surgeons, these women are likely finding this much needed information on the internet or through friends and family. Commonly, in the media, women view breast augmentation in a similar context as breast reconstruction. These cosmetic results may vary tremendously. We currently offer patients a Navigator Notebook which has a tremendous amount of breast cancer information. However, an educational gap is the limited reconstructive education prior to a formal consult with a plastic surgeon. How can women make appropriate lifelong decision, if they are unfamiliar with options? Upon IRB approval of an 11-item questionnaire, women who had received the Navigator Notebook and elected to receive breast reconstruction were surveyed. An additional cohort of women were given an enriched Navigator Notebook. With input from surgical oncology, plastic surgery and nursing, a color-picture educational insert was placed into the Navigator Notebook. This cohort received the same survey. The photos included women of various sizes and skin color. The pictures consisted of the most frequent reconstructive surgeries including implant-based and tissue based reconstruction. Funding was provided by a local grant. The two groups of women were compared; those prior to the intervention of the color pictures and brief explanations, and those after the intervention. Data collection is underway. Anticipate data analysis to be complete by early 2016. Women don’t always know if they are interested in breast reconstructive surgery as they may not be familiar with such. These women may not seek out expert consultation from a plastic or reconstructive surgeon being unfamiliar with these options. This colored educational insert was to provide these women with a brief, realistic tool, so they can make the best decision for breast cancer care. Providing breast cancer patients of their reconstructive options utilizing visual aids and written information is essential early in the care continuum so each patient can make the best choice for themselves.

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**WHEN DO WE TREAT PORTAL VEIN THROMBOSIS IN PATIENTS WITH GASTROINTESTINAL MALIGNANCIES? EDUCATING FOR BETTER PATIENT OUTCOMES—IMPLICATIONS FOR NURSING.** Natasha Ramrup, MSN, RN, OCN®, AOCNS®, CNS, Memorial Sloan Kettering Cancer Center, New York, NY; Douglas Koo, MD, MPH, FACP, Memorial Sloan Kettering Cancer Center, New York, NY

Although portal vein thrombosis (PVT) is increasingly diagnosed either symptomatically or incidentally via radiographic studies, there are no uniform management guidelines. This is challenging for the medical and surgical management of PVT, which can lead to high mortality and morbidity. In the Disease

Management Team (DMT) of our Gastrointestinal Medical Oncology service, patient/caregiver education about PVT, symptom management, treatment, and complications is imperative for optimal patient outcomes. The etiology of PVT includes hypercoagulable states, inflammatory diseases, complications from medical procedures, cirrhosis, and hepatic cancer. Understanding the presentation of PVT symptoms such as abdominal pain, fever, weight loss and life threatening bleeding and intervention to achieve re-canalization of the portal vein may lead to better patient outcomes. Astute nursing assessment, knowledge, and education on various treatment options is of utmost importance to prevent further complications such as thrombosis extension, intestinal ischemia and infarction, portal hypertension, portal cholangiopathy, and severe bleeding. At our NCI designated comprehensive cancer center, treatment is individually based on sound clinical judgment of the patient's hypercoagulable states, underlying medical conditions, and risks/benefits of interventional procedures and anticoagulation. It is important for oncology nurses to have thorough understanding of PVT and its sequelae. Treatment of PVT rests with the clinician. Therefore, each patient is assessed, treated and monitored for complications on an individual basis. Successful management of PVT can be accomplished with early identification, treatment and education between the patient and collaboration of the multidisciplinary team. In an ever changing healthcare environment, treatment options for PVT are not one-size-fits-all. Oncology nurse driven education plans are vital to the care of patients diagnosed with PVT. Patient education should be an ongoing endeavor throughout the cancer spectrum for this patient population. Nursing literature on PVT is limited in scope. The majority of the publications on the topic are focused on patients with cirrhosis. Therefore, oncology nurses are in an ideal position to educate our patient population about risk factors, clinical presentation, complications and treatment options to prevent further extension of the clot. This DMT is committed to sustaining a culture of collaborative patient education in the pursuit of excellent patient outcomes.

**MENTORSHIP IMPROVES QUALITY OF PALLIATIVE CARE SERVICES.** Anastasia Giles Mitema, RN, Ocean Road Cancer Institute, Dar Es Salaam, Tanzania; Habiba Mahuna, RN, Ocean Road Cancer Institute, Dar Es Salaam, Tanzania; Theodora Lwanga, Ocean Road Cancer Institute, Dar Es Salaam, Tanzania

Mentorship is an ongoing and empowering learning process that provides support and encouragement. The objective of this initiative was to develop and promote best practices and high quality palliative care (PC) services in Pwani region, Tanzania. Incurable diseases, advanced cancers and HIV-AIDS are increasing causing great suffering to patients and their families. A total of 30 health care workers (HCWs) from six health facilities, including medical doctor, pharmacists, social workers and nurses, of Pwani region were trained on basic PC skills for 5 days at Ocean Road Cancer Institute (ORCI). After one month it was followed by a three days onsite visit of four PC supervisors every three months for one year in 2012/2013. During the visits HCWs were provided with supportive supervision and coaching. In addition, all aspects of PC core standards were taught. Furthermore, morphine dispensing, documentation and reporting procedures were mentored. The follow-up visits were an important evaluation tool to assure quality PC service provision in the area. Palliative care Mentoring has improved PC services provision to patients in visited areas. A constant availability of morphine at visited sites was noted; hence reduced patients' traveling cost to ORCI for morphine. On the other hand, it was noted that palliative care is not well understood by hospital management teams and health care providers who are not trained on it. Addition-

ally, some of the health care providers had fears, myths and misconception about morphine. Al lack of morphine dispensing bottles, measuring units, labels, etc. was mentioned in the health facilities. Furthermore, poorly recording and reporting morphine consumption to Tanzania Food and Drug Authority (TFDA) was observed. Recommendations HCWs trained on PC skills should be part of a mentorship program to empower them and ensure sustainable capacity building in PC provision. A interdisciplinary mentorship network with skilled PC professionals and PC trainees is an ideal method to exchange ideas and knowledge. and any other health care services

**JUST IN TIME RESOURCES FOR CHEMOTHERAPY NURSES.** Kendra Laufer, BSN, RN-BC, OCN®, Cancer Treatment Centers of America, Tulsa, OK

Chemotherapy administration is a complex and high-risk skill that requires continual experience to produce expertise. The majority of chemotherapy in our facility (Cancer Treatment Centers of America in Tulsa, Oklahoma) is administered in the outpatient setting, resulting in fewer opportunities for the inpatient nurses to administer chemotherapy. Although the inpatient nurses had successfully completed the ONS Chemotherapy and Biotherapy course and unit competencies in chemotherapy administration, they verbalized lack of confidence in the skill. In response, we developed a plan to increase confidence in chemotherapy administration for the inpatient nurse. The plan to increase confidence and skill in chemotherapy administration for the inpatient nurses included participation in a mock patient chemotherapy administration competency. The competency utilized volunteers as patients to incorporate psychosocial interaction and focused on the nurses demonstrating competence in utilizing just-in-time resources. A chemotherapy administration worksheet was designed utilizing our institution's chemotherapy administration policy and the ASCO ONS chemotherapy administration standards. The worksheet provided a step-by-step guide for the pre-administration assessment, such as verifying the treatment plan, education, consent, body surface area and allergies. It also included a guide for accessing references to verify regimen dosages, pertinent monitoring parameters and administration instructions. Finally, the worksheet provided administration reminders, such as appropriate personal protective equipment, verification of chemotherapy spill and anaphylaxis kit, process for managing hypersensitivity reaction or extravasation and the necessity for final bedside check with a second chemotherapy-competent nurse. Nurses were surveyed to assess their confidence level, on a 1-10 scale, before and after the educational offering. Their confidence level prior to the competency was 5.5 and their confidence level after the competency was 8.5. Nurses also consistently verbalized more confidence and demonstrated continued use of the just-in-time resources. Nurses are required to process a vast amount of knowledge and resources on an ongoing basis. The best method to ensure safe application of knowledge is to provide "just-in-time" resources that are practical and can be accessed close to the time of application.

**TRANSFORMING A UNIT'S CULTURE TO IMPROVE CLINICAL OUTCOMES.** Theresa Woodrum, RN, BSN, OCN®, Nebraska Medicine, Omaha, NE; Heidi Tonne, RN, BSN, BA, Nebraska Medicine, Omaha, NE; Mike Romano, MBA, MSN, BS, RN, Nebraska Medicine, Omaha, NE

Leadership identified that an unhealthy work environment existed in our Oncology Hematology Special Care Unit (OHS-CU). This was evidenced by increased turnover, low National Database of Nursing Quality Indicators (NDNQI), and nursing

sensitive quality indicator scores. In the fall of 2014 changes were made to the unit leadership structure. Purpose: To create within the unit a culture of clinical excellence, engagement, professionalism, accountability, and improve staff satisfaction. Unit leadership met to define the future state of the unit and develop a vision statement. The Nursing Quality Outcomes Manager meet with our Unit based Council (UBC) to review data, discuss shared accountability between leadership and staff and the impact each individual can have on culture and clinical outcomes. Organizational Development facilitated staff focus groups without unit leadership present. Questions asked included: What behaviors would you like to see more, what behaviors would you like to see less? What are the “undiscussables”? What are you willing to do to support change? Focus group results were shared with staff, and guided the development of an OHSCU Guidelines for Professional Behavior. Leadership met with lead staff nurses to have open, honest discussions regarding their willingness to embrace cultural change and unit vision. Leads completed the Crucial Conversations Class to help them provide immediate, direct, and specific feedback to staff. Leadership met with each staff member to review the guidelines and discuss their commitment to support change. The unit vision was incorporated in all written and verbal communication with staff. Changes in leadership behaviors included increased leadership presence on nights and weekends, daily rounding with patients and staff, and increased amount of positive feedback. Fall injury scores were decreased from 1.55 to 0.25 per 1,000 patient days, with a target of 0.72. OHSCU has had no catheter associated urinary tract infections (CAUTI) or pressure ulcers in the last 12 months, a significant increase in patient satisfaction scores, along with increased staff engagement. Through focused efforts and thoughtful actions, it is possible to change the culture of a unit and have a positive impact on quality metrics.

**MULTI-DIMENSIONAL CULTURE OF MENTORING FOR NURSE PROTÉGÉS.** Ashley Mickiewicz, BSN, RN, OCN®, Robert Wood Johnson University Hospital, New Brunswick, NJ; Patricia Andrews, BSN, RN, OCN®, Robert Wood Johnson University Hospital, New Brunswick, NJ; Myrna Young, MSN, RN, CNOR, Robert Wood Johnson University Hospital, New Brunswick, NJ; AnnMarie Crowley, BSN, RN, Robert Wood Johnson University Hospital, New Brunswick, NJ

Engaging nurses from the first day of hire is possible when a culture of mentoring is provided. Effective mentorships provide an environment in which a new graduate nurse can be empowered to implement best practices, collaborate interprofessionally, participate with dissemination of nursing research, all while driving for quality health care delivery. Mentoring provides the framework to allow for the new nurse to provide exemplary work practices that improve patient and nursing outcomes. Empowering mentorships for new nurses creates future success. With a diverse leadership approach that is relational, collaborative and transparent a culture of mentoring is evidenced in the environment. Effective mentoring leads to increased retention and success of new nurses. Leadership mentors for new nurses consist of the unit director, unit clinical nurse educator and central education educator. The three work together in consistent collaboration assessing the strengths of each new nurse, and tailoring the mentorship to pave the way for attainment of career goals. While the formal mentorship roles are identified with job title there is an informal mentorship that develops as professional relationships are established. The unit director and educator focus on specialty growth while the central education educator focuses on career and educational goals. Individual strengths are identified and mentorships are tailored to meet the protégés desires. The institution provides and environment to

make mentorship attainable. Structured programs are available for specialty growth: core education, in-services, and certification courses. Programs such as the RN Residency are highly supported; substantial amount of tuition reimbursement is available. The unit has 40 registered nurses, with 10 new graduate nurses in two years. Professional Advancement System (PAS) participation has increased by 50%. Participation of new nurses on the PAS by is 100%, RN Residency Participation is 80%, and enrollment into an advanced degree program is at 50% within one year of hire. Developing a culture of mentorship is key to success of the new graduate nurse. Having a diverse team to assist in mentoring provides the greatest benefits to the new nurse. Collaboration between mentors provides the environment that allows for the professional growth of the new nurse.

**WALK A MILE IN ANOTHER'S SHOES: IMPROVING COLLABORATION AND COMMUNICATION ACROSS INFUSION UNITS THROUGH A CHARGE NURSE EXCHANGE PROGRAM.** Jaclyn Andronico, MSN, CNS, OCN®, AOCNS®, Memorial Sloan Kettering Cancer Center, New York, NY; Lorna Thomas, RN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Caroline Lochner, RN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Christen Hughes, RN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Ramona Cruz, RN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Jennifer Moore, RN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY

Fiscal responsibility in healthcare is achievable through maximizing human resources. It is necessary for skilled, knowledgeable and flexible leaders to collaborate across units. In one outpatient center with five decentralized disease-specific infusion units, communication between charge nurses was poor due to lack of understanding of how other units functioned. This became evident when they were merged under one leadership team and resources were pooled for more efficient patient care. This presentation will describe a strategy to promote cohesion across units and develop skill sets related to communication, managing workflows and care of complex oncology patients. This intervention focused on preparing the infusion charge nurse to be a resilient leader in supporting a safe, collaborative patient care environment. A taskforce of six charge nurses and the clinical nurse specialist was assembled. Pre-survey of 22 charge nurses showed 52% were comfortable collaborating with charge nurses on another unit; 46% were comfortable with different diagnoses and treatments; 53% rated their communication with other units as “very” or “extremely” good; and only 20% understood unit operations on another unit. The taskforce then implemented an exchange program, whereby all participants were assigned to work with a charge nurse on different units to observe unique workflows, expand regimen knowledge and enhance inter-unit communication. After completing the exchange program, 71% of the charge nurses reported an improved relationship with charge nurses from other units; comfort with different diagnoses and treatments nearly doubled to 80%; there was an 11% increase in comfort communicating amongst the units; and there was a 49% increase in understanding the unit operations and workflow of other units. Charge nurses play a key role in facilitating efficient patient care within infusion units. Through experiencing daily operations outside of the primary unit, deeper understanding of co-workers was developed. Charge nurses are strategically placed to be leaders and role models on their unit. By improving communication and collaboration at the charge nurse level, cohesion across units becomes more attainable. A similar strategy can be applied to all settings and specialty areas that share responsibilities in caring for patient populations across the disease-trajectory.

**CLINICAL TRIAL INFUSION NURSE ORIENTATION.** Judy Ranous, BSN, RN, OCN®, Froedtert and the Medical College of Wisconsin, Milwaukee, WI; Margaret Riegert, RN, OCN®, Froedtert and the Medical College of Wisconsin, Milwaukee, WI; Theresa Rudnitzki, MS, RN, AOCNS®, ACNS-BC, Froedtert and the Medical College of Wisconsin, Milwaukee, WI; Holly Senovich, BSN, RN, Froedtert and the Medical College of Wisconsin, Milwaukee, WI

Objective: To establish training for infusion RNs so they can care for patients on investigational studies. Oncology clinical trials, especially early phase trials, are detailed, complex, and require a high level of attention to detail and assessment skills. The infusion nurse needs to be cognizant of the differences between clinical trials and standard of care (SOC) otherwise it can result in protocol deviations. These alterations from the protocol can impact patient outcomes and facility integrity as a compliant, accountable research site. The nurse needs to have the knowledge to grade side effects as well as an understanding of the importance of accurate timing required for research related tasks like blood draws, EKGs and vital signs required for the study. Communication of all patient symptoms, expected and unexpected, with the clinical research coordinator(CRC)/nurse, provider and investigational pharmacist is critical for determining ongoing patient treatment and management. Orientation for infusion nurses new to work with clinical trials consisted of Human Subjects Protection and rDNA training as well as an eight hour workshop that was audiotaped so it could be used for future staff. Nurses completed competency checklists which included becoming familiar with research protocols, administration of study treatments with associated research tasks and understanding of the entire trial process by shadowing the CRC and pharmacist. The training provided a solid knowledge base for caring for patients on clinical trials. This training raised awareness for the vigilance required to provide safe, ethical, quality care within the requirements of a clinical trial. This awareness along with access to approachable, supportive research nurses promoted comfort and confidence in new staff and encouraged them to ask questions, discuss situations and ultimately evolve into high level oncology clinical trial nurses. Integral to the development of these skills was performing them regularly. When nurses are highly trained and have a solid understanding of clinical trial protocol requirements and the difference between research and SOC it ultimately leads to an improved quality of care for the patient, decreased deviations from the research protocol and makes the infusion center more attractive to researchers who want to perform quality research.

**A MODEL FOR PERSONALIZING THE PREVENTION AND EARLY DETECTION OF COLORECTAL CANCER.** Karen Roesse, RN, MSN, AOCNS®, Thomas Johns Cancer Hospital at Johnston-Willis Hospital, Richmond, VA

Nurses are instrumental in providing education to the community on the risks for cancer in an effort to decrease the occurrence of cancer development. In addition, the use of evidence-based guidelines provides an individual with the appropriate screening measures necessary to prevent or decrease the occurrence of a particular cancer. Providing both of these measures may be helpful in achieving these goals, however, personalizing this to a community and to a patient's particular risks may further improve adherence to risk reduction and screening and thus further reduce cancer development. This community program illustrates a model which provides personalization regarding the prevention and screening for colorectal cancer. Programs involving other cancers may also be developed using this template on how to personalize education and screening for cancer. The following interventions were utilized

for this community program: identification of the prevalence of colorectal cancer per annual incidence rate in local surrounding counties; provide incidence on obesity, fruit/vegetable consumption, and physical inactivity for surrounding counties; evaluate each participant's individual risk for developing colorectal cancer through the use of the National Cancer Institute risk evaluation tool and provide 1:1 counseling on risks and how to decrease their risks; provide education on colonoscopy; provide hemoccult kits and testing. Participants were asked to bring their risk evaluation tools with them to the program. Four advanced practice nurses met with 18 participants to discuss their score including their risks and risk reduction measures. A wellness trainer and dietitian from the community provided education and were available 1:1. Participants' evaluations indicated that they were extremely pleased with the program (score 4.8/5). This was particularly evident in their evaluation of the individualization of the program to their needs and risks. Six participants returned their hemoccult cards for evaluation. One of six was positive for blood and this patient was notified by certified mail. As increased attention is being given to the use of personalized medicine in the treatment of cancer, this program provides an example of how a community program could be tailored to each member of the audience while maintaining the standards for screening for cancer.

**THE USE OF DATA TO HELP DESIGN A SYSTEM FOR DISTRESS SCREENING OF ONCOLOGY PATIENTS.** Adrienne Banavage, MSN, RN-BC, OCN®, UVAHS, Charlottesville, VA; Jody Reyes, BSN, MBA, RN, OCN®, UVAHS, Charlottesville, VA; Veronica Brill, MSN, NEA-BC, UVAHS, Charlottesville, VA; Christina Sheffield, UVAHS, Charlottesville, VA; Jennifer Mellott, BSN, RN, CRRN, UVAHS, Charlottesville, VA; Deborah Lewandowski, BSN, MBA, RN, OCN®, UVAHS, Charlottesville, VA

In 2013 a survey of provider satisfaction was showed that 54 % of LIPs/RNs were either neutral or dissatisfied with the overall social psychological, spiritual and practical services provided to patients at the Emily Couric Clinical Cancer Center (ECCCC). This information was used to inform the plan for integration of distress screening. In alignment with the Commission on Cancer's (COC) guidelines all cancer patients need to complete a distress screening at "pivotal visits" and be referred to the appropriate supportive services. The team at ECCCC viewed this as an opportunity to not only meet the COC standard but also to better meet the needs of the patients and the providers. A multidisciplinary team was assembled to create the overarching framework for distress screening at ECCCC as well as to identify the specific domains of distress to be assessed. In response to patient and provider request a psychologist was added to the team to supplement the social workers. Then, the group identified which member of the team would be most appropriate to see patients with needs around particular domains. Special focus was placed on differentiating which issues would require assessment by the psychologist versus the social worker. The second visit was identified as the pivotal visit. A delay in the availability of the electronic tool selected led to the implementation of a paper tool; this was originally viewed as a setback but allowed the operations team valuable opportunity to identify barriers in this workflow. The introduction of distress screening allowed a formal method for nursing staff to quantify the referrals to supportive services and provide a method for their documentation. Overall feedback from the patients and staff was positive. Based on feedback from staff and patients, the threshold for formal referral to support services was decreased. Post implementation data about supportive services will be collected. While the implementation of distress screening has been mandated by the COC a thoughtful approach to this tool allows

for greater utilization of current services as well as improvement in the portfolio of services offered.

### **A UNIQUE AND COMPREHENSIVE APPROACH TO TRAINING ONCOLOGY NURSES FOR TRANSITION TO A NEW HOSPITAL.**

**Erin Ferlet, MS, RN, OCN<sup>®</sup>, The James Comprehensive Cancer Center, Columbus, OH**

An estimated 1.6 million people in the United States will be diagnosed with cancer this year. With increasing demand for healthcare services there is an obligation for hospitals to continue to expand their services. Moving to a new building, wing, or floor, requires that staff understand how it will impact the patient experience, how their workflows will change, and how to navigate their new work environment. The approach created for these transitions take extensive planning and collaboration, with the thoughtful education of staff playing an integral part in a successful transition. This presentation describes how over 6,500 staff transitioned to a new 1.1 million square foot hospital, with inpatient and outpatient services. A temporary project team was established to develop and implement a transition training plan. The plan addressed five elements of transition learning, including; Navigation & Way-finding, Building Safety, Equipment & Technology, Workflow Redesign, and Transition Management. Training methods used included: travel themed kick-off events to prepare learners for training and transition, interactive eLearning units addressing the five major learning elements, an electronic 3D Hospital game, orientation tours, and sandbox training, with day-in-the-life simulations. In addition, a Transition Training webpage provided information and updates. Sandbox training was customized to meet the specific learning needs of each area. This included a 3.5 hour simulation experience intended to give staff the opportunity to tour their workspace, learn new equipment, and understand daily work routines associated with their new clinical environment. Training design was based on the needs of the adult learner and included a facilitator to learner ratio of 1:8. Simulations were split into 35 minute time blocks that left time for debriefing along with opportunities to reinforce knowledge and skills. In-hospital training was conducted in the three-month period immediately prior to opening, with ninety-two percent of learners completing training prior to occupancy. Training effectiveness was determined using a variety of measures including participant survey, patient satisfaction, and quality measures. All results were positive. The majority of participants surveyed indicated they felt confident working in the new building as a result of training.

**CORE: AN ONCOLOGY CURRICULUM.** Colleen McCracken, BSN, RN, CMSRN, CHPN, OCN<sup>®</sup>, Froedtert Hospital, Milwaukee, WI; Julianna Manske, MSN, RN, OCN<sup>®</sup>, Froedtert Hospital, Milwaukee, WI; Rebecca Martin, BSN, RN, OCN<sup>®</sup>, BMTCN<sup>™</sup>, Froedtert Hospital, Milwaukee, WI

In order to safely and effectively care for patients with cancer, the novice oncology nurse must retain a plethora of information. Inpatient and outpatient oncology nurse educators at a large academic medical center created an Oncology Nurse Residency program to mentor and support nurses new to oncology. Historically, a new oncology nurse was required to attend 16 hours of Basic Oncology and four hours of Oncologic Emergency lectures over three days, allowing little time for discussion. A new program, CORE: An Oncology Curriculum, was developed to incorporate multimodal learning techniques in a four-hour class delivered over six months. Evaluations of previous programs consistently indicated staff were dissatisfied with the lecture-style format and were unable to retain the information. Participants requested increased interaction and application

relevant to their practice. The purpose of CORE is to provide new oncology staff basic education to enhance the care provided to patients affected by a cancer diagnosis. CORE is organized into six sessions: Hematologic Malignancy (two days), Lung Cancer & Sarcoma, Gastrointestinal Cancers, Head & Neck Cancer, and Reproductive & Breast Cancers. Each day consists of didactic education followed by round table discussions or demonstrations. Discussions are used to cover nursing implications relevant to the day's topics utilizing case studies. Topics include oncologic emergencies, equipment, survivorship/quality of life, and palliative care. Participants complete pre and post questions during each session via an audience response system to evaluate their knowledge before and after the presentations. The goal of CORE is to increase the knowledge of new oncology nurses in an interactive way while appealing to multiple learning styles. Together, participants scored 25% higher on the post questions. In addition, 88% of participants strongly agreed teaching methodologies were appropriate. Overall, 74% of participants rated CORE as excellent. CORE provides new oncology nurses the education they need to safely and effectively care for their patients. Mentoring and supporting new nurses through educational programming increases retention rates and engagement scores. Other organizations may wish to adopt similar programming to support nurses new to oncology in ways that appeal to multiple learning styles and specialty cancer programs.

**DEVELOPING AN INPATIENT ORAL CHEMOTHERAPY ADMINISTRATION PROCESS.** Patricia Hegedus, MBA, BSN, RN, OCN<sup>®</sup>, Gibbs Cancer Center & Research Institute, Spartanburg Regional Healthcare System, Spartanburg, SC; Catherine Jenkins, BSN, RN, Spartanburg Regional Healthcare System, Spartanburg, SC

Spartanburg Regional Healthcare System consists of four hospital facilities with greater than 600 beds. American Society of Clinical Oncology (ASCO) and Oncology Nursing Society (ONS) recommend safety standards which include the management of oral chemotherapy to improve patient outcomes. SRHS's Chemotherapy Safety Committee (CSC) reviewed a limited set of oral chemotherapy agents to identify areas of administration. Our aim was to standardize the consenting, ordering, and documenting for oral chemotherapy to comply with ASCO/ONS Chemotherapy Administration standards for inpatient oral chemotherapy administration. The CSC subcommittee reviewed the current process for oral chemotherapy recommendations and established best practice for oral chemotherapy administration through benchmarking with other community and NCI designated hospitals and by conducting a literature review. These included the ASCO/ONS 2013 Chemotherapy Administration Safety Standards and the NIOSH (2014) list of antineoplastic and other hazardous drugs in healthcare settings. The team expanded the focus to all hazardous drugs (HD) in order to incorporate non-oncology use of antineoplastic medications. A classification system of HDs was developed which outlined the class of medication, handling precautions, qualifications to administer, and their relation to the NIOSH List of Hazardous Drugs. The categories included HD1 parental antineoplastics, HD1 non-parental antineoplastic agents, HD2 non antineoplastic agents, and HD3 medications rated as pregnancy risks of C, D or X. Due to the high use of megestrol acetate to stimulate appetite, the Pharmacy & Therapeutics Committee was petitioned to remove megestrol acetate from the hospital formulary and reduce HD exposure. The process improvement included identification, patient education, and safety environmental controls for oral HDs. Comprehensive nursing education related to HD management was developed and is now required as an annual competency for all nursing, pharmacy, transport, and housekeeping staff. Multiple levels of controls have been established to keep our

staff and patients safe. Annual staff education is required. The CSC reviews policies and procedures related to this process annually, and reviews chemotherapy spills and medication errors quarterly. Our process enables us to comply with the current standards for consenting, ordering, and documenting for oral chemotherapy for inpatient oral chemotherapy administration.

**IMPACTING ONCOLOGY NURSING PRACTICE AND OUTCOMES THROUGH AN INNOVATIVE AND ROBUST NURSE RESIDENCY PROGRAM.** Nicole Reimer, RN, BSN, OCN®, Lehigh Valley Health Network, Allentown, PA; Ashley Owoc, RN, BSN, Lehigh Valley Health Network, Allentown, PA; Jennifer Lanter, RN, BSN, MGS, Lehigh Valley Health Network, Allentown, PA

2016 marks five years since the 2011 seminal publication *The Future of Nursing: Leading Change, Advancing Health*. Though all recommendations relate in some way to oncology nursing practice, 'Recommendation 3: Implement nurse residency programs' can significantly impact oncology nursing practice. This presentation details actions within a Magnet™ hospital to implement a nurse residency program (NRP), with attention to the requirement for nurse residents to complete an evidence-based practice (EBP) project; three studies completed by nurse residents on medical-surgical hematology/oncology units will be featured. From the onset of the NRP in 2013, a variety of innovations were incorporated. The barrier of cost expenditures associated with residencies was addressed through a successful grant proposal garnering \$1.4 million dollars to sustain the residency for its first 3 years. A second innovation was formation of a NRP Advisory Board structured within the organization's shared governance model. This board, composed of bedside clinical nurses, educators and managers, selected the nurse residency program provider and makes decisions regarding its operations. A third innovation is the robust nature of the EBP projects. A doctoral prepared nurse devised the in-depth didactic and interactive EBP content and master's prepared nurses serve as facilitators for each project. The three featured hematology/oncology unit projects are: 'A Comparison of Chest Tube Dressings and Relation to Pneumothorax Rates,' 'Impact of Targeted Education on Nurses' Perception and Management of Pain,' and, 'Nutrition Screening to More Accurately Identify Malnutrition in Oncology Patients.' A variety of metrics associated with return on investment are directly tied to the Nurse Residency project goals. Turnover is improved and less than the national data base. To date, 107 EBP projects have been completed or are in process, leading to a wide variety of practice changes and impacting nurse sensitive indicator empirical outcomes. Nurse residents have offered posters and oral presentations at regional and national conferences on their projects and publications are in process. Presentation attendees will gain pragmatic strategies and insights applicable in any acute care practice setting to develop or refine a NRP, with special attention paid to nurse resident EBP projects that impacted hematology/oncology nursing practice and outcomes.

**A GRASS ROOTS APPROACH TO CREATING A PATIENT AND FAMILY/CAREGIVER ADVISORY COUNCIL.** Gail Zephyr, BSN, RN, OCN®, Johns Hopkins Hospital, Baltimore, MD; Karla Vilorio, BSN, RN, Johns Hopkins Hospital, Baltimore, MD; Colleen Apostol, MSN, RN, OCN®, CHPN, Johns Hopkins Hospital, Baltimore, MD; Katherine Pisano, BA, Johns Hopkins Hospital, Baltimore, MD; Sharon Krumm, RN, PhD, Johns Hopkins Hospital, Baltimore, MD

Patients and caregivers are consumers of healthcare and, in the philosophy of patient centered care, are essential partners

with healthcare professionals tasked with improving the quality of care and service, the culture of the institution and the safety of healthcare delivery. A strategic pillar of this academic medical center is "Partnering with patients, families and others to eliminate preventable harm, optimize patient outcomes and experience while reducing health care costs; and, to engage patients and families in shared organizational and clinical decision-making." A staff nurse initiative created an alliance with leadership to partner with patients, their families and caregivers to create and establish a Patient and Family/Caregiver Advisory Council (PFAC) in a National Cancer Institute (NCI)-designated Comprehensive Cancer Center. In 2013, a small team of staff nurses formulated a plan to collaborate with patients, their families and caregivers throughout the Cancer Center to create and sustain a PFAC. These nurses were liaisons in identifying patient and caregiver members to the newly formed Advisory Council. They continue to identify and recruit potential patient and caregiver council members. The staff nurses are essential in setting up the meetings, engaging with Council members, following up on issues and recording and maintaining meeting minutes. The Council, consisting of 8 patients, 5 caregivers, faculty and staff, has met monthly since inception. A collaboration among the patient, caregiver and staff Council members created a mission and vision statement. Personal experiences shared by the patients and their caregivers shaped the Council's strategic goals. The Council contributes to the development of policies, quality improvement initiatives and patient safety by addressing a wide range of topics identified by constituents within the Cancer Center. Performance improvement initiatives included reducing wait times in the Infusion Center, providing access to integrative medicine, creating patient education materials and input into the design of a new ambulatory building. Discussion: Oncology nurses have a unique opportunity to move cancer care delivery from a system-based approach to patient and family centered care. Innovation: The implementation and continued involvement of nurses on the PFAC provides a forum where they can partner with patients and caregivers to drive organizational change.

**REMEMBER TO WEAR YOUR PPE: SAFE HANDLING OF ANTINEOPLASTIC AGENTS ON A HEMATOLOGY ONCOLOGY UNIT.** Kristen Battiato, RN, BSN, OCN®, MSKCC, New York, NY; Jacqueline Patterson, RN, BSN, OCN®, MSKCC, New York, NY; Liza Sanchez, RN, BSN, OCN®, MSKCC, New York, NY; Connie McKenzie, RN, BSN, OCN®, MSKCC, New York, NY; Melanie McCormick, RN, BSN, OCN®, MSKCC, New York, NY; Mary Dowling, RN, MSN, OCN®, CENP, MSKCC, New York, NY

Antineoplastic drugs are considered high-alert medications by the Institute for Safe Medication Practices (ISMP) and deemed hazardous by the National Institute for Occupational Safety and Health (NIOSH). Guidelines for safe handling of hazardous drugs have existed for years, including the use of personal protective equipment. With the risk of exposure being high for nurses who administer chemotherapy, the importance of maintaining safety guidelines has never been greater. In 2014, our hematology oncology unit administered 30% of all inpatient chemotherapy (2,653), the highest of all inpatient units. Despite the risks of exposure and the establishment of guidelines, the compliance rate on the unit with PPE use is suboptimal. The purpose of the project was to explore the motivations behind non-compliance with PPE and implement interventions to increase its use on our hematology oncology unit. A pre-survey was sent to RN staff. Of the 38 nurses who responded, 26% admitted to being 100% compliant in wearing PPE. Reasons for non-compliance included forgetting to put it on (50%), poor accessibility (21%), being unfamiliar with where to find it (15%), and never being trained to use it (10%). Select senior staff provided unit-wide education addressing the hazards of

chemotherapy exposure, selection, and use of PPE. The unit's Clinical Nurse Specialist included PPE education in the annual chemotherapy/biotherapy review course. Personal Protective Equipment was kept in the medication room with a sign above the chemotherapy bin as a reminder. Also, a buddy system to ensure compliance was developed encouraging nurses to comply with PPE guidelines. A post survey was sent to the staff. Of the thirty five nurses who responded, 58% were 100% compliant in wearing PPE, an increase of 32%. Implications for clinical practice include ongoing education related to PPE and fostering an environment that promotes its use.

**UTILIZING A SHARED GOVERNANCE APPROACH TO THE CREATION OF STANDARDIZED COMMUNICATION FOR SUPPORTIVE SERVICES IN A CANCER CENTER.** Adrienne Banavage, MSN, RN-BC, OCN®, UVAHS, Charlottesville, VA; Christina Sheffield, UVAHS, Charlottesville, VA; Veronica Brill, MSN, NEA-BC, UVAHS, Charlottesville, VA; Jody Reyes, BSN, MSBA, RN, OCN®, UVAHS, Charlottesville, VA

In January 2015 formalized distress screening was introduced at the Emily Couric Clinical Cancer Center (ECCCC). Since 2011 when the ECCCC opened an array of supportive services were offered to oncology patients. However, with the implementation of formalized distress screening along with a 23% increase in the number of patient visits in 2014 versus 2013 it was apparent that a standardized pathway to refer patients to these services was needed. A multidisciplinary team including nurses, LIPs, social workers and navigators as well as IT specialists was assembled to address this issue. The goal was to create a referral process that would ensure the timely delivery of the patient's information to the appropriate discipline that would be simple for all providers to use. The team looked to the process that the LIPs used however this was not available for all domains. Also it was found that there was no standardized way to communicate a referral to disciplines with multiple team members, such as social work. The team decided that the goals included: creation of a single process for all providers regardless of licensure and a standardized method of dissemination of referral information to appropriate supportive care team members. Collaboration with IT colleagues allowed for the creation of this tool. After education to staff throughout the cancer center this online electronic referral was introduced in July of 2015. The implementation of the referral process was easily accomplished and the creation of a standardized communication workflow provides a mechanism for all referrals to be captured and acted upon in a timely manner. In turn, this communication provides assurance that the patient's practical/psycho-social/spiritual needs are addressed. Future plans include collection of data involving the volume and distribution of referrals. This data will be used to assure the optimal allocation of resources within the supportive care services department to best meet the needs of the patients.

**HOME CARE INSTRUCTIONS: RESULTS FROM AN AMBULATORY PATIENT SURVEY.** Amber Williams, RN, OCN®, The Ohio State University James Cancer Hospital, Columbus, OH; Sarah Bryant, RN, BSN, OCN®, The Ohio State University James Cancer Hospital, Columbus, OH; Kori Fenner, RN, BSN, OCN®, The Ohio State University James Cancer Hospital, Columbus, OH; Judy Sherer, RN, BSN, OCN®, The Ohio State University James Cancer Hospital, Columbus, OH

Ambulatory chemotherapy nurses are the patients' primary educators regarding side effects and symptom management. They have the responsibility to educate patients and families concerning what to expect when they get home. Following

an episode of care, Press Ganey® patient satisfaction surveys are sent to a random sample of patients. In January, 2015, the unit's "home care instructions" scores were lower than national benchmarks. Because of this, a nurse developed a survey specific to the unit's chemotherapy patients to determine what needs were not being met. The survey was administered over a two week period in February, 2015. The purpose of the survey was to determine ways in which the Press Ganey® scores could be increased in the areas of home care instructions and managing chemotherapy side effects. In the survey, patients were asked whether the amount of home care and symptom management education was helpful and what information they thought should have been provided at their initial chemotherapy appointment. A committee of chemotherapy nurses met to evaluate the results. These instructions were revised based on current evidence: diarrhea, constipation, rash, fatigue, nausea, mucositis, GERD, pain, home infusion monitoring/care, chemotherapy exposure precautions, and when to call the oncologist. The updates were communicated to the nurses and the material is now placed in the after visit summary and reviewed with the patient and family prior to discharge. There were 126 completed surveys received. Of these, 23 respondents provided suggestions for improving or changing the education material. The other respondents did not offer suggestions. In January, 2015, the mean score for home care instructions was 90.9 and the mean score for managing chemotherapy side effects was 85. Three months after implementing our changes, the instructions score was 93.8 and the side effects score was 96. The implication for oncology nurses is to understand patient expectations regarding self-care throughout the cancer treatment journey. In order to do this, nurses must accept the feedback from patients and make evidence based changes as necessary. Consistent education from nurses is important to increase patient satisfaction, compliance, and overall well-being.

**IT'S THE LAW: IMPLEMENTING A HAZARDOUS DRUG CONTROL PROGRAM.** Terri Cunningham, MSN, RN, AOCN®, Seattle Cancer Care Alliance, Seattle, WA; Lenise Taylor, MN, RN, AOCNS®, Seattle Cancer Care Alliance, Seattle, WA

Despite longstanding concern about healthcare worker exposure to hazardous drugs (HD), employers have inconsistently implemented recommended safeguards. Through highly publicized efforts of concerned family members and employees, state legislators passed a bill requiring employers to implement a HD control program consistent with National Institute for Occupational Safety and Health's (NIOSH) 2004 Alert. Oncology CNS's from an Alliance of urban academic and community healthcare organizations were called on to provide expertise and guidance to the interdisciplinary team responsible for ensuring compliance of the requirements. Purpose: To assess institutional gaps in compliance to federal HD legislation and implement corrective actions. An interdisciplinary team (Oncology CNSs, pharmacists, safety officer) collaborated to design and implement an HD program. The scope of the task included: HD list, hazard assessment of workplace, HD policies including engineering controls, personal protective equipment (PPE), safe handling practices (receiving through disposal), housekeeping, waste handling, spill control, personnel issues (pregnant workers) and training. Program included: (a) Development HD list (b) Created standard medication administration practices for drugs not on the HD list. (c) Provision of respiratory protection for staff cleaning spills of vapor-creating HDs. (d) Web-based training created and required by all institutional personnel. Three areas identified as suboptimal: HD Training, appropriate respiratory protection, and consensus agreement on HD list. The hazard assessment highlighted all organizational areas had potential

risk and web-based training was necessary for all employees. Collaboration with the Safety Officer ensured that appropriate respiratory protection is available to staff who clean up spills. Implementing standard medication handling practices helped define which drugs could be excluded from the HD list. Ensuring healthcare workers are knowledgeable and protected from exposure to hazardous drugs is challenging. Federal legislation was the impetus to ensure organizational support to overcome the barriers encountered to address HD handling. Oncology nurses' expertise is essential to organizational efforts to expand safe handling practices.

**IMPROVING PATIENTS' PERCEPTION OF MEDICATION EDUCATION AT THE BEDSIDE.** Tanya Haight, RN, BSN, OCN®, CCRN, Providence Holy Cross Medical Center, Mission Hills, CA; Ingrid Blose, RN, BSN, OCN®, CMSRN, Providence Holy Cross Medical Center, Mission Hills, CA

Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) is a standardized, national publicly reported survey of the patient's perspectives of their hospital care. The survey asks recently discharged patients about aspects of their hospital experience including two questions addressing medication education by the nurse. The Oncology unit HCAHPS scores for these two medication related questions averaged 4% below the national mean for three quarters (Q3–2013 to Q1–2014). The purpose of this project was to better educate the oncology patients regarding what their medication was for and the purpose for taking these medications. The goal was to see an improvement in patient education reflected in the HCAHPS scores to be measured in the three quarters post implementation. An interprofessional team consisting of the Nurse Educator, Nurse Manager, Clinical Pharmacist and Oncology Clinical Nurses developed an evidence based, two page patient education handout listing the most common medications, potential side effects, purpose, and drug class. This colorful, easy to read handout (In English and Spanish) is titled, "Indication and Common Side Effects of the Most Used Medications". This is given to all patients on admission and reviewed during their stay. Nurses highlighted the patients' specific medications and educated the patient and family each time they administered the medications. Patients took the handout home and were encouraged to review it after discharge. Nurses were educated as to use of the handout and how to educate the patients using teach back methodology. After implementation of the education handout, HCAHPS scores were measured for the following three quarters (Q4–2014 to Q2–2015). HCAHPS scores averaged 7% above the national mean for three quarters, showing an overall increase of 11% improvement. Because of the significant improvement in HCAHPS scores related to medication education on the Oncology unit, the initiative was rolled out hospital wide and the handout adapted to the specific clinical areas to include most common medications. Several other clinical departments have since seen similar positive increases over the national mean. This demonstrates that our patients feel informed and included in their plan of care.

**IT'S NOT QUIET IN A HOSPITAL, IS IT?** Stephanie Alesandroni, RN, BSN, OCN®, CCRN, Cancer Treatment Centers of America, Philadelphia, PA; Lynette Peterson, RN, BS, Cancer Treatment Centers of America, Philadelphia, PA; Michelle Jetter, RN, BSN, Cancer Treatment Centers of America, Philadelphia, PA; Ryan Irving, RN, BSN, Cancer Treatment Centers of America, Philadelphia, PA; Tara O'Connor, RN, BSN, Cancer Treatment Centers of America, Philadelphia, PA;

**Michael DiPalma, RN, BSN, ND, Cancer Treatment Centers of America, Philadelphia, PA**

The national standard survey, Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS), measures the patient's perspective on hospital care. One area that continually evokes sub-optimal results is the 'quiet at night' measurement. Our investigation explored the patient's perception of nighttime "noise" in the hospital setting. Patients in our medical surgical/telemetry floors subjectively evaluated the noise level at night. An ethnographic interview method was utilized that was approved and standardized to prevent bias. Results were stratified and coded. A total of 224 patients completed the process prior to any intervention to provide our hospital with a baseline understanding of the current state. We then utilized two evidenced-based approaches which have been shown to decrease a patient's perception of noise: a sleep pack consisting of ear plugs, headphones, and a sleep mask, and one-on-one education on how to use the relaxation channel. Of the additional 101 patients who received this education, twenty-seven of these participants completed a second interview the following day, which allowed for comparison data to be compiled. By speaking with the patients, our investigation not only yielded information regarding the perception of noise level in their room, but additionally identified factors that were the cause of the noise. Although, our two interventions did not produce a positive change in noise level, it did provide valuable feedback and insight for quality initiatives. Noise level is a quality issue which needs to be continually addressed. Our interdisciplinary team, along with nursing leadership, intends to move forward with developing an innovative plan to promote an optimal healing environment.

**PATIENT THROUGHPUT EXPERIENCE.** Jemilat Siju, MSN, RN, APN-BC, OCN®, Mount Sinai Hospital Systems, New York, NY

A Patient Centered Coordination of Care Initiative was Implemented to Improve Patient Throughput in an NCI Cancer Infusion Center. A Patient Centered Coordination of Care Initiative Was Implemented to Improve Patient Throughput in an NCI Cancer Infusion Center. In a growing cancer infusion center that includes multiple providers and referral sources, variation in scheduling and practitioner and patient preference negatively influenced optimal care coordination and related quality and operational outcomes including but not limited to increased wait times related to scheduling bottle necks, decrease in patient satisfaction and nursing "burn-out". A nurse-led collaborative approach was used to engage members of the clinical team to improve the process. The following improvements were implemented: (a) A grid based on chair time and regimen/drug acuity as a guideline was developed for the scheduler to use when scheduling patients (b) The providers were educated regarding the new scheduling process; An information session was provided so each provider could update their schedulers and patients about the coming scheduling changes (c) The infusion site schedulers were provided with on-site support at "Go-Live" (d) A Medical Assistant was re-assigned to the infusion suite to enhance patient navigation (e) Primary care nursing was implemented in the infusion suite: Patients are assigned to RNs a day before the scheduled appointment; RNs review patient treatment plans and orders before scheduled appointment; RNs form therapeutic relationships with their patients as they become familiar with treatment plans and patient specific needs Scope: Outpatient Cancer Center. Results: (a) Improved Press Ganey mean score for "wait time" by an average of 8.44 mean points sustained for a five month period (b) Increased capacity in the infusion center. (c) Increased staff satisfaction as vocalized at staff meetings (d) Increased physician satisfaction, vocalized

as “now nurses are waiting for their patients not the other way around.” Patient throughput is affected by multiple factors and in order to improve this aspect of the patient’s experience, a multifactorial approach is necessary. This patient centered project successfully improved care coordination and the associated quality and operational outcomes. Recommendations: (a) Standardize the outpatient infusion scheduling grids/guidelines (b) Develop tools to accurately calculate nurse to patient ratio in outpatient oncology infusion centers.

## RESEARCH PODIUM ABSTRACTS

**A MULTIVARIATE ANALYSIS OF PAIN AND DISTRESS IN ADULTS UNDERGOING BONE MARROW ASPIRATION AND BIOPSY.** Amy Moore, MSN, RN, ACNS-BC, Hospital of the University of Pennsylvania, Philadelphia, PA; Rebecca Trotta, PhD, RN, Hospital of the University of Pennsylvania, Philadelphia, PA; Steven Palmer, PhD, Hospital of the University of Pennsylvania, Philadelphia, PA; Regina Cunningham, PhD, RN, Hospital of the University of Pennsylvania, Philadelphia, PA

Bone marrow aspiration and biopsy (BMAB) can be painful and distressing. No proactive identification methods exist to identify patients at increased risk for pain or distress associated with BMAB. Furthermore, treatment algorithms for optimal management are lacking. This study describes BMAB-related distress, pain severity and pain character in light of demographic and procedure-related variables, both prior to and following the procedure. A prospective multivariate correlational design was used to evaluate the effect of patient and procedure-related characteristics on patients’ ratings of pain and distress associated with BMAB. English-speaking, cognitively intact, clinically stable in-patients undergoing BMAB comprised the study sample (N = 152). Patients rated their pain using The Numeric Pain Intensity Scale, and their distress using the Distress Thermometer at 3 times: before, 5 minutes after, and 1 hour after BMAB. Subjects rated pain quality using The McGill Pain Quality and Character Scale 5 minutes after and 1 hour after BMAB. Descriptive statistics, chi-square and linear regression were utilized for analysis. Anxiolytics did not reduce distress when compared to patients who did not receive an anxiolytic (p = 0.88). Patients receiving an opioid had decreased pain at 1 hour compared to those who didn’t (p < .001). Multivariate analysis yielded female gender, first time biopsy, and elevated pre-procedure pain as independent predictors of post-procedure distress (p < 0.001). Identification of moderate pre-procedure pain and distress as independent predictors of overall distress at 1 hour support the need for symptom management with BMAB. Elevated pre-procedure distress was an independent predictor of both post-procedure pain and distress. Opportunities for appropriate selection of pre medications were identified for both distress and pain. Lack of anxiolytic efficacy suggests the appropriate drug, route and/or timing of administration were insufficient to relieve distress. This study reveals the opportunity for interprofessional collaboration around pre-procedure assessment of pain and distress, appropriate treatment, and follow-up. Future studies could test interventions for mitigation of pain and distress around BMAB. Distress and pain are under recognized and under treated in patients undergoing BMAB. Pre-procedure assessment and intervention may improve patient experiences.

**Underwriting:** This study was supported by a \$5,000 grant from the Daisy Foundation

**THE INFLUENCE OF ETHNICITY, BODY MASS INDEX, AND SMOKING ON COMORBIDITY AMONG WOMEN BEING TREATED FOR BREAST CANCER.** Horng-Shiuan Wu, PhD,

RN, Goldfarb School of Nursing at Barnes-Jewish College, St. Louis, MO; Jean E. Davis, PhD, RN, Goldfarb School of Nursing at Barnes-Jewish College, St. Louis, MO

Presence of comorbidities is associated with age and negatively affects cancer survival. Cancer disparities exist; some evidence has shown that African Americans (AA) are at higher risks of having more comorbidities. Lifestyle factors are common determinants of many medical conditions. Given that cancer patients often have co-occurring chronic conditions, it is imperative to understand effects of risk factors for chronic illness so preventive strategies can be developed. This analysis aimed to examine the influence and interaction of ethnicity, body mass index (BMI), and smoking on comorbidity in women being treated for breast cancer. The sample for this secondary data analysis consisted of 102 women with breast cancer undergoing outpatient chemotherapy. Mean age was 51.4 (±9.2) years; 32 Caucasians and 70 AAs. Comorbid conditions, weight, height, and smoking status were identified by chart review. The BMI was computed and classified as normal (≤24.9), overweight (25-29.9), and obese (≥30). One- and two-way analysis of covariance (ANCOVA) with age as the covariate examined impact of ethnicity, BMI, and smoking on the number of comorbidities other than cancer. Although multiple comparisons initially showed that AAs had significantly more comorbidities than Caucasians (2.8 and 1.8, respectively), racial influences on comorbidity became marginally significant (p = 0.058) after controlling for age. Adjusting for age, number of comorbidities differed by BMI (p = 0.017); the obese group had significantly more comorbid conditions than the other weight groups. Smokers reported more comorbidities than non-smokers (p = 0.038). The interaction between BMI and smoking was marginally significant (p = 0.06). Smokers who were obese had substantially more comorbidities (adjusted mean = 4.3 conditions) than smokers who were normal or overweight (adjusted mean = 2.0 conditions). Nonsmokers who were obese had more comorbidities (adjusted mean = 2.5 conditions) than nonsmokers of normal weight (adjusted mean = 1.4 conditions). Breast cancer patients who were obese/overweight and/or smoked often had more comorbidities than normal weight or nonsmoker cohorts. Lifestyle factors, such as weight and smoking status, are strong determinants of cancer comorbidity. Future research should investigate different lifestyle modification strategies that are feasible during cancer treatment. Individualized care planning, weight management, and smoking cessation may lead to better cancer outcomes.

**Underwriting:** ONS Foundation/Novartis Nursing Research Grant

**PERCEPTION, ACCEPTANCE AND UPTAKE OF HUMAN PAPILLOMA VIRUS VACCINE AMONG FEMALE ADOLESCENTS IN SELECTED SECONDARY SCHOOLS IN IBADAN, NIGERIA.** Chizoma Ndikom, RN, PhD Nursing, Department of Nursing, University of Ibadan, Nigeria; Patience Oboh, RN, BNSc, Department of Nursing, University of Ibadan, Nigeria

Infection with Human papilloma virus (HPV) can cause malignant changes in the cervix which has been known to contribute to morbidity and mortality among women. HPV vaccine is now available for its prevention, yet the level of uptake is low. The theoretical orientation for the study was the health promotion model. The study aimed at determining Perception, Acceptance and Uptake of Human Papilloma Virus Vaccine among female adolescents in selected secondary schools in Ibadan, Nigeria. This descriptive cross-sectional study was conducted among 296 female adolescent senior secondary school students in selected Schools in Ibadan, Nigeria. The eligible respondents were selected using purposive

sampling method and data were collected using a structured self-administered questionnaire. The data were analysed using the Statistical Package for Social Sciences version 20.0 (SPSS, v20.0). Variables are presented as frequency tables and in form of hypotheses which were tested using chi-square and Fisher's exact test of significance at  $P \leq 0.05$ . This study showed that the perception and knowledge of female adolescents in selected secondary schools about HPV vaccine, HPV infection and cervical cancer was generally poor. Findings from the study also revealed that only 12(4.1%) of the respondents have received the HPV vaccine before the study. There is a significant association between adolescent's perception and uptake of HPV vaccine (Fisher's exact test,  $p < 0.001$ ). Also there is a significant association between acceptance of HPV and the use of HPV vaccine (Fisher's exact test,  $p = 0.000$ ). Parental approval and acceptance were found to be significantly associated ( $p = 0.000$ ). Parental consent, awareness of HPV as well as support from friends were found to be significantly associated with uptake of HPV vaccination (Fisher's exact test,  $p = 0.000$ ). Religion, ethnic group and class were not found to be significantly associated with uptake (Fisher's exact test,  $p > 0.05$ ). In conclusion there is need to increase awareness about the importance of Human Papilloma Vaccination among female adolescents and their mothers. Also, peer educators in schools can be trained to improve awareness in schools so as to reduce the incidence of HPV infection and cervical cancer.

### **EXAMINING THE PATIENT'S IDENTIFIED PRIORITY SYMPTOM IN ADVANCED LUNG CANCER.** Marie Flannery, RN, PhD, University of Rochester, Rochester, NY

Patients with advanced lung cancer experience multiple symptoms that decrease quality of life and increase distress. Determination of the patient-identified priority symptom is critical to establishing an individualized symptom management plan. While the importance of the patient's priority symptom is acknowledged, only limited empirical evidence is available to guide practice. As part of a pilot randomized clinical trial, we asked patients receiving treatment for advanced lung cancer to identify the symptom that was most important to them. Patients identified their priority symptom using an open-ended question at entry and exit (week 9). We intentionally asked this question first so responses would not be influenced by completion of a symptom checklist. 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. 39 patients receiving treatment for advanced lung cancer responded at entry (23 at exit), age  $M = 62$  years, 55% male. Patients reported 4-16 symptoms,  $M = 9.90$  ( $s = 3.13$ ). The symptoms most often identified as a priority were pain (17) and tiredness (8) / fatigue (3). All but one patient reported a physical symptom as their priority. 31% of patients identified priority symptoms that were not captured on the MDASI (i.e.: rash, diarrhea, imbalance, 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 number of symptoms reported remained stable over the nine weeks. In contrast, 70 % of patients reported a change in the most important symptom from study entry to exit. Priority symptoms elicited with an open-ended question were overwhelmingly physical symptoms. The priority symptoms for patients with advanced lung cancer cannot be determined from severity ratings; they are not reliably captured on a screening symptom inventory, and they change over time. Findings indicate the need for clinicians to directly ask patients about their priority when multiple symptoms are reported. Interventions that target patients' priority symptoms may be most useful in this challenging clinical situation.

**Underwriting:** ONS Foundation

### **BIOLOGICAL FACTORS AND NUTRITION IN PERSONS WITH GASTROINTESTINAL CANCER.** Saunjo Yoon, PhD, RN, University of Florida College of Nursing, Gainesville, FL; Debra Kelly, PhD, RN, OCN®, University of Florida College of Nursing, Gainesville, FL; Thomas J. George, MD, University of Florida College of Medicine, Gainesville, FL; Cynthia Garvan, PhD, University of Florida College of Nursing, Gainesville, FL

Gastrointestinal (GI) cancer is the second highest to the respiratory cancers and accounts for 149,300 deaths in the US. Compromised nutrition due to cancer metabolism, treatment and anorexia negatively affects quality of life, physical function and mortality. Effect of biological factors that contribute to mortality in the context of weight loss is still unknown. This study aims to examine the relationships between demographics, weight, cancer related variables, biological factors and mortality. A de-identified dataset obtained from the University Health Integrated Data Repository upon IRB approval (#201400215). Eligibility was: (1) 18 years or older, (2) diagnosed with any GI cancers (ICD-9 codes: 150-159), and (3) entered care in the University system from June 2011 to March 2014. Variables for the analysis included demographics (age, sex, and race), weight, albumin level, nutrition status, cancer types, stages and mortality. To investigate association with mortality, categorical, ordinal, and numeric predictors were analyzed with chi-square, Wilcoxon rank sum, and t-tests respectively. Pearson correlation test was used to examine the relationship between weight and albumin level. Of the 496 patients included in the dataset, 39.9% were women, 10.5% were black, 23.6% died, and mean (SD) age of 66.4 (11.5). At the first visit, the mean (SD) weight (lbs), body mass index (BMI), albumin, and Braden nutrition subscale were 164.7 (40.8), 25.5 (5.9), 37.7 (6.0) and 3.1 (0.8) respectively. Mortality was significantly related to race (blacks had higher mortality compared to whites,  $p = 0.0245$ ), cancer stage ( $p = 0.0152$ ), lower albumin at first visit ( $p < 0.0001$ ), and more compromised nutrition ( $p = 0.0013$ ). Age, sex, cancer type, weight at initial visit were not significantly related to mortality. Weight and BMI at first visit were not significantly correlated to albumin level at first visit ( $r = 0.03$  for weight,  $r = 0.02$  for BMI). Findings indicated significant correlations of albumin and nutrition to the mortality among GI cancers. Nutritional interventions at the earlier stage of cancer may be crucial for decreasing mortality rate. It is novel to examine the relationships between nutrition, albumin and mortality in GI cancer for early intervention to improve quality of life.

### **ASSOCIATION OF TELOMERES AND TELOMERASE WITH CLINICAL OUTCOMES IN CHILDREN WITH ACUTE LYMPHOBLASTIC LEUKEMIA: A REVIEW OF LITERATURE.** Marianne Bundalian Tejada, DNP, MSN, RN, PHN, University of Nevada Las Vegas, Las Vegas, NV; Richard Young, University of Nevada Las Vegas, Las Vegas, NV; Vanessa Mercado, University of Nevada Las Vegas, Las Vegas, NV; Karanjot Kaur, University of Nevada Las Vegas, Las Vegas, NV; Alan Ikeda, MD, Children's Specialty Center of Nevada, Las Vegas, NV; Nada Lukkahatai, PhD, MSN, RN, University of Nevada Las Vegas, Las Vegas, NV

Acute lymphoblastic leukemia (ALL) is the most common pediatric cancer. Telomere plays a key role in cancer development through impairment of chromosome stability. The purpose of this study was to report the current state of science of the role of telomeres and telomerase in children with ALL. The biomedical model of disease processes and the understanding of the telomere, the end of the chromosomes, in DNA replication mechanisms during the cell proliferation were used to guide this study. Using PubMed, CINAHL, and Scopus, an integrated

review of the literature was conducted. Search terms included “acute lymphoblastic leukemia” OR “acute lymphocytic leukemia” OR “acute lymphoid leukemia” and “telomere” OR “telomerase”. Studies in adults, animal studies, non-English studies, review articles, case reports, books, and thesis were excluded. Thirteen studies were selected. Eleven investigated telomere length (TL) and/or telomerase activity (TA) in ALL children and two in both children and adults. Only four studies were published between 2010–2015. The TL and TA were measured by real-time quantification polymerase chain reaction (n = 7), real-time reverse transcriptase (n = 4), telomerase amplification protocol (n = 6), and southern blot analysis (n = 3). Findings of an association between TL and TA with treatment outcomes were inconsistent. Majority of the reviewed studies suggested that children with ALL have shorter TL and higher TA than healthy controls. During treatment, shorter TL and activation of TA were associated with a reduction in survival rate, poor prognosis, and poor treatment outcomes. Among ALL patients, TL was not associated with age at diagnosis. Most often limitation listed in these studies was small sample sizes. Current evidence shows an inconsistent correlation between TA, TL, and cancer treatment outcomes. Additional longitudinal studies in larger sample sizes are needed. The understanding about the association among telomere length, telomerase activity and clinical outcomes (e.g., remission, relapse) in acute lymphoblastic leukemia is vital. It provides the framework for future studies and potential target for treatment.

**RELIABILITY OF THE PARENT CARING RESPONSE SCORING SYSTEM (P-CaReSS) FOR CHILDREN DURING CANCER TREATMENT-RELATED PORT STARTS.** Jinbing Bai, MSN, RN, School of Nursing, the University of North Carolina at Chapel Hill, Chapel Hill, NC; Kristen Swanson, PhD, RN, FAAN, The College of Nursing, Seattle University, Seattle, WA; George Knafelz, PhD, School of Nursing, the University of North Carolina at Chapel Hill, Chapel Hill, NC; Felicity Harper, PhD, Department of Oncology, Wayne State University, Detroit, MI; Louis Penner, PhD, Department of Oncology, Wayne State University, Detroit, MI; Sheila Santacroce, PhD, RN, CPNP, FAANP, School of Nursing, the University of North Carolina at Chapel Hill, Chapel Hill, NC

Treatment-related procedures such as port starts can negatively affect children with cancer and their parents. Enhancing caring parent-child interactions could be a way for nurses to help children and their parents manage pain and distress during these procedures. Multiple observational measures have been developed to study parent-child interacting behaviors during painful procedures. Most of these observational measures are neither theory-based nor do they well represent parent nonverbal behaviors. The Parent Caring Response Scoring System (P-CaReSS) was developed based on the Swanson's Caring Theory to capture parent verbal, nonverbal and emotional behaviors during painful procedures. The purpose of this study was to test the inter-rater reliability of P-CaReSS in children during cancer treatment-related port starts. Methods: 27 children, each with one video-recording of port start available, were selected from an original study (1R01CA138981). These videos were used to refine the P-CaReSS (10 videos), train coders (6 videos) and test its inter-rater reliability (IRR; 11 videos). One PhD-prepared coder and the first author trained to code the videos using the P-CaReSS using timed-event coding method and StudioCode software. Cohen's Kappa was calculated for categorical variables. Findings: The 18-item refined P-CaReSS describes three types of parent behaviors: verbal (11 items), nonverbal (6 items), and emotional indicators (1 item). These parent behaviors com-

prise 6 domains: Knowing (1 item), Being With (3 items), Doing For (3 items), Enabling (4 items), Maintaining Belief (2 items), Non-Caring (4 items), and Emotional (1 item). The average IRR agreement was 0.82 for the total P-CaReSS, with an average point-by-point agreement of 0.83 for verbal (range 0.62–1.0) and an average duration agreement of 0.80 for nonverbal (range 0.57–0.99). The Kappa coefficient was 0.81 for emotional indicator. Discussion and Implications: The P-CaReSS is a reliable tool that can be used to code parent verbal, nonverbal and emotional behaviors. This observational tool, which is based on a middle-range nursing theory, could be used to guide development of nursing interventions to help parents in caring for their children during painful procedures. Innovation: Test a new theory-based observational measure which captures parent verbal, nonverbal and emotional interacting behaviors during painful procedures.

**Underwriting:** Sigma Theta Tau Alpha Chapter

**SUPPORTIVE CARE PLANS: LINKING PATIENT-REPORTED OUTCOMES TO EVIDENCE-BASED SUPPORTIVE CARE ACROSS THE CANCER CONTINUUM.** Jeannine M. Brant, PhD, APRN, AOCN®, FAAN, Billings Clinic, Billings, MT; Judith Miller, RN, CCRP, Billings Clinic, Billings, MT; William N. Dudley, PhD, University of North Carolina, Greensboro, NC; Panzer Sarah Lena, BS, Carevive, Miami, FL; Carrie Tompkins Stricker, PhD, RN, Carevive, Philadelphia, PA

The negative impact of symptoms on patient quality of life and health utilization outcomes is well-documented. This study explored feasibility and usability of a novel supportive care planning technology (Carevive® CPS) linking patient-reported symptom outcomes (PROs) to creation and delivery of individualized supportive care plans. Prospective, multi-center pilot study at the largest gynecologic cancer center in the mid-northwest enrolled patients (n = 49) and their providers (n = 3) in the study. Patients reported symptoms and top 3 visit concerns via an electronic tablet in the waiting area prior to office visits. Providers reviewed PROs to tailor the office visit, and provided electronically-generated supportive care plans to patients following the visit. Study outcomes included usability and satisfaction (1–5 scales) and care plan referrals generated individually from PROs. Of the 49 patients enrolled, 67% (n=33) completed post-test measures. Providers also completed post-test measures. Patients and providers reported high overall satisfaction (Mean (M) = 3.9 and M = 4.5 respectively). Provider satisfaction was highest with platform ability to identify/assess patient symptoms and address patient concerns/distress derived from PROs (M = 4.7 each). Patients and providers reported high system usability (M = 4.0 and 4.3). Care plan data for 90% of patients (n = 44) were also analyzed (n=19 ovarian cancer, n=12 cervical cancer, and n=13 uterine cancer). Each patient received an average of 3 care plans (Range (R) = 1-7) and 6.6 unique recommendations (R = 2-11), over an average of 9 weeks (R = 1-32). The average number of unique recommendations made per care plan was 4.0 (R = 1-9). Most common recommendations were for anxiety/depression (89% of patients, 59% reporting moderate-severe levels at its worst), moderate to severe fatigue (80% of patients), pain (64% of patients, 46% reporting moderate-severe levels at its worst), hot flashes (56.8%), and cognitive dysfunction (54.5%). Usability and satisfaction are high; use of the platform results in high rates of referrals for patients with gynecologic cancers. Further studies are needed to determine whether supportive care plans enhance self-care/follow-through on recommended referrals and improve patient outcomes. The CPS is the first technology available that delivers personalized electronic care plans derived from PROs and aligns with quality care standards and current evidence.

## **EFFICACY OF A TRANSDERMAL GRANISETRON PATCH IN CONTROLLING CHEMOTHERAPY-INDUCED NAUSEA AND VOMITING (CINV) IN HEMATOLOGIC CANCER PATIENTS.**

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Multiday, highly emetogenic chemotherapy regimens are commonly used in the management of hematologic malignancies. Despite prophylaxis, CINV, especially during the delayed phase, remains a barrier to attaining planned chemotherapy dose on time for some patients. A granisetron transdermal system (GTS) has been shown to be as effective as oral granisetron (OG) in controlling CINV across multiple tumor types. This post-hoc analysis examined efficacy and safety of GTS in hematologic cancer patients. A phase 3 study has been published comparing GTS (7 day application) to OG (2 mg/day) in patients receiving moderately or highly emetogenic chemotherapy for 3-5 days. Data were limited to patients with a primary tumor diagnosis of lymphoma (n=51), leukemia (n=27), or multiple myeloma (n=5). The rates of complete control (CC; no vomiting, mild nausea, no rescue medication) and complete response (CR; no vomiting, no rescue medication) using either GTS or OG were compared during the acute (first 24 hours) and delayed phase (days 2 to 5) following chemotherapy. Need for rescue medication and patient assessment of response to therapy were also compared. 83 hematologic cancer patients (31 GTS, 52 oral granisetron) were included. The majority received a non-cisplatin regimen with corticosteroids (59 patients; 71%). Patients received chemotherapy for 3 days (37; 45%) or 4 to 5 days (46 patients; 55%). During the acute phase, the CC rate of 94% and CR rate of 94% in the GTS group were similar to rates in the overall population (94% and 95%, respectively). There was no difference in CC and CR between GTS and OG in the acute phase (p=0.90 and 0.59, respectively). In the delayed phase, GTS resulted in CC in 87% and CR in 90%; compared with CC in 77% and CR in 81% of patients given OG (p=0.26 and 0.25, respectively). Rescue medication use and patient assessment of overall response to therapy did not differ between arms (p=0.60 and 0.92, respectively). GTS was well tolerated; the only treatment related adverse event was one case of mild constipation. This retrospective analysis suggests GTS may be appropriate for prevention of CINV in hematologic cancer patients.

**Underwriting:** Prostrakan, Inc.

**KNOWLEDGE AND PERCEPTIONS OF PALLIATIVE CARE IN AMBULATORY ONCOLOGY PATIENTS.** Tara Donnelly, RN, BSN, Overlook Medical Center, Summit, NJ; Erica Fischer, MSN, CNS, CBCN®, AOCNS®, Overlook Medical Center, Summit, NJ; Lee Anne Caffrey, RN, MSN, OCN®, Overlook Medical Center, Summit, NJ; Donna Delicio, RN, MSN, ANP-BC, Overlook Medical Center, Summit, NJ; Lydia Nadeau, RN, FACHE, Overlook Medical Center, Summit, NJ; Gillian McKie, RN, APN, ACHPN, Overlook Medical Center, Summit, NJ

Palliative care (PC) is often misconstrued as end-of-life care. Misconceptions lead to delayed symptom management, decreased referrals and knowledge deficits by patients and providers. The American Society of Clinical Oncology (ASCO) has issued a new clinical practice guideline further supporting the stance on early integration of PC services for stage IV patients. This study sought to identify patients' perceptions, knowledge and intention to seek PC. An IRB-approved, cross-sectional prospective study sampled 139 adult oncology patients using a convenience sample from a community hospital-based

ambulatory cancer center. Two validated tools were utilized; The Knowledge of Care Options and Perceptions of Palliative Care Instrument. Descriptive statistics including Pearson's Correlation and multivariate regression analysis were used. Preliminary data analysis found patients averaged >90% on knowledge questions about hospice, <70% on PC questions and overall intention to seek PC was low (mean=2.53/7). The term 'PC' did not elicit anxiety, fear or stress; PC referrals provoked neutral responses (4/7) on questions about considering the future, discussing dying and concern over terminal disease. There was a positive relationship between those who self-identified needs for PC services and intention to seek (r=0.308, p=0.001). Avoiding PC discussions may be based on inaccurate provider assumptions of patient fears. Data suggests patients don't perceive PC negatively but require more information about its benefits. Opportunities for earlier introduction of PC and patient education are essential to minimize impact to quality of life. In this cancer center, understanding baseline knowledge and perceptions has led to clinical practice changes such as improved patient education materials, an onsite PC nurse practitioner and increased discussions between the multidisciplinary team leading to increased referrals. Screening patients and caregivers at diagnosis may also assist in guiding discussions, identifying needs and dispelling myths toward avoiding referral delays and earlier symptom management. Employing these tools supports ASCO's opinion to integrate PC at diagnosis. Further research is still needed to examine provider knowledge and perceptions. Formal presentation will include participant demographics, tool components, and data analysis on relationships between knowledge and intention to seek, knowledge and perceptions, and demographics.

**AURICULAR POINT ACUPRESSURE TO MANAGE ARTHRALGIA RELATED TO AROMATASE INHIBITORS IN BREAST CANCER SURVIVORS.** Chao Hsing Yeh, PhD, University of Pittsburgh, Pittsburgh, PA; Wei Chun Lin, MD, University of Pittsburgh, Pittsburgh, PA; GJ van Londen, MD, UPMC, Pittsburgh, PA; Lunc Chang Chien, Dr.PH, University of Texas, San Antonio, TX; Dana Bovbjerg, PhD, UPMC, Pittsburgh, PA

We conducted a pilot, waitlist control (WLC) study to investigate the feasibility of 4 weeks of auricular point acupressure (APA) for aromatase inhibitor induced arthralgia (AIA) in breast cancer survivors (BCS). A recruitment letter with study information was mailed to 55 BCS. Patients in the WLC remained in the waitlist condition for 4 weeks before they received APA. The APA was 4 weeks with weekly cycles. Each weekly cycle included one office visit, 5 days of wearing the tape with seeds on both ears, and 2 days without, minimizing the risk of allergic reactions to the tape and allowing the points on the ear to recover and restore sensitivity prior to the next treatment. After seed placement by the trained therapist, patients continued to press the seeds at home (i.e., 3 times per day, 3 min per time) to manage AIA. Outcomes (pain, function, APA practice, and analgesic use) were assessed at baseline, daily during APA treatment, weekly during treatment, at end-of-intervention, and at 1-month follow-up. The mean age of the participants was 55.40 years (SD = 10.79, range 40-69). Results. We received 29 self-referrals in response to the recruitment letter within 3 weeks. The response rate was 53%. Fifteen participants were excluded because they were unable to keep a study appointment, 14 enrolled, one dropped out because of ear discomfort after the first APA treatment, and 13 participants (nine Caucasian and four non-Caucasian) completed the study (93% retention rate). The adherence rate of APA practice was 95% in week 1 and at least 85% throughout the 4 weeks. Adverse effects (i.e., ear sensitivity [n = 1, 7%], soreness [n = 2, 14%], and discomfort [n

= 1, 7%]) of APA were minor after seed placement. No patients reported any instance of the tape and/or seeds falling off their ears. APA shows promising evidence of reduction in 53% pain reduction, 27% less stiffness as well as 37% improvement of physical function (Cohen's *d* effect sizes ranged from 0.61 to 4.78). APA is an attractive strategy for patients to self-manage AIA and resume many daily tasks interrupted by pain.

**EXPLORING THE RELATIONSHIP BETWEEN PRE-TREATMENT BMI AND POST-TREATMENT SEXUAL FUNCTION IN WOMEN WITH ENDOMETRIAL CANCER TREATED WITH VAGINAL BRACHYTHERAPY.** Rubi Garcia, RN, BSN, Emory University Nell Hodgson Woodruff School of Nursing, Atlanta, GA; Alexandra Hanlon, PhD, University of Pennsylvania School of Nursing, Philadelphia, PA; William Small, MD, FACRO, FACR, FASTRO, Loyola University Chicago Stritch School of Medicine, Chicago, IL; Jessica Wells, RN, PhD, Emory University Nell Hodgson Woodruff School of Nursing, Atlanta, GA; Deborah Bruner, RN, PhD, FAAN, Emory University Nell Hodgson Woodruff School of Nursing, Atlanta, GA

Endometrial cancer (EC) is the most prevalent gynecological cancer in the United States. Current treatment for the most prevalent intermediated stage EC involves surgery with adjuvant radiation therapy (RT), usually delivered by vaginal brachytherapy (VBT). Most therapies associated with treatment of EC have shown to interfere to some extent with different aspects of sexuality. Sexuality is a complex phenomenon that includes the interplay of multiple factors including chronic disease such as obesity and cancer and its treatments. The literature contains only few inconclusive studies looking at the relationship between BMI and sexual function among EC patients. Therefore, the purpose of this secondary analysis is to explore the association between pre-treatment BMI and sexual function—as measured by the Female Sexual Function Index (FSFI)—in EC patients pre- and post-RT via VBT. The data is based on the parent study—Adherence Intervention for Dilator Use Following Endometrial Cancer. Sociodemographic factors, age, and BMI data was collected for 30 patients with EC stage I-III who received post-operative VBT by standard technique. The mean age at enrollment was 60.6 years ( $\pm 9.30$  years) and the mean pre-treatment BMI was 30.1 ( $\pm 7.58$ ). FSFI was used as a reliable and valid measure to assess the degree of female sexual function, with a total score  $\leq 26.55$  classified as female sexual dysfunction. The study sample was divided into two groups according to BMI at enrollment—BMI  $\geq 30$  grouped as obese and BMI  $< 30$  grouped as non-obese. FSFI for each BMI group was analyzed using paired t-test. FSFI at baseline for the non-obese cohort ( $N=17$ ) was 12.47 ( $\pm 5.96$ ) and for the obese cohort ( $N=13$ ) was 14.48 ( $\pm 6.24$ ) ( $p=0.383$ ). At six months, paired t-test revealed a significant change in FSFI according to BMI group. The FSFI score for the non-obese cohort increased to 19.33 ( $\pm 6.97$ ) and for the obese cohort FSFI score decreased to 13.74 ( $\pm 6.58$ ) ( $p=0.036$ ). This suggests that non-obese women had better sexual function compared to obese women at 6 months post-treatment in this study cohort. However, this study was underpowered (0.139) to fully explore the relationship between BMI and sexual function. Future work with larger samples is

warranted to explore factors related to sexual dysfunction in this population.

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**ASSOCIATIONS AMONG INFLAMMATION, PERCEIVED STRESS, AND LIFESTYLE BEHAVIORS OF INDIVIDUALS WITH CHRONIC GRAFT-VERSUS-HOST DISEASE (CGVHD) FOLLOWING ALLOGENEIC STEM CELL TRANSPLANT (SCT).** Debra Kelly, PhD, RN, OCN<sup>®</sup>, University of Florida, Gainesville, FL; Debra Lyon, PhD, RN, FAAN, University of Florida, Gainesville, FL; Cynthia Garvan, PhD, University of Florida, Gainesville, FL; John Wingard, MD, University of Florida, Gainesville, FL

Survivorship after allogeneic SCT has increased but is threatened by cGVHD, a major cause of non-relapse mortality. cGVHD involves immunologic perturbations that mimics other autoimmune disorders. Manifesting in one or more body organs, cGVHD may be mild to life-threatening. In addition to physical stress, psychological stress may exacerbate immunologic responses resulting in chronic inflammation. Maintaining a healthy lifestyle may mitigate stress and inflammation; however, is relatively unexamined in cGVHD. Understanding potentially modifiable behaviors hypothesized to correlate with inflammation and stress may inform self-management strategies to improve survivorship. This was a secondary analysis of a correlational study (IRB# HM15063) that enrolled 24 adults ( $>21$  years) with cGVHD. After obtaining informed consent, data was collected by medical record and validated self-report measures. Blood (3 ml) was collected and stored in a  $-80^{\circ}$  freezer until analysis. Inflammatory markers were analyzed using BioPlex<sup>®</sup> multiplex and enzyme-linked immunosorbent assays. Results were reported using descriptive statistics and Spearman's rank correlations. All statistics were done using SAS version 9.3 with the level of significance set at .05. The mean age (years) was 53. Most participants were Caucasian (87.5%), female (58.3%), had AML (29.2%), and had moderate to severe cGVHD (83.3%). Over half (62.5%) had involvement of 3-5 organs. Participants reported the lowest scores on nutrition, activity and stress management behavior sub-scales. Spiritual growth and perceived stress were significantly related ( $r = -.68$ ,  $p < .01$ ). Several behaviors and perceived stress items significantly correlated with markers of inflammation. Associations were demonstrated among lifestyle behaviors, perceived stress and inflammation. Individuals did not routinely engage in health-promoting lifestyle behaviors reported by the American Cancer Society as essential for cancer survivorship. Nurses are in the unique position to educate individuals with cGVHD on the importance of maintaining a healthy lifestyle. Future research to understand why these behaviors are neglected and nurse led interventions focusing on these behaviors may increase longevity and quality of life for individuals with cGVHD. This study is the first known study to examine health-promoting lifestyle behaviors in individuals with cGVHD in relationship to perceived stress and inflammation as mechanisms purported to affect survivorship of individuals with cGVHD.

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## E-Poster Clinical Abstracts

Visit [congress.ons.org](http://congress.ons.org) for the dates and times of the e-Poster Presentations.

### E-1

**TAKING HUDDLE TO THE NEXT LEVEL: IMPLEMENTING A RISK ASSESSMENT PATIENT ACUITY TOOL TO IMPROVE CONTINUITY AND OUTCOMES.** Esther Koulikov, RN, BSN, UC Davis Medical Center, Sacramento, CA; Debra Burgess, RN, BSN, MSHA, UC Davis Medical Center, Sacramento, CA; Brenda Bernardez, RN, MSN, UC Davis Medical Center, Sacramento, CA; Rick Harse, RTT, UC Davis Medical Center, Sacramento, CA

Coordination of cancer care is complex, involving multiple sites for entry. Head and neck patients require multidisciplinary management involving surgeon, oncologist, radiation therapy, psychiatrists/social workers, nursing and nutritional support. Patients treated with combined modality treatment (CMT) are also at high risk for developing complications leading to the need for urgent hydration and treatment breaks. Complex treatment plans necessitates optimal communication between Cancer Center clinics, Infusion Room and Radiation Oncology to facilitate treatment as care transitions to outpatient therapy and along the care continuum. The purpose of this project is to improve the continuity of care, clinical outcomes and interdepartmental communication at the Cancer Center for CMT patients and other high risk cancer patients. A nurse-led interdepartmental huddle process aimed at improving patient outcomes and communication between departments was developed. Huddle sessions included nurses/nurse navigator, case manager, social worker, dietitian, and other clinical staff as needed. CMT and other patients at high risk for developing complications were the priority. This typically included head and neck, GYN, colorectal cancers and patients lacking family/socioeconomic support systems. Frequently, these patients needed help to coordinate appointments, and extra support to prevent weight loss, dehydration, anxiety and pain. Once referred for huddle patients were re-assessed weekly to ensure the huddle/navigation process would benefit them. This process led to the development of a "risk-based" acuity tool to objectively evaluate high-risk patients. Metrics for improvement included pre/post staff surveys of the huddle process; need for urgent hydration during treatment; and number of unplanned therapy breaks. Post huddle issues with interdepartmental communication dropped to 6% leading to higher staff satisfaction. There was a 19% decline in administration of urgent hydration in Radiation Oncology during RT compared to pre-huddle. We continue to assess whether patients experienced fewer treatment breaks. The interdepartmental huddle process lead to improved communication and care coordination for our high risk patients improving outcomes using an innovative approach. More studies are needed to monitor treatment complications, and evaluate use of the risk assessment acuity tool to effectively allocate nursing resources to continue to improve patient care.

### E-2

**IS THERE A DIFFERENCE BETWEEN AFRICAN AMERICAN AND CAUCASIAN BREAST CANCER SURVIVORS AND THE INCIDENCE AND SEVERITY OF CHEMOTHERAPY-INDUCED PERIPHERAL NEUROPATHY (CIPN)?** Darcy Burbage, RN,

MSN, AOCN®, CBCN®, Helen F Graham Cancer Center and Research Institute, Newark, DE; Scott Siegel, PhD, Helen F Graham Cancer Center and Research Institute, Newark, DE

Chemotherapy induced peripheral neuropathy (CIPN) is a common adverse effect impacting a large number of breast cancer survivors (BCS) and may result in dose reductions, delays and even discontinuation of treatment. CIPN usually occurs during treatment and may last up to several years post treatment or plateau resulting in a decreased quality of life (QOL). Comorbidities may increase the risk of CIPN and symptoms may be overlooked if survivors aren't adequately evaluated. Oncology nurses are in a pivotal role to assess, educate and monitor CIPN as they serve as the primary point of contact for BCS. Because of this relationship, the Survivorship Nurse Navigator (SNN) noted that African-American BCS voiced concerns with CIPN more frequently than Caucasian BCS. The purpose of this performance improvement project is to assess BCS who have received chemotherapy for the incidence, severity, and impact of CIPN on their activities of daily living (ADL) and QOL to determine if there is a difference in CIPN between African-American and Caucasian BCS. Utilizing the Chemotherapy-Induced Peripheral Neuropathy Assessment Tool (CIPNAT) and an internally developed tool to assess for race/ethnicity, comorbidities, and chemotherapeutic agents, BCS complete surveys during their end of treatment counseling session with the SNN. In addition, each survivor receives written materials on CIPN and an invitation to attend a free educational seminar on CIPN. Referrals are made to Oncology Rehabilitation for those survivors endorsing a score of 4 or more on any area of the CIPNAT. From January through August 2015, 48 BCS completed the CIPN assessment tools. As compared to Caucasian BCS, African-American BCS indicated that CIPN in their hands impacted their ability to work. Preliminary results from this small sample size reveal that African-American BCS were twice as likely to endorse CIPN in their hands as compared to Caucasian BCS (70% compared to 34%) which suggests an impact on their ability to work. Oncology nurses need to be aware of the potential effects of CIPN and how it may impact different races to provide individualized and culturally competent care to improve QOL in BCS.

### E-3

**PATIENT EDUCATION: TEACHING PATIENTS HOW TO DE-ACCESS THEIR PORT-A-CATH AT HOME POST INFUSION OF 5-FLUOROURACIL VIA CADD PUMP.** Patricia Minkler, MS, RN, OCN®, ACNP, Stratton Veterans Medical Center, Albany, NY; Kathleen France, BSN, RN, Stratton Veterans Medical Center, Albany, NY; Cheryl Brennan, RN, Stratton VAMC, Albany, NY; Nicole Martin, RN, Stratton VAMC, Albany, NY; Delores Roberts, LPN, Stratton VAMC, Albany, NY

At the Stratton Veteran's Administration Medical Center patient's travel distances to receive their care, in an effort to decrease unnecessary travel and assist patient's financially a process improvement strategy was developed to address deaccessing at home by the patient or family. The incidence of colorectal cancer is increasing and patients commonly receive the regimen FOLFOX which includes continuous infusion of 5-fluorouracil via a CADD pump. A module was developed by the infusion nurses with pictures and input from patients. Visual cues, reading level, and size of the print was sensitive to the veteran population. All patients receiving the continuous infusion via pump were given the opportunity to participate. A small number of patients that lived close to the hospital declined. The majority of patients that traveled distances did participate and were successful in the procedure. The home care company provided the normal saline, heparin,

chemotherapy spill kits, and necessary equipment to mail the used chemotherapy reservoir back. Phone numbers were provided in the event the pump alarmed or if questions existed. This process improvement enabled patients to decrease their travel and impacted financially. Prior to this effort patients did not have access to a 24 hour on call nurse to assist with any questions or receive a home visit. The evaluations were positive and the process continues.

#### **E-4 IMPLEMENTING STANDARDS TO ENHANCE PATIENT EXPERIENCE.** Renee Barwick, RN, OCN®, Aspirus Regional Cancer Center, Wausau, WI; Wendy Schulz, MSW, OSW-C, Aspirus Regional Cancer Center, and Aspirus Wausau Hospital, Wausau, WI

Cancer is a complex disease process that can impact patients in a variety of ways. Patients experience psychological, social, financial, and behavioral issues that can interfere with their treatment plan and adversely affect their outcome. The 2007 Report of the Institute of Medicine, Cancer Care for the Whole Patient: Meeting Psychosocial Health Needs, emphasized the importance of screening patients for distress as a critical component to providing high quality cancer care. According to NCCN, distress should be recognized, monitored, documented, and treated promptly at all stages of disease. In 2012, the Commission on Cancer implemented the standard 3.2 “Psychosocial Distress Screening” as a phase in standard for 2015. The standard states that the cancer committee develops and implements a process to integrate and monitor on-site psychosocial distress screening and referral for the provision of psychosocial care. We spent months researching best practices and presenting ideas to our Cancer Committee and we implemented a process to screen patients for distress. We developed a screening tool for our RNs to utilize in screening our patients. Our tool included a multidisciplinary approach in which referrals could be made to clinical nutrition, financial services, pastoral care, and social services. Coordination with each of these disciplines played an integral role in meeting the needs of the patients we serve. We educated our Medical Oncology and Radiation Oncology physicians as well as all RN’s in our cancer center. We implemented the process in two phases; we began by screening all new consults for distress in January 2013. Once this process was in place, we went onto phase two by expanding our distress screening to include all new consult visits, new treatments (which included all new chemotherapy starts and radiation starts), at survivorship visits, and the discretion of the RN if noted disease progression or increase distress. We complete monthly audits to monitor adherence and we report to the cancer committee on an annual basis. The documentation of patient needs assisted in obtaining a financial counselor for our cancer program and additional social work support.

#### **E-5 IMPLEMENTING NEULASTA ON-BODY INJECTOR.** Linda Mahler, RN, MSN, OBGNP, ANP-C, Stony Brook Medicine Cancer Center, Stony Brook, NY; Dayna McCauley, Pharm.D., BCOP, Stony Brook Medicine Cancer Center, Stony Brook, NY; Regina DiBlasi, RN, BSN, OCN®, Stony Brook Medicine Cancer Center, Stony Brook, NY; Anielka Perez, RN, BSN, OCN®, Stony Brook Medicine Cancer Center, Stony Brook, NY; Jeannie Gaspard, RN, MSN, ANP, OCN®, Stony Brook Medicine Cancer Center, Stony Brook, NY

Many chemotherapy regimens in use today require the support of granulocyte stimulating factor (GSF) for the pre-

vention of life-threatening neutropenia. In March, 2015 Amgen announced the introduction of a Neulasta delivery kit. The new innovative delivery kit features an On-body Injector. This new delivery method eliminates the need for the patient to return for injection the day after chemotherapy. As Neulasta (pegfilgrastim) and the On-body Injector are only used in oncology practice, this is a topic of significant importance to oncology nursing. The purpose of this study is to monitor the implementation of the Neulasta delivery system in our outpatient facility. Our goal is to provide Neulasta via On-body Injector safely and effectively. We also want to ensure that our patients are satisfied with the new delivery system. Lastly, we want to evaluate the effects of this new device on our outpatient clinic workflow. All outpatient oncology nurses receive education and training on product administration and key patient education items. All patients eligible for standard Neulasta are eligible for the On-body Injector formulation. The patients view video provided by Amgen and receive instructions related to recognition of potential device failure. Patients are contacted by phone within 36 hours to verify dose was delivered without incident. A plan is in place in the event of device failure. Evaluation: Patient satisfaction will be evaluated utilizing a Patient Satisfaction Survey. Device failure rate will be calculated and reimbursement will be tracked. Effect on workflow will be determined by estimated average nursing time to apply and educate for the On Body device, and by capturing the reduced number of follow up visits required. Establishing an effective implementation process for the Neulasta On-body Injector will help to ensure the safe and effective delivery of Neulasta. Improvement in unit workflow is anticipated.

#### **E-6 STANDARDIZATION OF ELECTRONIC NURSING DOCUMENTATION IN RADIATION ONCOLOGY.** Hyun Soo Chae, BSN, ME, RN, OCN®, MedStar Georgetown University Hospital, Washington, DC; Pamela Birch, BSN, RN, OCN®, MedStar Georgetown University Hospital, Washington, DC; Marilyn Ayoob, MSN, RN, MedStar Georgetown University Hospital, Washington, DC; Cynthia Franklin, ASN, RN, MedStar Georgetown University Hospital, Washington, DC

Consistent and clear nursing documentation is essential to providing high quality, continuous patient care. The radiation oncology department at MedStar Georgetown University Hospital is divided into specialized teams based on cancer type and tumor location. Radiation toxicity nursing assessments are site-specific, based on each individual patient’s treatment plan. After the transition from paper-based charts to the electronic medical record (EMR), it became evident that assessment documentation was often inconsistent or incomplete. The standardization project was initiated to ensure continuity of care across specialized treatment teams. The nursing team collaboratively developed a standard nursing documentation form in the EMR. This form contains six essential assessment components for all patients: patient education, medications, allergies, radiation toxicity, performance status, and skin assessment. A self-audit form was created for each member of the nursing staff to review the completeness of their own documentation on a weekly basis. A justification is required when incomplete components are noted at the time of the self-audit. A meeting was held to educate the nursing staff on how to use the tool including self-audit guidelines, and additional individual education was provided to each nurse. The data manager ensured that self-audits follow the prescribed protocol, and the data was analyzed every two weeks during nursing staff meetings. After the first week, 28.9 % of the nursing documentation events contained all required documentation elements. The rate increased to 71.7% at week two, and reached over 80% for weeks three through five. After four months

of monitoring, the rate of completion improved and stabilized at 90%, and the weekly audit was concluded. The standardization of nursing documentation project accomplished consistency and continuity of the completion of essential documentation. This experience can easily be applied at other institutions or other nursing disciplines. Over the course of the audit, drops in the documentation correlated to periods when nurses provided care for other nurses' patients due to vacations or unplanned leave. Practice changes were implemented to divide patient workload by the patients' treatment plan and nursing task when covering for an absent nurse.

#### E-7

**GETTING IT RIGHT THE FIRST TIME: ONCOLOGY RN TELEPHONE TRIAGE.** Kalene Anundson, MS, RN, OCN®, University of Colorado Hospital, Aurora, CO; James Bachman, MBA, University of Colorado Hospital, Aurora, CO; Rosemary Myers, RN, BSN, MS, CHSE, University of Colorado Hospital, Aurora, CO; Lori Allen, MSN, RN, University of Colorado Hospital, Aurora, CO; Barb Wenger, MS, RN, AOCNS®, CRNI, University of Colorado Hospital, Aurora, CO

Telephone triage is a venue used in many institutions to help determine the urgency of a question and relay advice for treatment to the individual/family. The University of Colorado Hospital/ Cancer Center (UCH/ CC), has many Oncology specialties with RNs working in 13 different clinical areas. A need for a consistent process of telephone triage was identified in a 2013 survey querying RNs and Providers about their use of, and support for, Oncology specific triage protocols. Various venues for telephone triage were explored by the educational team. The purpose was three-fold: Identify a resource for Oncology specific telephone triage protocols, attempt a licensing agreement with the Oncology Nursing Society (ONS) to integrate their telephone triage text into the Electronic Health Record (EHR), and train RNs on these protocols and documentation. A 2013 pre survey identified a need for a consistent approach to telephone triage. The ONS telephone triage text was determined to be a very appropriate resource. ONS was contacted with a request to purchase their text to integrate into UCH/ CC EHR. After negotiation and leadership support /funding, an agreement was finalized. Collaboration between nursing and the Information Technology (IT) team began to integrate, review, and validate the protocols in the EHR. Training needs were assessed, developed, and implemented. Training began in April 2015 with a pilot group of approximately 20 RNs from various specialty practices. Post surveys were collected after each training session and content was modified for future participants based on feedback. Training for all RNs will soon be complete and final evaluation of the project and RN usage of the protocols will be determined. Oncology RNs have a unique opportunity to utilize Oncology specific protocols for telephone triage. Cancer patients are high acuity, and the nurses who care for them should advocate for their specific needs. The ability to utilize a resource from our professional nursing organization and have it integrated into the EHR is extremely valuable, and this opportunity should be explored.

#### E-8

**CANCER RISK MANAGEMENT PROGRAM FILLS A GAP FOR HIGH RISK PATIENTS.** Denise Musser, APRN-CNS, OCN®, ANG-BC, University of Minnesota Health, Minneapolis, MN; Kristin Niendorf, MSN, CGC, University of Minnesota, Minneapolis, MN; Mary Ahrens, MSN, CGC, University of Minnesota Health, Minneapolis, MN; Colleen Wherley, MSN, CGC, University of Minnesota Health, Minnesota,

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Between 5%–10% of all cancers are estimated to have a hereditary or familial component. In 2011, University of Minnesota Health identified a need within the oncology service line to be a specialized clinic for patients who are identified to be at higher risk for cancer than the general population. These patients may be seen twice a year and need regular medical testing and preventative care, but do not need to be seen by an oncologist as they do not have cancer. At the time the Cancer Risk Management was proposed, an estimated 375 patients fell into this category at five clinical locations throughout the Minneapolis area. In response to this need, the Cancer Risk Management Program (CRiMP) began on Jan. 31, 2014. The program, a collaboration among an advanced practice oncology nurse, genetic counselors, surgeons, oncologists and other physicians, offers primary, secondary and tertiary prevention. It ensures these “high risk” patients, who need prevention services the most, are not lost to follow up. Cancer genetics counselors serve eight clinics, assess family histories and help patients reach decisions about genetic testing. Patients considered to be at a significantly higher risk than the general population (usually 20% lifetime risk or higher) by cancer risk models, qualify for the program. An APRN-CNS working in collaboration with consulting physicians provides examination, medical management and care coordination for patients who usually have heightened risk for multiple types of cancers. In addition to the physical exam, the APRN provides patients an individualized surveillance plan, orders prescriptions and tests and follows the patient. Currently, 180 patients have enrolled. Chart reviews found that 79% were not receiving surveillance by NCCN standards prior to enrollment. These include patients with BRCA1, BRCA2 genetic mutations, Familial Adenomatous Polyposis, Lynch, Cowden's, MEN1, MEN2, Li Fraumeni, Peutz-Jeghers and Von Hippel-Lindau syndromes, ulcerative colitis, women who are considered to be high risk for breast cancer (DCIS, LCIS, childhood radiation patients). An estimated 8–10 first degree relative of these patients are also at heightened risk for cancer. They also now have the opportunity to have screenings coordinated by a team familiar with their needs.

#### E-9

**CREATION OF CHILDREN'S PROGRAM ADDRESSES UNMET NEED AT ONCOLOGY HOSPITAL.** Lindsay Rehm, BSN, RN, OCN®, Cancer Treatment Centers of America, Tulsa, OK

Cancer Treatment Centers of America employees recognized an unmet need for our patients with children. Staff was assisting with childcare while parents received treatment, and they were frustrated with the lack of resources available to help the increasing number of parents with children visiting the center. Patients were asking when and what do I tell my children? What resources are available and what type of support is available for my children? According to the National Institutes of Health, 2.85 million U.S. children under the age of 18 are living with a parent who has been diagnosed with cancer. Our employees wanted to create a program for our patients and their children to address this gap. Research revealed that The Children's Treehouse Foundation offers training for the Children's Lives Include Moments of Bravery (CLIMB) program, a support program with the mission to “ensure that every child whose parent is diagnosed with cancer is given the early tools and emotional support to cope.” A patient education nurse and a social worker attended the training and adapted the format for our patient population and collaborated with other cancer centers to create a program focused on the needs of teens. Patient education nurses collaborated with multiple departments to identify the best resources

for our patients and created a branded brochure: "Talking to Children about Cancer". The brochure contains a description of the program, information about talking to kids about cancer, age-appropriate print and online resources and lists of contact information. Guest services started distributing activity backpacks and added child-friendly puzzles, board games, and media to the offerings for guests. The library was expanded to include books for children about cancer as well as entertaining books. Patients are utilizing these resources and feedback surveys are consistently positive. Staff consistently refers patients to the program. CLIMB is offered at least quarterly and various support is provided as needed to families throughout the continuum of care. Children increase their knowledge of cancer and its treatments through tours and discussion. They learn to communicate with their parent and how to express their feelings.

## E-10

### **USING GOOGLE TRANSLATE™ FOR NON-NATIVE ENGLISH TRANSLATION OF BREAST CANCER TREATMENT SUMMARIES.**

**Patricia Kormanik, RN, MS, AOCNP®, B-C, UCSD Moores Cancer Center, La Jolla, CA**

The Commission on Cancer (CoC) and the National Accreditation Program for Breast Centers (NAPBC) have set standards for providing patient treatment summaries for those treated with curative intent. San Diego, with > 3 million residents, includes many self-identified monolingual non-English speaking households, speaking languages other than Spanish. These additional non-English languages include Tagalog (1.49%), Vietnamese (1.08%) and Farsi (0.24%). Therefore, these patients should receive treatment summaries in languages they can understand and are relevant to their ethnicity. This project assessed the ease of use and accuracy of the widely-available Google Translate™ internet translation application, when translating Treatment Summaries for selected non-native English speakers. These languages represent underserved populations in the community healthcare setting. A pilot project involved translating the ASCO Breast Cancer Treatment Summary via Google Translate™ to targeted languages. To confirm accuracy, selected clinical colleagues—bilingual in the target languages of Tagalog, Vietnamese and Farsi—reviewed the language translations. Following their reviews, each reviewer was interviewed to identify summary accuracy and clarity of concept. Based on post-translation interviews with the reviewers, Google Translate™ was determined easy to use and the translated Treatment Summaries readable and comprehensible. Some errors in grammatical syntax had occurred but the reviewers noted these errors and corrected them without changing meaning. To meet CoC and NAPBC standards of care, multicultural patient populations should receive Treatment Summaries in languages targeted to those populations. Based on this pilot project using Google Translate™, this strategy to translate summaries provides a reliable translation resource tool in the clinical setting. Google Translate™ is an excellent option for translation since it is updated frequently, expanding words, concepts and dialects; it currently provides translation in 88 languages. In addition, Google Translate is available in pc and mobile application (App), which enables this translation strategy to be widely accessible in the community healthcare setting and at no cost.

## E-11

### **POST-OPERATIVE COMPARTMENT SYNDROME: CAN WE PREVENT IT? May Saulan, MSN, MPS, RN, CNOR, Memorial Sloan Kettering Cancer Center, New York, NY**

Post-operative Compartment Syndrome (CS) is condition in which increased pressure within a limited space (Osteo fascial in extremities) compromises the circulation and function of the

tissues within that space after long surgery. Patients undergoing oncologic surgery are at risk for CS and our comprehensive cancer center had 9 incidents of post operative CS in the last 5.5 years. This is an evidence-based practice project to reduce the rates of post-operative CS for patients undergoing oncologic surgery at a comprehensive cancer center. We aim to identify risk factors with our patient population that will develop post-operative CS and develop initiatives for prevention and early detection. A literature review of risk factors was conducted and compared to our cancer population. A retrospective review of 55,281 patient records through an IRB approved protocol was conducted to understand the scope of the problem and to identify risk factors such as patient's weight and gender and length of surgery. Based on our findings I educated nursing staff; both at the council and unit level, as well as hospital-wide at Nursing Grand Rounds. I revised our positioning policy, worked with Nursing Informatics for alerts on our electronic medical record for patients that meet our risk factors for CS, changed our practice in positioning these high risk patients, and collaborated with in-patient and PACU nurses on how to detect and treat early sign of CS. Post-operative CS is a rare but a life threatening complication after surgery that hasn't been addressed. This project educated oncology registered nurses and other staff to this debilitating surgical outcome and will help to prevent future cases. Early prevention and awareness are the keys in preventing this devastating post operative complication. Electronic alerts to identify patients that are high risk for CS are initiated 24 hours before surgery. Once identified, positioning algorithm is followed to carefully position high risk patients during surgery.

## E-12

### **EXAMINING CURRENT PORT-A-CATH FLUSHING PRACTICE: APPLYING THE EVIDENCE. Jeanette Cowin, BSN, RN, OCN®, Missouri Baptist Medical Center, St. Louis, MO; Mary Miles, BSN, RN, OCN®, Missouri Baptist Medical Center, St. Louis, MO**

Maintenance flushing of a Portacath after completion of treatment for cancer continues to be a part of a patient's life as long as they retain their vascular access device. Manufacturers of the Portacath recommend a flushing frequency of every four to six weeks as also endorsed by the Oncology Nursing Society (ONS). However, in our outpatient cancer center, the practice of flushing frequency every twelve weeks has been an established practice. At our center, most patients want to retain their Portacath. This project was undertaken to determine whether our current practice was supported by evidence or if it should be changed. The following clinical question directed the project: In adult cancer center outpatients on maintenance therapy with a Portacath, does flushing every 12 weeks compared with the manufacturers' recommendation of every four weeks maintain patency and decrease patient cost? After a critical literature review, data was gathered on patients currently receiving maintenance flushing for their Portacaths for a 12-month period from January through December 2014. Data was collected for flushing interval, use of tissue plasminogen activator (tPA), use of dye studies, and primary cancer diagnosis. At least three flushing intervals over the 12 months were needed for analysis resulting in a final sample of 135 patients. Although patients were instructed to return for flushing every 12 weeks, most patients did not adhere to this schedule. Only 16 patients required tPA reflecting an 11.8% occlusion rate in our sample, below the published rate of 14% to 36% in patients within one to two years of catheter placement. Over the 12 month time frame, four follow up dye studies were conducted to investigate repeated occlusion for patients who did not want to have their line removed. The 12-week interval demonstrated a 69% reduction in cost for the patient. Current data at our cen-

ter indicates that extending the Portacath flushing interval to 12 weeks is safe, effective, and economical for these patients. Analysis also identified opportunities to develop a guideline for use of dye studies to determine patency when repeated occlusions require treatment with tPA and the patient sought to retain the Portacath.

### E-13

#### **ADVANCED PRACTICE NURSES PROMOTE EVIDENCE BASED PRACTICE AMONG SURGICAL ONCOLOGY NURSES.**

Lisa Parks, MS, RN, CNP, James Cancer Hospital, Columbus, OH; Allison De Villiers, MSN, RN, OCN®, ACNS-BC, James Cancer Hospital, Columbus, OH

Quality events involving nasogastric tubes placed in the bronchus and duodenum of postoperative patients triggered a clinical nurse specialist (CNS) and nurse practitioner (NP) to meet with managers of a surgical oncology unit to address patient quality issues. A list of senior staff nurses was compiled and contacted to develop a workgroup. The goal of the project was to improve the knowledge of surgical oncology nurses caring for surgical oncology patients with surgical tubes and drains. The purpose of the work group was to develop an evidence based educational plan for all staff nurses with competency assessment of nursing care of surgical tubes and drains. Management agreed to schedule workgroup nurses over a one week period to check off all staff nurses working on the surgical oncology unit. The work group of senior nurses under the guidance of the CNS and NP developed an educational program involving posters explaining postoperative care of surgical tubes and drains. A pre and posttest measurement tool was developed to assess level of improvement of nurse's knowledge of surgical tubes and drains. The workgroup was checked off by the CNS using the competency checklist. The work group was then assigned by management groups of nurses to be assessed with the competency checklist. Knowledge was evaluated by a pre and posttest assessment and by completion of the competency check sheet which showed an improvement from 83.1% to 90.6%. No further quality events have been reported. This project enabled these nurses to be identified as unit leaders for future unit projects. Management now has a competency assessment for all nurses working on the surgical oncology unit. The CNS and NP now act as mentors for nurses wishing to work on unit projects in collaboration with unit management, as the CNS and NP are skilled in using relevant research, change theory, and protocol development. Advanced practice nurses are adept in change theory. Using senior nurses to change their peer's practice promoted collegiality and improved patient care of the surgical oncology patient.

### E-14

**IMPLEMENTING EVIDENCE-BASED STRATEGIES TO REDUCE UNIT NOISE LEVELS IN ORDER TO INCREASE PATIENT HEALING, AND IMPROVE STAFF COMMUNICATION AND PATIENT SATISFACTION SCORES.** Preston Andrew, RN, Duke University Hospital, Durham, NC; Alice K. Meise, RN, BSN, OCN®, Duke University Hospital, Durham, NC; Lindsey Gregg-Kearns, RN, BSN, OCN®, Duke University Hospital, Durham, NC; Nicola Brooksbank, RN, BSN, OCN®, Duke University Hospital, Durham, NC

On our 31-bed hematology-oncology unit, increased noise levels directly affected patient satisfaction scores. Evidence shows that excessive noise impairs quality and effectiveness of healing, staff communication, and patient satisfaction. Purpose: To reduce unit noise levels to improve patient and

staff quality-of-life, overall patient satisfaction and staff communication. A unit-based Noise Reduction Team identified unit noise issues and sources. The NRT informally sought interdisciplinary opinions on unit noise levels to identify stakeholders and engage support for noise reduction (NR) intervention implementation. The literature review aided in identifying NR interventions aimed to reduce negative effects on healing, communication, and sleep. NRT took noise measurements using a decibel meter at team stations, delivery carts/stock suppliers, tube station, and door closings (e.g. medicine cabinet, supply doors, linen closets). NRT then formulated an education plan for staff, patients/families, and ancillary departments that have unit activities: including a power-point presentation that focused on the impact of noise on healing and the introduction of NR interventions. NR interventions were: 1) placing Yacker Trackers™ in high noise areas to remind staff of noise levels, 2) placing "Healing in Process" signs at our unit front door and visible hallway areas, 3) distributing "Silent Hospitals Help Healing" buttons to staff to wear daily on their scrubs, and 4) educating all newly admitted patients and families about their role in NR interventions. Noise levels on our unit have been markedly reduced as staff and patients continuously look to the Yacker Tracker™ to monitor noise levels. Patient satisfaction scores have improved from an initial 30% to current scores of 70%. As there is occasional practice drift, the NRT continuously re-engage staff in NR interventions. Post-intervention staff surveys indicate a perception of a less noisy work environment, workflow improvement, and an environment of safety and improved communication. An NR program involving targeted interventions has improved patient satisfaction, patient safety, and staff communication. This program has served as a successful example for implementation across our health system.

### E-15

**EVALUATION OF PRACTICE PATTERNS FOR PREVENTION OF CHEMOTHERAPY-INDUCED NAUSEA AND VOMITING (CINV) AND ADHERENCE TO ANTIEMETIC GUIDELINES: RESULTS OF A SURVEY OF ONCOLOGY NURSES.** Rebecca Clark-Snow, RN, BSN, OCN®, University of Kansas Cancer Center, Westwood, KS; Cynthia Rittenberg, RN, MN, AOCN®, FAAN, Rittenberg Oncology Consulting, Metairie, LA; Mary Affronti, DNP, RN, MHSc, ANP, Duke University School of Nursing, Durham, NC

Studies have suggested that adherence to established antiemetic guidelines is suboptimal. With appropriate use of evidence-based antiemetic regimens, CINV can now be prevented in most patients. Oncology nurses, as part of a multidisciplinary team, are in a unique position to promote and reinforce guideline-recommended antiemetic prophylaxis, and improve adherence to evidence-based guideline recommendations. The purpose was to explore among oncology nurses (1) awareness of antiemetic guidelines, (2) "real world" utilization of antiemetics for prevention of acute (Day 1: day of chemotherapy) and delayed (Days 2-5) nausea/vomiting associated with highly (HEC) and moderately emetogenic chemotherapy (MEC), and (3) adherence to guideline recommendations. In September 2015, ONS:Edge invited 7,974 practicing oncology nurses (ONS members) to participate in an online survey; 531 responses were received. Awareness of National Comprehensive Cancer Network (NCCN) antiemetic guidelines was highest (73%). Practice patterns revealed most frequently used antiemetics as: HEC setting: Day 1: 5-HT3 receptor antagonists (RAs) (94% of respondents), steroids (93%) and NK1RAs (81%) Day 2 and after: 5-HT3RAs (78%) and steroids (71%) MEC setting: Day 1: 5-HT3RAs (95%) and steroids (89%) Day 2 and after: 5-HT3RAs (80%) In the HEC setting, key discrepancies between antiemetic use compared with guideline recommendations were under-

utilization of NK1RAs on Day 1 (19% not using) and high use of 5-HT3 RAs (78%) on Days 2 and after, where the guideline recommendation is a steroid. In the MEC setting the use of phenothiazones (47%) and benzodiazepines (30%) on Day 2 and after is inconsistent with guideline recommendations. The most common barrier interfering with administration of guideline-recommended agents was physician preference. Satisfaction with current antiemetics, product cost/insurance coverage, and lack of guideline awareness also play a role. The greatest challenges in managing CINV within respondent's practice(s) were reported as "controlling nausea/vomiting in the delayed phase" and the "impact of CINV on patients' quality-of-life". This survey highlights opportunities to increase nurses' awareness of antiemetic guidelines, to develop practical multi-faceted approaches for overcoming barriers interfering with their use within their practices, and to ultimately improve CINV control and quality-of-life for patients undergoing emetogenic chemotherapy.

## E-16

**USING TRAIN-THE-TRAINER METHODOLOGY TO VALIDATE CHEMOTHERAPY COMPETENCIES ACROSS A LARGE HEALTH SYSTEM.** Clara Beaver, MSN, RN, AOCNS®, ACNS-BC, Karmanos Cancer Center, Detroit, MI; Barbara Gimbert, BSN, RN, OCN®, Karmanos Cancer Center, Detroit, MI; Morris Magnan, PhD, RN, Karmanos Cancer Center, Detroit, MI

Nurses working in chemotherapy infusion centers regularly face the challenge of protecting oncology patients from harm. Accessing ports, administering vesicants, and managing chemotherapy spills, for example, must be done flawlessly to ensure patient safety. In the wake of a state-wide merger of two health care systems, the Ambulatory Oncology Nursing Quality Consortium (AONQC) was tasked with the responsibility of standardizing nursing care across 17 urban and rural ambulatory infusion centers which were essentially functioning independently. Site evaluations revealed that adherence to best-practice guidelines was haphazard at some sites and many practices were governed by loosely defined standards of practice. Consequently, in order to ensure a uniform standard of practice across all sites, there was a need to strengthening the capabilities of the nursing staff by ensuring that all infusion nurse were aware of and able to demonstrate competencies related to patient safety. Direct observation using detailed checklists is a well-recognized means of validating behavioral competencies. However, the successful implementation of direct observation of staff competencies requires having a cadre of well-trained assessors. To meet the need of having a cadre of well-trained assessors, a train-the-trainer educational program was developed and implemented. Before the launching the educational program, "characteristics of well-trained assessors" were established and agreed upon by the AONQC. Well-qualified experts taught the assessors how to validate competencies using detailed checklist and how to provide appropriate feedback to assess. To date, 8 assessors have been trained and 67 infusion nurses have been validated for up to 20 competencies through direct observation. With the challenges of validating competencies of high risk skills, oncology educators and preceptors may find the "characteristics of well-trained assessors" and detailed competency checklist useful in their practice.

## E-17

**ORAL CHEMOTHERAPY ADHERENCE; A NOVEL NURSING INTERVENTION.** German Rodriguez, MSN, RN, Laura & Isaac Perlmutter Cancer Center, New York, NY; Theresa

Ryan, MD, Laura & Isaac Perlmutter Cancer Center, New York, NY; George Joseph, MS, RN, Laura & Isaac Perlmutter Cancer Center, New York, NY; Minerva Utate, MSN, ANP-BC, OCN®, Laura & Isaac Perlmutter Cancer Center, New York, NY; Thelma St. Victor, MSN, FNP-BC, Laura & Isaac Perlmutter Cancer Center, New York, NY

In the ambulatory care setting chemotherapy regimens have become increasingly complex with combination of induction treatments and oral medications. Patients who do not adhere to oral chemotherapy are at risk of worse clinical outcomes including but not limited to: disease progression, disease recurrence, increased physician visits; higher hospitalization rates, longer hospital stays, and overall increased cost \$290 billion annually. Our goal was to define and establish a robust standardized workflow for ongoing assessment of patient's adherence to oral chemotherapy. A multidisciplinary taskforce met biweekly for a year to review current oral chemotherapy ordering practices within our License Independent Practitioners (LIP) at different Disease Management Groups (DMGs). We reviewed the literature and assessed best practices and the concept of a novel way of addressing oral adherence chemotherapy was born. We implemented an oral adherence tracking workflow documentation system in the Electronic Health Record (EMR). Nurses can now document oral chemotherapy start date, held doses, dose reduction and re-started drugs after breaks. A standardized adherence questionnaire and symptom assessment including toxicity scale was utilized during office visits and telephone assessments. We created electronic DMG pools that identified patients that needed to be enrolled in the adherence monitoring program. This presentation will cover the development, design, future challenges and outcomes of this project. The oral adherence tracking workflow was implemented April, 2015 with Gastro-intestinal, Breast, Hematology and Neurology DMGs. Twenty nurses' participated on the initial pilot. After three months 71 out of 226 patients with active oral chemotherapy orders were enrolled (34%). Total of 68 patients never missed a dose (96%) and 3 patients missed a dose (4%). Neurology obtained 100% adherence rate. Today we are expanding the program to all DMGs. Overall nurse's satisfaction with the system is positive. Nurses were empowered to participate in creating the best possible process workflow and impact patient outcomes. Oncology nurses participated in generating a written policy and regimen-specific assessment for each patient's oral adherence and toxicity at each clinical encounter. Health care organizations could benefit of implementing this cost effective workflow when addressing adherence to oral chemotherapy.

## E-18

**THE CARE CABINET: ONCOLOGY NURSES LEADING THE WAY TO COMPASSIONATE CARE AT THE END OF LIFE.** Sarah Sumner, RN, MSN, OCN®, Huntington Hospital, Pasadena, CA; Frances Bakar, RN, BSN, Huntington Hospital, Pasadena, CA; Ashleigh Reid, RN, BSN, OCN®, Huntington Hospital, Pasadena, CA

Nurses on an inpatient medicine/oncology unit in a community teaching hospital in Pasadena, California identified a need to improve patient care at the end of life. They often felt emotionally drained and dissatisfied that their caring intentions were not having a tangible impact on the patients' and families' experience. Purpose: To create a tool for nurses to communicate compassionate caring to their patients and families at the end of life and to satisfy the inherent desire of nurses to provide meaningful interventions when cure is no longer an option. Interventions: (a) Literature review was conducted examining the dying experience from both the patient and the nurse perspective. Three

themes emerged that enrich the dying experience that is shared between the nurse and the patient/family: dignity promoting activities and life review, caring practices of therapeutic touch, caring presence, active listening, and honoring the significance of the moment in time (b) Collaboration with Social Work/Spiritual Care/Palliative Care Team (c) Resources selection and procurement (d) Designation of a location and development of guide to available materials. A section of the work room near the main nurses' station was named The CARE (Care and Respect at the End of Life) Cabinet (e) Education provided to RNs on the medicine/oncology unit during annual 2014 Oncology Skills Day Nurses now have immediate access to a variety of religious materials, tokens of encouragement, hand-knitted blankets, educational pamphlets, journals, and digital recording devices. Nurses are now empowered to utilize CARE Cabinet resources to personalize and enrich their care of the dying. For example, a nurse recommended the digital recording device. A dying lymphoma patient and his wife used that opportunity to renew their wedding vows and record messages for his grandchildren days before his death. Innovation: A new model for a program that can be readily implemented on inpatient units caring for patients at the end of life to enhance and enrich the experience for patients, families, and caregivers. Based on this pilot program, a significant gift was donated to the organization that will support implementation of The CARE Cabinet throughout the hospital.

### E-19

**AN INTERDISCIPLINARY EVIDENCE BASED PRACTICE APPROACH TO PREVENTING CATHETER ASSOCIATED URINARY TRACT INFECTIONS.** Jennifer Blackey, BSN, RN, OCN®, Loma Linda Medical Center, Loma Linda, CA; Charis McCoy, BSN, RN, Loma Linda Medical Center, Loma Linda, CA; Monica Paredes, BSN, RN, OCN®, PHN, Loma Linda Medical Center, Loma Linda, CA; Sara Allen, BSN, RN, Loma Linda Medical Center, Loma Linda, CA; Carol Nielsen, BSN, RN, OCN®, Loma Linda Medical Center, Loma Linda, CA; Amy Paluzzi, BSN, RN, Loma Linda Medical Center, Loma Linda, CA

The devastating impact of catheter-associated urinary tract infections (CAUTIs) on vulnerable oncology patients demands action from the bedside nurse to protect against preventable infections. This problem peaked interest at our 442 bed academic teaching hospital when a rise in inpatient acuity corresponded with an increase in Indwelling Urinary Catheter (IUC) days and a subsequent jump in CAUTI rates. The goal of the program is to prevent CAUTIs by implementing an evidence based CAUTI bundle and a nurse driven protocol for discontinuing IUCs. To accomplish this an interprofessional quality improvement team determined if current CAUTI prevention practices were evidence based. Thirty four articles were reviewed and evidence-based practice (EBP) interventions were translated into a nurse-driven protocol. A hospital review committee approved the protocol and an implementation trial on two twenty-six bed oncology units began. Unit staff were educated on the protocol and how to use the audit tool. Throughout the trial nurses used the m-HOUDINI nurse driven protocol every shift to assess whether IUCs in male and female patients should remain or be removed. After implementation of the nurse driven protocol, initial findings showed a reduction from 8 CAUTIs in 2014 to 1 in 2015. Nursing compliance with the nurse driven protocol rose from 66% initially to 90% in the first two months. These statistics represent improved outcomes for our patients and a minimum of \$8,000 in savings. The findings of our project showed a decrease in CAUTIs and catheter days in conjunction with an increase in medical and nursing staff knowledge of appropriateness of IUCs within the

oncology population. CAUTI prevention is especially essential to the oncology inpatient population due to their immunocompromised health status. In order for cancer treatment to be successful the patient must be protected from any preventable infections. The evidence-based m-HOUDINI tool empowers RNs to protect oncology inpatients from CAUTIs by providing a guide to independent-decision making for IUC removal.

### E-20

**REDUCING C.DIFF RATES ON A MEDICAL ONCOLOGY UNIT.** Patricia Jakel, RN, MN, AOCN®, UCLA Santa Monica Medical Center, Santa Monica, CA; Rebecca Hoh, RN, BSN, OCN®, UCLA Santa Monica Medical Center, Santa Monica, CA; Maria Quirch, RN, BSN, UCLA Santa Monica Medical Center, Santa Monica, CA; Samantha Thomas, RN, BSN, OCN®, UCLA Santa Monica Medical Center, Santa Monica, CA

Infection with *Clostridium difficile* (CDI) is the most important cause of hospital-acquired diarrhea and is a growing threat to hospital safety. During the past 15 years, the incidence of CDI has tripled in the United States. The inpatient, 26-bed, medical oncology unit had an alarming rate of C.diff infections. Oncology patients are at high risk for contracting C.diff due to multiple factors. C.diff is a life-threatening complication for neutropenic patients that can cause septic shock and death. Evidence based interventions were implemented to reduce the occurrence of C.diff in oncology patients. By preventing C.diff infections, we can decrease sepsis, septic shock and improve patient satisfaction. Assessment of unit practices: Late identification of diarrhea Interventions: (a) Nursing Bundle (no MD order needed) (b) Screen for diarrhea upon admission and every shift; patients with positive screens-isolation (c) Stool sample sent to rule out C.diff. (d) Proper hand hygiene and use of PPE. (e) No standard of practice on 4SW for disinfecting C.diff rooms (f) Intervention "High Touch Wipe-Down" (HTWD) (g) The American Journal of Gastroenterology published guidelines in 2013 on the diagnosis, treatment and prevention of C.diff infections. One recommendation was the use of EPA-registered disinfectant. HTWDs were completed at the start of each shift and at mid-shift for neutropenic patients. (h) Document on the sheet in each patient room (i) Perform audits to know how often the HTWD is being done. (j) Educate employees via informational flyers and PowerPoint presentation during huddles. Evaluation: Rate of infection/10,000 patient days, 2014 = 14.99%, 01/2015 = 27.43%, HTWD started 2/1/2015, 02-09/2015 = Zero. Discussion: Performing HTWDs as part of a bundle has dramatically reduced our C.diff rates. Continued staff education occurs with huddle messages, new staff orientation and patient education. Nursing bundles allow for an autonomous practice and improve patient outcomes. The HTWD is simple and inexpensive but can be highly effective. The collaborative effort of RN's and CP's has been crucial in our success.

### E-21

**CHEMOTHERAPY EDUCATION FOR INPATIENT ONCOLOGY NURSES—CHEMO CAMP 2015.** Dorothea Baum, RN, BSN, UPMC Shadyside Hospital, Pittsburgh, PA; Anna Maria Lang, RN, BSN, OCN®, UPMC Shadyside Hospital, Pittsburgh, PA

It is mandatory for all in-patient oncology units at our facility to attend the annual "Chemo Camp" chemotherapy competencies. Nursing management ensures that all oncology nurses comply with current policies and safe practice for chemotherapy administration. Ever-changing oncology care and treatments must align with nursing updates to provide best practice. Chemo Camp 2015 was a collaborative effort between nursing and pharmacy to reinforce best practices in

chemotherapy care. The focus of Chemo Camp 2015 was based on risk events that occurred on in-patient oncology units. These events were subject to a peer review process that discussed where and why the errors occurred and how they could have been prevented. The unique Chemo Camp setting affords an uninterrupted four-hour mandatory learning environment for which multiple disciplines provide best practice updates. Interventions: Topics included: policies for safe administration of chemotherapy; case studies to broaden the knowledge base of typical chemotherapeutic regimens; a skill station to assess competency for issues not commonly seen in practice; and a review of the process to access all policies electronically. Interactive case studies encouraged group participation. Hands on skills sessions included administration of chemotherapy via intravenous push and intravenous infusion, extravasation, and the use of chemotherapy spill kits. Our inter-collaborative pharmacists participate in Chemo Camp by sharing chemotherapy agent updates. A pre-test was given to all attendees to assess knowledge base. At the completion of skills, the Annual Skills Re-Qualification Checklist was signed off. Participants completed a 42-question exam. A score of 80% was required to pass the test with a 95% overall pass rate. A post survey was emailed to staff. The survey reported that the Chemo Camp 2015 was a positive learning experience and relevant to daily practice. Three Continuing Education Units (CEUs) were offered to staff upon the successful completion of the Chemotherapy Competencies. A total of 66 nurses attended these competencies. Chemo Camp is a unique focused environment to provide ongoing best practice for oncology nurses. The process could be replicated in other facilities with similar needs.

## E-22

**PHARMACY FALLS PREVENTION INITIATIVE IN A COMMUNITY CANCER HOSPITAL.** Inna Tsuker, PharmD, BCPS, Cancer Treatment Centers of America-Eastern Regional Medical Center, Philadelphia, PA; Tahitia Timmons, MSN, Cancer Treatment Centers of America-Eastern Regional Medical Center, Philadelphia, PA

The Department of Pharmacy became an important steward of the 'falls prevention' initiative as part of a hospital-wide effort to enhance patients' and staff education about medications that may lead to falls to further reduce the number of falls in the institution. Pharmacy staff conducted several live educational sessions on medication classes and the mechanism by which they may lead to falls. This presentation became a mandatory online course for all nursing staff. The Pharmacy Department reviewed patient cases from August 2014 through August 2015, identifying patients that are at risk of falls. A "Falls Prevention" medication screening tool was updated from the previous publication by Beasley, 2009, and adopted. Patients were stratified into the categories of "high falls risk" and "not high falls risk". Pharmacists looked for interventions to reduce patient's falls risk by adjusting their pharmacotherapy regimen: discontinuing medication, decreasing the dose, changing medication, and avoiding duplication. Over a thousand cases were reviewed during the specified period of time. Forty five percent of cases were identified as high falls risk with respect to the medications. The most common pharmacists' intervention was: discontinue medication, 43%, followed by decrease dose and avoid duplication (both 25%). Medications are always assumed to be one of the main reasons for patient falls. Although medications may be involved, our project demonstrated that only about half of patients were at risk for falls due to medication. Educating prescribers, nurses and other health care professionals about the medications at risk, limiting their use if possible and utilizing team approach to falls prevention is the best strategy of preventing the fall.

## E-23

### **PREPAREDNESS FOR SURGERY AS A QUALITY INDICATOR.**

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Breast cancer is a common disease among American women resulting in an increased awareness of breast cancer related issues. There has been growing attention to the informational priorities of patients in a shared decision making model of care. Patients report, however, adequate information provision as an unmet need throughout their cancer experience. This is especially of concern when patients are faced with complex decision making based on an understanding of medical information in an unfamiliar learning environment. This project is designed to identify informational priorities of breast cancer patients related to diagnosis and treatment decisions. We hope to show that an active role in decision making that considers patients' information needs increases satisfaction with the overall surgical experience. Patients' perceived preparedness for surgery was measured to determine whether their information needs were fully addressed and illustrate overall satisfaction with the surgical experience. A self-administered questionnaire was used to measure satisfaction with information related to diagnosis, treatment, and recovery. Clinical data (e.g., stage of disease) and basic demographic data (e.g., age) was also collected to determine if informational priorities relate to these variables. An active role in decision making that considers patients' information needs increases satisfaction with treatment choices, perceived preparedness for surgery, and overall outcomes. Methods of providing information are often limited to written and verbal. Written information is generally non-specific and not tailored to patients' informational needs. Providers are also unable to control for access to other information sources such as the internet. A treatment plan developed through a shared decision making model should be evidence based and include an assessment of the patient's informational priorities. A combination of written and verbal information may be optimal with the written building on the verbal and not introducing new information. Encouraging recording of meetings to revisit and share information with significant others may be especially helpful when stress becomes a barrier to comprehending and retaining the information. The patient should also be provided with reliable websites to supplement this information. This results in greater patient satisfaction with the interaction and surgical experience including preparedness for surgery.

## E-24

**UTILIZING CITY OF HOPE "KNOWLEDGE AND ATTITUDES SURVEY REGARDING PAIN"—AN EVIDENCE BASED APPROACH TO IDENTIFYING GAPS IN KNOWLEDGE AMONGST NURSES IN ONS PAIN SIG AND DEVELOPING EDUCATION TO MEET IDENTIFIED DEFICIENCIES.** Ann Brady, MSN, RN-BC, Huntington Hospital, Pasadena, CA; Frances Cartwright, PhD, RN-BC, AOCN®, Mount Sinai Health System, New York, NY; Tahitia Timmons, MSN, RN-BC, OCN®, VA-BC, Cancer Treatment Center of America, Philadelphia, PA; Marsha Farrell, BSN, RN-BC, CHPN, Hospice Family Care, Huntsville, AL

Nurses who care for oncology patients require knowledge regarding the basic principles of pain management. Cancer pain has unique qualities that distinguish it from acute pain and chronic pain. A significant percentage (66%) of cancer patients report pain symptoms. Addressing pain in an oncology setting is challenging. The overall purpose of the presentation is to provide evidence based education that addresses

identified gaps in the basic principles of pain management among our ONS membership. Utilizing the City of Hope (COH) "Knowledge and Attitudes Survey Regarding Pain," the ONS Pain SIG workgroup collected data regarding knowledge and attitudes about pain management from our ONS membership in a variety of venues—we administered the survey on line and at ONS Congress 2013 and 2014. The data were analyzed, and gaps were identified and used to develop the pain education plan. At the end of this session, the participant will be able to: (a) List the essential concepts in using the Equivalency Chart: Peak Time and Duration of opioid, multi-modal approach, and incomplete cross over tolerance, (b) Define Addiction; Tolerance; Dependence, and (c) identify 3 essential elements to Individualized Pain Management: Partner with Patient to establish pain goals, Pain and medical plan of care, and pain and personal priorities. Case studies were developed based on identified gaps in knowledge and include the basic principles of pain management. The case studies were designed to include interactive discussion. The data revealed some misconceptions about administration and duration of analgesic administration, the definition of addiction vs tolerance vs dependence. Knowledge of pharmacology items was shown to be consistently lower than that of non-pharmacology items, as such, the case studies addressed these knowledge deficits. Innovative use of an existing and validated tool to assess knowledge gaps and devise targeted case studies to educate oncology nurses. And in doing so promoting and affirming the importance of Pain SIG as a vital ONS resource to oncology nurses.

#### E-25

**INFUSING GRANULOCYTES VIA VOLUMETRIC PUMP TO DECREASE TRANSFUSION REACTIONS.** Bonnie Arceneaux, BSN, RN, OCN®, MD Anderson Cancer Center, Houston, TX; Vanessa Perez, BSN, RN, MD Anderson Cancer Center, Houston, TX

Leukemia patients are inherently neutropenic due to their disease process and treatment. This results in susceptibility to infections that can quickly progress to life threatening conditions, such as sepsis. Neutropenic patients with documented infections in the soft tissue, sinuses, and skin are given granulocyte transfusions to increase healing and decrease the time of antibiotics. Due to the nature of granulocytes and the antigen receptors on them, many transfusion reactions were noted in patients who received them. Reactions usually consisted of fevers and shortness of breath. Some cases could be life threatening to patients in this fragile state. The purpose of this project was to decrease the number of transfusion reactions. Granulocytes were initially transfused by gravity over approximately one hour. With this method of infusion, there were 3 out of 460 transfusion reactions. The intervention to decrease these reactions was to transfuse the granulocytes steadily over four hours via a volumetric infusion pump. A complete blood count was also to be drawn one hour after the completion of the transfusion to assess the white blood cell count. This intervention was piloted in a large academic hospital on the hematology units for 90 days. One hundred-twenty patients were audited during this time, and no transfusion reactions were noted. Although there was no baseline data to compare, it should also be noted that the white blood cell counts increased in the one-hour post count in all patients that received transfusions. From the results of this project, the nursing policy was changed. It is now standard practice to infuse granulocytes using a volumetric pump over four hours and collect a complete blood count after the transfusion is completed. Looking forward, this group would like to assess how other blood products are given and if there is a way to decrease other reactions.

#### E-26

#### **IV CHEMOTHERAPY—THE MULTI DAY TREATMENT PROCESS—CHANGING THE WAY A PROVINCE PROVIDES TREATMENT.**

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The Canadian Association of Provincial Cancer Agencies (CAPCA), The Institute for Safe Medication Practices (ISMP) Canada, and five provincial cancer care organizations worked together to improve safety with IV chemotherapy administration. One aspect they looked at was the same day treatment model (not best practice) versus multi day treatment model (best practice). The same day treatment model involves the patient coming to the cancer center and having blood work, seeing the Doctor, IV chemotherapy orders being generated, medications prepared and patient receiving treatment all in one day. Multi day model encompasses the same steps occurring over 1 to 5 days to enhance patient safety. The analysis revealed that although the same day model may seem more consistent with patient centered care, there are safety and workload issues that affect all areas of the chemotherapy treatment facility. In comparison to the same day treatment model, centers using a multi-day model experienced many benefits and improved patient safety. Cancer Care Manitoba (Canada) had adopted this model of care in 2013, but the multi day treatment model was not being used in the 16 rural Community Cancer Programs (CCPs) in Manitoba. In keeping with the most current evidence based practice the Community Cancer Programs Network was able to educate, guide and assist in changing the way patient assessment, blood work and the timing of IV chemotherapy administration took place in the 16 rural CCP's. This presentation will focus on the most current evidence that supports the multiday treatment model, tools and methods used to promote change, lessons learned, results that measured the long term uptake of the multi day treatment model by the CCP's, and considerations for the future.

#### E-27

**DROP TO DROP: IMPROVING THE CHEMOTHERAPY ADMINISTRATION PROCESS.** Margaret Grue, MSN, RN, BC, CRNI, OCN®, Ben Taub General Hospital, Houston, TX; Janise Myles, BSN, RN, BC, Ben Taub General Hospital, Houston, TX; Rosalyn Jones-Waters, BSN, RN, OCN®, Ben Taub General Hospital, Houston, TX

Nursing leadership sought to improve the efficiency of the chemotherapy administration workflow while functioning within a framework requiring additional (burdensome albeit necessary) safety precautions to prevent errors. This resulted in long wait times and patient dissatisfaction. Generalizations regarding expected and acceptable lengths of time for chemotherapy administration were discussed by nursing, pharmacy and medical providers, no concrete data with actual times were cited. The purpose of this quality initiative was to improve workflow efficiency and address clinical, administrative or educational problems regarding the chemotherapy administration process. Nursing service sought to reduce the time between chemotherapy delivery to the unit and its initiation by 60 minutes. Plan, Do, Check, Act (PDCA) served as the framework in implementing change. To establish a baseline, two weeks of data were collected during the 4th quarter of 2014 on a mixed oncology inpatient unit for patients receiving first dose chemotherapy. Specific measurement points and time-frames averages included: (1) chemotherapy orders delivered to the unit to time checklist faxed—71 minutes; (2) checklist faxed to chemotherapy delivery—278 minutes; (3) chemotherapy delivery to initiation—194 minutes; and (4) total time from written order to chemotherapy initiation—542

minutes. Interventions implemented after baseline data collection included reviewing the results with the inter-professional team (nurses, pharmacists and medical providers) at multiple committee meetings. Team members owned responsibility for respective sections of the process and established an identified time-frame as a goal. Nursing interventions included in-services to review medications and protocols along with a heightened awareness of the need and desire for improvement was communicated and expected by leadership. Follow-up data were collected during two weeks in the 1st quarter of 2015. The same measurement points and subsequent improvements in average time included: (1) chemotherapy orders written to checklist faxed—56 minutes; (2) checklist faxed to chemotherapy delivery—177 minutes; (3) chemotherapy delivery to initiation—127 minutes; and total time from written order to chemotherapy initiation – 362 minutes. This inter-professionally driven, quality initiative resulted in a three hour improvement in overall time, impacting efficiency while maintaining safety and improving patient satisfaction.

### E-28

**IMPLEMENTATION OF CHECKLISTS TO IMPROVE SAFE PRACTICE SURROUNDING CHEMOTHERAPY ADMINISTRATION.** Carole Elledge, RN, MSN, AOCN®, Methodist Hospital, San Antonio, TX; Mary Krivoy, RN, BSN, OCN®, Methodist Hospital, San Antonio, TX; Cheryl Downey, RN, BSN, Methodist Hospital, San Antonio, TX

Chemotherapy is designated as a high-alert medication - incorrect administration may cause serious patient harm. In 2009, the Oncology Nursing Society (ONS) and American Society of Clinical Oncology (ASCO) published guidelines for the safe administration of chemotherapy in the ambulatory setting. These guidelines were later expanded to encompass the inpatient clinical setting and oral chemotherapy administration. We recognized that our current chemotherapy administration policy did not adequately address each of the key standards in the ONS/ASCO guidelines. Each clinical area faced unique challenges related to physician ordering and administration of chemotherapy and there was not a consistent approach throughout the hospital system to ensure guideline adherence. Addressing this issue became a priority for oncology nurses in our institution. First, we updated our chemotherapy administration policy to include the recommendations from ONS/ASCO. Once the policy was approved, two checklists were created delineating staff verification of the key elements both in chemotherapy ordering and during the pre-administration process. Finally, we created a chemotherapy order template for physicians to use in the absence of a pre-printed order set. RN staff, oncology pharmacists and physicians were in-serviced on the new policy, order sets and checklists. Beginning in September 2013, audits were completed on all returned checklists. Initial compliance rates averaged less than 40% overall but by 2014 had risen to greater than 85%. Event report rates related surrounding chemotherapy ordering and administration have declined substantially in the two years following checklist implementation. Checklists have a demonstrated role in complicated task-oriented processes and may potentially mitigate errors associated with fatigue, complacency, or distraction. We developed the chemotherapy order checklist to ensure that staff verify required elements of the written chemotherapy order and the chemotherapy pre-administration checklist to ensure consistency throughout the chemotherapy administration process. Implementation of these two checklists has decreased chemotherapy administration-related errors and improved patient safety in our institution. Future plans include incorporating the checklist into our electronic medication administration record.

### E-29

**MAKING ONCOLOGY TREATMENTS MORE ACCESSIBLE: CREATING A WEEKEND INFUSION SCHEDULE MODEL.**

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The oncology infusion center of the Wilmot Cancer Institute at University of Rochester Medical Center has seen an increase in patient volume over the past few years. Due to limited physical space and normal operating hours being 7:30 am –7:00 pm Monday–Friday, it was determined that in order to accommodate patient treatment needs, normal operating days would need to be extended to include Saturday and Sunday. Incorporating this change meant infusion nurses would now be required to work standard weekend hours. The purpose of this clinical practice abstract is to describe how a small committee of infusion RNs addressed the challenge of how to best operationalize this change to infusion RN work schedules. The committee formed in June 2015 to determine how to begin to change the scheduling process to include weekend rotations. Potential weekend shift templates were created and RN staff voted for preferred weekend shifts. The committee promoted open staff RN discussions and feedback during the planning phase and worked with leadership to address questions/concerns. A process for self-scheduling has been created and will go-live November 7, 2015. Although done in an informal manner, the committee has played an important role by involving all staff in the decision making process, addressing concerns, providing updates. One hope with this change is that by decompressing the schedule during the week, this will in turn decrease the risk of RN burnout. In winter 2016, staff will be surveyed to inquire how well they perceive the weekend scheduling is working. Making a significant change that will impact nursing work schedules can create an emotional impact on individuals and cause worry about impending change that may affect personal lives, either positively or negatively. Oncology RNs on this unit are indeed special, patient centric, and willing to make this change. They recognize it is part of keeping pace with changes in healthcare delivery, and it will reduce the burden of cancer treatment for their patients and caregivers. Moving to standard weekend hours in ambulatory reflects the need to adapt to changing needs in healthcare.

### E-30

**AN ORGANIZATIONAL, INTERDISCIPLINARY EDUCATION PROGRAM TO IMPROVE STAFF KNOWLEDGE OF GAMMA KNIFE RADIOSURGERY.**

Lynda Boulio, MSN, RN, NYULMC, New York, NY; Caitlin Doody, BSN, RN, NYULMC, NY

Annually, 100,000 cancer patients in the United States develop brain metastases. Gamma Knife Radiosurgery (Gamma Knife) is a well-tolerated, non-invasive treatment consisting of stereotactic radiosurgery, delivered in a single dose of gamma radiation. This treatment targets brain tumors in both the adult and pediatric patient with precision and accuracy, sparing healthy brain tissue and preserving cognitive function. It is primarily an outpatient procedure, reducing the cost of hospital stay and lowering the risks of nosocomial infection and other hospital-acquired illnesses. An organization-wide, interdisciplinary education program developed by nursing promotes

staff knowledge for development of safe, quality patient care. A performance improvement project was developed by nurses at a large academic medical center. The purpose of this project was to improve knowledge and competence amongst staff regarding care of the oncology patient undergoing Gamma Knife. Interdisciplinary educational sessions were held to educate staff about Gamma Knife, and its relevance to our patient population and practice. These sessions were focused on the nursing role during procedural sedation, head framing, radiosurgery, recovery, discharge, education, and post procedure care. Policies and procedures for safe, quality care were discussed to promote patient safety. Specific educational information used included visual aids, handouts, and demonstrations. Audience members completed an evaluation using department generated pre- and post-presentation surveys. Time was allotted for questions and answers, and specific areas of interest were discussed, including relevance to oncology nursing. Ten staff members involved in the educational program completed the questionnaires. The post-presentation questionnaire demonstrated enhanced knowledge, with a response of "strongly agree" on 10 out of the 10 survey participants. Education of Gamma Knife will enhance oncology nursing staff knowledge and promote safety, quality, and coordination of care. Continuous evaluation of the interdisciplinary educational program can provide essential knowledge. A Nursing Grand Rounds educational program is our next step. Organizations will benefit in providing education related to the complex care of the patient undergoing Gamma Knife Radiosurgery.

### E-31

**PERSONALIZED CANCER VACCINE IN HEMATOLOGIC MALIGNANCIES: AN EDUCATIONAL PROGRAM FOR ONCOLOGY NURSES.** Aya Sato-DiLorenzo, RN, BSN, OCN®, Beth Israel Deaconess Medical Center, Boston, MA; Emma Logan, BA, Beth Israel Deaconess Medical Center, Boston, MA

Immunotherapy is a highly promising area in cancer therapy. Its goal is to use a patient's intrinsic immune functions to generate an effective response against cancer. Cancer cells often have mechanisms to abate or evade the immune response. One approach to reverse such a process is the development of cancer vaccines to educate host immunity to selectively target and eradicate cancer cells. The investigators at our institution have developed a vaccine in which a patient's whole tumor cells are fused with patient-derived immune dendritic cells (DCs) *ex vivo*. With the vaccine, tumor-derived antigens are presented by the powerful immune-stimulating machinery of DCs, resulting in immune activation against the patient's own cancer cells. There has been a lack of nursing education regarding this unique vaccine program. The purpose of this presentation is to provide oncology nurses with an overview of immunotherapy with a DC/tumor fusion cell vaccine. The program addresses the immune system and its use in cancer therapy, the schema of clinical trials, and nursing implications. One of the trials at our institution is for patients with multiple myeloma who have undergone autologous stem cell transplantation. The vaccination resulted in an expansion of immune cells that recognize myeloma cells. Additionally, a subset of patients had better disease control after the vaccination. Another trial is for those with acute myeloid leukemia who have achieved chemotherapy-induced remission. The vaccination resulted in a very low rate of disease recurrence. Common toxicities from the vaccine are generally mild and include vaccine site reactions, transient pruritus, rash, fatigue, fever, arthralgias and myalgias. A nurse's role in this vaccine program includes patient education about the treatment and toxicities and identification of patient concerns. The develop-

ment of a standard of operations for safe administration of the vaccine is also considered. A multi-center clinical trial with this DC/tumor fusion cell vaccine is being planned across the United States, and as such, an education program for nurses is needed in order to promote proficient care for patients enrolled in the vaccine program.

### E-32

**HAND IN HAND: A MODEL OF COLLABORATION BETWEEN A LOCAL ONS CHAPTER AND A VOLUNTEER BASED CANCER CLINIC.** Marilyn Garcia, RN, MSN, APRN, NP-C, Texas Oncology PA, Dallas, TX; Ben Garcia, RN, Texas Health Presbyterian, Dallas, TX; Cindi Bedell, RN, MSN, ANP-C, Texas Oncology PA, Plano, TX

Founded in 2009, Greater Dallas Arya Samaj (GDAS) Cancer Clinic provides adjuvant chemotherapy to individuals with potentially curable cancers. Lack of clinical volunteers threatened to close the program in March 2011. A physician recruited two ONS members, one NP and one RN, to voluntarily staff the clinic. These dedicated nurses presented the need to their ONS chapter. Adoption by the local ONS chapter expanded volunteers from one NP and two RNs to six APPs, twelve infusion nurses and a team of nurses who educate, navigate, teach chemotherapy classes and address survivorship issues. A physical therapist offers lymphedema care. Administrators, medical assistants, translators and social workers offer a variety of services. Since the collaboration with ONS, GDAS services increased significantly. GDAS has provided care to individuals from seven different countries. Chemotherapy visits grew from 193 in 2011 to 286 in 2014, office visits from 66 to 274 and new patient visits from 0 to 35. The clinic operates one evening a week from 530pm to 9pm treating up to 10 patients a night including complex regimens such as docetaxel, carboplatin, trastuzumab and pertuzumab and ABVD for Hodgkin's disease. Since 2011 new initiatives were created to address the unique cultural needs of our patients including providing educational material in the patient's native language and survivorship visits focus on gradual realistic nutritional and exercise changes. Patients completing an exercise and diet journal receive pedometers and a gift card for shoes or exercise equipment. Recently, we initiated evaluation and early lymphedema care. This collaboration has promoted oncology care in the community. We have become a reliable source for mentorship for premed students, APP students, nursing students and physical therapy students. The clinic also supports any student who needs volunteer hours. The collaboration between GDAS and the local ONS chapter provides curative treatments to individuals who would otherwise be unable to obtain care. Moving forward we hope to sustain the success of this collaboration while continuing to further deepen educational and research opportunities for our patients and our chapter members.

### E-33

**USING YOUR PSYCHOSOCIAL DISTRESS ASSESSMENT TOOL TO IDENTIFY INITIAL CANCER SURVIVORSHIP NEEDS.** Ross Debra, BSN, RN, OCN®, Mercy Cancer Centers, Toledo, OH; Karen Andres, BA, LSW, Mercy Cancer Centers, Toledo, OH

Psychosocial Distress Assessment and Survivorship Care Plans are new standards of care for cancer patients. Intervention is an essential component of Survivorship Care. The interventions that are needed by patients are highly individualized. Establishing both an assessment tool and a process to address identified needs is an essential part of Survivorship Care.

Recognizing that a Psychosocial Distress Assessment tool can identify needs and that intervention can improve survivorship is an important concept for Oncology Nurses to understand. The goal of merging Distress Assessment with Survivorship is to emphasize the importance of early identification of barrier to cancer treatment and the importance of early intervention. It is essential that the members of the care team are armed with an assessment tool and are educated on available community resources and their referral processes. A Psychosocial Distress Assessment tool was selected that grouped patient concerns into categories such as practical problems, family problems, emotional problems and others. A referral process was established based on the category of the concern identified. Interventions by appropriate staff could then be directed at the specific patient need. Early recognition of problems, especially financial and transportation issues can have a positive impact on survival. If a patient does not have transportation for treatment or perceives that they cannot afford treatment or living expenses, they are less likely to complete therapy as prescribed. In a review of one hundred fifty Psychosocial Distress Assessment forms that were administered at the chemotherapy teaching visit, the top five concerns of patients were identified. They were insurance/financial, transportation, depression, fears and worry. Referrals to a social worker, spiritual care chaplain and/or the American Cancer Society were initiated. Interventions were then directed to the patient's specific area of concern. All cases resulted in complete or at least partial resolution of the issue. The success that has been demonstrated by the use of the assessment tool has prompted our Cancer Center to consider administering the assessment tool to patients at three different points in their care. The goal is to assure that we are providing adequate resources to patients at all phases.

## E-Poster Abstracts: Leadership/Management/Education

### E-34

**PASSING DOWN WISDOM: USE OF CRITICAL INCIDENT REPORTS TO MENTOR END-OF-LIFE COUNSELING.** Yvonne Hsiung, Mackay Medical College, New Taipei City, Taiwan; InFun Li, Mackay Medical Hospital, Taipei, Taiwan; Pei Chen Yeh, Chang Gung Medical Hospital, KeeLung, Taiwan

Oncology nurses nowadays face challenging roles with very little preparation or support when providing end-of-life (EOL) counseling. Promoting effective mentoring relationships may help reduce the attrition of staffs with today's time pressures. Critical incident reports (CIRs) have proven to be an ideal tool when reflective learning was used to teach professional development: it addresses values and attitudes, fosters moral and psychological growth, and solves practical problems, particularly for ethically sensitive accounts. An educational mentorship project was initiated in the Northern Taiwan area for oncology nurses to demonstrate and cultivate difficult EOL counseling. Recruited were a purposive sample of nine junior (years of work < 3 years) and three senior oncology nurses (>15 years) whom often were involved in terminal patients' EOL decisions. The junior nurses submitted short narratives of their most memorable, emotional, and value-challenging experiences. Written incident information were defined according to CIR columns, and subjected to content analyses by senior clinical experts experienced in EOL counseling. With an explicit goal to pass down clinical wisdom, they provided advice particularly in the professional standard, position, and actions. The results showed a significant difference between

the inexperienced and the experts in their ethically sensitive conflicts, beliefs, emotions about the events, strategies, and professional positions and actions. However, categorizing, analyzing, and reflecting on previous counseling experiences of critical significance have successfully built mentorships between junior and senior oncology nurses. Simple pre- and post-tests showed an overall progress on self-learning motivation and confidence in providing counseling. Upon completion of the experiential learning program, junior nurses were highly satisfied with senior colleagues' feedback, insight and support, whereas the seniors reported this mentorship has also improved their own counseling and leadership skills; their own expertise was articulated through re-examining junior nurses' categorized and multi-dimensional writing. Analyses of CIRs have been widely used in medical education but not yet in nursing mentorships. This teaching tool has shown promises for nurse counselors' psychological and cognitive responses in EOL counseling could be better understood by mentorships. Adopting the element of critical reflection not only improves counseling skills but also further achieves higher patient-satisfaction.

### E-35

**TRANSFORMATIONAL LEADERSHIP IN ACTION: AN INNOVATIVE APPROACH TO DECREASING PATIENT WAIT TIMES AND THE IMPACT ON SATISFACTION.** Bonnie Paternoster, MSN, RN, H. Lee Moffitt Cancer Center & Research Institute, Tampa, FL; Leonardo Begazo, BSN, RN, H. Lee Moffitt Cancer Center & Research Institute, Tampa, FL; Phyllis Begyn, MSN, RN, OCN®, NE-BC, H. Lee Moffitt Cancer Center & Research Institute, Tampa, FL

The Infusion Center has approximately 47,000 visits annually with 24% of the volume coming from the Malignant Hematology Clinic. However, we were facing wait times ranging between 1-3 hours with a Press Ganey Patient Satisfaction mean score of 65 out of a possible 100 for wait times (fiscal year 2014). To begin to address this, a partnership was formed with the management from the Blood Draw Department and the Malignant Hematology Clinic. The first intervention was the implementation of having all Infusion Center patients report to Blood Draw in lieu of the Infusion Center not only for their blood draw, but also to have their ports accessed/peripheral lines started. This change in practice resulted in improved efficiency and decreased wait times. The next intervention was related to our blood & platelet patients, which make up approximately 7% of our total volume in the Infusion Center. Historically, patient's receiving Blood Products were seated on average 16 minutes after their scheduled appointment time. Following implementation of a new blood ordering process and identifying dedicated chairs for blood and platelet patients, patients were seated ahead of time. The last major intervention was directly related to the Infusion Center template. Historically, patients/chairs were overbooked, there were no chairs reserved to accommodate same-day add-ons and the chair times were not in alignment with staffed hours. New templates were developed and we saw a dramatic decrease in wait times. Our evaluations reveal improved patient satisfaction related to wait times and improved employee engagement scores when we compare fiscal year 2014 to fiscal year 2015. To illustrate, the Infusion Center went from a mean score of 65 to 73, Blood Draw went from a mean score of 83 to 90 and Malignant Hematology went from a mean score of 81 to 83 on our Press Ganey surveys for Patient Satisfaction related to their wait time. Furthermore, our Press Ganey Employee Engagement scores revealed positive movement with Infusion Center going from 3.87 to 4.16, Blood Draw 4.13 to 4.45 and Malignant Hematology went from 4.15 to 4.36.

## E-36

**DE-CLUTTERING THE ROAD TO ONCOLOGY NURSING COMPETENCY.** Gail Kwarciany, MSN, RN-BC, OCN®, AOCNS®, UTMB TDCJ Hospital Galveston, Galveston, TX; Pamela Davis, MBA, BSN, RN, OCN®, UTMB TDCJ Hospital, Galveston, TX

In today's healthcare environment, institutions are held accountable for staff competency. The Joint Commission requires proof of competency through documentation. The American College of Surgeon's Commission on Cancer Care Standard 2.2 requires that "oncology knowledge and skills is completed and documented". Evaluating and documenting performance in the clinical setting in an efficient and accessible fashion can be a challenge. Previously, this institution's method utilized multiple paper documents listing tasks to be validated by the end of orientation. Employee document file management was a challenge for staff and leadership. There was a need to identify oncology specific competencies for oncology nurse from novice to advanced. The purpose of this project was to provide a documentation tool in an easy to access, concise, manageable format that demonstrates oncology specific competency for newly graduated nurses, experienced nurses new to oncology, and oncology nurses as they develop professionally. A literature review revealed a lack of evidence based formats to determine specific competencies as well as methods of documentation. The IOM identifies 5 core competencies for healthcare workers. Whelan suggests identifying phases of competency based on hospital orientation, nursing orientation, and specialty orientation. The Oncology Nursing Society has a draft document of General Oncology Nursing Competencies. A method of timely, individualized, competency assessment that included critical thinking for decision making and critical behaviors was not found. Although individualized to each nurse, competencies are included that are consistent across the institution with an identified time frame for completion and re-evaluation and allows for documenting nurses' professional development. A group of expert oncology nurses worked on identifying core competencies utilizing input from inpatient and ambulatory oncology staff. The online tool will be pilot tested with new employees. Evaluation: the project is ongoing and the impact of this tool will be evaluated as nurses progress through the oncology specialty orientation and professional development. This institution identified the need for a more defined vision of oncology specific competencies and a method of documenting achievement of those competencies in a tool that is usable for preceptors, new employees, managers, and accreditors.

## E-37

**CUSTOMIZING THE ONBOARDING PROCESS FOR ADVANCED PRACTICE PROVIDERS.** Heather Brom, MS, RN, CNP, The James Cancer Hospital, Columbus, OH

Oncology Advanced Practice Providers (APPs – clinical nurse specialists, nurse practitioners, and physician assistants) employed in hospital-based settings have unique onboarding needs that require orientation to their clinical practice, departmental policies, and medical staff bylaws. At our institution, in FY 2015 through the first half of FY 2016 we will onboard 107 APPs. This represents a substantial growth in our APP workforce. Less than 1/3 has oncology experience and less than 1/4 has prior APP experience. These APPs require a great deal of individualized planning. Purpose: To describe the multifaceted onboarding process for APPs new to our organization. Interventions Our Advanced Practice Educator collaborates with the APP's Manager and Lead to create a customized onboarding plan based on levels of oncology and APP experience. This includes orientation to the clinical role, meeting with the multi-disciplinary team, live classroom, and asynchronous online learning. The APP's onboarding plan includes a hybrid

of a schedule along with customized educational resources including various references and a list of competencies expected to have at the end of orientation. All APPs also attend a full-day orientation session highlighting unique considerations for them in our institution. Nurse practitioners and physician assistants additionally attend a two-hour session to review provider-specific topics. The APPs meet three weeks into onboarding with the Educator and onboarding team to discuss progress and create specific goals. The Manager/Lead assumes responsibility of overseeing the remainder of the onboarding process and consults with the Educator if issues arise. The full-day orientation and supplemental sessions include written evaluation. Overall evaluation is based on feedback from Managers/Leads and the APP. Through the credentialing process, all new hires undergo a six month review. As the APP workforce continues to grow, it's increasingly important to devote time and attention to individual onboarding to ensure competency and confidence of our workforce, staff satisfaction, and retention. Our process is innovative because of the multidimensional resources and the support team that includes the Advanced Practice Educator, Managers/Leads, and preceptors. Elements of this plan could be utilized by oncology practices with fewer resources to support advanced practice.

## E-38

**EARLY RECOGNITION AND MANAGEMENT OF MALNUTRITION IN THE PERI- AND POSTOPERATIVE ONCOLOGY PATIENT.** Carmela Hoefling, MSN, APNC, AOCNP®, Rutgers Cancer Institute of New Jersey, New Brunswick, NJ

Malnutrition is a common problem in oncology patients that has been recognized as a significant contributor to adverse outcomes in the pre- and postoperative patient increasing morbidity, mortality and decreasing quality of life. Weight loss, defined as an at least 10% loss of body weight in 6 months, has been identified as a predictor of poor prognosis. Poor preoperative nutritional status, coupled with delayed and inadequate postoperative nutrition has been associated with worse clinical outcomes. Malnutrition causes a number of adverse outcomes postoperatively including increased susceptibility to infection, poor wound healing, prolonged hospitalization and delayed recovery. Purpose: To obtain a basic understanding of the peri- and postoperative signs of malnutrition, its management and impact on quality of life in malnourished oncology patients. The role of preoperative nutrition is to improve undernutrition prior to surgery, while postoperative nutrition aims at maintaining nutrition. It is necessary to identify the malnourished patient preoperatively. Diagnosis requires that a patient exhibit two or more of the following: insufficient intake, weight loss, loss of muscle mass or subcutaneous fat, fluid accumulation, low albumin level or diminished functional status. Implementation of preoperative nutrition orally, enterally or parenterally has shown to decrease postoperative complications; thus improving quality of life. Initiate postoperative nutrition as soon as bowel function returns and advance as tolerated. Preoperative malnutrition is associated with adverse postoperative clinical outcomes and malnourished patients were two times more likely to develop complications including wound dehiscence, prolonged postoperative ileus and infection compared to well-nourished patients. The evidence supports identifying the risk of malnutrition early and providing proper intervention. Correcting preoperative malnutrition, limiting nil-by-mouth days and properly advancing postoperative diets has been shown to improve clinical outcomes in surgical oncology patients and, therefore, improving a patient's quality of life. The evidence shows that improving a patient's nutritional status prior to and after surgery can prevent adverse complications including infection and poor wound healing. Optimizing a patient's

nutritional status through oral intake is the preferred method. Oncology nurses can help their patients through education regarding proper nutrition and providing them with the tools and resources necessary for a positive surgical outcome.

### E-39

#### **INCORPORATING SYSTEMATIC FAMILY HISTORY COLLECTION INTO PUBLIC AND COMMUNITY HEALTH CENTERS TO IDENTIFY WOMEN AT HIGH RISK FOR HEREDITARY BREAST AND OVARIAN CANCER SYNDROME (HBOC).** Alice Kerber, MN, APRN, ACNS-BC, AOCN®, AGN-BC, Georgia Center for Oncology Research and Education, Atlanta, GA

HBOC accounts for 5%–10% of all breast and ovarian cancer diagnoses. Limited knowledge of hereditary risk factors and family history are barriers to appropriate identification of women at risk for HBOC. To increase knowledge and appropriate genetic referrals, an educational module, screening, counselling and testing plan was developed for use in Georgia Public and Community Health Centers. In collaboration with the Georgia Department of Public Health (DPH) and Emory University, the Georgia Center for Oncology Research and Education (CORE) increased the use of genomics education and risk assessment to reduce disparities among high risk minority women. The educational module effectively increased HBOC knowledge among 110 DPH and community providers. As of December 2014, over 5000 women have been screened within thirteen public health districts and community health centers representing 26 of Georgia's 159 counties. 73.9% of participants self-identified as African American/Black, followed by 13.6% Caucasian/White and 6.5% Hispanic/Latino. The introduction of genomics information within public health and community centers represents the opportunity for better access to cancer care through the provision of genetic counselling to uninsured individuals. Systematic family health history collection leads to guided discussion of resources while minimizing additional workload for the providers. Oncology nurses are uniquely positioned to incorporate these principles in assessing and identifying their patients for candidates at high risk for a familial syndrome. The successful incorporation of systematic family history collection in the public and community health systems can serve as a model for integration of HBOC screening into additional venues.

### E-40

#### **ESTABLISHING AN INFUSION NURSE STAFFING MODEL FOR OUTPATIENT ONCOLOGY TREATMENT CENTERS.** Georgina Rodgers, BSN, RN, OCN®, NE-BC, Cleveland Clinic Taussig Cancer Institute, Cleveland, OH; Scott Platz, Cleveland Clinic Taussig Cancer Institute, Cleveland, OH; Kimberly Bell, Cleveland Clinic Taussig Cancer Institute, Cleveland, OH

Nursing roles and responsibilities within ambulatory oncology infusion suites across our health system are not clearly defined and it is not understood what the appropriate staffing ratio should be per site. It is not clear if employees are working to the highest level of their licensure or skill, and if the appropriate activities are performed by the correct department. A standard staffing model to provide efficiency of clinical services and patient safety does not exist, and nursing roles are variable between the sites. Similar patient populations are being treated at each site and the variability of the roles introduces unnecessary costs to the system as a whole. The purpose of this project was to define roles of the infusion nurse to insure performance to the highest level of licensure, create

efficiencies within the clinical setting, potentially reduce RN staffing requirements, achieve a cost savings, and develop a target nurse to patient ratio. Daily patient volume and hours of operation were compiled for each outpatient site and three methodologies were used to determine nurse to patient ratio. We utilized an acuity based ratio tool, hours per unit (HPU) method using billed charges for technical procedures and finally a simple 1:6 ratio based upon patient volume. Each methodology showed similar results and a final target ratio of 1:6 was chosen. A staffing template was created to predict the number of RNs necessary for treatment and an analysis of infusion sites was also completed to observe workflows and determine potential staffing adjustments. Our pilot site was initially staffed with 14 RN FTEs and the analysis showed many non-clinical, non-nursing duties were being performed by RNs. Through process improvement we have created clear role delineation and the site currently functions with 5 RN FTEs. We have maximized the efficiency of the nursing team, reduced costs, and there has been no decline or compromise in quality or patient safety. The implications of establishing this standard for infusion nursing has allowed us to duplicate the methodology across the health system and achieve a level of staffing that matches well with patient care needs.

### E-41

#### **INPATIENT CHEMOTHERAPY ADMISSION TO START TIME PROCESS IMPROVEMENT PROJECT.** Jill Benedeck, RN, BSN, OCN®, Centegra Health System, McHenry, IL; Jessica Giangiorgi, RN, BSN, Centegra Hospital, McHenry, IL; Amy Moerschbaeher, RN, MS, Centegra Health System, McHenry, IL

Oncology managers recognized a trend in chemotherapy patients staying beyond their scheduled length of stay, and short notification of impending admissions. A team was formed to develop a process improvement plan. The team consisted of inpatient and outpatient oncology nursing, registration, admission nurses, pharmacy, and care coordination. Based on several months of collected data from admitted chemotherapy patients, the team recognized the following barriers that affected readiness and potentially length of stay: (a) Admission orders for chemotherapy did not get sent to the same hospital intake area consistently, (b) Notification from physicians of impending admissions was short resulting in difficulty in staff planning and pharmacy drug ordering, (c) Once patient arrived to floor, IV access difficulty, RN patient load, and lab wait time could potentially delay start of treatment. To create a primary start point for chemo orders, admission notifications will come through admitting nurse. A Microsoft Outlook group entitled "Direct Admit Chemo Alert" was created—the admitting nurse initiates so all areas can prepare for admission in advance (verify order and check for regimen safety, order drugs if needed, organize staffing, have room ready, etc.). To improve patient readiness once they arrive to the inpatient unit, all admissions will arrive through the outpatient cancer center before going to the inpatient unit. The cancer center nurses will initially assess patient, access the port and draw labs (if applicable) and then call report to the inpatient nurse before patient is brought to the floor. Start time for chemotherapy improved from an average of 6 hours to an average of 3 hours. Notification from physicians improved from 2 days to 4 days. Implementation has resulted in staff being ready, drugs ordered and available, patients assessed before admission, and patients leaving on their expected discharge day. Satisfaction for both patients and nurses is high. Control of length of stay is important, as well as patient safety and satisfaction. This project resulted in a positive outcome that took into account all of those areas, as well as collaboration between our inpatient and outpatient staff.

## E-42

### **WANT MORE? MONTHLY ONCOLOGY RELATED EDUCATION.**

Julianna Manske, MSN, RN, OCN®, Froedtert Hospital, Milwaukee, WI; Rebecca Martin, BSN, RN, OCN®, BMTCTM™, Froedtert Hospital, Milwaukee, WI; Colleen McCracken, BSN, RN, CMSRN, CHPN, OCN®, Froedtert Hospital, Milwaukee, WI

The experienced oncology nurse has a professional and personal need for continued education as they grow in their practice and obtain or maintain certification. Oncology nurses have ongoing education needs as cutting-edge treatments emerge and new practices arise. Based on annual needs assessments of nurses across three hospitals within a health system, inpatient and outpatient nurse educators implemented a series of education programs entitled: Monthly Oncology Related Education (MORE). The purpose of MORE is to offer registered nurses and other members of the oncology patient health care team, advanced oncology knowledge to enhance the care provided to patients affected by a cancer diagnosis. Contact hours are provided at all sessions to promote certification. Each MORE program is offered several times per month, as a one-hour lecture, to accommodate inpatient and outpatient staff at three affiliated hospitals. Presenters include physicians, advanced practice providers and pharmacists. Topics for MORE sessions are organized to align with Oncology Nursing Society's Oncology Certified Nurse test blueprint and include: specific cancers, compassion fatigue, pharmaceutical updates, advance directives, bone marrow transplant, radiation therapy, and palliative care and quality of life. The goal of MORE is to provide advanced quality education to the oncology nurse and other staff working with oncology patients. Since the inception of MORE in January 2015, attendance has doubled and 402 nursing contact hours have been provided. Overall, 93.5% of participants evaluated each month's program as excellent or very good. MORE is an excellent venue to provide oncology updates and education to staff. While oncology nursing focused, participants have included physical and occupational therapists, dietitians, pharmacists, advanced practice providers, and clinical staff from several non-oncology departments. Other organizations may wish to adapt monthly contact hour programs for the advanced oncology nurse to simultaneously promote professional development and support oncology certification.

## E-43

**EXTRA EXTRA READ ALL ABOUT IT—CONNECTING NURSING STAFF VIA AN ELECTRONIC NEWSLETTER.** Michelle Cavuoto, RN, MA, OCN®, Memorial Sloan Kettering Cancer Center, Manhattan, NY; Patricia McTague-Allen, RN, MSN, FNP-BC, Memorial Sloan Kettering Cancer Center, Manhattan, NY

In this fast-paced inpatient oncology setting the dissemination of information can be a challenge. Our nurses desired a means of receiving education regarding policies, new products, and events at the time most convenient for them to absorb. With the intent of keeping staff engaged and informed while supporting increased staff involvement with decision-making we decided to publish a collaborative electronic monthly newsletter. Conceptually rooted in Adult Learning Theory and the Relationship Based Care (RBC) Nursing Model, a plan to disseminate information, education and RBC initiatives was devised. In May 2011 the first edition of the M17 Happenin's was published. The newsletter opens with a greeting from our nurse leader, setting the tone for the month ahead. Built around our shared governance structure, each of our four departmental councils provides a monthly update focusing on Practice, Quality, Education and staff Recognition. Practice updates and policy changes are reviewed and references provided. Unit specific data regarding Nursing Quality outcomes are shared via monthly report card. Successes and exceptional performances are celebrated and areas for improvement are explored. Care of

colleague is highlighted in the 'back at'cha' compliment corner. Patient care excellence is spotlighted by sharing Caring Heart message from patients and families. 'Inside' and 'outside' activities showcase the importance of work life balance and welcome new staff via biographical antidotes. 'Comin ur way' raises staff awareness regarding important dates and activities worthy of special attention. Our newsletter has successfully been published monthly for 52 months. Distribution has extended beyond nursing to include integral members of the interdisciplinary team. Staff and leadership alike praise this innovative approach to sharing knowledge and celebrating care of colleague. Other institutions looking for a novel means of sharing information may consider publishing a newsletter. The newsletter enhances a collaborative team approach and provides a creative way to keep nursing staff engaged. Keeping staff informed is a priority at this institution. The dissemination of information across multiple shifts is challenging. The implementation of a nursing newsletter has helped improve communication and staff education on this oncology unit.

## E-44

### **IMPROVING PATIENT CARE THROUGH PRIMARY TEAM NURSING AND THE CLINICAL NURSE LEADER ROLE.**

Kristy Alexander, MS, RN, CNL, OCN®, MD Anderson Cancer Center, Houston, TX

The function of the Clinical Nurse Leader (CNL) is to manage outcomes and facilitate continuity of care in a specific microsystem. In one academic hospital, this has been paired with Primary Team Nursing (PTN). The purpose of this abstract is to show how the role of the CNL and PTN have changed the patient experience and improved quality outcomes on an inpatient leukemia unit. The goal of PTN is to deliver safe and effective patient care through a team based approach to nursing. The back bone of the care delivery model is to have the same team of nurses, aids, and secretaries care for specific patients throughout their hospital stay. This facilitates continuity of care, team based professional practice and synergy of patient needs and nursing expertise. While this concept is important to all patients, this particular patient population is especially in need due to the emergent nature of the disease, extended stay, and multiple potential complications. The leader of these teams in the CNL, who is on the floor five days a week, and in charge of continuity of care. She is the holder of the patients' story as she facilitates communication to the interdisciplinary team. She is the only constant through the patients' stay in the hospital leading to a strong therapeutic relationship and trust from the patients throughout their stay. Not only does she facilitate the care of the patients directly, but also through teambuilding, mentoring and coaching nurses in order to form a cohesive team that interacts with the patients daily. Lastly, the CNL is responsible for quality improvement projects such as decreasing falls and CLABSI's. Since the initiation of PTN and the CNL on this acute leukemia unit, it has been transformed from the nurses' and most importantly the patients' perspectives. Patient satisfaction scores have increased in all eight domain on the HCAHPS questionnaire, the number of falls has nearly been cut in half, and on the last pressure ulcer rounds, and there was not one pressure ulcer on this unit.

## E-45

### **ADVOCATE, ACKNOWLEDGE, AND AWARD: CHAMPIONING ONCOLOGY NURSING CERTIFICATION ON THE FRONTLINES.**

Michele Gaguski, MSN, RN, AOCN®, CHPN, APN-C, Atlanticare Cancer Care Institute, Egg Harbor Township, NJ; Susan Bruce, MSN, RN, AOCNS®, Duke Raleigh Cancer Center, Raleigh, NC

Oncology nursing certification has long been recognized as a hallmark to commitment and dedication to quality oncology nursing practice. Achievement of oncology nursing certification

demonstrates the nurse's expert level of specialty knowledge and clinical skills beyond that of the initial RN license. The rewards of becoming certified in oncology nursing are well known: professional excellence, improved self-confidence and satisfaction, and personal growth. Nurse leaders have the opportunity to create a work environment conducive to supporting oncology nursing certification. In an effort to support nurses with their pursuit of certification, two advanced practice nurses (APNs) share their successful strategies for reaching 100 % eligible oncology certified nursing staff at their respective institutions. Using strategies that include advocacy efforts, acknowledging and empowering current certified nurses to embrace their credential and mentor others, become involved in leadership opportunities, and recognize certified nurses through various award mechanisms both locally and nationally. These approaches focused on promoting the availability and utilization of oncology nursing certification resources to nursing staff including inpatient and outpatient departments; developing organizational strategies to promote inclusion of certified nurses at decision making levels within their institutions and community; recognize and award the professional and personal achievement of oncology nursing certification through internal and external award mechanisms; implementing processes for reimbursement for test preparation and examination, and "points" included within the clinical ladder program for certified nurses. APN driven certification tactics can strengthen the work environment philosophy that nursing certification makes a difference. Oncology nursing certification is a vital first step to lifelong learning, professional development and career opportunities. Outcomes from APN developed initiatives can result in increasing the number of certified nurses in the work setting, achieving positive nurse engagement scores and creation of a workplace culture committed to continually growing future nurse leaders by interweaving the importance of oncology nursing certification.

#### E-46

**UNDER MY WING: A TAPESTRY OF NURSING MENTORSHIP.** Kimberly Drewry, MSN, RN, FNP-C, CBCN®, AOCNP®, University of Virginia Health System, Charlottesville, VA; Jo Schafer, BSN, RN, University of Virginia Health System, Charlottesville, VA

Numerous studies have proven the vast benefits of nursing mentorship. Nursing shortages are expected to reach 29% by 2020. Between 1992 and 2000, there was a 28% increase in the number of registered nurses who chose non-nursing jobs due to dissatisfaction with the nursing role. The Institute of Medicine (IOM) reported that mentoring strengthens the nursing workforce, and in turn, improves the quality of care and patient outcomes. Literature indicates a positive correlation between mentorship programs and nursing retention. Our hypothesis was that a culture that expected each nurse who worked on a professional project to actively include a less experienced clinician in their work would enhance professional development, job satisfaction and retention. Purpose: To integrate a culture of nursing mentorship and leadership through the "Under My Wing" initiative. Create a nursing culture where the expectation is that when a nurse prepares a project, he/she would include others. Projects deemed, "Under My Wing" receive preferential treatment for external presentation and travel reimbursement. "Under My Wing" was introduced to the Chair of the Professional Development Committee. From there, the idea was presented to the Mentorship sub-committee. After approval from both committees, by vote, this program has been targeted for presentation to our Professional Nursing Cabinet on 10/15/15. "Under My Wing" projects will be mentored by our nursing research program. Through travel reimbursement we have the means to evaluate "Under My Wing presentations.

Additionally institutional job satisfaction and retention data can be analyzed. Currently many nurses include others in their projects. These individuals should be celebrated, and others encouraged to embrace this standard and participate in active mentorship. There is a scheduled nursing mentorship launch planned for later in October where this program will be presented to all nurses. Plans are already in place for Hospital wide implementation and evaluation. The "Under My Wing project will enable our nurses to fly higher, those that are mentored to fly even higher, and as an institution we will SOAR!

#### E-47

##### **IMPROVING ACCESS TO PATIENT EDUCATION MATERIALS THROUGH THE USE OF ELECTRONIC EDUCATION FOLDERS.**

Debra Woo, BSN, RN, OCN®, University Hospitals Seidman Cancer Center, Cleveland, OH; Paula Schultz, RN, CNRN, University Hospitals Seidman Cancer Center, Cleveland, OH; Regina Carlisle, RN, University Hospitals Seidman Cancer Center, Cleveland, OH; Melissa O'Grady, MLIS, University Hospitals Seidman Cancer Center, Cleveland, OH

Selecting patient specific and appropriate written materials to reinforce verbal education is an evidence based health literacy best practice. Yet, accessing appropriate educational resources often involves remembering and finding online locations where specific written materials are housed. This inefficient process can be time consuming and frustrating for oncology nurses, resulting in patients receiving less than appropriate educational materials, or no materials at all. The University Hospitals Seidman Cancer Center (UHSCC) Patient & Family Education Committee was made aware of nursing requests for one-step electronic access to disease specific oncology patient education materials. Several multi-disciplinary teams were formed to electronically streamline approved educational materials for easy access. The teams identified reliable and appropriate online resources consistent with institutional policy. A system was also developed for creating electronic chemotherapy drug regimen information packets. Electronic links to all materials were organized by topic into disease specific education folders (e-folders) housed on the UHSCC intranet. Nursing staff was familiarized with e-folder content and intranet locations and then, instructed on how to easily access them by creating a shortcut link. Health literacy best practices for effective use of patient education materials were reinforced including; (a) introducing the document to the patient, (b) circling or highlighting the most important points, (c) personalizing the material and, (d) using teach back to confirm understanding. Statistics from the UHSCC intranet show hits to the e-folders have increased incrementally since implementation. Nurse's feedback indicate e-folders promote efficiency and productivity by reducing time and effort searching for and gathering educational materials. The systematic arrangement of the e-folders also helps nurses consider topics that would benefit the patient. Materials housed in the e-folder link directly to the original documents assuring the most current version is provided to the patient. This also eliminates the need to store paper copies of patient education materials. Detailed evaluations will be shared as well as future direction for the project. Disease specific e-folders enable nurses to easily access current, reliable and pertinent patient education materials. This method also solves the problem of storing numerous copies of often outdated and poor quality patient education materials.

#### E-48

**INNOVATIONS IN NETWORKING: TAKING PROFESSIONAL CHAPTER AND COLLEAGUE DISCUSSIONS TO THE NEXT LEVEL.** Theresa Zielinski, RN, MS, OCN®, Frontier Science

Technology & Research Foundation, Amherst, NY; Marianne Jerla, RN, BSN, Roswell Park Cancer Institute, Buffalo, NY; Laurie Sullivan, RN, BS, OCN®, CCS Oncology, Williamsville, NY; Kimberlee Bliek, RN, MS, CMNL, Arnot Ogden Medical Center, Elmira, NY

Collaboration of nurses from diverse backgrounds contributes to more meaningful and robust discussion of clinical problems. Through the melding of varied backgrounds, practice areas, and professional focus, identification of problems such as the clinical relevance of nurses understanding the Response Criteria in Solid Tumors (RECIST) can be successfully addressed and understood. At local Oncology Nursing Society (ONS) chapter programs, nurses from different disciplines and geographic locations came together and formed a focus group. During discussions, the nurses identified a learning need in nursing practice that should be addressed and a shared vision with a clear purpose began to evolve. The discussions focused on identifying ways that nurses could better understand RECIST criteria and how increasing the knowledge of this tool could serve to improve the quality of care. This shared vision led to a plan to help address this gap in nursing practice. The dialogue progressed to the development of a project that would serve to better understand if increasing nursing knowledge about RECIST could, as predicted, impact quality of care. Using a Plan-Do-Check-Act (PDCA) methodology, the group utilized social media and a designated contact person to coordinate idea sharing. Group members were approached and agreed to participate prior to writing the abstract. Roles were clarified and tasks were assigned as the project evolved. Utilizing the PDCA cycle, consultants were added to the group. Problems were clarified and tasks were reassigned as the project progressed. Finally, an ONS mentor was contacted to help visualize the project. Evaluation of the collaborative process will be through the submission of a research abstract to ONS and the successful development of a research project. This project serves as a strategic way to engage nurses within the local professional chapter and the larger healthcare community. It also supports the advantages of mindful, collaborative networking and a method for using these conversations to promote nursing research goals.

## E-Poster Abstracts: Research

### E-49

#### **ASSOCIATION OF TELOMERES AND TELOMERASE WITH CLINICAL OUTCOMES IN CHILDREN WITH ACUTE LYMPHOBLASTIC LEUKEMIA: A REVIEW OF LITERATURE.**

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Acute Lymphoblastic Leukemia (ALL) is the most common pediatric cancer. Telomere plays a key role in cancer development through impairment of chromosome stability. The purpose of this study was to report the current state of science of the role of telomeres and telomerase in children with ALL. The biomedical model of disease processes and the understanding of the telomere, the end of the chromosomes, in DNA replication mechanisms during the cell proliferation were used to guide this study. Using PubMed, CINAHL, and Scopus,

an integrated review of the literature was conducted. Search terms included "acute lymphoblastic leukemia" OR "acute lymphocytic leukemia" OR "acute lymphoid leukemia" and "telomere" OR "telomerase". Studies in adults, animal studies, non-English studies, review articles, case reports, books, and thesis were excluded. Thirteen studies were selected. Eleven investigated telomere length (TL) and/or telomerase activity (TA) in ALL children and two in both children and adults. Only four studies were published between 2010-2015. The TL and TA were measured by real-time quantification polymerase chain reaction (n = 7), real-time reverse transcriptase (n = 4), telomerase amplification protocol (n = 6), and southern blot analysis (n = 3). Findings of an association between TL and TA with treatment outcomes were inconsistent. Majority of the reviewed studies suggested that children with ALL have shorter TL and higher TA than healthy controls. During treatment, shorter TL and activation of TA were associated with a reduction in survival rate, poor prognosis, and poor treatment outcomes. Among ALL patients, TL was not associated with age at diagnosis. Most often limitation listed in these studies was small sample sizes. Current evidence shows an inconsistent correlation between TA, TL, and cancer treatment outcomes. Additional longitudinal studies in larger sample sizes are needed. The understanding about the association among telomere length, telomerase activity and clinical outcomes (e.g., remission, relapse) in acute lymphoblastic leukemia is vital. It provides the framework for future studies and potential target for treatment.

### E-50

#### **A PATIENT-REPORTED OUTCOME MEASURE FOR SYMPTOMS AND SYMPTOM BURDEN OF ACUTE MYELOID LEUKEMIA (AML) AND MYELODYSPLASTIC SYNDROME (MDS).**

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Purpose was to develop a patient-reported outcome (PRO) measure of symptom burden in acute myeloid leukemia (AML) and myelodysplastic syndrome (MDS) for research and practice. Symptom assessment/management is a primary role for oncology nurses. A validated, easily administered, easily scored PRO can improve symptom assessment and save time for oncology nurses. Methods/Analysis: A convenience sample of 152 AML patients (75 inpatients, 77 outpatients) and 97 MDS outpatients were recruited to this IRB-approved, nurse scientist-led, cross-sectional study. Six proposed AML/MDS symptom items (muscle weakness, malaise, fever, headache, diarrhea, skin problems), developed from qualitative patient interviews, were added to the 13 symptom and 6 interference items of the MD Anderson Symptom Inventory (MDASI). Patients rated symptoms and interference on 0-to-10 scales (0 = not present or no interference; 10 = as bad as can be imagined or complete interference) twice, 1-2 days apart. Standard psychometric techniques were used to determine reliability and validity. Clinical and demographic information was analyzed using descriptive statistics. Mean symptom and interference ratings were significantly higher for AML inpatients ( $2.8 \pm 1.6$  and  $4.0 \pm 2.4$ , respectively) than for AML outpatients ( $1.8 \pm 1.4$ ,  $2.7 \pm 2.3$ ) and MDS patients ( $1.9 \pm 1.5$ ,  $2.7 \pm 2.5$ ); all  $p < 0.01$ . The most severe symptoms for all patients were fatigue, disturbed sleep, drowsy-

ness, and muscle weakness. Fever and headache were dropped for lack of moderate to severe (>4) ratings (only 12% and 11%, respectively). Cronbach's reliability for symptom and inference items were 0.88 and 0.86, respectively, for AML and 0.91 and 0.92 for MDS. Test-retest intraclass correlations were 0.85 for core MDASI symptoms, 0.77 for AML/MDS symptoms, and 0.84 for inference items. The MDASI-AML/MDS can be completed in <5 minutes. The MDASI-AML/MDS is an easily administered and scored measure of symptom burden that can be used by oncology nurses in clinical practice for consistent routine symptom assessment and in research to develop evidence for effective symptom-management interventions in these patients where current evidence is lacking. Better understanding of symptoms across disease and treatment trajectories can assist oncology nurses in providing effective education to patients and family caregivers and improving adherence to treatment regimens. Innovation: No validated symptom measure specific to AML or MDS exists.

**Underwriting:** Research grant from Bristol-Myers-Squibb.

## E-51

### **DELAYED OR NOT TO BE SCREENED FOR CERVICAL CANCER AMONG VIETNAMESE WOMEN—PROVIDER AND CLIENT COMMUNICATION INTERACTION APPROACH.**

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Vietnamese women are diagnosed higher with advanced cervical cancer (CC) (36%) than non-Hispanic White (28%), Korean (34%), and Japanese (32%) women. Compared to a national goal of 93%, 69% of Vietnamese women reported adherence to CC screening guidelines. Vietnamese women who reported having a health care provider who recommended CC screening were more likely to adhere to guidelines. The study purpose was to explore primary health care providers' (PHCP) perspectives on Vietnamese women's beliefs about symptom perception, preventive care-seeking, and CC screening. Principles of community-based participatory research were used to create a partnership between community members and nurse scientists to inform the research. Ten PHCP participants were referred to the research team by the community advisory board and through snowball sampling. Interviews were one hour using an open-ended, semi-structured guide, digitally recorded, and transcribed verbatim. Braun and Clark's thematic analysis was used to identify major themes. Debriefings with the qualitative consultant and with Vietnamese women were done as external checks on the inquiry process. PHCPs' range 2–23 years of experience treating Vietnamese women. Two major themes were identified. One theme focused on PHCPs' perceptions that Vietnamese women decline or delay CC screening based on the women's beliefs (e.g., infection of the genitalia represents immoral behavior; being healthy means no more future testing). The other theme related to PHCPs' perceptions regarding communication between PHCP and client. For example, asking about sexual history equals prying. PHCP messaging included building a trusting relationship prior to doing a CC screening; and enhancing access to cancer screening. PHCPs' role is crucial where communication between PHCPs and Vietnamese

women may influence the women's decision to be screened for CC. An earlier study showed Vietnamese women reported asking their PHCP for information was difficult. Findings will inform an educational intervention whereby nurse scientists will partner with a community-based organization to improve CC screening rates in the Vietnamese community. Innovation: Nurse scientists partnered with members from the community that is the most affected by the disparity.

**Underwriting:** Institutional, National Institute of Nursing Research (T32 #5T32NR007061); Beta Psi Chapter of Sigma Theta Tau.

## E-52

### **ONCOLOGY NURSING SPEED DATING: FINDING THE RIGHT PATH FOR YOU!** Jeanine Gordon, RN, MSN, OCN®, ONS New York City Local Chapter, New York, NY; Erica Fischer-Carlidge, MSN, CNS, CBCN®, AOCNS®, ONS New York City Local Chapter, New York, NY; German Rodriguez, MSN, RN, ONS New York City Local Chapter, New York, NY; Jaclyn Andronico, MSN, CNS, OCN®, AOCNS®, ONS New York City Local Chapter, New York, NY; Donna Marie Curran, BSN, RN, OCN®, ONS New York City Local Chapter, New York, NY; Pamela Ginex, EdD, RN, OCN®, ONS New York City Local Chapter, New York, NY

According to the Institute of Medicine's (IOM) Future of Nursing report (2010), academic nurse leaders should partner with healthcare and community organizations in recruiting and advancing nursing students to meet the growing demands of populations. A strategic goal of the ONS New York City Chapter is recruiting nursing students into the specialty of oncology nursing. The purpose of this study was to determine if conducting an informative "speed dating" event for undergraduate nursing students would increase interest in pursuing a career in oncology and dispel myths. Chapter members partnered with a local university school of nursing to offer the event. IRB approval was obtained to conduct pre- and post-surveys of students to ascertain their knowledge and perceptions of oncology nursing. The intervention used a round-robin format; nursing students spent five minutes with 16 expert nurses representing different oncology roles such as leadership, infusion, research, outpatient and advanced practice. Each role was described by the nurse and students could ask questions. This program was offered twice and 23 students participated. Aggregate survey responses were evaluated. At baseline, 96% stated they were interested in oncology and may consider specializing in it. Students with didactic oncology content in school were significantly more likely to report they may chose oncology as a specialty ( $p=0.027$ ). After the intervention nurses responded more positively to perception questions about oncology nursing ( $p=0.037$ ). Presentation will discuss demographics, logistics, and complete data analysis. This program was beneficial in dispelling myths about oncology nursing. The sample was already highly interested in oncology so benefits to increasing interest could not be determined from this offering. Given the impact of didactic oncology content on consideration to work in the specialty, ONS national, local chapters and healthcare organizations should be collaborating with academia to reach students. As oncology nurses we need to develop innovative recruitment strategies to secure the future of our profession. The program was financially inexpensive and was found to be mutually fulfilling to both students and nurses. This intervention can easily be replicated by healthcare organizations and other chapters to recruit nursing students as well as experienced nurses into oncology.

**Underwriting:** ONS Foundation Chapter Grant

## E-53

### **PREDICTORS OF DEPRESSION IN AFRICAN AMERICANS BEING TREATED FOR CANCER PAIN.** Allysa Rueschenberg, RN, Emory University, Atlanta, GA; Kate Yeager, RN, PhD, Emory University, Atlanta, GA

Depressive symptoms, found in as many as 15%–25% of people with cancer, contribute to decreased quality of life, non-adherence to treatment, and suicide. While African Americans (AA) are more likely than Caucasians to be diagnosed in later stages of cancer, experience poorer pain management, and have worse treatment outcomes, there is a paucity of research on cancer and depressive symptoms in AA being treated for cancer pain. Understanding the prevalence and factors contributing to depressive symptoms can help nurses address this treatable condition. The purpose of this study is to evaluate the prevalence of depressive symptoms and explore the individual and interpersonal factors that contribute to these symptoms in AA being treated for cancer pain. This descriptive study analyzes data from the Adherence in African Americans Being Treated for Cancer Pain study. A convenience sample of AA adults being treated for cancer pain with around the clock opiates was enrolled in the study. Measures included: depressive symptoms (Patient Health Questionnaire-8), social support (Multidimensional Scale of Perceived Social Support-MSPSS), religious social support (Measure of Religiousness/Spirituality), symptom burden (Edmonton Symptoms Assessment Scale-ESAS), and pain severity (Brief Pain Inventory-BPI). Demographic variables, including age, sex and income, were collected via interview. The sample consisted of 77 AA with cancer, mean age 56.72 ( $\pm 10.69$ ) years, 56.4% female, and mean pain severity 4.4/10. Preliminary analyses show a 33.8% prevalence of moderate and severe depressive symptoms. Of our identified predictor variables, only those that showed an association with depressive symptoms (pain severity, symptom burden, and social support) were entered into a logistic regression. Results indicated that only symptom burden was predictive of depressive symptoms [OR1.07 (CI 1.02-1.13)]. While our results are statistically significant, they may not be clinically relevant. Further data analysis is ongoing. Our findings suggest that depressive symptoms are prevalent in AA being treated for cancer pain. Previous studies have also found an association of increased symptoms burden and depressive symptoms. This study provides an initial investigation into the factors that contribute to depressive symptoms in AA with cancer. Further research is needed in this population to inform healthcare providers of the risk factors for depressive symptoms.

**Underwriting:** National Institutes of Health (NIH)/National Institute of Nursing Research; Grant ID: 1K01NR014673

## E-54

### **FUNCTIONAL DISABILITY AND QUALITY OF LIFE IN ELDERLY CANCER PATIENTS VERSUS GENERAL ELDERLY POPULATION.** Myung Kyung Lee, RN, PhD, College of Nursing, Kyungpook National University, Daegu, South Korea

Cancer is an important and challenging health concern for the elderly. Aging involves a progressive reduction in the functional reserve of multiple organ systems, with a reduced tolerance to stress. So, any pathological condition could cause some disabilities as a result of functional impairment. The purpose of the current study is to compare functional disability and quality of life between elderly cancer patients and general elderly population. We used data from a nationally representative sample of Korean adults from the 2008 Korean Community Health Survey (KCHS). We compared functional disability and Quality of Life between general elderly population and elderly cancer population. Because differences in the characteristics

between the two populations can bias estimates of the effect of cancer on the functional disability and health status, we attempted to adjust for differences in observed characteristics of the elderly cancer population using propensity score matching to minimize bias when selecting the comparison population. We analyzed 1,776 elderly cancer patients of age 65 years or more and their matched 1,766 general elderly population. Multiple logistic regression analyses showed the ECP were less likely to be independent in preparing meals, doing laundry, and shopping than PMGEP, while the ECP were more likely to be independent in handling money and administration medication than the PMGEP. Total functional disability score of the ECP were lower than the PMGEP ( $p = 0.028$ ). The ECP were more likely to experience be ridden compared to PMGEP. The ECP were less likely to have no problem in mobility, usual care, pain and discomfort, and anxiety and depression compared to the PMGEP. However, the ECP were more likely to have no problem in self-care domain compared to the PMGEP. Elderly cancer patients are more likely to have physical disability in daily activity living compared to general elderly population, however, the elderly cancer patients are more likely to do self-care or self-management in managing their illness compared to general elderly population do.

**Underwriting:** This research was supported by Basic Science Research Program through the National Research Foundation of Korea (NRF) funded by the Ministry of Science, ICT & Future Planning (NRF-2014R1A1A1006809)

## E-55

### **CHARACTERIZING THE VAGINAL MICROBIOME OF GYNECOLOGIC CANCER PATIENTS: AN INTEGRATIVE REVIEW.** Julie Lemen, BSN, RN, Emory University, Atlanta, GA; Deborah Bruner, RN, PhD, FAAN, Emory University, Atlanta, GA

This review is the first to compare and contrast the dominant taxonomic compositions of the vaginal microbiome (VM) in gynecologic cancer patients before and after cancer treatment. In 2015 close to 100,000 women in the United States will be diagnosed with a gynecologic cancer. In addition to the physical and emotional stressors of the cancer itself, treatments directly result in decreased quality of life (QOL) related to vaginal pain, bleeding, infection and sexual dysfunction. The purpose of this review is to better understand the changes in the VM associated with gynecologic cancer and its treatments to inform future research and clinical care related to interventions promoting vaginal homeostasis. Literature suggests that vaginal microbiome dysbiosis leads to negative gynecologic outcomes. This review exams if toxicities related to current gynecologic cancer treatments are associated with unhealthy VM profiles. The PRISMA framework was used to facilitate transparent formatting of the review process. Database searches employed PICO research question scaffolding. A Cochrane Group systematic review form was adapted for data extraction. Summary tables and thematic coding were developed using a previous Bruner systematic review as a template. Tables divided summary findings into those with and without 16S rRNA gene sequence analysis and further by variables pertinent to the research questions and known microbiome modifiers such as ethnicity and menopausal status. Preliminary findings reveal marked alterations in VM profiles in women treated for gynecologic malignancies with surgery +/- chemotherapy and or radiotherapy compared to literature on healthy postmenopausal norms. Variations continue to occur throughout treatments. Cross-study analysis is difficult due to the variety and individualization of employed methodologies. New metagenomic technology allows for further understanding of the ecological relationship between host and microbe. This

review analyzes current findings of the relationship between gynecologic cancer treatments and the vaginal microbiome as well as explores microbiome shifts linked to resulting symptoms. In characterizing these vaginal microbiome changes the goal of identifying opportunities for symptom management can be met in order to improve patients' QOL.

## E-56

**VALIDATION OF AMERICAN UROLOGIC ASSOCIATION BEST PRACTICE GUIDELINES FOR PROSTATE BIOPSY INFECTIOUS COMPLICATIONS: A QUALITY IMPROVEMENT INITIATIVE.** Mary Schoen, MSN, MPH, AOCNP®, Memorial Sloan Kettering Cancer Center, New York, NY; Michael Manasia, RN, BSN, Memorial Sloan Kettering Cancer Center, New York, NY; Behfar Ehdaie, MD, MPH, Memorial Sloan Kettering Cancer Center, New York, NY; Max Spalaviero, MD, Memorial Sloan Kettering Cancer Center, New York, NY

The American Urologic Association (AUA) recently updated recommendations for antibiotic prophylaxis prior to prostate biopsy. The oncology surgeons, nurse practitioners and nurses in our outpatient urology service in a large comprehensive cancer center sought to implement these guidelines to standardize antibiotic prophylaxis and assess the impact on infectious complications after biopsy. In 2013, we implemented AUA guidelines to standardize prophylactic antibiotic use. The guidelines describe standardized regimens using a single antibiotic for up to 24 hours duration. The recommendations include consulting the local anti-biogram and identifying high-risk men, such as those with recent antibiotic use or previous biopsy related infection. To assist nursing staff in applying these guidelines, we developed an education program including an antibiotic prophylaxis questionnaire and a biopsy preparation checklist. We then compared 584 men who underwent biopsies from January 2011 to January 2012 to 654 men who underwent biopsies January 2014 to January 2015. Men were contacted within 14 days post biopsy to collect information retrospectively on complications. We calculated the change in overall antibiotic use and rate of infectious complications between men biopsied in 2011 and 2014. In 2011, the use of 19 different antibiotic regimens was reported among the oncology surgeons. Antibiotics were usually started the evening before the biopsy and continued for 72 hours. In 2014, 96% of men received one of three standardized antibiotic regimens, which were started on the same day of biopsy and continued for 24 hours. In 2011 and 2014, fluoroquinolone prophylaxis was the most common regimen. In 2014, 98% of men received a 1 drug regimen compared to only 73% of men in 2011. Infection rates decreased from 3.3% in 2011 to 2.8% in 2014. Men treated after implementing AUA guidelines had a lower rate of infection (difference -0.5%; 1-sided 95% CI 1.1%). We were able to exclude a clinically relevant increase in infectious complications using AUA guidelines. Implementing the AUA guidelines for antibiotic prophylaxis prior to prostate biopsy was a collaborative effort among the oncology surgeons, nurse practitioners and nurses. Nursing assessment and patient education proved crucial in preparing patients for biopsy, thereby helping to reduce infection rates.

## E-57

**PREVENTION OF THROMBOSIS IN AMBULATORY PATIENTS WITH CANCER.** Inna Tsuker, PharmD, BCPS, Cancer Treatment of America-Eastern Regional Medical Center, Philadelphia, PA

Venous Thromboembolism [VTE] is one of the leading causes of morbidity and mortality among cancer patients. Approximately 20% of all VTEs occur in oncology patients, and of these,

75% occur in the outpatient setting. Despite there are defined VTE prophylaxis guidelines for hospitalized patients, few providers are aware of the new and emerging literature regarding VTE prophylaxis in ambulatory patients with cancer. The goal of this presentation is provide an overview of the current literature and guidelines supporting VTE prophylaxis in the outpatient cancer patients. A detailed literature search was conducted to identify the studies evaluating safety and efficacy of VTE prophylaxis in the patients with cancer, not admitted to the hospital. The identified studies provide insight as to: which agents should be used prophylactically; what screening tool should be utilized to identify the patient who would have a high risk of thrombosis; those chemotherapy agents which could play a role; and what cancer types pose the highest risk. The Khorana Algorithm helps providers identify patients at the highest risk of the outpatient VTE by calculating the score per site of cancer, pre-chemotherapy platelet and leukocyte counts, hemoglobin, and Body Mass Index [BMI]. There were a few attempts to adjust to the original algorithm and incorporate chemotherapy type agents and additional laboratory values like D-dimer. Patients with the pancreatic cancer appear to benefit the most from the VTE prophylaxis in the ambulatory patients receiving chemotherapy. On another hand, there was no difference in the patients diagnosed with the breast cancer. All patients with multiple myeloma treated with thalidomide-type compounds were identified as a group that benefited from the prophylaxis. Major national guidelines were reviewed as well and their recommendations were evaluated in detail and summarized as well. Low molecular weight heparins were the most studied class of drug. Apixaban was also evaluated in one phase II study. Patients with myeloma were assessed with aspirin, enoxaparin or warfarin. In conclusion, VTE prophylaxis is an exciting new topic that might be somewhat controversial to some extent. However, there is a body of literature that supports VTE prophylaxis on selected high risk ambulatory cancer patients, currently even included in the national guidelines that providers should incorporate in their practice.

## E-58

**MEASURE DEVELOPMENT AND FACE VALIDITY OF A SELF-EFFICACY FOR COMMUNICATING ABOUT SEX SCALE.** Elizabeth Arthur, RN, MS, AOCNP®, Ohio State University, Columbus, OH; Usha Menon, PhD, RN, FAAN, University of Arizona, Tucson, AZ

Symptom management and quality of life in cancer survivorship is of primary importance to oncology nurses. Sexual wellbeing is recognized as an integral component of quality of life. Current research reveals most women are sexually active after cancer treatment, but effects of diagnosis and treatment can have lasting negative effects on sexual wellbeing in an estimated 8-58% of women treated for anal or rectal cancer (ARCa). There are validated measures of sexual wellbeing such as sexual (genital) function, sexual communication, sexual distress, couples relationship satisfaction, and intimacy. However, despite evidence that self-efficacy is of primary importance for women to manage sexual wellbeing after cancer treatment, there is no validated scale for use in oncology practice. The purpose of the project was to develop a measure of self efficacy for managing sexual wellbeing among women with ARCa and to assess the face validity of the scale. Based on theory, we defined self efficacy as a woman's confidence in her ability to renegotiate sex and intimacy with her partner after being treated for ARCa. The Self-Efficacy for Communicating about Sex (SECS) scale contains 19 Likert-type items that were developed from a comprehensive review of the literature as well as clinical experience with cancer survivors. We identified international content experts to provide feedback about the instrument for its face validity (relevance, clarity and comprehensiveness) using a standardized tool.

Responses were tallied and weighed, and appropriate changes incorporated into the scale. Future steps involve pilot testing of the scale to assess psychometric properties of reliability and validity. Development of this measure is significant because it fills a critical gap in self-efficacy measures for sexual wellbeing in women treated for ARCA. The results of this study will have great impact for studies of women's health in cancer, quality of life in survivorship, and advancing the science of effective interventions for sexual wellbeing. With the innovation of the SECS scale, self-efficacy for communicating with a partner about sexual wellbeing may be incorporated into health behavior intervention and clinical counseling by oncology nurses.

### E-59

**ELOTUZUMAB ADMINISTERED OVER APPROXIMATELY 60 MINUTES IN COMBINATION WITH LENALIDOMIDE AND DEXAMETHASONE IN PATIENTS WITH MULTIPLE MYELOMA: A PHASE 2 SAFETY STUDY.** Regina Swift, RN, James R. Berenson, MD, Inc., West Hollywood, CA; Shantel Hobson, RN, US Oncology Research and Rocky Mountain Cancer Centers, Denver, CO; Robert Rifkin, MD, US Oncology Research and Rocky Mountain Cancer Centers, Denver, CO; James Berenson, MD, Institute for Myeloma and Bone Cancer Research, West Hollywood, CA

Elotuzumab is an immunostimulatory monoclonal antibody under investigation for multiple myeloma (MM). In a Phase 3 study in patients with relapsed/refractory MM [Lonial et al. *NEJM* 2015], elotuzumab (10 mg/kg, administered via ~2- to 3-hour infusion) plus lenalidomide/dexamethasone demonstrated 30% reduction in risk of progression/death, and an acceptable safety profile. This Phase 2, multicenter, open-label, single-arm study (NCT02159365) investigated the safety of accelerated elotuzumab infusion rates within Cycle 1 (duration ~60mins) in patients with newly diagnosed or relapsed/refractory MM. Dosing schedule: elotuzumab 10 mg/kg intravenously (Cycles 1–2: weekly; Cycles 3+: biweekly), lenalidomide 25 mg (Days 1–21), and dexamethasone 40 mg, in 28-day cycles until disease progression/unacceptable toxicity. As in Phase 3 studies, a premedication regimen of dexamethasone (8 mg intravenously + 28 mg orally), H1 blocker (diphenhydramine 25–50 mg), H2 blocker (ranitidine 50 mg), and acetaminophen (650–1000 mg) was administered. In the absence of infusion reactions (IRs), elotuzumab infusion rate was increased during Cycle 1, from 0.5–2 mL/min (Dose 1, 170-min duration), to 3–4 mL/min (Dose 2, 73-min duration), and 5 mL/min (Doses 3–4, 53-min duration). After Cycle 1, elotuzumab was administered at 5 mL/min. Vital signs were monitored pre-infusion, 30 mins into infusion, at infusion end, and 30 mins post-infusion. Responses to IRs were: Grade 1 = no intervention; Grade 2/3 = infusion interrupted, treatment as clinically indicated; once resolved to Grade ≤1, infusion restarted at 0.5 mL/min; if no recurrence, acceleration continued; Grade 4 = discontinuation from study. Results: As of February 20, 2015, 52 patients were enrolled (median treatment cycles: 3; range 1–9). Target infusion rate was reached by 47/52 patients (5 patients not yet reached Dose 3) with no Grade 3/4 IRs observed. To date, 1 patient has experienced an IR, at 2 mL/min (Grade 2 infusion-related reaction, first dose, infusion temporarily interrupted). Four patients discontinued due to non-IR adverse events. Elotuzumab with lenalidomide/dexamethasone was well tolerated, with low IR incidence, when administered over an accelerated (5 mL/min, ~60mins) infusion time. Innovation: Elotuzumab can be safely administered in ~1 hour, at an accelerated rate of 5 mL/min by Dose 3, Treatment Cycle 1.

**Underwriting:** Study funded by Bristol-Myers Squibb. Writing assistance was provided by K Rees, PhD, at Caudex and funded by Bristol-Myers Squibb.

### E-60

**COMPLIANCE OF BONE MINERAL DENSITY TESTING FOR PATIENTS WHO ARE PRESCRIBED AROMATASE INHIBITORS IN ONE PRIVATE PRACTICE.** Camille Servodidio, RN, MPH, OCN®, CBCN®, CCRP, Middlesex Hospital, Middletown, CT; Susanna Hong, MD, Middlesex Hospital, Middletown, CT; Andrea Malon, MD, Middlesex Hospital, Middletown, CT; Kathleen Gould-Mitchell, RHIA, CTR, Middlesex Hospital, Middletown, CT

Both NCCN and ASCO guidelines suggest that postmenopausal women diagnosed with invasive breast cancer and who take an aromatase inhibitor (AI) should have monitoring of bone health with a bone mineral density (BMD) determination at baseline and periodically thereafter. While the importance of bone health assessment has been identified, few studies identify the timing of baseline BMD testing and whether patients are compliant. One community population study identified 41.6% of women who underwent BMD testing when initiating AI therapy. Research question: Do postmenopausal breast cancer patients who are placed on AI in a private practice actually obtain BMD testing two years prior to or sixty days after the initiation of AI therapy? Women diagnosed with Stages I–III and estrogen receptor positive and progesterone receptor positive invasive breast cancer from July 1, 2013 through June 30, 2014 were identified through the tumor registry at a comprehensive community cancer program. A retrospective quality improvement chart review was conducted on 49 electronic medical records in a private medical oncology practice affiliated with a community hospital. Chart review included physician and APRN documentation of baseline BMD testing for those patients who were prescribed an AI. Forty-six (94%) patients had BMD testing performed two years prior to or two months after the initiation of an AI. While three (6%) patients did not meet criteria of BMD testing performed within this time frame, all three patients did have BMD testing performed. Discussion & Implications: Little is published about the application of NCCN and ASCO AI guidelines to clinical practice and the specific timing of baseline BMD testing. The 94% compliance for BMD testing in this private practice population is higher than a community population study which demonstrated 41.6% of women who underwent BMD testing when initiating AI therapy. Innovation: Oncology nurses and physicians are in a prime position to promote patient safety by ensuring that baseline and follow up BMD testing is performed on this patient population.

### E-61

**APF530: A NOVEL EXTENDED-RELEASE FORMULATION OF GRANISETRON FOR 5-DAY PREVENTION OF CHEMOTHERAPY-INDUCED NAUSEA AND VOMITING (CINV).** Carrie Smith, RN, Gabrail Cancer Center, Canton, OH; Michele Smith, RN, BSN, Cancer Center of Kansas, Wichita, KS; Jolee Holt, RN, MSN, CCRC, Tulsa Cancer Institute, Tulsa, OK

Poorly controlled CINV remains a significant problem. A single subcutaneous injection of APF530 (a granisetron formulation utilizing Biochronomer™ polymer technology) in the upper arm or abdomen provides slow, sustained release of granisetron for ≥5 days. Nurses' understanding of APF530 administration, efficacy, and safety may improve CINV management. In a phase 3 trial (n=1428), APF530 was noninferior to palonosetron in preventing acute and delayed CINV after moderately emetogenic chemotherapy (MEC) and acute CINV after highly emetogenic chemotherapy (HEC). We present findings from the MAGIC (Modified Absorption of Granisetron In the prevention of CINV) comparative trial of APF530 versus ondansetron, each in the guideline-recommended 3-drug antiemetic regimen (5-HT3 receptor antagonist + neurokinin 1 receptor antagonist + corticosteroid) in preventing delayed CINV after HEC. This multicenter,

randomized, double-blind trial (NCT02106494) compared APF530 (500 mg, subcutaneous; n = 450) versus ondansetron (0.15 mg/kg, intravenous; n = 452), each administered with fosaprepitant and dexamethasone. A significantly greater proportion of patients in the APF530 (65%) versus ondansetron arms (57%) achieved complete response (no emesis; no rescue medication use) in the delayed phase (8% treatment difference; p = 0.014; 14.2% relative difference) (Schnadig, ASCO Breast Cancer Symposium 2015, Abstract 68). There were no new or unexpected safety findings. The most common treatment-emergent adverse events (TEAEs) were constipation, fatigue, headache, and injection-site reactions (ISRs). TEAEs led to study withdrawal in 1.3% and 0.7% of patients in APF530 and ondansetron arms, respectively; none were considered study drug-related. ISRs, generally mild or moderate, occurred within 1 to 3 days, and resolved by study end. In our extensive experience, APF530 was easy to inject in the abdomen or upper arm, with a convenient prefilled syringe and innovative warming pouch (reducing product viscosity). In this first US 3-drug versus 3-drug phase 3 efficacy trial for CINV prevention, the APF530 versus the ondansetron regimen provided superior control of delayed CINV following HEC, and was generally well tolerated. Results from both phase 3 trials suggest that APF530 is a convenient and effective treatment option for CINV control over the entire 5-day period following MEC or HEC.

**Underwriting:** Heron Therapeutics, Inc.

## E-62

### **QUTENZA® PATCH USED FOR LOCALIZED CANCER-RELATED NEUROPATHIC PAIN IN A COMMUNITY CANCER CENTER.**

Inna Tsuker, PharmD, BCPS, Cancer Treatment Centers of America—Eastern Regional Medical Center, Philadelphia, PA; Michelle Francavilla, MD, Cancer Treatment Centers of America—Eastern Regional Medical Center, Philadelphia, PA

Neuropathic pain is a commonly occurring and debilitating condition that can be precipitated by cancer, or infections such as zoster or HIV. Neuropathic pain is not always responsive to the conventional medications such as gabapentin, pregabalin or opioids. Capsaicin 8% (Qutenza®) patch is indicated for post-herpetic neuralgia, and can be used for various neuropathic syndromes, except certain types of diabetic neuropathy. All providers are facing the challenge of taking care of patients with neuropathic pain, including physicians, nurses and pharmacists. Although there are multiple publications detailing the use of Qutenza® patch for various neuropathic conditions, there is a paucity in the literature regarding its use for cancer-induced neuropathic pain. Here we present a case in which a patient noted significant improvement in retractable neuropathic pain with use of Qutenza®. A 50-year-old male with lung cancer presented with a history of a left-sided chest wall pain described as, “electrical, sharp, and stabbing”. The patient’s pain was not controlled on oxycodone extended release 30 mg every 12 hours and oxycodone 5 mg as needed. One patch of Qutenza® was applied during an inpatient admission for uncontrolled pain. The patient was evaluated three weeks and two months post patch placement, during which his pain was noted to be “very well-controlled”. At three months, re-application of Qutenza® was offered, but declined by the patient, citing continued resolution of the pain. This case is one of the first reports documenting utilization of the Qutenza® patch for cancer-related pain. This is significant due to the long-acting nature of the patch on the localized neuropathic pain, with concurrent lack of systemic

side-effects. The Qutenza® patch could be an innovative way to address localized neuropathic pain in cancer patients with the benefit of no systemic side-effects. The Qutenza® patch has been successfully used for different kinds of pain as reported in the literature, however, it can be used for cancer-induced neuropathy with great results as well.

## E-63

### **ELOTUZUMAB IN COMBINATION WITH LENALIDOMIDE/ DEXAMETHASONE IN PATIENTS WITH RELAPSED/ REFRACTORY MULTIPLE MYELOMA (ELOQUENT-2): A 3-YEAR SAFETY UPDATE.** Deborah Doss, RN, OCN®, Dana-Farber Cancer Institute, Boston, MA; Kathleen Colson, RN, BSN, Dana-Farber Cancer Institute, Boston, MA; Charise Gleason, MSN, ANP-C, AOCNP®, Winship Cancer Institute, Emory University School of Medicine, Atlanta, GA; Paul Richardson, MD, Dana-Farber Cancer Institute, Boston, MA; Sagar Lonial, MD, Winship Cancer Institute, Emory University School of Medicine, Atlanta, GA

Elotuzumab is an immunostimulatory monoclonal antibody (mAb) for the treatment of relapsed/refractory multiple myeloma (RRMM). The efficacy and safety of elotuzumab was assessed in the Phase 3 ELOQUENT-2 trial (NCT01239797). Two-year data demonstrated that patients receiving elotuzumab plus lenalidomide and dexamethasone (ELd) had a 30% reduction in the risk of disease progression or death versus lenalidomide and dexamethasone (Ld). Overall response rates (ORRs) were 79% (ELd) and 66% (Ld). ELd was well tolerated, with minimal added toxicity, and infusion reactions (IRs) resolved in most patients (2 [1%] discontinued due to an IR). In ELOQUENT-2, patients with RRMM who had received 1–3 prior lines of therapy were randomized 1:1 to ELd or Ld. To mitigate IRs, a premedication regimen of diphenhydramine (25–50 mg)/equivalent, ranitidine (50 mg)/equivalent, and acetaminophen (650–1,000 mg)/equivalent was administered 30–90 minutes before elotuzumab infusion, in addition to dexamethasone (28 mg PO plus 8 mg IV; 40 mg PO non-elotuzumab weeks). Extended 3-year safety data are discussed here. A total of 646 patients were randomized to receive ELd (n = 321) or Ld (n = 325). Median age was 66 years; median prior number of therapies was 2; 35% of patients were refractory to their last therapy. Eleven percent of patients receiving ELd experienced IRs (9.4% grade 1/2; 1.3% grade 3). The most common IRs were pyrexia (3%), chills (1%), and hypertension (1%). Most IRs occurred during the first cycle of elotuzumab therapy. Elotuzumab infusion was interrupted in 5% of patients and discontinued in 1% of patients due to an IR. Grade 3/4 adverse events experienced by >15% of patients included lymphopenia (78% ELd, 49% Ld), neutropenia (35% ELd, 44% Ld), anemia (20% ELd, 21% Ld), and thrombocytopenia (21% ELd, 20% Ld). Exposure-adjusted infection rates (incidence rate/100 person-years of exposure) were 196 (ELd) and 193 (Ld). We demonstrate that ELd improves progression-free survival and ORR with minimal incremental toxicities, versus Ld. IRs were manageable with premedication, with most resolving without discontinuing infusion. Elotuzumab offers a novel approach in the treatment of MM as it is the first mAb to demonstrate significant clinically relevant outcomes with minimal toxicity.

**Underwriting:** Study funded by Bristol-Myers Squibb and AbbVie Biotherapeutics. Writing assistance was provided by S Addison, PhD, at Caudex and funded by Bristol-Myers Squibb.

## Poster Abstracts

The following abstracts are organized by content type and day of the presentation.

- Abstracts presented on Thursday appear in purple.
- Abstracts presented on Friday appear in green.
- Abstracts presented on Saturday appear in blue.

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## Clinical Poster Abstracts

1

### **KEEP WALKING: IMPROVING POSTOPERATIVE PATIENT OUTCOMES BY IMPROVING AMBULATION.** C. Wendy Isler, BSN, RN-BC, H. Lee Moffitt Cancer Center, Tampa, FL

Early postoperative ambulation is advocated in the literature; however, little information exists defining the number of walks per day a patient must complete to see an improvement in outcomes. This lack of information exposed a need to create a formalized postoperative ambulation protocol to define the amount of ambulation required to improve patient outcomes: patient satisfaction, fatigue, health related quality of life (HRQOL), and length of stay. This abstract describes using an evidence-based, patient- and family-centered approach, to create an ambulation protocol specifically for postoperative oncology patients aimed to improve outcomes by ensuring 3 walks per day. The ambulation protocol was created after a review of literature. All staff were educated on the protocol and use of ambulation aids. Patients were educated upon admission using a "Benefits of Walking Early After Surgery" tool created by nursing. Each walk completed was documented. All nursing staff, physical therapists, and patients/families were educated on filling out the ambulation form and coordinating ambulation efforts. Nursing was alerted when symptoms prevented walking and intervened as needed. Surveys, including Brief Fatigue Inventory, EQ-5D-3L, and HRQOL, measured patient satisfaction related to ambulation, fatigue, and HRQOL. Patients filled out the surveys before implementation and at discharge. Fatigue related to walking ability (0 = "does not interfere with walking" to 10 = "completely interferes with walking") reduced to 3.55 from 4.17 baseline. HRQOL (1=worse to 5 =best) related to self-care improved to 4.35 from 3.96 baseline; HRQOL (1 = worst to 10 = best state of health) improved to 6.93 from baseline 6.39. Average length of stay was reduced by 1.3 days. A revenue analysis was completed using reduction from baseline, patient volume, and daily contribution margin as the driving metrics. The three-month average increase in potential revenue achieved by reducing length of stay was \$74,899. Nurses in collaboration with interdisciplinary team members play a vital role in improving outcomes related to postoperative ambulation. Results translated to a hospital-wide postsurgical early ambulation protocol and can easily be adapted into other healthcare settings. Future plans include collaborating with nursing research to facilitate a study on early ambulation.

2

### **EFFECTS OF NURSE NAVIGATOR PROGRAM ON HEALTH OUTCOMES OF COLORECTAL CANCER PATIENTS.** Wen-Li Lin, Cancer Center, Chi Mei Medical Center, Liouying, Tainan City, Taiwan; Shu-Chan Chang, Cancer Center, Chi Mei Medical Center, Liouying, Tainan City, Taiwan; Pei-

Hua Wu, Cancer Center, Chi Mei Medical Center, Liouying, Tainan City, Taiwan; Wen-Tsung Huang, Cancer Center, Chi Mei Medical Center, Liouying, Tainan City, Taiwan; Chao-Jung Taso, PhD, Cancer Center, Chi Mei Medical Center, Liouying, Tainan City, Taiwan

Colorectal cancer is a leading cause of cancer incidence for women, the incidence and mortality rates have increased in Taiwan. However, nurse navigator program and behavioral techniques are not yet well established in Taiwan. This study examines and evaluates the effect that adopting a Nurse Navigator Program (NNP) has on the care and survival rates of Colorectal cancer (CRC) patients. In this retrospective study, 851 CRC patients were recruited between January 2006 and December 2013. The experimental group comprised 426 patients who had received care from "NNP". The case manager coordinated the recruitment, liaison, and care plan implementation, and conducted disease education, telephone consultations, follow-ups, and evaluations. The control group comprised 425 CRC patients. The patients in the control group had similar characteristics to those in the experimental group, and received routine care. Adopting a "NNP" in CRC care increased patient follow-up appointment compliance rates at the first week, first month, and third month ( $p = 0.022$ ,  $p = 0.005$ ,  $p = 0.001$ ). The "NNP" also effectively reduced the patients' 14-day readmission rate ( $p < 0.01$ ). Furthermore, these improvements were statistically significant. The results also indicated that the survival rate for patients receiving care from the CRC "NNP" was superior to that of the control group receiving traditional care. The average survival time of the NNP group (66.8 months) was longer than that of the control group (57.2 months) ( $p < 0.001$ ). Adopting a "NNP" in CRC care effectively enhanced clinical treatment adherence, increased survival rates, and reduced the 14-day readmission rate. The results of this study may be valuable for medical institutions promoting a "NNP" in CRC care, improve cancer patient care, and ultimately enhance the quality of health care.

**Underwriting:** Yes

3

### **CAREGIVER CAFE: MEETING THE NEEDS OF FAMILY CAREGIVERS.** Joanne Finley, RN, MS; Johns Hopkins Kimmel Cancer Center, Baltimore, MD; Susan Sartorius-Mergenthaler, MA, RN, Johns Hopkins Kimmel Cancer Center, Baltimore, MD

The many burdens faced by oncology family caregivers have been well documented. They are asked to perform skills, make assessments, coordinate care and communicate with health care providers at an increasingly complex level. The City of Hope Oncology Family Caregiver Course in Anaheim, California served as the catalyst for a caregiver quality improvement project at this NCI-designated comprehensive cancer center. The goals of the project were to (1) comprehensively review available caregiver educational materials, selecting one to include in our new patient guide; (2) add care-giving sessions to our existing Ask the Expert program; and, (3) utilize a validated tool to assess caregiver preparedness. Additionally, an information needs assessment and distress thermometer screen were completed by caregivers. Results from the preparedness assessment, the information needs assessment and the distress thermometer screen indicated a need for intervention with family caregivers. A weekly Caregiver Café, facilitated by an advanced practice nurse, was implemented. The purpose of the cafe is to 1) provide respite and a place for caregivers to relax; 2) provide a place for caregivers to meet and support each other; 3) answer caregivers' questions; and 4) refer caregivers to resources. To date, 408 caregivers and 49 patients have

attended the café over 40 weeks. The café format varies from individual counseling to group discussion to speaker presentation, depending on participants needs. Discussion themes and referrals are documented and evaluated, some leading to operational changes. In addition, goals one and two were met. A handout was selected by the patient education committee to include in our patient guide and our Ask the Expert program includes care-giving sessions on an ongoing basis. Oncology nurses, who partner with family caregivers by providing support and education, may alleviate caregiver stress and uncertainty and contribute to better patient outcomes. In the words of one caregiver, "I thought that the Caregiver Café experience I had was very powerful."

**Underwriting:** Institutional Development Office

#### 4 **GET YOUR ONCOLOGY PATIENTS MOVING: A MOBILITY PROJECT TO REDUCE FALLS.** Jamilyn Kennell, MSN, RN, OCN®, UPMC Shadyside, Pittsburgh, PA; Valerie Hess, BSN, RN, CHPN, UPMC Shadyside, Pittsburgh, PA; Jack Benson, BS, MHA, UPMC Shadyside, Pittsburgh, PA; Sharon Hanchett, MSN, RN, OCN®, UPMC Shadyside, Pittsburgh, PA

Falls are not only a hazard to patients' health but are also costly for institutions. There is no universal strategy to reduce falls. Interventions need to be unit specific. The research indicates that education and empowering nurses regarding falls has shown to reduce falls by up to 20%. This project occurred on a 29 bed inpatient medical-oncology unit in Pittsburgh, Pennsylvania where staff has been hard at work to create a culture of safety. This mobility project adds to existing efforts to reduce falls through the use of nurse education, purposeful rounding, daily safety huddles, equipment utilization (bed alarms, low beds, nonslip socks, etc.) and post-falls debriefings. Continued awareness and nursing engagement are crucial to the success of a falls reduction strategy. It is not just nursing education that reduces falls, but it is also the cultivation of nurses' caring attitudes that reduces falls. New publications emphasize the issue of decreased mobility that patients face while hospitalized. Oncology patients have lost so much with the diagnosis of cancer and have become accustomed to the intimate nature of treatment that they try to maintain control in whatever aspect they can. The last thing they want to do is ask for help when traditionally they would have been able to complete activities independently. This project utilized a restorative aide (RA) to assist patients with mobility activities, supplemental to physical therapy evaluations, in order to reduce falls. The RA was a part-time employee with physical therapy training whose primary job focus was patient mobility. The RA worked with agreeable/available patients to participate in exercises, transfers out of bed, or ambulation in hallway. During the 6 months after implementation the average fall rate decreased from 5.1 to 4.3 falls/1,000 patient-days with a subsequent decrease from 24 to 21 falls in 6 months. Review of the literature reveals that no magic bullet exists to reduce falls, but rather it has to be a continuous focus with daily interventions and staff engagement. Mobility adds an additional means to tackle such a complex issue as inpatient falls.

#### 5 **RISK FACTORS FOR FALL IN HOSPITALIZED AUTOLOGOUS HEMATOPOIETIC STEM CELL TRANSPLANT PATIENTS.** Vivian Dee, APRN, Audie Murphy VA, San Antonio, TX; Cesar O. Freytes, MD, Audie Murphy VA, San Antonio, TX; David Haile, MD, Audie Murphy VA, San Antonio, TX; Rosalinda Alonzo, RN, Audie Murphy VA, San Antonio, TX; Sandra

#### Shaw, RN, Audie Murphy VA, San Antonio, TX; Juan Toro, MD, Audie Murphy VA, San Antonio, TX

The identification of risks factors that predispose hematopoietic stem cell transplant (HSCT) patients to falls offers an opportunity for intervention to mitigate these risks. Falls are common in hospitalized autologous HSCT patients and these events are associated with increased morbidity and financial costs. Research demonstrates that preventing patient falls requires knowledge of the risk factors and the circumstances preceding the patient's fall. To identify risk factors and circumstances related to patient falls in autologous HSCT recipients and to assess the predictive value of the Morse Falls Scale (MFS) in this setting. We conducted a retrospective case-control study of patients, who received autologous HSCT at the San Antonio Audie L. Murphy Memorial Veterans Hospital (ALM-MVH) Bone Marrow Transplant Unit. Records of all patients transplanted between January 2010 and August 2015 were reviewed. The patients who fell were compared to controls. Data collected included: age, MFS on admission, antiemetic use, sedatives use, beta blockers use, diarrhea, diabetic medication use, fever, and length of hospital stay. Descriptive analysis and simple logistic regression were used to analyze the data. A total of 288 patients were transplanted during this period and 14 (5%) falls were identified. Twenty controls were randomly selected from the same period of time. The mean age was 63.6 vs. 61.4 years ( $p = 0.505$ ) and mean length of hospital stay was 21.2 vs. 20.6 days ( $p = 0.812$ ) for cases and controls respectively. Eight Fallers (57.1%) and 4 Non-Fallers (20.0%) had high Morse Fall Scale ( $p = 0.031$ ). Logistic Regression Model indicated that patients with high Morse Fall Scale were 5.3 times more likely to fall compare to low Morse Fall Scale patients. Days of diarrhea were statistically significant different ( $p = 0.024$ ) between Fallers and Non-Fallers  $8.6 \pm 5.1$  and  $4.4 \pm 4.5$ , respectively. For every increment of one day in diarrhea, the risk of fall increased 1.2 times. High MFS scores on admission and a longer duration of diarrhea were predictive of falls in this study. Future studies should include these parameters in the fall risk evaluation assessment of autologous HSCT recipients.

#### 6 **BEYOND BORDERS.** Sreedevi Warriar, RN, MSN, CNS, DNP, California State University, Long Beach, CA; Savitri Singh-Carlson, PhD, APHN-BC, California State University, Monterey Bay, CA

The Educational project called "Beyond Borders" is to support health professionals in developing clinical skills and knowledge in the safe handling and administration of antineoplastic drugs and related waste in a community hospital located in Kerala, India, where educational resources are limited, and not readily available. Lack of knowledge in preparation, administration, and handling could lead to a sentinel error. The consequences of antineoplastic drug errors can be devastating because these agents have one of the lowest therapeutic indices and safety margins of any drug class. In May 2015, during a site visit, a request was received from the hospital administration to implement chemotherapy educational classes for nurses who worked in the inpatient oncology unit and outpatient infusion center to provide baseline knowledge in chemotherapy administration. The need for such education was identified as crucial to the site's patient population; hence a train-the-trainer program was planned and implemented during the visit. A 3-day chemotherapy certification program started with 12-nurses in the hospital following the concepts and curriculum of Oncology Nursing Society's "Chemotherapy and Biotherapy Guidelines and Recommendations for Practice". In addition, a clinical competency checklist was developed for the staff as part of skills evaluation. As part of the training, additional resources

including extravasation order form, ideas on creation of an extravasation drug kit, anaphylactic management, preparation guidelines, administration practices, medication safety measures, and safe handling and disposal requirements were also provided. The medication administration practices in the Infusion Center were observed and recommendations were made to develop a policy including the following: use of informed consent, obtaining protocol from providers, medication calculation and verification, independent double verifications, infusion pump safety and high alert medication practices. It is anticipated that the knowledge and skills gained by the nursing staff will be shared with other nurses in the facility that handle and administer chemotherapy. The implementation of this standard of care is critical for patients, ensuring safe and competent clinical practice, promoting awareness among nurses about occupational safety measures, and enhancing knowledge in chemotherapy administration. This is the first educational program of its nature established in the State of Kerala, India.

## 7 A NURSING-LED MULTIDISCIPLINARY APPROACH TO IMPLEMENTING A STANDARD DISCHARGE PROCESS PROGRAM IN AN ONCOLOGY SETTING. Maegan Chmura, RN, MS, CMSRN, Roswell Park Cancer Institute, Buffalo, NY; Amy Chappell, PA, Roswell Park Cancer Institute, Buffalo, NY; Steven Hochwald, MD, Roswell Park Cancer Institute, Buffalo, NY

The Centers for Medicare and Medicaid Services (CMS) suggests that incorporating a multidisciplinary approach into the patients' plan of care improves patients' outcomes. Evidence suggests that when using a multidisciplinary approach to discharge planning both staff and patient satisfaction are enhanced and financial risk to the hospital is reduced. The purpose of developing a multidisciplinary, comprehensive discharge planning program was to standardize all aspects of the discharge process. The development of the program was driven by the examination of the patient satisfaction survey and HCAPHS questions and results. The program provides the patient with a comprehensive discharge plan ensuring post discharge care and educational needs of the patient and their family are met during the hospital stay. The multidisciplinary approach to discharge planning reduces discharge delays, improves patient flow through the hospital, and enhances communication between bedside nurse leaders, Providers, and support teams. A multidisciplinary team on an 18 bed medical-surgical inpatient-nursing unit in a comprehensive cancer center initiated this discharge program. The program implementation begins on postoperative day one for all admitted patients. Interventions included are: (a) Implementation of a daily unit HUDDLE where a multidisciplinary team reviews patient length of stay, discharge disposition, and barriers to discharge (b) Development of an EMR based nursing flowsheet to capture information obtained from the HUDDLE (c) Integration of a nurse driven EMR discharge notification to improve communication between disciplines (d) Development of patient education materials and implementation of disease specific care pathways focused on the discharge process. The process of implementing a multidisciplinary approach to discharge planning is being evaluated utilizing the results current Press Ganey HCAHPS and Patient Satisfaction survey data. Through the support of administrative leadership, bedside nurses were empowered to improve their practice in an effort to increase patient and staff satisfaction through developing an efficient standardized discharge process. Continuously monitoring patient feedback and staff feedback as well as making necessary modifications to the program based on their responses was critical to the success and sustainability of the program. The principles developed for this process are adaptable but the

specifics should reflect the needs of the patient population of the Nursing unit.

## 8 A CASE REPORT OF CUSHING'S SYNDROME DUE TO ECTOPIC ADRENOCORTICOTROPIC HORMONE SECONDARY TO PANCREATIC NEUROENDOCRINE CANCER. Natasha Ramrup, MSN, RN, OCN®, AOCNS®, CNS, Memorial Sloan Kettering Cancer Center, New York, NY; Douglas Koo, MD, MPH, FACP, Memorial Sloan Kettering Cancer Center, New York, NY; Morie Davis, MSN, RN, OCN®, ANP-BC, Memorial Sloan Kettering Cancer Center, New York, NY

Chronically elevated cortisol levels are associated with psychological and physiological symptoms (metabolic disturbances, glucose intolerance, cardiovascular disease, infection) that can be harmful to one's health and is known as Cushing's syndrome. Under normal conditions when the body recognizes a stressor, neurotransmitters signal the hypothalamus to release corticotropin-releasing hormone (CRH) which then stimulates the anterior pituitary to produce adrenocorticotrophic hormone (ACTH). ACTH is a key regulator of cortisol synthesis and stimulates the adrenal cortex to release cortisol into the body. However, nonpituitary release of ACTH is known as ectopic ACTH secretion and can occur in neuroendocrine malignancies. and lead to prolonged elevated cortisol and resultant Cushing's syndrome. Prompt diagnosis and treatment is imperative for optimal outcome. A 48 year old male (AB) with metastatic pancreatic gastrinoma to the liver presented to our institution. Treatments included Hepatic Arterial Embolizations, chemotherapy and Octreotide injections. AB was admitted with altered mental status and metabolic abnormalities consistent with Cushing's syndrome. Workup revealed ectopic ACTH secretion from metastatic neuroendocrine tumors. Oncology nurses are in an ideal position to identify symptoms of hypercortisolemia and implement appropriate interventions immediately. Diagnostic work up included MRI of the brain and EEG. Consultations included neurology, endocrinology, infection disease and surgery. AB's hypercortisolism remained unimproved with medical management. He continued with a cortisol level of 104 and ACTH of 236. Eventually, AB underwent a total adrenalectomy, which resulted in rapid recovery. Stress plays a significant role in the state of our health and well being. In AB's case, prolonged hypercortisolemia resulted in hyperglycemia, altered mental status and personality changes. Understanding the impact of hypercortisolemia in cancer patients can lead to prompt treatment to alleviate symptoms and improve quality of life. As seen in AB case, hypercortisolemia had detrimental effects on his health. This abstract detail the significant nursing role in identifying symptoms associated with hypercortisolemia and its treatment options. By raising awareness of the significance of hypercortisolemia and educating more nurses to be aware of this condition in their oncology settings will help prevent unfavorable outcomes.

## 9 NURSE PRACTITIONERS DEVELOP A COMPREHENSIVE SURVIVORSHIP PROGRAM IN THE PRIVATE PRACTICE SETTING. Amita Patel, MSN, NP-C, OCN®, Regional Cancer Care Associates, East Brunswick, NJ; Shannon Woerner, MSN, ANP-BC, OCN®, Regional Cancer Care Associates, East Brunswick, NJ; Tina Flocco, MSN, ANP-BC, Regional Cancer Care Associates, East Brunswick, NJ

Early detection and evolving oncology regimens have brought cancer survivorship to the forefront of cancer treatment. Previously, limited resources in the private practice setting made

such comprehensive treatment impractical. To facilitate the effortless transition towards survivorship, the Central Jersey Division of Regional Cancer Care Associates established a survivorship visit upon treatment completion where the individual's chemotherapy regimen is reviewed, possible adverse effects discussed, and follow up care is meticulously planned. A comprehensive survivorship care plan addresses potential long term side effects of treatment and stresses the importance of follow up care, in order to improve patient outcomes. The ASCO Survivorship Care Plan incorporates multiple aspects of general health maintenance, which may require specialized therapy not available in the oncology setting. To overcome this hurdle, various health professionals were recruited to provide counseling in their respective areas of expertise. For example, dieticians offered their guidance to patients requiring a shift towards healthy eating habits. A list was then compiled of these practitioners and added to a survivorship folder, allowing both patients and providers quick access to their services. Thus, this inter-disciplinary approach overcame the barrier of limited resources. Patients and their primary care physicians were given a copy of their comprehensive survivorship care plan post-treatment, with completed survivorship visits increasing 250% compared to the prior year (12 vs. 30). The compiled community resources list was utilized by all nursing staff during follow up, allowing providers involved in the patient's care to work collaboratively. Patients have expressed their unequivocal satisfaction with the comprehensive survivorship care plan, both in the specialized care they have received as a result, and the individual medical information contained within it that may prove critical for other providers. Cancer chemotherapy can be a physically & emotionally daunting undertaking for many patients. Having a comprehensive survivorship care plan to address patient, caretaker, & provider concerns reduces anxiety and fosters a positive healing environment by engaging the patient to take advantage of community resources. The inter-disciplinary approach provides the best evidenced-based care while reducing the strain on individual practitioners attempting to manage post-treatment sequelae.

**10**  
**NO, YOU CAN'T ALL COME AT ONCE: CHEMOTHERAPY VOLUME NORMALIZATION.** Lindsey Radcliff, BSN, RN, Ohio State Wexner Medical Center, Columbus, OH; Keri Mast, RN, Ohio State Wexner Medical Center, Columbus, OH; Heidi Basinger, MS, BSN, RN, Ohio State Wexner Medical Center, Columbus, OH; Nicole Muscari, BSN, RN, OCN®, Ohio State Wexner Medical Center, Columbus, OH; Shelly Joiner, Ohio State Wexner Medical Center, Columbus, OH; Jennifer Lenihan, MHA, Ohio State Wexner Medical Center, Columbus, OH

Spacing chemotherapy treatments throughout the infusion clinic day schedule is important to accommodate all patients in need and allow for safe staffing levels during treatment administration. The Ohio State Comprehensive Cancer Center's Stephanie Spielman Comprehensive Breast Center (SSCBC) was experiencing severe fluctuations in the volume of patients seen throughout the clinic day. Our goal was to have consistent numbers of infusions scheduled throughout the day. A multidisciplinary group from our outpatient infusion clinic consisting of patient access staff, staff nurses, and managers gathered to do a mini LEAN project to analyze and revise process for scheduling in our electronic scheduling system. It was discovered that no process was in place for spacing appointments according to treatment type and length. The group also found chemotherapy scheduling templates did not have limitations to the number of patients scheduled in one time

slot. This resulted in a, heavy volume of patients scheduled in the morning, patients did not have a choice of appointment times and clinic exam templates were not in alignment with chemotherapy templates. Solutions implemented consisted of adding earlier morning appointment times, adjusting nursing schedules to accommodate chemotherapy appointment times throughout the day and staggering appointment times throughout the day. Limits on timing of appointments for lengthy treatments were also set and publicized to providers. The end results of effective chemotherapy patient scheduling have been greater ability to accommodate same day add on patients and improved staff satisfaction. We were able to see a 15% increase in the number of patients scheduled due to the scheduling restrictions implemented along with the later chemotherapy start times. Decrease in patient wait times was also reported on patient satisfaction surveys. The wait times were decreased in multiple areas involved in treatment visits including registration, pharmacy and time spent in the waiting room. Our project resulted in patients and staff reaping the benefits of a more lean process.

**11**  
**PROCESS OF IMPROVEMENT IN DISTRESS SCREENING.** Poppy Patterson, BBA, RN, Baylor Scott & White McClinton Cancer Center, Waco, TX; Michelle King, MSW, LCSW, Baylor Scott & White McClinton Cancer Center, Waco, TX; Julie Pederson, BSW, RN, OCN®, Baylor Scott & White McClinton Cancer Center, Waco, TX

As an accredited Commission on Cancer ambulatory community cancer center, standard 3.2 requires all patients are routinely screened for psychosocial distress. According to multiple studies, incorporating distress screening and assessment is vital to providing comprehensive quality cancer care. 363 patients coming to the Baylor Scott & White McClinton Cancer Center (BSWMCC) for an initial consult were identified, however not all patients completed psychosocial distress screening. Supportive Oncology team members identified the following contributing issues: a developing cancer center with rapid volume growth, rotating providers, multiple clinic sub-specialties, and team members with knowledge deficits regarding distress screening. A multidisciplinary distress screening pilot assessed patients' distress levels and concerns during their initial consult. Rapid cycle improvements were continuously identified then implemented. Strategies for improvement included: multidisciplinary staff training, delegation of tool delivery to certified medical assistant (CMA), creating a reusable screening tool, electronic medical record charting and report generation with supportive oncology team follow up. Continuous process improvement increased psychosocial distress screening by 16% over the past eight months. Presently, 84% of patients are assessed for psychosocial distress. When patients are not initially assessed, the Supportive Oncology team identifies the next opportunity for assessment leading to near 100% capture. The evolving process increased the lines of communication between physicians, clinic nurses, nurse navigators, the financial navigator, social worker, dietitian, and schedulers. Most importantly patients in the BSWMCC are routinely assessed for psychosocial distress and receive the ongoing care needed to support holistic cancer care. All patients within a CoC accredited organization must be assessed for psychosocial distress. In order for this standard to be met, a multidisciplinary team approach is required to look for ongoing opportunities for improvement. Other community cancer centers can use rapid cycle improvement to ensure all patients are routinely assessed for psychosocial distress and receive recommended care to support the whole person.

## 12

### **EVOLUTION OF A SKIN WOUND OSTOMY TEAM (SWOT) PROGRAM TO MEET THE CHALLENGES OF ONCOLOGY PATIENTS.** Stephanie Terry, BSN, RN, CWOCN, PCCN, HN-BC, Cancer Treatment Centers of America, Philadelphia, PA; Joe Rudolph, BSN, RN, CWOCN, DWC, Cancer Treatment Centers of America, Philadelphia, PA; Paul Gehringer, RN, Cancer Treatment Centers of America, Philadelphia, PA; Kristin Tinney, BSN, RN, HN-BC, Cancer Treatment Centers of America, Philadelphia, PA

This review highlights the multidisciplinary support needed to maintain successful Skin Wound Ostomy Team (SWOT) participation and development. In response to the high prevalence of pressure ulcers reported during inpatient stays at our facility, a SWOT team formed in 2013. The team successfully increased education, improved documentation on admission, improved patient outcomes, and increased overall awareness of available skin and wound care products. Since the inception of the SWOT, incidence rates of pressure ulcers have remained low: 1.025% in 2014, and 1% for 2015. Maintenance of excellent patient outcomes, coupled with top-notch stakeholder satisfaction, require identification of opportunities to continue to innovate. There are currently two team lead nurses and 35 members participating in SWOT from various departments which include inpatient, quality of life clinic, outpatient clinic and Operating Room. Incentives for stakeholders included recognition from fellow peers, contact hours for educational offerings, and points to be applied to their professional clinical ladder application within the hospital. Continued development of SWOT received significant support from administration as evidenced by good staffing ratios which facilitated floor nurses time to obtain appropriate training and education sessions. The SWOT reports a high satisfaction with their role as resources for staff, as well as their ability to immediately improve a patient's quality of life due to their specific knowledge of basis for odor, pain, drainage, and bleeding control. The floor nurses are a natural extension of the SWOT, with an ability to proactively screen patients for skin issues that may become problematic. New initiatives require continuous development, innovation, and administrative support. Improvement in stakeholder education, significant reduction in hospital acquired pressure ulcers, and improved quality of life for patients are a result of the SWOT initiative. This is paramount as pay for performance values improved outcomes. Moreover, SWOT members report high satisfaction with their role as resources, which may positively impact nursing retention.

## 13

### **ENERGY THROUGH MOTION: AN ACTIVITY INTERVENTION FOR PEOPLE RECEIVING CANCER CHEMOTHERAPY.** Linda Abbott, MSN, RN, AOCN®, CWON, University of Iowa Hospitals and Clinics, Iowa City, IA; Geri Quinn, MSN, RN, OCN®, University of Iowa Hospitals and Clinics, Iowa City, IA; Laura Cullen, DNP, RN, FAAN, University of Iowa Hospitals and Clinics, Iowa City, IA; Edie Hochstetler, BSN, RN, OCN®, University of Iowa Hospitals and Clinics, Iowa City, IA; Rebecca Raw, BSN, RN, University of Iowa Hospitals and Clinics, Iowa City, IA; Linda Moeller, BSN, RN, University of Iowa Hospitals and Clinics, Iowa City, IA

Cancer-related fatigue (CRF) occurs in up to 75% of all people with a cancer diagnosis and in 80%–100% of those undergoing chemotherapy. CRF is reported as more distressing than pain, nausea or vomiting. Physical activity (PA) is beneficial in reducing CRF and is safe for people living with cancer. While there is

an abundance of research demonstrating benefit, application through evidence-based practice and understanding how to promote regular PA for this population is not well understood or documented. Nurses are in a prime position to partner with people living with cancer to promote PA through education, encouragement and support. The purpose of this evidence-based project, conducted at a large Midwestern National Cancer Institute-designated Center, was to implement and evaluate a 3-month, patient-centered, PA intervention for people undergoing chemotherapy. The Iowa Model provided the framework. People followed in the cancer clinic were invited to participate through posted flyers and by clinic nurses. Each participant was provided an activity tracker and resistance bands to promote aerobic and strengthening activities. Verbal instruction included the importance of regular PA, use of resistance bands, and strategies to stay active. It also included printed material and a videodisc of follow-along activities. Reminders and messages of encouragement were sent through text messages 3 times a week for 3 months. At baseline and 3 months after starting the intervention, participants completed (1) the Brief Fatigue Inventory; (2) a self-reported PA measure; and (3) a measure of attitudes, beliefs, and knowledge about sustaining regular PA. The goal of the program was to maintain and/or improve adherence to regular PA to manage CRF and potentially improve quality of life. Data analysis is currently underway. Preliminary evaluation indicates that patient's value talking with nurses about how to stay active during treatment. The activity tracker, text messages and personal connection with nursing staff were reported as the most helpful interventions. One patient commented that if it were not for nurses talking with her and telling her that she could and should stay active through treatment, she might have "just sat around feeling sorry for myself."

**Underwriting:** University of Iowa Hospitals and Clinics Volunteer Department Golfing Fore Cancer University of Iowa Hospitals and Clinics Nursing Research and Evidence-based Practice Committee

## 14

### **CARING CHEMO: A COMMITMENT TO PATIENT SATISFACTION IN AN INFUSION ROOM.** Tara DelGrippo, RN, BSN, Fox Chase Cancer Center, Philadelphia, PA; Jennie Gilliland, RN, BSN, Fox Chase Cancer Center, Philadelphia, PA

**Objective:** To focus a structured effort in response to nursing-related Press Ganey scores below the targeted level. "Caring Chemo" responded directly to information reported by patients as a result of the Press Ganey survey. Attempts were made to differentiate the patient's experience from their waiting room experience. The goal was to obtain a verbal affirmation from patients that care expectations were met prior to leaving the treatment area. Press Ganey scores are becoming increasingly important for hospitals in all care settings due to its direct relation to reimbursement. These results are shared publicly and affect a hospital's reputation and ranking. Stress from diagnoses, provider visits, multiple modality treatment therapies, and wait times can leave patients overwhelmed with information and feeling impersonalized. These issues can result in decreased patient satisfaction and lower Press Ganey scores. Staff work tirelessly to ensure patients are comfortable, well informed, and treatment is expedited safely; but why were scores not reflective of guided efforts? In order to focus these efforts an initiative was undertaken at a comprehensive cancer facility's infusion center entitled "Caring Chemo." This campaign focused on staff education. Presentations and huddle sessions using various techniques, buzz words, and social cues focused on five categories related to nursing care in the outpatient Press Ganey survey. These categories include explaining what

to expect during chemotherapy, concern for comfort, courtesy, management of side effects and comfort in the treatment area. An internal process improvement committee formed involving management and staff RNs, to finalize efforts and disseminate the program to staff members. Efforts were visible to patients. Signage and buttons were created with our slogan, "Ask me, I care." Staff participated by wearing the buttons, explaining the initiative to patients, and implementing strategies into their daily work. Scripted material was circulated by committee members and staff attendance was documented. Press Ganey data was collected prior to the start of the campaign and was evaluated post-implementation to determine the effectiveness of the program. Data reflected patients felt more 'cared' for and improvement was visible in many of the targeted indicators including perception of wait times and peer group rankings.

## **15 SURVIVORSHIP CARE PLAN DELIVERY PROCESS FROM A NURSE COORDINATOR PERSPECTIVE. Amy Monroe, BSN, RN, CNOR, Froedtert Hospital, Milwaukee, WI**

Survivorship is a hot topic in cancer care today. The American College of Surgeons Commission on Cancer requires all cancer programs to provide a summary of treatment and follow-up plan to all patients upon completion of primary cancer treatment. The Gynecologic Oncology program at Froedtert and the Medical College of Wisconsin rose to the challenge early on and developed an innovative model having the nurse coordinator (NC) manage the survivorship process for patients rather than an advanced practice provider (APP). There were no additional resources for this process so the program needed to absorb it with the current team. The process of providing survivorship care plans (SCP) to Gynecologic Oncology patients started small with one subset of patients and then over time expanded to all eligible patients. New patients are captured at the weekly tumor conference and any eligible established patients are forwarded to NC by providers and kept track of via the electronic health record (EHR). Early buy-in from the Gynecologic Oncology providers was due to an APP in the program promoting the use of SCPs and the NC presenting to the group the importance and reasoning behind the SCP and the developed SCP process as well as resources available to patients. Prior to the SCP being in the EHR, the Journey Forward template was used. The current process is sustainable in a small program but may be difficult to carry out in a larger program. Since the NC is not a staff nurse and not embedded in the clinic, time spent waiting to see patients, not knowing the patients ahead of time and not receiving notifications if patient's appointments are changed can be a disadvantage of this process. A benefit of having the NC deliver the SCP is having face to face time with patients, sharing available resources and reviewing the importance of survivorship. Next steps include figuring out how to better capture and schedule patients needing SCPs to make the process more sustainable and to carry over to other programs. Many patients report appreciation and understanding of the importance of SCP at these visits.

## **16 STAFFING BY ACUITY IN THE AMBULATORY COMMUNITY CANCER CENTER INFUSION ROOM. Erin Noel, RN, OCN®, Baylor Scott & White McClinton Cancer Center, Waco, TX; Joni Watson, MBA, MSN, RN, OCN®, Baylor Scott & White McClinton Cancer Center, Waco, TX; Paloma Pearson, MBA, Baylor Scott & White McClinton Cancer Center, Waco, TX**

Frontline nurses replicated an acuity tool for the outpatient oncology setting and implementation of staffing by acuity levels

in the Baylor Scott & White McClinton Cancer Center Infusion Room. Treatment regimens were assigned an acuity level and the patients were distributed with an average combined acuity of 20 points to each nurse. The goals were to reduce stress levels, decrease overtime, and equally distribute patient care assignments. Utilizing an acuity tool, with levels 1-5, each regimen was assigned a level from 1 (short IVP therapy, injections, port access with or without labs, combined time of 30-60 minutes) through level 5 care consisting of complex chemotherapy administration lasting more than 4 hours, packed red blood cell transfusions with same day type and cross or patients requiring a transfusion exchange, patients needing complex symptoms management and possible admission. The day prior to treatment, each patient was assigned an acuity level and the charge nurse assigned the patient loads by total acuity points. Each nurse had the opportunity the day before to review their chart for lab values and orders. Each nurse completed a survey for 12 days, weekly for 6 weeks and monthly for 6 months. Results indicated that nurses felt assignments were appropriate (94.4%), had less stress (95.8%), and did not feel overwhelmed (91.6%). They also felt their days were well managed by having an assignment (95.8%) and able to provide safe and efficient care (100%). Due to the utilization of PRN nurses, overtime was not decreased; rather staffing-by-acuity maintained the current staffing costs before initiation of the pilot. Overall, the infusion nurse had increased job satisfaction and less stress when staffing by acuity. The tool allowed for equally distributed assignments among the nursing team. This staffing and care design can be further extended to facilities outside of Baylor Scott & White McClinton Cancer Center to enhance infusion room nurses' workplace satisfaction while maintaining costs.

## **17 REDUCING PAIN, AGITATION AND DELIRIUM TO OPTIMIZE OUTCOMES IN MECHANICALLY VENTILATED CRITICALLY ILL ONCOLOGY PATIENTS. Dana Bullick, RN, Cancer Treatment Centers of America, Philadelphia, PA; Sharon Barniak, RN, Cancer Treatment Centers of America, Philadelphia, PA; Michele Kennedy, BSN, RN, OCN®, Cancer Treatment Centers of America, Philadelphia, PA; Joanne McGovern, MSN, RN, CCRN, Cancer Treatment Centers of America, Philadelphia, PA; Trisha Patel, PharmD, BCPS, Cancer Treatment Centers of America, Philadelphia, PA; Jeffrey Hoag, MD, MS, Cancer Treatment Centers of America, Philadelphia, PA**

Greater than 60% of cancer patients experience chronic pain which is heightened in critical illness. Optimal pain assessment is challenging in the critically ill leading to under treatment often as a result of sedation during mechanical ventilation (MV). The Society of Critical Care Medicine (SCCM) favors treating pain with intermittent boluses rather than continuous infusions; however, appropriate analgesic doses and means of titration are elusive possibly leading to over sedation, prolonged ventilation, and delirium. Utilization of protocols promotes better nursing assessment of sedation-delirium scores which reduce the inappropriate use of sedatives. The purpose of this study was to assess the need for a nurse driven pain-sedation protocol in ventilated oncology patients. This retrospective study included 51 mechanically ventilated oncology patients admitted between 12/2013 and 6/2015. The analgesics, sedatives, dosing, and duration of MV were collected. Sedative titration was evaluated relative to analgesic utilization by the nursing staff. Fentanyl was administered in 94% of patients at an average rate of 142 mcg/hr (3,413 mcg/day) significantly higher than average rates of 43 mcg/hr. Midazolam was administered at an average rate of 1.25 mg/hr in 57%, while 54% received propofol at 15.5 mcg/hr, demonstrating concurrent use of

sedatives and continuous analgesics. In 49%, sedatives were increased without prior adjustment of analgesics indicating that pain was unaddressed and undertreated. In the setting of over-sedation nursing neurological assessment was difficult and was associated with prolonged duration of MV (9.7 days). Guidelines recommend “analgesia-first sedation” to promote the use of analgesic agents over sedatives to treat both pain and agitation and reduce the risk of undertreating pain. This becomes crucial in the oncology population. This study demonstrates inconsistencies with guidelines and further supports the need for a structured pain-sedation protocol to decrease over-sedation, adequately treat pain, and potentially decrease sequelae such as delirium and prolonged MV. Subsequently, a protocol has been developed which will be implemented after education has been provided to the multidisciplinary team.

## **18 THE DEVELOPMENT AND EXPANSION OF A NURSE PRACTITIONER LED PROCEDURE CLINIC.** Colin Reeder, MS, FNP-BC, the James Cancer Hospital, Columbus, OH; Sueann Treiber, MS, FNP-BC, the James Cancer Hospital, Columbus, OH

The James Comprehensive Cancer Center is the largest cancer hospital in the United States, with 306 inpatient beds, over 380,000 outpatient clinic visits and more than 140,000 hospital admissions annually. Diagnostic and therapeutic bedside procedures are essential for cancer patients and contribute significantly to their treatment plans, overall safety, comfort and satisfaction. The James has consistently used nurse practitioners to perform minimally invasive procedures dating back to 1997 with the hiring of its first advanced practice nurses. Since then The James has increased the number of advanced practice providers to outnumber the more than 200 oncologists also employed by The James. With growth in providers came greater variation in the quality of specimens and patient satisfaction associated with procedures. The purpose was to describe the context, history and processes through which this procedural clinic took shape, as well as track and evaluate key metrics related to patient experience, procedural complications and sample quality. A procedurally focused, nurse practitioner led Acute Care Clinic (ACC) opened in December of 2014 to coincide with the opening of the new James Cancer Hospital. This clinic focuses on performing bone marrow biopsies, lumbar punctures (both diagnostic and with intrathecal chemotherapy), paracentesis and thoracentesis, while adding skin punch biopsy and omya reservoir accessing over the proceeding nine months. Since opening, the ACC has been able to consistently provide high quality diagnostic samples, and facilitated procedural training for nurse practitioners, physician assistants, residents and fellows. The ACC has increased procedure volume, thereby decreasing work load in other departments while maintaining a patient satisfaction score greater than 93%. The James ACC has changed advanced practice nursing practices and policy among the ambulatory clinics and has begun to offer support to the inpatient services of The James. These changes illustrate the benefit of using nurse practitioners in this capacity and provide a framework to expand the role of the ACC to support other services and procedures at The James. The ACC uniquely provides Nurse Practitioners increased responsibility with expanded procedural privileges, while working autonomously within the context of a subspecialty practice.

## **19 REDUCING CENTRAL-LINE ASSOCIATED BLOODSTREAM INFECTIONS ON AN INPATIENT HEMATOLOGY/ONCOLOGY UNIT.** Tracy Curry, MSN, RN, OCN®, Christiana Care Health Services, Newark, DE; Trudy Thomas, BSN, RN, OCN®,

Christiana Care Health System, Newark, DE; Angela Ross, BSN, RN, OCN®, Christiana Care Health System, Newark, DE; Courtney Crannell, MSN, RN, OCN®, Christiana Care Health System, Newark, DE

Central Line-Associated Bloodstream Infections (CLABSIs) are a leading source of hospital acquired infections. These infections often delay treatment, directly impact patient outcomes, increase costs, and increase risk of mortality. Prevention of CLABSIs in oncology patients is imperative due to their immunosuppression. Many CLABSIs can be prevented by adherence to evidence based practice guidelines. Christiana Hospital houses a 40-bed inpatient Hematology/Oncology unit and a 6 bed Bone Marrow Transplant unit. To ensure commitment to CLABSI reduction, a Value Improvement Team (VIT) was created to oversee the education, implementation, and evaluation of central line care and maintenance. Prior to the VIT interventions, CLABSI rates were elevated. As a result of the team’s leadership, the development and use of surveillance tools, and active staff participation, the CLABSI rate is currently trending down. The VIT team has introduced multiple interventions to reduce the unit’s CLABSI rate, including staff education, and implementing a double mask policy for all dressing changes, and port accesses. Other departments, such as the emergency department and the vascular access team, have been engaged by team members to promote consistent care. The team developed a monitoring tool that is used during monthly auditing rounds to assess nursing practices related to line care. Rounds included documentation of dressing and tubing changes and labeling, patient interviews on compliance with mask wearing, and reviewing electronic orders to ensure central line orders were initiated. The monitor results and opportunities for improvements were shared regularly with staff. Another tool the VIT team created was a CLABSI excel template, which was used to investigate each CLABSI case on the unit. The template contained information and indicators that are specific to the specialized population, and assisted with targeting interventions to improve outcomes. One such intervention was the initiation of a chlorhexidine bathing project for neutropenic patients and bone marrow transplant recipients. These CLABSI reduction interventions have led to improvements in care practices and outcomes. The unit staff continues their efforts to create innovative strategies that promote safety and excellence in their delivery of nursing care.

## **20 THE EFFECTS OF ANIMAL ASSISTED THERAPY ON HEALTH CARE PROFESSIONALS.** Christine Veal, RN, MSN, OCN®, Cancer Treatment Centers of America, Philadelphia, PA

Workplace stressors can be described as physical and emotional outcomes that result when the demands of a job are greater than the amount of control the individual has over these demands. Because caring and compassion are necessary traits of the nursing profession, it may be hard for RNs to avoid compassion fatigue or burnouts while frequently being exposed to stressful situations. The purpose of this study is to identify if Animal Assisted Therapy (AAT), a common therapy for patients experiencing stressful situations, would provide positive outcomes for RNs. To do this, staff was able to quantify work-related stressors that nurses experience, explore their current coping mechanisms, and evaluate the impact of AAT on identified stressors. A total of 12 oncology nurses were asked to complete both the Nurse Stress Scale (NSS) and the Nurses Coping with Stress Questionnaire (NCSQ) after working one 12 hour shift. Participants were then asked to dedicate 30 minutes to spending time with their pet while reflecting on a stressful situation they experienced during their work day. Participants were asked to complete the NCSQ and the NSS again after this time

with their pet. Each of the 12 participants noted various levels of decreased stress after the pet therapy, significant enough that the average NSS score dropped from 28 to 16. Each participant also noted an increase in perceived usefulness of coping skills after the pet therapy. Scores on the NSCQ went from 12 to 15, signifying that the time spent with a pet was a useful coping mechanism for these participants. As a result of the data collected, showing a decrease in the perception of stress and the increase in the perception of useful coping mechanisms, one can interpret that the pet therapy session was successful. Our next step is proposing an initiation of AAT sessions with oncology infusion nurses. At each meeting, RNs will discuss a stressful situation the unit experienced while interacting with a therapy animal to allow team building and time to cope.

**21**  
**EFFECTS OF NURSE NAVIGATOR PROGRAM ON HEALTH OUTCOMES OF LYMPHOMA PATIENTS.** Pei-Hua Wu, Cancer Center, Chi Mei Medical Center, Liouying, Tainan City, Taiwan; Shu-Chan Chang, Cancer Center, Chi Mei Medical Center, Liouying, Tainan City, Taiwan; Wen-Li Lin, Cancer Center, Chi Mei Medical Center, Liouying, Tainan City, Taiwan; Wen-Tsung Huang, Cancer Center, Chi Mei Medical Center, Liouying, Tainan City, Taiwan; Chao-Jung Taso, PhD, Cancer Center, Chi Mei Medical Center, Liouying, Tainan City, Taiwan

Lymphoma is a leading cause of cancer, the incidence and mortality rates have increased in Taiwan. However, nurse navigator program and behavioral techniques are not yet well established in Taiwan. This study examines and evaluates the effect that adopting a “Nurse Navigator Program” (NNP) has on the care and survival rates of lymphoma patients. In this retrospective study, 341 lymphoma patients were recruited between January 2010 and August 2015. The experimental group comprised 210 patients who had received care from a lymphoma “NNP”. The NNP comprised numerous professionals, including a physician, case manager, dietician, and social worker, who formulated the care plan and the patient treatment and care processes. The case manager coordinated the recruitment, liaison, and care plan implementation, and conducted disease education, telephone consultations, follow-ups, and evaluations. The control group comprised 131 lymphoma patients. The patients in the control group had similar characteristics to those in the experimental group, and received traditional care. Adopting a “NNP” in lymphoma care increased patient follow-up appointment adherence rates at 1 week, 1 month, and 3 months ( $p = .021$ ,  $p = .005$ ,  $p = .001$ ). The “NNP” also effectively reduced the patients’ 14-day readmission rate. Furthermore, these improvements were statistically significant. The results also indicated that the survival rate for patients receiving care from the lymphoma “NNP” was superior to that of the control group receiving traditional care. The average survival time of the “NNP” group (39.5 months) was longer than that of the control group (27.8 months) ( $p < 0.001$ ). Adopting a “NNP” in lymphoma care effectively enhanced clinical treatment adherence, increased survival rates, and reduced the 14-day readmission rate. The results of this study may be valuable for medical institutions promoting a “NNP” in lymphoma care, improve cancer patient care, and ultimately enhance the quality of health care.

**22**  
**CENTRAL LINE POLICE: CREATING CONSISTENCY ON THE UNIT.** Surinder Kaur, BSN, RN, OCN®, Robert Wood Johnson University Hospital, New Brunswick, NJ; Anusuya Govindarajan, BSN, RN, OCN®, RWJUH, New Brunswick,

NJ; Laura Sharlow, BSN, RN, RWJUH, New Brunswick, NJ; Sweet Jessica Galvarole, BSN, RN, OCN®, RWJUH, New Brunswick, NJ; Ashley Mickiewicz, BSN, RN, OCN®, RWJUH, New Brunswick, NJ

Central lines are used frequently in Oncology for chemotherapy and multiple drug and blood infusions. Care of the line is critical to keep the patients safe from infection as they are at high risk from having a line placed for long admissions and having low neutrophil counts as a side effect of treatment. The purpose of the central line police is to ensure consistent and quality care of the central lines on the unit. Interventions: The Central Line Police perform frequent audits of the patients on the unit. They review at the bedside that they dressing is intact and labeled, tubings are current and labeled, and curo caps are in place. The police also review charts to ensure that accurate and consistent documentation is occurring. The police assist with ensuring that the buddy system for dressing changes occurs and helps to hold each other accountable for the correct care of central lines. The police are finding that documentation of cap changes and buddy system is lacking, while the practice observations is showing that it is occurring. The police have noticed that as their audits have been occurring that practice is improving. The central line dressings are consistently intact, clean, and dry and their need to remind their peers to change the dressing is decreasing. By having peers be the central line police it has ensured that frequent bedside and chart audits are occurring. The practice of central line cares has improved with having active unit based Central Line Police.

**23**  
**DEVELOPING A TOOL TO ASSESS THE COMPLEXITY OF NURSING SKILLS REQUIRED IN A CLINICAL TRIAL.** Theresa Rudnitzki, MS, RN, AOCNS®, ACNS-BC, Froedtert & the Medical College of Wisconsin, Milwaukee, WI

The purpose of the Translational Research Unit (TRU) is to provide an environment that meets the care needs of patients on Phase 1 and 2 clinical trials and other complex oncology clinical trials. The TRU is staffed with nurses who are specially trained to understand the needed detail required of Phase 1 and 2 clinical research studies. Maximal utilization of their skill set in providing individualized patient care is a goal. The opening of thirteen treatment bays in a new outpatient TRU created scheduling challenges. Until the volume of patients on early phase trials and the number of those studies increase, it is important to utilize the space for any patient on a clinical trial. In the interim, it was apparent there would have to be a way to distinguish which patients on clinical trials required the enhanced skills of the TRU nurses vs which patients could be safely placed in the Day Hospital (DH), our cancer care infusion/treatment area. This may vary treatment day by treatment day based on the unique requirements of each study. Some studies may require 1:1 care; whereas other studies require the standard nursing care ratio (1:3). Information was gathered from different sites and the topic was researched. Through collaboration with physicians, research staff, and scheduling coordinators the approach for scheduling these patients using an acuity scale was implemented. An acuity rating score of 1–4 was created based on the complexity of the treatment required. The criteria for each score was developed by the TRU service coordinator/staff RN and the Cancer Center CNS. Each study was evaluated and assigned a score for each day of treatment by the TRU Service Coordinator. The score provides quick direction to the health care team who may not be familiar with the idiosyncrasies of each clinical trial day. It guides placement of the patient in the best environment (TRU vs DH) to assure safe delivery of complex care needs. The TRU opened in October 2013 and has had over

2800 clinical trial visits. The utilization and impact of the complexity score will be further presented in the poster.

#### 24 DECREASING THE CLOT: AN EHR MEASURE-VENTION APPROACH TO PREVENTING VENOUS THROMBOEMBOLISM.

Misty Cahoon, RN, BS, University of California Davis Medical Center, Sacramento, CA; Dorine Fowler, RN, MSN, MS, ONC, University of California Davis Medical Center, Sacramento, CA; Stacy Hevener, RN, MSN, CCRN, University of California Davis Medical Center, Sacramento, CA; Patricia Parker, PharmD, University of California Davis Medical Center, Sacramento, CA; Hein Nguyen, MD, University of California Davis Medical Center, Sacramento, CA; Richard White, MD, University of California Davis Medical Center, Sacramento, CA

Venous thromboembolism (VTE) affects an estimated 900,000 people in the United States yearly. According to the Centers for Disease Control 60,000–90,000 will ultimately die as the result of a VTE contributing to overall mortality and increased healthcare costs. Prior to 2013, approximately 1.5% of patients hospitalized for 2 days or more at a large academic center (2010–2012) were diagnosed with hospital acquired VTE (HA-VTE). Although cancer patients made up only a small percentage of those hospitalized during that time period, they constituted almost 30% of the HA-VTEs identified through pre-intervention root cause analysis. Failure to provide appropriate pharmacological and/or mechanical prophylaxis was determined to be contributing factors in the high incidence of HA-VTE. With the support of a substantial grant, an interdisciplinary team undertook a quality improvement project to reduce the incidence of preventable HA-VTE. Potentially preventable cases were defined as symptomatic HA-VTE cases in which patients at intermediate or high risk did not receive thromboprophylaxis due to failure to order. An evidence-based, real-time dashboard “Measure-vention” was developed. This “Measure-vention” consisted of a dynamic electronic health care record (EHR)-based VTE risk assessment tool that stratified admitted patients into high, moderate, or low risk categories for developing VTE based on known risk factors as evidenced by current literature. The EHR further identified gaps in both mechanical and pharmacological prophylaxis. Medical, nursing and pharmacy staff members utilized these electronic record based tools daily to ensure appropriate and necessary prophylaxis was provided to adult critical care, medical-surgical and telemetry patients. Outcomes were then measured by extraction of ICD-9 codes reflecting the presence of a VTE. A 20% relative reduction in preventable HA-VTEs was achieved from the 2012 baseline data to the first quarter of 2015. In oncology patients, a 50% reduction was achieved in preventable HA-VTEs from 2012 baseline data through the end of 2014. Through interdisciplinary collaboration it is possible to tackle complex quality improvement projects. Additionally, the utilization of an EHR based clinical decision support tool can help to provide feedback on VTE risk and appropriate prophylaxis leading to better patient outcomes.

**Underwriting:** Yes

#### 25 CLABSI ELIMINATION: GETTING BACK TO BASICS. Kathy Mooney, MSN, ACNS-BC, BMTCTM, OCN®, Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins Hospital, Baltimore, MD

Central line-associated blood stream infections (CLABSI) are a major risk for hospitalized patients, increasing mortality and health care costs. Blood and Marrow Transplant (BMT) patients

are at high risk for CLABSI. The BMT units at this NCI-designated Comprehensive Cancer Center had one of the highest CLABSI rates in the Hospital, and needed to improve. The BMT clinical nurse specialist (CNS) and an infection control representative identified themes from previous CLABSI evaluations, including increased hiring, increased specimen contamination, and the elimination of sterile technique for central line blood draws. The CNS determined that a “back to basics” approach was needed. All staff responsible for central lines received CLABSI prevention reeducation and weekly emails posting CLABSI data and practice reminders. The decision was made to return to sterile technique for all blood draws. Staff were required to demonstrate central line dressing and blood drawing competencies. Monthly audits of central line maintenance practices were done to identify potential risk factors for infection. CLABSI rates for BMT units were monitored post-intervention. One has been CLABSI-free for 83 weeks and the other, which includes oncology ICU patients, has been CLABSI-free for 39 weeks. The total number of CLABSIs for the second unit decreased from 10 (2.5/1,000 CL days) in 2012 to 8 (2.13/1,000 CL days) in 2013 to only 2 (0.56/1,000 CL days) in 2014. Monthly audits identified room for improvement related to properly labeling tubing and IV fluids. The staff on the BMT units demonstrated that focusing on basic maintenance practices reduces the incidence of CLABSIs in one of the most at risk populations, and can sustain this reduction for an extended period of time. During the initial intervention period, many inconsistencies in sterile technique were identified. These inconsistencies decreased during competencies the following year. The units’ progress was attributed to a focus on basic maintenance practices, standardization of central line care, and a consistent message regarding CLABSI prevention. Future goals for this project include improving monthly audit results by identifying barriers to practice and solutions to increase compliance with all maintenance practices.

#### 26 INCIDENTAL PULMONARY NODULES: CAPTURING HIGH RISK PATIENTS FOR APPROPRIATE FOLLOW-UP. Lindsey Bowman, RN, BSN, OCN®, TTS-M, Virtua, Voorhees, NJ

Lung nodules, a common radiographic finding, can be found in up to 51% of all Chest CTs, chest x-rays and abdominal CT scans; it is important to evaluate for the possibility of malignancy in these patients. There are evidenced based guidelines to assist in the management of incidental lung nodule findings; however the rate of adherence to these guidelines is unknown. The Thoracic Leadership Committee, a multidisciplinary team of physicians and nurses sought to develop a plan to identify, manage and better follow high risk patients with incidental lung nodule findings. Nurse navigation is positioned to track and analyze the data as well as coordinate care for high-risk patients. Objectives: (a) Identify high risk patients with incidentally found lung nodules (b) Implement navigator services to better coordinate care and ensure follow up (c) Increase adherence to evidence-based guidelines (d) Diagnose lung cancer at an earlier stage. Intervention: Using a computer software program to identify incidental radiologic findings; develop a process to capture high-risk patients with incidental lung nodules and streamline these patients into the appropriate follow-up care. A data manager is in place to organize the data that is obtained from the software. Letters are sent to primary care physicians to notify them of the finding. They can then enroll their patient into the lung nodule program for coordination of care by the nurse navigator. Cases are presented to a multi-disciplinary team to plan the next steps. This initiative also included implementation of a smoking cessation program and widespread education of primary care physicians. Compliance to follow up will be measured. High risk patients who are current smokers are

referred to the smoking cessation program. Malignancies will be tracked. The optimal approach to management of patients with nodules continues to evolve. A discussion of our experience in the development and implementation of a system to appropriately identify and follow high risk incidental findings in a large community based health system will be addressed.

## 27

**CHALLENGES IN IMPLEMENTING THE SEPSIS CORE MEASURE IN ONCOLOGY.** Brenda Shelton, DNP, RN, APRN-CNS, CCRN, AOCN®, Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins, Baltimore, MD; Joyce Kane, MSN, RN, Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins, Baltimore, MD; Richard Jones, MD, Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins, Baltimore, MD; Megan Weber, BSN, RN, University of Maryland Graduate School of Nursing, Baltimore, MD

Sepsis is a common complication of cancer and its treatment. Implementing universal sepsis practices became a core measure in October 2015, but evidence suggests that universal screening criteria for cancer patients are flawed. Severe sepsis occurs in about 14% of oncology patients, with an estimated 8.5% mortality. In this NCI-designated Comprehensive Cancer Center, patients with potential infection account for 22% of admissions. Reduction in incidence and severity of infection could reduce morbidity and mortality. The purpose of this project was to approximate the effect of the sepsis core measure on Oncology Center workflow and pilot the effect of modified hypothermia and heart rate screening criteria. Patient data were collected on a single day within oncology inpatient units and a high-acuity hematology-oncology clinic. Data meeting universal and revised sepsis screening criteria were collected. Based on the core measure 6 hour look-back period, 80 inpatients and 36 outpatients were evaluated. The sample included solid tumor (23.3%), acute hematologic-malignancy (37%), hematopoietic stem cell transplant (34.5%) patients, and nonmalignant hematology (5%) for a total of 116 patients with 342 screenings. Chronic organ dysfunction and cytopenias were not counted as organ failures per core measure criteria. Universal criteria identified 50 (14.6%) positive screens, and revised criteria resulted in 32 (9.4%) positive screens. Confirmed infections were present in 10 patients (6 positive cultures, 3 severe sepsis, 1 septic shock), who all screened positive using revised criteria. Universal criteria resulted in 65% more positive sepsis screens than when revised criteria were applied; no cases of infection were missed using revised criteria. Challenges noted when implementing sepsis best practice recommendations included: 1) patients with neutropenia and only one sepsis criterion (e.g., fever) may be infected without screening positive, and 2) positive screens were prevalent at times when vital signs were obtained and providers had competing responsibilities. The sepsis core measure aims to motivate organizations to reduce severe sepsis incidence; however, recommended screening criteria may potentially miss septic oncology patients and negatively affect workload and efficiency. Additional strategies to enhance sensitivity and specificity of sepsis screening criteria in oncology patients are needed.

## 28

**EFFECTS OF CHEMOTHERAPY RELATED COGNITIVE IMPAIRMENT ON QUALITY OF LIFE IN BREAST CANCER PATIENTS.** Rosanne Casal, RN, MSN, APN-BC, AOCNP®, UH Seidman Cancer Center, Cleveland, OH

A decrease in cognitive function often referred to as “chemo-brain,” “chemo-fog,” or chemotherapy related cognitive impair-

ment, (CRCI) has been reported by cancer patients as a side effect of chemotherapy for several decades. The impact of CRCI on quality of life for cancer survivors has become increasingly significant. Up to 75% of all cancer patients report symptoms of CRCI, with the highest incidence of non-CNS cancers reported in breast cancer patients receiving chemotherapy, at approximately 50%. The purpose of this review is to examine the impact of CRCI on quality of life of breast cancer survivors; asking the PICO question: How do breast cancer patients reporting chemotherapy related cognitive impairment (CRCI) perceive its impact on quality of life (QOL)? Interventions: A systematic review of PubMed, Cumulative Index to Nursing and Allied Health Literature (CINAHL), Cochrane Database of Systematic Reviews, Psych Info, and ancestral search of publications between 2000 and 2014 yielded 10 articles; two quantitative and six qualitative studies with a total sample (n = 330) of women with breast cancer reporting CRCI impacting QOL. Cumulative findings reported lower scores in executive functioning, verbal fluency, memory, and difficulty with concentrating, word finding, decision-making, and multitasking. Other findings were feelings of frustration, diminished independence, feeling emotionally drained, and having difficulty with work. All studies reported a perception of diminished quality of life resulting from CRCI. A recurring theme identified that patients felt uninformed and thus unprepared to cope with CRCI when it occurred. Discussion: Improved assessment skills and tools for assessment are needed, along with education of oncology nurses and providers to facilitate early identification of symptoms of CRCI. A deeper understanding and focus on patient reported outcomes is needed with regard to QOL issues for patients with CRCI. Further research is needed to identify effective evidence based treatment interventions. As a result of this review, a quality improvement project is being developed to facilitate assessment of breast cancer patients receiving chemotherapy to facilitate early identification of CRCI in order to refer patients for symptom management and improve quality of life.

## 29

**IMPLEMENTATION OF THE COMPREHENSIVE WELLBEING SCREENING PROGRAM (CWSP) IN A MULTISPECIALTY OUTPATIENT ONCOLOGY CLINIC.** Geline Joy Tamayo, MSN, ACNS-BC, OCN®, UC San Diego, Moores Cancer Center, San Diego, CA; Anna Downey, RN, UC San Diego Moores Cancer Center, La Jolla, CA; Scott Irwin, MD, UC San Diego Moores Cancer Center, La Jolla, CA; Jeremy Hirst, MD, UC San Diego Moores Cancer Center, La Jolla, CA; Veronica Cardenas, PhD, UC San Diego Moores Cancer Center, La Jolla, CA; Yuko Abbott, LCSW, UC San Diego Moores Cancer Center, La Jolla, CA

As of 2015, The Commission on Cancer (CoC) requires its accredited institutions provide Psychosocial Distress Screening for all cancer patients. Screening includes the components of assessment, documentation and taking action, when indicated. Following the Commission’s directive, the UCSD Moores Cancer Center in La Jolla, California, one of 44 NCI-designated Comprehensive Cancer Centers in the United States, established a pilot project to develop and implement psychosocial distress screening in its outpatient multispecialty clinic. Purpose: To evaluate a pilot Comprehensive Wellbeing Screening Program (CWSP), establishing a process for staff education and implementation. An interdisciplinary committee (psychiatrists, psychologists, social worker, administrator and nurses) developed the CWSP and implemented a rollout with 1–2 disease teams at a time over ten months. Components of the Program included development of: (1) Bilingual patient education materials relevant to wellbeing domains, (2) CWSP screening tool, (3) Education

materials accompanying the patient's after visit summary (AVS) at clinic visit end, (4) Training strategies to equip clinic nurses to provide patient screening, (5) Screening instructions [(a) nurse reviews the CWSP tool responses with the patient, (b) based on patient's responses, the nurse assesses whether patient needs educational materials or a referral to the psychosocial team (social worker, psychologists or psychiatrist)], (6) Electronic Medical Record-based smart phrase to document screening, assessment and interventions. Evaluation: Between July 7-October 31, 2014, 2,032 patients completed the CWSP's screening tool. Feedback from patients and providers indicate that the tool was easy to complete and facilitated important conversations. The tool demonstrates excellent internal reliability with little redundancy. Visit times increased by only 1-2 minutes. Screening prompted requests for education materials and the opportunity for patients to speak with someone about their distress. Ongoing Nursing chart audits determine compliance with implementation of the CWSP tool. Based nursing chart audits, clinic nurses need frequent coaching about the need for psychosocial assessment at each clinic visit. Pilot data suggests strategies to expand the Program to all disease teams at the Cancer Center. The implementation of this new program in an outpatient multispecialty clinic.

### 30 SETTING THE STANDARD: IMPROVING ORAL CHEMOTHERAPY PROCESSES WITHIN A COMMUNITY CANCER CENTER. Deborah O'Sullivan, RN, OCN®, Baylor Scott & White McClinton Cancer Center, Waco, TX; Miriam Blasingame BSN, RN, OCN®, Baylor Scott & White McClinton Cancer Center, Waco, TX; Joni Watson, MBA, MSN, RN, OCN®, Baylor Scott & White McClinton Cancer Center, Waco, TX; Paloma Pearson, MBA, Baylor Scott & White McClinton Cancer Center, Waco, TX

As FDA approval for oral anti-cancer agents increases, more patients are prescribed these drugs instead of traditional IV chemotherapies. Prescriptive care with oral agents outpaced the needed care processes within smaller, ambulatory cancer centers. Community cancer centers infrequently reach the goal of monitoring patient oral chemotherapy adherence for therapeutic drug dose to achieve the desired treatment outcome. The Baylor Scott & White McClinton Cancer Center faced challenges helping patients safely adhere to oral chemotherapy regimens. These included: lack of standardized informed consent and patient education, drug affordability, delays in initiating therapy and obtaining refills, limited knowledge assessing patient adherence, adverse reaction management variation, and provider inconsistency. Over 1.5 years, the team standardized both the informed consent and patient education processes to align with IV chemotherapy processes. The team developed color-coding systems to easily identify patients' hardcopy information; implemented a calendar system to proactively refill prescriptions and follow-up with patients to assess barriers and side effects; generated a shared patient-tracking document, identifying each care step to streamline and improve team collaboration; contributed to patient adherence tools including drug calendars and a tip sheet suggesting methods for consistent dosing; enhanced financial navigation and prior-authorization processes to remove financial barriers; and began assessing baseline patient adherence. Collectively, the team dramatically improved care of patients on oral chemotherapy, providing safer care meeting standards. Of 18 patients surveyed over two months of the standardization processes, 94.4% reported they took medications as scheduled, 100% received information about their medication, and 88.9% knew the long-term benefits. 22% said they had difficulty paying for medication; only one patient (.05%) said he almost went without his

medication because of cost. To date, the financial navigator has helped locate \$247,705 in assistance for oral chemotherapy alone. The benefits of improving oral chemotherapy process are invaluable for patients and staff. Patients are more engaged in their care and have experts to support them on their treatment journeys. Nurses are more proactive as they can anticipate and assist patients before medications run out or adverse reactions occur. Through ongoing process change, nurses can improve cancer care for this unique patient population.

### 31 IT TAKES A VILLAGE . . . DIAGNOSIS AND MANAGEMENT OF THE ESOPHAGEAL CANCER PATIENT AT AN NCI DESIGNATED COMPREHENSIVE CANCER CENTER (CCC). Kris Mathey, MS, RN, CNP, AOCNP®, The Ohio State University Wexner Medical Center-James Cancer Hospital and Solove Research Institute, Columbus, OH; Heather Ratliff, MS, RN, CNP, The Ohio State University Wexner Medical Center-James Cancer Hospital and Solove Research Institute, Columbus, OH

In the United States it is estimated 16,980 people will be diagnosed and 15,590 people will eventually die of esophageal cancer in 2015. Esophageal cancers are generally classified as squamous cell carcinoma or adenocarcinoma. Patients are treated with chemotherapy, chemoradiation, or surgery, or multimodal treatment. Purpose: Detail how the utilization of the oncology nurse practitioner is invaluable in the multidisciplinary team approach to care of the esophageal cancer patient. Care of the esophageal cancer patient includes utilizing medical oncology, radiation oncology, and surgery. In addition, radiology, gastroenterology, and pathology work in collaboration to discuss each patient in tumor board to form a comprehensive treatment plan. Concurrent clinics are held to allow patients to be seen by all disciplines at once. The medical and surgical oncology nurse practitioners independently run a patient clinic with multidisciplinary care coordination at the provider level. In our clinic, we have seen approximately 65 new esophageal cancer patients over the past year. In 2014, 21 patients were treated with neoadjuvant chemoradiation. In 2015, we have treated 19 patients with neoadjuvant therapy. Because of the increased incidence of this cancer, our program is growing. Patients may present with dysphagia, odynophagia, weight loss, abdominal pain, and cough. Depending on the stage of the disease, patients may receive single or multi-modal therapies. Side effects of treatment can be debilitating and costly requiring admission for dehydration, pain, and overall symptom control. Patients who undergo surgery with esophagectomy, can experience difficulty with oral intake, dehydration, and pain. The utilization of the nurse practitioner is invaluable. The nurse practitioner is able to run an independent clinic to monitor patients and provide symptom management to optimize functioning throughout the treatment continuum and prevent hospitalization. By utilizing the nurse practitioner at the highest level of functioning with independently run clinics, physician clinics can be utilized for new patients and treatment plan decisions. Having the nurse practitioner functioning at their highest level of autonomy within the team approach, allows maximal care throughout the disease continuum of the esophageal oncology patient.

### 32 MEETING PATIENTS' NEEDS: PREPARING PATIENTS FOR SYMPTOM MANAGEMENT AFTER DISCHARGE THROUGH INDIVIDUALIZED PATIENT EDUCATION CLASSES. Michelle Kasprzak, MSN, RN, OCN®, Duke University Hospital, Durham, NC; Dannel Ediger, BSN, RN, CN III, Duke University

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Our medical-oncology admissions averaged 4.2 days primarily for symptom management. With declining HCAP patient satisfaction and increasing re-admissions, the unit-based Patient-Family Education Committee (PFEC) developed and implemented a formal comprehensive patient education (PE) program to address these issues. PE program aims to foster patient engagement in symptom management. Program goals: (1) augment symptom improvement and facilitate home-based symptom management to reduce re-admissions, and (2) increase patient satisfaction through empowerment during hospitalization for home-care. PFEC assessed the most common admission symptoms to form 3 classes: Pain/Fatigue; GI symptoms/Nutrition; Anxiety/Depression/Stress Management. Classes were developed using evidence-based symptom guidelines, facility, and national resources. Scripts were written and vetted by clinical experts (social work, dietitian, medical-oncology and psycho-oncology clinical nurse specialists). Class handouts included: class outline, symptom-specific PE materials, and reliable website resources. Patients completed Educational Needs Assessment on admission and staff reminded patients/families of class schedule. Despite interest and positive feedback, conflicts prohibited patient participation (i.e. physician-rounds, procedures). To engage patients, PFEC began offering individual classes throughout the week. Class length was tailored to meet needs and reduce burden. The current process involves: (1) obtaining Needs Assessment, (2) PFEC-RN provides education, materials, and documents accordingly, and (3) class evaluation completion. 33% admissions indicated wanting classes for 83.5% participation. Most patients completed one class, 43%, while 32% completed all three classes. Classes were not completed due to fatigue, visitors, procedures, early discharge. 2013–2014 30-day unplanned oncology readmission rates averaged 30%. 22% patients who received classes were readmitted; these patients reported earlier symptom recognition and were “not as ill” for readmission. Class evaluations were “excellent” (97%), needs were met, appropriate in length, and questions were answered (mean > 4.7 on 5-point scale). Patients indicated feeling better prepared for discharge, symptom identification and management, and knowing who to call for healthcare questions. PFEC members reported increased ability to empathize with and advocate for their patients. Successful program has engaged patients for symptom recognition and self-care in its first year of implementation. Next steps include offering additional topics, video development, increasing patient/family participation, and fostering program development across the healthcare system.

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**ENGAGING STAFF IN A CULTURE OF SAFETY: USING PERSONAL PROTECTIVE EQUIPMENT FOR CHEMOTHERAPY ADMINISTRATION IN THE OUTPATIENT SETTING.** Anita Grenier, BSN, RN, OCN®, CNIV, Duke University Health System, Durham, NC; Heather Harris, BSN, RN, OCN®, CN III, Duke University Health System, Durham, NC; Katherine Becker, MSN, RN, OCN®, Duke University Health System, Durham, NC; Amy Boswell, MSN, RN, OCN®, Duke University Health System, Durham, NC; Deborah Allen, PhD, RN, AOCNP®, Duke University Health System, Durham, NC

Chemotherapy contamination occurs when safe handling procedures are not followed, potentially exposing colleagues

and patients. Exposures increase illness risk, including cancer development, yet the majority of staff at a large academic outpatient treatment center opted not to use personal protective equipment (PPE) and follow national guidelines for safe handling. PPE program goals were to increase PPE use throughout administration/disconnection processes and reduce cross-contamination across the work environment to other staff and patient/families. Phase I focused on three crucial PPE uses as incremental initiatives towards full safe handling implementation: double-gloving, PPE use during chemotherapy discontinuation/disposal, and gown use to remain chairside (not at nurse's station/breakroom). Preliminary 2013 surveys indicated staff predominately used gloves during administration/discontinuation (75%) and barriers at infusion site (60%). Double-gloving (20%) and gowns (5%) were less likely to be used. Safe Handling Champions (SHC) developed a scripted “best practice” chemotherapy scenario demonstrating safe handling processes for administration/disconnection and disposal. Staff meetings on risks of chemotherapy contamination and national initiatives were presented, followed by the best practice film viewing (which all new hires must view). SHC performed staff observations providing informal feedback to improve processes. PPE were made available within closer proximity of patient stations to reduce staff burden. Pre-post intervention surveys were used with observational data to determine performance improvement. Since initiation 1 year ago, staff has significantly increased ( $p < 0.05$ ) use: double-gloving, gowns, and barrier pads for administration & disconnection. Staff observations yield 100% compliance yet nearly 50% staff verbalize continued struggles with compliance during times of high volume or acuity; staff have improved PPE use despite these issues ( $p < 0.05$ ) which may reflect over-reporting of non-compliant events. Unexpected outcomes pertain to patient/family engagement in process change as they have verbalized appreciation of PPE use to protect themselves and others and their responsiveness to learn home safety precautions to prevent body fluid contamination after treatment. Despite significant improvements, interventions will continue to focus on double-gloving and disconnection PPE use. This program demonstrates that focused interventions for small successes can have a major impact in creating a sustainable culture of safety.

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**SAFETY FIRST: EMERGENCY RESPONSE IN THE OUTPATIENT ONCOLOGY CLINIC.** Renee Shalvoy, RN, BSN, OCN®, OSU CCC–The James, Columbus, OH; Diana McMahon, RN, MSN, OCN®, OSU CCC–The James, Columbus, OH

As more care of oncology patients moves to the outpatient setting, patient acuity and the potential to develop life-threatening complications related to disease and treatment present new challenges. Outpatient nurses are faced with emergency situations with fewer resources than their inpatient counterparts. This project focused on the emergency response needed to optimally care for patients in an academic, free-standing, NCI-designated outpatient center with approximately 65,772 patient visits per year and 161 patient emergencies necessitating a 911 call. While life-threatening conditions necessitate a 911 emergency response, staff must be prepared to administer life-saving care including cardiopulmonary resuscitation until paramedics arrive. After several emergent events in an outpatient clinic, nurses asked to develop a stream-lined, patient-centered emergency response process to provide optimal outcomes for their patients. Interventions: Patient emergency data and staff education needs were assessed. It was determined since emergency situations were low volume but high risk and involve

both nursing and registration personnel, well-defined roles and visual cues during an emergency would be most beneficial. Emergency roles were defined using organizational policy/procedures, AHA guidelines, crew resource management concepts and relationship-based care principles. Roles were outlined on color-coded laminated cards allowing the charge nurse to hand out cards assigning specific duties during an emergent event. Additionally, staff advocated to develop a “patient care kit” (blanket, pillow, water) to provide additional comfort to the patient/family waiting for the emergency responders. A post-education survey and simulation demonstrated increased staff comfort with emergency response. Roles were consistently assigned and carried out according to the color-coded cards. Continued evaluation will be done as all 9-1-1 calls receive a quality review. In the outpatient setting, an oncology patient’s condition can change quickly with little or no warning. Enhancing emergency response by integrating several evidence based principles provided outpatient oncology staff with the tools and confidence to respond in a coordinated and efficient manner. Innovation: The standardization of roles in a streamlined, setting-specific response facilitated by using laminated assignment cards increased the quality of patient emergency interventions resulting in caring and effective treatment.

### 35 PARTNERSHIP, PATIENT NAVIGATION, AND QUALITY CARE.

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The healthcare system is often looked at as difficult to navigate and understand. It can seem even more complicated for someone with a cancer diagnosis who requires treatment from multiple specialists. With this understanding, Froedtert & the Medical College of WI (F&MCW) wanted to make getting cancer care easier; therefore two new coordinator roles were implemented. The typical navigator role in cancer care is a nurse that physically helps patients move throughout the system and coordinates their care. Initially, F&MCW piloted dual roles, the Clinical Coordinator (RN) and a New Patient Coordinator (non-RN) in the breast program. The initial focus of the roles was patient intake and streamlined entry into the system with all relevant records, imaging, and pathology available prior to consult. Over time, the roles have expanded. The New Patient Coordinators focus on entry into the system and record retrieval, and the Clinical Coordinators now focus on: (a) Facilitating establishment of consensus-driven evidence-based standards of care for each disease program, (b) Ensuring consistency across programs, (c) Managing data for reporting and quality and outcomes initiatives. These roles are unique because they are responsible for the upfront coordination of getting a patient into the system and the patients care is then transitioned to the clinic RNs who function as disease-specific navigators. This partnership allows the Clinical Coordinator to focus on outcome measures, quality of care, and supportive care initiatives. The roles have increased patient satisfaction, decreased turnaround time, decreased time to imaging and surgery, and improved quality within each program. Due to the outcomes of the breast pilot, F&MCW was able to expand the two roles to all 13 disease programs. Clinical Coordinators have an overall view of the program(s) they work with, which puts them in a unique position to evaluate quality and make improvements over the continuum of care. Next steps include expanding the Clinical Coordinator role across the F&MCW Cancer Network to assure that patients will receive consistent care no matter what location they are seen at.

### 36 OPTIMIZATION OF THE ELECTRONIC MEDICAL RECORD TO IMPROVE DISTRESS SCREENING.

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The majority of oncology patients experience distress during their journey. It is essential to develop a clear process for distress screening, assessment, and documentation. Prior to 2009, Froedtert Hospital (FH) did not have a clear way to document distress screening. The patient completed a paper Distress Thermometer and the nurse reviewed with the patient. The document was entered into an access database, and later scanned into the electronic health record. It was nearly impossible to track the use of the tool and find previous data. Our completion rate for distress screening was 29%. A group of nurses including directors, CNS’s, and informaticists collaborated to develop a successful plan. Through cooperative meetings, the nurses decided to integrate the Distress Thermometer into Epic. Initially, the tool was built as a Smart Text; however, the data could not be easily extracted. Next, the tool was built into a documentation flowsheet. Columns were added into the schedule view so nurses could easily view patients with completed distress screening and corresponding distress score. Finally, the Epic team developed a Best Practice Alert to notify the nurse that a patient needed distress screening. An electronic report was designed to show completion percentages. Prior to the implementation into Epic, the FH completion rates for distress screening were low. After the integration, the nurses were able to capture 87% of the patients, with that number continuing to rise. Nurses have reported that the tool is easier to use and previous results are easier to find. The nurses feel more comfortable utilizing the data to help drive practice interventions. Evidence proves that most oncology patients endure distress which emphasizes the need to capture all patients. With the increase in screening for distress, we would expect to see more positive outcomes for patients. Increased screening often leads to an increase in referrals for supportive care and more thoroughly assessed physical symptoms. Next steps would include continuing to increase our completion rates, increasing reassessment rates, and measuring patient outcomes including supportive care referrals. Nursing staff is determined to maximize the current documentation tools in order to best serve the patients.

### 37 PAIN REDUCTION IN THE ONCOLOGY SETTING.

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Pain management in an inpatient hospital setting has historically been difficult due to complex medical issues, healthcare provider perception and patient expectation. The purpose of this project was to increase and sustain patient satisfaction with pain management in an oncology inpatient population, using the Hospital’s Consumers Assessment of Healthcare Providers and Systems (HCAHPS) evaluation system. Nurses on the oncology unit were dissatisfied with their low HCAHPS patient satisfaction scores related to pain. Prior to the inter-

vention, scores were ranked at the first percentile, well below the acceptable standard. Bedside nurses wanted to use oncology patient-specific interventions which would include family members. Discussions at staff meetings led to incorporation of an interdisciplinary team, to include nurses, physicians, patient care technicians, pharmacists, and the patient and family. This interdisciplinary team would round on all oncology patients with chronic pain as well as post-operative surgical patients. The patient and their team would discuss possible barriers to adequate pain control and explore other non-pharmacologic options. Pharmacists provided education on medication purposes, side effects and half-life. The interdisciplinary team educated patients and families about mechanisms of pain and collaborated with patients to identify realistic pain relief goals. Patients and families discussed plans for pain medication at the beginning of each shift, to plan for seamless delivery of care. After implementation, the HCAHPS pain management scores for the oncology unit were sustained at the 99th percentile during the last four months. Pain management in the oncology setting should be a priority as it helps to increase patients' quality of life and decrease anxiety. Open communication between healthcare providers and patients is essential to providing optimal pain relief. This project used an interdisciplinary focus, but the core of this team was led by nursing. The nurses brainstormed for innovative interventions, then expanded their team to include pharmacy. As the project expanded, the entire interdisciplinary team met biweekly to ensure the intervention was hard wired. Currently, they meet monthly to fine tune the process.

### **38 NURSES SWITCHING GEARS FOR NEW ONCOLOGY PATIENT POPULATION. Linda Lakdawala, DNP, RN, CPAN, UPMC Shadyside Hospital, Pittsburgh, PA**

The oncology patient population has unfortunately grown in numbers over the past few years at an acute care facility. A nursing unit transitioned from a cardiology specialty to also include the solid tumor patient population. A safe and convenient intravenous route is an infusion port which is implanted underneath the skin usually in the upper chest area. The patient's port is accessed with a Huber needle and is one of the oncology preferred intravenous routes for chemotherapy and infusions. Intravenous (IV) therapy related events can have a positive financial impact by providing best practice for patients receiving IV therapy. The purpose of the project was to transition medical surgical nurses to learn an oncology-focused skill. The newly acquired skill permitted the nurse to access or de-access the port, therefore improving patient flow for possible IV therapy, testing or discharge to home. Mandatory education for infusion port access and de-access occurred. A quality improvement project monitored staff compliance, IV team assistance and central line infections. Data was monitored to focus on successful port insertions, the need for contacting IV team for assistance and central line infections. In a five month period the nurses accessed 16 ports and de-accessed 37 ports. The IV team was paged only once for assistance. Most importantly, the unit had no central line infections for the five month evaluation period. Changes in health care and finances are experienced across medical facilities. An entire nursing department can successfully transition to care for oncology patients with proper training. Innovation: Successful outcomes of the quality improvement project became the basis for the staff to learn additional skills and to complete a chemotherapy course. This is a win-win for a growing patient population and patient satisfaction. The nurses learned high level skills as a result of the population transition and are proud to be confident oncology care providers.

### **39 BENEFITS OF A DESIGNATED EDUCATION UNIT IN A PERIOPERATIVE ONCOLOGY SETTING. Michele Leonard, RN, Roswell Park Cancer Institute, Buffalo, NY; Jennifer Russell, RN, Roswell Park Cancer Institute, Buffalo, NY**

Currently at our facility, we are involved in a pilot program in a partnership with a local university school of Nursing, called a designated education unit, (DEU). The DEU is designed to provide students with an innovative clinical learning environment that bridges the gap between theory and practice and fosters learning through a collaborative approach. The students are supported to make autonomous decisions as if they are the primary nurse. "Identifying a mentor who has successfully transitioned from one nursing role to another can provide support for the nurse in transition." (Hayes, 2011, p.7). While implementing the DEU, students gain a well-rounded experience of what it is like to work in an oncology ambulatory peri-operative setting. While DEU's are not new to nursing, implementing them in the peri-operative area is an innovative approach to recruitment to an area that requires extensive training. Due to the demanding training, it is imperative that we select candidates that fit seamlessly into the team. Therefore the DEU is a benefit to the candidate as well as the institution, as the candidates are being trained with necessary skills prior to submitting an application for employment. This opportunity gives them the insight to the unique specialized training required of an oncology nurse. After the first year of our DEU program, we successfully hired one out of the six participants in the operating room setting. Additionally, it has allowed staff to train and search for candidates that would have a natural fit with the team. Nurses who provided the DEU training reported increased satisfaction and a reignited passion for nursing, contributing to an increase in productivity. Additional benefits are the gratification of seeing the successes of the students who reported that they felt increased worth, value and inclusion in the team rather than just a student. One student reported a feeling of confidence, which contributed to an amazing experience.

### **40 IMPROVING PATIENT SATISFACTION: A CALL BELL RESPONSE INITIATIVE. Patricia Verrigni, RN, BSN, OCN®, Duke University Hospital, Durham, NC; Monica Kegler, RN, MSN, PHN, CNL, University of California San Francisco Medical Center, San Francisco, CA**

The call bell provides patients with a means to communicate needs to nursing staff. In the oncology population, treatment side effects and disease processes often lead to alterations in elimination, pain, nausea, vomiting and mobility issues. If not proactively managed using strategies that are purposeful and intentional such as hourly rounding, patients have to use their call bell more often to get needs met. Frequent use of call bells can lead to interruptions in work flow making it difficult for staff to respond in a timely manner. Delays in response time contribute to patient dissatisfaction and potential safety issues, including falls related to toileting. HCAHPS scores in this area for our adult hematology-oncology unit were comparatively lower than the rest of the hospital. Purpose: To implement evidence-based interventions aimed at improving call bell response time and to educate patients about call bell communications. The goal is to improve call bell response time and increase patient satisfaction. Intervention: A literature review indicated patients expect healthcare responses to call bell activation within 2.5 minutes believing call bell use relates to safety as they are asking for assistance. Staff surveys revealed most were not educating patients effectively about using the call bell system, or conducting hourly rounds, and only 10% indicated asking patients about the 4 P's of Pain, Potty, Position, Partner. Survey results

and proposed interventions were shared with staff at several in-services. Interventions included implementing purposeful hourly rounding by RN's and NA's using the 4 P's on a predetermined schedule using consistent language and educating patients to be specific about stating their needs when using their call bell. Evaluation: Since implementation Spring 2015 HCAHPS scores have improved from 70% to sustaining current levels of 100%. Staff response is positive indicating reduction in call bell use has reduced workload, especially during shift change. Post-implementation staff surveys are pending. Successful program leading to rapid reduction in call bell response time and improvements in patient satisfaction. Anecdotally, staff are pleased with program implementation and reduction in workload stress. This project can be easily replicated in other inpatient areas.

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**PATIENT THROUGHPUT EXPERIENCE.** Erika Florendo, ANP-BC, Mount Sinai Hospital, New York, NY; Daniel Vernia, ACNP-BC, Mount Sinai Hospital, New York, NY; Juliet Escalon, NP-C, Mount Sinai Hospital, New York, NY; Nadege Stevens, RN, Mount Sinai Hospital, New York, NY; Chloe Spears, RN, BSN, Mount Sinai Hospital, New York, NY

Maximizing quality through optimal patient-focused care coordination is a priority identified by the Institute of Medicine. Quality care coordination ensures that the patient receives the right care, in the right setting, at the right time and by the right care team members. A growing Multiple Myeloma Program (MMP) that includes multiple providers and a national referral base, is challenged with ensuring that this complex care is standardized and streamlined. A collaborative nurse-led task force was organized to identify opportunities to align the patient care flow with principles of value-based care. Using Advisory Board staffing benchmarks the current MMP staffing model and a time in motion study to evaluate scope of practice was reviewed. The MMP analyzed work-flow and identified several immediate opportunities. Each day, one CN was assigned to triage phone calls, conduct follow-up calls and see drop in. The other CNs focused on their patients for the day. Registration was decentralized by moving this staff to the MMP site. A hybrid primary care nursing model was implemented. The MMP and interdisciplinary team reviewed the patient list for the next day and assigned an APN/CN and medical assistant to one or more providers, depending upon patient's needs and acuity. This ensured that time would be blocked as needed (e.g., for an extended symptom management session). The administrative team reorganized their work flow to decrease duplication of effort and streamline efficiency on the front and back end document retrieval and scheduling of appointments. Outcomes tracked include: patient satisfaction scores, # of triage calls related to information need or unresolved issues, wait time, capacity, avoidable re-admission and ED Visits. Although this is a new initiative, providers are reporting that this is improving their care delivery and patients are making positive comments. As the MMP continues to provide "world class" clinical care, ongoing initiatives will be implemented to "hard-wire" best quality care. This process will be used to evaluate other practices in the organizations cancer center.

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**OUTPATIENT METHOTREXATE-PARTNERSHIP BETWEEN HEALTH CARE TEAM AND PATIENTS.** Dede Gibson, BAN, CPHON, Memorial Sloan Kettering Cancer Center, New York, NY; Maria Christina Pinero, BSN, CPHON, Memorial Sloan Kettering Cancer Center, New York, NY

In the ever changing world of health care, innovative modes of delivery are essential. Shifting traditionally inpa-

tient chemotherapy treatments to the outpatient setting increases efficiency and decreases cost; while maximizing patient independence and satisfaction. A study of the administration of outpatient High Dose Methotrexate (HD MTX) was used to define the necessary elements for successful outpatient treatment. Our investigation found four essential components for effective outpatient treatment; consistency in treatment guidelines, early patient education by nursing staff, increased involvement of patients in their own care and a shared responsibility between health care team and patient in achieving desired outcomes. HDMTX is an antimetabolite that is traditionally administered on an inpatient unit. It is our practice in the Department of Pediatrics at Memorial Sloan Kettering Cancer Center to administer HDMTX in the outpatient setting. Standard guidelines for outpatient HDMTX include daily visits, labs, hydration and medication dosing algorithms. Patient education by nurses include the previous list as well as home urine monitoring (output and pH), mouth care and nutrition. Early learning of consistent information with defined treatment parameters allow patients to have the tools necessary to care for themselves in the comfort of their own home. The cornerstone of successful outpatient therapy is the active role of patient/families in their individual care. Removing inpatient stays results in increased independence and can empower patients as they participate in treatment. Shared responsibility and dual accountability between the health care team and the patient creates a partnership that together produces effective quality healthcare. As healthcare evolves, efficiency and cost effectiveness have become essential factors in defining quality. Therefore, the shift from inpatient to outpatient treatments will continue to be an innovative way to deliver care. Nurses can support this transition through awareness of the essential components of successful outpatient treatment.

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**SYMPTOMS CLUSTERS IN PATIENTS WITH BREAST CANCER SUBMITTED TO ADJUVANT SYSTEMIC TREATMENT.** Sarah Goncalves, RN, MSc, AC Camargo Cancer Center, Sao Paulo, Brazil; Erika Maria Monteiro Santos, AC Camargo Cancer Center, Sao Paulo, Brazil

On average, cancer patients experience 11 to 13 concomitant symptoms, and those who report higher number of symptoms have worse functional status and quality of life. The multiple simultaneous symptoms can be characterized as symptom cluster. Objectives: To verify the presence of symptoms clusters and its association with the quality of life and sociodemographic characteristics in patients with breast cancer submitted to adjuvant systemic treatment; and to verify to most frequent symptoms at this population. This is a descriptive and prospective study. The study included non-metastatic breast cancer patients, age 18+ years, submitted to adjuvant systemic therapy. Patients were invited to participate in the study at the first chemotherapy session, and after they have signed the informed consent, the following instruments were applied at first and last chemotherapy session: EORTC QLQ-C30, EORTC BR-23, MDASI and socio-demographic questionnaire. The most prevalent symptoms found in the sample of 56 patients in the second interview were: fatigue (89.3%), concerns (80.4%) and dry mouth (80.4%). It was observed the occurrence of four symptoms clusters: Emotional (sleep problems, concerns, sadness and shortness of breath); Gastrointestinal (nausea, lack of appetite and vomiting); Cognitive (difficulty to remember things, drowsiness and dry mouth); and physical (pain, fatigue and numbness or tingling). There was no association between the symptoms cluster and the socio-demographic characteristics. Association was found

between the cognitive and physical characteristics and the presence of venous catheter. The four groups had moderate negative correlations with the functional scales, as well as moderate positive correlation with the symptoms range, which may indicate that the clusters interfere on the quality of life. This study showed that there are symptoms clusters and they interfere on the quality of life of breast cancer patients submitted to adjuvant systemic treatment. The results of this research can bring contributions to clinical practice, showing the need for symptom control during treatment with curative intent and also can contribute to the design of research projects on symptoms clusters in the future and to identify management strategies in this context.

#### 44 OUTPATIENT ADMINISTRATION OF EPOCH CONTAINING REGIMENS. Candis Morrison, PhD, CRNP, National Cancer Institute, Bethesda, MD; Pia Nierman, RN, BSN, OCN®, National Institutes of Health, Bethesda, MD; Tracey Walsh-Chocolaad, PharmD, National Cancer Institute, Bethesda, MD; David Kohler, PharmD, National Cancer Institute, Bethesda, MD; Ann Rutt, RN, BSN, National Institutes of Health, Bethesda, MD; Mark Roschewski, MD, National Cancer Institute, Bethesda, MD

The National Cancer Institute (NCI) is consistently challenged with rare and aggressive lymphoma cases and has been investigating methods to improve outcomes. In the 1980s our investigators combined etoposide, prednisone, vincristine, cyclophosphamide and doxorubicin to comprise the regimen known as EPOCH. Continuous infusion and dose adjustment were incorporated to enhance tumor cell kill. Granulocyte stimulating factors and rituximab were added to this platform when they became available. Despite being more cumbersome to prepare and deliver than are bolus regimens such as CHOP (cyclophosphamide, doxorubicin, vincristine and prednisone,) EPOCH may be more effective in treating certain lymphoma subtypes. Use of the regimen is becoming more widespread and we frequently receive inquiries from outside facilities requesting guidance on outpatient administration of EPOCH containing regimens. Purpose: To develop a “manual” intended to share the knowledge gleaned by the NCI during its treatment of over 500 lymphoma patients with EPOCH based regimens. The manual provides information on preparation, administration, symptom management and patient education unique to patients receiving EPOCH based regimens in the outpatient setting. Dissemination of this manual to outside institutions to enable safe and maximally tolerable dosing of outpatient administered EPOCH based regimens. Application of the concepts in the manual has served to decrease admissions and improve patient quality of life via proactive adverse event symptom management. As EPOCH use increases, nursing expertise regarding administration and required patient support is crucial. We therefore aim to provide a framework for successful outpatient administration of EPOCH in the community. EPOCH is administered over 96 hours via an infusion pump with brief visits to the infusion center on days 1–5 of each cycle for bag changes. During these brief visits, nurses also have the opportunity to assess for adverse events and reinforce patient education regarding aspects of the treatment. Our infusion center also has a dedicated telephone triage nurse who monitors intra-cycle blood counts and symptoms between visits. These data points are crucial for subsequent cycle dosing. This degree of nursing support has permitted safe outpatient administration of this continuously infused regimen. Nursing expertise is essential to the successful outpatient administration of DA-EPOCH.

#### 45 SAFE HANDLING OF BODY FLUIDS AFTER HAZARDOUS DRUG ADMINISTRATION—CHANGING POLICY, PRACTICE, AND DEVELOPING A PATIENT AND FAMILY EDUCATIONAL BROCHURE. Linda Chan, BSN, RN, OCN®, UT Southwestern Medical Center, Dallas, TX; Tracy McGaw, MSN, RN, CCRN, CNRN, UT Southwestern Medical Center, Dallas, TX; Deborah Spitzer, MSN, RN, OCN®, UT Southwestern Medical Center, Dallas, TX

Participants will be able to describe key points in a comprehensive safe handling of body fluids (SHBF) initiative. Health problems can occur as a result of hazardous drug exposure. In a study with three patients who received chemotherapy in a Japanese clinic, researchers found that the patients' and the family members' urine tested positive for the chemotherapy agent 48 hours after administration. Two patients received cyclophosphamide and one patient received 5-fluorouracil. Environmental wipe samples showed contamination with chemotherapy around the toilet, door, and bathroom faucets in the homes of the two patients who received cyclophosphamide. Some hazardous drugs exceed 48 hours to excrete, for example; cyclophosphamide and doxorubicin, five days, and gemcitabine, seven days. Therefore at UT Southwestern Medical Center (UTSW) the uniform time for observing hazardous precautions was changed from 48 hours to seven days. The purpose of this project is to ensure safe handling of body fluids (SHBF) through policy and practice for healthcare workers, and to develop a dedicated educational brochure for patient/family teaching. The brochure gives specific information about SHBF at home, the hospital, the clinic; addresses handling soiled material; and tells why special safety measures are indicated. The project began by comparing current literature and practice. Permission for the project was obtained through UTSW Nursing Research and Evidence Based Practice Council, Shared Governance, Education Council, Nursing Director, and Medical Director. Education for nursing staff was done through varied in-service modalities. Extending SHBF precautions to seven days provides a consistent response to SHBF regardless of the drug administered. Patient/family education is standardized with a dedicated educational brochure. Cancer survivors are treated with hazardous drugs for longer periods of time. This may expose family members and healthcare workers to low levels of hazardous drugs via body fluids. Teaching, using a standardized approach, can lead to better adherence to safety measures. Additional nursing research is needed to evaluate the effectiveness of the educational brochure.

#### 46 SIMULATION AS A METHOD TO TEACH END-OF-LIFE CARE. Peggy Shaw, MSN/ED, BSN, RN, OCN®, Mount Carmel College of Nursing, Columbus, OH

More than 75 percent of Americans die in hospitals and nursing homes in spite of the fact that they wish to die at home. Thus, lack of knowledge related to end-of-life (EOL) care has a profound effect on quality of care. Oncology nurses are optimally situated to address EOL care when aggressive treatment is no longer effective, as they spend more time at bedsides of dying patients than any other member of the health care team. Oncology nurses must manage distressing EOL symptoms, coordinate care, assist with decision-making/ treatment plans, and prepare the patient and family for death. Additionally, oncology nurses must be aware of ethical and spiritual needs of patients, and have confidence, compassion, and the ability to meet the unique needs of patients and families. At the conclusion of this presentation, the oncology nurse will be able to

describe how end-of-life nursing care can be taught in hospital settings through the use of simulation. Considering most people die in healthcare facilities, it is important that oncology nurses are exposed to EOL clinical situations to help them to provide high quality EOL care. Simulation is an effective and low-stakes teaching strategy that can be used to bridge this educational gap. Critical EOL simulation content includes: understanding complexities of EOL assessment and care, recognition of when aggressive treatment is not effective, and identifying own fears about talking to the patient and family about death and dying. Debriefing data revealed that nursing students appreciated the opportunity to think critically and prioritize through EOL clinical situations, thereby gaining experience and confidence in navigating the myriad challenges EOL presents. More than 70 percent of Americans die in hospitals/nursing homes. Oncology nurses must manage EOL symptoms, communicate with healthcare team members, assist with decision-making/treatment plans, and prepare the family for death. Few oncology nurses are exposed to curriculum and clinical situations related to death and dying. Simulation is an effective teaching strategy to bridge this educational gap.

#### 47 USING PERFORMANCE IMPROVEMENT (PI) METHODS TO STANDARDIZE AND IMPROVE NURSING DOCUMENTATION IN AN OUTPATIENT HEMATOLOGY/ONCOLOGY SETTING.

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Oncology nurses are the final safety net for patients receiving cancer therapies. In our facility, outpatient hematology/oncology nursing leaders recognized that no standard existed for infusion center nursing documentation; resulting in inconsistent documentation and possible dangerous practice variability. This created potential for patient harm, limited nursing awareness of potential risks, and failed to capture essential nursing interventions that prevent patient harm and promote positive outcomes in this vulnerable population. The purpose of the PI project was to establish unit documentation standards, develop an audit tool to increase documentation consistency, and improve patient safety and outcomes by providing evidence of how nurses adhere to practice standards. Documentation standards and an audit tool were created using the updated 2013 American Society of Clinical Oncology/Oncology Nursing Society (ASCO/ONS) and TJC safety standards. Nursing leadership educated and trained nursing personnel (11 Registered Nurses and 1 License Practical Nurse) on the new documentation standards, the audit tool, and the method to report documentation variance and non-compliance. All staff participated in peer chart audit (8 audits per nurse per month/88 charts monthly). Audits were performed on approximately 11% of electronic documentation monthly for one year. Initial data showed 90% compliance for 8 out of 15 areas audited. At 6 months, 14 out of 15 were above the 90% benchmark. Final results showed greater than 90% in all categories. Documentation compliance is sustained through ongoing weekly random chart audits of all 15 areas. This PI initiative heightened nurse awareness of published documentation standards for hematology/oncology outpatient nursing. The peer review process fostered staff growth and development, as increased education led to more uniform use of electronic medical record. Nurses were empowered to identify near misses and report practice variances. Since the initiation of documentation standards and completion of monthly audits, 15 near misses were identified to date. These experiences have unified the multi-disciplinary

clinic staff around the need for teamwork and the critical safety role nurses play. Patient safety and outcomes for vulnerable cancer patients were validated, and the nurses are now more engaged in seeking out additional ways to improve.

#### 48 MONTHLY SERUM HCG (PREGNANCY TEST) DURING ACTIVE TREATMENT. Fatemeh Youssefi, PhD, RN, OCN®, UT Southwestern Simmons Cancer Center, Dallas, TX; Kristen Vaught, BSN, RN, OCN®, UT Southwestern Simmons Cancer Center, Dallas, TX

To ensure females at child-bearing age who are receiving anti-cancer agents have recorded negative HCG results prior to beginning treatment throughout the course of their cancer treatment. Majority of anti-cancer drugs are considered teratogenic, and patient education is imperative during visits. Oncologists are precise when explaining the treatment plan which includes the duration of treatment, adverse effects due to treatment, and a general expected outcome from treatment. However, information regarding effects of these agents on a potential pregnancy needs more emphasis during education sessions. One of the suggested measures is to monitor pregnancy test results at the start of each cycle. At an accredited cancer center in Dallas, electronic treatment plans are used to order all necessary blood work including a comprehensive chemistry panel and a complete blood count with differential. However, lab orders for serum human chorionic gonadotropin (HCG) prior to each treatment were inconsistent. Often, at the initiation of treatment, the HCG serum was measured but not monitored continuously throughout subsequent treatments. Patients at child-bearing age who received anti-cancer agents such as ABVD protocol for Hodgkin lymphoma did not routinely have their HCG level evaluated forcing the infusion nurse to add the test to a treatment plan after discussions with physicians. After confirming a negative result, they continued with anti-cancer treatment. Following collaborative discussions with pharmacists, nurses and physicians, the decision was made to add HCG monitoring throughout treatment plan. Additionally, nurses and physicians discussed the importance of birth control and the effects of anti-cancer agents on an embryo with female patients who are at a child-bearing age. Females at that age must have a current negative HCG Qualitative result within seven days of their treatment plan. Afterward, they would be tested beginning of each cycle but not longer than a month. Each dispensing pharmacist and assigned infusion-nurse will monitor this test in their chart prior to administering the anti-cancer agents. In conclusion, it is the responsibility of the health team members to safeguard their patients and to collaboratively establish a proper system ensuring all aspects have been covered prior to administering anti-cancer agents.

#### 49 EFFECTIVENESS OF INPATIENT DISTRESS SCREENING TO PROMOTE PATIENT CENTERED CARE AND IMPROVE PATIENT SATISFACTION OF HOSPITALIZED PATIENTS WITH CANCER. Kerstin Scheper, RN-BC, OCN®, Overlook Medical Center, Summit, NJ

Distress is an important concept to consider in providing patient centered care. A recent study reported high levels of psychosocial and physical distress in two thirds of inpatients studied. The NCCN standards of care state, "Distress should be recognized, monitored, documented, and treated promptly at all stages of disease and in all settings". However, many facilities still lack inpatient distress screening and distress is often unrecognized within the inpatient setting. This project will identify, discuss and provide resources to hospitalized patients with

cancer experiencing distress. Talking about distress allows for a conversation in which patients are more in control and facilitates patient centered conversations. Staff nurses are in a unique position to identify and manage distress in patients because of the amount of time spent at the bedside. Interventions: All patients admitted to the inpatient oncology unit will be screened for distress within 12 hours of admission, during hospitalization, and at discharge. Patients will be given information on distress, asked to complete the NCCN Distress Thermometer and Problem List, and will be asked "How distressed are you on a scale of 0-10?" Patients will be asked what have they done in the past to reduce their distress and will be given a list of resources available to them during their hospitalization. Information collected will guide the nurse in a patient centered conversation and identify resources and interventions to manage patient's distress. Patients will be given a simple distress screening survey to complete on day of discharge. The survey will evaluate patient's perception of the effectiveness of distress screening, satisfaction and which interventions provided was most beneficial. Oncology nurses will review, analyze and report data collected. Results of this project will be disseminated by the nurses through hospital committees as well as conference presentations. Research has shown that implementation of distress screening has positive clinical outcomes and resulted in increased patient satisfaction which is what we hope to accomplish with this project. Innovation: Distress in the inpatient setting should be recognized and its implementation within the admission and daily electronic assessment is cutting edge.

**Underwriting:** This project has been submitted to the Daisy Foundation for grant consideration.

**50**  
**MY PATIENT IS A FALL RISK! REDUCING FALLS ON AN ACUTE CARE ONCOLOGY UNIT.** Victoria Averhart, MSN, RN, ACNS-BC, University of Michigan Hospitals and Health Centers, Ann Arbor, MI; Alyssa Roy, BSN, RN, University of Michigan Hospitals and Health Centers, Ann Arbor, MI; Amanda Ezekiel, BSN, RN, University of Michigan Hospitals and Health Centers, Ann Arbor, MI; Laura Galunas, MSN, MBA, RN-BC, OCN®, University of Michigan Hospitals and Health Centers, Ann Arbor, MI; Autumn Heiney, MSN, RN, OCN®, University of Michigan Hospitals and Health Centers, Ann Arbor, MI

Falls with injury are the leading cause of death in adults over 65 years of age. Oncology patients are at an increased risk of falls and serious injury. Oncology patients who fall experience a higher percentage of hospital related injuries. Metastatic disease, blood product use, and decreased functional status are identified as fall predictors in oncology patients. There are a limited number of validated fall risk assessment tools that take into account factors contributing to falls in the oncology population. The purpose of this quality improvement project was to decrease fall and injury rates on an acute care oncology unit. All fall cases were analyzed for contributing factors with identification of themes in aggregate data. Nursing staff involvement occurred by engaging the unit-based clinical practice council and falls taskforce. Strategies implemented to reduce falls included fall prevention huddles with patients and families, mandatory education for all nursing staff members, mobility signs that communicate level of assistance needed, and a sign reminding families to call for assistance to get their loved ones out of bed. Over a six month time frame, falls reduced approximately 50% with a subsequent decrease in patient injuries. A decrease in patient falls accompanied by family members was also noted. In summary, implementation of multi-factorial strategies is essential to reducing fall and injury rates. Identification of risk

factors specific to oncology patients, increased communication of the patient's mobility level, and involving patients and families in fall prevention education promotes patient safety and individualized, family-centered care.

**51**  
**SYMPTOM MANAGEMENT AT HOME: PREPARING PATIENTS THROUGH A GROUP PATIENT EDUCATION CLASS DURING INDUCTION CHEMOTHERAPY.** Jessica Turner, RN, BSN, OCN®, Duke University Medical Center, Durham, NC; Sara Smith, RN, BSN, OCN®, Duke University Medical Center, Durham, NC; Deborah Allen, PhD, RN, CNS, FNP-BC, AOCNP®, Duke University Medical Center, Durham, NC

This 31-bed inpatient hematology-oncology unit observed the occurrence of an increase in unplanned readmissions for symptom management issues. Discharge follow-up phone calls yielded that 28% patients ask for symptom management guidance after discharge. As induction chemotherapy accounts for a fourth of all admissions with an average length of stay of 24 days, the opportunity to provide patient education focused on symptom recognition and management at home was identified as a potential intervention. Purpose: To provide patients/families group education focused on symptom recognition and management in order to improve home-based management after induction chemotherapy and reduce unplanned readmissions in this group. The unit-based Patient-Family Education Committee (PFEC) worked with the discharge follow-up nurse (DFUN) team to identify common symptoms that were addressed during discharge calls and examined readmission data for symptom presence. The PFEC adapted an outpatient chemotherapy class to focus on appropriate common symptoms that present in hematology-oncology patients undergoing induction chemotherapy. Beginning May 27, 2015, group classes were presented weekly to patients that were identified as new to receiving chemotherapy. Patients were strongly encouraged to attend a class prior to discharge. Class packets provide copies of presentation slides, approved patient education symptom management sheets, and specific information regarding safety at home. All attendees completed a class evaluation to provide feedback on information delivery and class satisfaction. Descriptive analyses were used to determine the frequency of symptom presence on readmission. 22 patients/family members participated in group class over a 3 month timeframe. Evaluations indicated that patients/families found materials and group discussion to be informative and provided essential information that they may use at home. As compared to the overall oncology readmission of 30%, 16.6% patients (n = 3) who participated in class had unplanned readmissions; all were for fever with concerns for infection warranting antibiotic coverage. 5% patients (n = 1) asked for additional information (nausea management) at time of DFUN call. Data collection and analyses is ongoing. Offering a class focused on symptom management to inpatients receiving chemotherapy is feasible and increases patient and families' understanding of treatment side effects and proper management.

**52**  
**SAFE ADMINISTRATION AND NURSING MANAGEMENT OF CHEMOTHERAPY/BIOTHERAPY VIA A PERCUTANEOUS NEPHROSTOMY TUBE.** Kathy Morris, BSN, RN, OCN®, RNC, Rutgers Cancer Institute of NJ, East Windsor, NJ; Ellen Serman, RN, APN C, AOCNS®, ACNS, RN, Rutgers Cancer Institute of New Jersey, New Brunswick, NJ

A viable treatment option in patients with upper urinary tract urothelial carcinoma in situ (CIS) or for a small tumor in

that location is chemotherapy or biotherapy such as Bacillus Calmette–Guérin (BCG) via percutaneous nephrostomy tube. When used as adjunct therapy following tumor resection, it enables an organ-sparing surgical approach which preserves kidney function. There is a paucity of evidence-based information regarding the safe performance of this procedure. Oncology nurses who are certified in chemotherapy administration must be proficient in the administration of chemotherapy/biotherapy via various routes. We developed a procedure for the safe administration of these agents via a percutaneous nephrostomy tube in order to treat patients who can benefit from this approach. Purpose: To outline the procedure for the safe administration of chemotherapy/biotherapy via a percutaneous nephrostomy tube. A review of the literature was conducted. Based on institutional standards and existing best practices for intravesical chemotherapy/biotherapy, a policy was developed outlining a procedure for the administration of chemotherapy/biotherapy. The policy was submitted to our Policy and Procedure Committee for approval. After approval, nursing education and competency verification was completed. This procedure outlines the safe administration of local upper urinary tract chemotherapy/biotherapy for the protection of the patient, the nurse, and the environment. To date, we have not any errors in the treatment of these patients. Anecdotal feedbacks from RNs have reported increased confidence in the safe administration and management of these patients. Safe handling of chemotherapy and biotherapy is a significant concern in oncology nursing. Guidelines that outline the safe administration of hazardous drugs via a route that nurses may be unfamiliar with is beneficial in preventing exposure of the nurse to these agents, yet delivering safe care to the patient. This standard procedure can be adapted for use by all nurses nationally to ensure safe administration and management of this patient population. Evidenced-based resources are available for the more common chemotherapy/biotherapy intravesical administration procedure, but are challenging to find for upper urinary tract administration. As more eligible patients are offered is treatment option, our procedure fills the knowledge gap.

### 53 THE ORAL FIREBALL: SCREENING, PREVENTION, AND MANAGEMENT OF TREATMENT-INDUCED MUCOSITIS. Danielle Pisen, RN, BSN, OCN®, Billings Clinic, Billings, MT; Leah Scaramuzzo, MSN, RN-BC, AOCN®, Billings Clinic, Billings, MT; Jeannine Brant, PhD, APRN, AOCN®, FAAN, Billings Clinic, Billings, MT

Oral mucositis is a common complication experienced by up to 40% of patients undergoing chemotherapy, 80% of patients undergoing hematopoietic transplantation, and up to 100% of patients undergoing head and neck radiotherapy. It is often the dose-limiting toxicity of cancer treatment and significantly impacts quality of life. Oncology nurses play a key role in the early identification of mucositis so that prompt interventions can be employed to decrease morbidity. Oral assessments were rarely documented on an inpatient oncology unit in the northwest. Nurses lacked knowledge of mucositis assessment and evidence-based interventions. A consistent assessment and documentation tool were lacking in the Electronic Medical Record (EMR). Rather, nurses would free text the location of oral ulcers under the Ears, Nose and Throat section. Grading the severity of mucositis and determining whether it was improving or worsening was also lacking. A project was initiated to implement an oral mucositis tool in order to promote consistent identification, ongoing assessment, and prompt interventions of oral mucositis. A pretest was administered to the nursing staff to assess knowledge of mucositis assessment and management. A literature review was conducted and

three oral assessment tools were examined for use. The Oral Assessment Guide was chosen for its comprehensive assessment parameters. A customized Oral Assessment Band was created in the EMR. A dietary order for NaHCO<sub>3</sub> was created to be delivered on the meal tray for patients with mucositis. An educational curriculum and skills session was developed for nurses to practice detailed oral assessments utilizing the electronic oral assessment tool and to employ evidence-based interventions. A change in mucositis knowledge and practice will be evaluated using a post-survey of nurses on the inpatient oncology unit. Chart audits will also be conducted. Nurses are on the forefront of identifying oral complications of therapy and drove this practice change to improve patient care. This project emphasizes the importance of standardizing mucositis assessment and practice so that early interventions can be employed.

### 54 ASSAY INTERFERENCE AND BLOOD TRANSFUSION SAFETY IN PATIENTS WITH RELAPSED OR REFRACTORY MULTIPLE MYELOMA TREATED WITH DARATUMUMAB. Donna Catamero, Mount Sinai Medical Center, New York, NY; Gillian Morgan, RN, BSN, Mount Sinai Hospital School of Medicine, New York, NY; Imran Khan, MD, PhD, Janssen Research & Development, LLC, Raritan, NJ

Daratumumab is a human anti-CD38 IgG1 monoclonal antibody that has demonstrated promising safety and efficacy in multiple myeloma (MM). Daratumumab binds to CD38, a protein that is ubiquitously expressed on myeloma cells but also expressed, to a lesser extent, on red blood cells (RBCs). Indirect Coombs tests are performed to detect minor antibodies in recipient/donor blood before a RBC transfusion. Early clinical data revealed unexpected, false-positive indirect Coombs tests in 100% of daratumumab-treated patients. Daratumumab interferes with the test by binding to endogenous CD38 on RBCs, resulting in pan-agglutination. Blood banks have a variety of protocols to mitigate daratumumab interference, allowing for the identification of safe blood products for daratumumab-treated patients. Informing blood banks that they will receive a daratumumab-treated patient sample is critical to prevent a delay in the release of blood products. Procedures may vary among institutions; compatibility typing is often performed before daratumumab treatment begins. Results are recorded on a patient's ID card and chart and referenced for transfusions. For emergency transfusions, non-crossmatched, ABO-RhD-compatible RBCs can be given. Nurses have an essential role in educating patients and other members of the health care team about daratumumab-interference. Patients are encouraged to carry their ID card ≥6 months after their last infusion and reassured that transfusions can still be performed safely. To date, no daratumumab-related transfusion reactions have occurred. In the ongoing phase 2 SIRIUS (NCT01985126) study in patients with heavily-pretreated relapsed or double refractory MM, 42 (40%) patients receiving daratumumab 16-mg/kg as a monotherapy required transfusions during the study, including 40 (38%) patients receiving packed RBCs (126 transfusions) and 14 (13%) receiving platelets (67 transfusions). One patient had an on-study transfusion-related reaction (grade 1 hives, itching, and facial flush) deemed unrelated to daratumumab. It is important to note that assay interference has been observed in studies of daratumumab as a monotherapy and in combination with proteasome inhibitors or immunomodulatory drugs as well as in patients with relapsed or refractory MM, newly diagnosed disease, or smoldering MM. In summary, daratumumab assay interference is mitigated with appropriate, customized communications between stakeholders and by incorporating new protocols into oncology nursing practice.

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**I'M CALLING TO CHECK ON YOU: IMPLEMENTING CHEMOTHERAPY CALL BACKS FOR NEW CHEMOTHERAPY PATIENTS.** Penny Moore, MSN, RN, OCN®, NEA-BC, The James Cancer Hospital and Solove Research Institute, Columbus, OH; Michelle Mullen, MS, RN, OCN®, The James Cancer Hospital and Solove Research Institute, Columbus, OH; Korri Fenner, BSN, RN, OCN®, The James Cancer Hospital and Solove Research Institute, Columbus, OH; Sarah Bryant, BSN, RN, OCN®, The James Cancer Hospital and Solove Research Institute, Columbus, OH

Infusion nurses in this Midwest comprehensive cancer center recognize one of the most common symptoms experienced by patients receiving chemotherapy for the first time is anxiety. Nursing literature supports that anxiety experienced by chemotherapy patients is related to the unknown and fear of side effects. Oncology nurses can improve the care provided to patients by decreasing their anxiety and identifying treatment related symptoms early with a telephone call to patients 48 hours post chemotherapy administration. Oncology patients receiving active treatment frequently call with questions related to symptom management. A telephone call 48 hours post chemotherapy by an infusion nurse may eliminate many of these calls and allow the patient to receive the support of an infusion nurse before symptoms become significant. This proactive approach can enhance patient education, improve patient experience and improve patient outcomes. A standardized smart phrase was developed in the electronic medical record with symptom management questions highlighting commonly reported symptoms: nausea, vomiting, mouth sores, fever, diarrhea, fatigue, pain, constipation and poor appetite. Patients were asked if they had any questions regarding home medications or any other questions or concerns. Other elements in the standardized phrase identify if the patient had an issue that needed to be referred to a provider and if the patient found the call helpful. A pilot unit for post chemotherapy call backs was identified and nurses began the calls for every new patient 48 hours after their first chemotherapy treatment. The standardized phrase in the electronic medical record is consistently used and early feedback from patients has been overwhelmingly positive. The standardized electronic phrase has been given a unique name allowing each encounter to be pulled for data analysis. Data will be collated to examine the number of times specific symptoms were reported, if issues referred to a provider and if patients found the telephone call helpful. Patient satisfaction scores will be tracked before and after initiation of patient call backs related to how well symptoms were controlled. We believe post chemotherapy call back data can be used to improve patient education, patient satisfaction and patient outcomes related to complications of chemotherapy.

**VALIDITY AND RELIABILITY OF TURKISH VERSION OF THE FUNCTIONAL ASSESSMENT OF CANCER THERAPY—BRAIN QUESTIONNAIRE.** Senay Karadag Arlı, Agri Ibrahim Cecen University School of Health, Agri, Turkey

Quality of life (QOL) assessment among patients with brain tumor is important, given that new therapies have increased survivorship. The purpose of this study was the adaptation of the Functional Assessment of Cancer Therapy-Brain (FACT-Br) Questionnaire to Turkish language and testing validity and reliability of its. Methods: The process of translation and back-translation was carried out, along with adaptation in the Turkish language and Turkish culture. This Turkish version of the study was applied to 500 patients. Principal component

analysis was conducted to examine the construct validity of the scale. Test-retest and Cronbach alpha reliability coefficient were calculated to determine reliability of the tool and all sub-dimensions. The results of goodness of fit levels of the questionnaire indicated that the model was well fit to the Turkish culture. Interclass Correlation Coefficients (ICC) of the questionnaire were between 0.93 and 0.99. The five subscales presented excellent internal consistency, with Cronbach's alpha ranging from 0.72 to 0.87. Overall, the reliability estimate for the total scale was 0.93. There was no difference between test-retest done in 15 days about each subscales and total score average. These findings revealed that Turkish version of the FACT-Br are a valid and reliable instrument that can be used to measure to the quality of life of patients with brain tumor. Implications for practice: Results of validity and reliability studies of a tool to assess various factors of quality of life of patients with brain tumor are of importance for further theoretical and practical studies.

**IMPROVING THE INFUSION SCHEDULE TO INCREASE PATIENT AND NURSE SATISFACTION.** Michelle Wade, RN, BSN, OCN®, the Ohio State University James Comprehensive Cancer Center, Columbus, OH; Kayla Hill, RN, BSN, OCN®, the Ohio State University James Comprehensive Cancer Center, Columbus, OH; Melanie Cunningham, RN, OCN®, the Ohio State University James Comprehensive Cancer Center, Columbus, OH; Tamara Yanssens, RN, BSN, OCN®, the Ohio State University James Comprehensive Cancer Center, Columbus, OH; Kevin Turner, MSM-HCA, BSN, RN, the Ohio State University James Comprehensive Cancer Center, Columbus, OH

Infusion nurses in this 40 chair outpatient infusion clinic were dissatisfied with scheduling practices which accounted for scheduled chair time based on planned treatment only. Unplanned interventions were not considered and are significant in the population served. Hematology and solid tumor patient treatments were often extended to include transfusions and hydration, increasing chair time and resulting in delays for incoming patients. Delays were compounded by adding on unscheduled patients from multiple exam clinics. Nurses expressed concerns over a decrease in patient satisfaction related to chair wait time. Nurses also expressed frustration with their struggle to manage patient flow and inability to get away from the unit for an uninterrupted lunch break. A nursing proposal for a change in the scheduling template would schedule five patients every 30 minutes beginning earlier in the morning and extending until later in the day. No patients would be scheduled from 11 am–12 pm to allow for catch up of morning overflow of patients and allow a rotation for nurses to leave the unit for lunch. Education for management, chemo schedulers and all nurses was done to promote the leveling of the infusion schedule by spreading treatments throughout the day and blocking the schedule from 11 am–12 pm. Nurses were held accountable to leave the unit for 30 minutes as scheduled by the charge nurse during the blocked time frame. Culture change included frequent multidisciplinary team meetings to encourage following of the new template and promote scheduling changes to patients by highlighting the decrease in wait time. Patient satisfaction will be monitored through Press Ganey to demonstrate improvement in chemotherapy patient wait times. RN satisfaction will be measured by the ability to take an uninterrupted lunch with the NDNQI survey in October 2015. Adjustments to patient scheduling in the infusion area will continue to be adjusted based on acuity of patients to optimize patient flow and decrease wait times. Front line nurses

possess the most knowledge related to feasibility of scheduling templates and are supported in making appropriate changes allowing the unit to care for more patients without compromising nursing or patient satisfaction.

**58**  
**THE SURVIVORSHIP JOURNEY: DEVELOPMENT AND IMPLEMENTATION OF A SURVIVORSHIP CARE PLAN PROGRAM.** Claire Sutherby, BSN, RN, CMSRN, Deaconess Hospital, Inc., Newburgh, IN; Debra Wilson, MSN, RN, OCN®, Deaconess Hospital, Inc., Newburgh, IN

Currently, there are more than 13 million cancer survivors in the United States with an estimated 18 million by 2022. The Institute of Medicine's (IOM) 2005 report, *Cancer Patient to Cancer Survivor: Lost in Transition*, recommended all health care providers, patient advocates, and other stakeholders work to raise awareness of the needs of cancer survivors, establish cancer survivorship as a distinct phase of cancer care, and act to ensure the delivery of appropriate survivorship care. The IOM also recommended cancer patients, who complete primary treatment, be provided a comprehensive care summary and follow-up plan that is clearly and effectively explained. In 2012, the Commission on Cancer (CoC) added Standard 3.3 Survivorship Care Plan to the program standards to be phased in beginning January 2015 to meet the IOM's objective of addressing potential patients who may get "lost" in their continuum of care as they transition from treatment through life phases or disease stages. A survivorship care plan will enable cancer survivors to receive better care related to accessibility of past diagnoses and treatment history, surveillance guidelines, and potential long term effects through the continuum of care. The Oncology Committee adopted the American Society of Clinical Oncology's (ASCO) Treatment Summary and Survivorship Care Plan template and added a Survivorship Nurse Navigator to the interprofessional treatment team. The survivorship nurse navigator provides monitoring and review of survivorship care plans (SCPs) with patients, advises them when to seek treatment, discusses recommended surveillance guidelines, navigates the patient through support therapies, and provides education on cancer preventions and screening. Evaluation of the strategy will begin early 2016. Evaluation will include reviewing quality of life issues and compliance with recommended surveillance guidelines. Oncology nurses fulfill an important role in the implementation and delivery of survivorship care plans. The oncology survivorship nurse navigator role is uniquely positioned to take the lead in care coordination of the cancer survivor. Development of the cancer survivorship program within the interprofessional care team will not only meet the objectives of the IOM and CoC, but improve the navigation of care for cancer survivors through the continuum of care.

**59**  
**ADDRESSING A GAP IN BREAST CANCER SUPPORT SERVICES WITHIN AN AMBULATORY COMMUNITY CANCER CENTER.** Julie Pederson, BSW, RN, OCN®, Baylor Scott & White McClinton Cancer Center, Waco, TX; Michelle King, MSW, LCSW, Baylor Scott & White McClinton Cancer Center, Waco, TX; Poppy Patterson, BBA, RN, Baylor Scott & White McClinton Cancer Center, Waco, TX

Many women diagnosed with breast cancer experience a decrease in quality of life secondary to change in body image, fatigue, anxiety, and depression. Evidence suggests that women who attend breast cancer support groups experience a positive change in their psychosocial functioning and quality of life. Multiple studies have shown a significant improvement in cognitive

function and some show an increase in longevity after a woman participates in a support group. Multidisciplinary Supportive Oncology team members identified breast cancer patients as needing accessibility to breast cancer specific support groups in the community. The team reviewed breast cancer support resources, identified gaps, and then developed the support group. A nurse navigator and social worker collaborated to develop and facilitate the breast cancer support group. The group targeted all stages of breast cancer, including patients currently in and post treatment. The team identified a day, time, and location and made an agreement with a local café to provide a healthy lunch for group participants. The format included a 15 minutes of education, followed by 45 minutes of open discussion and support. Team members created marketing materials to distribute throughout the cancer center and to patients with an expressed need. The group was filled within 2 weeks by email and in person reservations. Group participants completed pre and post self-evaluations. Findings were comparable to current literature which supports the efficacy of breast cancer support groups. Specifically, 9 out of 10 group participants reported a decrease in their stress levels immediately following group. All 10 women reserved a place in the next month's group prior to departing. Women with a breast cancer diagnosis rapidly responded at the opportunity to attend a local, in-person support group. Ambulatory community cancer centers considering developing a similar support group can replicate this method to address breast cancer patients' psychosocial and quality of life needs. Initial assessment did not support the need, however, the group was built and attended in full.

**60**  
**STARTING THE CONVERSATION: A NEW APPROACH TO WEIGHT CONCERNS AND CANCER.** Elizabeth Sherwood, RN, MS, ANP, Private Consultant/Savor Resilience, Portland, OR; Aimee Shea, MPH, RD, CSO, LD, Mount Carmel College of Nursing, Columbus, OH

The results of the 2012 National Health and Nutrition Examination Survey indicate 68 million Americans qualify as obese and an additional 65 million as overweight. The Center for Disease Control predicts by 2030, forty four percent of the population may be obese. The American Cancer Society estimates 1 out of 3 cancer deaths in the US with being linked to excess body weight, poor nutrition and physical inactivity. Several cancers are linked with excess weight including post-menopausal breast cancer, esophageal, endometrial, ovarian, cervical, kidney, rectal, colon, and liver cancers. Yet the majority of nurses, while acknowledging that obesity is a topic requiring intervention, do not approach the subject with their patients. Research demonstrates the benefits of healthy weight for overall quality of life, cardiovascular health, aging well and avoidance of chronic disease. Although a recent statement by the American Society of Clinical Oncology calls for more clinical trials to support the incorporation of weight management and physical activity programs into standard oncology practice, nurses can Start the Conversation now. Oncology nurses engage with patients across the care continuum and in all clinical settings thus are strategically placed to Start the Conversation about the benefits of eating well, assessing nutrition literacy and need for weight reduction. Food behaviors and weight concerns are complicated issues and require specific communication skills and tools for assessment of patients' motivation for change prior to appropriate referral. Optimizing health and wellness after treatment are a part of the survivorship conversation. A nurse entrepreneur NP and oncology dietician propose a new, on-line wellness service for patients who have completed treatment. Starting January 2016, "Savor Resilience" will provide an eight-week course focusing on wellness behaviors, nutrition

and weight management. The program will include screening questionnaires addressing weight, side effects of treatment and distress, goal setting, education, individual support, social support and process evaluations. Patients will benefit accessing the program from any geographic location, and have the benefits of professional and peer support. Results will be reported.

## 61

**ACUTE MYELOGENOUS LEUKEMIA AT 18 WEEKS GESTATION: THE CHALLENGES OF ASSURING A POSITIVE OUTCOME.** Sally Cowgill, MSN, RN, OCN®, Wake Forest Baptist Medical Center, Winston-Salem, NC; Dena Shore, BSN, RN, OCN®, Wake Forest Baptist Medical Center, Winston-Salem, NC

The nursing care of patients with acute myelogenous leukemia (AML) is complex, but the situation is even more challenging when the patient is pregnant. This case study will identify issues of cancer treatment during pregnancy and resulting nursing implications. S. H., a 28-year-old Caucasian woman, presented to her obstetrician at 18 weeks of gestation with complaints of malaise and large bruises on her legs. A hematologic work-up yielded a diagnosis of AML. After extensive counseling, S. H. and her husband elected to continue the pregnancy and proceed with the standard AML chemotherapy induction with cytarabine and daunorubicin. Both drugs are pregnancy category “D” with growth retardation being the biggest concern after the first trimester. Weekly ultrasounds showed that the baby was consistently at the 50th percentile in growth. Treatment complications included: nausea and vomiting, pancytopenia supported with red cell and platelet transfusions, and febrile episodes treated empirically. Bone marrow biopsy on day 14 revealed a hypocellular marrow with rare blasts. She was discharged after four weeks of hospitalization. Standard post-remission therapy in AML requires administration of four cycles of high dose cytarabine. The dosages of the first two cycles were modified and were scheduled to allow count recovery prior to delivery. She delivered a healthy male at 35.5 weeks vaginally without complications. She completed her final cycles of chemotherapy at the recommended dose. Nurses worked to provide S. H. with a positive pregnancy experience despite her serious illness. Caring relationships between the nurses and the patient provided support for S.H. and her husband. Nurses affirmed their decision to continue with treatment by answering questions and helping them envision a future with their child. Daily fetal heart rate monitoring provided reassurance for them. A lactation consult was provided to support her decision to breastfeed. Nurses provided information on fetal development and milestones were celebrated. They shared their own stories of pregnancy and childbirth and surprised S.H. with a baby shower. The nurses surpassed the challenges of caring for S. H. and are reminded of this accomplishment when they see the picture of Baby L in the break room.

## 62

**WHAT'S YOUR NUMBER? DEVELOPMENT OF A PATIENT POPULATION SPECIFIC ACUITY TOOL FOR ONCOLOGY/MEDICAL SURGICAL AND BMT PATIENTS TO USE TO BALANCE NURSING ASSIGNMENTS.** Joy Prabhakar, RN, BSN, University of Colorado Hospital, Denver, CO

University of Colorado Hospital (UCH) bases nursing assignments/staffing on nursing workload per patient by using acuity tools. This process needed improvement to create a more reliable/standardized tool on the Oncology/ BMT/ Medical Surgical unit. Literature review revealed multiple sources reflecting the concept of staffing based on patient acuity scores, yet there is

little information of the process. Purpose: To create an easy to use, standardized and relevant tool in order to increase nursing satisfaction and compliance; which will translate to more uniform workloads for the RN's. A patient population specific acuity tool was developed to include specific nursing intensive interventions. A pre-implementation survey was completed regarding current use of the tool, interventions and satisfaction with the process. Most felt that the previous tool was hard to use, time intensive and not relevant to their patient population. After a two month implementation period an equivalent post-implementation survey was completed. 66% of the RNs with the pre-survey believed that the old tool did not accurately reflect the specialized needs of the patient population compared to 6% who completed the new tool. 87% of RNs thought that the new tool accurately described their patient population. Two months post implementation, indicated a 91% satisfaction rate with the new acuity tool and nursing assignments. It was consequently adopted as the norm for acuity-assigned staffing. Discussion: Nursing assignments based on standardized patient acuity scores has important implications to provide safe, effective and efficient care. Proper acuity levels create a safer environment for the nursing staff and increase nursing satisfaction with patient assignments and workload. This tool will support the need for transferring patients with a higher nursing acuity to a higher level of care (i.e. step-down versus ICU unit). Data will be collected for patients with acuity of  $\geq 60$  in order to aid in determining a range of acuity warranting this type of transfer.

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**APPLYING ONS MUCOSITIS GUIDELINES IN PRACTICE.** Lenise Taylor, MN, RN, AOCNS®, BMTCTM™, Seattle Cancer Care Alliance, Seattle, WA; Hilary Carroll, RN, BSN, University of Washington Medical Center, Seattle, WA; Rachael DeWitt, RN, University of Washington Medical Center, Seattle, WA; Elmira Jangi, RN, BSN, University of Washington Medical Center, Seattle, WA; Angela Knox, RN, BSN, University of Washington Medical Center, Seattle, WA; Michele Lloid, RDH, BA, MS, University of Washington Medical Center, Seattle, WA

Oral mucositis (OM) is a significant problem for many oncology patients due to radiation and chemotherapy. For those patients with OM, pain and infections can have negative impact on the quality of life. Nurses on several oncology units of an urban academic medical center identified a lack of consistency of Oral Care (OC) in patients at-risk for OM. This inconsistency created confusion among the patients and made orienting new staff problematic. Purpose: To standardize oral care practices for patients at risk for OM using the ONS Putting Evidence into Practice (PEP) Standard: Improving Oncology Patient Outcomes: Mucositis. To standardize practices and availability of tools to perform OC, members of the Unit Practice Councils (UPC), using PEP guidelines recommended an OC program of nursing interventions: tooth brushing, flossing and normal saline/sodium bicarbonate rinses. This decision to focus on nursing domain and not the medical domain was to facilitate rapid education and adoption. The Oncology CNS worked with the Oral Medicine hygienist to identify education parameters provided to patients at the pre-treatment examination. At implementation, an email describing the background and significance of the problem was distributed to staff along with an educational handout. A poster was placed on each participating unit and Charge RNs addressed this poster at the beginning of each shift report. Patient outcomes (adherence to the oral care recommendations) were evaluated at baseline, at 2, 4, and 6 weeks post implementation. At each time point, at-risk patients were identified, and nurses on each unit conducted an in-person interview with the patient and observed for the presence of a toothbrush and saline rinse

in the room. The integration of the PEP guidelines into the Oral Standards of Care materials resulted in a sustained improvement in clinical practice processes and practice outcomes. Discussion: Oncology nurses provide and reinforce education to patients. If knowledge is inconsistent between nurses, patients may be unsure about best practice. A short and focused intervention allowed nurses to identify and consistently support OC best practices with patients.

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**BLADDER CANCER AND NEPHROSTOMY TUBES: ROLE OF THE ONCOLOGY NURSE.** Salima Rafikh, RN, OCN®, MSKCC, New York, NY

Bladder cancer affects about 74,000 people yearly. There is a high incidence of ureteral obstruction secondary to tumor which can prevent bladder cancer patients from receiving the necessary chemotherapy used to treat their tumors. The insertion of a nephrostomy tube (NT) is used to decrease serum creatinine and to safely treat with a Cisplatin based drug regimen which has been shown to increase overall survival. These patients are overwhelmed with their cancer diagnosis and also with this complex procedure. The purpose of this presentation is to educate oncology nurses working with bladder cancer patients who have a newly inserted NT. Due to the complexities of having either unilateral or bilateral NT, patients require extensive education and emotional support. At this designated NCI cancer center, NTs are inserted in an outpatient Interventional Radiology service. The nurse is instrumental in ensuring that the patient/caregiver is adequately prepared for these procedures by having skills assessed through return demonstration of care, signs and symptoms of infections, blockage and resources for possible issues. This is supported with an educational booklet that reinforces this information with diagrams, pre/post procedure instructions and care supply lists with order numbers. Patients are given a kit of supplies which are reviewed with them before discharge. A video regarding management and care of the NT is also available. Nursing education and interventions are documented in the clinical record. A Visiting Nurse referral is always initiated to offer support at home. If any patient has issues with their insurance, the patient and designated family member are taught how to care for the NT. They are encouraged to contact the office practice nurse and the Interventional Radiology nurse for assistance or support and supplies.

**65**  
**NURSING CARE OF CANCER-RELATED FATIGUE.** Alexis Covert, BSN, RN, OCN®, the Ohio State University, Columbus, OH; Candice Metzger, BSN, RN, OCN®, OSUWMC's James Cancer Hospital, Columbus, OH

Cancer related fatigue (CRF) is a distressing persistent, subjective sense of tiredness or exhaustion related to cancer or cancer treatment that is not proportional to recent activity and interferes with usual functioning. Fatigue is the most prevalent and distressing symptom of cancer affecting 80%-100% of people with cancer. Fatigue is underreported, underdiagnosed, and undertreated nationally. Our institution is no exception, we currently do not address CRF on inpatient units. Our goal is to raise awareness among staff nurses on the assessment and interventions to treat cancer related fatigue. There was also a need to implement an assessment tool throughout the institution. Interventions: A hospital wide survey was conducted for all nursing staff to analyze their education level on assessment & nursing care of cancer-related fatigue prior to any interventions being in place. 82% of staff reported that they had not received formal education on CRF, it was self-taught. Also, the staff reported that they did not utilize an assessment tool to determine a patient's fatigue

level. The results showed a need for additional education on CRF. Staff also vocalized a need for a uniform assessment tool to be implemented in our institution. With the assistance of the clinical informatics team, we are adding the Common Terminology Criteria for Adverse Events scale to all inpatient and outpatient nursing units, allowing each patient to have a fatigue assessment completed. Staff education will be completed through Power Point presentations to the nursing quality and patient safety committee, staff meetings, and Nursing Grand Rounds. The Nursing grand rounds presentation will be available online and for CE credit to all nursing staff. A post-intervention hospital wide survey will be conducted to assess nursing staff's post intervention education level on cancer-related fatigue.

**66**  
**IS SEXUAL HEALTH ADDRESSED ENOUGH? AN ASSESSMENT AND EVALUATION OF BARRIERS IN DISCUSSION OF SEXUAL HEALTH BY HEALTHCARE WORKERS AND PATIENTS.** Alissa Coslit, RN, BS, OCN®, Rutgers Cancer Institute of NJ, New Brunswick, NJ; Sara Toth, MSW, LSW, Rutgers Cancer Institute of NJ, New Brunswick, NJ; Janet Gordils-Perez, MA, RN, ANP-BC, AOCNP®, Rutgers Cancer Institute of NJ, New Brunswick, NJ

Describe the development and implementation of a practice improvement project using an electronic evidence-based documentation and educational tool for managing sexual health in oncology patients. Sexual dysfunction can be a distressing consequence of cancer treatment that has a negative impact on the patient's quality of life. Discussing sexuality with patients can be difficult for healthcare providers. However, it is a topic of importance for those patients diagnosed with cancer. At an NCI-designated Comprehensive Cancer Center, nurses identified the need to improve their assessment, documentation and management interventions of sexual health based on a needs assessment data. Data revealed 41.1% do not initiate discussion of sexual issues with patients, 45.7% do not include the topic of sexuality assessment of patients receiving treatment and 51.4% feel they are not confident in knowing available sexual health resources. The project's purpose was to improve assessment, documentation and interventions of sexual health to ensure quality oncology care by using the strongest level of evidence on which to base nursing practice intervention. Staff educated regarding the needs assessment data as well as sexual health resources available. A multidisciplinary sexual health committee was developed to brainstorm opportunities for incorporating interventions into practice. Several focused in-services were provided by an expert sex therapist, including role play between provider and patient, evidence-based lectures and educational materials. After review of current nursing documentation, modifications were made to our electronic nursing documentation tool that prompts the nurse to complete an in-depth assessment and provide evidence-based interventions and evaluation. A patient education tool was developed. Oncology nurses play an important and unique role in teaching patients of potential or actual complications related to their cancer therapy and disease. The patient teaching sheet, nursing documentation tool as well as the educational program may be adapted for use by all nurses nationally to ensure evidence-based practice with the goal of improving nursing sensitive patient outcomes.

**67**  
**IMPROVING ACCESS OF PERSONALIZED CARE: PILOTING A TELE GENETIC PROGRAM.** Janice Schwartz, BSN, RN, OCN®, New Mexico VA Healthcare System, Albuquerque, NM; Stacey Schneider, BSN, RN, New Mexico VA Healthcare

**System, Albuquerque, NM; Melvin DeHerrera, MSN, RN, New Mexico VAHCS, Albuquerque, NM; Sharon Wehner, MSN, RN, NMVAHCS, Albuquerque, NM; Sandee Razner, BSN, RN, NMVAHCS, Albuquerque, NM; Rebecca Chavez, MSN, RN, NMVAHCS, Albuquerque, NM**

The New Mexico Veterans Affairs Health Care System (NMVAHCS) is striving to improve personalized cancer care and prevention through early identification of hereditary cancer syndromes. Detection of genetic syndromes remains vital for the implementation of precise therapeutic options and prevention measures offering improved Veteran-Centered care. Numerous genomic discoveries have provided personalized therapeutic options for improving clinical management of hereditary disease. However, the NMVAHCS lacks professionally trained genetic counselors to appropriately assess and address genetic testing. Primary Care Physicians lack specialized knowledge regarding appropriate use, application of genetic architectures, and an understanding of result interpretation. This lack of knowledge leaves providers both reluctant to apply genomics in clinical practice or utilize testing on inappropriate patients, which remains costly and increases risk for litigation. Increasing NMVAHCS access to appropriate genetic counseling, involved initiating tele-health consults through the Veteran Affairs Genomic Medicine Service (VAGMS) in Salt Lake, Utah. After seeking stakeholder input and addressing availability of tele-health equipment, VAGMS was contacted. Tele-health Service Agreements, Memorandum of Understanding, and information security was obtained to allow offsite access into Veterans charts. Clinics and consults were built into the computerized patient record system (CPRS), and staff training occurred to learn the intricacies of coordinating virtual appointments and awareness of available service. Initially, consults were limited for breast cancer risk evaluation (BRCA1 and BRCA2), to establish process flow, before opening all genetic counseling consults. Five appropriately identified Veterans received breast risk consults within the first week: fee-based cost savings of over \$25,000.00. Counseling empowered Veterans and families with information providing personalized therapeutic options: improving satisfaction and overall outcomes. While the cost of breast conserving -surgery versus mastectomy remains relatively equal, prophylactic therapies reduce overall associated costs and psychosocial distress of treating breast cancer; estimated well over \$100,000.00. Increasing access to genetic counseling and testing, through partnering with a proven Veteran Affairs genetic program, provides Veterans with personalized, proactive therapeutic options. The role of genetics will continue to evolve and require collaboration to insure optimal application of precision care for prevention and management of Veteran's and family members at risk for disease.

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**LANGUAGE: IT DOES MATTER! Stephanie Lee, RN, BSN, OCN®, New York University Langone Medical Center, New York, NY; Susan Taddeo, RN, BSN, OCN®, New York University Langone Medical Center, New York, NY; Laura Diaz, RN, BSN, OCN®, New York University Langone Medical Center, New York, NY**

In 2014, the number of falls that occurred on the inpatient hematology/ oncology unit at New York University Langone Medical Center dramatically increased. After reviewing 10 cases of patients who fell during the third quarter, it was noted that English was not the primary spoken language among those patients. This raised the concern that language barriers may have contributed to the falls. Although the hospital has language services available, including in-person, phone, and video interpreter, not all nursing staff utilized these different services consistently and appropri-

ately. To initiate a protocol that will increase the awareness of Limited-English Proficiency (LEP) patients on the hematology/ oncology unit among nursing staff and to improve communication among this patient population to help reduce the incidence of falls and improve patient care. A new protocol was developed to properly identify LEP patients on the hematology/ oncology unit. Upon the patient's admission, nurses would use a screening tool to determine if interpreting services were warranted. High-visibility language signs were placed inside and outside the patient's room, and on the cover of patient's chart to alert the staff of the need for interpreting services and of the patient's preferred language. Nurses were educated on how to schedule an in-person interpreter via the hospital's Language Service Department. A unit binder containing points from the in-service was created to provide additional references for the staff. Nursing awareness of LEP patients was evaluated by observation of changes in nursing practices within the unit. The findings showed that members of the nursing staff were unaware of the different types of interpreting services available at the hospital. There were also changes in nursing practice to mention LEP patients during nursing safety rounds, and an increase in the use of language signs throughout the unit. After the implementation of this new protocol, there has been an increased awareness of LEP patients on the unit, and utilization of interpreting services among nursing staff. To further improve communication and quality of care, the nurses are in the process of creating a bedside communication board and language-specific fall prevention material for the patients.

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**MULTIDISCIPLINARY TEAMWORK FOR IMPROVED CARE OF THE SICKLE CELL PATIENT. Eileen Crose, RN, Seattle Cancer Care Alliance, Seattle, WA; Grace Ma, MBA, Seattle Cancer Care Alliance, Seattle, WA**

In a large NCCN outpatient infusion center chronic manages 80 Sickle Cell Crisis (SCC) patients. This population of patients is chronically underserved and marginalized, experiencing significant pain needs as well as social needs. They can be perceived as a drain on resources and clinic time as they must be seen by a primary care provider for emergent evaluation for implementation of a pain protocol. With the care provider's determination of necessity to receive a pain protocol, the infusion clinic schedules time for implementation of the pain protocol. A pain protocol regimen requires a pain medication given every 20 minutes for the 1st hour, then every hour X3-4 doses. These patients (2-3 each day) are generally added on the previously scheduled oncology patients appointments and so nursing assignments must urgently accommodate these high acuity patients. The social needs of the SCC patient include employment issues, nutrition, and inability to drive to the clinic. A pilot project has created a multi-disciplinary team to improve SCC patient outcomes by providing comprehensive care planning with a goal to improve clinical outcomes of pain management and social support. A multi-disciplinary team was created to formulate comprehensive assessment of SCC patients (physicians, nurses, scheduling staff, pain team, Social Work, Nutrition, Physical therapy, Chaplain, nurses and the state coordinator of SCC patient care. The plan can be designed with each of the multidisciplinary team members' expertise thus providing holistic patient centered care. The communication about individual patient has been instrumental in the care of each SCC patient and coordinating the complex care needs specific to each case. The communication about individual patient has been instrumental in the care of each SCC patient and coordinating the complex care needs specific to each case. The multidisciplinary team has made valuable contributions to the streamlining of clinical care provision, communication and coordination of SCC patient care. Much work needs to continue to be done to provide the SCC patient

with quality care in order to help manage the complex, chronic, debilitating disease and improve outcomes.

## **70 REDUCING CENTRAL LINE ACQUIRED BLOOD STREAM INFECTIONS IN THE INPATIENT SETTING. Pamela Basea, BSN, OCN®, St Joseph Medical Center, Tacoma, WA**

In fiscal year 2014 our 28 bed inpatient oncology unit had five central line acquired blood stream infections (CLABSI); making the rate of CLABSI in 2014 1.10. The number of CLABSI doubled in fiscal year 2015 to ten; increasing the CLABSI rate to 1.76. The facility's goal is zero CLABSI. All ten CLABSI patient charts were reviewed to look for any commonalities. It was noted that seven of the ten patients had diarrhea and that five of the ten cases could be classified as mucosal barrier injury – laboratory confirmed blood stream infection CLABSIs due to the patients' profound neutropenia and type of organism found in the culture. A CLABSI charter workgroup was formed under the direction of the Oncology Associate Vice-President, the Med-Surg Oncology Clinical Manager, and the department of Infection Prevention. The group consists of the oncology unit based educator, a charge nurse, staff nurses and certified nursing assistants. They are tasked with researching evidence based practice articles, clinical standards and guidelines that focus on reducing CLABSI rates. Areas of focus for research include: the use of chlorhexidine bath wipes daily on all neutropenic patients, changing of linen daily for neutropenic patients, proper use of handwashing – particularly when in the patient's room in between tasks and educating the patient on proper handwashing techniques. In dealing with infection control, there is rarely one thing that can fix the problem as bacteria abound and there are so many key players that come in contact with the patients and their environment, from nursing staff, support staff, physicians, and environmental service staff. Based on the results of the evidence-based research about the aforementioned topics, new policies and guidelines will be written to support them. An evidence based action plan will be developed around the policies and staff will be educated and the plan implemented. Evaluation of the action plan will include audits to ensure new policies are followed and working with Infection Control and Prevention to evaluate all CLABSI for fiscal year 2016.

## **71 BLOOD TRANSFUSIONS IN ONCOLOGY PATIENTS. Rebecca Martin, BSN, RN, OCN®, BMTCN™, Froedtert Hospital, Milwaukee, WI; Tabetha Walden, RN, Froedtert Hospital, Milwaukee, WI**

As an academic medical center with a large population of patients with hematological malignancies, the cancer center utilizes more blood products than any other site on campus. Overutilization of blood products can cause problems in the hematology/oncology (Heme/Onc) population including, increased risk for infection, elevated ferritin levels, increased risk for hemolytic reactions, alloimmunization, increased costs to patient, facility, and prolonged discharge times. This initiative was to decrease the overall utilization of red blood cells while continuing to improve patient performance with symptomatic relief. A multidisciplinary team was formed consisting of a malignant hematology oncologist, a Six Sigma black belt, inpatient and outpatient oncology nurses, nurse educators, and nurse informaticists. Baseline performance showed most patients were transfused two units for hemoglobin less than 8.0 g/dL. New parameters for blood transfusions, suggested all Heme/Onc patients are transfused one unit of blood for hemoglobin less than 7.0 g/dL. Providers and nurses were trained on the new parameters, and order sets were adjusted to default to one unit.

The first six months of the pilot, blood usage decreased by 35% with a cost savings of \$194,460.00. Decreasing the units of red blood cells transfused decreases the patient's risk of hemolytic reactions. This improves patient satisfaction and safety. The length of time required for a patient to receive a transfusion (in the outpatient setting) was decreased by two hours. In addition patients reduced their medical expenses by not having to receive additional pre-transfusion lab testing or pay for unnecessary blood products. Patients required more frequent visits for baseline testing associated with monitoring hemoglobin levels and blood counts. Current data demonstrates improvement in cost savings. Patients are seeing decreased wait times, decreased transfusion needs, and less cost associated with labs with no increase in their length of stay. This may lead to decrease in risk of infection, decreased risk of high ferritin levels related to blood transfusions, decreased risk of hemolytic reaction, and less interference in stem cell transplanted patients.

## **72 INTEGRATING A PROGNOSTIC-FOCUSED QUESTION PROMPT LIST ON AN INPATIENT ONCOLOGY UNIT. Vicki McLawhorn, DNP, FNP-BC, Vidant Medical Center, Greenville, NC; Joy Vess, DNP, ACNP-BC, Medical University of South Carolina, Charleston, SC; Bonnie Dumas, PhD, MBA, Medical University of South Carolina, Charleston, SC**

Many patients with incurable cancer do not accurately understand their prognosis, which can lead to aggressive and often futile treatment. Improved prognostic awareness can help patients to appropriately de-escalate aggressive treatment sooner in an illness trajectory. The purpose of this project was to introduce a discussion aid (question prompt list) on an oncology unit to increase prognostic awareness by promoting patient-provider dialogue, which could lead to limitation in life-sustaining treatments demonstrated through increased “do not resuscitate” orders and hospice referrals. Interventions: Medical records of consecutive admitted solid malignancy patients urgently admitted to the in-patient setting were reviewed for three months to determine percentage of “do not resuscitate” orders and referrals to hospice care. After inclusion of the communication aid in admission packets, records of consecutive patients admitted to the units were reviewed for three months to reassess percentage of “do not resuscitate” orders and referrals to hospice care. There was an increase in the percentage of patients with active “do not resuscitate” orders as well as in hospice referrals after a discussion aid was included in admission packets. A question prompt list can promote patient-provider dialogue. A QPL is an inexpensive way to improve prognostic awareness of advanced cancer patients. Improved prognostic awareness can lead to de-escalation of aggressive medical care in patients with poor prognosis.

## **73 DID YOU REALLY TELL ME THAT? A NEW METHOD OF HIGHLIGHTING MEDICATION SIDE EFFECTS. Linda Schiech, RN, MSN, AOCN®, LNC, Fox Chase Cancer Center, Philadelphia, PA; George Doran, RN, BSN, Fox Chase Cancer Center, Philadelphia, PA; Amanda Cancelliere, RN, BSN, Fox Chase Cancer Center, Philadelphia, PA**

Oncology patients are recipients of life-changing diagnoses. Along with these diagnoses come new, often complex, medication regimens. Nurses in an oncology setting have an ongoing role in educating patients about these medications, as they are often the first clinicians to administer them. They are also there to reinforce education each time the medications are given and before the patient goes home. The institution gathers information

related to the patient experience via surveys after discharge. These results are retrieved from Press Ganey's Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS). In the previous two years the hospital overall remained in the 53rd percentile compared to other Magnet Hospitals in the category of "staff describe medicine side effect." As this institution is proud to proclaim its Magnet status, it recognizes that there is a need for improvement within this area of patient discharge education. Many patients leave the hospital feeling that they were not properly educated on the side effects of their new medications. By providing patients with a personalized printed educational tool on the side effects of their new medications along with verbal reinforcement, the institution hopes to send these patients home better informed and better equipped to manage their own care. To address this disparity, the institution's surgical step down unit (SSDU) will implement the use of a printed, personalized medication side effect tool. This tool was created by a staff nurse in collaboration with pharmacy. Implementing this tool will provide patients with basic information regarding purpose and side effects of new medications they will be continuing after discharge. The desired outcome will be that these oncology patients will leave the hospital empowered with a better understanding of their new medication side effects as evidenced by improved HCAHPS. A three month trial of this process will take place on the SSDU. If the scores from patient surveys begin to show a positive correlation with the use of this tool, the institution will adapt this process throughout the hospital. A new tool used during discharge for patient education.

**74**  
**KNOWLEDGE, ATTITUDES, AND BEHAVIORS OF NURSE PRACTITIONERS CONCERNING ADVANCED CARE PLANNING FOR ONCOLOGY PATIENTS.** Cheryl Barnes, RN, FNP, DNP, Memorial Sloan Kettering Cancer Center, New York, NY; Sincere McMillan, RN, ANP, Memorial Sloan Kettering Cancer Center, New York, NY; Abigail Cohen, RN, NP, Memorial Sloan Kettering Cancer Center, New York, NY

Despite the advances in cancer treatment and the growing number of cancer survivors, cancer remains the second most common cause of death in the US, accounting for nearly 1 of every 4 deaths. Advance care planning (ACP) involves considering end-of-life decisions and preferences ahead of time and documenting them in an advance directive (AD). ADs have been shown to make a difference in helping oncology patients get the care they prefer at the end-of-life. Despite the importance of ACP, a study done by Zhang et al., (2009) indicated that only 31% of patients with advanced cancer reported having baseline discussions about end-of-life care issues with their providers. Clinicians' attitudes, knowledge and practice behaviors plays a significant role in enabling end-of-life discussions with patients. Nurse Practitioners (NPs) care for oncology patients across the cancer continuum and are in key positions to facilitate their end-of-life care planning. A needs assessment will examine the knowledge, attitudes and behaviors of NPs regarding ACP at a comprehensive cancer care center. Eligible NPs are those who have been employed as a nurse practitioner at the center for at least 1 year. A validated web-based survey tool will be used to assess NPs knowledge, attitudes, behaviors, and perceived barriers to end-of-life planning and ADs with patients. Responses to the survey will be analyzed for common themes that will be used to create an educational intervention aimed at increasing NP's participation in ACP with their patients. After the educational intervention, NPs knowledge, attitudes, and behaviors in relation to ACP will be reassessed by way of a post-intervention survey analysis. By recognizing the potential barriers to, and evaluating their own apprehension regarding ACP, NPs can more efficiently facilitate end-of-life care planning with their patients. We aim to identify the knowledge, attitudes, and behaviors of

NPs in regards to ACP, and design a supportive intervention that may help NPs better provide patient-centered end-of-life care, for oncology patients through ACP and the establishment of ADs.

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**THE CLINICAL PROTOCOL COORDINATOR: ESSENTIAL ROLE IN THE INTEGRATION OF PHASE 1 CLINICAL TRIALS ON A HEMATOLOGY ONCOLOGY UNIT.** Jacqueline Patterson, BSN, RN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Connie McKenzie, BSN, RN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Kristen Battiato, BSN, RN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Diane Llerandi, MSN, RN, AOCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Donna Miale-Mayer, MSN, RN, AOCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Mary E. Dowling, MSN, RN, CENP, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY

A Protocol violation can impact the integrity of a clinical trial and alter the risk to the subject. This awareness can weigh heavily on nurses who are unfamiliar with study guidelines, leading to unsafe practices. In 2010, the Oncology Nursing Society (ONS) released Oncology Clinical Trials Nurse Competencies, a comprehensive guide on clinical trial coordination and standardization. It emphasizes the importance of Clinical Protocol Coordinators (CPC) in effective conduct of clinical trials and in improving trial and patient outcomes. The hematology oncology unit at this comprehensive oncology center have successfully managed the care of patients receiving the Chimeric Antigen Receptor (CAR) T-Cell protocol in Acute lymphoblastic leukemia (ALL) and ABT-199 in patients with relapsed/refractory (R/R) non-Hodgkin lymphoma (NHL). As a result, the unit has been designated the home of all Phase I clinical trials. The purpose is to demonstrate how the CPC role has facilitated the successful integration of phase I clinical trials on an inpatient hematology oncology unit. The integration of all phase 1 trials began with the hiring of the CPC in May 2015. With an extensive background in oncology nursing and clinical trials, the CPC worked with and under all principal investigators (PI) to support and facilitate daily clinical trial operations on the unit. She coordinated with PIs on unit-wide education on protocol guidelines. She kept up to date with patients accepted into trials, anticipated admission, assessments, and screening protocols. She ensured each study was conducted in compliance with the institutions rules, regulations and Good Clinical Practice guidelines and maintained the integrity of each study by ensuring daily toxicity reports were generated by pharmacists, appropriate assessments and documentation were completed by nursing, and clearance by each Attending. She also made sure continuity of care was maintained by ensuring each patient had a designated nurse for the duration of the trial period. Since the hire of the CPC nurses have reported an improvement in workflow and report feeling increased confidence with having a resource on the unit. The CPC is essential in coordination of clinical protocols and with the increase complexity of clinical trials, the role will continue to expand and evolve.

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**FACILITATING USE OF ELECTRONIC-BASED TEACHING PLANS TO PROVIDE AND DOCUMENT PATIENT EDUCATION.** Deborah Allen, PhD, RN, CNS, FNP-BC, AOCNP®, Duke Cancer Center, Durham, NC; Dannet Ediger, BSN, RN, CNIII, Duke Cancer Center, Durham, NC

Patient education is an essential component of nursing care and one of 14 high-priority areas in ONS Standards of Professional

Practice. Patient education integration into electronic medical record (EMR) systems has lagged behind initial EMR installation. This resulted in fragmented delivery and documentation of patient education across an academic health system as teaching plans, documentation, and patient education materials lived in 3 different EMR domains. Thus, integrating oncology-specific teaching plans across the health system was a priority to increase use and documentation compliance. Purpose: To develop and categorize oncology-specific teaching plans for the EMR which would increase delivery and documentation of patient education. The health system patient education website housed patient education materials until EMR integration was ready. Most patient education materials were paper-based and teaching plans were primarily hand-written in patient charts for Joint Commission compliance. Thus, the majority of oncology-specific patient education materials did not have accompanying teaching plans for EMR integration. Oncology Patient/Family Education Committee members created three teaching plan templates for symptom management, chemotherapy, and cancer-related tests/procedures. The category-specific template was then used to define teaching points for the specified patient education material. EMR teaching plans are searchable under "Cancer" title/heading and the specific category as a subheading. All teaching plans under each subheading pre-populate for selection when teaching and documenting. Sixty-six teaching plans have been created at this time. Early during implementation, it was observed that the subheading lists were too long for staff to navigate. Subsequently, the symptom management category was re-categorized into seven systems: cardiorespiratory, dermatologic, endocrine/electrolytes, general, gastrointestinal, hematologic, and psychosocial. Likewise, cancer tests, procedures, and devices are distinctly separate categories. Preliminary data demonstrate that staff readily use the teaching plans to aid in the teaching process and find that documentation is easily individualized to patient/family needs and responses. Implementation of oncology-specific teaching plans for patient education was made easy by the development of category-specific templates. This project has served as an exemplar for other departments in their EMR patient education integration process. Furthermore, these teaching plans will be available for oncology physicians, pharmacists, and mid-level use.

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**THE DEVELOPMENT OF AN ONCOLOGY CLINICAL PRACTICE COUNCIL IN AN AMBULATORY ONCOLOGY TREATMENT CENTER AND ITS IMPACT ON PRACTICE.** Ellen Parks, RN, OCN®, CBCN®, Duke University Medical Center, Durham, NC; Elizabeth Abernathy, APRN, MSN, Duke Cancer Network, Durham, NC; Amy Boswell, MSN, RN, OCN®, Duke Cancer Network, Durham, NC

Ambulatory oncology treatment center (AOTC) nursing practice is continuously being updated as a result of research and evidence-based practice guideline development. Maintaining relevant clinical knowledge and practice are essential for high quality, up-to-date, safe nursing care. Nurses and providers often come from diverse backgrounds and expertise resulting in variabilities across chemotherapy ordering and nursing application. A venue for developing and maintaining standards of practice is integral for today's practice environment. This led to forming an Ambulatory OTC Clinical Practice Council (AOTC-CPC). Using a shared governance model, nursing leadership initiated a work-group of staff leaders to focus on OTC clinical practice. This high-functioning collaborative multidisciplinary work-group focuses on clinical practice issues for cancer treatments spanning all adult cancer diagnoses. Intervention: AOTC-CPC is comprised of key stakeholders

and resources. Co-chaired by two oncology certified nurses, membership includes nursing leadership, outpatient oncology pharmacists, advanced-practice providers, and ad hoc members. Monthly agenda items are generated by any staff with clinical practice questions or concerns. AOTC-CPC reviews literature, evidence-based practices, best practices at benchmark facilities, and research to determine whether practice change is necessary or clarification of a practice needs to be communicated for standardized care. Since inception, AOTC-CPC has been presented with varying practice issues which have resulted in clear, concise, direction and standardization for nursing, pharmacy, and oncology medical staff. Exemplars of issues that have been resolved include: (a) Chemotherapy/medication administration (Order of medications: R-CHOP; validity of Taxane titration; gemcitabine concentration to prevent venous "burning"; tPA dosing/administration in ports; reloading trastuzumab/pertuzumab: time interval and administration duration; hydration pre/post-cisplatin administration, including home oral hydration), (b) Nursing Care (Dual lumen port flushing protocol, discharge instructions across healthcare system for newly implanted ports). These interventions have resulted in (1) Reduced medication errors/near misses and potential reactions, (2) Increased medication administration efficiency, patient safety, patient and nursing satisfaction. AOTC-CPC provides progressive multidisciplinary collaboration for determining, clarifying, and changing nursing practice to deliver exceptional care. Development and implementation of an AOTC-CPC is replicable across ambulatory OTC settings.

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**DEVELOPING ORAL ADHERENCE PROGRAM AT A SMALL COMMUNITY CANCER CENTER.** Kendra Walston, Vidant Edgecombe Hospital, Tarboro, NC

Oral chemotherapy agent development has exploded over the past 5 years with more being developed daily. This will continue to be the trend for the future. While on the surface this appears to be simple for the patient, it comes with many issues related to adherence as well as safety. Nursing plays a major role in the education, follow-up and symptom management of this new form of treatment. The purpose of our project is to develop an oral chemotherapy adherence program for our Cancer Center to enable us to track our patients' adherence including symptom management and educational needs. Our patient population in eastern North Carolina has a high rate of poverty, low educational level and low health literacy. This presents an additional layer of challenges in the development of an adherence program. As we began the project, we performed literature searches, viewed the ONS web-ex from 2015 ONS Congress, and gathered information from sister hospitals. We quickly realized that the first step was to get an accurate list of all patients currently on oral agents and a way to be notified when a new patient was starting oral agents. We also quickly realized that the program could not be "one size fits all". We would have to adjust the process based on individual patient needs. We have learned that some patients need weekly follow up while others need only the initial follow up. We identified the need to separate the chemotherapy agent from their regular medications as well as a way to dispose of any tablet that needed to be discarded. Another area that was identified was the need to reach out to nursing homes in our community to assess their level of understanding for these agents. While this project is still very much under development, we have made contact with all current patients receiving oral chemotherapy within our practice and have established their follow up plans. We have also developed a plan to identify any new patients to assure continuity of this program.

**TRAIN THE TRAINER: USE OF MOTIVATIONAL INTERVIEWING IN END-OF-LIFE COUNSELING.** Yvonne Hsiung, Mackay Medical College, New Taipei City, Taiwan; InFun Li, Mackay Medical Hospital, Taipei, Taiwan; Pei Chen Yeh, Chang Gung Medical Hospital, KeeLung, Taiwan

Oncology nurses have great needs to attain state-of-the-art knowledge and essential skills for terminal clients and their families. Motivational Interviewing (MI) has been proven effective to facilitate difficult medical decision-making, yet despite its apparent benefits in EOL counseling, front-line Taiwanese practitioners question the efficiency and effectiveness of supplementing MI sessions and lack such training. A clinical train-the-trainer project was initiated in the Northern Taiwan area to investigate the feasibility of MI in oncology patient counseling. A series of MI fundamentals were presented to future trainers who often deal with EOL decision-making. Conducted in a national base of palliative care center in Taiwan, this project has recruited a purposive sample of 15 senior nurses as seed trainers in three teaching hospitals. Theory-based pedagogical methods were introduced to increase MI knowledge, with an explicit goal to teach critical exploration of clients' ambivalent experiences. Specific strategies were followed on the focus of cognitive contents of decisional balance, self-efficacy, and an overall readiness for EOL treatment and care. Media analyses in the form of literature and films was to guide counselors to establish rapport, empathize fear of cancer progression, engage and focus on client ambivalence, and thus evoke satisfactory EOL decisions. Upon completion of the workshop, nurse learners were highly satisfied; simple pre- and post-tests showed a progress on self-learning motivation and confidence to perform MI on a daily basis. Qualitative feedbacks also concluded that such teaching has cultivated not only their MI understandings, but also non-judgmental counseling skills and critical thinking, along with an increased sensitivity, empathy, introspection, and self-reflection regarding the EOL experiences as a whole. Compared to traditional lecturing, learners discover and cognize their own fears and frustrations related to cancer progression and death and dying. MI and the creative tactic of media analyses have been widely used in other disciplines but not oncology nursing for EOL counseling, and this teaching tool and self-reflecting guide has shown promises for oncology nurses. Only when counselors recognize and respond to this affective domain of learning, quality compassionate care to the terminal patients and their families could be realized.

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**MODEL FOR A MULTIDISCIPLINARY CANCER RISK CLINIC IN A COMMUNITY SETTING.** Alice Brafford, RN, MSN, CBCN<sup>®</sup>, Novant Health Presbyterian Medical Center, Charlotte, NC; Amy Bush, MSN, OCN<sup>®</sup>, APRN, Novant Health Presbyterian Medical Center, Charlotte, NC

Genetics and genomics are playing an increasingly important role in cancer risk-reduction and treatment. It is expected that oncology nurses incorporate genetics into their practice. At Novant Health, genetic counseling and testing have been provided for several years with a genetic counselor offering patient education, counseling, testing, and guidelines to share with healthcare providers to develop screening and surveillance plans for patients. Few healthcare providers are equipped to manage the increasingly complex issues of cancer risk in patients with genetic mutations and/or familial history of cancer. In order to assist patients and healthcare providers in addressing these issues, the Novant Health Cancer Risk Clinic was created. The Cancer Risk Clinic is a specialized, multidisciplinary practice focusing on risk assessment, cancer prevention, early detection, and education. Its mission is to provide individuals concerned

about risk of developing cancer with the tools needed to make informed health decisions. Many factors are considered when determining an individual's risk for cancer: family history, possibility of or known genetic mutation, and lifestyle choices. At the first in-depth appointment, patients meet with a genetic counselor, oncologist, nurse practitioner, oncology nurse navigator and wellness specialist for a clinical exam, review of imaging, review of personal and family history, lifestyle modifications and follow-up recommendations for both screening and risk reduction. Oncology nurses play a critical role in patient education, communication, follow-up, and clinic coordination. To measure patient satisfaction, patients are given a twelve item survey to assess the quality and value of their clinic visit. Since the beginning of the clinic in May 2013, 224 new patients have visited the Cancer Risk Clinic with 35 surveys returned. Ninety-five percent of patients returning surveys rated the Cancer Risk Clinic as excellent overall and all would recommend the clinic. Sixty-seven percent of patients chose to continue follow-up screening and surveillance at the Cancer Risk Clinic. Based on feedback received, the Cancer Risk Clinic has been successful in helping patients navigate complex issues. In the future, we will examine how many breast magnetic resonance imaging (MRI) studies lead to further imaging/biopsies/cancer detection.

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**IMPACT OF METASTATIC BREAST CANCER AND TREATMENT SIDE EFFECTS ON PHYSICAL APPEARANCE: IMPLICATIONS FOR ONCOLOGY NURSES.** Lisa Tamis-Bieder, RN, BSN, OCN<sup>®</sup>, ProHEALTH Care Associates, Lake Success, NY; Adam Brufsky, MD, PhD, University of Pittsburgh Medical Center, Pittsburgh, PA; Robyn Bell Dickson, BS, Harris Poll, New York, NY; Marc Citron, MD, ProHEALTH Care Associates, Lake Success, NY

As metastatic breast cancer (MBC) is incurable, optimizing quality of life (QOL) is important. Treatment-related side effects are important to patients with MBC and can adversely affect QOL. Improved communication between the patient and oncology team may mitigate the psychological/emotional effects of treatment. Objective: The Make Your Dialogue Count survey explored attitudes of women with MBC toward treatment-related side effects particularly with regards to the impact on physical appearance. The survey was conducted (June-August 2014) online, and by paper and telephone among US women (age ≥ 21 years) with MBC. Patient data were not weighted and are representative only of the individuals interviewed. Statistically significant differences between groups were determined by standard t-test of column proportions and means at the 95% confidence level (marked by \*). 359 women (median age 53 years) completed surveys. Of those who have had MBC treatment, the majority experienced at least one appearance-related side effect (96%), with hair loss being most common (74%). Over half of the patients (56%) stated their overall physical appearance was very important/important to their self-esteem while undergoing treatment, especially younger women 21–44 years (65% (n = 110) vs 51%\* 45–59 years (n = 135); 53% ≥ 60 years (n = 102)). Individual aspects of physical appearance – including hair, weight, complexion, and clothing/attire – were considered important to most patients' self-esteem while undergoing treatment, with significantly more younger women reporting most aspects as being very important/important. Younger women were significantly more likely than older women to say they felt confused by the changes in their body, like less of a woman, and like cancer had stolen their dignity. Women with MBC, especially younger women, are affected by treatment-related changes in their physical appearance. By being sensitive to and understanding patient needs during treatment, nurses can proactively encourage communication and provide education that can positively

affect the patient experience throughout the treatment course. Nurses play a critical role in discussions concerning side effects, including measures to prevent or minimize side effects. Proactive discussion of side effects should occur at each visit and should involve spouses or significant others who provide much-needed emotional support at this time.

**Underwriting:** Novartis provided support for medical writing.

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**MANAGING CHEMOTHERAPY-RELATED SIDE EFFECTS THROUGH TELEPHONE TRIAGE.** Amita Patel, MSN, NP-C, OCN®, Regional Cancer Care Associates, East Brunswick, NJ; Dennise Geiger, RN, Regional Cancer Care Associates, East Brunswick, NJ; Shannon Woerner, MSN, ANP-BC, OCN®, Regional Cancer Care Associates, East Brunswick, NJ; Tina Flocco, MSN, ANP-BC, Regional Cancer Care Associates, East Brunswick, NJ; Carmela Hardy, RN, Regional Cancer Care Associates, East Brunswick, NJ

With the shift in cancer treatment to ambulatory settings and growing complexity of treatment regimens, many outpatient oncology practices have seen an increase in phone calls regarding chemotherapy-related side effects and their symptomatic management. The Central Jersey Division of Regional Cancer Care Associates maintains a dedicated telephone triage line to help patients navigate adverse effects in order to reduce unnecessary emergency room visits, and to proactively empower patients in the management of their care. The goal of the triage line is to decrease the severity of chemotherapy-related health incidents by providing immediate access to experienced oncology nurses and ultimately decreasing ER visits. It operates weekdays 8 AM–5 PM, and is covered by one RN with an additional RN, per demand. Approximately 50-90 calls are fielded daily, with 1/3 related to adverse-effects management including nausea, vomiting, diarrhea, constipation, pain, fatigue, and skin rashes. Calls are given priority status based on symptoms and degree of severity. Using ASCO guidelines, a standardized algorithm chart was formulated for the management of diarrhea, and is utilized by the RN to provide patients with individually tailored evidence-based symptom management. Patients utilizing the triage line receive self-management instructions based on the algorithm chart. If further assessment is warranted, patients are scheduled with same-day evaluations by the nurse practitioner or physician, with severe cases directed immediately to the ER. Nurses have unequivocally stated that having a standardized algorithm for diarrhea management has enhanced patient care while simultaneously boosting staff confidence. More importantly, a majority of patients concur with the effectiveness of the telephone triage line, as evidenced by a reduction in ER visits. Success of the diarrhea algorithm chart has led to creation and implementation of additional adverse-effect management algorithms, currently employed by all nursing staff. While every patient scenario is different, having standardized charts reflecting specific symptoms management has helped better serve the physical and emotional needs of oncology patients. Through the use of evidence-based practice and dedicated algorithm charts, the telephone triage line has afforded expert guidance to patients in managing their symptoms, while fostering a positive environment of advocacy and support.

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**NURSE NAVIGATION CARE MODEL—LEADING THE PATIENT'S BREAST CANCER EXPERIENCE.** Sandra Walters, RN, CBCN®, CN-BN, Saint Joseph Hospital, Denver, CO; Sandi Vannice, DNP, RN, AOCN®, Saint Joseph Hospital, Denver, CO

At Saint Joseph Hospital (SJH) in Denver, the Cancer Centers of Colorado (CCC) is committed to sustaining a process that

supports patient centered care. Patient navigation (PN) services are a vital part of patient satisfaction and successful outcomes at the CCC. The primary goal of PN is to achieve timely access to care as well as to increase the patient's understanding of the diagnosis of breast cancer and probable next steps toward treatment. The theoretical framework for the PN care model at SJH is Watson's Theory of Human Caring. Watson's Caritas Processes put Love/Heart-Centered Caring practice into action. The SJH PN model embraces Watson's carative factor "Development and Sustaining a Helping-Trusting, Authentic Caring Relationship" as the foundation for patient interaction and services provided. The purpose of this presentation is to describe the breast cancer navigator role at SJH, and the impact on the patient experience and outcomes, as well as to underscore the value of a nurse navigator in a community based program. Interventions for the navigation process include: RN outreach to the patient within several hours of learning of their diagnosis; review of clinical reports and discussion of next steps; assistance with care coordination, emotional support, provider communication and barrier removal. The Navigator's direct work and cell phone numbers are provided along with a staff/department navigation sheet to offer transparency and easy access to needed resources which serve to decrease the fear and anxiety of stepping into a complex and foreign setting under such a stressful situation. Outcomes show an average of six days from time of diagnosis to treatment consult (N = 153 breast cancer patients in 2014). Collaboration with the psychosocial oncology team offers additional emotional support while decreasing financial (n = 83), transportation (n = 20/month), and language barriers (12%), as well as access to community resources. Navigation has gone from a buzz word to a movement that is traveling at lightning speed. The value of the nurse navigator role in a community cancer center setting has been demonstrated at SJH by decreasing the interval from diagnosis to first consult, decreasing barriers to care, and increasing access to community resources.

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**THE PARADOX OF CANCER SURVIVORS AND HOW STORYTELLING CAN LEAD TO BETTER OUTCOMES.** Kathleen Bricco-Jablonski, DNP, APRN-BC, AH-CNS, AOCNS®, University of St. Catherine, St. Paul, MN

As survival rates for cancer continue to rise in the United States the lack of understanding by healthcare professionals regarding management of their needs is placing extra burden on a system that is both inadequate and inconsistent to meet the variable needs of this community. The 2006 Institute of Medicine's report identified the necessity of a survivorship plan of care for patients no longer requiring treatment for the primary cancer; yet, in 2014, cancer survivors needs continue to go largely unaddressed in clinics throughout the United States. Furthermore, the myriad challenges patients face after treatment are as personal as the individuals themselves so assessing and finding interventions can be perplexing. The literature consistently provides categorical data of needs but provides little understanding of how to intervene. Since meaning, and therefore interventions, are discovered when we understand the story, we must first seek the story. When the story is told, professionals are better able to address the needs of the cancer survivor in ways that are congruent with the beliefs and cultural values of the individual. Interventions: A CNS lead survivor group was formed to facilitate the sharing of the survivors stories in a community setting apart from the medical institution. Those unable or unwilling to gather in a group forum are given the opportunity to meet face to face or via telephone. In this setting, the individual is gently encouraged to heal by giving voice to their story. In addition, appreciative awareness, by clinicians, of the lived experience and how that experience relates to the physical and psychological functioning of the person after treatment can facilitate a healthier

transition back to the larger world. By fostering the richness and depth of stories nurses can look beyond the lens of nursing and medicine to form a picture of how the needs and ultimately the decisions an individual makes can shape the interventions that lead to better patient outcomes. This cultural restructuring in turn has influenced the way the CNS role models and educates oncology nurses.

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**IMPLEMENTATION OF A PALLIATIVE RESOURCE NURSE PROGRAM ON AN INPATIENT MEDICAL ONCOLOGY UNIT IN A COMMUNITY HOSPITAL.** Klara Culmone, RN, MSN, OCN®, Greenwich Hospital, Greenwich, CT; Elizabeth Barbarita, RN, Greenwich Hospital, Greenwich, CT; Jenelle Grindle, RN, Greenwich Hospital, Greenwich, CT; Barbara Leafe, RN, MSN, Greenwich Hospital, Greenwich, CT; Konul Mammadova, RN, Greenwich Hospital, Greenwich, CT; Killis Portes, RN, Greenwich Hospital, Greenwich, CT

Clinical nurses on the inpatient medical oncology unit at Greenwich Hospital identified challenges in symptom management for oncology patients approaching end of life. The nurses must be competent in symptom management for these patients. They identified a need for more support and evidence-based resources to guide their clinical decision-making as they care for the unique needs of this patient population. Developing and implementing a palliative resource nurse program will empower the oncology nurses to handle difficult patient situations and perform effective symptom management for oncology patients. In order to be successful, the palliative resource nurse program will need nursing staff “buy in”, evidence based tools, and leadership support. In February 2015, four oncology nurses were trained and identified as palliative resource nurses. Along with the palliative care nurse practitioner, physician, oncology nurse manager and nursing director, a palliative care committee was formed. The palliative care committee meets on a monthly basis where case reviews and other topics are discussed. On the medical oncology unit, twice daily “safety huddles” are performed with the nursing staff and items identified are as follows: palliative resource nurse for that shift, patients being followed by the palliative care service, and patients who are approaching end of life. The palliative care committee adopted the standard of care for the dying patient through implementation of the C.A.R.E.S. tool. It is an evidence-based, comprehensive tool for symptom management. Using this tool, the palliative care committee developed a clinical nurse competency in June 2015. This competency, intended for the clinical nursing staff, validates the clinical nurse’s ability to demonstrate management of the patient’s symptoms. The oncology nurses felt empowered to utilize nursing interventions appropriate to the patient’s symptoms, and also serve as their advocate. Overall, the nurses’ comfort level had increased. This program continues to grow and the committee is in the process of recruiting more palliative resource nurses. With this program, the multidisciplinary clinical team improved communication by providing transparency about care of the dying patient. We will continue to educate the oncology nursing staff and build this into their culture.

**86**  
**IMPROVING THE FUNCTIONALITY OF THE ELECTRONIC HEALTH RECORD IN ONCOLOGY INFUSION CENTERS.** Ellie Stull, MSN, RN, OCN®, Nebraska Medicine, Omaha, NE; Meg Peters, BSN, RN, OCN®, Nebraska Medicine, Omaha, NE; Laurie Winkelbauer, BSN, RN, OCN®, Nebraska Medicine, Omaha, NE

Our cancer service line provides infusion services for patients at three geographic locations; collectively 54 Infusion

chairs with average volumes of 20-120 patients per day. The organization implemented a new Electronic Health Record (EHR) in August 2012. Providers soon realized note clutter existed and it was difficult to find the “story” of past infusion appointments. Nurses felt documentation was inefficient, time consuming, documentation tools were scattered and finding orders was troublesome. As a result, documentation frequently occurred post-visit versus in real-time. This model created potential safety concerns and took time away from direct patient care. Create a standardized approach to document the patient’s infusion center encounter and create a process that easily determines what occurred during the visit. Seek to maximize the capabilities of the EHR by tailoring existing tools to meet the needs of the infusion centers. Interventions: (a) Conducted a baseline assessment with nurses to determine how efficient, thorough and satisfied they were with documentation workflow. (b) Reviewed existing capabilities within the EHR and explored options to create a user friendly documentation tool. (c) Worked with EHR applications analyst to develop a prototype. Presented to staff for feedback. (d) Pilot took place at the infusion center with the least volume over four weeks. (e) During pilot, issues surrounding billing and security were identified and addressed prior to implementation at all locations. (f) One-to-One nurse training occurred with staff nurse super users, EHR Analyst and EHR Applications Trainer. Six months post narrator implementation, a follow up survey with nursing staff was conducted utilizing the same questions as the baseline survey. Staff were asked to rate their agreement with each question on a 1–10 scale, 1 = not at all, 10 = very. Pre-narrator implementation, staff rated their workflow efficiency a six (n = 28) and post-narrator implementation an eight (n = 24). Staff satisfaction with documentation workflow improved from 6 to 8.5. Although not officially surveyed, case managers and providers report improved ease of finding information regarding the patient’s visit. Tailoring existing capabilities within the EHR can help improve workflows, provide improved staff satisfaction and allow enhanced communication among care providers.

**87**  
**UNDERSTANDING POTENTIAL BARRIERS TO COMMUNICATIONS CONCERNING SIDE EFFECTS: CAREGIVER ASSESSMENTS.** Patricia Gordon, CRNP, Medical Oncology, Magee Women’s Hospital of the University of Pittsburgh Medical Center, Pittsburgh, PA; Marc Citron, MD, ProHEALTH Care Associates, Lake Success, NY; Robyn Bell Dickson, BS, Harris Poll, New York, NY; Adam Brufsky, MD, PhD, University of Pittsburgh Medical Center, Pittsburgh, PA

Caregivers play an important role in the support of women with metastatic breast cancer (MBC). Understanding the issues important to caregivers may optimize communications between patients, their caregivers, and oncologists. Objective: The Make Your Dialogue Count survey explored potential gaps in doctor-caregiver discourse to identify areas of communication in need of improvement. The survey was conducted (June-August 2014) online, and by paper and telephone among adult, unpaid caregivers to women aged ≥ 21 years with MBC. Caregiver data were not weighted and are representative only of the individuals interviewed. The survey for oncologists was conducted (June-July 2014) online only. Oncologist data were weighted by geography, years in practice, and sex to match actual populations of licensed oncologists in the US. Results: 234 caregivers and 252 oncologists completed surveys. Caregivers typically attended 93% of their loved ones oncology visits, with 76% of caregivers extremely/very involved in making treatment decisions. While the majority of caregivers and oncologists indicated it was very important/important to discuss ways to manage treatment-related side effects at the time of initial

diagnosis (93% and 90%), only 58% of caregivers reported that this occurred. The majority of oncologists strongly/somewhat agreed that they usually tell patients that side effects can be managed (97%) and indicated side effects do not usually stop women from taking treatment (82%). However, 42% of caregivers said a loved one was concerned about discussing side effects with their physician. Often the caregiver said the patient felt she had to live with the side effects (40%). The majority of caregivers strongly/somewhat agreed to wanting more information on prevention/minimization of side effects (81%) and wished the healthcare team did more to help manage side effects (67%). Given that caregivers actively participate in treatment decisions, it is critical for nurses to ensure that caregivers are included in discussions, especially those concerning side effects, and to help them take a more active role. Nurses can help to create opportunities whereby caregivers feel comfortable voicing patient concerns and being vocal participants in their loved ones' care.

**Underwriting:** Novartis provided support for medical writing.

## **88** **STANDARDIZING HAZARDOUS DRUG ADMINISTRATION PRACTICES IN NON-ONCOLOGY SETTINGS. Eric Zack, DNP, RN, ACNP-BC, AOCN®, BMTCTM™, Rush University Medical Center, Chicago, IL**

New trends have emerged in treating patients with autoimmune diseases and for anti-rejection purposes with medications traditionally utilized in oncology settings, such as chemotherapy and biotherapy. These medications are considered to be hazardous drugs (HD) as they possess exposure risks for nursing staff as well as potentially dangerous patient side effects. Non-oncology nursing staff often do not have the training needed for safe administration of HDs. Unlike oncology settings, no formal HD standards exist for non-oncology nurses such as formal education, certification, or continuing education. The goal was to increase nursing knowledge in regards to safe administration of HDs and subsequently reduce the number of hazardous drug-related safety events (chemotherapy spills and preventable adverse drug reactions (ADRs) in non-oncology inpatient settings. We (1) offered the Oncology Nursing Society's Treatment Basics Course for non-oncology nurse champions, (2) revised our hospital's HD (formerly chemotherapy) administration policies and procedures, (3) developed web-based education for all non-oncology nurses, HD administration checklists, and updated chemotherapy signs and nursing care plans, (4) standardized pharmacological practices, (5) revised the hospital's annual RN and PCT competencies, and (6) developed patient placement guidelines. Evaluation: (1) Knowledge of all non-oncology nurses regarding chemotherapy (2) Pre-post paired t-test comparison upon completion of non-oncology chemotherapy class with control group (3) Successful completion of 2 competency HD web-based modules by January 2013 & then annually thereafter (4) Frequency of HD dispenses by pharmacy to non-oncology patients (5) Longitudinal reporting of HD-related safety events Didactic education improved non-oncology nurse knowledge and more importantly improved both nurse & patient safety by reducing safety events and therefore should be provided to all nurses who administer these high-risk medications. Additional activities are important to support non-oncology nurses in effectively translating new knowledge into HD safe handling and administration practices (behaviors) to achieve zero tolerance. Ongoing evaluation and policy revisions that reflect changing best practice recommendations are necessary due to the rapidly dynamic fields of oncology, organ transplantation, and autoimmunology. This hazardous drug administration project serves as an efficacious model that can be adopted by other health care institutions to effectively bridge this gap.

## **89** **WHY CANCER PATIENTS DEFAULT ON FOLLOW UP VISIT AT OCEAN ROAD CANCER INSTITUTE TANZANIA. Habiba O. Mahuna, Ocean Road Cancer Institute, Dar Es Salaam, Tanzania; Anastasia Mitema, Ocean Road Cancer Institute, Dar Es Salaam, Tanzania**

This study was done to find out why cancer patients default on followup visit. Questionnaire were administered by the investigators to cancer patients who defaulted twice on their follow-up visit on completion of Oncology treatment. Patients with stages 1-111 disease were selected. All the patients were counselled before commencement of treatment. Information gathered also include, age, stage of disease, reason for default on follow-up, educational qualifications, occupation and monthly income. Those with metastatic disease on palliative care were excluded from the study. A total number of 40 patients, aged between 30 and 70 years were interviewed. Lack of finance was responsible for default of 14 (35.0%) Twelve (30.0%) complained of long distance to the clinic while seven (17.5%) resorted to alternative treatment. Four (10.0%) expressed loss of hope while withdrawal of family support affected 3(7.5%) as their husbands abandoned them. Fourteen respondents (35.0%) have no formal education, 5 (12.5%) had primary education, 11 (27.5%) had secondary while 10 (25.0%) had post secondary education. Sixteen (40.0) respondents were petty traders, eighteen (45.0%) were unemployed while 6 (15.0%) were employed with the monthly incomes between 20,000 Tanzanian (120 USD) and 50,000 Tanzanian (280 USD). From above findings lack of finance and long distance from treatment centers are the main reason why these patients default. Effort to subsidize cancer treatment and establishment of more cancer centers can help solve the problem. Intensification of counselling can also encourage better follow up visit.

## **90** **THE FUTURE IS HERE: WHAT YOU NEED TO KNOW ABOUT BIOSIMILARS. Sharon Lynch, BSRN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY**

**Purpose:** To educate nurses about biosimilars, discuss the importance of pharmacovigilance and explore the impact of biosimilars on nursing practice and patient care. This presentation will review current literature and FDA biosimilar guidelines to highlight important nursing implications. **Significance & Background:** The FDA approved the first biosimilar product, Zarxio (filgrastim-SNDZ), for use in the US in March 2015. Over the next 10 years, multiple patents for biologics, (including Rituximab, Cetuximab, Avastin and Herceptin) will expire and biosimilars of these agents will emerge on to the market. **Interventions:** Biologics are drugs produced in living cells. In the simplest terms, biosimilars are like the generic version of a biologic drug; however, biosimilars are not generics. While generic drugs are easily produced, small molecules identical to the reference product, biosimilars are large, complex molecules produced in living organisms by a complicated, manufacturing process and are highly similar but not identical to the reference product. For FDA approval, biosimilars must show they are highly similar to the reference product with no clinically meaningful difference in terms of safety, purity and potency. The immunogenicity of biologics is difficult to predict in patients, with many biologics inducing undesirable immune responses resulting in reduced efficacy, anaphylaxis and life threatening autoimmunity. Careful post-market monitoring of the safety of a biologic is extremely important. Between 2006 and 2014, the European Medicines Agency approved 17 biosimilars. In that time, no unusual or unexpected effects have occurred with the use of biosimilars. **Evaluation:** Nurses will have a large impact

on patients' understanding and comfort level with biosimilars. Long term effects are yet to be seen. Nurses will play a significant role in observing and reporting these effects. The complex nature of biosimilars requires that nurses are well informed about their uses and effects. In the coming years, as more biosimilar agents are approved in the US, nurses will play an important role. This presentation will provide nurses with the information they need to practice safely and to effectively educate patients on this rapidly developing class of medications.

## 91

**LEAN PRINCIPLES AND A BE SAFE METHODOLOGY APPLIED TO CLABSI REDUCTION STANDARD WORK ON A STEM CELL AND INPATIENT ONCOLOGY UNIT.** Elizabeth Daniels, MSN, RN, University of Virginia Health System, Charlottesville, VA; Tanya Thomas, BSN, RN, OCN®, University of Virginia Health System, Charlottesville, VA; Lisa Huntsinger, MSN, RN, CCRN, University of Virginia Health System, Charlottesville, VA; Adrienne Banavage, MSN, RN, OCN®, University Of Virginia Health System, Charlottesville, VA

LEAN methodology as used in the manufacturing world is well known. The concept of applying LEAN principles to healthcare settings has grown in popularity over the last several years with varying degrees of success. True change and application of LEAN techniques in a hospital setting requires strong multi-level support and a cultural change. Lean transformation has been described as a journey with many discoveries and opportunities uncovered along the way. University of Virginia Health System (UVA) has embraced LEAN principles and created the BE SAFE program which supports organizational efforts towards the goals of being the safest place to work and the safest place to receive care. UVA shares how frontline staff from an inpatient Stem Cell Transplant and Oncology unit tapped into the BE SAFE program and used LEAN principles to reduce CLABSI rates in the cancer population across the health continuum. The A3 was utilized as the problem solving tool and through this process small tests of change were implemented to identify the most appropriate solution. Daily Unit-Based-Leadership (UBL) meetings supported change via the PDCA cycle. The A3 highlighted the degree of variations in manipulation and maintenance related practices for central lines. By standardizing supplies and methods (dressing changes, scrub the hub and CL blood culture draws) a significant reduction in CLABSI rates  $\geq 75\%$  has been achieved. Discussion: By actively engaging frontline staff and coalition members, we were able to educate and empower key stakeholders across the clinical cancer continuum; bringing standard work spread throughout the health system. Key to this success was the inclusion of patients and their family members as critical members of the healthcare team. Innovations: Publishing standard work and other resources to MyChartReview for ease of access by patients, families and outside health care providers to support continued spread of standard work practices related to maintenance/manipulation of central lines. Central line care bundle for oncology patients developed. Exploration of innovative approaches/protocols for at-risk oncology patients experiencing mucositis.

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**ANNUAL COMPETENCY REVALIDATION: OPTIMIZING RESOURCES THROUGH COLLABORATION OF FIVE SEPARATE ONCOLOGY UNITS.** Pamela Bowman, RN, BSN, OCN®, Duke University Hospital, Durham, NC; Nicola Brooksbank RN, BSN, OCN®, Duke University Hospital, Durham, NC

Nursing core competencies are revalidated annually based on practice change, process improvement data, and organi-

zational initiatives. The assessment of clinical competence provides a challenge in a large NCI-designated southeastern cancer center. Competency assessment and validation can be time consuming for units to conduct individually, while competencies required are most likely the same across all oncology units. Our oncology clinical lead nurses from hematology and solid tumor units have been conducting a combined competency revalidation for several years. As the inpatient oncology division grew this year to include a new surgical oncology unit, adult hematopoietic stem cell transplant (HSCT) unit, and outpatient HSCT day hospital, an opportunity presented to combine resources streamlining the validation procedure for over 250 staff members across five units. Historically, all units provided different competencies. Meeting as a leadership team, facilitated by the Clinical Operations Director (COD), a strategy was developed to offer competency validation to all areas. Six separate skills sets were identified for validation. Specifically, chemotherapy validation was developed to meet the needs of four areas, which included a case study with interactive components to demonstrate competency and best practice. In addition, the surgical oncology unit incorporated chemotherapy safe handling and extravasation topics related to care of patients receiving chemotherapy. Pretests developed included core questions applicable to all units as well as unit specific questions. These questions allowed special focus on staff learning opportunities and the unique needs of each unit's specific populations. Expert nurses were identified to review and validate practice. Staff attended one hour sessions during work with patient care coverage provided. Substantial interactions were noted between staff from the five units, building rapport and a sense of teamwork to the previously divided units. Nursing competency is not easily assessed using a single tool. Didactic, testing, return demonstration and observation are all key methods for determining competency. We will share the tools developed, lessons learned and positive outcomes of expanding our competency revalidation on such a large scale. Revalidation of competencies, when met with enthusiasm and creativity, can be a vital part of providing safe, effective care to our oncology patients.

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**INTERDISCIPLINARY APPROACH TO THE EVALUATION AND MANAGEMENT OF CHRONIC GRAFT-VERSUS-HOST-DISEASE TO IMPROVE SURVIVORSHIP OUTCOMES.** Jennifer Hsu, RN, BSN, OCN®, BMTCTM, National Institutes of Health, Bethesda, MD; Brenna Hansen, RN, BSN, OCN®, National Institutes of Health, Bethesda, MD; Stephanie Cotton, RN, BSN, National Institutes of Health, Bethesda, MD; Lauren Curtis, MD, National Institutes of Health, Bethesda, MD; Steven Pavletic, MD, National Institutes of Health, Bethesda, MD; Sandra A. Mitchell, PhD, CRNP, AOCN, National Institutes of Health, Bethesda, MD

Chronic graft-versus-host-disease (cGVHD) is an immune mediated disorder occurring in 30%-50% of allogeneic hematopoietic stem cell transplant recipients. Chronic GVHD often has multi-site involvement and is diagnosed by organ specific tests, in conjunction with ruling out acute GVHD or any other underlying causes. Sites of cGVHD include skin, mouth, lungs, gastrointestinal tract, eyes, joints, muscles, genitalia, and liver. These can manifest in any combination and can severely decrease patient's quality of life while increasing mortality. cGVHD severity is directly related to non-relapse mortality; cGVHD can occur at any time in the post-transplant survivorship phase. Early diagnosis and evidence-informed treatment have been shown to improve survival and quality of life and to reduce the incidence of co-morbidities. A biopsy of a suspected organ

confirms a diagnosis of cGVHD; however, a guided and noninvasive tool is preferred for initial assessment and to facilitate frequent and comprehensive clinical reevaluations. The initial 2005 National Institutes of Health (NIH) Consensus Criteria was an early tool that used a combination of clinical assessment and patient reporting, this has been since been updated in 2014. These criteria are used as a tool by a multidisciplinary team comprised of transplant physicians, nurse practitioners, organ-specific sub-specialists, together with nursing, nutrition, and rehabilitation professionals. As a team, they are able to identify the signs and symptoms of cGVHD and are able differentiate other health care problems from transplant related cGVHD. The interdisciplinary team then meets to discuss the individual findings, and reach a consensus on the best course of treatment. The team develops a survivorship care plan, and that plan is communicated to the patient and family, and to the team providing care in the home community. A multidisciplinary approach using the 2014 Consensus Criteria is essential and can be used to document a comprehensive and reproducible evaluation of the organ system manifestations of cGVHD. This evaluation optimizes organ-specific treatment, improves care quality, enhances patient self-management, and strengthens the delivery of comprehensive survivorship care to patients with cGVHD.

**94**  
**BUILDING AN INPATIENT SUPPORT GROUP FOR BLOOD AND MARROW TRANSPLANT PATIENTS AND CAREGIVERS.**  
Shawnette Graham, RN, BSN, OCN®, Baylor University Medical Center, Dallas, TX

Support groups can be an important part of the Oncology patient's care. Relationships built and additional resources for patients and caregivers enhance overall quality of life. On-line communities are available for BMT, but people connect better in person. The purpose of this project was to build an inpatient support group for patients and caregivers on the BMT Unit. Project goals included encouraging patients to continue to socialize and gather information from others that are going through the same process; encouraging caregivers to make connections for emotional support and experiences; provision of education to the group about resources available on the transplant experience. A committee was created to address the need of a patient and caregiver support group. The committee involved nursing staff and our Leukemia Lymphoma Society Representative. The LLS representative set up speakers such as the Dietician, Chaplain, Social Worker, Child Life Specialist, Music Practitioner, Occupational Therapist, and nurses from the outpatient area to discuss care after transplant. Nursing staff encouraged patients and caregivers to attend. We developed a successful alert system through trial and error to remind patients and caregivers of upcoming sessions. At the end of each group, participants completed evaluations providing feedback on the project. Comments received included – "Very informative," "I enjoyed the time together," "Great support," and "Thank you for having this." Patients and caregivers made personnel connections. They began socializing outside of the inpatient rooms by visiting in the family room or walking around the unit together. The support group was a positive addition to the unit. The offering provided support from those that were walking on that same path and gave patients and caregivers information to assist them during the transplant journey. Patients began socializing and exercising together during the inpatient hospitalization. Support groups encourage individuals to talk with someone that truly understands what it means to be where they are. Innovation: Developing an inpatient Bone Marrow Transplant support group for patients and caregivers.

**95**  
**ENHANCING PATIENT EDUCATION FOR DRAINAGE CATHETERS.** Laura Conti, RN, BSN, FNP-BC, Memorial Sloan Kettering Cancer Center, New York, NY; Donna Fitzmaurice, RN, BSN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Kim Borg, RN, BSN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY

Our inpatient population specifically treats patients with Hepatobiliary cancers, Pancreatic Cancers and GI cancers. Consequences of these cancers are the development of a biliary obstruction. It is caused by actual tumor or blockage by scar tissue. A biliary obstruction is caused when the bile will no longer flow properly into the duodenum. This results in a buildup of bile in the liver. This buildup can cause cholangitis-with fever and pain, nausea, vomiting, pruritus and jaundice. To help alleviate these symptoms, a percutaneous biliary drainage catheter can be placed to improve biliary flow. There is an external drain that goes into the bile ducts and drains externally. There also is an external-internal drain that sits in the small intestine and flows externally. The video was developed over 16 months by Hepatobiliary (HPB) RNs to be an easy and readily available teaching tool of drain care. RNs were receiving verbal feedback from patients and family that they were mastering material in house, but not retaining information when discharged home due to high stress levels and acceptance of a drain. A consensus among nurses was made that patients learned and retained information more successfully from multiple teaching styles and if information could be accessed in their home. Proper drain care is associated with less fever, infections, re-admissions and an overall higher patient satisfaction. The development included a multidisciplinary approach of RNs, CNS, Interventional Radiology and Audio/Visual Department. The drain video is easily accessed in the hospital and at the patient's home, via the MSK portal. The video was unveiled to the HPB staff by word of mouth in morning meetings. Presentations were given to introduce the video and educate staff on how and when to utilize. The HPB staff verbalized appreciation and satisfaction with the video during their educational sessions with patients. Patients and families voiced relief and happiness to have the ability to update and reinforce their knowledge of proper drain care in the home setting. The HPB staff has felt that this has led to overall patient satisfaction and reduced negative outcomes.

**96**  
**DECISION TREE FOR THE ONCOLOGY NURSE CARING FOR PATIENTS WITH GLIOBLASTOMA.** Margaret Schwartz, MSN, APN, CNRN, Northwestern Medicine Group, Chicago, IL; Raymond Lezon, BSN, RN, Northwestern Medicine Group, Chicago, IL; Mary Ellen Maher, MSN, APN, CNRN, Northwestern Medicine Group, Chicago, IL; Kellie Mora, BSN, RN, Northwestern Medicine Group, Chicago, IL; Lynnette Onuselogu, MSN, APN, Northwestern Medicine Group, Chicago, IL; Nicole Rizio, MS, APN, CNRN, SCRN, Northwestern Medicine Group, Chicago, IL

The care of a patient with a glioblastoma can be complex and intimidating for many nurses. The diagnosis of glioblastoma is relatively rare (<2% of all cancers diagnosed annually) and carries a notoriously poor prognosis. Community oncologists and nurses in generalist oncology settings may only ever encounter a few patients with glioblastoma. The specialty nursing care provided in a neuro-oncology clinic is often out of reach for rural or underinsured patients. Additionally, many healthcare systems do not have a staff neuro-oncologist, or the neuro-oncologist shares nursing support with other oncology disciplines. Patients with a diagnosis of glioblastoma receive increasingly complex care. The

generalist oncology nurse would theoretically be better prepared to care for the patient with a glioblastoma with an easily accessed reference. For these reasons, the nurses of the Northwestern Brain Tumor Institute collaborated to create a decision tree to aid the generalist oncology nurse. The nursing interventions identified within the decision tree are supported with current practice standards and are evidence-based, where available. The decision tree carries the generalist oncology nurse through patient care from diagnosis and hospitalization to referral for end-of-life care. The recommendations for nursing care focus on the patient with glioblastoma as an individual but includes nursing care of the family, particularly as the patient's family and friends typically bear the burden of full-time caregiving at some point in the disease trajectory. The oncology nurse often carries the weight of patient education from diagnosis through treatment and symptom palliation during active treatment and survivorship. As the chemotherapy agents and treatment modalities used in treating glioblastoma become more complex and sophisticated, oncology nurses must respond with effective and time-efficient nursing interventions. In employing a decision tree, the generalist oncology nurse is able to quickly assess and respond to the education needs accompanying these medical interventions. Employing a decision tree for nursing interventions positions the generalist oncology nurse to provide safe, efficient, and effective care for a high-needs patient population.

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**HPV: A NURSING CHALLENGE FROM TOP TO BOTTOM.** Roberta Sales, MPH, BSN, RN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Melanie Carrow, RN, ONS®, ACRN, Memorial Sloan Kettering Cancer Center, New York, NY

Recognized in 1983, the Human Papilloma Virus (HPV) is an important infectious cause of cancer. Persistent infection with HPV types 16 and 18 are strongly associated with cervical, anogenital and oral cancers. As the most prevalent sexually transmitted disease worldwide, most sexually active adults will become infected. Infections are usually subclinical and transient with an unknown latency period. Contributing factors include previous HPV associated malignancies, immunosuppression, HIV, early sexual debut and cigarette smoking. Due to the strength of the HPV oncogene, HPV is expected to replace tobacco as the main cause of oropharyngeal cancer in the US. HPV is not a gender or age related health issue. It is estimated that 79 million Americans are currently infected. Fourteen million new infections will occur yearly, mostly in teens and young adults. These infections will contribute to an increase in cancers. Advancing the expertise of the oncology nurse in current management strategies for persons with, and at risk for HPV will increase the effectiveness of nurses' influence during patient encounters. We must recognize the consequences of HPV and the role it plays in the pathogenesis of multiple cancers. We must integrate our knowledge of surveillance measures for HPV associated cancers. We must recognize and embrace the role oncology nurses play in increasing awareness and overcoming stigmas about this difficult and complex health issue. The transient nature of HPV infection requires frequent and ongoing surveillance, and guidelines for vaccinations are evolving. This challenges nursing healthcare delivery and people are uncomfortable discussing sexual behaviors. Although controversy and fear still surround HPV vaccination and diagnosis, public discussion has increased. The incidence of HPV associated cancers is increasing. Oncology nurses need to address this public health issue through advocacy, education and collaboration to promote HPV prevention, appropriate surveillance and access to care. The association with cancer cannot be ignored. By utilizing every patient encounter, nurses can play a pivotal role in the dissemination of HPV information, and in the

prevention and early detection of cancer. This includes oncology clinic visits during active treatment, survivorship, and outreach efforts for cancer screening.

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**EVALUATING OF EFFECTIVENESS ON CASE MANAGEMENT MODEL IN LEUKEMIA PATIENTS.** Pei-Hua Wu, Cancer Center, Chi Mei Medical Center, Liouying, Tainan City, Taiwan; Shu-Chan Chang, Cancer Center, Chi Mei Medical Center, Liouying, Tainan City, Taiwan; Wen-Li Lin, Cancer Center, Chi Mei Medical Center, Liouying, Tainan City, Taiwan; Wen-Tsung Huang, Cancer Center, Chi Mei Medical Center, Liouying, Tainan City, Taiwan; Chao-Jung Taso, PhD, Cancer Center, Chi Mei Medical Center, Liouying, Tainan City, Taiwan

Leukemia is a leading cause of cancer, the incidence and mortality rates have increased in Taiwan. However, case management model is not yet well established in Taiwan. This study examines and evaluates the effect that adopting a case management model (CMM) has on the care and survival rates of leukemia patients. Interventions In this retrospective study, 136 leukemia patients were recruited between January 2009 and December 2012. The experimental group comprised 56 patients who had received care from a case management model. The case manager coordinated the recruitment, liaison, and care plan implementation, and conducted disease education, telephone consultations, follow-ups, and evaluations. The control group comprised 80 leukemia patients. The patients in the control group had similar characteristics to those in the experimental group, and received routine care. Adopting a case management model in leukemia care increased patient follow-up appointment compliance rates at 1 month, and 3 months ( $p = 0.04$ ,  $p = 0.02$ ). The model also effectively reduced the patients' 14-day readmission rate ( $p = 0.05$ ). Furthermore, these improvements were statistically significant. The results also indicated that the survival rate for patients receiving care from leukemia. A case management model was superior to that of the control group receiving traditional care. Adopting a CMM in leukemia care effectively enhanced clinical treatment adherence, increased survival rates, and reduced the 14-day readmission rate. The results of this study may be valuable for medical institutions promoting a CMM in leukemia care, improve cancer patient care, and ultimately enhance the quality of health care.

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**ELECTRONIC CIGARETTES USE AND CANCER—EVALUATING THE EVIDENCE.** Yanina Zborovskaya, RN, MSN, NP-C, AOCNP®, North West Oncology, Elk Grove Village, IL

E-cigarettes are a psychosocial phenomenon of the 21st century with serious implications to public and individual health, especially to high-risk patients. E-cigarette use in the U.S. and globally is increasing rapidly. Current e-cigarette use among U.S. adolescents has surpassed the use of conventional cigarettes. The e-cigarette industry is not self-regulated, and FDA regulations or evidence-based guidelines are lacking. Consequently, the controversy among health professionals and policy makers about e-cigarettes safety is growing. Up-to-date findings raise doubts about e-cigarettes use as a healthier alternative to continued cigarette smoking. Furthermore, the findings raise doubts about the safety and usefulness of e-cigarettes for facilitating smoking cessation in the general population and among cancer patients in particular. This article explores e-cigarettes effects and consequences on the human body and on human psychology, and addresses their effectiveness, safety, and efficacy as a smoking cessation strategy. It evaluates the safety of e-cigarettes to public health in general and to cancer patients in particular.

This article assesses e-cigarettes as a potential gateway to renormalizing tobacco cigarette smoking, and examines ethical issues of e-cigarette use from the perspective of the harm reduction theory. This article aims to clarify what is known about e-cigarettes; point to what is yet unknown; and, offer clinicians an overview of the topic, practice recommendations, and communication directions with their patients who smoke tobacco cigarettes, use e-cigarettes, or consider their use.

## 100

**A COLLABORATIVE INITIATIVE TO ENHANCE PALLIATIVE CARE AND END OF LIFE COMMUNICATION.** Carol Blecher, MS, RN, AOCN®, APNC, CBCN®, Trinitas Comprehensive Cancer Center/Trinitas Regional Medical Center, Elizabeth, NJ; Timothy Clyne, MS, RN, Trinitas Regional Medical Center, Elizabeth, NJ

NCCN guidelines indicate that palliative care begins at diagnosis and continues throughout the care continuum. Palliative care has been shown to improve overall survival, quality of life, and patient/significant other satisfaction. A basic, vital component of palliative care is communication between health care providers and patients/their significant others. Historically, it has been demonstrated that oncology nurses consistently demonstrate signs of distress when discussing palliative care and end of life topics with patients and their significant others. COMFORT communication curriculum will be instituted at our facility. To evaluate baseline knowledge and comfort levels we asked the RN staff to perform a self assessment regarding perceptions of their abilities in this area. The CNAs were assessed regarding key palliative care competencies. City of Hope RN End of Life Knowledge Assessments was distributed to all the Oncology RNs in the Outpatient Facility and on the Inpatient Unit. Additionally the RNs completed the City of Hope End of Life Professional Caregiver Survey an assessment of professional educational needs. The CNA's completed the City of Hope Home Health Aides version for End of Life Knowledge Assessment. Knowledge levels among the more experienced nurses and CNAs was good, with an average score of 92.2 in the RN group and 87 in the CNA group. The average among the less experienced RNs and CNAs in the outpatient area was 75 and 45 respectively. The majority of nurses that scored well in the knowledge identified a variety of areas of knowledge deficit in the End of Life Professional Caregiver Survey. The inpatient nurses scored similarly on the knowledge based questions for RNs with an average score of 81, of note is that this group has less experience than the outpatient group of RN's. We have validated the need for education to increase the comfort level of the nurses with issues surrounding palliative care and end of life conversations. We will begin to educate the staff using the COMFORT curriculum a holistic model for narrative clinical communication in practice developed for use in early palliative care in November and perform follow up evaluation after education has been completed.

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**ACROSS THE POND—A COMPARISON OF NURSING ROLES IN A LUNG CANCER SERVICE—THE CNS ROLE IN THE U.K. AND NURSE NAVIGATOR IN THE U.S.A.** Ruth Doerfler Evans, RN, BA, OCN®, Medstar Franklin Square Medical Center, Baltimore, MD; Dympna McPhillips, BSc, CNS, Galway University Hospitals, Galway, Ireland; Carol Esche, DNP, MA, RN, NE-BC, Medstar Franklin Square Medical Center, Baltimore, MD

The delivery of care in a thoracic cancer clinic is dependent on an oncology specialized nurse occupying a pivotal role in the overall delivery pathway. Nurses in these roles advocate, lead, educate, and care for the lung cancer patient. The role of the

oncology specialized nurse is paramount as the overall 5 year lung cancer survival is 15% or less with an incidence of 200,000 cases per year which is greater than breast, colon, and prostate cancer incidence combined. In the U.K., the Clinical Nurse Specialist provides direct care to the patient with lung cancer from the initial referral to commencement of definitive treatment. In the U.S.A., the role of Nurse Navigator has developed to meet the needs of patients and families dealing with lung cancer. Nurses in both roles provide support and act as resource for patients and families on issues related to complex treatment modalities, survivorship, and end of life care. Facilitators and barriers for role implementation in each country will be described as related to patient care outcomes. This poster provides a transatlantic perspective comparing and contrasting current practices within the CNS and Nurse Navigator roles and makes recommendations for enhancing both roles to better address the needs of lung cancer and all cancer patients as they advocate, lead, educate, and care for patients with complex physical and emotional needs.

## 102

**ENSURING PATIENT SAFETY DURING DEEP TISSUE HYPERTHERMIA.** Marguerite Everman, RN, Cancer Treatment Centers of America, Philadelphia, PA; Tricia Yerkov, RN, OCN®, Cancer Treatment Centers of America, Philadelphia, PA

Objective: Describe the role of the nurse in maintaining patient safety during Deep Tissue Hyperthermia Treatments. Deep Tissue Hyperthermia (DTH) is an adjunctive therapy for patients with recurrent or hard to treat cancers, although it is not widely used in the United States. It utilizes heat to enhance the effects of radiation or chemotherapy. The nurse ensures patient safety by monitoring vital signs and patient comfort, such as providing ice chips, fan, ice bag, pillow under knees, and music during the treatment according to facility policy. Prior to the first treatment, the nurse educates the patient about the process, catheter placement, and what to expect during the treatment. Post-treatment education includes the importance of hydration. A water-filled applicator is placed around the patient's abdomen. Focused electromagnetic energy is directed at the tumor, exposing it to a temperature of 104-106° F (40-41° C) for at least 45 minutes. The heating process is continually monitored, and can be adjusted if it becomes too hot. The heat immediately stops when the equipment is turned off. The heat causes vasodilation of the vessels in and around the tumor, causing an influx of oxygen-carrying red blood cells to infiltrate the tumor. The hyper-oxygenated tissue is more susceptible to radiation treatments. If the patient receives chemotherapy after DTH, blood flow to the tumor is increased, bringing more chemotherapy to the tumor. The patients at our site have not had any serious events since inception of our program in August 2011. There have been no malfunctions related to the DTH machine. Data from clinical trials conducted in Europe have shown DTH to be safe and effective as an adjunctive therapy in the treatment of cancer located in the abdominal cavity, such as in cases of unresectable pancreatic cancer. Although DTH is not widely used because the treatment is viewed as experimental, indications for use include patients that have had poor outcomes from standard treatment. Safe administration of DTH is a collaborative effort between nurses, therapists, radiation oncologists.

## 103

**INCREASING PATIENT CONTROL AND WELL-BEING WITH A MOBILITY INITIATIVE.** Barbara Lineham, RN, MSN, OCN®, Piedmont Hospital, Atlanta, GA; Rose Wituka, RN, BSN, OCN®, Piedmont Hospital, Atlanta, GA; Vivian Jackson, PCT, Piedmont Hospital, Atlanta, GA

In the past the value of mobility and its effect on health was not clearly understood. Hospitals encouraged patients to

stay in bed and rest. It is now believed that people improve independence, decrease pain, and increase positive emotional well-being with mobility. The Piedmont Atlanta Oncology/Gynecology/Bariatric 41 bed unit started a mobility initiative in April of 2014. This was initially known as the walking/sitting club and was started by a patient care technician, Vivian Jackson. The purpose was to help improve patient's emotional well-being by placing control and increased mobility into a patient's activities of daily living. This was in an effort to continue normalcy of their daily lives. The mobility initiative was implemented to improve pain management and customer service scores and ultimately decrease average length of stay in the hospital. For this initiative to be successful there was collaboration between the physicians, physical and occupational therapists, the Registered Nurses, Clerks, Patient Care Technicians, patients and their support system. The clinical manager, nurse educator and physical and occupational therapists became oncology rehab certified by STAR (survivorship training and rehab). The staff received additional training and supplies were purchased. A welcome letter and a poster displaying our initiative on admission, along with change of shift bedside report became the opportune time to explain the program to our patients/support system and encourage their participation. The structure of vital signs and baths changed to allow for time to get patients out of bed first thing in the morning. Patients are encouraged to be out of bed in a chair for all meals and to ambulate at least three times a day if not contraindicated. Post-operative patients that were not ordered to be on bedrest are to get out of bed within 2 hours of returning to the unit. Walking parameters and rewards for progress were established. Outcome metrics were calculated after 1 year with evidence of improved pain management and customer service and decreased length of stay. This abstract will discuss how the program was implemented, our outcomes and progress towards future evidence based practice with a mobility initiative.

**104**  
**“CAN YOU HELP ME SEND THIS EMAIL”? A COMPUTER ORIENTATION PROJECT.** Karen Biel, AAS, RN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Mallory Bowker, BSN, RN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Rose Semler, MS, RN, AOCNS®, Memorial Sloan Kettering Cancer Center, New York, NY; Beau Amaya, BSN, RN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Asia McCoy, BSN, RN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Maryellen O'Sullivan, MA, RN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY

At this comprehensive cancer center we identified a computer knowledge deficit for nurses hired in an ambulatory setting. The on-boarding of new nurses from within and outside our institution demonstrated various levels of proficiency in the use of technology. Initial discomfort levels with the computer systems were a barrier to successful completion of orientation. A task force was formed to help facilitate computer literacy for new staff. Various systems were identified in which competent use was a minimum requirement. These included: Microsoft Outlook, Health Information Systems, Electronic Medical Record (EMR), Share Point sites, and navigating our Intranet. Our project was developed utilizing the Peer Coaching and Mentoring Education Model. The team met bi-weekly to outline the project and identify content. We created an online training and reference manual. Three case scenarios were written to assess skill level, current knowledge and program content. At the beginning of orientation nurses

were scheduled for two face to face meetings with a computer preceptor for a skills assessment. If the preceptor identified a knowledge deficit additional sessions were scheduled. When competencies were met the nurse tested out successfully. The preceptor used a “Level of Familiarity” Likert scale to assess comfort level at each session. Six participants have completed a self evaluation survey measuring comfort and knowledge of their computer skills. We found that nursing experience and perceived technology skill did not correlate with computer literacy. Detailed data will be available at the time of presentation. Computers have revolutionized the ways in which we store, share, and access information. It is crucial that nurses have an in-depth knowledge of the EMR and other technology to maintain a competitive edge and provide quality patient care. We found nursing computer literacy contributes to successful orientation and efficiency of practice. The Peer Coaching and Mentoring Education Model was a unique and effective method to accomplish our project. As meaningful use forces the evolution of electronic healthcare systems, orientation must adapt in response. This project is now a standard part of our orientation and can serve as a model that is adaptable for any unit and institution.

**105**  
**EDUCATING ONCOLOGY NURSES AND PATIENTS ON SAFETY RELATED TO THE ADMINISTRATION OF IMMUNOTHERAPEUTIC VACCINES THAT USE LIVE VIRUSES.** Sheri McMahon, RN, BSN, National Cancer Institute, Bethesda, MD; Myrna Rauckhorst, RN, BSN, National Cancer Institute, Bethesda, MD; Nancy Harold, RN, BSN, National Cancer Institute, Bethesda, MD

The primary goal in the development of effective therapeutic cancer vaccines is to induce a response to tumor specific antigens. There are many vaccines currently in clinical trials. A few will likely receive approval from the Food and Drug Administration marketed for cancer treatment. Some vaccines incorporate a live virus as part of the delivery system in order to have the antigen reach its intended target. For oncology nurses, administering a live vaccine presents a unique challenge; that of understanding the safety precautions when administering, caring for and providing education to patients receiving live virus vaccinia therapy. Viral vector vaccines use vaccinia which is classified as a Biosafety level 2 and are considered infectious biological substances. Staff administering these vaccines needs to wear gloves and take precautions such as contact isolation. Also, staff who are pregnant, immuno-compromised or suffering from chronic skin disorders should not administer the live virus vaccines. The Center for Disease Control and Prevention (CDC) guidelines need to be followed in the administration of the vaccines to ensure staff safety. Patient teaching should emphasize excellent hand washing to prevent accidental spread of the virus (e.g., touching the injection area and then eyes, or mucous membranes). Soap and water are the preferred means to cleanse the site. The site should be covered after injection with gauze and a semipermeable dressing. The patient may “shed” live virus from the vaccination site until the site heals completely, and could potentially spread the virus to others. Patients need teaching to avoid close contact (e.g., in the same household) with the following people for approximately 3 weeks after the vaccine: pregnant women, children age 3 and younger, and those who are immunosuppressed as per CDC guidelines. There have been concerns raised regarding safe administration of vaccinia from staff in the clinical trial community. Currently, no reports of transmission to healthcare personnel from vaccine recipients have been reported. With the proper

education and knowledge, nurses can have confidence and feel comfortable in their ability to safely administer the live virus vaccinia vaccine to patients.

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### **THE IMPORTANCE OF SLEEP AND QUIETNESS IN THE HOSPITAL ENVIRONMENT IN ONCOLOGY PATIENTS. Jamie Craig, BSN, RN, Froedtert Hospital, Milwaukee, WI**

Oncology patients are a unique group of patients who are going through a difficult time. Quality sleep is essential for all people, but especially important in the oncology population. Fatigue is one of the most common side effects of cancer and its treatment. Lack of quality sleep can not only increase fatigue but can also be detrimental to a patient's quality of life (Ancoli-Israel, 2001). Many oncology patients need to spend nights in the hospital. A common complaint while in the hospital is the noise, which then leads to sleep disturbance (Montague, 2009). The oncology unit at Froedtert Hospital has implemented many ideas to decrease noise. Specifically, when patients are admitted to the oncology unit they are offered a card informing them that hospitals can be noisy and that the nursing staff are there to promote a healing environment and do what they can to reduce noise. Additionally, a pair of ear plugs is attached. Other implementations include quiet time beginning at 8PM and noise reducers on doors outside of the patient rooms. There are a few ways that quietness and patient satisfaction have been monitored on the unit. A survey was distributed to patients asking them about noise during their stay. Fourteen out of seventeen patients responded that they were never or rarely woken by a sound during the night. Additionally, fourteen out of seventeen patients replied that they were never or rarely disturbed by an unnecessary sound while resting during the day. The Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) is another way how quietness is monitored. The question asked how often the area around a patient's room was quiet during the night. If the response was always, it counted in the unit's favor. In 2014 60% of patients responded always and in 2015 the score increased to 73.81%. The above results indicate that the nursing practices implemented on the unit are working. The main focus has been patient education on common noises heard in the hospital environment. It is vital that nurses realize the importance of sleep and utilize their skills to decrease noise when possible.

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### **PEEK-A-BOO. I SEE YOU. NON-INVASIVE VISUALIZATION OF THE SMALL INTESTINE. Kymberly Kisiel, BSN, RN, OCN®, HN-BC, Cancer Treatment Centers of America, Philadelphia, PA; Pamela Sellers, RN, BA, Cancer Treatment Centers Of America, Philadelphia, PA**

The use of capsule endoscopy (CE) in an oncology setting allows for a non-invasive visualization of approximately 20 feet of small bowel, which cannot be seen using other methods of diagnosis such as colonoscopy or esophagogastroduodenoscopy (EGD). The CE is an encapsulated wireless, disposable miniature video camera the size of a multivitamin. It is able to take 50,000- 60,000 images in 8.5 hours. The CE plays an integral role in diagnosing within the oncology setting as evidenced in three cases described below. The nurses provide patient education prior to the procedure, including pre- and post- CE instructions, details about the procedure, and potential side-effects. Prior to study, nurses assess the patient's ability to swallow the capsule. Once informed consent is obtained by the physician, the patient swallows the capsule. Nurses then apply the small recording device to patient which captures the images

that are transmitted from the CE. Findings and Interpretation: Patient #1 was diagnosed with lymphoma by duodenal biopsy. Capsule endoscopy revealed nodularity in the small bowel during chemotherapy treatment. Once six cycles of Ritxuan were completed, the CE was repeated, and revealed no nodules in the small bowel. This would be difficult to visualize with other modalities. Patient #2 capsule endoscopy was performed on a patient who was anemic and has a positive occult stool result. Colonoscopy and EGD was negative for signs of active bleeding, but CE was performed and showed the patient's erythema from irritation of a bleed. Patient #3 with thyroid cancer who was status-post thyroidectomy was hospitalized multiple times due to hypocalcemia and hypothyroidism. It was assumed the patient was non-compliant with medications. However, the CE revealed the patient had severe malabsorption due to Celiac disease. Capsule endoscopy has shown benefit in diagnosing and restaging oncology patients which otherwise may be difficult to diagnosis. With CE, the entire small bowel can be visualized which is difficult with colonoscopy or EGD. Potential complications arising from sedation are avoided. The CE allows monitoring of lesions, ulcers, tumors, and bleeding within the small bowel.

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### **EVIDENCE BASED PRACTICE PROJECTS AND THE STAFF NURSE. Pam Laszewski, RN, OCN®, Karmanos Cancer Center, Detroit, MI; Carole Bauer, MSN, RN, ANP-BC, OCN®, CWOCN, William Beaumont, Royal Oak, MI; Lena Andrieths, RN, OCN®, Karmanos Cancer Center, Detroit, MI; Eva Vera Cruz, RN, BSN, OCN®, Karmanos Cancer Center, Detroit, MI; Cindy Zelko, RN, OCN®, Karmanos Cancer Center, Detroit, MI; Morris Magnan, PhD, RN, Karmanos Cancer Center, Detroit, MI**

Evidence based nursing has been around since Florence Nightingale, yet staff nursing is reluctant and intimidated to actually do evidence based projects. Nurses are taught how to conduct evidence based projects in their academics. Even though these skills are learned, to actually implement the process can be an overwhelming undertaking for the staff nurse. Nurses are faced with decision making every day. When there is a question regarding current practice, the nurse can develop a research question, and do a literature search. If there are differences found in current practice, or questions remain unanswered, it is then that the staff nurse questions the next steps to complete to implement a project. Knowing how to develop a project, and put together a working team can seem like a very daunting task for the nurse. Also knowing the time commitment and work involved for a project can be a lot for a staff nurse to take on. This is the situation we found ourselves in at our institution in radiation oncology. 95% of all radiation oncology patients will develop radiation dermatitis during their treatment. We wanted to try to decrease skin reactions, improve adherence to skin care and improve patient satisfaction with education. The building of our team included the Advanced practice wound care nurse, our PHD prepared nurse and the staff nurses in the radiation department. With their assistance our project was developed and IRB approved. We were also able to obtain a grant from the ONS Foundation for the implementation of this project. Our project has taken us over two years to develop and complete and has come with great learning opportunities for us. We have improved our radiation dermatitis in the head and neck population, patient's were very adherent to our skin care regime, and patients expressed satisfaction with the education they received. The staff nurse has the knowledge and skills to develop and carry out evidence based projects that can increase patient outcomes.

**Underwriting:** ONS Foundation

## Leadership/Management/Education Poster Abstracts

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### **VISUALIZING HAZARDOUS DRUG SAFETY: USE OF SIMULATION LEARNING TO IMPROVE SAFE HANDLING.**

Leah Scaramuzzo, MSN, RN-BC, AOCN®, Billings Clinic, Billings, MT; Jeannine M. Brant, PhD, APRN, AOCN®, FAAN, Billings Clinic, Billings, MT

Studies demonstrate healthcare workers exposed to hazardous drugs (HDs) are at risk for acute and long-term adverse health effects including physical symptoms, reproductive concerns, and development of malignancy. Using personal protective equipment (PPE) reduces risk of developing health problems. National organizations have published guidelines/recommendations for healthcare workers handling HDs and body fluids. On an inpatient oncology unit, nurses identified inconsistent practices in caring for patients receiving HDs and lack of adherence. Lack of knowledge about national safe handling guidelines and access to PPE were contributing factors. The purpose of this project was to increase nurses' adherence to HD safe handling guidelines. A multifaceted approach was employed collaboratively with key stakeholders. Proper PPE was ordered and an electronic medical record (EMR) alert was built, notifying staff of HD precaution patients. An educational curriculum was developed incorporating didactic and hands-on competency evaluation. Objectives included identifying potential adverse effects of handling HDs and demonstrating use of recommended PPE. Using a train-the-trainer approach, skills stations were created and held in the hospital's simulation laboratory. Staff were presented with the following scenarios: HD precaution preparation of patient rooms, disposal of body waste, clean-up of accidental spill of body waste, management of a drug spill, removal/disposal of PPE, and education of the patient/family regarding precautions. Staff rotated through each skill station demonstrating appropriate management. During evaluations, staff expressed learning risks of exposure to HDs assisted in adherence with PPE. Staff noted that real-life patient scenarios better prepared them for patient care. Rounding audits demonstrated 100% guideline compliance. As more hazardous drugs are administered in the inpatient setting, including oral oncolytics, healthcare workers are at increased risk for exposure to HDs. This education model can easily be adapted to educate staff, increase adherence, and confirm competency in safe handling of HDs and body fluids.

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### **STANDARDIZING BMT NURSE ORIENTATION ON AN INTEGRATED HEMATOLOGY/ONCOLOGY/BMT UNIT.**

Fallon Hughes, MSN, RN, OCN®, Penn State Milton S. Hershey Medical Center, Hershey, PA; Jennifer Zimmerman, BSN, RN, Penn State Milton S. Hershey Medical Center, Hershey, PA

A gap was identified concerning effective education and orientation for the nurse caring for a Blood and Marrow Transplant (BMT) patient on an integrated hematology/oncology/BMT unit at a large, academic medical center. Under the Shared Governance model, a team was developed consisting of the unit's Nurse Educator, a member of the nursing management team, and the scheduling committee. The goal of this team was to design a standardized BMT orientation while also creating a consistent scheduling process to ensure appropriate staffing skill mix for the care of the BMT patient. The BMT orientation, typically initiated after 12–18 months of hematology-oncology nursing experience, was designed as a separate module

from general hematology-oncology orientation to the unit. The content for the BMT orientation was based on the standards set forth by ONS, and more specifically, Hematopoietic Stem Cell Transplantation: A Manual for Nursing Practice. The curriculum consisted of twenty hours for completion of the ONS BMT Foundations online course and an additional twenty hours designed to provide various shadow experiences that allowed each nurse to follow the patient through the BMT journey. A BMT core competency checklist, based on the standards set forth by the Foundation for the Accreditation of Cellular Therapy (FACT), documented the skill level achieved by the nurse during the shadow experiences. Nurses who completed the BMT orientation submitted an evaluation for each experience, as well as ideas and solutions for improvement of the program. Early outcomes indicate that the standardized approach to BMT education and orientation produces a confident and competent bedside nurse. Readiness to participate in the BMT orientation is determined by competency and skill in chemotherapy and biotherapy administration, as well as ability to deliver safe, effective care to the oncology patient, as determined during annual employee evaluations. The scheduling committee developed a staffing plan utilizing scheduling software that enabled staff to be distinguished based on level of specialized education, training, and demonstrated competency. Appropriate skill mix and patient assignments were more easily facilitated with this new staffing model.

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### **CAN ADDING A CLINICAL NURSE LEADER TO AN INPATIENT ONCOLOGY UNIT IMPROVE QUALITY OUTCOMES AND PATIENT SATISFACTION.** Kelly Cole, MSN, RN, OCN®, CNL, Medical City, Dallas, TX

Today's healthcare is comprised of fragmented, complex, specialized and siloed systems which produce gaps in communication and increases risk of error. In 2003, the American Association of Colleges of Nursing (AACN) presented the Clinical Nurse Leader role to healthcare and subsequently issued the 2007 white paper describing the role and competencies of the CNL. In 2012, Medical City instituted the CNL role on a medical oncology unit to improve processes and assist nurses in obtaining quality outcomes. The purpose of a CNL to the unit's leadership team was to assess and implement process within the microsystem that would affect nurse sensitive outcomes. By 2013, the CNL obtained trust with staff while setting guidelines for evidence based care at the bedside. Weekly multidisciplinary meetings supported the change of discipline centered care to patient centered care. Physical therapy, dietary, social work, case managers and bedside nurses met weekly to discuss the current plan of care for each patient. The CNL disseminated evidence based practice to the staff on fall prevention and catheter associated urinary tract infections (CAUTI). Falls with injury decreased from a rate of 1.53 in Q4 2012 to 0 in Q1 2015 with the use of "Up with one" or "Up with two" assist signs and improved bed alarm compliance. CAUTIs decreased from a rate of 11.81 in Q1 2013 to 0 in Q1 2015 with implementation of the nurse driven protocol for removing catheters. Central line associated blood stream infections were initially low and stayed at a level rate. The CNL helped hardwire a hospital wide core measure checklist which eliminated venous thromboembolism (VTE) core measure outliers on the medical oncology unit. Hospital Consumer Assessment of Healthcare Providers and Systems was also affected by the addition of the CNL role. Communication with nurses, communication about medicines and pain management went from below the national average in Q4 2012 to the national 95th percentile in Q2 2015. The addition of a CNL to the medical oncology unit showed overall improvement in nursing sensitive indicators from 2012–2015.

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**IMPROVING PATIENT EDUCATION ON ORAL CHEMOTHERAPY: IT'S NOT JUST ANY PILL.** Clare Sullivan, BSN, MPH, OCN®, Dana-Farber Cancer Institute, Boston, MA; Carole Dalby, RN, MBA, Dana-Farber Cancer Institute, Boston, MA; Christine Cleary, Dana-Farber Cancer Institute, Boston, MA; Kaitlin Chesnulevich, RN, BSN, OCN®, Dana-Farber Cancer Institute, Boston, MA; Patricia Rizzo, RN, BSN, Dana-Farber Cancer Institute, Boston, MA; Christine Lilienfeld, RN, BSN, OCN®, Dana-Farber Cancer Institute, Boston, MA

Care of the patient receiving oral agents for cancer (OAC) is complex. Unlike infusion chemotherapy, the patient and caregiver assume more risk and responsibility at home. Essential to patient safety is a comprehensive education package for patients and families. Purpose: To improve patient safety consistent with the ASCO/ONS Chemotherapy Administration Safety Standards, Dana-Farber Cancer Institute (DFCI) implemented an adherence program with a unique initiative to improve OAC education materials. The goal was to educate a culturally diverse audience with evidenced based information, reinforcing critical safety points to reduce overall risk factors. In conjunction with a process improvement plan, a focus group of patients and clinicians created a comprehensive package of improvements that included web content, teaching sheets and four video vignettes that reinforce a critical message: It's not just any pill. Oral chemotherapy is a serious drug that requires extra caution. Success is currently being measured through Press Ganey, a patient survey, and media based analytics. The videos have been viewed in 25 countries representing all continents. Initial feedback. "Having cancer is stressful, but the commonality of the stick figures, with the music generates a positive message regarding oral chemotherapy safety." Print materials on oral chemotherapy safety include an electronic hyperlink to the videos. The teaching materials and videos are available internally and on the DFCI external website in five languages. Innovation: Animated videos have many advantages for the health care community seeking cost effective, efficient and innovative approaches to cancer education. The cost and labor is less than the traditional camera interviews. Revisions and dubbing into multiple languages is much easier. The videos received multiple media awards.

**Underwriting:** Friends of Dana-Farber grant

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**LEVERAGING AN EPIC-BASED ELECTRONIC MEDICAL RECORD TO MEET QUALITY ONCOLOGY PRACTICE INITIATIVE (QOPI) STANDARD #19.** Jayme Cotter, MS, RN, AOCNS®, ACNS-BC, Froedtert & Medical College of Wisconsin, Milwaukee, WI

Many oncology programs are working to attain Quality Oncology Practice Initiative (QOPI) certification. Work to achieve this certification often includes modification of any workflows and/or documentation to meet the 20 QOPI safety standards. One of these standards (#19) speaks to providing patients with written information after chemotherapy teaching has been completed, and outlines specific elements that are required. These elements include diagnosis, goal of therapy, chemotherapy regimen (with schedule, frequency, and number of planned cycles), side effects/risks, practice contact information, and a follow-up plan for monitoring/future appointments. When we reviewed the current practice in our Cancer Center, we identified that there was a consistent process to achieve success with approximately half of these

elements. The evaluation of the written dissemination of the remaining components resulted in inconsistent practice findings. The purpose of this work was to identify a consistent mechanism to meet all elements of the QOPI standard 19, using the electronic medical record. This work was completed in an outpatient Cancer Center of an academic, tertiary medical center in Milwaukee, Wisconsin. The work was started by identifying options to meet the standard, using the electronic medical record that functions on the Epic platform. A team of reviewers was assembled that included staff RNs, nursing shared governance leaders, nurse managers, clinical nurse specialists, and directors. Each option was discussed for its feasibility, potential for standardization, and end-user ease of use. Interventions included: (a) An existing note template that nurses were familiar with was modified to include the essential elements of QOPI standard 19. (b) This new note template was restricted to the After Visit Summary (Epic's written discharge instructions) which was automatically printed out for all patients at the completion of the clinic visit. Implementation of these interventions allowed the practice to (1) standardize the documentation and process for providing the patient with the written information required by QOPI, and (2) create discoverable proof of this process for the QOPI on-site survey. This project could directly impact any clinical oncology practice that uses the Epic platform for its medical record to successfully meet QOPI standard 19, and move towards QOPI certification.

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**IMPACT OF ONCOLOGY COMMUNICATION SKILLS TRAINING ON THE BEDSIDE ONCOLOGY NURSE.** Emily Baird, BSN, RN, OCN®, UPMC Shadyside Hospital, Pittsburgh, PA; Janet A. Cipkala-Gaffin, Dr PH, MN, RN, UPMC Shadyside, Pittsburgh, PA; Mohammad Alrawashdeh, MSN, RN, UPMC Shadyside, Pittsburgh, PA

Oncology nurses report that sufficient communication with newly diagnosed patients is lacking, and often feel unprepared to handle difficult conversations. The goal of this project was to improve the bedside oncology nurse's communication skills when discussing a new diagnosis with their patients. Research has shown that use of oncology communication skills training (OCST) has improved behavior and attitudes, and may improve overall patient experience. Many reviews have been consistent in reporting improved communication behaviors and knowledge of the clinicians at the bedside, with the strongest positive effects seen in nurses. A one hour OCST session was held for Registered Nurses (RNs) on four oncology units over two months. Nurses experienced face-to-face education in a small group setting. Content included techniques to deliver and discuss a new cancer diagnosis, discussion of the patients' illness perception, and barriers to effective communication. Guidelines to communicating with empathy were provided. OCST knowledge was assessed before sessions, immediately after, and at ten weeks. Using one-way ANOVA, there was a significant difference in test scores among pre-intervention, post-intervention, and 10-week time points ( $F_{2,162} = 28.1, p < 0.001$ ). Multiple group comparisons showed that there was a significant improvement in test scores from pre-intervention to post-intervention (Tukey's HSD test,  $p < 0.001$ ). There was a significant decrease in test scores at the 10-week time point compared to the post-intervention scores (Tukey's HSD test,  $p < 0.001$ ) however, the test scores at 10 weeks were still significantly higher than pre-intervention scores (Tukey's HSD test,  $p = 0.007$ ). Including this OCST program into the Oncology RN competency skill-set may improve the nurses' knowledge of communication techniques, although follow-up OCST sessions may be necessary for sustained long term results.

**IMPROVING PATIENT CARE THROUGH ONCOLOGY NURSING INFORMATICS.** Mandy Hendricks, RN, MSN, AOCNS®, Lehigh Valley Health Network, Allentown, PA; Roberta Werkheiser, RN, OCN®, Lehigh Valley Health Network, Allentown, PA; Alfonsina Zolynski, RN, OCN®, Lehigh Valley Health Network, Allentown, PA

In the United States, approximately 14 million people have cancer and more than 1.6 million new cases are diagnosed each year. The American Cancer Society projects the number of survivors will increase from 14.5 million in 2014 to 19 million in 2024. Cancer survivors require long-term care and monitoring to detect and treat recurrence or new cancers and manage long-term treatment side effects. The combination of growing survivors with a suboptimal number of oncology providers led to recommendations to improve survivorship care. The American College of Surgeon's Commission on Cancer requires all of its accredited facilities to implement Survivorship Care Plans (SCPs) by 2015. A multidisciplinary team including oncology administration, oncology nurse leaders, oncology nursing informaticists, tumor registry, and a physician champion at Lehigh Valley Health Network (LVHN) assembled a committee with the goal to develop, implement, and evaluate SCPs. The oncology nursing informatics team worked closely with the multidisciplinary team to develop a general template for the SCPs. The care plan template was incorporated into the Electronic Medical Record (EMR). The template was then expanded to include disease site specific information and tailored to the oncology discipline (medical, radiation, and surgical oncology). To implement, the nursing informatics team identified strategies to incorporate the EMR to cue providers towards integration of the SCPs into their workflow, and also to generate a treatment summary visit for eligible patients. The oncology nursing informatics team then formulated a tool for retrieval of data. To evaluate, the informatics team combined tumor registry data of Stage 0-3 cancers (1323) as a denominator; and the number of patients who received a treatment summary in the EMR as a numerator (209). As of 2014, LVHN has provided 15.8% of eligible patients with a SCP, meeting the CoC goal. With the increasing demand to provide data through integration of EMR, nursing informaticists are directly involved in process improvement projects designed to improve quality of care. Nursing informaticists specializing in oncology are integral members of the team combining innovative solutions powered by technology and a passion to provide quality patient care.

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**OUR JOURNEY OF HOPE® CANCER LEADERSHIP TRAINING EDUCATES PASTORS ABOUT CARING FOR CANCER PATIENTS.** Deborah Selm-Orr, BSN, MS, DNP, RN, CRNP, AOCN®, Cancer Treatment Centers of America, Philadelphia, PA; Aking Beverly, MDiv, MBA, Cancer Treatment Centers of America, Philadelphia, PA

The family and the community become the caregiver when patients are discharged from hospital stays. Discharge planners often struggle to identify potential sources for patient support. Patients with established relationships within a religious community may rely on them to offer care and support during recovery periods after surgery, and during active chemotherapy treatments. Our institution has offered training to clergy and faith communities since 2004. A medical oncologist or oncology nurse practitioner provides an overview of the cancer process, cancer treatments, and a question and answer session. Purpose: Discuss the purpose of community spiritual outreach with the Our Journey of Hope® program,

which educates clergy about the cancer process, and psychosocial aspects of being diagnosed with cancer. The goal is to reach 200 pastoral partners each year. In 2015, the program has been presented to 178 pastors to date. The program is now offered onsite, inviting pastors to the center for two days of presentations that detail the challenges for the clergy in ministering to cancer patients, and offer ideas for establishing a cancer care ministry for the congregation. Leadership materials are provided that provides participants with tools for use with their congregation. Findings and Interpretation: Participants offer positive feedback on evaluations. Each section and presenter is evaluated using a Likert-type scale. The scores for the "Cancer Process" lecture have consistently been excellent. Questions and answer periods also serve to focus the potential areas to enhance future programs. Nurses play an integral role in providing up to date and evidenced-based information to not only their patients but to the community as well. Programs like Our Journey of Hope® create a venue to impart current thought on cancer as a disease. Providing information to this community on cancer risk, cancer prevention, and cancer treatment empowers the community to offer support to those who are facing this diagnosis.

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**NURSING LED MONTHLY MULTIDISCIPLINARY DISCUSSION ROUNDS TO PROMOTE COMPASSIONATE CARE.** Eric Zack, DNP, RN, ACNP-BC, AOCN®, BMTCTM, Rush University Medical Center, Bolingbrook, IL

Promoting compassionate care and alleviating the negative effects of moral distress that oncology healthcare professionals (HCPs) experience is vital. Rush University Medical Center's (RUMC) Nursing Engagement Survey (NES) in 2008 revealed staff nurses felt they were not supported. Few evidence based (EB) practices exist to help HCPs effectively deal with stressful situations practically encountered every day. Schwartz Center Rounds® (SCRs) is a national EB model that (1) shares caregiver insight into the realm of compassionate care, (2) promotes self-care measures, and (3) alleviates the effects of moral distress on HCPs in most settings. We wanted to (1) utilize a forum where caregivers from diverse disciplines discuss non-clinical aspects of care (emotional and psychosocial issues) that arise while caring for challenging patients and their families, friends, and/or significant others, (2) initiate a discussion with the panel and audience guided by a facilitator that fosters personal connections and improves caregiver's insights into their own responses, personal ideas, thoughts, and feelings, and (3) incorporate human and emotional factors into patient care. We implemented the Schwartz Center Rounds program. Although it was offered hospital-wide to include all specialties, the sessions showcasing oncology cases and oncology staff as panelists provided a catharsis that proved to be powerful, emotional, and therapeutic for all who attended. We consistently and significantly increased our NES scores (specifically my hospital helps nurses deal with stress and burnout) from a baseline of 17.5% in 2008 to 31% in 2013 surpassing national benchmark after offering the program for four years. Specific participant comments will also be shared. SCRs is a unique interdisciplinary discussion forum that (1) contributes to improving communication, (2) strengthens teamwork, (3) provides insight into non-clinical aspects of care, (4) develops an appreciation of others' roles and contributions, (5) promotes compassion towards patients and their families' needs, and (6) fosters openness to giving and receiving support from colleagues. It was vital to obtain organizational support, understand and meet the needs of the multidisciplinary audience, and offer interesting and varying topics that impact all disciplines, specialties, and healthcare settings.

### **DEVELOPING IMMUNOTHERAPY EDUCATION RESOURCES FOR PATIENT EDUCATION.** Donna Williams, RN, PHN, Stanford University, Palo Alto, CA; Kristine McGlennen, MS, RN, Stanford University, Palo Alto, CA; Melissa Worman, MPH, Stanford University, Palo Alto, CA

There has been much anticipation and excitement for an emerging class of agents called 'checkpoint inhibitors', or immunotherapy, within the Oncology community. To date, the FDA has approved three immunotherapy agents: ipilimumab and two PD-1 antibodies (pembrolizumab and nivolumab). In contrast to traditional tumor targeting, these agents activate the immune system to remove inhibitory pathways that block T-cell activity. The side effects of these agents differ dramatically from traditional cytotoxic chemotherapy. Immune-related adverse effects may be as subtle as fatigue (a prodrome of thyroiditis). More severe symptoms such as a cough (secondary to pneumonitis) or unrelenting diarrhea (related to colitis) may require steroids, dose interruption and/or discontinuation. Proper symptom management requires nurses and patients to be educated about the immune-related adverse events unique to immunotherapy so we can be vigilant in monitoring and reporting these new side effects. The caveat to the exciting new advances associated with immunotherapy is that the durable responses observed to date are limited to a subset of patients. Ongoing research seeks to understand if predictive biomarkers will help clinicians identify patients likely to respond to these agents. It is critical that we develop educational resources to help patients and their families, nurses and community practitioners understand the genetic targets likely to identify responders as well as how these treatments work. There are few nursing articles or teaching materials available to assist patients in understanding how these targeted therapies work, who can benefit, and which side effects are specific to these new treatments. We propose development of an online education tool (YouTube® video) targeted to patients and caregivers which would help to understand basic concepts related to these new agents. The benefits of developing an online patient resource is that it can be easily disseminated, and can be reviewed at leisure by patients and their caregivers. Nurses are key in developing patient education programs. Clinical trial nurses offer additional expertise, as they have the most experience in side effect management for these new agents. We must share our experience in ways that patients, families and community practitioners have access.

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### **HEALING THE HEALERS.** Patricia McTague Allen, RN, MSN, FNP-BC, Memorial Sloan Kettering Cancer Center, New York, NY; Maureen Laffey, RN, BSN, Memorial Sloan Kettering Cancer Center, New York, NY

Patients on this medical oncology unit confront terminal prognoses and are often admitted for palliative care measures and end of life concerns. Actualizing Relationship Based Care, staff form significant and long-term relationships with oncology patients and their families. Living with the finality of these special relationships causes considerable distress. A decrease in staff morale was on exhibit in reaction to the continued stress and emotional weight of coping with substantial loss. In response to an increase in traumatic events and patient deaths, Nursing Leadership identified a need to cultivate staff healing. While many organizational programs exist to build staff resilience in coping with the effects of oncology nursing, a limited number of staff actually participate and benefit. However, initiatives brought directly to the unit better promote increased staff involvement and have greater impact. With collaboration

among varied disciplines, a range of offerings have been made available on this oncology unit to combat stress and emotional fatigue. Interventions: Encompassing clinical experts from Social Work, Chaplaincy, and Psychiatry, a Crisis Debriefing Team was arranged to provide an immediate forum for staff to help process a challenging event with the goal of attaining closure. To respond to the stress of a particular shift, Massage Therapists perform chair-side back massages to interested staff. In partnership with Integrative Medicine, a weekly 'De-Stress Class', Relax, Refresh & Renew, is readily accessible on the unit. Bi-weekly Meditation sessions further advance staff healing. Quarterly, Nursing coordinates a Remembrance Ceremony and gathers for a reflective opportunity to contemplate loss in the sanctuary of our chapel. Unit results from the 2013 NDNQI RN Satisfaction Survey revealed an opportunity to address compassion fatigue. Attendance, participation and feedback to initiatives now delivered at the unit level demonstrate favorable results. Discussion: To help staff heal from their involvement in a traumatic event or grief surrounding a patient death, deployment to the unit of a Crisis Debriefing Team and other targeted interventions allows for timely discussion and exploration of feelings to preserve and maintain the emotional health of oncology nurses. Innovation: Creative approaches and sustainable programs to nurture healing.

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### **IMPLEMENTING AN EVIDENCE-BASED PRACTICE APPROACH TO IMPROVE PERCEPTION OF NURSE-PATIENT COMMUNICATION AT THE BEDSIDE.** Lyn Zehner, MN, RN, AOCN®, AOCNS®, Inova Alexandria Hospital, Alexandria, VA; Rachel Watson, BSN, RN, Inova Alexandria Hospital, Alexandria, VA; Kimberley George-Shields, BSN, RN, Inova Alexandria Hospital, Alexandria, VA; Sandy Danquah, BSN, BA, MHA, Inova Alexandria Hospital, Alexandria, VA; Carrie Friedman, BS, RN, Inova Alexandria Hospital, Alexandria, VA

Patients spend more time with nurses when in the hospital than with any other health care professional. Patient experience scores, particularly the dimension Communication with Nurses, correlates with improvements in other HCAHPS dimensions. As patient experience scores are tied to Medicare reimbursement, nurses have an impact on reimbursement. The purpose of this EBP project was to develop a high-impact communication strategy that nurses and clinical technicians would implement on a 29 bed medical oncology unit. Purpose: (1) Develop a high impact nurse communication strategy when interacting with patients at the bedside. (2) To achieve an improvement in the HCAHPS score dimension Communication with Nurses. Literature was reviewed, rated, and ranked utilizing the John Hopkins EBP model. The team collaborated to develop strategies for improving communication. The interventions consisted of sitting at the bedside, utilizing body language, and attention to eye contact when using equipment or the white board. Staff received training and participated in role playing to assist in implementing the strategies. A survey was developed to elicit feedback from staff regarding the new communication behavioral strategies. Analysis: The Nurse Manager monitored strategy implementation during patient rounding with 89% of patient visits reporting "Yes to sitting." 94% of RNs and 78% of CTs felt comfortable sitting at the bedside. Environmental factors accounted for a majority of the barriers to sitting, with the top 3 barriers being too many visitors, unavailable chair, and patient in isolation. Both RN and CT reported patient load impacted ability to sit at the bedside. Evaluation: The nurse communication score improved from a score of 72% for Quarter 1 of 2015 to a high of 88% for Quarter 3 (July-August data). Other domains improved, including Pain

management 61% to 84.6%; Communication about Medication 55% to 73% and the Overall Rating moved from 54% to 71%. Prior to implementation of the nurse communication strategy, the HACHPS scores reflected an opportunity for improvement in patients' perception of nurse communication dimension on a medical oncology unit. Implementation of the new strategy have contributed to improvement in patient satisfaction.

**Underwriting:** 2015 Evidence-Based Practice (EBP) Fellowship Program, Inova Nursing Research and Evidence-Based Practice Council, Inova Health System

## 121

**“FLU ON THE GO” AN EFFECTIVE PROCESS TO INCREASE FLU VACCINATION COMPLIANCE: IMPLICATIONS FOR NURSING LEADERSHIP.** Jacquelyn Burns, MA, RN, NE-BC, Memorial Sloan Kettering Cancer Center, New York, NY; Natasha Ramrup, MSN, RN, OCN®, AOCNS®, CNS, Memorial Sloan Kettering Cancer Center, New York, NY; Sandra James, MS, RN, OCN®, AOCNS®, CNS, Memorial Sloan Kettering Cancer Center, New York, NY; Debra Rodrigue, MS, RN, BC, Memorial Sloan Kettering Cancer Center, New York, NY

The Centers for Disease Control and Prevention (CDC), recommend that all U.S. healthcare workers receive vaccinations annually against influenza. By receiving annually vaccinations hospital employees may reduce the transmission of influenza, staff illness and ultimately influenza-related mortality and morbidity for patients. Vaccination of health care workers is definitely a clinically worthwhile benefit. Prevention of influenza is of utmost importance among employees at this NCI-designated cancer center where highly susceptible immunocompromised patients are treated daily. The purpose of the influenza vaccination initiative was to increase the percentage of staff receiving the vaccine and to decrease the risk of illness for both staff and patients. A 24/7 two week flu clinic was initiated in 2009 to accommodate the NYS mandatory influenza vaccinations of all health care employees. Following that year, various methods to increase staff compliance were added to the clinic. “Flu on the Go” was created—a team of nurses traveling throughout the hospital administering “on the spot flu shots.” Additionally, Vocera a hands free communication tool was utilized to enable direct care staff to call for the flu shot RN to receive their vaccination from the mobile flu team any time. Flu Fighter stickers were proudly worn, by those that received their flu vaccine. “Vaccination compliance of nurses has increased over the past few years from 64% in 2011 to 93% in 2014. In the first two weeks of the 2015 campaign, over 3500 employees have been vaccinated. A goal was set for both day and night Flu RN which was easily accomplished with over 500 flu vaccine administered each day with the first week of “Flu on the Go”. Staff verbalized appreciation for convenience of receiving vaccination without having to leave their clinical area. Cancer patients are generally immunocompromised and thus may be more at risk for complications, hospitalizations and deaths from influenza. The Vaccinations of employees who have the closest and most intimate contact with immunocompromised patients may reduce the incidence of clinical influenza. These creative and innovative strategies can easily be adopted in any institution to maximize immunization rates to protect patients and employees.

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**“LIVING WITH SARCOMA: FACING TODAY WITH HOPE FOR TOMORROW”: A PATIENT-FOCUSED EDUCATIONAL EVENT.** Tracy Erlitz, RN, BSN, OCN®, Froedtert Hospital, Milwaukee,

WI; Amy Newman, RN, MSN, CPNP, Children's Hospital of Wisconsin, Milwaukee, WI

Along with the diagnosis of cancer comes the need for physical, educational, psychosocial and spiritual support. This support is required for patients who are both on and off treatment. Ongoing support is provided to patients and their families through frequent contact with a multidisciplinary team in the outpatient and inpatient settings, but these opportunities are time-limited and little opportunity exists for patients and families to interact with other patients and families in a formal fashion. The pediatric and adult sarcoma programs from Children's Hospital of Wisconsin and Froedtert and the Medical College of Wisconsin saw this as an opportunity to collaborate and create a patient-focused educational event. The event “Living with Sarcoma: Facing Today with Hope for Tomorrow” began in 2012 with a short weeknight event, and has since evolved into a day-long weekend event. A nurse practitioner and clinical nurse coordinator in consultation with a patient and family advisory group and the affiliated medical teams have developed and overseen the events. The agenda aimed toward people of all ages generally includes a keynote speaker, updates on the sarcoma programs, breakout sessions, resource booths, patient speakers, and opportunities for patient and family connections. Resource booths include both internal departments such as social work and dietetics as well as external organizations like Imerman Angels. The highlight of the events has been hearing the stories and inspiring words from sarcoma survivors. Through formal evaluations attendees have rated the event highly, commenting on the great opportunity to network with other patients and to engage the medical team. This annual event has also provided a unique opportunity for staff to interact with patients and families outside of the hospital and collaborate with sarcoma team members across campus. The event has allowed patients to have improved access to resources within and outside of these healthcare systems, increased knowledge regarding disease processes, and an opportunity for those with a rare disease to network with other patients and families facing similar diagnoses. This program can serve as a template for oncology nurses in different subspecialties to create similar educational programs for their unique patient populations.

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**CHEMOTHERAPY EDUCATION IN THE NEWLY DIAGNOSED CANCER PATIENT.** Myra Johnson, BSN, RN, OCN®, Baylor University Medical Center, Dallas, TX

Chemotherapy education in the newly diagnosed cancer patient is a complex subject for patients facing a new diagnosis with the accompanying emotions. The oncology nurse has the opportunity to provide a foundation for the chemotherapy experience by preparing the patient and their family for treatment and the management of side effects. Educational information provided will assist with issues that arise along the disease trajectory. Nurses can help reduce anxiety and fear and improve the learning process by providing information and utilizing a variety of teaching techniques. The objective is to assess current strategies in place for chemotherapy education and the resources provided to the inpatient population. Handouts on chemotherapy drugs are provided by nurses from a variety of sources. Verbal teaching depends on the education level and the comfort level of the nurse providing the education. There is a lack of consistency in the use of the Electronic Health Record as a teaching tool for information related to disease process and chemotherapy education. An additional facet is providing patients with reputable online resources for information and pamphlets to use as a reference. Nurses were surveyed to assess current practice. Additionally, patients were queried to

provide feedback on their individual education experience. After analysis, a checklist was developed to guide nurses as they interact with the newly diagnosed cancer patient receiving chemotherapy. As part of the evaluation process, an outline was created to detail content to be covered in a patient focused chemotherapy video (pending development). Staff as well as patients will be resurveyed to assess changes in practice. This evidenced based practice project focused on patient views of the nursing education processes as related to chemotherapy and associated side effects as well as actual nursing actions in the delivery of chemotherapy education to patients. A comprehensive education plan that delivers up to date information in an educational format preferred by the patient can facilitate timely discussion and resolution of issues that arise along the disease trajectory.

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**BY NURSES, FOR NURSES: A SUCCESSFUL EDUCATIONAL INTERVENTION THAT IMPROVES KNOWLEDGE RELATED TO IMPROVING THE CARE OF PATIENTS WITH MULTIPLE MYELOMA.** Beth Faiman, PhD, MSN, APRN-BC, AOCN®, Cleveland Clinic Taussig Cancer Institute, Cleveland, OH; Patricia M. Repetto, M.Ed, Medscape, LLC, New York, NY; Emily S. Van Laar, MS, Medscape, LLC., New York, NY

Given the rapidly changing landscape in evidence based treatment of patients with multiple myeloma (MM), oncology nurses require education on strategies to prevent or, when they do occur, to manage the adverse effects associated with MM treatment including awareness of drug/supplement interactions and contraindications, need for supportive care, monitoring myeloma-relevant lab results, and providing caregiver support. Purpose: To improve nurse's knowledge related to MM. A web-based video educational program designed as a roundtable discussion among nurses and tailored to a nursing audience was posted on Medscape Oncology in June 2015 (<http://www.medscape.org/viewarticle/846311>) and was assessed using a pre-education assessment/post-education comparison study design. This study design compared each participant's responses to questions posed before exposure to educational content (pre-assessment) with his/her responses to identical questions posed after exposure to the educational content (post-assessment measurement). Between June 29, 2015, and September 1, 2015, more than 10,300 nurses participated in the activity, of which 1241 (those who completed all pre and post education assessment questions) were assessed. Participation in this educational program resulted in a robust effect size seen among nurses ( $V = 0.155$ ;  $p < 0.05$ ). Specifically, Oncology Nurses demonstrated ( $p < 0.05$ ): (a) 20% improvement in ability to recognize the need for ordering a baseline echocardiogram for a patient with MM and congestive heart failure before starting carfilzomib treatment; (b) 27% improvement in knowledge that subcutaneous bortezomib can be substituted for intravenous bortezomib in patients with MM undergoing treatment with panobinostat, bortezomib, and dexamethasone in order to reduce the risk of gastrointestinal toxicity; (c) 32% improvement in recognition that green tea and vitamin C have been shown to adversely interact with bortezomib therapy. This is a large study which demonstrated the success of a web-based nursing-focused educational initiative designed by nurses for nurses to improve the care and management of patients with MM. Although significant improvement was observed, it is clear that additional education is needed to address ongoing gaps in the areas of recognizing the contraindications of MM therapeutic agents, identifying strategies to prevent or minimize adverse effects of MM treatment, and identifying drugs, supplements, or other compounds that may adversely react with MM therapeutic agents.

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**REVITALIZATION OF ONCOLOGY NURSING GRAND ROUNDS.** Donna Viner, MS-N.Ed., RN, OCN®, Smilow Cancer Hospital at Yale New Haven, New Haven, CT; Donna Andruskiwec, BSN, RN, OCN®, Smilow Cancer Hospital at Yale New Haven, New Haven, CT; Dawn Blake-Holmes, MSN, APRN, CCNS, Smilow Cancer Hospital at Yale New Haven, New Haven, CT; Cara Henderson, BSN, CMSRN, Smilow Cancer Hospital at Yale New Haven, New Haven, CT; Desiree Sanchis, BSN, RN, OCN®, Smilow Cancer Hospital at Yale New Haven, New Haven, CT; Michelle Randall-Doran, BSN, RN, OCN®, Smilow Cancer Hospital at Yale New Haven, New Haven, CT

The challenge of providing relevant educational opportunities to ambulatory oncology practices was a concern of the Oncology Cluster council of the Nursing Shared Governance group. Purpose: To design, develop, and implement an Oncology Nursing Grand Round (ONGR) CEU program which can be accessed and viewed by nurses at the Smilow Cancer Hospital and Smilow Cancer Care Centers (SCCC) located in ambulatory practices across CT. Before expansion of Smilow oncology services into the community, oncology nursing grand rounds (ONGR) were attended by nurses working the day, evening, or night shifts at the hospital's main campus. Nurses requested opportunities for educational programs with continuing education credits (CE) without traveling to the main campus. With the implementation of a Shared Governance Model, the Oncology Cluster Council (OCC) chose to revitalize the ONGR. A subcommittee of OCC members was created to redesign, redevelop, and implement the ONGR program to incorporate the off-site Smilow locations. Members' responsibilities included coordinating the speakers, scheduling, obtaining speaker information for CEU submission, coordinating video streaming, process development dealing with remote attendance capture, best ways to communicate programs to nurses, and evaluation process. ONGR were scheduled monthly starting in July 2014 for all Smilow locations. The redesigned ONGR program was presented live and via intranet for viewing by nurses in the network sites in July 2014. Attendance sheets were emailed electronically to network sites, scanned and returned for the CEU process. Nursing feedback identified the Livestream program was difficult to hear and view due to delays in transmission of the images. During 2015 program planning it was decided to set a goal to increase overall attendance for all ONGR programs. Changing from a Livestream to WebEx format provided improved audio and visual quality and moved programs from a large function space to smaller venues on campus. To date 189 nurses have attended ONGRs either on campus or online from July 2014 to June 2015. Eighteen nurses accessed Livestream programming versus fifty-seven with WebEx after only four programs. Ongoing evaluation and process changes are occurring to continue to increase nursing participation.

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**QUIET! NOISE REDUCTION ON A HEMATOLOGY ONCOLOGY UNIT.** Mary Beth Leo, BSN, RN, Memorial Sloan Kettering Cancer Center, New York, NY; Kerry King, BSN, RN, Memorial Sloan Kettering Cancer Center, New York, NY; Colleen McGlynn, BSN, RN, Memorial Sloan Kettering Cancer Center, New York, NY; Danielle Donlon, BSN, RN, Memorial Sloan Kettering Cancer Center, New York, NY; Lindsay Kenworthy, BSN, RN, Memorial Sloan Kettering Cancer Center, New York, NY; Megan Hanley, BSN, RN, Memorial Sloan Kettering Cancer Center, New York, NY

Noise, or unwanted sound, is one of the most frequent patient complaints on acute care oncology units. Research has shown

a link between noise disruptions and spikes in blood pressure, impaired immune function, and pain management. Members of the clinical nursing staff on the hematology unit at this comprehensive oncology center found on review of patient satisfaction scores they consistently ranked below hospital average in noise level. It was identified as one of the priority issues affecting patient experience. The purpose of the project was to enhance the patient experience by implementing evidence. In October 2014, the unit-based council began unit-wide education to nursing and ancillary staff raising awareness of noise and its effects on healing. In collaboration with Nurse Leadership, noise reduction measures were implemented to create an environment that supported patient needs. These measures included disabling the overhead paging system and removing all telephones from the hallways. Utilization of wireless voice communication through vocera increased. Telemetry alarm pagers were set to vibrate only. Cell phone use was prohibited in hallways. Interdisciplinary rounds began after 8 am. Bedside handoff occurred in designated areas outside the patient room. Quiet hours were instituted from 11 pm to 6 am and point of care was coordinated to reduce unnecessary entry into patient rooms. Also, during this time computer monitors were shut off, lights dimmed, and complimentary ear buds were provided upon request. Pre-project patient-satisfaction scores on the unit, as measured by Press Ganey, consistently ranked below hospital average in 4 out of 5 quarters. After completion of staff education and implementation of noise-reduction measures, patient-satisfaction scores rose above the hospital average in three consecutive quarters, an increase of 3%. Implications for clinical practice include ongoing education and tracking processes to measure compliance of noise reduction strategies.

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**PREVENTING THE FIRE, SO YOU DON'T BURNOUT!** Melissa Varda, RN, BSN, CPHON, Memorial Sloan Kettering Cancer Center, New York, NY; Emily Long, MSN, FNP-BC, CPHON, Memorial Sloan Kettering Cancer Center, New York, NY; Michelle De La Ossa, RN, BSN, CPHON, Memorial Sloan Kettering Cancer Center, Miami, FL

Learning Objectives: (1) Educate about burnout and compassion fatigue. (2) Provide a tool for nurses to identify the signs and symptoms of burnout and compassion fatigue in themselves and their colleagues. (3) Understand strategies to prevent or help alleviate burnout and compassion fatigue, and what resources are available at the institution. Burnout and compassion fatigue are ever increasing conditions among medical professionals, specifically nurses. The oncology specialty is a unique subset of nursing that can take a toll on nurses mentally, physically and emotionally. In the Annual Review of Psychology, burnout is defined as a "prolonged response to chronic emotional and interpersonal stressors on the job, and is defined by the three dimensions of exhaustion, cynicism, and inefficacy." Compassion fatigue is described by Sabo as "severe exhaustion, which occurs after providing continued care to individuals enduring pain or suffering." We recognized that in order to give our patients and their families the best care possible, we must first be able to care for ourselves. We performed a literature review about both burnout and compassion fatigue, specifically focusing on their impact on pediatric oncology nurses. We created a presentation to educate our colleagues about both conditions. The signs and symptoms were highlighted, so nurses can better recognize red flags in themselves and one another. We identified the resources available at Memorial Sloan Kettering Cancer Center (MSKCC), and provided the staff with places and ways to utilize them. Some strategies to prevent burnout or compassion fatigue that we found achievable within MSKCC are debriefing, end of life edu-

cation, a unit resource nurse and a self care program. Pediatrics has implemented a float/resource nurse, debriefing and created the PASTRY Program, to promote self care and rejuvenation. We have set out to provide hope not only for our patients, but for ourselves.

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**STARTING AT ZERO! A PROGRAMMED APPROACH TO ONCOLOGY NURSES ACHIEVING HOSPICE AND PALLIATIVE CARE CERTIFICATION.** Dawn Blake-Holmes, MSN, APRN, CCNS, Smilow Cancer Hospital at Yale New Haven Hospital, New Haven, CT; Mandeep Smith, BSN, RN, Smilow Cancer Hospital at Yale New Haven Hospital, New Haven, CT

At Smilow Cancer Hospital (SCH), nurses caring for patients at the end of life were not certified in the specialty of Hospice and Palliative Care. Evidence has demonstrated that nurses provide advanced care and improved outcomes when certified in their specialty. However, in a large organization that spans the acute care and ambulatory setting created many challenges. An educational program to support the achievement of certification of nurses in Hospice and Palliative Care was developed utilizing technology to overcome geographic barriers. Purpose: To develop and implement a review course to prepare nurses for the Certified Hospice and Palliative Nurse (CHPN) Examination. An 8-week review course was developed based on the CHPN examination blueprint. The course was offered using Go To Webinar By Citrix® technology and live sessions simultaneously to all oncology nurses within SCH. Content experts were enlisted to provide weekly one-hour review sessions on the topic adapted from the exam blueprint. Case studies, exam questions, polling, and didactic content were utilized during the review sessions. All participants, regardless of location, were able to actively participate in group discussion. Each class was recorded and made available to participants. Newly certified nurses were asked to provide examination feedback and support related to the exam and process. Continuing education credits were provided for each session attended. Following each session, an evaluation was electronically forwarded to participants for feedback and comments. After running the program for two 8-week sessions, 30 nurses participated in the program and 15 have achieved certification. We went from a Zero certification rate to 50% of those who participated in the review class. Utilizing technology enabled us to meet the needs of nurses from a variety of locations across the Health System. This technology has been instrumental in achieving certification success mostly in the ambulatory setting; a group often isolated from programs due to geographic barriers.

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**ESTABLISHING INFUSION CENTER SCHEDULING GUIDELINES TO ACCOMMODATE INCREASING GROWTH.** Aileen Ewin, RN, MSN, OCN®, UCSD Moores Cancer Center, La Jolla, CA; Monette Santos-Moss, RN, MSN, OCN®, UCSD Moores Cancer Center, La Jolla, CA

The UCSD Moores Cancer Center in La Jolla, California is one of 44 NCI-designated Comprehensive Cancer Centers in the United States. The Moores Infusion Center (IC) has 58 treatment chairs. In 2014, the IC had approximately 38,000 patient visits. From April 2013 to April 2014, IC patient volume increased by 28%. With this dramatic increase in patient volume, improvements in patient scheduling were needed. Purpose: To establish IC Scheduling Guidelines: (a) to more accurately and efficiently schedule patient appointments, (b) to accommodate the infusion center growth Interventions: In October 2013, IC nursing management established a Project Team, which documented approximately 220 active treatment plans and developed

Scheduling Guidelines. The Guidelines distinguished treatments “ready” to proceed vs. those requiring prior lab draws and further lab result evaluation before patients could start treatment. Based on Guidelines, “ready” scheduling avoided peak IC operations hours: M-F, 10 AM–2 PM. Based on a survey of IC schedulers, schedulers report that the Guidelines allow more accurate and efficiently-scheduled patient appointments. Based on implementation of Scheduling Guidelines, the infusion center was able to accommodate another 16% growth from April 2014 to April 2015. Every 6 months, the Project Team and other stakeholders (Pharmacy, Cancer Center Nursing) review and update active treatment plans and revise the Scheduling Guidelines. A literature review did not produce any published recommendations to improve scheduling in an outpatient IC. Therefore, the IC Project Team—using a detailed process—documented approximately 220 active treatment plans and developed Scheduling Guidelines. With Guidelines now established, IC patient scheduling is based on a realistic framework. The Team’s latest review added an approximate 60 additional treatment plans and Guideline refinements, which included revised scheduling patient criteria and targeted times to schedule patients. The project’s next phase will integrate these Scheduling Guidelines with metrics determining patient acuity.

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**THE VALUABLE ONCOLOGY NURSE PRECEPTOR.** Donna Colabroy, RN, MSN, AOCNS®, Lehigh Valley Health Network, Allentown, PA; Maura Price, RN, BSN, OCN®, Lehigh Valley Health Network, Allentown, PA

Quality Cancer care begins with a proficient team of oncology professionals. According to the American Cancer Society (ACS), in 2014, there were 14.5 million persons with a history of cancer alive in the United States (US), with the expectation that in 2015, there will be 1.6 million new cancer diagnoses. Many of these patients will be treated with newly emerging chemotherapy, biotherapy, or targeted therapies that require current knowledge, skills, and expertise from oncology nurses. Nurses new to the field of oncology need hands-on instruction and training from experienced preceptors. The close interaction with an involved preceptor enables the development of a highly specialized skill set in the new oncology nurse. A positive orientee and preceptor relationship promotes nursing satisfaction and retention of new nurses. If the connection between orientee and preceptor remains strong, the preceptor may develop into a mentor over time. Oncology nurse leaders at Lehigh Valley Health Network (LVHN) met to formulate ideas that would foster the development of oncology nurse preceptors into the role of teacher/mentor. Current preceptor roles and responsibilities were evaluated. Feedback regarding challenges encountered by both orientee and preceptor were discussed. The group concluded that a restructuring of the existing preceptor model was needed. Key concepts that emerged from team brainstorming sessions included a need to recognize and support preceptors while encouraging mentorship. A preceptor program was developed to provide oncology nurse preceptors with education regarding adult learning principles, effective teaching and communication strategies, support for compassion fatigue, and the value of mentoring. The course challenges oncology nurses to evaluate the characteristics of an effective preceptor and a competent learner. The program has been successfully implemented at LVHN. In a follow-up 12 week evaluation, 100% of participants reported improvement in their preceptor skills. Multiple requests to broaden the course to include allied oncology health professionals have been received. There is an imperative need for skilled oncology nurses. Innovative strategies for supporting nurse preceptors and retaining new oncology nurses is essential to the contin-

ued quality care provision for the expanding oncology patient population.

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**PROMOTION OF ONCOLOGY EDUCATION: CRITICAL THINKING SKILLS VIA ALGORITHMS.** Rebecca Collins, RN, BSN, OCN®, CHPN, Ohio’s Hospice, Dayton, OH

Ohio’s Hospice (OHI) cares for over 100 oncology patients a month. The nursing staff caring for these patients was noted to have minimal background in oncology. Symptom management for such patients is very specialized. There was a need for effective approach to disseminate symptom management options to all nurses caring for oncology patients. There was an identified need for education based on evidence based practice (EBP) guidelines to our nursing staff caring for oncology patients. This education needed to be understood and easily utilized by nurses that have minimal background in caring for oncology patients. Critical thinking skills were needed when providing a thorough assessment and reviewing possible interventions for oncology patients under our care. OHI utilized a team approach that included a RN with OCN certification, Medical Director with certification in palliative care, and the education department. Intensive literature research was compiled and reviewed for current EBP guidelines. Algorithms were constructed to guide the nurse through reported symptoms and effective interventions. All nurses were required to attend lectures and showed mastery by completion of a test. Algorithms were included in mandatory disease management courses, complex case meetings and placed on intranet. Oncology Specific Algorithms are utilized throughout the plan of care. Case studies will be presented on specific positive outcomes achieved. All nursing staff passed mandatory exam regarding utilization of this intervention. This will show an effective option in caring for oncology patients by utilizing the knowledge of an OCN prepared RN in a team approach. Algorithms used show promise in replication for use to manage and triage oncology patients in multiple settings and hospice. Promotes the clinical expertise needed when caring for such a population. The oncology patient has specific needs that continue during journey. Recognizing the need for specific measures for symptom management of these patients through all levels of the continuum is needed. Such educational interventions are rare for this patient population near end-of-life. The use of algorithms to direct critical thinking skills is an innovative way to provide the highest quality of care to patients during times of need.

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**USING A SHARED GOVERNANCE FRAMEWORK TO ADDRESS INCREASED PATIENT VOLUME IN AN INFUSION CENTER.** Adrienne Banavage, MSN, RN-BC, OCN®, UVAHS, Charlottesville, VA; Margaret Kellison, RN, UVAHS, Charlottesville, VA; Veronica Brill, MSN, NEA-BC, UVAHS, Charlottesville, VA; Denise James, MSN, RN, NEA-BC, UVAHS, Charlottesville, VA; Jody Reyes, BSN, MBA, RN, OCN®, UVAHS, Charlottesville, VA

Our ambulatory infusion center saw a 40% increase in the number of visits from 2014 to 2015. This growth was not anticipated and resulted in challenges to patient flow and employee engagement. A shared governance framework was identified as the ideal method for simultaneously addressing patient and staff needs. A group of staff nurses partnered with the nurse manager to address the issues surrounding this increase in volume. In 2014 an assessment of current state revealed opportunities to enhance The Access Center (TAC). The TAC was staffed by 2 LPNs who accessed central venous access devices, started pe-

ripheral IVs and drew labs from PICC lines. The staff identified that additional personnel to allow for more appointments, as well as greater access to the RN staff would improve throughput and support to the LPN staff. Initially one of the infusion center RNs rotated to the TAC however this did not have the desired impact. In late 2014 the staff recommended a reconfiguration of the infusion center space along with moving the function of TAC and the LPN staff to the infusion center. This move proved to be efficacious resulting in increased appointment availability and improved staff engagement, with one nurse stating “This move is utopia”. The workgroup continued to identify opportunities as the volume continued to increase. In July of 2015 the group recommended utilization of a beeper system for patients waiting for laboratory results as well as targeting specific treatments, short in duration, to be delivered by the LPNS and RNS in one area within infusion. This move occurred in September 2015 and was referred to as “Fast Track”. Tools were created to evaluate patient and employee satisfaction and data was collected pre-intervention and will be recollected in October 2015. The utilization of a shared governance framework to address issues of efficiency and practice environment fostered an enhanced sense of team, resulting in increases in staff satisfaction, as measured by the Gallop survey from 3.68 to 3.89 and an increase in the “my team members are committed to quality from 4.24 to 4.5 while meeting patient needs.

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**CREATING AND UTILIZING AN INCLUSIVE SKIN CARE BINDER TO PREVENT PRESSURE ULCERS IN ONCOLOGY PATIENTS.** Meira Friedman, RN, BSN, OCN®, NYU Langone Medical Center, New York, NY; Donna O’Neill, RN, BSN, OCN®, NYU Langone Medical Center, New York, NY; Sarah Lebovitz, RN, MSN, ANP-BC, CWOCN, DAPWCA, NYU Langone Medical Center, New York, NY; Elizabeth Savage RN, MSN, ACNS-BC, CWON, NYU Langone Medical Center, New York, NY

As Oncology Certified Nurses at NYU Langone Medical Center, we are sensitive to the special needs of our unique patient population. As active members of the Skin Care Council, we noticed a lack of standardization of skin care on our unit. After working closely with the Wound Care Team, we devised a comprehensive skin care binder specific to our patient population. The goal of the binder is to provide the staff nurses with a resource to help them develop the confidence and knowledge to care for and prevent pressure ulcers in patients with cancer. The goal of this project was to establish a readily accessible resource for the staff nurses to use as a guide in providing appropriate skin care for oncology patients. Interventions: The skin care binder provides information on numerous topics of skin care ranging from documentation, skin care tools, ordering specialty beds and boots, hospital skin care protocols, and online resources for support. Over the course of a few weeks, we reviewed each section with every RN and PCT on our unit. We conducted a pressure ulcer incidence report daily, noting which patients arrived to the unit with a pressure ulcer present, and which patient’s developed pressure ulcers during their hospital stay. If a patient developed a pressure ulcer while on our unit, we documented the location in our report. Preventing pressure ulcers in patients with cancer is a challenging task, but neglecting their skin care can lead to significant pain and quality of life issues. To assist in identifying and preventing pressure ulcers from developing, we created a skin care binder to be utilized as a resource for the staff nurses. After reviewing the binder with the staff and analyzing the data from the daily pressure ulcer incident report, we noticed an improvement in our monthly pressure ulcer incidences. As such, we found that utilizing the binder as a unit based resource and providing the

staff with information on proper skin care, had a positive effect on the pressure ulcer rates of our oncology patients.

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**SUPPORTING CLINICAL RESEARCH AT THE BEDSIDE: A CLINICAL LIBRARIAN–NURSING PARTNERSHIP.** Pamela Ginex, EdD, RN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Marisol Hernandez, MLS, MA, Memorial Sloan Kettering Cancer Center, New York, NY

As health care institutions strive to develop a ‘spirit on inquiry’ among their nurses, a support system must also be in place to maintain and fulfill this mission. Nurses working clinically are interested in research and evidence-based practice but often struggle with the process of asking and answering a clinical question. At our institution, a survey of nurses revealed that most (96%) think research and EBP should guide practice and that 63% of nurses would be interested in doing a research or EBP project but only about half feel supported to participate in this endeavor. The purpose of this presentation will be to discuss a successful partnership between medical library services, a designated clinical librarian and nursing staff at a large comprehensive cancer center. A clinical librarian (CL), dedicated to the Department of Nursing, serves as a ‘primary point’ of contact to library resources, services and training. The CL provides in-depth literature searches that address specific clinical questions as well as provides ready reference, quick fact checking, and citation verification. The CL also provides customized training on evidence-based practice information resources, highlights new resources, and maintains specific Nursing guides on the Library’s website. The CL is active within the Department and works with the nursing staff as a member of the Nursing Research Committee, Nursing Practice Council, and presents to nurses regularly at orientation, nurse resident seminars, the nursing fellowship and others. Our CL is integrated and visible within our department and is an often mentioned as a significant benefit by nurses. Annually, our CLs conduct approximately 200 literature searches for nurses. Clinical nurses are in the ideal position to ask relevant questions about patient care and nursing practice. A strategic and ongoing partnership between medical library services and nursing can support these nurses as they embark on the process of answering these questions and ultimately improving patient care and clinical outcomes. This innovative collaboration fully immerses a CL with nursing to benefit our clinical staff and, ultimately, our patients.

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**URGENT ONBOARDING OF NEW NURSING STAFF AFTER EXPANDING PATIENT BED CAPACITY.** Jill Schimmoeller, BSN, RN, OCN®, The Ohio State University Comprehensive Cancer Center James Cancer Hospital and Solove Research Institute, Columbus, OH; Cindy Nagel, MA, BSN, RN-BC, The Ohio State University Comprehensive Cancer Center James Cancer Hospital and Solove Research Institute, Columbus, OH; Vickie Gloeckner, MS, RN, The Ohio State University Comprehensive Cancer Center James Cancer Hospital and Solove Research Institute, Columbus, OH; Miranda Naegele, BSN, RN, CEN, The Ohio State University Comprehensive Cancer Center James Cancer Hospital and Solove Research Institute, Columbus, OH; Massa Nnadi, MSN, RN-BC, CNL, The Ohio State University Comprehensive Cancer Center James Cancer Hospital and Solove Research Institute, Columbus, OH; Colleen O’Leary, MSN, RN, AOCNS®, The Ohio State University Comprehensive Cancer Center James Cancer Hospital and Solove Research Institute, Columbus, OH

We opened the doors to our new hospital dedicated to the treatment of cancer patients December 2014. This increased the bed capacity from 232 to 306, added an Oncology critical care unit and opened the first fully integrated 15 bed oncology emergency department. Urgent onboarding of new staff was essential, while orienting current staff to a new facility. Purpose: To describe the successful onboarding of over 600 staff into a newly built cancer hospital. Interventions: Traditional methods could not be utilized by the education team to provide quality education for a large number in a short timeframe. Educators, clinical nurse specialists (CNS), nursing leadership and tenured nursing staff participated in the orientation process. Additional educators were hired to cover new critical care units. CNSs took on some responsibility for following staff during orientation. Education staff roles were clearly defined to streamline responsibilities. Clerical duties that education staff was taking on were re-assigned to clerical staff. Evaluation: We onboarded 381 nurse and 224 patient care associates from November 2014 to September 2015. From the opening of this institution to present, inpatient nurses increased by 219, with the number of orientations continuing to grow. Both controllable and uncontrollable nurse turnover decreased dramatically. Discussion: It is imperative to find innovative means to orient large volumes of staff over a short period of time in order to meet the needs of the institution as well as the orientee. Our statistics on staff satisfaction and turnover rates prove we were successful in doing just that. We saw this as an integral part of the Magnet status we are proud to uphold. Innovations: Critical care classes that were live were recorded allowing more staff to participate at a given time. Skill simulation education including case studies were developed. Regular meetings occurred during orientation with the orientee, their preceptor(s), manager, and designated person following them. Staff nurses formed education teams on their units, supported by educators/CNSs to provide needed education. Emergency Department onboarding changed to ensure that nurses gained the knowledge, skills, and abilities to care for oncology patients presenting with an emergency.

### 136 BOOSTING EDUCATION WHILE BOOSTING THE IMMUNE SYSTEM. Cathy Cerami, RN, BSN, OCN®, Lehigh Valley Health Network, Allentown, PA; Mandy Hendricks, RN, MSN, AOCNS®, Lehigh Valley Health Network, Allentown, PA

Since 2011, the Food and Drug Administration (FDA) released over eighty drug approvals and/or new indications for cancer. As science, technology and therapeutics continue to advance simultaneously with a personalized approach to cancer care; the number of drug approvals is expected to rise. In 2014, all 10 of newly FDA approved drugs work by attacking cancer on the molecular level. Among new therapies with recent approvals are immunotherapies, specifically those that interfere with immune system checkpoints. Immune-mediated adverse reactions are common in patients treated with immunotherapies. Since 2011 Lehigh Valley Health Network (LVHN) has opened twenty clinical trials including the immunotherapies. Combined with the approval of ipilimumab in 2011, and pembrolizumab and nivolumab in 2014, the number of patients receiving immunotherapy has increased. In 2011, 57 doses were administered within the institution of LVHN compared to 343 doses in 2015. The purpose was to educate staff and patients on immune-related adverse events. Inpatient nurses and outpatient nurses identified the topic of immunotherapy and adverse events for education during a learning needs assessment. Oncology nurse leaders provided in-services to staff specific to the drugs with a large concentration on immune-mediated adverse reactions. The LVHN Cancer Program Patient Education Committee also

identified a need for patient education material related to immunotherapy. Two oncology nurse leaders co-authored a patient education book developed to provide unique information related to immunotherapy, distinctly on how to recognize and report the immune-related adverse reactions. Oncology nurses reported an increase in knowledge of immunotherapies and their adverse events following the in-services through verbal feedback and post-test evaluations. Patients are reporting signs and symptoms of immune-mediated adverse events leading to direct hospital admissions for immune-related side effects, and prompt management with high-dose systemic corticosteroids. Innovative strategies to educate staff and patients are needed to provide quality care to a growing population of patients receiving immunotherapy. The adverse effects of immunotherapy are common and much different than chemotherapy or radiation side effects. To maintain patient safety, it is imperative for nurses and patients to have the knowledge to recognize the symptoms.

### 137 HARDWIRING NURSING ACCOUNTABILITY AT ALL LEVELS: USING A GAP ANALYSIS METHODOLOGY TO ALIGN NURSING STRATEGIC PLAN INITIATIVES WITH MAGNET COMPONENTS. Anne Jadwin, MSN, RN, AOCN®, NE-BC, Fox Chase Cancer Center, Philadelphia, PA

If you fail to plan, then you plan to fail. It is well documented in nursing leadership and general business literature that strategic planning improves organizational performance, creating a shared vision to counter excessive inward and short-term thinking. A well-defined process identifies priorities, broadly outlines resource allocation and serves as a tool to articulate what is important and how progress will be monitored. The Chief Nursing Officer at a Magnet® NCI-designated cancer center, was concerned about recent integration into a health system, workforce reductions, and increasing attention organizationally on accountable, cost-effective care. In addition, a review of the revised Magnet® components indicated greater emphasis on performance data and staff driven initiatives. The CNO facilitated a strategic thinking retreat (fall 2014) to plan the future state and sought input from institutional stakeholders, including physicians, staff nurses, nursing leaders, and ancillary departments. A detailed gap analysis was conducted by the CNO, aligning strategic plan tactics with Magnet® components and key organizational initiatives that involved nursing. Accountable “owners” were assigned to each tactic by members of the Executive Nurse Council (spring 2015). All aspects of the strategic plan were aligned in color-coded Excel spreadsheets with accountabilities and timelines defined by individual or nursing council. The CNO conducted an informational session for council chairs and their administrative liaisons (nursing directors assigned to support councils), to explain the tactics that were aligned with their group and clarify expectations. The fiscal year transition encompassed orientation to the spreadsheets at council meetings so that all council membership was aware of the tactics, timelines, and project responsibilities. A review of council-specific spreadsheets is included at monthly council meetings, to ensure that groups stay on track and can measure project status, review performance data, and redirect resources accordingly. Biannual council reports are submitted in January and July to the Nurse Executive Council and provide a barometer of departmental performance in critical domains. In addition, manager and director accountability is reflected in the annual performance appraisal process. We believe that this methodology has hard-wired departmental and individual accountability for future success in a highly competitive healthcare environment.

**ESTABLISHING SHARED GOVERNANCE IN AN AMBULATORY CANCER CENTER.** Adrienne Banavage, MSN, RN-BC, OCN®, UVAHS, Charlottesville, VA; Christina Taylor, BSN, RN, UVAHS, Charlottesville, VA; Veronica Brill, MSN, NEA-BC, RN, UVAHS, Charlottesville, VA; Jennifer Mellott, BSN, RN, CRRN, UVAHS, Charlottesville, VA; Jody Reyes, BSN, MBA, OCN®, RN, UVAHS, Charlottesville, VA; Deborah Lewandowski, BSN, MBA, RN, OCN®, UVAHS, Charlottesville, VA

Shared governance has been a well-accepted concept in acute care nursing for several decades however this concept is not as well embedded in the ambulatory settings. There is limited data available but staff mix, geography of settings as well as the uniqueness of the ambulatory nursing practice are all possible explanations. In 2013 at an ambulatory cancer center the leadership team identified a need to enhance and nurture the tenets of shared governance. Based on multiple recent leadership changes as well as unfamiliarity with shared leadership features in ambulatory, these concepts were introduced in a step-wise pattern. Initial steps included staff presentations at a pre-existing care coordinator staff meeting with the inclusion of staff from other areas including infusion and radiation oncology. Additionally a staff nurse accepted the role of co-chair of the group along with the nurse educator. The educator provided mentoring to the co-chair on topics including agenda creation, the running of meetings and engagement of team members. As the attendees grew more diverse and the staff assumed responsibility for the work of the committee it was suggested to broaden participation further to include ancillary staff as well as a change in meeting name to the Shared Leadership Council (SLC). In current state the SLC has between 20–30 attendees every month including staff at all levels representing LIPS, staff from both the inpatient and outpatient settings as well as the School of Nursing. Projects undertaken by the membership include the creation of standardized communication for new patients, standardized workflow for requesting preauthorization for specialty pharmaceuticals as well as the preparation for a successful Magnet site visit. Throughout this time period the staff engagement scores at the cancer center increased over all 12 domains 2015 over 2014 including an increase in “opinions count” (3.7 to 3.81) and “team members committed to quality” (4.19 to 4.35). These improvements to workflow as well as staff satisfaction show that utilization of a shared governance structure, based on preexisting structures, can enhance staff engagement, productivity and the patient experience.

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**IMPLEMENTING A NEW ROLE: PROFESSIONAL DEVELOPMENT SPECIALIST OF ONCOLOGY.** Kelsey Haley, MSN, RN, OCN®, Baylor Scott & White Health, Dallas, TX

Due to the evolution of oncology and patient care, nurses must maintain current and specialized knowledge to provide quality care for those with cancer. The Oncology Nursing Society (ONS) has three position statements regarding nursing knowledge and education: (a) Lifelong learning enables oncology nurses to stay informed of scientific advances, practice evidence-based nursing, and maintain competency in oncology nursing to provide quality care. (b) Specialized education and preparation of the oncology nurse who administers chemotherapy and biotherapy ensures a safe level of care for individuals receiving these agents. (c) Certification benefits patients and their families, nurses, and employers. Oncology nursing certification validates that nurses have met stringent requirements to provide competent oncology care. Within the north region of Baylor Scott & White Health (BSWH), nine hospitals offer inpatient oncology services with over 300 nurses

providing inpatient oncology care. Clinical resources to support nursing staff differ among sites resulting in variances in the distribution of oncology education, rate of chemotherapy and biotherapy providers, and number of oncology certified nurses (OCN). The role of a Professional Development Specialist (PDS) of Oncology has been implemented in an effort to provide consistent and ongoing educational support to all BSWH oncology nursing areas. The PDS collaborates with the leaders and staff of BSWH oncology and nursing services to assess and meet the educational needs of and facilitate the dissemination of new information to oncology nursing staff via onsite visits and online venues. Performance metrics include the rates of chemotherapy and biotherapy providers and certification. As of June 2015, the certification rate is 23%. A goal certification rate of 27%–30% has been established for June 2016. The aim of this role is to improve patient outcomes and patient and nursing satisfaction by providing clinical expertise and increasing availability of oncology nursing education among BSWH facilities. A survey of oncology nursing staff will be conducted every two years to identify educational needs and learning preferences and guide the development of future offerings. The PDS advocates for oncology nursing staff by leading the Oncology Education Coordinating Council, attending the Oncology Nursing Forum, and reporting to the Oncology Administrative Committee.

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**DESIGNING A PRETREATMENT EDUCATIONAL PROGRAM FOR BREAST CANCER PATIENTS IN THE OUTPATIENT SETTING.** Katherine FitzPatrick, RN, BSN, OCN®, Mount Sinai, New York, NY; Jenna Enson, RN, BSN, Mount Sinai, New York, NY; Corinne Ellovich, RN, BA, BSN, Mount Sinai, New York, NY

Everyone knows someone who had a distressful experience with their cancer treatment. They have heard horror stories—uncontrollable nausea and vomiting and debilitating pain. When it comes to a cancer diagnosis, knowledge is empowering. A nurse-led initiative to design a more effective education program for newly diagnosed breast cancer patients was developed and implemented to address the fear and misconceptions experienced by our patients. The goal of this new patient education program is to streamline the educational process for new patients, empower them with the information needed to have a successful course of treatment and navigate them through to survivorship. The purpose of the new education program is to provide newly diagnosed patients with the knowledge and tools required to understand their treatment plan, formulate realistic expectations and have the resources at their fingertips to assist them through the physical, psychological, social and spiritual aspects of care throughout their journey. After meeting with their Medical Oncologist, patients are scheduled for a Nursing Education appointment. If patients prefer, the Nurse Coordinator (Navigator) will see them that same day. Patients are navigated through the process with a nurse at their side. Appointments span from 45 minutes to 2 hours, depending on the needs of the patient. Nurse coordinators tailor their presentations to each patient’s individual needs. Topics discussed include but are not limited to: treatment regimens, side effects and prevention, referrals to the Breast Health Resource Program, Social Support Services e.g. psychiatry, integrative health, nutrition referrals as needed. The Clinical Coordinators will check in with the patients at meaningful time points from treatment through survivorship. They help facilitate communication with the clinical and interdisciplinary teams. Since initiating the education program, the patient satisfaction scores have increased, and there are fewer patient calls related to unmet needs. Patients continue to respond to the rate my hospital survey with positive comments regarding their care.

The fact that these positive metrics have been consistent since the program started indicates that it is hard-wired and sustained. Next step will be to implement this program in other disease management groups.

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##### **HUDDLE UP: IMPLEMENTING AND EVALUATING DAILY MULTIDISCIPLINARY TEAM HUDDLES IN AN OUTPATIENT ONCOLOGY INFUSION CLINIC.** Nick Escobedo, MSN, RN, OCN®, NE-BC, Houston Methodist Hospital, Houston, TX

Those practicing in cancer care must coordinate and evaluate the treatment of patients with complex diseases by working together as efficiently as possible. Daily huddles are quick meetings which allow team members to meet, communicate, and gain a better understanding of the dynamics, issues, and safety concerns which could be faced during the assigned shift. Based on data from the Houston Methodist 2014 Press Ganey Employee Opinion Survey (EOS), the team of the Outpatient Infusion Services (OPIS) Department at the Houston Methodist Hospital (HMH) Cancer Center identified the need to increase the perception of teamwork and communication between shifts. The purpose of the quality improvement project was to examine the impact multidisciplinary daily huddles would have on the daily operations of a 25 chair ambulatory oncology infusion clinic. The project examined if the implementation of a daily multidisciplinary team huddle increased the level of perceived teamwork and communication. Using the PDCA cycle, leadership educated team members and implemented multidisciplinary huddles in the infusion clinic. Daily huddles take place at 0815 Monday through Friday in which all team members, including unit leadership, participate. Data relevant to the daily operations is presented to all present staff members and time is allotted to discuss questions or concerns. Evaluation: 12 of 32 Staff members completed a Likert scale post-evaluation survey through an electronic data collection program. Results were analyzed and compared to the 2014 Press Ganey EOS results. 1. My unit works well together-decrease from 4.29 to 4.212. Communication between shifts is effective in my work unit-decrease from 4.33 to 4.14. Continuation of the daily multidisciplinary team huddle was recommended by OPIS team members while negating the hypothesis presented. The use of team huddles to promote improved communication and teamwork between health-care team members and patients has maintained consistent outcomes, but did not outright represent positive findings. As a result there is sufficient evidence to support further study to enhance the process of daily huddles and examine their long-term impact in oncology infusion settings. Further analysis will be completed upon completion of the 2015 EOS survey.

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##### **FORGING PARTNERSHIPS TO IMPROVE CANCER CARE: GUAM ONCOLOGY OUTREACH PROJECT.** Phuong Huynh, RN, BSN, Seattle Cancer Care Alliance, Seattle, WA; Terri Cunningham, RN, MSN, AOCN®, Seattle Cancer Care Alliance Seattle, WA; Robert Chapman, RN, MN, CCRN, Seattle Cancer Care Alliance, Seattle, WA; Kathleen Shannon Dorcy, RN, PhD, Seattle Cancer Care Alliance, Seattle, WA; Zennia Cruz Pecina, RN, MSN, Guam Memorial Hospital Authority, Tamuning, Guam; Josephine Eustaquio, RN, BSN, Guam Memorial Hospital Authority, Tamuning, Guam

Cancer is the leading cause of mortality on the island of Guam. Nursing leadership at Guam Memorial Hospital Author-

ity (GMHA) were awarded federal grant to build resources of the GMHA community and staff. Collaborating with a large National Comprehensive Cancer Network (NCCN) cancer center in Washington State an oncology symposium was developed. The team traveled to Guam and provided an evidence based practice (EBP) oncology curriculum including, an overview of cancer and treatments; chronic pain, symptom management, safe handling of hazardous drugs; palliative care and end of life. Purpose: To deliver EBP oncology and palliative care curriculum with intent to improve outcomes for the oncology patients of Guam. A two-day symposium with awarding of professional credit hours was built on an assessment of GMHA needs; specified learning objectives of symptom identification, cancer diagnoses, chemotherapy regimens, and end of life care. Program evaluations showed (51/60 Likert Scale) 100% of the respondents rated the curriculum as very good to excellent; with new content learned, and expectations met. Under resourced communities face challenges to improve outcomes in oncology care. It is important for nursing to have access to current evidence based practice standards and material. Global collaboration is an opportunity to improve caring for cancer patients and their families. The cross collaboration between GMHA and this NCCN cancer sets the stage for future endeavors to build high quality exchanges of culture and oncology care resources. This endeavor was filled with cultural enrichment as well. We were inspired and learned from their commitment to their patients and readiness to implement recommendations.

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##### **YOU CAN DO IT: CONTRIBUTING TO THE LITERATURE AS A CLINICAL STAFF NURSE.** Amy Walton, RN, BSN, CMSRN, OCN®, Billings Clinic, Billings, MT; Leah Scaramuzzo, MSN-BC, RN, AOCN®, Billings Clinic, Billings, MT; Jeannine M, Brant, PhD, APRN, AOCN®, FAAN, Billings Clinic, Billings, MT

Staff nurses are infrequently involved in contributing to oncology nursing literature. From oncology journals to reference books, few bachelors' prepared nurses (BSNs) are noted as authors. The third edition of the Core Curriculum includes only one BSN and the fourth edition includes four. Additionally, most oncology nursing peer-reviewed journal articles are authored by nurses with advanced degrees. Despite the immense knowledge and experiences from bedside nurses, a lack of publications clearly exists. This highlights a barrier of our profession from tapping into these great resources. Purpose: Provide staff nurses with the necessary tools to move toward disseminating and publishing their work and experiences. Deciding where to start is a first step. This begins with a spirit of inquiry in daily practice or a passion to learn about a topic of interest. Lack of an advanced degree should not be a barrier. Identifying a mentor is essential, whether it be a clinical nurse specialist, nurse practitioner, or nurse educator. The mentor can guide the literature search, help establish a timeline, and provide oversight with writing and submission. Carving out time to write and disseminate requires prioritizing and balancing work obligations, family, and personal time. Keys to success include staying current in the literature, using small pockets of time to review, critique, and synthesize the literature, blocking out writing time in a weekly calendar, and scheduling appointments with a mentor for ongoing support. Staff nurses can successfully publish and disseminate their work and clinical experiences. Benefits to publication are immense and include meeting professional goals, and practicing to the fullest extent as encouraged in the Institute of Medicine Future of Nursing report. Additional benefits are improving personal knowledge and care at the bedside, contributing to the oncology nursing literature, sharing new knowledge with nursing colleagues, and

encouraging others to begin the publishing process. This model has resulted in the dissemination of 4 book chapters, 2 podium sessions, and 15 posters presented nationally by staff nurses at this organization. This author will share personal experiences about getting started as an author and successfully contributing to the nursing literature.

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**DEVELOPING A ONE TEAM APPROACH TO MEET THREE INFUSION CENTERS' STAFFING NEEDS.** Laurie Winkelbauer, BSN, RN, OCN®, Nebraska Medicine, Omaha, NE; Yager, Ann, BSRT, (R)(T), Nebraska Medicine, Omaha, NE; Becky Hoff, BSN, RN, Nebraska Medicine, Omaha, NE; Ellie Stull, MSN, RN, OCN®, Nebraska Medicine, Omaha, NE

Our cancer service line provides infusion services for oncology patients at three geographic locations. The numbers of chairs vary at each location from 10 to 30. Each location has a nurse manager. Staff are hired for specific locations. Hours of operation differ at each location, depending on patient needs. With increasing pressure to streamline operations and maintain productivity, along with challenges of RN position vacancies and growing volumes, efforts were needed to coordinate staffing between all locations to ensure best utilization of resources. The leadership team met to identify opportunities for improvement and determine an action plan to address these issues. Issues identified included: (a) Locations worked in silos to manage staffing issues and patient volumes. Decisions were made without consideration of the other locations. (b) Staff were reluctant to float (c) Lack of consistent communication and comradery among managers/leads (d) Critical decisions were made inconsistently by staff (e) Lack of communication to senior management and physician leadership when capacity and staffing situations were occurring. The group proposed strategies to address the issues. Phone huddles with leadership from all three locations are held daily to discuss staffing, patient scheduling and concerns. A tool was developed to assist with decision making related to staffing and patient scheduling. A "One Team" approach was implemented for staffing at the three locations, with the expectation that staff would float to cover staffing needs at the other locations. Processes were standardized across all units to help ensure staff feel comfortable and competent when floating. Several positive outcomes have been noted since these changes were implemented 10 months ago. Staff has been more willing to float and have bought into the "One Team" concept. Cross coverage of staffing vacancies occurs daily, allowing for better and more cost effective utilization of staff across locations. Decisions to block schedules are made by managers using the developed tool. There is improved awareness of critical staffing and capacity issues by senior leadership and physician leaders. Implementing a One Team staffing approach to cover three infusion center locations increases staff productivity and allows for fluctuations in patient volumes.

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**BREAKING DOWN SILOS: INCORPORATING INTER-PROFESSIONAL EDUCATION TO PROMOTE SAFE ADMINISTRATION OF CYTOTOXIC AGENTS.** Susan Sakalian, MS-RN, OCN®, Montefiore-Einstein Center for Cancer Care, Bronx, NY; Carol Sheridan, MSN-RN, OCN®, Montefiore-Einstein Center for Cancer Care, Bronx, NY

The World Health Organization defines interprofessional education (IPE) as occurring when students from two or more professions learn about, from and with each other to enable effective collaboration and improve health outcomes. The Institute of Medicine has identified IPE as an important strategy

necessary to improve healthcare outcomes through safe and effective delivery of care. Traditionally healthcare providers have been educated in silos. Typically, this approach does not incorporate role recognition of other disciplines within the healthcare team, and could create a barrier to teamwork and collaboration. At this major academic medical center it has been identified that there was an opportunity to incorporate IPE in the training of RNs, NPs, and PAs in the guidelines for chemotherapy and biotherapy administration. The goal of incorporating IPE was to help foster an understanding of the role each member of the healthcare team has in the process of chemotherapy and biotherapy administration. A two day didactic course is required for all RNs who are new to oncology and have no prior experience administering antineoplastic agents. The course is taught by a faculty comprising advanced practice nurses and a pharm D specializing in oncology. An invitation to the course was offered to PAs and NPs who had limited oncology experience. The role of IPE will be evaluated via an anonymous Likert-type survey. Questions will focus on role responsibilities, safe patient care, and improving communication. The results will be compared to a control group that did not participate in the IPE course. In 2013, ONS/ASCO published national guidelines addressing safety standards for chemotherapy and biotherapy administration. There is a great opportunity to educate simultaneously all members of the oncology healthcare team that are involved in prescribing, preparing and administering cytotoxic agents. The goal of this program is to begin an awareness of role responsibilities and to foster communication to improve safe patient care. The concept of IPE has been around for many decades and yet there are very few opportunities within the healthcare system for interprofessional education.

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**THE EVOLUTION OF A STREAMLINED ONCOLOGY CURRICULUM INCORPORATED WITHIN A MULTI-STATE ENTERPRISE.** Jaclyn Figueras, RN, MSN, OCN®, Cancer Treatment Centers of America at Western Regional Medical Center, Goodyear, AZ; Amy Malensek, RN, OCN®, CBCN®, Cancer Treatment Centers of America at Western Regional Medical Center, Goodyear, AZ; Cynthia Daniels, RN, MSN, OCN®, Cancer Treatment Centers of America at Western Regional Medical Center, Goodyear, AZ; Elaine Doyle, RN, MSN, OCN®, Cancer Treatment Centers of America at Midwestern Regional Medical Center, Zion, IL; Kendra Laufer, RN, BSN, OCN®, Cancer Treatment Centers of America at Southwestern Regional Medical Center, Tulsa, OK; Tahitia Timmons, RN, MSN, OCN®, Cancer Treatment Centers of America at Eastern Regional Medical Center, Philadelphia, PA

A collaborative process was developed and utilized to create a streamlined core oncology curriculum among multiple sites across different time zones, in order to educate and advance both new and experienced oncology nurses. Four years ago, the Cancer Treatment Centers of America enterprise found several inconsistencies within the education that was being provided to nursing staff. In order to provide a strong foundation for the nursing staff, a core oncology curriculum was needed. This process had several barriers, as each site had different content that needed to be reviewed and revised. It was discovered that a few sites did not have in-house oncology education at the time and needed to build a foundation. A needs assessment was completed at each site showing several gaps with the current education, proving the necessity for an oncology curriculum to be developed utilizing continuing education and evidence based practice. To address each gap, regular monthly

teleconferences were held, and information was shared through a developed share-site. As each course evolved, interactive elements were added to engage with the participants and encourage classroom activity. Facilitator and participant guides were also created to provide consistent content to all participants. An established, evidence based oncology curriculum was developed including ONS CE's with each course. The curriculum includes a six course series ranging from core oncology basics to oncological emergencies. A streamlined process was developed for annual review of coursework, as well as the creation of any future courses. This process describes how five facilities shared in the collaboration of creating interactive oncology education for both the new and experienced oncology nurse.

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**ONCOLOGY NURSES PAY IT FORWARD.** Elizabeth Dailey, BSN, RN, OCN®, HN-BC, Cancer Treatment Center of America, Philadelphia, PA; Marie Decker, MSN, RN, AOCN®, NE-BC, HN-BC, Cancer Treatment Centers of America, Philadelphia, PA

Nurses are notorious for avoiding self-care in deference to caring for others. Self-care activities are intended to address the holistic needs of the individual, and nurses who participate in these activities are better equipped to care for their patients. The American Nurses Association developed HealthyNurse™ Constructs which identified 'Priority to Self-Care' as an empowering initiative. "Self-care and supportive environments enable the nurse to increase the ability to effectively manage the physical and emotional stressors of the work and home environments." In order to educate our oncology nurses of the importance of self-care, a "Pay-It-Forward-Pass" was created. The "Pass" encourages mutual collaboration in taking a 20 minute respite in our supportive environment, the Quiesce Room. Interventions: The process begins with recognition of the needs of other nurses, as peer-to-peer advocacy supports the intention of the Pass. The verbal exchange promises that the nurse's patients' needs will be addressed so that the gift of self-care can be realized by a visit to the Quiesce Room. This quiet space developed by the Holistic Nursing Council encourages relaxation and reflection through the use of massage chairs, a glider, reading inspirational books or articles, mindful meditation, yoga, prayer, and aroma or music therapies. A pre-survey revealed that over 43% of respondents had never visited the Quiesce Room due to the perception that coverage was not possible. An overwhelming 92% of respondents reported that they would take advantage of the Quiesce Room if they could be assured their patients' needs were met. Additionally, 40% of the respondents reported feeling stressed at least five times during a typical work week. In November 2015, the results from a follow-up survey will determine if time set aside for self-care made a difference in self-reported stress levels. The very fact that this innovative endeavor is being championed by oncology nurses demonstrates our responsibility to educate and empower nurses to reflect and relax. We are giving ourselves permission to be instruments of healing not only for our patient but also for ourselves.

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**PERFECTING PATIENT PLACEMENT IN THE ONCOLOGY SETTING.** Kelly Acker, BSN, RN, OCN®, BMTCN™, Froedtert and the Medical College of Wisconsin, Wauwatosa, WI

Admitting oncology patients to a hospital is challenging when the hospital of choice frequently carries a census of 99% capacity. The Clinical Cancer Center, our outpatient setting, continues to grow at a rapid rate. With this growth there have

been an increased number of patients needing to admit to the hospital when they become too complex or ill to be managed at home. The hematology/oncology care team historically has not been involved in the process of patient placement at the time of admission. This frequently led to patients being assigned a bed on a unit that did not match the specific needs of that patient and resulted in relocating patients to another unit. Transferring patients is very stressful for both the patient and their families after they have grown comfortable in their current environment. In order to improve the process of placing patients on the unit most specialized to fit their individual needs, our multidisciplinary team set a goal to map out a process to place new admissions in the correct bed at the time of the admission. The team consisted of both nursing staff and nursing administration, physicians, and hospital patient flow coordinators from the admitting department. Together, we created a pager group to be used for each new unscheduled oncology admission. The clinic nursing staff was trained to text page the admission pager with specific information prior to calling the hospital admitting office. The Nurse Managers on the oncology units would carry the admission pager and collaborate with each other to identify the desired unit and bed placement for each new admission. Once this has been completed, the Nurse Manager returns the page to the Clinic RN and shares with her what bed and unit to ask for. After this important step has been completed, the Clinic RN then calls the Admitting Department and requests the correct bed on the correct unit. This process has increased both the safety of our oncology patients as well as improved patient satisfaction. It has defined a process and standardized the way in which oncology patients are admitted to our hospital.

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**EDUCATIONAL NEEDS FOR BONE MARROW TRANSPLANT PATIENTS: A REVIEW OF THE LITERATURE.** Tia Thistlewood, RN, BSN, University of Kentucky, Lexington, KY

Bone Marrow Transplantation (BMT) is a complex medical procedure used to restore marrow function in refractory hematopoietic conditions. Despite advancements in transplantation standards, complications still include risk for infection, graft vs. host disease, and chemotherapy-induced organ toxicity; all of which can increase morbidity and mortality. The emotional burden of diagnosis, complexity of the procedure, and low patient health literacy all impede attainment of true informed consent. Additionally, long-term side effects and repeated follow up appointments can have profound effects on patient quality of life (QOL). Comprehensive educational interventions allow patients to be empowered with the knowledge needed for decision-making throughout the transplant process. The aim of this review was two-fold: gather evidence on educational needs for patients receiving BMT and determine key concepts for developing a BMT patient education program. Articles published after 2005 were searched from EBSCO Host, CINAHL, PubMed, Google Scholar, and ancestry search using the following search terms: patient education, bone marrow transplant, hematopoietic stem cell transplant, transplant, quality of life, and informed consent. Included articles focused on patients aged 19 and older. Literature supports the use of educational interventions that assess individual patient learning needs. Educational delivery should tailor to individual health literacy levels and format preferences. Information delivered in short sessions throughout the transplant process is preferable. Patients identified physical care, symptom management, and psychosocial concerns as priority educational needs. Caregiver presence at time of educational intervention offers patient support and promotes patient understanding. Nurses are influential in the education process, as they often encounter patients throughout the pre-, intra-, and post-transplant phases.

Different educational needs exist at all phases of the transplant process, and nurses are essential in assessing for interventional need. BMT patient education programs that use clear communication and evaluate patient understanding can positively impact the transplant process by assisting patients in making informed treatment decisions that coincide with their unique perceptions of QOL.

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**SIX SIGMA INFUSION CHAIR UTILIZATION PROJECT.** Tara Donnelly, RN, BSN, Overlook Medical Center, Summit, NJ; Erica Fischer, MSN, CNS, CBCN®, AOCNS®, Overlook Medical Center, Summit, NJ; Lydia Nadeau, RN, FACHE, Overlook Medical Center, Summit, NJ; Donna Delicio, RN, MSN, ANP-BC, Overlook Medical Center, Summit, NJ

At one ambulatory infusion center, average time from appointment request to infusion chair time was 180 hours. This resulted in frustration with physician practice partners, staff, and patients. Baseline data was captured to identify barriers. Statistically significant trends that emerged included physician ( $p = 0.042$ ); new patients found to take 55% longer to schedule compared to existing patients with regimen changes ( $p = 0.036$ ); and pretreatment requirements (port insertion, insurance precertification, required radiology tests, etc.) ( $p = 0.000$ ). Unit leadership aimed to decrease delays in scheduling first time infusion treatment patients by addressing identified barriers in the process. Multiple interventions were put into place; two infusion units were merged to centralize staffing under one coordinator to maximize human resources. Unit times were extended by two hours and nursing shifts were staggered. Existing nurse navigators were utilized for care coordination prior to scheduling, and communication was improved among the multidisciplinary team through daily huddles. Physicians were educated on opportunities to improve clarity during treatment ordering to help expedite insurance authorizations and scheduling. To date, there has been a 21% reduction (average 140 hours) in time from appointment request to chair. Additionally, there has been a projected \$370,000 gross revenue increase for 2015 related to the expanded hours of operation. Patient satisfaction with time to get an appointment averages above 90% on press ganey reports. Anecdotally, physicians report improved satisfaction with the scheduling process and communication with the unit. The success of implemented interventions relies on staff engagement in the performance improvement process. Communication between unit leadership and staff is paramount; Monthly updates of ongoing data collection are posted on a unit dashboard. Ongoing monitoring of metrics to ensure continued downward trend in time to chair, as well as upward trend in satisfaction are essential. In times of economic stress on healthcare systems, opportunities to improve revenue while creating an environment focused on high quality patient care is crucial. Identifying ways to increase productivity and efficiency through creative, cost-effective methods is central to the role of the healthcare leader. Using processes like the Six Sigma Methodology can assist leaders in accomplishing these goals.

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**BUILDING A SUSTAINABLE PROGRAM OF COMMUNITY SERVICE: AN ONS CHAPTER LEADERSHIP SUCCESS STORY.** Laura Fennimore, DNP, RN, University of Pittsburgh, Pittsburgh, PA; Mary Burgunder, MSN, RN, OCN®, UPMC Visiting Nurses Association, Pittsburgh, PA; Sandra Lee Schafer, MN, RN, AOCN®, Hospice and Palliative Nurses Association, Pittsburgh, PA

Busy nurses are increasingly challenged to divide their precious hours of “discretionary time” between personal commit-

ments to family and friends, civic responsibilities, and professional commitments. Even with the best intentions, nurses are challenged to volunteer and commitment is often measured in minutes or hours. ONS members, however, share a unique passion for the people we serve and frequently commit to projects that make a difference. Camp Raising Spirits is a program that has made a difference in Southwestern Pennsylvania for hundreds of people with cancer and their caregivers for 22 consecutive years. Camp Raising Spirits is the longest-running camp for adults with cancer in the country and was established in 1994 as a partnership between the Greater Pittsburgh Chapter of the Oncology Nursing Society (GPC-ONS) and the local Leukemia and Lymphoma Society. Each summer approximately 50 campers and their guests are provided with the opportunity to celebrate life and to put the every-day stresses of their diagnosis and treatment problems on hold for a few days. Weekend activities are coordinated by an all-volunteer staff and include creative workshops, cooking demonstrations, crafts, manicures, and recreational activities. The chapter assumed full financial and operational responsibility for the program in 2009. The average cost for this 3-day event is approximately \$500 per person. A series of successful fundraising events including the recent establishment of Camp Raising Spirits as a non-profit entity with a 501(C3) status has permitted chapter leaders to successfully offer this service to the cancer care community year after year with highly positive evaluations. A recent camper noted, “The weekend felt like one big hug from the universe brought about by much caring, careful planning, work, and even perfect weather”. This presentation will detail the establishment of an innovative strategic and implementation plan for a sustainable community program that may be replicated by other committed ONS chapter volunteers.

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**THE EVIDENCE BASE FOR ADDRESSING ESSENTIAL ONCOLOGY COMPETENCIES FOR ALL NURSES.** Melinda Oberleitner, DNS, RN, University of Louisiana at Lafayette College of Nursing and Allied Health Professions, Lafayette, LA; Joan Lockhart, PhD, RN, CORLN, AOCN®, CNE, ANEF, FAAN, Duquesne University School of Nursing, Pittsburgh, PA; Anna Vioral, PhD, MEd, RN, OCN®, BMTCN™, Allegheny Health Network, Pittsburgh, PA

While great strides continue to be made in the detection, diagnosis, and treatment of cancer, the focus has also shifted to survivor care, particularly care provided in non-oncology settings. The majority of long-term cancer survivors are likely to transition to care provided by general practitioners and non-oncology clinicians, including nurses, with little experience in oncology. How prepared are non-oncology nurses to meet the myriad needs of cancer survivors? Lockhart and colleagues (2013) queried nurse faculty in 250 pre-licensure RN programs to discern the importance and depth of cancer content taught. Although educators indicated teaching oncology-related content was important, several barriers were identified which impacted their ability to present the content in sufficient depth. In a more recent national study, medical-surgical nurses assigned higher importance than oncology nurses to concepts related to management of cancer symptoms and problems indicating gaps in knowledge in these areas. The medical-surgical nurses also identified barriers to providing optimal care to survivors in non-oncology settings including lack of knowledge of survivor needs, lack of time to learn and limited access to survivor-specific resources. To date, no national nursing organization has defined expectations, in terms of skills and competencies, of non-oncology nurses caring for survivors in non-oncology settings nor is there consensus on core knowledge required by these nurses. This presentation will describe models from other specialty organizations which have been used to successfully overcome educational barriers to the

implementation of specialty educational content. In addition, recommendations for future directions, from organizational, professional development, and personal standpoints, in assuming a leadership role in addressing gaps related to optimum provision of survivor care on a national level, will be discussed.

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**AN INNOVATIVE APPROACH TO MEDICATION EDUCATION FOR PATIENTS AND THEIR FAMILIES.** Amanda Wilson, RN, BSN, CHPN, Froedtert Hospital, Milwaukee, WI; Colleen McCracken, BSN, RN, CMSRN, CHPN, OCN®, Froedtert Hospital, Milwaukee, WI; Audrey Schmitz, RN, Froedtert Hospital, Milwaukee, WI

Patients are introduced to new medications often which can be overwhelming to keep all the information about new medications correct. Patients may not even know why they are being prescribed certain medications which can lead to compliance issues or incorrect administration of the medication at home after being discharged from the hospital. Patients expressed concerns over lack of communication about medications and side effects of those medications that they were prescribed. The goal of our project was to increase patient knowledge related to the medications they are prescribed during hospitalization. A council from an academic medical center developed a list of medications which are commonly prescribed to the oncology population followed by their uses and common side effects. The nurse caring for the patient is responsible for educating the patient/family about the medication during first dose and re-educating about other medications as applicable. The medication teaching sheet list is updated during the patient's admission so the patient and/or family has the most up to date list of the prescribed medications. The medication sheet is then able to be used when the patient is discharged from our facility. The medication teaching sheets were implemented on a hematology/oncology unit at Froedtert Hospital in October 2013. Prior to the implementation of this new process our average score about medication teaching on Avatar was 65.85%. Since the implementation our average score on Avatar about medication teaching is 78.51%. This is over a 12% increase on our Avatar scores in the nine months post implementation. It is imperative patients and families are educated throughout the health care continuum. This is particularly important for the oncology population as there are many medications they are prescribed while being admitted to the hospital for treatment or complication from their cancer. Patients should have autonomy over their healthcare decisions, which starts by giving them the knowledge about medications that they are prescribed.

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**PEER TEACHING FROM THE START FOR CENTRAL LINE CARE.** Anusuya Govindarajan, BSN, RN, OCN®, Robert Wood Johnson University Hospital, New Brunswick, NJ; Surinder Kaur, BSN, RN, OCN®, Robert Wood Johnson University Hospital, New Brunswick, NJ; Vickie Aquino, BSN, RN, OCN®, Robert Wood Johnson University Hospital, New Brunswick, NJ; Lauren Li Brizzi, BSN, RN, OCN®, RWJUH, New Brunswick, NJ; Ashley Mickiewicz, BSN, RN, OCN®, RWJUH, New Brunswick, NJ; Mryna Young, MSN, RN, CNOR, RWJUH, New Brunswick, NJ

Central Line Bloodstream infections (CLABSI) result in added health care costs and death. The CLABSI Taskforce meets monthly to discuss current infections and trends. The taskforce

also evaluates practice and products. There have been changes to policy and products, thus resulting in practice changes at the bedside. To keep consistency throughout the organization can be a challenge: large number of staff and habits to change. A group of Oncology nurses suggested providing education during the hospital orientation to deliver the same education to newly hired nurses to any unit. This provides the first touch of Central Line education being done consistently to all new nurses. The hope is that the newly hired nurse will then be able to speak up if a preceptor tries to teach an old practice or product details. Purpose: To provide a consistent education to all newly hired nurses on the policy and procedures of central line care at the institution, provided by clinical oncology nurses, in a peer to peer format. Oncology nurses have arranged with central education to provide discussion and demonstration of central line care at orientation each month. Dressing change is demonstrated along with port a cath accessing, a volunteer is recruited to perform and the instructor provides demonstration of the buddy system. A discussion is then started with the various products used to prevent infection and details of the policy. In 2013 the hospital rate for CLABSI was above 1.10/1000 line days each quarter. After presenting at the monthly orientation; the rate has decreased throughout the organization. During the presentations it has been noted that nurses coming from other organizations have learned care of the central line with different products or slightly different techniques. The theory of central line care is consistent amongst organizations; there is a difference at the bedside. This education session has provided a clear understanding of what is expected. By having clinical nurses present as a peer to peer presentation also helps in encouraging the newly hired nurses to ask questions of their peers and to participate in professional development activities.

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**COLLABORATIVE APPROACH TO REVIEWING PORT SITE COMPLICATIONS AND EDUCATION.** Laura Houchin, MSN, RN, AOCNS®, Duke University Hospital Cancer Center, Durham, NC; Jessica Meadows, BSN, RN, OCN®, Duke University Hospital Cancer Center, Durham, NC

In a large academic cancer center, Oncology Treatment Center (OTC) nurses identified an increasing number of wound care issues in patients with newly implanted venous access devices (ports). A knowledge gap was discerned as patients/families reported that no home care instructions after placement were performed. As > 500 ports/year are placed by Interventional Radiology (IR), increasing adverse events warranted concern. Thus, encouraging interdepartmental collaboration would benefit staff and patients across the healthcare system. Purpose: To describe the oncology clinical nurse specialist (CNS) role in facilitating interdisciplinary collaboration by all stakeholders was focused at developing a program to prepare patients for port placement. Using Lewin's Change Theory, the CNS introduced the issue with an initial meeting between OTC staff, nursing leadership, and IR chief physician. Reported adverse events and patient reports were openly reviewed. IR identified that patient education was being performed post-procedure. As patients and their families were already overwhelmed by the cancer diagnosis, preparing for chemotherapy administration, and receiving procedural sedation, the home care instructions were not easily recalled. Thus, the team identified that patient education should occur prior to port placement using teach-back methods and hands on demonstration. Also recognized was that all departments interacting with this patient population needed to use the same patient education materials. This called for interdepartmental revisions for current materials. In addition, an action plan was developed to improve patient communications and provide post-procedural follow-up phone calls to reinforce

home care instructions and answer questions. Since the initial problem identification, there have been four interdisciplinary-interdepartmental meetings over a 5-month timeframe. Patient education material has been rewritten and updated with current practice. Interdepartmental staff education on the newly developed patient education processes and materials are scheduled to occur fall 2015. This project exemplifies the role of change agent by the CNS through problem identification and promoting interdepartmental teamwork to improve patient outcomes.

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**ORAL CHEMOTHERAPY EDUCATION: A NURSING INTERVENTION TO IMPROVE MEDICATION SAFETY.** Patricia Emerson, MSN, RN, OCN®, Old Dominion University, Norfolk, VA; Kathie Zimbardo, PhD, RN, Old Dominion University, Norfolk, VA

Oral chemotherapy can be self-administered in the home, many times eliminating the need for chemotherapy infusion regimens, in the controlled infusion center environment, and close supervision of the healthcare team. Short of watching individuals consume their daily treatment regimen, very few effective education and monitoring tools exist, to facilitate safe medication management in the home setting. Differences in client knowledge of oral chemotherapy management, perceived barriers, and fidelity to treatment regimens in the home setting following implementation of a nurse-led chemotherapy education program will be evaluated. Purpose: The purpose of this study is to explore differences in client knowledge of oral chemotherapy management, perceived barriers to oral chemotherapy management, and fidelity to treatment regimens in the home setting following implementation of a nurse-led oral chemotherapy education program. Interventions This study aims to improve both quality and safety of self-medication management in the home setting by increasing client knowledge of oral chemotherapy management, reducing barriers to self-care, and improving fidelity to prescribed treatment regimens. Research questions will include: Research Question 1. Will client knowledge of oral chemotherapy management improve following a nurse-led chemotherapy education program? Research Question 2. Will fidelity to prescribed oral chemotherapy treatment regimens improve following a nurse-led chemotherapy education program? Research Question 3. Are there differences in number of perceived barriers to oral chemotherapy management following a nurse-led chemotherapy education program? Medication adherence is directly linked to clinical outcomes and toxicity measures. While measuring fidelity is difficult in the self-administration environment, it is imperative that clients receive oral chemotherapy education about safe medication principles (the right medication at the right time and under the right conditions). This study provides an opportunity for nurses to create, translate, and evaluate an oral chemotherapy education program that will partner with physicians, and healthcare systems seeking to provide high quality cancer care, and safely manage oral chemotherapy in the home environment.

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**THINGS ARE NOT ALWAYS AS THEY APPEAR: THE SOMETIMES SURPRISING FINDINGS OF MULTI-GENE PANEL TESTING AND THE ROLE OF THE ADVANCED PRACTICE NURSE.** Heather Hannon, MSN, RN, CBCN®, Thomas Johns Cancer Hospital, CJW Medical Center, Richmond, VA

With the growing number of national recommendations advocating for the testing of patients with cancer for a hereditary

disposition, genetic testing is increasing, and in particular multi-gene panel testing. In addition, a significant benefit of multi-gene panel testing is the ability to identify deleterious mutations that family history might not suggest. In light of the complicated and sometimes surprising findings, an advanced practice nurse (APN) with specialized training to understand the complexity of hereditary conditions, testing, risk models, and how to provide counseling is in the unique position to best educate and help patients understand the implications of multi-gene panel testing. Purpose To highlight the surprise findings associated with multi-gene panel testing and the role of the APN in their interpretation to the patient and other clinicians. Referrals were made from clinicians to an APN run high-risk genetics clinic. Pre and post-test counseling was provided using risk models, pedigrees, and resources such as genetic references, presentation of cases for review by genetic counselors and APNs, literature review, and collaboration with genetic counselors. A review of records was conducted that examined 71 patients undergoing multi-gene panel testing at our high-risk hereditary cancer clinic over the course of one year. Results varied and included variants of unknown significance with conflicting evidence of pathogenicity, mutations in genes for which clear cut clinical guidelines do not yet exist, and the presence of a mutation in a gene unrelated to the cancer diagnosis that originally led the patient for testing. Now more than ever, with the increasing complexity of multi-gene panel testing, the APN must possess a higher level of understanding to be competent in the utilization of multi-gene testing in oncology nursing practice. In addition to advanced education in genetics/genomics, everyday counseling requires a myriad of interventions to provide high-level interpretation of results and follow-up measures needed for risk reduction. If APNs are to provide this service, they need to devote significant time to researching and fully comprehending the implications of their patient's results.

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**OUTPATIENT ONCOLOGY NURSING: WHAT IS THE BEST NURSING MODEL FOR ENHANCED PATIENT CARE?** Theresa Melville, MS, RN, OCN®, Virginia Commonwealth University Hospital, Richmond, VA; Teresa James, BFA, MS, RN, OCN®, Virginia Commonwealth University Hospital, Richmond, VA

Nursing care is an integral part of the treatment plan for Oncology patients. Nurses are responsible for coordinating care, performing assessments, triage and education. Nurses are often tasked with administrative duties that take them away from direct patient care therefore resulting in decreased patient education, increased triage calls and decreased satisfaction for both patients and nurses. In the spring of 2015 our organization introduced Certified Medical Assistants (CMAs) into our outpatient clinics. In order to prepare ourselves and the staff with information regarding how we were to utilize the CMA role, a literature review was performed that included key words of patient navigation, care coordination, patient/nurse satisfaction and CMA scope of practice. Nursing leadership examined current practice with regards to daily duties, review of triage calls and examination of satisfaction data. Nursing leadership identified the current nursing model did not support the nurses ability to thoroughly coordinate care, provide education and triage, in turn preventing them from working to their fullest scope. By reviewing the literature, implementing break out sessions with staff nurses and other leaders within the organization, we developed a new nursing model for our outpatient clinic that would allow nurses to coordinate care for our patients from diagnosis through survivorship. The new model appropriately re-assigned duties related to patient care and administrative tasks to the appropriate medical personnel (i.e. RN, CMA) to allow each to work to their fullest scope. With the new model CMAs are

responsible for patient flow, vital signs, EKG's, and documentation of medication history, meaningful use data. They also assist with procedures, patient message pools and patient requested paperwork. This model will elevate nurses to perform within their fullest scope allowing adequate time for thorough assessment, enhanced education (i.e. creation of medication/treatment calendars) and follow up phone calls status post chemotherapy. That in turn should decrease the volume of emergency room visits and return calls to clinic. This model is expected to lead to improved outcomes for both patient and nursing satisfaction as well as increased patient safety.

### 159

**A PILOT PROJECT EXPLORING THE UTILITY OF PHARMACISTS IN THE ONCOLOGY CLINIC.** Adrienne Banavage, MSN, RN-BC, OCN®, UVAHS, Charlottesville, VA; Melissa Otoy, MSN, RN, UVAHS, Charlottesville, VA; Leslie Ward, R.Ph, UVAHS, Charlottesville, VA; Veronica Brill, MSN, RN, NEA-BC, UVAHS, Charlottesville, VA; Jody Reyes, BSN, MBA, RN, OCN, UVAHS, Charlottesville, VA

In 2015 at an academic cancer center investigated opportunities to enhance the safety of the care delivered at the cancer center as well to enhance the patient's experience. Impediments to optimal care included delays in the infusion center related to need for order clarification as well as a struggle to meet all the patients needs for education related to their medication regimens and the medication reconciliation process. A multidisciplinary team including physicians, nursing and pharmacy evaluated current processes in the ambulatory clinics to help identify opportunities to improve efficiency and patient experience. This group identified significant opportunities to improve efficiency for patients being seen in the clinic by their oncologists on the same day. Chemotherapy orders required adjustment due to findings on physical exam or through review of the patient's symptom assessment profile. Additionally the group identified that patient's frequently had questions regarding their home medications and required review of conflicting medications orders. The task force identified that a pharmacist would be uniquely qualified to assist with both of these obstacles. The plan to be implemented in October 2015 consists of assigning a pharmacist to support the practices of several specialty oncologists. These pharmacists would prioritize consulting with the LIPs to assure that current chemotherapy orders were accurate, appropriate and up-to-date based on that days physical assessment and lab values. Additionally the pharmacists will meet with any patient either self referred or referred by members of the multi-disciplinary team to discuss their home medications, with special focus to those medications used to manage side effects as well as patients receiving oral chemotherapy. Upon implementation data will be collected to assess patient satisfaction with their experience related to throughput as well as consultation with the pharmacist. Additionally data will be collected regarding the need for clarifying communication between infusion staff and the medical oncology team. The hope is that this pilot project will improve the patient experience and efficiency and that this data will inform future allocation of resources.

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**IMPLEMENTATION OF AN INTRALESIONAL CHEMOTHERAPY ADMINISTRATION PRACTICE GUIDELINE IN THE DERMATOLOGIC ONCOLOGIC AMBULATORY SETTING.** Christine Lombardi, MSN, RN, OCN®, Hospital of the University of Pennsylvania, Haddon Heights, NJ

Significance and background: Provide a framework for consistent nursing practice. A standardized approach to intra-

lesional chemotherapy administration helps to minimize errors in handling & administration when these agents are delivered to dermatologic oncologic patients. Current ASCO/ONS standards recommend that staff have a comprehensive education/competency assessment that outlines requirements for the administration of chemotherapeutic agents, however, guidelines in intralesional administration have not been identified. Purpose: Implement an intralesional chemotherapy administration practice guideline for nurses to use in this type of setting. The guideline has a competency validation that nurses need to complete. The rationale behind this practice guideline and competency was to decrease variations in practice by having staff administer and handle these agents in a consistent manner. Interventions: Implementation of the practice guideline was accomplished by: providing didactic learning to nurses as well as having the nurses demonstrate safe administration via completion of a competency validation. The interventions are appropriate for this topic because staff are given the education and nursing practice guideline to follow on how to safely administer these agents while preventing unnecessary exposure to themselves, their patient's and other patient's that may in the same setting. The goals of the project are to provide clinical staff with the resources that they need to safely administer chemo and biotherapeutic agents via the intralesional route. The specific measures include an effective demonstration of proper technique, an understanding of the pharmacologic implications of these agents, and strategies to create a safe environment for anyone who may be potentially exposed to these agents. Nurse satisfaction and patient outcomes will be assessed following six months of implementation of the practice guideline. Clear guidelines of nursing staff who are responsible for administering intralesional chemotherapeutic agents can promote a safe environment for staff members and support safe patient care. With a nursing practice guideline, every nurse knows the proper technique and what to do in the event of potential exposure. Also, patient exam rooms are shared in many ambulatory practices. To further support the implementation of a practice guideline for nurses who administer intralesional agents, you can prevent other patient's from exposure to these drugs in these types of situations. Nurses will be utilizing our center for Innovation and Learning to demonstrate chemotherapy safe practice handling.

### 161

**COMPASSION FATIGUE AND BURNOUT IN ONCOLOGY NURSING.** Margaret Zimmer, RN, BSN, OCN®, University of Rochester, Rochester, NY; Rachel Cringoli, RN, BSN, University of Rochester, Rochester, NY; Sara Deisinger, RN, BSN, University of Rochester, Rochester, NY; James Reinhard, RN, University of Rochester, Rochester, NY; Lauren Smith, RN, BSN, OCN®, University of Rochester, Rochester, NY; Emily Taylor, RN, BSN, OCN®, University of Rochester, Rochester, NY

Oncology nurses experience compassion fatigue at a higher rate than their colleagues in other patient care settings. The purpose of this project is to measure the prevalence of compassion fatigue and burnout in oncology nurses in our institution, as well as implement interventions to identify and manage these conditions. A randomized sample of nurses from nine oncology units in a major university medical center, including associated off-site locations were surveyed (n = 106). Results showed a high prevalence of compassion fatigue and burnout across the oncology institution, with a higher prevalence occurring in newer nurses with 0-4 years experience, in the inpatient setting. Implemented interventions across three oncology units within the center included teaching self-care techniques, team-building exercises, and a trialed education forum for nursing

staff. In conclusion, there is a high prevalence of compassion fatigue and burnout found in oncology nurses, and continuing education, as well as developing support groups for staff, are interventions to help manage and prevent these conditions.

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**PARTNERSHIPS TO DEVELOP NURSE LEADERS: ADVANCING THE ONCOLOGY NURSE WORKFORCE.** Elizabeth A. Murphy, RN, EdD, National Marrow Donor Program, Minneapolis, MN; Jackie Foster, MPH, RN, National Marrow Donor Program, Minneapolis, MN; Kim Schmit-Pokorny, RN, MSN, OCN®, BMTCN™, Nebraska Medicine, Omaha, NE; Stacy Stickney Ferguson, MSW, LICSW, National Marrow Donor Program, Minneapolis, MN; Ellen M. Denzen, MS, National Marrow Donor Program, Minneapolis, MN

The 2011 Institute of Medicine report, *The Future of Nursing*, identified a number of challenges that will impact the oncology nursing profession and its ability to provide quality patient care. Competency to lead healthcare change and workforce recruitment/retention were two such challenges. Engaging nurses in professional development activities has been shown to improve retention and build feelings of belonging, ultimately improving patient outcomes. However, the rapidly changing healthcare environment and current economic climate results in responsibility for continuing professional development often falling on individual nurses. A solution is for oncology nurses to partner with non-profit organizations and professional associations/societies in clinical education and leadership activities. In response to the IOM's Recommendation 7: to prepare and enable nurses to lead changes which advance health, the National Marrow Donor Program® (NMDP®)/Be The Match® developed a robust program to educate and support blood and marrow transplant (BMT) nurse development. Key components of the program include: (1) clinical education planning and participation (e.g., annual Council Meeting, NMDP Nursing Education Committee, educational webinar development); (2) research with nurses as Primary Investigator and/or Co-investigator (e.g., association of burnout with career satisfaction); (3) governance roles (e.g., Patient Services Advisory Group to the NMDP Board of Directors, Patient Education Advisory Groups); (4) systems change initiatives (e.g., HCT in 2020: A System Capacity Initiative); and (5) program evaluation. Evaluation is critical to ensure program effectiveness and assess participant engagement and meaningful contribution. There are several factors nurses should consider when determining whether a professional development opportunity is a "good fit": (1) role and responsibilities; (2) scope of work and time commitment; (3) organization's success record with similar initiatives; and (4) alignment with individual skill set and goals. While formal courses and certificate/degree programs are invaluable, these may be cost prohibitive for individuals and/or their institutions. Nurses can look to external organizations for myriad volunteer leadership opportunities. The NMDP/Be The Match program is a model for partnering with BMT nurses to further our mission and support their professional growth.

## Research Poster Abstracts

### 163

**EFFICACY OF TRANSDERMAL GRANISETRON PATCH IN CONTROLLING CHEMOTHERAPY-INDUCED NAUSEA AND VOMITING IN GASTROINTESTINAL CANCER PATIENTS.** Loretta Williams, PhD, APRN, The University of Texas MD Anderson Cancer Center, Houston, TX; Christine Brown,

RN, BSN, MA, Prostrakan, Inc, Bedminster, NJ; Deborah Braccia, RN, MPA, PhD, Prostrakan, Inc, Bedminster, NJ

Patients with gastrointestinal (GI) cancer are at risk of chemotherapy-induced nausea and vomiting (CINV) due to the use of highly emetogenic chemotherapy regimens. Patients with GI cancer can also experience limited gut motility and absorptive capacity, potentially decreasing effectiveness of oral medications. A granisetron transdermal system (GTS) has been shown to be as effective as oral granisetron (OG) in controlling CINV across multiple tumor types. The objective of this post-hoc analysis was to examine the efficacy, safety, and patient satisfaction of GTS in patients with GI cancer compared to OG. A randomized, phase 3 study compared GTS (7 day) to OG (2 mg/day) in patients with cancer receiving moderately or highly emetogenic chemotherapy for 3-5 days. This analysis was limited to data from patients with GI cancer (n = 53). Rates of complete control (CC; no vomiting, mild nausea, no rescue medication), complete response (CR; no vomiting, no rescue medication), rescue medication, and patients' global satisfaction using GTS or OG were compared. Results: 53 patients with GI cancer (27 GTS, 26 OG) were included. The majority received cisplatin-based chemotherapy (43 patients; 81%); 94% received highly emetogenic chemotherapy. The CC and CR rates were similar in the GTS (both 70%) and OG (CC= 69%, CR = 73%) groups. Lack of rescue medication was similar for GTS and OG (81% for both; p = 0.95), and patient's global satisfaction did not differ (8.50 cm vs. 8.22 cm; p = 0.48). The only GTS related adverse event was one case of constipation. GTS may be an effective option for controlling CINV in patients with GI cancer who are at high risk of CINV. Blinded, randomized, placebo-controlled trials in larger samples of patients are needed to confirm these preliminary results.

**Underwriting:** Prostrakan, Inc

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**WORKING WITH THE MCL PATIENT TO ENSURE ADHERENCE AND MANAGE ADVERSE EVENTS DURING TREATMENT WITH IBRUTINIB.** Maria Badillo, MSN, RN, OCN®, CCRP, The University of Texas MD Anderson Cancer Center, Houston, TX; Ellen Catuiza Mullen, RN, ANP-C, GNP-C, PhD, The University of Texas MD Anderson Cancer Center, Houston, TX; Wendy Chen, MS, PA-C, The University of Texas MD Anderson Cancer Center, Houston, TX; Nora Cavazos, MD, Pharmacyclics LLC, an AbbVie Company, Sunnyvale, CA; Darrin Beaupre, MD, PhD, Pharmacyclics LLC, an AbbVie Company, Sunnyvale, CA; Michael L. Wang, MD, The University of Texas MD Anderson Cancer Center, Houston, TX

Ibrutinib is approved as a single agent for patients with mantle cell lymphoma (MCL) who have received at least 1 prior therapy. Ibrutinib is an oral treatment taken once daily (dose 560 mg, 4 capsules) until disease progression or unacceptable toxicity. Because oral anticancer medicines require fewer clinic visits for treatment, oncology nurses have fewer patient interactions to monitor adherence and toxicity. Adherence to therapy correlates with treatment success highlighting a need for patient education and enhanced nurse-patient communication (Neuss, 2013). Purpose: To discuss factors, including adverse events (AEs) that influence adherence in ibrutinib-treated MCL patients and to provide oncology nurses with guidance on patient education and AE management based on strategies implemented at MD Anderson. We examined exposure/safety data of 111 relapsed/refractory MCL patients treated with ibrutinib in a phase 2 clinical trial, as well as serious AE narratives of the 35 patients enrolled at MD Anderson, to identify AEs that influenced adherence. With a median follow-up of 27 months, 46% of patients had taken ibrutinib for > 1 year and 20% for ≥ 2 years. The overall response rate

was 67% (complete response, 23%) with a median duration of response of 17.5 months. Ibrutinib was well-tolerated with few discontinuations (11%) and dose reductions (16%) resulting from AEs. The most frequent grade  $\geq 3$  AEs were hematologic; no hematologic event led to ibrutinib discontinuation. Dose reduction because of neutropenia occurred in 7 cases. Nonhematologic AEs were primarily low-grade events. Diarrhea, reported in 35% of patients, led to no treatment discontinuations and dose reduction in 3% of patients. Monitoring and early intervention strategies for AE management in patients enrolled at MD Anderson will be described. Ibrutinib is safe and effective in patients with relapsed/refractory MCL. By implementing appropriate identification and toxicity management strategies, oncology nurses played an important role in reducing the incidence of dose reductions and treatment interruptions, thereby ensuring adherence to treatment schedule, as well as good efficacy and tolerability in the trial. It is imperative that oncology nurses educate patients and develop systematic care and communication plans in order to maximize patients' benefit from ibrutinib.

**Underwriting:** 1104 Clinical Trial is funded by Pharmacyclics LLC, an Abbvie Company.

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**WHY SHOULD WE BE CONCERNED ABOUT COGNITIVE FUNCTION IN WOMEN WITH THYROID CANCER PRIOR TO TREATMENT?** Mi Sook Jung, PhD, RN, Chungnam National University, Daejeon, South Korea; Eun Ju Kang, RN, Chungnam National University Hospital, Daejeon, South Korea; Ha Ni Choi, RN, Chungnam National University Hospital, Daejeon, South Korea; Mi Soon Song, MS, RN, Chungnam National University, Daejeon, South Korea; Hyunli Kim, PhD, RN, Chungnam National University, Daejeon, South Korea; Kyoung Suk Lee, PhD, RN, Chungnam National University, Daejeon, South Korea

Treatment-related cognitive dysfunction has become an increasing concern. Numerous study provided evidence of attention and working memory dysfunction mainly affected following treatment. However, a subset of patients might be vulnerable to cognitive dysfunction before starting cancer treatment, possibly due to changes in neurocognitive, immune and endocrine interactions. Our previous study demonstrated cognitive dysfunction in women treated for thyroid cancer. However, relatively little is known about pre-treatment cognitive function in this cancer population. This study aimed to identify pre-treatment cognitive dysfunction in women with newly diagnosed thyroid cancer in comparison with healthy controls and to examine factors influencing cognitive test performance and complaints. Korean women awaiting surgery for early-stage thyroid cancer (TC, n=80) and healthy controls (HC, n=80) were enrolled and tested with neuropsychological tasks (Digit Span Test, Controlled Oral Word Association test) and self-reported questionnaires of cognitive dysfunction (Attentional Function Index, AFI), fatigue, depression, sleep, and worry. Analysis of covariance was used to compare cognitive function between groups and multiple regression models were used to examine factors associated with test performance and self-report cognitive function. The TC group exhibited significantly lower attention and working memory test performance than the HC group when controlling for covariates: demographic factors (age, educational level, employment status), health status (comorbidity), and symptoms (depression, sleep disturbance, fatigue, worry) ( $p < .01$ ). The effective action, a domain of the AFI, was also different between groups even when controlling for these covariates ( $p < .05$ ). Attentional lapses and interpersonal effectiveness, other domains of the AFI, did not differ between groups. Multiple regression models demonstrated that age and educational level were as-

sociated with cognitive test performance while fatigue predicted perceived cognitive function. Pre-treatment cognitive dysfunction was evident in women awaiting surgery for thyroid cancer as compared to women without cancer. Different factors were associated with objective and subjective evaluation of attention and working memory function, suggesting the necessity of therapeutic intervention designed with two-arm approach to reduce fatigue and to address any co-occurring attention and working memory problems in women with thyroid cancer. This is a first report of pre-treatment cognitive dysfunction among thyroid cancer patients.

## 166

**CREAM PRINCIPLES: NURSING ROLE IN THE MANAGEMENT OF DERMATOLOGIC ADVERSE EVENTS TO ANTICANCER THERAPY.** Kathryn Ciccolini, RN, BSN, OCN®, DNC, Memorial Sloan Kettering Cancer Center, New York, NY

Dermatologic adverse events (dAE) can occur during and after all anticancer treatment regimens such as, but not limited to, rashes, nail abnormalities hand and feet symptoms, alopecia, xerosis, pruritus, radiation dermatitis, new onset proliferative skin lesions, hypersensitivity reactions, lichenoid eruptions, mucositis, secondary skin infections, and graft versus host disease. Therapies include chemotherapy, targeted therapy, immunotherapy, radiotherapy, hormone therapy, therapeutic transplants, and surgery. Consequences of these dAE have various negative impact on quality of life (QoL), psychosocial and physical impact, instrumental and self-care activities of daily living and financial health. Most importantly, dAE can lead to alteration or discontinuation of anticancer therapy and trials. The nursing role in the management of these untoward dAE is integral in ensuring adherence to anticancer and dermatologic treatment and optimizing disease outcomes. Pubmed was searched filtering to humans only and English language from 2005 to June 30th, 2015 resulting in 788 articles. Further, a trail of citations from similar and cited references were followed to ensure the search was all encompassing of the topic. Articles selected for review were dedicated to oncologic literature mentioning dermatologic adverse events resulting from anticancer therapy or cancer diagnosis itself. The selected articles also mentioned the role of nursing in the management of these conditions under the CREAM principle subheadings. Trending themes were extracted from 133 articles to create the CREAM principles: Communication, Referral, Education/Encouragement, Assessment and Management/Monitoring. These are the first principles to define the philosophy of the oncodermatologic nurse caring for the patient experiencing all types of dermatologic adverse events to any anticancer therapy. Oncology nurses should be well versed in the encompassing role by developing highly specialized skills in the management of dermatologic adverse events to anticancer therapy during treatment and survivorship setting for all types of cancers. Future studies are essential to elucidate the indispensable role of nursing in the management of dAE to anticancer therapy and the impact on patient outcomes. This is the first systematic definition of the oncodermatologic nursing role in the management of oncology-related dAE

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**IMPACT OF HYPERGLYCEMIA AND AGE ON HEALTH OUTCOMES IN PATIENTS WITH ACUTE MYELOID LEUKEMIA.** Susan Storey, PhD, RN, AOCNS®, Indiana University School of Nursing, Indianapolis, IN; Diane Von Ah, PhD, RN, FAAN, Indiana University School of Nursing, Indianapolis, IN

Hyperglycemia, a disorder of glucose metabolism, is a frequent occurrence among hospitalized patients and has been

shown to be associated with poor health outcomes. Hyperglycemia, may be a significant concern for patients with Acute Myeloid Leukemia (AML) during induction therapy who are vulnerable to infection. However, little is known, about the prevalence and impact of hyperglycemia on the health outcomes in AML patients. Therefore, the study purpose was to determine the prevalence of hyperglycemia and its role on health outcomes (neutropenic days, infection, and hospital length of stay) in AML patients during induction therapy. Secondly, we examined the impact of age, as it may be a significant factor for both hyperglycemia and AML, by comparing younger versus older AML patients on health outcomes. A retrospective record review of 103 AML patients, hospitalized for initial induction chemotherapy was conducted. A sub analysis of those  $\geq 65$  ( $n = 41$ ) was also performed. Hyperglycemia was defined as mean serum fasting blood glucose (FBG)  $\geq 126$ mg/dL. Infection was determined by review of laboratory or physician documentation. Neutropenic days (defined as the number days ANC  $< 500$  cells/mm<sup>2</sup>) and length of stay were calculated from admission to either re-induction, discharge or death. Study analyses included Mann Whitney U and Fishers Exact. Over one-fourth (26.5%) of the AML patients had hyperglycemia; this rate was higher for those in the older group (37%). Hyperglycemia was not related to health outcomes among the entire sample. However, those  $\geq 65$  were 5.6 times more likely to develop infection ( $p = 0.022$ ; OR 5.6; 95% CI [1.43, 22.2]) than the younger AML patients. Although not significant, older patients had 2.5 more days of neutropenia and 1.5 longer hospital stay than those  $< 65$ . Findings indicate that hyperglycemia is common and has a detrimental impact on outcomes in AML patients  $\geq 65$ . More research is warranted to elucidate clinically significant levels of hyperglycemia and its impact on health outcomes. Oncology nurses should assess and collaborate with other members of the healthcare team to implement strategies to prevent or mitigate the harmful consequences of hyperglycemia.

**Underwriting:** STTI/Alpha Chapter grant, St. Vincent Hospital Foundation grant

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**NOCTURIA-INDUCED SLEEP DISTURBANCE CAUSES FATIGUE IN PROSTATE CANCER MEN ONE YEAR FOLLOWING RADIATION THERAPY.** Michelle Millwood, RN, BSN, National Institutes of Health, Bethesda, MD; Rebekah Feng, PhD, National Institutes of Health, Bethesda, MD; Leorey Saligan, PhD, RN, CRNP, FAAN, National Institutes of Health, Bethesda, MD

**Aim:** To examine the relationship between fatigue, urinary symptoms, and sleep disturbance one year following radiation therapy in prostate cancer men. Fatigue is one of the most debilitating side effects of cancer and cancer therapy. Fatigue persists long after treatment completion. Cancer-related fatigue is defined as a “subjective sense of tiredness” that persists over time, interferes with activities of daily living, and is not relieved by adequate rest. The mechanism of fatigue is not well-understood and it is a symptom that is often neglected and under-managed by clinicians. Understanding the etiology of this distressing symptom is critical to identifying therapeutic targets and developing optimal management. In this study, we aimed to investigate underlying mechanisms of fatigue symptoms in prostate cancer survivors who received external-beam radiation therapy (EBRT). A sample of 56 men with prostate cancer scheduled to receive radiation therapy were enrolled in a National Institutes of Health Institutional Review Board-approved study (NCT00852111) and were followed at baseline (T1 – before EBRT), and one year after EBRT (T2). Clinical and demographic data (e.g., age, race, stage of prostate cancer, EBRT dose, EBRT technique used, and laboratory tests) were

obtained from chart review at T1. Symptom measurements include: urinary symptoms – American Urological Association (AUA) symptoms score; fatigue – Functional Assessment of Cancer Therapy-Fatigue questionnaire (FACT-F); sleep disturbance – Patient Reported Outcomes Measurement Information System-Sleep Disturbance form (PROMIS-SD). Chronic fatigue in this population is defined as a decrease in FACT-F scores of 3 points or more from T1 to T2. Decrease in FACT-F suggests worsening fatigue. At T2, 37.5% of subjects continued to experience persistent, clinically-significant fatigue. These men with chronic fatigue experienced more severe urinary symptoms compared to non-fatigued subjects. Urinary symptoms correlate with sleep disturbance, which in turn correlates with fatigue. Persistent fatigue developed one year after radiation therapy in prostate cancer survivors is likely a result of nocturia-induced sleep disturbance. Therapies that target urinary symptoms will likely alleviate sleep disturbance and fatigue symptoms in this patient population.

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**IMPACT OF SPECIALIST PROSTATE CANCER NURSES ON PATIENT REPORTED AND HEALTH SERVICE OUTCOMES: A COMPARATIVE EFFECTIVENESS STUDY.** Patsy Yates, RN, PhD, Queensland University of Technology, Kelvin Grove, Australia; Langbecker Danette, PhD, Queensland University of Technology, Kelvin Grove, Australia; Leanne Monterosso, RN, PhD, University of Notre Dame, Perth, Australia; Sanchia Aranda, RN, PhD, Cancer Council Australia, Sydney, Australia; Wendy Liu, PhD, Queensland University of Technology, Kelvin Grove, Australia; Nicholas Graves, PhD, Queensland University of Technology, Kelvin Grove, Australia

The scope of advanced practice nursing roles has expanded, however few adequately powered trials have reported on how such roles impact on patient and health service outcomes. A new prostate cancer specialist nursing (PCSN) service was established in 12 hospitals in Australia providing a unique opportunity to evaluate the impact of advanced nursing roles on patient and health service outcomes. Separate cohorts of men treated for primary or recurrent prostate cancer were assessed at two time points: (1) six months before implementation; (2) a six month period following 12 months of service implementation. Patient reported outcomes (PROMs) assessed were care experiences, supportive care needs, severity of prostate cancer specific symptoms, quality of life and decisional regret. Bivariate analyses were conducted to identify covariates to be adjusted for when comparing outcomes. Multiple regression analyses were used. Adjusted covariates were entered in models at the first step, and the group variable (PCSN or no PCSN) entered at the last step. Data were analysed for 302 pre- and 260 post-implementation patients. After adjusting for demographic differences between groups, compared to patients who did not have access to a PCSN (pre-implementation group), patients who did have access to a PCSN (post-implementation group) reported a significantly higher level of symptom severity in relation to urinary incontinence ( $\beta = -0.10$ ,  $p = 0.03$ ) and sexual function ( $\beta = -0.10$ ,  $p = 0.02$ ), but showed significantly lower need in the area of sexuality ( $\beta = 0.12$ ,  $p = 0.03$ ) and had better experiences of in-hospital care ( $\beta = -0.15$ ,  $p = 0.001$ ). Patients' health related quality of life and level of decisional regret did not differ according to whether they did or did not access a PCSN. While men who had access to a PCSN reported higher symptom severity in areas of urinary and sexual function and no differences were noted between groups in overall quality of life, men who accessed a PCSN had lower level of need in key areas of concern for this population and better care experi-

ences compared to men who did not access the service. These findings add important knowledge about key PROMs that can be improved by advanced cancer nurses.

**Underwriting:** Prostate Cancer Foundation Australia

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**AN EXPLORATORY STUDY OF TREATMENT COMPLEXITY, COPING, APPRAISAL OF ILLNESS AND PSYCHOLOGICAL DISTRESS IN PATIENTS WITH ADVANCED STAGE CANCER DIAGNOSES UNDERGOING CHEMOTHERAPY.** Catherine Sumpio, PhD, MSN, RN, Fairfield University, Fairfield, CT; Sangchoon Jeon, PhD, Yale University, West Haven, CT; M. Tish Knobf, PhD, MSN, RN, FAAN, Yale University, West Haven, CT

Scientific advances in cancer treatment have improved survival for patients with advanced stage cancer diagnoses. However, unlike early stage disease, stage III and IV cancer patients remain in treatment for long periods of time, often with no clear endpoint. Patients contend with treatment complexities, such as lengthy infusions and frequent outpatient visits, in addition to illness stressors. A stress-coping model was used to explore treatment complexity, symptom distress, personal resources, illness appraisal, coping and psychological distress in a cross-sectional, descriptive study. A convenience sample of 121 adults subjects with stage III and IV cancers was recruited from an outpatient cancer center. Measures included: Revised Life Orientation Test, Brief Cancer Behavior Inventory, Social Support Questionnaire, MD Anderson Symptom Inventory, Brief Coping Scale, Appraisal of Illness Scale, and Profile of Mood Scale. Treatment visit hours and number were calculated for a 3-month timeframe. Bivariate correlation, mediation analysis and generalized linear model regressions were performed. Correlational analysis showed that being younger, less optimistic, less self-efficacious, and having greater symptom distress were associated with more avoidant coping and greater psychological distress. Active coping was not associated with optimism. Appraisal of illness severity was negatively associated with both optimism ( $r = -0.36$ ,  $p < 0.0001$ ), and self-efficacy ( $r = -0.57$ ,  $p < 0.0001$ ), and positively associated with symptom distress ( $r = 0.39$ ,  $p < 0.0001$ ), and psychological distress ( $r = 0.54$ ,  $p < 0.0001$ ). Total hours and visits were not significant correlates. Multivariate analysis yielded a final model with younger age, lower optimism, greater symptom distress, and negative illness appraisal accounting for 54% of the variance in psychological distress. Negative illness appraisal partially mediating the effect of optimism and symptom distress, and predicted avoidant coping. As theorized by the stress coping model, distress resulted from a transaction between the person and stressors, mediated by one's cognitive appraisal. Optimism was found to be a beneficial trait and should be included in innovative assessments of patients by collaborative teams. Illness appraisal and symptom distress are important targets for intervention.

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**SYMPTOM CLUSTER REVOLVES AROUND FATIGUE IN MEN WITH PROSTATE CANCER.** Darpan Patel, PhD, University of Texas Health Science Center at San Antonio, San Antonio, TX; Lauren Battershell, BA, University of Texas Health Science Center at San Antonio, San Antonio, TX

Individual symptoms related to prostate cancer (PCa) have been thoroughly investigated, yet the interaction between symptoms, or symptom clusters, remains underexplored. The importance of identifying symptom clusters including fatigue is evident as 50-90% of men with PCa report fatigue as a significant

adverse event that impacts quality of life (QoL). The purpose of this project was to identify symptom clusters that include fatigue among men treated for PCa. We hypothesize significant correlations will be observed between fatigue and multiple subscales related to QoL in men with PCa. We conducted a preliminary analysis of an ongoing cross-sectional study to determine the impact of PCa and PCa treatment on fatigue and QoL in 100 men with PCa and 200 age-matched controls. Thirty men treated for PCa are included in this analysis (age:  $70 \pm 10$ ; BMI:  $29 \pm 4.3$ ). Participants were asked to complete three questionnaires: the Brief Fatigue Inventory, the Functional Assessment of Chronic Illness Therapy-Fatigue (FACIT-F) and the Short Form (SF)-36. Patient demographic data was extracted from the medical records. Correlations were performed between the subscales of each survey and demographic data. Significance was set at  $p < 0.05$ . Body mass index (BMI) and fatigue had significant negative correlations with multiple subscales of the SF-36 and the FACIT-F. Increased BMI was negatively associated with SF-36 subscales of physical function ( $-0.621$ ;  $p = 0.001$ ), energy/fatigue ( $-0.449$ ;  $p = 0.02$ ), social function ( $-0.409$ ;  $p = 0.04$ ), pain ( $-0.422$ ;  $p = 0.04$ ) and FACIT-F subscales of functional wellbeing ( $-0.546$ ;  $p = 0.006$ ), general health ( $-0.494$ ;  $p = 0.01$ ), and total score ( $-0.458$ ;  $p = 0.02$ ). Fatigue, measured using the BFI and FACIT-F was significantly correlated with each subscale of the SF-36 ( $p < 0.05$ ). A tendency for significance was observed between BMI and role limitation due to physical ( $-0.385$ ;  $p = 0.057$ ) and emotional ( $-0.0386$ ;  $p = 0.056$ ). The results of this study support our hypothesis that fatigue is associated with multiple QoL indicators in men with PCa. This cluster is relevant as it helps us better understand the complexity of symptoms in this clinical population. Management of this symptom cluster has the potential to improve QoL. Future research should focus on the interactions between symptom clusters.

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**MOVING SCIENCE FORWARD WITH THE STORIES PATIENTS TELL.** Cynthia Bell, PhD, RN, Wayne State University, Detroit, MI; David Dickens, MD, Helen DeVos Children's Hospital, Grand Rapids, MI; Pamela Hinds, PhD, RN, FAAN, Children's National Health System, Washington, DC

Critical methodological barriers exist in end-of-life research including valid and reliable patient outcome measures responsive to change across time. Qualitative data provide a rich resource for generating empirically-supported instrument items. The purpose of this nurse-led research study is to describe the process of developing an instrument from conceptually-organized qualitative data. A secondary analysis was conducted to extract/organize data for a quantitative self-report instrument measuring adolescent readiness to engage in end-of-life preparedness discussions. A conceptual model of readiness, consisting of cognitive awareness, emotional acceptance and behavioral willingness to engage in discussions was qualitatively established in a previous study with adolescents living with incurable cancer. Sixty-three readiness items were generated with evidence of content validity established with six interdisciplinary pediatric experts. Next, relevant items were read aloud during individual cognitive interviews with five adolescents living with advanced cancer. Each interview lasted approximately one hour. A think aloud procedure elicited rich explanations of adolescents' interpretations and responsiveness to items. Probes were used to assess problems with assumptions, comprehension, sensitivity, and adequacy of response categories. A constant comparative approach was used to generate prevalent themes. Content validity: Items with an Item-CVI lower than 0.78 were deleted resulting in acceptable level of interrater agreement. Scale Content Validity

Index (S-CVI) was calculated as the average congruency percentage. After deleting 8 non-relevant items, S-CVI's were: Awareness S-CVI = 0.91, Acceptance S-CVI = 0.94, and Willingness S-CVI = 0.96. Cognitive Interviews: Adolescents provided further item clarity on acceptability, interpretation, and sensitivity. Minor modifications were necessary. Prevalent themes include desiring the truth, hoping for a future, living for today, staying strong for my family, and protecting family from sadness. Instrument development from qualitative data is a labor-intensive process yielding a comprehensive pool of relevant items. Adolescents living with advanced cancer provided invaluable insight on interpretation, acceptability, and appropriateness of instrument items to guide conversations in a clinical setting. Creating items from actual words adolescents with advanced cancer qualitatively shared provided a solid instrument that resonated with our targeted population. Pilot testing is needed to assess feasibility of the Readiness Instrument's use in a clinical setting.

**Underwriting:** ONS Foundation

### 173 INTEGRATIVE REVIEW OF PRE-TREATMENT GENETIC VARIATIONS IMPACTING SYMPTOM EXPERIENCE IN PATIENTS RECEIVING CHEMOTHERAPY FOR COLORECTAL CANCER. Kristen Fessele, PhD, RN, AOCN®, University of Utah College of Nursing, Salt Lake City, UT

Multi-agent chemotherapy regimens are a mainstay of treatment for colorectal cancer (CRC). Symptom management is an oncology nurse-sensitive activity carried out in collaboration with other disciplines, and interventions may be stratified by risk factors when available. Patients may experience a wide spectrum of chemotherapy-related symptom incidence and severity, and literature has emerged over the past decade exploring how genetic factors might impact this variation in symptom experience. Though pretreatment genomic testing to assess risk of severe symptoms is not yet routine clinical practice, technology is rapidly advancing, and oncology nurses must increase knowledge of potential evidence-based biomarkers that may be utilized in the future to identify patients at highest risk of negative outcomes. This integrative review examines and summarizes literature focused on genetic factors impacting symptom experience during chemotherapy for CRC. The terms (cancer OR neoplasm) AND (symptoms OR toxicity) AND ((variant OR variants OR variation) AND (gene OR genetic OR genomic)) NOT "genetic counseling" were searched in PubMed, CINAHL, Academic Search Premier and PsycInfo databases for the date range January 2000 to July 2015, and returned 1442 results across multiple cancer diagnoses and treatment modalities. Manual review excluded citations focused on risk of developing cancer or drug selection by biomarker identification, and sources of interest were reduced to 280. For this review, 52 citations specific to CRC chemotherapy regimens were evaluated for rigor and relevance. Multiple genetic variants associated with the incidence and severity of symptoms experienced by patients with CRC receiving 5-fluorouracil, capecitabine, irinotecan and oxaliplatin were identified in the literature. Polymorphisms in the DYPD, UGT1A1, TYMS and MTHFR genes are among the most studied thus far. The possibility of future pretreatment assessment of genetic variants predictive of elevated risk for negative symptom experience begins with selection of evidence-based biomarkers. This review represents a first step to determine relevant biomarkers for common CRC chemotherapy agents reported in the literature. Further work is needed to evaluate applicable symptom-related biomarkers described among other populations, as well as environmental factors that may influence differential gene expression, further explaining variance in symptom experience.

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### 174 RELATIONSHIP BETWEEN ATTENTIONAL FATIGUE AND PERCEIVED WORK ABILITY IN BREAST CANCER SURVIVORS. Sarah Dutkevitch, RN, OCN®, Indiana University Health North Hospital, Carmel, IN; Adele Nielsen, BSN, RN, Indiana University School of Nursing, Indianapolis, IN; Jill Dodson, LSW, LMHC, LMFT, Indiana University Health North Hospital, Carmel, IN; Charlotte Howard, MSN, RN, CBCN®, Indiana University Health North Hospital, Carmel, IN; Susan Storey, PhD, RN, AOCNS®, Indiana University School of Nursing, Indianapolis, IN; Diane Von Ah, PhD, RN, FAAN, Indiana University School of Nursing, Indianapolis, IN

Work is central for most adults in the U.S., including women with breast cancer. More than 90% of breast cancer survivors (BCS) in the U.S. return to work following cancer treatment. Research indicates that work is a vital part of coping for many BCS, but side-effects related to cancer treatments can impact BCS' ability to function. Little is known, however, regarding the impact of attentional fatigue on perceived work ability in BCS. AIMS/PURPOSE: To examine the relationship between attentional fatigue and perceived work ability in BCS. A cross sectional, descriptive design was used. BCS who were currently working and at least 1 year post-adjuvant treatment were recruited from a NCI-designated Cancer Center. BCS completed questionnaires regarding attentional fatigue (Attentional Function Index [AFI]) and perceived work ability (Work Ability Index [WAI]). Descriptive statistics was used to describe the sample. Linear regression was used to examine the impact of attentional fatigue on work ability, controlling for known covariates of age, education, household income and time post-treatment. 68 female BCS who ranged from 29 to 68 years of age (M=52.12; SD=8.603) and were on average 4.97 (SD=3.36) years post-treatment participated. Over one-fourth (26.5%) of BCS reported poor to moderate perceived work ability, indicating substantial concerns regarding work performance. Attentional fatigue was found to be significantly related to perceived work ability (p<0.001) and explained 40% of the variance of perceived work ability. Age, education level, household income and time post-treatment were not significantly related to perceived work ability. Findings indicate that attentional fatigue is a prevalent symptom post-treatment that negatively impacts perceived work ability in BCS. These findings are important clinically as they lend further support for the need for individual, comprehensive survivorship care plans to effectively address symptoms that impact the quality of life of cancer survivors. Further longitudinal research studies, which also includes objectively measured cognitive performance, is needed to fully understand the impact cognitive impairment on work-related outcomes in BCS.

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### 175 FEMALE SEXUALITY AFTER STEM CELL TRANSPLANT. Linda Caruso, RN, BSN, Massachusetts General Hospital & Simmons College, Boston, MA; Sara Astarita, RN, BSN, Massachusetts General Hospital & Simmons College, Boston, MA; AnneMarie Barron, PhD, RN, PMHCNS-BC, Massachusetts General Hospital & Simmons College, Boston, MA; Patricia Rissmiller, DNSc, RN, PNP-BC, Simmons College, Boston, MA

Sexual dysfunction is a common and persistent long-term complication following Hematopoietic Stem Cell Transplant (HSCT). Females experience a greater number of sexual complications post-HSCT compared to men, and more sexual health problems over time. Although there are significant quantitative

data regarding sexuality after HSCT, qualitative data describing the lived experience of sexuality among female recipients of HSCT are lacking. The purpose of this study was to explore the lived experience of women following HSCT in relation to sexual health. Women 18 years or older, diagnosed and treated for leukemia or lymphoma requiring hematopoietic stem cell transplant were invited to participate in this qualitative investigation. Women were at least 3 months post-HSCT, were sexually active prior to transplant, did not experience menopause prior to their diagnosis, and were without signs of relapsed disease or Graft Versus Host Disease. Data were collected via semi-structured interviews, including an open-ended question regarding sexual health after HSCT. Data were analyzed using content analysis to identify themes from the interviews. Interviews have been conducted among 4 women to date with a mean age of 34 years old. Six themes emerged from the data analysis: (1) relationship changes, (2) significant and concerning physical changes, (3) sense of loss and powerful emotional impact, (4) fatigue, (5) body image, and (6) educational needs. Findings highlight the need for greater support and education for women regarding sexuality and sexual health following HSCT due to the impact of HSCT on body image, energy level and quality of life. Furthermore, study findings inform the development of a comprehensive sexual education curriculum for both patients and nursing staff, to prepare women well and enhance knowledge, education and confidence of nurses as they provide excellent and holistic care for women receiving HSCT.

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**COMPARING THE PUSH-PULL VERSUS DISCARD BLOOD SAMPLE METHOD FROM ADULT CENTRAL VENOUS ACCESS DEVICES.** Dia Byrne, MSN, RN, ACNS-BC, OCN®, St. Luke's Mountain States Tumor Institute, Meridian, ID

Patients experience frequent blood sampling from central venous access devices (CVADs) to monitor the impact of treatment. Techniques requiring blood discard may contribute to cumulative blood loss and the risk for anemia. The discard method requires a volume of blood be discarded before obtaining the sample. This assures a sample free of contaminants but results in blood loss which may contribute to anemia and increased need for blood transfusions. An alternative is the push-pull method which requires no blood discard. The purpose of this study was to test agreement of laboratory results from blood samples obtained using the discard method and the push-pull method from CVADs. The percentage of samples affected by hemolysis was also evaluated. A comparative, within subject design was used to evaluate a convenience sample of 61 unique paired blood samples. Eligibility included a functioning CVAD and an order for a complete blood count and comprehensive metabolic panel. Excluded were patients with orders for blood cultures, coagulation testing or drug levels. Each patient first had blood drawn using the push-pull technique followed by blood sampled using the discard technique. Obtaining the first sample using the push-pull technique served as the discard volume for the second sample. A 21 measure laboratory panel was conducted on each of the paired blood samples. Bland-Altman analysis was performed resulting in graphical plotted data for each measure. The analysis allows for evaluation of disagreement between methods, identification of outliers and observation of bias. If the calculated limits of agreement for each measure are within or more narrow than laboratory results considered clinically acceptable then the push-pull method would be considered interchangeable with the discard method. Interpretation showed a small mean bias and clinically acceptable limits of agreement for all measures. Laboratory evaluation revealed no hemolysis of 59 samples. Blood samples obtained using the push-pull method showed

excellent agreement with samples drawn using the discard method. This study demonstrates the feasibility of replacing the discard method with the push-pull method, which supports efforts to decrease iatrogenic blood loss. These findings may have clinical implications in other settings where patients experience frequent blood sampling.

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**NURSING THE FAMILY DURING END-OF-LIFE (EOL) CARE IN THE ACUTE CARE SETTING.** Deborah Boyle, MSN, RN, AOCNS®, FAAN, University of California Irvine Health/Chao Family Comprehensive Cancer Center, Orange, CA

EOL family needs have been described in the home and long-term care settings. Yet the majority of Americans die in the hospital. A goal of this descriptive comparative research is to characterize nurses' attitudes toward dying, their confidence in providing EOL care, and their perceptions of EOL family needs within the acute care setting. This abstract describes findings depicting nurses' perceptions and is part of a larger study inclusive of delineation of family perceptions of EOL needs. Nurses (n=993) were emailed invitations to participate. Excluded were nurses having limited exposure to dying patients (i.e., Ambulatory Care, Psychiatry, Acute Rehab) and those working in practice settings where time restrictions precluded family needs identification (i.e., ED, Peri-Op). Participants were asked to complete four measures: the Nurse Demographic Tool, the Perceptions of Family Preferences for Care at the End-of-Life Survey, the Perceptions of Preparedness and Ability to Care for the Dying R-1 Scale, and the Death Attitude Profile Revised instrument. T-Tests and ANOVA are further analyzing nurse responses. A total of 193, mostly female, bachelor's prepared, experienced critical care and medical/surgical/oncology nurses participated in the study. More than 40% reported having exposure to dying patients between 2 to 9 times monthly. Greater than 70% of nurses responded that they definitely perceived families to want nurses to make the environment quiet, explain to the family what they were seeing, and offer the family the chance to sit alone with their loved one after they died. However, less than a third perceived families to definitely want nurses to offer them to chance to help with post-mortem care, and to pray with them. More than half of the nurses agreed that they thought about many aspects of death routinely, and less than one-third of the nurses rated themselves as being highly competent in their communication skills around death, dying and bereavement. Sharing the research results will drive the development of family-targeted nursing care protocols at the end of life, similar to what is practiced in the perinatal bereavement setting. This research is representative of the potential for translating evidence-based practice findings between specialties.

**Underwriting:** The Daisy Foundation; The Association for the Advancement of Nursing Science & Research

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**NON-PHARMACOLOGICAL INTERVENTIONS FOR CANCER-RELATED FATIGUE IN POST-TREATMENT CANCER SURVIVORS.** Noel Arring, DNP, RN, OCN®, Mayo Clinic and Oregon Health & Science University, Phoenix, AZ; Lillian Nail, PhD, RN, FAAN, Oregon Health & Science University, Portland, OR

The CDC estimates that there are 14 million cancer survivors (CSs) in the United States. Cancer-related Fatigue (CRF) is reported by approximately 30% of post-treatment CSs. CRF is a complex multidimensional symptom with poorly understood

etiology, wide variation in severity between individuals, the potential to appear at various points in the cancer trajectory, and have a negative impact on multiple aspects of life. Forty-four percent of CSs report using alternative treatments, a figure that illustrates the importance of understanding the evidence base for their safety and efficacy. The purpose of this review is to describe and appraise the safety and effectiveness of non-pharmacological treatments for CRF studied in post-treatment CSs. Medline and CINAHL databases from 2005-May 2015 were searched using the following Medical Subject Heading (MeSH) terms: neoplasm, fatigue, complementary therapies, exercise, and cancer fatigue. The search was limited to English language, adults, and randomized controlled trial study design. Inclusion criteria were that post-treatment CSs were included and that fatigue measured by a fatigue scale was a primary outcome. The search produced 162 non-duplicative articles. After reviewing titles and abstracts, 96 articles did not meet inclusion criteria, and the remaining 66 articles were retrieved. Forty-one articles were excluded for not clearly listing post-treatment CSs in inclusion criteria (14), including only active treatment CSs (6), not listing CRF as a primary outcome (10), only using a subscale to measure fatigue (7), and not including results from a RCT (4). Twenty-five articles are included in this review and categorized by the study intervention—physical activity (8), herbal medicines (3), health education (3) and traditional procedure-based therapies (11). Results, including attrition, adherence, sample, safety and efficacy, will be presented separately for each intervention. The effectiveness of the interventions varied, with some interventions demonstrating statistically significant decreases in CRF in post-treatment CSs. Important limitations such as inconsistent definitions of post-treatment CSs, narrow populations studied, small sample sizes and lack of replication limit our ability to identify any of the interventions reviewed as efficacious at decreasing fatigue in post-treatment CSs.

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**DEVELOPMENT AND FEASIBILITY TESTING OF AN ONLINE PSYCHOSOCIAL TRANSITIONS INTERVENTION FOR MALE PARTNERS OF WOMEN WITH BREAST CANCER.** Wendy Duggleby, PhD, RN, AOCN®, University of Alberta, Edmonton, Canada; Kelly Struthers-Montford, MA, University of Alberta, Edmonton, Canada; Katia Tonkin, MBBS, FRCP, MD, FRCPC, Cross Cancer Institute, Edmonton, Canada; Cheryl Nekolaichuk, PhD, R.Psych, University of Alberta, Edmonton, Canada; Sunita Ghosh, PhD, P.Stat, P.Stat (ASA), University of Alberta, Edmonton, Canada; Ceiwen Cumming, PhD, R.Psych, University of Alberta and Cross Cancer Institute, Edmonton, Canada

Male partners of women with breast cancer experience multiple complex significant changes (transitions) resulting in distress and decreased quality of life. Ways to support male partners is of importance to oncology nurses as the quality of life of male partners is significantly related to the quality of life of women with breast cancer. The overall purpose of this research project was to develop and pilot test an online transition toolkit for male partners of women with breast cancer. A Delphi approach with an expert panel was used to develop a self-administered online transition toolkit entitled Male Spouse Transition Toolkit (MaTT). A pilot study was then conducted to: a) evaluate the MaTT for ease of use, acceptability, and feasibility; and b) collect primary data to determine potential effectiveness of MaTT in increasing hope, general self-efficacy, and quality of life scores for male partners of women with stage 1-3 breast cancer. Using a mixed methods design, 57 male partners of women with breast cancer participated in the study. Thirty one were randomly assigned to the treat-

ment group (used MaTT for 28 days) and 26 to the usual care group. Quantitative measures of hope (Herth Hope Index), general self-efficacy (General Self-Efficacy Scale) and quality of life (Caregiver Quality of Life- Cancer) were completed at baseline, day 14, 28 and 56 for all participants. The MaTT was evaluated by those in the treatment group at day 14 and day 28 with an evaluation survey and qualitative interviews. The study findings suggested that the MaTT is easy to use, acceptable and feasible. The qualitative findings supported the quantitative data regarding ease of use, feasibility and acceptability of MaTT. Using general estimating equations we did not find significant differences over time or between groups for the main variables. However, when participants were asked on day 28 if using the MaTT had increased their ability to deal with significant changes 50% (6/12) agreed or strongly agreed, while one participant disagreed. The MaTT has potential to support male partners of women with breast cancer, but it requires further evaluation to determine its effectiveness.

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**PROSTATE SPECIFIC ANTIGEN IS POSITIVELY ASSOCIATED WITH FATIGUE IN MEN WITH PROSTATE CANCER.** Lauren Battershell, BA, University of Texas Health Science Center San Antonio, San Antonio, TX; Darpan Patel, PhD, University of Texas Health Science Center San Antonio, San Antonio, TX

Cancer-related fatigue (CRF) affects 50%-90% of men with prostate cancer (PCa), significantly impacting quality of life (QoL). Current management of CRF in PCa patients is challenged by the lack of objective biomarkers. The literature proposes the association of CRF with multiple markers, including C-reactive protein (CRP), interleukin (IL)-6 and cortisol, with mixed results. The purpose was to measure the association between prostate specific antigen (PSA), salivary IL-6, CRP, cortisol and CRF in a cohort of men diagnosed with PCa. This analysis is part of an ongoing cross-sectional study to determine the impact of PCa and PCa treatment on fatigue and QoL in 100 men with PCa and 200 age-matched controls. Thirty-seven men with PCa have consented to be in this study thus far; 30 are included in this preliminary analysis (age:  $70 \pm 10$ ; BMI:  $29 \pm 4.3$ ). Participants provided ~3 mL of saliva for cortisol, IL-6 and CRP quantification. PSA was extracted from the medical records. Participants completed three questionnaires: the Brief Fatigue Inventory, the FACIT-F and the SF-36. Correlations were performed to determine association between variables. Significance was set at  $p < 0.05$ . Of the 30 participants, 27 (90%) had localized PCa and 3 (10%) had metastatic PCa with a PSA of  $4.06 \pm 11.01$ . We found PSA to be positively correlated with fatigue (0.400;  $p = 0.48$ ) and negatively correlated with functional well-being (-0.458,  $p = 0.2$ ), physical function (-0.561,  $p = 0.004$ ), role limitation due to physical function (-0.557;  $p = 0.004$ ), role limitation due to emotional functioning (-0.589;  $p = 0.002$ ), social function (-0.481;  $p = 0.02$ ) and pain (-0.493;  $p = 0.012$ ). A positive correlation was observed between cortisol and IL-6 (0.542;  $p = 0.004$ ), suggesting an activation of the HPA axis. We found PSA to be positively associated with fatigue; however, its sensitivity to treatment makes it a highly suspect biomarker. Though preliminary, the results of our study suggest the inability of salivary CRP, IL-6 and cortisol to measure fatigue in men with PCa. Future work should focus on identifying an objective biomarker of fatigue insensitive to treatment and clarifying the association between cortisol and IL-6 in men with PCa.

**Underwriting:** UTHSCSA School of Nursing Advisory Council Migliorino Piccione Research Award

**“I COULDN’T EVEN TALK TO THE PATIENT”: PERCEIVED BARRIERS TO COMMUNICATING WITH CANCER PATIENTS AMONG NURSING STUDENTS IN TAIWAN.** Chia-Chun Tang, MSN, RN, OCN®, Indiana University Purdue University at Indianapolis, Indianapolis, IN; Mei-Feng Lin, PhD, RN, National Cheng Kung University, Tainan, Taiwan

Effective nurse-patient communication in the oncology setting is closely tied to safe practice, high-quality care, and good patient outcomes. Given that most clinicians fall into routines when communicating with patients, it is important to address potentially problematic communication patterns early. Nevertheless, communication experiences with patients with cancer can be challenging for nursing students as they struggle to meet patients’ and families’ special needs without fully developed professional skills. A better understanding of nursing students’ experiences communicating with patients may help educators and clinicians develop more effective communication training programs and avoid “traumatic learning”. Aim: To explore nursing students’ experiences of communication with patients with cancer and their families in Taiwan. Forty five senior nursing students caring for cancer patients for at least 48 hours were recruited from three universities to participate in one of the eight focus group interviews. Inter-views were led by a PhD prepared nurse, guided by open-ended probing questions and transcribed for inductive content analysis. Of the 45 students interviewed, one third of them had received no formal communication training in their programs. The majority of students reported communicating with patients and families was difficult and was a source of emotional stress. Three themes emerged from students’ negative experiences communicating with patients’ and families’: disengagement, reluctance, and regression. These negative experiences were attributed to the terminally-ill situation, students’ lack of training, low self-efficacy and power status, and poor emotional regulation. The fourth theme, transition, described by one third of the students is related to transforming thwarted experiences into a motivation to learn and communicate. Results indicate Taiwanese students’ tendency to withdraw communication with oncology patients and families. This may be due to the lack of formal communication in their nursing program and culture context. The social norms of family-centered care present special communication challenges to students. One encouraging result showed how students adjusted their attitude and made progress. Our study is one of the few that explored student nurses’ communication experience with oncology patients. Further studies are needed to examine the relationship among students’ ability to regulate emotions, communication skills and outcomes.

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**ROLAPITANT FOR THE PREVENTION OF NAUSEA IN PATIENTS RECEIVING MODERATELY OR HIGHLY EMETOGENIC CHEMOTHERAPY.** Cindy Nagy, RN, Indiana University School of Medicine, South Bend, IN; Rebecca Clark-Snow, RN, BSN, OCN®, The University of Kansas Cancer Center, Westwood, KS; Sujata Arora, MS, TESARO, Inc, Waltham, MA; Dan Powers, DO, TESARO, Inc., Waltham, MA; Rudolph Navari, MD, Indiana University School of Medicine, South Bend, IN

Despite advances that have been made in the control of chemotherapy-induced emesis, nausea remains an unmet

need for patients receiving moderately or highly emetogenic chemotherapy (MEC, HEC). Here, we present post hoc analyses of nausea from three randomized, double-blind, active-controlled, phase 3 clinical trials of the recently approved neurokinin-1 receptor antagonist, rolapitant (VARUBI™), in patients receiving MEC or HEC. Post hoc analyses were done per chemotherapy subgroup: carboplatin-based MEC (n=401), non-carboplatin-based MEC (n = 228), total MEC (n = 629), anthracycline/cyclophosphamide (AC)-based chemotherapy (previously classified as MEC, but now considered HEC) (n = 703), or cisplatin-based HEC (n = 1,070). Patients were randomized 1:1 to oral rolapitant 180 mg or placebo ~1–2 h before chemotherapy. All patients received active control: granisetron 2 mg oral or 10 mcg/kg IV and oral dexamethasone 20 mg. Granisetron was continued on days 2 and 3 for patients receiving MEC or AC-based therapy. Patients self-assessed nausea on days 1–6 using a 100 mm visual analog scale (VAS). Percentage of patients with no nausea (NN; maximum VAS < 5 mm) or no significant nausea (NSN; maximum VAS < 25 mm) was determined for overall, delayed, and acute phases of CINV in cycle 1. Rates of NN in the carboplatin-based MEC and total MEC subgroups were significantly higher (p < 0.05) with rolapitant than active control in the delayed (64.1% vs 53.6% and 59.6% vs 50.8, respectively) and overall (62.5% vs 51.2% and 56.8% vs 48.9%, respectively) phases. In the cisplatin-based HEC subgroup, rates of NN were significantly higher with rolapitant than active control in the delayed (55.7% vs 44.3%; p < 0.001), acute (70.5% vs 64.3%; p < 0.05), and overall (52.3% vs 41.7%; p < 0.001) phases. In the non-carboplatin-based MEC and AC-based subgroups, rates of NN were similar with rolapitant and active control in all phases. Trends for NSN were similar to those observed for NN, and were significantly higher in all phases in the cisplatin-based HEC subgroup. These results demonstrate that rolapitant prevents nausea during all CINV phases in patients receiving cisplatin-based HEC, and during the delayed and overall phases in patients receiving carboplatin-based MEC, thereby improving patient quality of life.

**Underwriting:** TESARO, Inc.

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**COMORBIDITY AND SYMPTOM MEASUREMENT IN ONCOLOGY SCALE: DEVELOPMENT AND TESTING.** Cheryl Lacasse, MS, RN, OCN®, University of Arizona, Tucson, AZ

About two thirds of all cancers are diagnosed in older adults and the diagnosis often co-occurs with normal and pathological changes of aging. Older adults’ perceptions of illness and symptoms may have a profound impact on cancer diagnosis, symptom management, and treatment outcomes. The purpose of this methodological study is to conduct initial psychometric testing of a newly developed self-report tool for measuring comorbidity burden and symptom perception, the Comorbidity and Symptom Measurement in Oncology Scale (COSMOS). The COSMOS is based on a blended conceptual model developed from the Theory of Unpleasant Symptoms (Lenz, 1987) and the Common Sense Model (Leventhal et al., 1980). Initial content validity of COSMOS was determined by expert panel survey. The revised COSMOS comorbidity burden subscale includes a checklist of 37 chronic illnesses/conditions and their current effect on daily life. The symptom perception subscale includes a 32 item checklist, symptom bother rating, and perceived cause of symptoms. The revised COSMOS was pilot tested with a convenience sample of 61 cancer survivors aged 65 years or older with two or more comorbidities, one or more symptoms, and the ability to read and speak English using a mixed methods approach. Participants were stratified into two groups including those on active cancer treatment (31) and those off treatment for one year or more (30). Each participant completed a paper-pencil version of the COSMOS

research packet. Quantitative data analysis is in progress including core psychometric measures of internal consistency and test-retest reliability. Analysis also includes comorbidity and symptom burden, symptom perception measures and differences between treatment groups. A subset of 7 participants was interviewed to explore their experience with the COSMOS and their perceptions about symptoms. Implications: It is projected that COSMOS could be easily translated into an electronic survey which can be used in the clinical setting as an integral component of the comprehensive geriatric assessment of older adults with cancer and in the research setting as a basis for predicting health-related outcomes for targeted interventions. Innovation: The COSMOS addresses a unique patient-centered perspective of the inter-relationships between comorbidity burden and symptom perception.

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#### 184 EXAMINATION OF THE VALIDITY OF THE ARABIC VERSION OF THE MEDICAL OUTCOME STUDY (MOS) SOCIAL SUPPORT SURVEY USING CONFIRMATORY FACTOR ANALYSIS. Fawwaz Alaloul, PhD, MSN, MPH, RN, University of Louisville, Louisville, KY; Lynne Hall, DrPH, RN, University of Louisville, Louisville, KY

Social support is an important factor in improving psychological functioning and quality of life. It has a great impact on a wide range of health outcomes. Since social support is important, a valid measure of social support is needed to fit the cultural context of the Arabic cancer population. The purpose of this study were to evaluate the reliability and validity of the Arabic version of the MOS Social Support Survey (MOS-SSS) among a sample of 63 Arabic cancer survivors who were at least three months post-Hematopoietic Stem Cell Transplantation (HSCT). The forward-backward method was used to translate the original MOS-SSS into Arabic. Data for this cross-sectional, exploratory study were collected from Arab cancer survivors at the King Hussein Cancer Center (KHCC) in Jordan. Confirmatory Factor Analysis (CFA) was used to evaluate the construct validity of the measure. The overall data-model fit was evaluated using goodness-of-fit criteria. Due to the study's sample size, Comparative Fit Index (CFI) in combination with Standardized Root Mean Square Residual (SRMR) will be used. Cronbach's alpha was used to evaluate the internal consistency of items loading on the same factor. CFA supported the four-factor structure of the Arabic version of the MOS-SSS. The results of the CFA for the Arabic version MOS-SSS model were chi-square = 0.3177, CFI = 0.9577, SRMR = 0.0293, NNFI = 0.8732 and the McDonald's centrality index (Mc) = 0.9593. Cronbach's alphas for the subscales ranged from 0.79 to 0.87. Findings from this study support the construct validity of the Arabic version of the MOS-SSS in providing a multidimensional measure of perceived social support in Arab HSCT survivors. This measure also had excellent internal consistency reliability in this sample. Valid and reliable measure of social support is important to accurately assess social support provided to Arabic cancer patients and survivors. Further study is needed with a large sample size of cancer patients and survivors to replicate and expand upon the results of this study. A valid measure of social support is needed to fit the cultural context of the Arabic cancer population.

**Underwriting:** ONS Foundation

#### 185 THE LIVED EXPERIENCE OF WOMEN WITH LUNG CANCER: A QUALITATIVE PHENOMENOLOGICAL APPROACH. Ji Hyun Sung, RN, PhD, OCN®, College of Nursing, Yonsei University, Seoul, South Korea; Eui Geum Oh, PhD, RN, Mo-Im Kim Nursing Research Institute, College of Nursing, Yonsei University, Seoul, South Korea; Sue Kim, PhD, RN, Mo-Im Kim Nursing Research Institute, College of Nursing, Yonsei University, Seoul, South Korea; Young Sook Tae, PhD, RN, College of Nursing, Kosin University, Busan, South Korea; Sanghee Kim, PhD, RN, Mo-Im Kim Nursing Research Institute, College of Nursing, Yonsei University, Seoul, South Korea; Soo Hyun Kim, PhD, RN, Department of Nursing, Inha University, Incheon, South Korea

This study aims to understand the lived experience of women with lung cancer. The incidence of lung cancer in women is increasing, and women's clinical characteristics are different from those of men. Lung cancer is associated with multiple layers of distress, including shame, depression and anxiety, yet little is known about the way women experience this illness. A qualitative approach using a Husserlian Phenomenological design was adopted. A purposive sampling strategy was used to recruit participants from the National Cancer Center in Korea. The participants consisted of 14 women (aged 38-68), varying in disease severity (stages 1-4), months since diagnosis (3-51 months), and experiences with treatment (surgery, chemotherapy, radiation, targeted therapy). Individual in-depth interviews captured narratives of the experiences of participants. Data were analyzed using Colaizzi's seven step framework. Ten main theme clusters emerged: (1) Shock at diagnosis; (2) Blame of self and medical staff; (3) Body and mind hanging between life and death; (4) Burden of responsibilities; (5) Relationship atrophy and emotional isolation; (6) Threatened family dynamics; (7) Will to overcome awakened by maternal instincts; (8) Efforts to defeat the illness; (9) Family and medical staff supporting the will to overcome; and (10) Reflection on life and death. This unique study sheds light on the experiences of women diagnosed with lung cancer. Participants noted that coping with diagnosis and treatment was a juggling of hope and despair in a painful journey requiring lots of adjustment. Reflection on the meaning of illness and preparation for death regardless of disease stage helped women reconstruct their lives. In particular, maternal instincts awakened the will to overcome lung cancer. However, the women experienced guilt over failed responsibilities as housewives, mothers, and daughters-in law. A better understanding of the above issues will help nurses recognize subtle challenges faced by women with lung cancer that in turn might affect how they cope with their disease. Further research is necessary to focus on experiential differences based on age and disease stage.

#### 186 GENDER DIFFERENCES IN BODY COMPOSITION AMONG GASTROINTESTINAL CANCER PATIENTS WITH UNINTENTIONAL WEIGHT LOSS. Saunjoo Yoon, PhD, RN, University of Florida College of Nursing, Gainesville, FL; Mara Lance, BSN student, University of Florida College of Nursing, Gainesville, FL; Oliver Grundmann, PhD, University of Florida College of Pharmacy, Gainesville, FL; Thomas J. George, MD, University of Florida College of Medicine, Gainesville, FL; Joseph J. Williams, AP, DOM, Sunshine Integrative Health, Gainesville, FL

It has been known that there are gender differences in body composition in a healthy population. Considering that cancer

metabolism and treatments may result in cachexia, it is not clear if the changes in known reference values of body composition for a healthy population apply similarly to cancer patients with significant weight loss. Purpose of this study is to explore gender differences in body composition with a focus on fat mass (FM) and phase angle by comparing a GI cancer to a healthy reference population. We hypothesize that gender differences in body composition in cancer patients do not differ from reference values. The main study is a two-group, single blind, randomized controlled design. Baseline data of the bio-electrical impedance analysis (BIA), using ImpediMed Imp™ SFB7 were extracted from the main study (PI: Yoon) which is ongoing. Data were compared to reference values of average body composition taken from the NHANES-III dataset surveyed in healthy Americans. This secondary analysis includes 24 subjects (12 males, 18 Caucasians), all diagnosed with GI cancer and 5% or greater weight loss in a 6-month period. Obtained values were compared via t-test with  $p < 0.05$  for significant differences. Male and female cancer patients did not differ in age, phase angle, or BMI. Women had significantly higher fat mass ( $p = 0.00026$ ). Age-matched cancer patients did not differ from healthy controls in FM changes ( $p = 0.58546$ ). The phase angle was not correlated with age in female cancer patients but decreased in male cancer patients. The phase angle difference between cancer patients and healthy controls showed a significant correlation with the measured phase angle. Since body weight does not reflect true health status of a patient, body composition should be an integral part in the evaluation for patients with cancer. Cachexia may affect women and men in a similar manner in regards to body composition changes. Preliminary results show that women lose FM at a slower rate than men. Considering the prevalence of cachexia in cancer patients and limited research on gender-specific body composition changes in such a population, this research warrants further investigation. Innovation: Use of non-invasive BIA to measure body composition

**Underwriting:** The main study is funded by the University of Florida (UF) Opportunity Fund and supported by the UF Clinical & Translational Science Institute.

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**OPEN LABEL RANDOMIZED CLINICAL STUDY COMPARING CALENDULA VERSUS AQUAPHOR AND ALOE VERA GEL IN WOMEN WITH BREAST CANCER UNDERGOING RADIOTHERAPY.** Susan Getz, RN, BSN, OCN®, Maine Medical Center, Portland, ME; Sheryl Search, RN, BSN, MSN, OCN®, Augusta Health, Fishersville, VA; James Kavanaugh, RN, MSN, OCN®, Maine Medical Center, Portland, ME; Nellie Bergeron, RN, BSN, OCN®, Maine Medical Center, Portland, ME; Julie Wildes, RN, OCN®, Maine Medical Center, Portland, ME; Kristiina Hyrkas, RN, MNsc, LicNsc, PhD, Maine Medical Center, Portland, ME

The majority of patients who are treated with radiation for breast cancer develop radiodermatitis. Skin irritation ranges from mild to severe, with 90-100% experiencing some skin reaction. The purpose of this nurse-lead, open-label, randomized study was to compare the efficacy of Calendula vs. Aquaphor®/Aloe vera, in reducing severe acute radiation skin reactions in relation to adjuvant radiotherapy (RT) for breast cancer. Data from the study were analyzed for 110 patients enrolled between 4/10/13 – 5/12/15. Subjects were randomly assigned to the usual care (Aquaphor®/Aloe Vera) group ( $n = 52, 47.3\%$ ) or the intervention (Calendula) group ( $n = 58, 52.7\%$ ). Subject's skin was assessed by the radiation oncology nurses at baseline (week 0), week 1 (initial treatment), then weekly thereafter (week 2–7) and two weeks post-treatment. The Radiation Therapy

Oncology Group (RTOG) scale was used to assess skin irritation. Subjects were primarily Caucasian (90.9%) with fair skin type (71.8%); did not have previous chemotherapy (73.6%) and were non-smokers (86/110, 78.2%). Subjects' mean age was 61 years; they used the skin care products an average of 31.0 days and spent 34 days in the study. Almost one-quarter (23.6%) required silvadene necessitating the need to be dropped from the study and 5.5% experienced a break in radiation treatment. For statistical analysis, the RTOG scores were dichotomized as (a) no skin irritation (RTOG  $< 2$ ) or (b) skin irritation (RTOG  $> 2$ ). No significant differences between groups at any week, except for the skin assessment performed at 2 weeks post-treatment, with the Calendula group having significantly fewer episodes of skin irritation at that time ( $\chi^2 = 5.039, df = 1, p = 0.025$ ). Results from recent studies comparing Calendula to other topical agents have been contradictory. The interim findings of this study are showing that Calendula decreases acute dermatitis of grade  $\geq 2$  at week 2. When comparing participants between the two groups no differences were noted during weeks 1-7 of RT. Acute skin reactions seem to be influenced by treatment related factors and how the skin changes over time especially in the immediate post radiation period.

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**DIFFERENCES IN THE SEVERITY OF COMMON SYMPTOMS BETWEEN PATIENTS WHO DO AND DO NOT EXPERIENCE NAUSEA DURING THE WEEK FOLLOWING CHEMOTHERAPY ADMINISTRATION.** Komal Singh, BSN, RN, MS, UCSF, San Francisco, CA; Steven Paul, PhD, UCSF, San Francisco, CA; Bruce Cooper, PhD, UCSF, San Francisco, CA; Laura Dunn, MD, UCSF, San Francisco, CA; Judy Mastick, RN, MN, UCSF, San Francisco, CA; Christine Miaskowski, RN, PhD, FAAN, UCSF, San Francisco, CA

The management of chemotherapy-induced nausea and vomiting (CINV) has improved over the past 20 years. Despite the availability of a variety of pharmacologic agents, patients continue to experience nausea during chemotherapy (CTX) administration. However, limited information is available on the relationship between nausea in the week following cancer CTX and other common symptoms reported by oncology patients. The purpose of this study is to determine the occurrence of nausea in patients in the week following the administration of CTX 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. A total of 1,266 patients with breast, gastrointestinal, gynecologic, or lung cancer were enrolled in the study. Patients completed self-report questionnaires in the week following the administration 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. Of the 1,266 patients, 58.5% reported the occurrence of nausea in the week following CTX administration. Compared to the patients who did not report nausea, patients with nausea were significantly younger, more likely to be female, and reported a poorer functional status score. In addition, patients who reported nausea had significantly higher state anxiety scores, depressive symptom scores, sleep disturbance scores, and morning and evening fatigue scores, as well as lower morning and evening energy and attentional function scores. The findings suggest that

nausea is a common symptom in oncology patients following the administration of CTX. In addition to nausea, these patients experience high levels of concurrent symptoms during the week following CTX administration. Oncology nurses need to assess patients for nausea as well as other co-occurring symptoms. In addition, patients need to be assessed for adherence with their anti-emetic regimen following CTX treatment.

**Underwriting:** National Cancer Institute

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**FERTILITY PRESERVATION FOR CANCER PATIENTS: EXPLORING NURSING ATTITUDES.** Maria Grabowski, MSN, RN, OCN®, UT Southwestern, Dallas, TX; Deborah Spitzer, MSN, RN, OCN®, UT Southwestern, Dallas, TX; Shaghayegh Rezale, BSN, RN, OCN®, UT Southwestern, Dallas, TX; Catherine Close, BSN, RN, OCN®, UT Southwestern, Dallas, TX; DaiWai Olson, PhD, RN, CCRN, FNCS, UT Southwestern, Dallas, TX; Sonja Stutzman, PhD, UT Southwestern, Dallas, TX

American Society of Clinical Oncology Quality Oncology Practice Initiative guidelines state infertility risks should be discussed prior to initiation of fertility-reducing therapies for patients in their reproductive years. Discussions regarding fertility preservation (FP) should occur at the earliest possible opportunity. However, national compliance remains low, at only 6%. Oncology nurses play an important role in ensuring adherence to quality guidelines. Research is lacking in the understanding of nurses' attitudes and behaviors towards FP. Currently no tool exists to exam this problem. This study will assess attitudes and behaviors of oncology nurses toward FP. The goal of this study is to gain increased understanding of potential barriers for nurses to recommend FP as an option for newly diagnosed patients. This instrument development study was developed by content experts and field tested with staff nurses. Next, an anonymous online survey method was used to examine factors associated with nursing recommendation for FP of newly diagnosed cancer patients. This survey was sent to oncology nurses. The endpoint of the study is a sound survey to assess nursing attitudes toward FP in cancer patients. Standardized descriptive measures of central tendency were used to describe baseline characteristics for the sample. Factor analysis was completed using SAS v9.3 with orthogonal rotation. Scree plot was examined for factors and loading >0.30 were retained. Analysis of the first 67 returned surveys (Phase 1) supports a 15-item (5-factor) survey tool. Preliminary results suggested the need for education, referral availability, and system refinement. Phase 2 surveys of additional 200 was initiated in August 2015, with an expected close of enrollment date of December 2015. Cancer patients of childbearing age worry how treatment will affect their ability to have a child. All members of the care team should be sensitive to this concern and recommend appropriate action. This study will identify nursing barriers to patient education, which will support system-wide implementation of a comprehensive FP program. Understanding FP nursing barriers will guide FP program implementation. Cancer patients deserve FP information, choice, and hope.

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**INTERVENTIONS TO IMPROVE QUALITY OF LIFE, WELL BEING AND CANCER CARE IN LATINO CANCER SURVIVORS: A SYSTEMATIC LITERATURE REVIEW.** Julie McNulty, RN, PhD, CPHQ, Arizona State University, Phoenix, AZ; Sunny Kim, PhD, Arizona State University, Phoenix, AZ; Tracy Thurston, MC, LPC, Cancer Support Community, Phoenix, AZ; Jiwon Kim, Arizona State University, Phoenix, AZ; Linda Larkey, PhD, Arizona State University, Phoenix, AZ

Hispanic/Latino cancer survivors (CSs) are at risk for increased psychosocial burden, yet very few interventional studies have been conducted in this population. The purpose of this literature review is to examine and synthesize research on supportive care interventions to improve quality of life, well-being and cancer care in Hispanic/Latino CSs. Data sources included MEDLINE, CINAHL, and PsycINFO from 1994 to 2014. Utilizing PRISMA guidelines, studies were categorized by sample description, study design, cancer type/site, type of intervention, major findings/implications and theoretical framework. Samples included Hispanic/Latino CSs from diagnosis into survivorship. Studies were excluded if they focused on prevention and surveillance, included less than 25% Hispanic/Latino participants, were doctoral dissertations, or non-English publications. Of the 468 articles found, 15 studies met inclusion criteria. Of those 15 studies, 6 (43%) were psychosocial interventions, 4 (28%) were educational, 4 (28%) were exercise and exercise/diet interventions and 1 included a navigational component. Most studies were pilot and feasibility studies, and 9 were randomized controlled trials. The most common outcomes measure was quality of life. Ten out of 15 studies demonstrated significant changes in outcomes with the most efficacious interventions being telephone counseling, collaborative care for depression, in-person education and group based psychosocial interventions. Interventional studies for Hispanic/Latino CSs are at the very early stages of scientific development. Most interventions are feasible and accepted by the Hispanic/Latino population. The evidence supports the notion that there are benefits to culturally relevant support interventions for this population. To our knowledge this is the first systematic review that focuses on interventions for post-diagnosis Hispanic/Latino CSs. Considering the rapidly increasing number of Hispanic/Latino CSs in the United States, there is a great need for further research in this area through replication and multisite studies. Ongoing psychosocial and functional assessments by interdisciplinary oncology and primary care practitioners can help identify who might be at risk, and what type of interventions would be most appropriate for that individual. Interventions need to be culturally tailored and translated into practice to improve quality of life and well-being for Hispanic/Latino CSs.

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**TIMELY EDUCATION ABOUT PALLIATIVE CARE (PC) AMONG PANCREATIC CANCER PATIENTS.** Nina Grenon, DNP, Dana-Farber Cancer Institute, Boston, MA; Karen Sommer, MSN, Dana-Farber Cancer Institute, Boston, MA; Constance Barysaukas, MS, Dana-Farber Cancer Institute, Boston, MA

A majority of cancer patients only receive PC at the end-of-life despite the physical, emotional, and existential distress throughout the continuum of the disease. The literature suggests early PC combined with standard care, improves quality of life and potentially extends survival. A four month retrospective chart review of patients diagnosed with pancreatic cancer at Dana-Farber Cancer Institute (DFCI) revealed only 19% of patients had a documented PC educational conversation within the first four weeks of care. Although early incorporation of PC education is imperative for patient quality of care it is not taking place. A quality improvement project was designed to increase the number of documented PC discussions among all new locally advanced and metastatic pancreatic cancer patients who were followed at the DFCI for the first four weeks of care. An educational brochure about PC was developed for providers and providers were educated

about PC at a monthly staff meeting after completing a brief survey. Providers received an email reminder for all eligible patients and the PC brochure was attached to all patient encounter forms. Follow-up chart audits were conducted and pre and post surveys were administered to patients. Providers and patients indicated no barriers to PC education. Providers indicated the onset of difficult to manage symptoms as the appropriate time to discuss PC and patients indicated first treatment or first treatment failure as the appropriate time to discuss PC. Chart audits revealed all eligible patients were educated about PC between April 14 and May 9, 2014 (n=13). Following implementation of this successful initiative, all eligible patients were educated about PC, conversations were documented and providers identified no barriers in the process. Due to the small scope of this project, further work is needed to improve sustainability, including ongoing identification of the number of patients who enroll in PC services concurrently with standard care, measure patient satisfaction, and implement our initiative in additional disease centers. In the future, infusion nurses, practice nurses, and social workers will participate in PC education training.

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**EFFECT OF ADHERENCE AND DOSE INTENSITY OF IBRUTINIB ON OUTCOMES IN PATIENTS WITH PREVIOUSLY TREATED CHRONIC LYMPHOCYTIC LEUKEMIA.** Sara Deisinger, RN, BSN, Wilmut Cancer Institute, University of Rochester, Rochester, NY; Gretchen McNally, PhD, ANP-BC, The Ohio State University Medical Center, Columbus, OH; Sam Suzuki, MS, MBA, Pharmacyclics LLC, an AbbVie Company, Sunnyvale, CA; George Cole, MD, Pharmacyclics LLC, an AbbVie Company, Sunnyvale, CA; John C. Byrd, MD, The Ohio State University Medical Center, Columbus, OH; Paul M. Barr, MD, Wilmut Cancer Institute, University of Rochester, Rochester, NY

Although oral anticancer therapies offer convenience to patients, monitoring adherence can be challenging. Ibrutinib is an oral agent approved for patients with chronic lymphocytic leukemia (CLL) who have received  $\geq 1$  prior therapy or have a 17p deletion mutation. Ibrutinib is taken once daily until disease progression or unacceptable toxicity. In the phase 3 RESONATE trial, ibrutinib use was associated with a high frequency of durable remissions in patients with relapsed/refractory CLL in comparison to ofatumumab (Byrd, 2014). To understand how adherence to ibrutinib influenced treatment outcomes, we evaluated the effect of ibrutinib dose intensity (DI) and drug holds on progression-free survival (PFS) in ibrutinib-treated patients from the RESONATE trial. Oncology nurses play a critical role in ensuring patient adherence, thereby supporting patients to maximize the benefit from ibrutinib. Dose intensity is defined as the ratio of actually administered ibrutinib dose to planned ibrutinib 420 mg dose. We analyzed effects of DI and dose interruptions  $\geq 8$  consecutive days on PFS in 195 ibrutinib-treated patients in RESONATE. All patients began treatment with the once-daily 420 mg (3 capsules) ibrutinib dose, regardless of age, weight, or comorbidities. With 8.6 months of treatment, mean ibrutinib DI was 95% (median 100%). Of 79 patients who needed a dose interruption for adverse events, 73 (92%) restarted treatment at 420 mg per protocol. Patients with DI above the mean experienced longer median PFS (not reached) compared to those with DI below the mean (6.9 months,  $p = 0.0127$ ). Similarly, among patients with PFS events, the median PFS for patients missing  $< 8$  days of ibrutinib ( $n = 137$ ) was longer than for those ( $n = 57$ ) who had dose interruptions  $\geq 8$  consecutive days (not reached vs. 10.9 months). The mean duration of a missed dosing event was 18.7 days for patients

with dose interruptions  $\geq 8$  consecutive days ( $n = 58$ ). Our data show that a higher mean DI of ibrutinib is associated with an improvement in PFS. With fewer clinic visits for ibrutinib treatment, it is critical that oncology nurses provide patients with tools to document adherence and educate them about the importance of taking ibrutinib at full dose and on schedule.

**Underwriting:** Y1112 Clinical Trial is funded by Pharmacyclics LLC, an Abbvie Company.

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**RELATIONSHIP BETWEEN CHEMOTHERAPY AND GLYCEMIC CONTROL: A CASE STUDY ANALYSIS.** Denise Hershey, PhD, FNP-BC, Michigan State University, East Lansing, MI; Sarah Hession, PhD, Michigan State University, East Lansing, MI

Patients with cancer who have pre-existing diabetes are at increased risk of having issues related to glycemic control while receiving chemotherapy. Chemotherapy and/or associated medications such as glucocorticosteroids can impact level of glycemic control. To date only a few studies have explored the relationship between glycemic control and outcomes in patients with cancer. The purpose of this project was to explore the relationship between chemotherapy, glycemic control and symptoms in adults with pre-existing diabetes receiving chemotherapy for cancer. A total of 18 adults undergoing chemotherapy participated in this 12 week longitudinal study. Hemoglobin A1cs were obtained at baseline and 12 weeks; patients were also asked to keep a daily fasting blood sugar log in order to measure glycemic control. Symptoms were assessed using a modified MD Anderson Symptom Inventory at baseline, 4, 8 and 12 weeks. A medical audit was used to obtain information regarding cancer type, chemotherapy type and regimen. A case study approach to analysis was utilized to highlight four unique cases to demonstrate patterns of glycemic control, symptom severity and interference, and potential modifications to treatment plans and unexpected hospitalizations over time. All individuals had a spike in glycemic levels around the time they received chemotherapy; patients on oral medications vs insulin returned to baseline readings quicker. Level of glycemic control generally correspond with overall symptom severity and interference at each time point, with symptom severity and symptom interference appearing to be higher when glycemic levels were higher. Two cases were hospitalized during treatment, one due to severe hyperglycemia, the other infection. Two ended chemotherapy early due to development of neuropathy symptoms. This case study approach identified the importance of monitoring a patient's glycemic status while they are being treated with chemotherapy. Further research needs to be done in this area in order to fully understand the relationship between glycemic control and symptoms in patients with diabetes who are receiving chemotherapy.

**Underwriting:** Supported by a grant from the Walther Cancer Foundation, Indianapolis, Indiana.

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**GASTROINTESTINAL TOXICITY AND RISK FACTORS IN PATIENTS WITH MYELOFIBROSIS TREATED WITH PACRITINIB.** Angela Toro, CNP, MSN, RN, Mayo Clinic, Scottsdale, AZ; Sarah El Farhi, RN, Guy's and St Thomas' NHS Foundation Trust, London, United Kingdom; Tanya Granston, PhD, CTI BioPharma Corp., Seattle, WA; Karen Amaradivakara, RN, Guy's and St Thomas' NHS Foundation Trust, London, United Kingdom

Myelofibrosis is a rare hematologic malignancy with limited treatment options, particularly for those with low platelets. Pacritinib, an oral JAK2/FLT3 inhibitor under investigation in

patients with myelofibrosis including those with thrombocytopenia, demonstrated significant improvements in spleen volume reduction (SVR) and total symptom score (TSS; V1+V2) reduction vs best available therapy. Pacritinib is associated with gastrointestinal adverse events (AEs), requiring early monitoring for successful management and adherence to avoid negative impacts on patient care and outcomes. Purpose: Characterize gastrointestinal toxicity including incidence, time to onset/resolution, recommended management, and effects on adherence and efficacy in pacritinib-treated patients with myelofibrosis. Methods: Safety data were analyzed for pacritinib-treated patients enrolled in the phase 3 PERSIST-1 trial, focusing on gastrointestinal AEs. Findings: Within 24 weeks, gastrointestinal AEs occurred in 147 (66.8%) pacritinib-treated patients, primarily diarrhea (53.2%), nausea (26.8%), vomiting (15.9%), abdominal pain (9.5%), and constipation (8.6%). CTCAE Grades 2 and 3 diarrhea occurred in 17.3% and 5.0% of pacritinib-treated patients, respectively. Grade 3 nausea and vomiting occurred in < 1%. No grade 4 gastrointestinal AEs were observed. Median time to diarrhea, nausea, and vomiting onset (for patients experiencing these events) was 0.43, 0.57, and 2.86 weeks, respectively; median time to resolution (any/grade 3) was 2.1/1.3, 2.1/1.0, and 0.3/0.5 weeks, respectively. Gastrointestinal AEs, primarily diarrhea, resulted in pacritinib discontinuation in 2.7% and drug hold in 10.0% of patients. A prescription was provided for antidiarrheals with instructions to use at first instance of diarrhea. By multivariate analyses, increasing age, absence of JAK2 mutation, increasing white blood cell count, and lower baseline platelets were significantly associated with increased odds of gastrointestinal AEs. There was no correlation between gastrointestinal AEs and efficacy by SVR ( $p = 0.78$ ) or TSS reduction ( $P=0.89$ ). Discussion: There were few discontinuations and no negative impact on efficacy due to gastrointestinal AEs, suggesting currently available management strategies are successful. Risk factors for gastrointestinal AEs with pacritinib may help identify patients for prophylactic management. Gastrointestinal AEs with pacritinib occur early, but improve with time; key nursing roles include closely and accurately monitoring/recording AEs early in treatment and ensuring adherence with supportive medication, requiring effective communication with patients.

**Underwriting:** The phase 3 PERSIST-1 clinical trial is funded by CTI BioPharma.

### 195 ONCOLOGY NURSES' AWARENESS AND COMPLIANCE OF GUIDELINE FOR SAFE HANDLING OF ANTINEOPLASTIC AGENTS IN A TERTIARY HOSPITAL. Ji Hyun Yun, Asan Medical Center, Seoul, South Korea; Yeon Hee Kim, RN, PhD, Asan Medical Center, Seoul, South Korea; Jeong Hye Kim, RN, PhD, University of Ulsan, Seoul, South Korea; Sun Ja Sin, RN, Asan Medical Center, Seoul, South Korea; Jeong Yun Park, RN, PhD, University of Ulsan, Seoul, South Korea

Purpose: To investigate oncology nurses' awareness and self-reported compliance of guideline for safe handling of antineoplastic agents in a tertiary hospital, to compared self-reported compliance and observed compliance of the guideline. Methods: To use the questionnaire of 186 nurses worked in oncology and hematology unit, chemotherapy infusion room for outpatient, and was collected from October 1 to November 30, 2014 at the tertiary hospital in Seoul. The questionnaires: 16 questions for awareness of safe handling of antineoplastic agents 24 questions for self-reported compliance of the guideline 20 questions for observed compliance. Analysis: Frequency, percentage, mean, standard deviation, t-test, one-way ANOVA and Pearson's correlation using Window SPSS version 22.0.

Findings: (1) In the examination of oncology nurses' awareness of guideline for safe handling of antineoplastic agents, they had an average 79.74 points out of 100 points. It was a 90% or more for awareness of the subject of safe antineoplastic management, the strategy for minimize of the exposure of the agents, the disposal of Hazardous drugs. But the percentage of correct answers was 69.9%, 39.8% for about the proper PPE & proper hand sanitizers and the percentage of correct answers is 79.6%, 29.6% for contaminated linen handling, disposal of remnants of antineoplastic agents. (2) The general awareness of guideline for safe handling of antineoplastic agents was related with oncology experience ( $F = 3.78, p = 0.012$ ). (3) There was a significant relationship between oncology nurses' awareness and self-reported compliance of guideline for safe handling of antineoplastic agents ( $r = 0.25, p = 0.001$ ). (4) The self-reported compliance on the guideline for safe handling of antineoplastic agents ( $3.97 \pm 0.38$  points) was higher than that reported in earlier studies. (5) There was no significant difference when comparing self-reported and observed compliance of guideline for safe handling of antineoplastic agents. Discussion and implications: The finding showed that there was a need to establish the efficient guideline for safe handling of antineoplastic agents and develop our structured, continuous educational program for improvement of safe practice related to handling of antineoplastic agents. The developed and enhanced that guideline & education program would contribute to improvement of staff and patient safety related to handling antineoplastic agents.

### 196 ASSOCIATION OF FATIGUE CATASTROPHIZING AND FATIGUE AMONG PROSTATE CANCER MEN RECEIVING EXTERNAL-BEAM RADIATION THERAPY. Nada Lukkahatai, PhD, MSN, RN, School of Nursing, University of Nevada Las Vegas, Las Vegas, NV; Alexandra Espina, BS, National Institute of Nursing Research, National Institutes of Health, Bethesda, MD; Leorey Saligan, PhD, RN, BC-FNP, National Institute of Nursing Research, National Institutes of Health, Bethesda, MD

Cancer related fatigue is one of the most distressing symptoms experienced by cancer patients during and after cancer treatment. Catastrophizing is the negative interpretation of a situation—always assuming the worst. Fatigue catastrophizing has been associated with fatigue severity. Purposes of the study were to examine (1) fatigue catastrophizing and fatigue trajectory during and after cancer treatment, and (2) the association of fatigue catastrophizing and fatigue before, during, and after cancer therapy. Methods and Analysis: Fifty five non-metastasis prostate cancer men aged 49-82 years ( $M = 66 \pm 7.2$ ) scheduled to receive EBRT were included in the analysis. Fatigue was measured by the Functional Assessment of Cancer Fatigue scale (lower scores = worse fatigue) and fatigue catastrophizing was measured by the Fatigue Catastrophizing Scale (higher scores = high catastrophizing) before EBRT, during treatment (Days 1, 7, 14, and 21), at completion of treatment, and 1, 3, and 6 months and one year post-EBRT. One-way repeated measure analysis of variance and Pearson's correlation were used for data analysis. Fatigue scores decreased from baseline during treatment and increased after treatment; scores significantly decreased from baseline ( $44.6 \pm 7.1$ ) to midpoint (Day 21;  $39.7 \pm 10.3, p < 0.001$ ) of EBRT. Fatigue catastrophizing significantly decreased from baseline ( $13.3 \pm 4.7$ ) to Day 1 ( $11.4 \pm 2.2, p = 0.026$ ), suggesting potential anxiety before treatment. Fatigue catastrophizing remained constant from Day 1 until one year post-EBRT (range 11.14-12.05). High fatigue catastrophizing before treatment significantly predicted higher fatigue at Day 21 ( $t = -5.34, p < 0.001$ ). High fatigue catastrophizing was significantly associated with

lower score of fatigue before, during, and after treatment ( $r = -0.515$  to  $-0.817$ ,  $p = < 0.001$  to  $0.04$ ) except at one-year. Study findings support role of fatigue catastrophizing on self-report fatigue during and post cancer treatment except at 1 year. The future studies are needed to investigate other factors influence fatigue experience at 1 year post treatment. Innovation: The use of fatigue catastrophizing scale to measure catastrophizing of fatigue. This longitudinal study enhances understanding of fatigue and fatigue catastrophizing trajectory during and after cancer treatment.

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### TOTAL DOSE OF CHEMOTHERAPY RECEIVED IN COHORT OF AFRICAN AMERICAN WOMEN WITH BREAST CANCER.

Margaret Rosenzweig, PhD, FNP, AOCNP®, FAAN, University of Pittsburgh School of Nursing, Pittsburgh, PA; Mary Connolly, RN, BSN, University of Pittsburgh, Pittsburgh, PA

The 5-year survival after a first diagnosis of BC (BC) is 13% lower in African American (AA) women than in White women, an alarming disparity that cannot be entirely explained by disease stage at presentation. Nonadherence to breast-cancer treatment and treatment delays from diagnosis to initiation of treatment, specifically adjuvant chemotherapy may be part of the explanatory model for AA breast cancer survival disparity. Design was secondary analysis of chemotherapy dosage prescribed/received among African American women recommended to receive first time chemotherapy for BC treatment. Retrospective chart review of chemotherapy dosage prescribed/received during a multi-site, randomized, 2 group clinical trial with one time intervention of encouragement to begin chemotherapy was conducted. Recruitment began December, 2009 and ended September, 2014 from seven sites in Western PA and eastern Ohio. There were 141 AA women available for full outcome analysis. Demographics included 44% ( $n = 61$ ) reporting family income under \$30,000, and 99% of the sample ( $n = 140$ ) reporting spirituality as “very” or “somewhat” important. About half ( $n = 70$ , 49%) had chemotherapy delay or dose reduction. No differences between control and intervention group for initiation to chemotherapy were noted. All women began recommended chemotherapy. However among this sample of African American women receiving first chemotherapy for BC, 50% ( $n = 71$ ) of this study sample had some reduction in dose intensity (less than prescribed dose), early treatment cessation or delay. Among this cohort, 82.3% of prescribed chemotherapy was received in prescribed time frame. 29% of the sample received less than 80% of their prescribed chemotherapy by projected end date. Historically 3.5%–15% of community (non clinical trials) patients (predominantly white) with early stage BC receive a relative dose intensity of less than 85% (associated with worse survival outcomes). Among our cohort of only black women, 40 participants (29%) of the sample received a cumulative dose of < 80% by projected end date. This alarming disparity requires closer patient, provider and community assessment in order to determine the cause of non-adherence, dose reductions and early chemotherapy termination among AA women.

**Underwriting:** American Cancer Society, RSGT-09-150-01-CPHPS, The ACTS Intervention to Reduce Breast Cancer Treatment Disparity

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**EXERCISE AND HOSPITALIZED LEUKEMIA PATIENTS.** Anne Delengowski, RN, MSN, AOCN®, Thomas Jefferson University Hospital, Philadelphia, PA; Justine O'Connor, RN, MSN, OCN®, Thomas Jefferson University Hospital, Philadelphia, PA; Megan Stinsman, RN, BSN, OCN®, Thomas Jefferson

University Hospital, Philadelphia, PA; Kate McHenry, RN, BSN, OCN®, Thomas Jefferson University Hospital, Philadelphia, PA; Kaitlin Mostak, RN, BSN, Thomas Jefferson University Hospital, Philadelphia, PA; Lauren Gilbride, RN, BSN, Thomas Jefferson University Hospital, Philadelphia, PA

Cancer and its treatment is associated with numerous physical and emotional symptoms that can present with adverse effects. Previous research has suggested that exercise might be a promising strategy for some symptom distress in cancer patients. The purpose of this study was to determine if hospitalized leukemia patients undergoing induction therapy experience less symptom distress when involved in a structured, monitored walking program than patients receiving usual standard of care. The subjects consisted of a convenience sample of 30 adults admitted to the oncology unit for induction/reinduction therapy for leukemia. Patients were randomized to a control group/current standard of care or the intervention/walking program group. Both groups were asked to complete the NCCN symptom distress tool on admission and weekly thereafter. The control group independently ambulated as tolerated while the intervention group received education on the importance of exercise, a motivational calendar and pedometer to track distances walked with encouragement by staff to increase distances over time. Motivation and distress levels changed significantly over time; however, neither motivation nor distress differed between the two groups. The intent for this research study, is to implement an exercise program for leukemia patients undergoing induction therapy. Additionally, it is the intent of the researchers to further study the source of distress in the inpatient oncology population. Of note, this was a staff nurse project that received funding under the mentorship of the Oncology CNS.

**Underwriting:** Daisy Foundation

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**CAREGIVER REACTIONS IN ONCOLOGY AND OTHER CHRONIC ILLNESSES.** Susan Cobb, PhD, RN-BC, Fox Chase Cancer Center, Philadelphia, PA; Carole Sweeney, RN, MSN, AOCN®, Fox Chase Cancer Center, Philadelphia, PA; Lisa Etkins, MSS, LCSW, OSW-C, Fox Chase Cancer Center, Philadelphia, PA

Oncology nurses increasingly partner with informal caregivers to provide optimal care for patients. Positive aspects of caregiving as well as challenges merit further study. More research is needed on how the experiences of informal caregivers vary according to the chronic illness of the patient as well as individual caregiver characteristics such as gender and race. The purpose of this nursing-led study was to identify positive and negative aspects of the caregiver experience and contributing factors, to help target interventions. Study design was descriptive and correlational. 111 self-identified informal caregivers completed a survey including the Caregiver Reactions Assessment and Positive Aspects of Caregiving instruments. Validity and reliability for both tools was confirmed. The data were summarized using descriptive statistics. Statistical tests were used to identify positive and negative aspects of caregiving, the impact of oncology vs. other chronic illnesses of the patient, and the association of caregiver reactions with demographic factors. Major new findings related to the current literature included that caregivers reported high caregiver esteem and moderately positive experiences with caregiving. Cancer caregivers were less likely to indicate a lack of family support. Males found assistance with walking, personal care and personal hygiene to be least challenging and reported less impact on health than females. Whites reported lower caregiver esteem, higher impact on health and were less likely to be posi-

tive about the caregiving experience than non-whites. Oncology nurses should be knowledgeable of both the positive aspects of the caregiving experience and the challenges and address these in education for caregivers. Differences in caregiving experiences are related more to individual caregiver characteristics such as gender and race/ethnicity than diagnosis of the patient, an area for further study. While physical tasks are common caregiving activities informal caregivers may find other aspects more challenging such as providing emotional and psychological support. Assessment and care planning should be based on individual factors and target identified areas of need. Innovative study findings included positive aspects of informal caregiving and gender and cultural differences in the caregiving experience. Nurses can use this information to target education and support interventions for caregivers.

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**SAFETY AND EFFICACY OF LANREOTIDE DEPOT VS PLACEBO IN NEUROENDOCRINE TUMOR PATIENTS WITH A HISTORY OF CARCINOID SYNDROME AND PRIOR OCTREOTIDE THERAPY.** Donna Williams, RN, PHN, Stanford University School of Medicine, Stanford, CA; Aaron Vinik, MD, Eastern Virginia Medical School, Norfolk, VA; Edward Wolin, MD, Markey Cancer Center University of Kentucky, Lexington, KY; Pamela Kunz, MD, Stanford University School of Medicine, Stanford, CA; Susan Pitman Lowenthal, MD, MPH, Ipsen Biopharmaceuticals, Inc, Basking Ridge, NJ; George Fisher, Jr, MD, PhD, Stanford University School of Medicine, Stanford, CA

In the ELECT study, lanreotide depot, a long-acting somatostatin analog (SSA), was associated with significant improvement over placebo in the percentage of days with short-acting octreotide used as rescue medication for symptomatic control of carcinoid syndrome (CS) in neuroendocrine tumor patients. In this subanalysis, we assessed the safety, tolerability, and efficacy of lanreotide depot 120 mg SC q4W in patients who had prior octreotide use. ELECT consisted of 16-week double-blind, 32-week open-label, and long-term extension phases. Adults with a histopathologically-confirmed gastroenteropancreatic neuroendocrine tumor (GEP-NET) or GEP-NET of unknown location with liver metastases and history of CS (flushing and/or diarrhea) were included. Patients were SSA-naïve or were responsive to conventional doses of octreotide LAR ( $\leq 30$  mg q4W) or short-acting octreotide ( $\leq 600$   $\mu$ g daily), and were randomized to lanreotide depot 120 mg or placebo. 64 patients (n = 33 lanreotide; n=31 placebo) were previously treated with octreotide LAR (n=56), short-acting octreotide (n = 24), or both (n = 6). Mean age was 58.8 years, 45% were male, and 84% had been diagnosed  $\geq 1$  year before the study. Most treatment-emergent adverse events (TEAEs) were mild to moderate in nature. One patient receiving lanreotide experienced serious TEAEs (small intestinal obstruction and urinary infection). Nineteen patients (58%) receiving lanreotide experienced a TEAE; the most common included headache (18%), abdominal pain (12%), and nausea (9%). Twenty-two (71%) patients receiving placebo experienced a TEAE; the most common included abdominal pain (16%), nausea (16%), and dyspnea (13%). 52% of lanreotide patients experienced complete treatment success (0 to  $\leq 3$  days of rescue short-acting octreotide medication between weeks 12 and 15), vs 26% of placebo patients (RR = 1.996 [95% CI: 1.009, 3.950], p = 0.0471). A transition to lanreotide depot 120 mg in GEP-NET patients previously treated with octreotide LAR and/or SC was well tolerated and resulted in no new safety signals. The relative chance for achieving complete treatment success was 2 times greater with lanreotide than placebo.

**Underwriting:** Ipsen

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**CHILDREN'S VOICES ON EXPERIENCING RADIOTHERAPY.** Viveca Lindh, RN, PhD, Department of Nursing, Umea University, Umea, Sweden; Gunn Engvall, RN, PhD, Department of Womens' and Childrens' Health Uppsala University, Uppsala, Sweden; Charlotte Ångström-Brännström, RN, PhD, Department of Nursing Umea University, Umea, Sweden; Kristina Nilsson, MD, PhD, Department of Oncology, Uppsala University, Uppsala, Sweden; Gun Wickart-Johansson, MD, Department of Oncology Karolinska University Hospital, Stockholm, Sweden; Jack Lindh, MD, Professor Emeritus, Department of Radiation Sciences, Umea University, Umea, Sweden

The aim of this study was to describe children's experiences with radiotherapy and proposals of improvement. In Sweden, of the roughly 300 children aged 0–18 years diagnosed with cancer each year, 80–90 undergo radiotherapy treatment. Thirteen children aged 5–15 years were interviewed to collect data for qualitative content analysis. Findings were grouped in five categories: hospital stays and practical arrangements with positive and negative experiences; radiotherapy with age-appropriate information, communication, and guidance to various degrees; more or less struggles; the use of distraction and other coping strategies; and children's suggestions for improving radiotherapy. Encompassing all categories, the overarching theme was summarized "It is tough and bothersome but it works, because it has to." Important experiences included making elucidative visits, needing communication, being afraid, disliking and suffering, needing media distraction, dealing with emotions, and needing support. A systematic family-centered preparation program and individualized distraction strategies during radiotherapy could reduce children's distress and better prepare families for the experience. Further studies addressing family-centered interventions could clarify the success of these and other programs.

**Underwriting:** The Swedish Childhood Cancer Foundation

## 202

**THE PSYCHOMETRIC PROPERTIES OF THE BRIEF PAIN INVENTORY FOR BREAST CANCER PATIENTS UNDERGOING ENDOCRINE THERAPY.** Yehui Zhu, RN, MSN, School of Nursing, University of Pittsburgh, Pittsburgh, PA; Jeffrey Rohay, PhD, MSIS, School of Nursing, University of Pittsburgh, Pittsburgh, PA; Catherine Bender, PhD, RN, FAAN, School of Nursing, University of Pittsburgh, Pittsburgh, PA

Pain is one of the most prevalent and distressful symptoms experienced by breast cancer patients. Pain is frequently reported by women with breast cancer receiving endocrine therapy. This symptom has a detrimental impact on quality of life and is related to nonadherence to therapy. Therefore, it is critical to assess pain during the endocrine therapy to facilitate targeted symptom management. The Brief Pain Inventory (BPI) is an 11-item measure that has been reported to be a reliable and valid measure of pain among the general cancer population, however, its psychometric properties for women with breast cancer undergoing endocrine therapy have not been evaluated. The purpose of this study was to examine the psychometric properties of the BPI in women with breast cancer receiving endocrine therapy. This study was a secondary analysis of data from the Anastrozole Use in Menopausal Women (AIM) study. The data were obtained from women diagnosed with early stage breast cancer at 6 months (n = 251) and 12 months (n = 179) post-initiation of endocrine therapy. Internal consistency reliability was

examined by calculating Cronbach's  $\alpha$ . Construct validity was examined using exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) using the data from the two time-points described above. The BPI showed excellent internal consistency (Cronbach's  $\alpha = 0.949$ ). Both EFA and CFA suggested a two-factor structure (pain severity and interference). Two items assessing the interference of pain with walking ability and sleep, showed high correlation ( $> 0.70$ ) with the pain severity factor. Results indicate that the BPI is a reliable measure of pain in women with breast cancer receiving endocrine therapy. Interference of pain with walking ability and sleep may also be indicators that reflect pain severity. Further testing of the loading of interference of pain with walking ability and sleep is needed to confirm the factor structure of the BPI. Innovation This critical study broadens the evidence for the reliability and validity of the BPI in an untested population with high potential to experience acute and chronic pain.

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**REFUSAL OF SURGERY IN GASTRIC CANCER: REASONS AND EFFECT ON SURVIVAL.** Wen-Li Lin, Cancer Center, Chi Mei Medical Center, Liouying, Tainan City, Taiwan; Shu-Chan Chang, Cancer Center, Chi Mei Medical Center, Liouying, Tainan City, Taiwan; Pei-Hua Wu, Cancer Center, Chi Mei Medical Center, Liouying, Tainan City, Taiwan; Wen-Tsung Huang, Cancer Center, Chi Mei Medical Center, Liouying, Tainan City, Taiwan; Chao-Jung Taso, PhD, Cancer Center, Chi Mei Medical Center, Liouying, Tainan City, Taiwan

Gastric cancer is one of the most common causes of cancer death in Taiwan. According to an analysis of the Taiwan Cancer Registry Database conducted by the Health Promotion Administration, patients undergoing treatment have a survival rate over 80% during the first year, while the rate for patients not undergoing treatment is only 50%. This study analyzed the treatment compliance of gastric cancer patients and their reasons for treatment refusal in hopes of understanding why cancer patients in Taiwan refuse to receive treatment. This study can serve as a national reference during the planning and promotion of cancer prevention policies. The participants in this study were 104 gastric cancer patients who received treatment at a teaching hospital in southern Taiwan from 2009 to 2014. Analysis was performed on the participants' reasons for treatment interruption and refusal. Results showed that of the 104 gastric cancer patients, 17 interrupted or refused surgery (16.3%). Analysis showed that 15 patients were male (88.2%), 8 were over the age of 70 (47.1%), 10 receive education  $\leq 6$  years (58.8%), and 4 lived alone (23.5%). With regards to the causes of interrupting or refusing treatment, 5 patients were worried about increasing the burden on their family (29.4%). This study found that a "age" and "support system" were the cause for patients' treatment compliance, interruption, and refusal of surgery ( $p = 0.001$ ). The results also indicated that in terms of survival rates, the compliance group was superior to the refusal group. It is suggested that medical teams establish a patient-centered multidisciplinary team care model to provide patients with information regarding financial and psychological support and promote correct medical seeking perspectives so that patients can receive early treatment, so patients' feelings of being lost can be reduced, and so the quality of cancer care can be improved.

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**PERCEPTIONS OF FALL-RISK AND INTENTION TO ENGAGE IN FALL PREVENTION AMONG HOSPITALIZED PATIENTS WITH CANCER.** Allison Spradlin, BS, RN, OCN®, Indiana

University Health Ball Memorial Hospital, Muncie, IN; Renee Twibell, PhD, RN, CNE, Indiana University Health Ball Memorial Hospital and Ball State University, Muncie, IN; Debra Siela, PhD, RN, ACNS-BC, CCNS, CCRN-K, CNE, RRT, Ball State University, Muncie, IN; Sharon Adams, DNP, RN, CRRN, CNE, Ivy Tech Community College, Muncie, IN

Oncology patients are at high-risk for falls during hospitalization. Nurses assess patients for fall-risk and institute prevention plans, yet fall rates remain high. Research has suggested that alert hospitalized patients do not engage in fall prevention plans because they do not believe they are at risk. A nursing team with the expertise of a nurse researcher queried how cancer patients viewed their own fall-risk and fall prevention plans. An evidence review revealed no research on fall-related perceptions of hospitalized oncology patients. In this correlational, IRB-approved study, a convenience sample of 52 alert, at-fall-risk oncology inpatients at one Midwestern teaching hospital completed a 31-item pen-and-paper survey. Variables measured included perceived confidence in mobilizing without help and without falling, anticipated outcomes of falling, intention to engage in prevention plans, fear of falling, and likelihood of falling. Nurses reported participants' adherence to prevention plans and number of falls following survey completion. A near-equal number of males and females participated (mean age = 68 years). Although all participants were evaluated by nurses as at-risk for falls, 59% did not believe they would fall. Although 98% and 43%, respectively, anticipated that a fall would be painful and severely injurious, almost one-third reported not following fall prevention plans and expressed low intent to follow prevention plans. Confidence in mobilizing was the strongest predictor of intention to engage in fall prevention. Higher confidence in mobilizing safely without help correlated with lower intention to engage in fall prevention ( $r = 0.70, p < 0.001$ ). No participants fell after survey completion, and adherence to prevention plans was high. Participants perceived markedly less fall-risk compared to nurses' assessments. Perceived confidence in mobilizing significantly influenced intended engagement in prevention plans. Assessment of patients' fall-related perceptions may be important to include when designing prevention plans. Since no participants fell and non-adherence was minimal, the survey may have heightened participants' awareness and increased engagement in fall prevention. Nurses may increase patients' engagement through a short, personalized focus on fall-related information. Further research can clarify fall-related perceptions, especially focusing on patients who express low intention to engage in fall prevention plans.

**Underwriting:** DAISY Foundation

### 205

**LIVING WITH ADVANCED CANCER: AN INTEGRATIVE REVIEW.** Debra Lundquist, MSN, RN, Boston College, Chestnut Hill, MA

The number of people living with advanced incurable cancer has increased significantly over the last decade. It is estimated that there are at least 300,000 people living with advanced cancer with the actual number likely approaching 500,000. Described as a new subpopulation of survivor, they are essentially a silent group for whom we know very little in regards to numbers, needs and experience. In addition, despite all we know about the benefits of palliative care, people with advanced cancer often do not receive palliative care. While the sheer volume of people living with advanced incurable cancer has increased, the research suggests that attention to palliative care for this population has decreased. An integrative literature review was undertaken to examine the research on the experience of people living with advanced cancer and their experience with palliative care. A comprehensive search

was conducted using CINAHL, PubMed and Google Scholar from January 1995 – March 2015. This review supported the predominant concerns of those living with advanced cancer as physical, psychological, and existential concerns. It is also confirmed that for people living in the face of incurable illness, much remains unknown. There is very little knowledge to date that describes the experience from the patient perspective. There is a paucity of research examining the impact of the lack of integration of palliative care into the care of those living with advanced incurable cancer. Further exploration is warranted to better understand the experience of living with advanced cancer when there is no longer curative therapy. This review identified gaps in the literature and areas for further study. Few accounts appear in the literature about the everyday experience of people living with advanced cancer. Knowledge directly acquired from patient experiences is needed to design care that will improve the experience of living with advanced cancer in ways that are meaningful to the patient. Further research is needed to understand the perspective of this vulnerable population.

**Underwriting:** ONS Research Doctoral Scholarship, Boston College Doctoral Fellowship

## 206 NURSES' KNOWLEDGE AND PRACTICES FOR CAREGIVER STRAIN AND BURDEN: IMPLICATIONS FOR NURSING PRACTICE AND EDUCATION. Margaret Irwin, PhD, MN, RN, Oncology Nursing Society, Pittsburgh, PA; Gail Mallory, PhD, RN, NEA-BC, Oncology Nursing Society, Pittsburgh, PA; William Dudley, PhD, Piedmont Research, Greensboro, NC

Informal caregivers are an important extension of the cancer care workforce. Caregiver strain and burden adversely impact caregivers and patient outcomes. Nurses are uniquely qualified to assess and intervene with caregivers, however nurses' actual practices and knowledge to address caregiver strain and burden has not been studied. The purpose of this study was to describe nurses' knowledge and practices with caregivers in order to identify opportunities for improvement. 16,818 RN members of the Oncology Nursing Society who work in direct patient care were emailed a web-based survey. Caregiver assessment and interventions were measured regarding frequency in practice and confidence with use on 100 point scales. Higher scores indicated greater confidence and frequency of use. Respondents were asked to distinguish evidence-based interventions from those without evidence. Content analysis of verbatim responses to open-ended questions regarding usual practices and barriers encountered was completed. Demographic variables were obtained from the ONS member database for descriptive and correlational analyses. Email surveys were delivered to 12,926 members. Response rate was 8.6% (N=1107). Mean percentages of practice cases in which the nurse reported assessment and intervention for caregiver strain and burden were 50% (SD 29.8) and 51.4% (SD 27.7), respectively. Level of confidence in assessment and intervention were 58.5% (SD 26.28) and 54.1% (SD 27.4), respectively. Mean knowledge score was 59.1% (SD 57.1). There were no significant associations with the results and role, age, highest nursing degree, years in oncology practice, setting or certification. Among the 648 participants who responded to open ended questions, most frequent interventions reported were referral to the social worker and others. Most frequent barriers reported were financial, caregiver emotional responses and lack of resources. ONS members do not routinely assess or intervene for caregiver strain and burden and have low confidence and knowledge of interventions supported by evidence. Barriers reported indicate the need to increase nurses' knowledge and skills to manage caregiver emotional responses and increase awareness of financial and other resources. These

results provide new information about nursing practices and barriers to delivering evidence based interventions to informal caregivers

**Underwriting:** Agency for Healthcare Research and Quality: Grant # 5R18HS021957-02

## 207 RESPONSE RATES IN THE PHASE 3 CLARINET TRIAL OF LANREOTIDE DEPOT VS PLACEBO IN PATIENTS WITH METASTATIC GASTROENTEROPANCREATIC NEURO-ENDOCRINE TUMORS (GEP-NETS). Michiko Iwasaki, RN, The University of Texas MD Anderson Cancer Center, Houston, TX; Edward Wolin, MD, Markey Cancer Center University of Kentucky, Lexington, KY; Arvind Dasari, MD, The University of Texas MD Anderson Cancer Center, Houston, TX; Nilani Liyanage, MSc, Ipsen Biopharmaceuticals, Inc, Boulogne-Billancourt, France; Susan Pitman Lowenthal, MD, Ipsen Biopharmaceuticals, Inc, Basking Ridge, NJ; Alexandria Phan, MD, GI Medical Oncology, Houston Methodist Hospital, Houston, TX

In the CLARINET study, significant improvement in progression-free survival (primary endpoint) was reported in patients (pts) treated with lanreotide depot (LAN), a long-acting somatostatin analog, for moderately- or well-differentiated, nonfunctioning, locally advanced or metastatic GEP-NETS. A favorable safety profile was also observed. This retrospective analysis presents tumor response from CLARINET. Pts were randomized to LAN 120 mg (n = 101) or PBO (n = 103) once every 28 days for 96 weeks. Tumor response was evaluated centrally using RECIST version 1.0. Pts' tumors were measured by sum of the longest diameter (SLD) of target lesions (TLs). Change was calculated for each pt's SLD from baseline to last available post-baseline assessment. Tumor response was classified as complete response (CR): disappearance of all TLs and non-target lesions (NTLs) and no new lesions; partial response (PR):  $\geq 30\%$  decrease in SLD and no progressive disease (PD); stable disease (SD): not meeting criteria for CR/PR or PD; PD:  $\geq 20\%$  increase in SLD from baseline or nadir, unequivocal progression of NTLs or appearance of new lesions. The remaining pts were not evaluable (NE) for response. 101 pts treated with LAN and 103 pts treated with PBO were assessed for tumor response. Among pts receiving LAN, 64% (65/101) demonstrated SD compared to 43% (44/103) of pts receiving PBO (Table). An additional 2 pts in the LAN group achieved a PR. A clinical benefit (defined as CR+PR+SD) of 66% (67/101) was observed with single agent LAN vs 43% (44/103) with PBO in the CLARINET population, further supporting the clinical efficacy of LAN. Similar trends were observed in pts with pancreas and midgut origin tumors.

**Underwriting:** Ipsen

## 208 STAYING STRONG AND HEALTHY: AN INTERVENTION IN LATINO MEN RECEIVING ANDROGEN DEPRIVATION THERAPY FOR LATER STAGE PROSTATE CANCER. Cecille Marie Basilio, MSN, PHN, RN, University of California Los Angeles, Los Angeles, CA; Stephanie Fletes, BA, University of California Los Angeles, Los Angeles, CA; Elisabeth Hicks, MA, University of California Los Angeles, Los Angeles, CA; Sally Maliski, PhD, FAAN, University of California Los Angeles, Los Angeles, CA

Previous qualitative data highlighted a teachable moment for promoting healthy diet and activity with men diagnosed with prostate cancer and treated with hormone therapy. Androgen deprivation therapy (ADT) has become the mainstay treat-

ment for advanced stage prostate cancer. ADT increases rates of obesity, metabolic syndrome, and hypertension which are factors for cardiovascular disease, the leading cause of death for men with prostate cancer. Latino men are at even greater risk as they already suffer these conditions at higher rates and are diagnosed with later stage prostate cancer than Non-Latino White men. Ongoing qualitative studies suggest that Latino men lack awareness of ADT side effects, but are willing to pursue lifestyle change in the face of serious illness. Our pilot healthy diet and exercise intervention, which included spouses, stabilized cholesterol for Latino men receiving ADT. We are testing an expanded version of the intervention, using a 2-group (intervention and usual care with attention arms) mixed methods randomized control trial. The 12-week intervention uses bicultural, bilingual mobile health (mHealth) strategies to provide education on ADT, nutrition and exercise guidelines, and support from a RN and promotora de salud team. Personal trainers work with the team to create an individualized exercise training program for each participant. Web-based modules are used to track nutrition data during 24-hour dietary recalls. Smartphones, heart rate monitors, and personal training apps (mobile applications) allow for timely, individualized and multi-modal educational messaging such as video, audio, text and web resources. The RN and promotora speak to the men and their spouses on a weekly basis to encourage participant driven, incremental goal setting. Data collected during the study include remote exercise monitoring, dietary recalls, quality of life measures, and evaluation interviews. Ultimately, Staying Strong and Healthy seeks to stabilize and maintain the men's health related quality of life, blood glucose, body mass index, waist-to-hip ratio and lipid profile while empowering strategies to manage ADT side effects in the long term. We will present key considerations and strategies used to culturally tailor our mHealth intervention.

**Underwriting:** NIH-NINR

## 209

### **ADVANCED PRACTICE PROVIDER (APP) DRIVEN URGENT VISIT PROGRAM.** Vanna Dest, MSN, APRN, BC, AOCN®, Smilow Cancer Hospital, New Haven, CT

In the United States, 30% of the total cancer expenditure is spent in the last year of the life and 55% of this is spent on inpatient care. For patients with advanced cancer, most hospitalizations arise from expected disease progression. Smilow Cancer Hospital at Yale New Haven is a 15 story, 500,000 square foot facility affiliated with Yale New Haven Hospital and Yale Cancer Center. In April 2014, we qualitatively observed preventable emergency department (ED) admissions during daytime hours. We reviewed oncology ED data over a 5-month period of time, from 1/1/2014 through 5/31/2014. Three hundred and ninety one (391) patients presented to the ED and approximately 90% of those patients were admitted. Sixty-two (62) percent of patients arrived to the ED between the hours of 9 AM–5 PM and average length of stay was 6.74 days. Chart review demonstrated many patients could have been managed in the ambulatory setting with pharmacy, infusion, and palliative care support. We implemented our APN Urgent Visit program on July 31, 2014. We analyzed our data after six months. We found that oncology ED visits decreased from 88.2% to 83.9%. Of significance, seventy-nine percent (79%) of patients seen as priority visits were treated in ambulatory setting and discharged to home. Eighteen percent (18%) of patients were seen as urgent/priority visits and after evaluation by APP, it as decided they needed to be admitted through direct admission process and three percent needed a higher level of care and needed to be transferred to ED. This is compared to almost 90% of patients who present to ED first and get hospitalized. We are currently analyzing our 12 month data which will be reported by the end of this year.

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### **RESILIENCE AND INTOLERANCE OF UNCERTAINTY: INFLUENCE OF SURVIVORS' COGNITIVE PROCESSING AND PSYCHOLOGICAL DISTRESS.** Judith Schreiber, PhD, RN, University of Louisville School of Nursing, Louisville, KY; Joyce Johnson, BSN, RN, University of Louisville School of Nursing, Louisville, KY; Timothy Crawford, PhD, University of Louisville School of Nursing, Louisville, KY

Today's 14 million U.S. cancer survivors will grow to 20 million by 2020. Many survivors cognitively process the experience and move forward with minimal psychological distress, while others experience significant long-term disruption and worry. Questions remain regarding why, and who, is at risk. Based on reports in the literature and our previous research, this study was designed to test how differing worldviews, intolerance of uncertainty, and resilience (cognitive processing) relate to demoralization, depression, anxiety, and stress (psychological distress). Identifying variables that predict psychological distress is exceptionally important to recognize those at higher risk, determine screening measures, and develop effective interventions. Study Purpose: To examine the relationship of cognitive processing variables with psychological distress. This was an internet-based, cross-sectional survey. Recruitment was via posted flyers, online postings on Facebook™, and cancer support organizations. Eligible participants included survivors: with any cancer diagnosis,  $\geq 21$  years, and able to access and comprehend the survey. Validated questionnaires included: Intolerance of Uncertainty Scale, Brief Resilience Scale, Image of God Scale, Demoralization Scale, and the Depression Anxiety Stress Scales. Differences in psychological distress variable, based on survivors' cognitive processing their experience, were examined with MANOVAs. Relationships among variables were examined using Pearson's Correlations and multiple regressions. Findings/Interpretation: Correlations between resilience and income were strongly negative with depression ( $r = -0.59$ ,  $p = 0.0005$ ) and intolerance of uncertainty ( $r = -0.54$ ,  $p = 0.0005$ ); and moderately positive ( $r = -0.45$ ,  $p = 0.0005$ ) with income. Hierarchical multiple regression identified depression, intolerance of uncertainty, and income as predictors of resilience accounting for 48% of the variance (adj.  $R^2 = 0.48$ ;  $F = 33.00$  (3, 101),  $p = 0.0005$ ). Study findings suggest that survivors who are less depressed, more tolerant of uncertainty, and possess more income are more resilient in addressing the stress of a cancer diagnosis. High levels of resilience have been associated with decrease fatigue, low emotional distress, spirituality, and personal growth. As interventions to address uncertainty, such as clear communication and preparing survivors for differing outcomes, are feasible, screening to identify survivors intolerant of uncertainty would allow for early interventions.

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### **THE RELATIONSHIP AMONG UNCERTAINTY, BODY IMAGE, SOCIAL SUPPORT AND QUALITY OF LIFE OF YOUNG BREAST CANCER SURVIVORS.** Jihye Kim, RN, OCN®, Asan Medical Center, Seoul, South Korea; Sue Kim, Nursing Policy Research Institute, Yonsei University, Seoul, South Korea; Hyangkyu Lee, Nursing Policy Research Institute, Yonsei University, Seoul, South Korea; Soo Hyun Kim, Inha University, Seoul, South Korea

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. However, there is a lack of research on young breast cancer survivors' psychosocial issues. This descriptive survey aimed to investigate the relationship among uncertainty, body image, social support,

and QOL of young breast cancer survivors aged 35 years or younger. Data were collected from women 35 years or younger diagnosed with breast cancer recruited from 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). 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. The results were as following: (1) The level of physical QOL differed by the state of menstruation ( $p = 0.009$ ). The level of uncertainty of additional 5 items differed by dating and married status ( $p = .002$ ), children or no ( $p = 0.006$ ). The level of body image differed by dating and married status ( $p = 0.015$ ), children or no ( $p = 0.020$ ). The level of family support differed by survival time ( $p = 0.033$ ). The level of significant other's support differed by dating and married status ( $p = .000$ ), the state of finances ( $p = 0.006$ ). (2) QOL had highly significant correlation with body image ( $r = 0.701$ ,  $p < 0.01$ ). Original uncertainty ( $r = -0.554$ ,  $p < 0.01$ ), additional uncertainty ( $r = -0.513$ ,  $p < 0.01$ ), social support ( $r = 0.438$ ,  $p < 0.01$ ). 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.

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**TAILORED WEB-BASED PROSTATE CANCER EDUCATION FOR PATIENTS AND PARTNERS.** Lixin Song, PhD, RN, University of North Carolina, Chapel Hill, NC; Eleanor Rodriguez-Rassi, BS, University of North Carolina, Chapel Hill, NC; Christine Rini, PhD, University of North Carolina, Chapel Hill, NC; Matthew Nielsen, MD, MPH, University of North Carolina, Chapel Hill, NC; Mary Palmer, PhD, RN, University of North Carolina, Chapel Hill, NC

Prostate cancer (PCa) and treatment side effects often cause distressing bowel, hormonal, sexual, and urinary symptoms that reduce quality of life (QOL) for patients and their partners. Most interventions addressing distressing symptoms, however, focus only on patients although partners may have worse QOL. To-date few couple-focused interventions are easily accessible to both patients and partners to help them manage PCa symptoms and improve their QOL. To bridge gaps in research and supportive care, our interdisciplinary team, working closely with PCa patients and partners, converted an efficacious nurse-led in-person intervention to a tailored, web-based symptom self-management program, Prostate Cancer Education for Couples (PERC). This study aimed to conduct a pilot study to test the feasibility of PERC using a population-based cohort. PERC offers 10 tailored education modules about PCa related information to enhance participant symptom management knowledge and skills. It also has built in features to facilitate mutual support between survivors and partners, as well as support from their peers and healthcare providers. We are conducting (1) a quasi-experimental pilot study among patients who recently completed initial treatment for localized PCa, and their partners who completed pre- and post-assessments separately, and (2) semi-structured exit interviews with 8-dyad subset. Participants were recruited from 36 counties using the North

Carolina Cancer Registry Rapid Case Ascertainment (RCA). We evaluated specific outcomes (QOL, symptom management and healthy living behaviors measures) using psychometrically sound instruments pre- and post-intervention and identified motivators and barriers to PERC use. We received 267 referrals with 95 ineligible patients. We were unable to reach 97, with 5 attempts during a 6 week period for eligibility screening and had 40 refusals. Among 35 remaining patient-partner dyads, 29 (83%) were consented and enrolled and 6 refused. Preliminary results indicate that PERC was well-received. Web-based tailored intervention is a promising approach for improving symptom self-management after treatment for PCa patients and their partners. RCA provided an alternative method of recruiting participants with diverse socio-demographic backgrounds for family-based intervention research.

**Underwriting:** UNC CPC Intervention Research Pilot Grant Award, North Carolina Translational & Clinical Sciences Institute (NC TRACS)

**213**  
**MORE THAN SKIN DEEP: ASSESSING THE DERMATOLOGIC TOXICITIES OF EPIDERMAL GROWTH FACTOR RECEPTOR INHIBITORS.** Sonia Sims, BSN, RN, OCN<sup>®</sup>, Arlington Cancer Center at Texas Health Dallas, Grand Prairie, TX

Epidermal growth factor receptor inhibitors (EGFRIs) are an important targeted therapy for oncology patients with solid tumors. The most common EGFRi toxicities are papulopustular eruptions on the face and upper body occurring in 85% of patients. Skin toxicities may cause erythema, pain, and pruritus with resulting effects on quality of life (QOL). At our infusion center, we noted with the current chart-by-exception electronic health record (EHR) that skin assessments and supportive care were infrequently recorded. Current literature supports using an evidence-based tool, the Multinational Association of Supportive Care in Cancer (MASCC) grading tool, for assessing EGFRi toxicities and QOL. PICO: For patients receiving EGFRIs in the outpatient infusion center, what is the effect of using a modified MASCC skin assessment tool compared with the current EHR assessment for identifying and grading skin toxicities and QOL issues? We did a baseline chart review of patients receiving EGFRIs (January – April 2015) ( $n = 70$  patient visits), educated staff about EGFRi toxicities, and piloted the MASCC tool (May-June, 2015), ( $n = 52$  patient visits). Pre-project, 18.5% (13/70) of skin assessments were documented with no information about pain, pruritus or QOL. Post-implementation, skin assessments were completed on 48% (25/52) of visits and included toxicity grading and effects on physical and social functioning. Nurses commented: "Patients are disclosing more, and we are providing more education." We have incorporated the MASCC tool into our EHR system. Using the MASCC tool, we are improving our skin assessments and identifying opportunities for patient education and supportive care.

**214**  
**EFFECT OF SUBTYPE OF K-RAS MUTATION ON SURVIVAL IN RESECTED PANCREATIC.** Kyung Chu, NYU Medical Center, New York, NY; William Sherman, MD, Columbia University Medical Center, New York, NY

The purpose is to determine if the different Kras mutations found in pancreatic ductal adenocarcinoma (PDA) confer different survivals after adjuvant gemcitabine, docetaxel and capecitabine (GTX) therapy, a regimen that affects Kras signaling. We evaluated the survival with the type of Kras mutation in 53 patients who had resected PDA. The types and frequencies of Kras mutations in our PDA patients were compared to those in the literature for PDA, lung cancer and colon cancer.

We found that 79% of our patients had a mutation in Kras at codon 12, with replacement of the glycine for either aspartic acid (47%), valine (19%), arginine (9%) or cysteine (4%). Serine and alanine substitutions and codon 13 mutations were not found. The frequency of Kras mutations detected in PDA differs markedly from those found in lung and colon cancer. Our PDA patients with aspartic acid or valine substitutions for glycine 12 had more relapses ( $p=0.026$ ). The types and frequencies of Kras mutations are different in PDA from those observed in lung cancer or colon cancer. PDA patients with aspartic acid and valine have a poor survival, but it is not clear if all Kras mutations are equally detrimental as other mutation had fewer relapses. Larger sample sizes are needed to know different amino acid substitutions in Kras result in different responses or survivals with GTX or other therapy.

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**EFFICACY AND SAFETY FROM RECOURSE: A MULTICENTER, RANDOMIZED, DOUBLE-BLIND, PHASE 3 STUDY OF TAS-102 VERSUS PLACEBO WITH BEST SUPPORTIVE CARE IN PATIENTS WITH METASTATIC COLORECTAL CANCER REFRACTORY TO STANDARD THERAPIES.** Thomas Ferencz, R.Ph., BCOP, Yale Cancer Center, New Haven, CT; Howard Hochster, MD, Yale Cancer Center, New Haven, CT; Gihan Atalla, R.Ph., Taiho Oncology, Inc., Princeton, NJ; Heinz-Josef Lenz, MD, FACP, USC Norris Comprehensive Cancer Center, Los Angeles, CA; Atsushi Ohtsu, MD, PhD, National Cancer Center Hospital East, Kashiwa, Japan; Robert Mayer, MD, Dana-Farber Cancer Institute, Boston, MA

TAS-102 is comprised of an antineoplastic thymidine-based nucleoside analog, trifluridine, and the thymidine phosphorylase inhibitor, tipiracil hydrochloride, at a molar ratio of 1:0.5 (weight ratio, 1:0.471). The phase 3 RECOURSE trial evaluated efficacy and safety of TAS-102 in patients with metastatic colorectal cancer (mCRC) refractory to standard therapies. Enrollment criteria included documented mCRC and  $\geq 2$  prior lines of standard chemotherapy (including an anti-EGFR antibody if KRAS wild-type). Patients were randomized 2:1 to receive TAS-102 (35 mg/m<sup>2</sup> BID on Days 1-5 and 8-12 of each 28-day cycle, determined by prior dosing studies) or placebo, both plus best supportive care. TAS-102 was administered orally by 20 mg and 15 mg tablets in combinations to obtain the requisite 35 mg/m<sup>2</sup> dose (BID). Patients continued study treatment until disease progression, death, or unacceptable toxicity. Eight hundred patients were randomized to TAS-102 ( $n = 534$ ) or placebo ( $n = 266$ ). Baseline characteristics were well balanced between arms. Hazard ratios for overall survival (OS) and progression-free survival (PFS) were 0.68 (95% CI: 0.58-0.81;  $p < 0.0001$ ) and 0.48 (95% CI: 0.41-0.57;  $p < 0.0001$ ), both favoring TAS-102. Median OS was 7.1 (95% CI: 6.5-7.8) for TAS-102 and 5.3 months (95% CI: 4.6-6.0) for placebo. Median PFS, overall response rate, and disease control rate for TAS-102 and placebo were 2.0 vs 1.7 months, 1.6% vs 0.4% (ns), and 44.0% vs 16.3% ( $p < 0.0001$ ). Mean duration of treatment was 12.7 weeks for TAS-102 vs 6.8 weeks for placebo; dose delays were more frequent with TAS-102. Most frequent Grade  $\geq 3$  adverse events ( $\geq 5\%$  of TAS-102 patients vs placebo) were neutropenia (34.9%, 0%), leukopenia (12.8%, 0%), and anemia (16.5%, 2.6%). Febrile neutropenia was observed in 3.8% of TAS-102 and 0% of placebo patients. In patients with mCRC refractory to standard therapies, TAS-102 demonstrated a significant improvement in OS and PFS vs placebo, with a favorable safety profile.

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**STUDY OF COMPLEMENTARY AND ALTERNATIVE MEDICINE USAGE OF CANCER PATIENTS RECEIVING MEDICAL ONCOLOGY CLINIC MEDICINE AND ITS RELATIONSHIP WITH THEIR LIFE QUALITY.** Elif Temucin, Msc, Bahcesehir University Health Sciences Faculty Nursing Department, Istanbul, Turkey; Tulay Ortabay, Dr., Hasan Kalyoncu University Faculty of Health Sciences Nursing Department, Istanbul, Turkey

This study has been implemented as an descriptive with the aim of examining the situation and the quality of life the cancer patients receiving treatment at an oncology clinic and using complementary and alternative medicine (CAM). Research, has been carried with 85 colorectal and lung cancer patients, accepting to participate in the research and whose treatments were completed at the Medical Oncology Clinic of GATF Training and Research Hospital. The research was conducted from 23 March to 01 May 2011. "Introductory Information Form", "Question Form for the Status of Using Complementary and Alternative Medicine" and "Rotterdam Symptom Checklist (RSCL)" have used as data collecting tools. It has been found in this study, that the rate of cancer patients using CAM was 51,8% ( $n:44$ ). The most popular CAM method among the patients, using CAM was herbal cures with a rate of usage of 86.4%; and the most commonly used herbal treatment was the stinging nettle (39.5%). In our research, we found that the CAM was used young age group with a high level of education, and the patients being in the third phase of the disease as well as the women. It has been also found that the patients were mostly informed by their close environment and they were reluctant to disclose the CAM method they use to health care professional. 63.6% of the patients, using CAM intended to increase their body strength and 51,2% of the patients who do not use CAM considered it not useful. When assessed through RSCL, the quality of life of cancer patients, using and not using CAM, no statistical difference was determined in their physical, psychological, and daily life activities according to the scores of the scale lower group. It is utmost important for the nurses providing primary care for the cancer patients in the implementation of conventional treatment, to be able to make assessments about usage of CAM of the patients and provide appropriate advice. It can be proposed to develop training programs for the nurses to achieve sufficient information in this respect.

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**CLOSTRIDIUM DIFFICILE SURVEILLANCE PROJECT.** Caitlin Seybold, ADN, RN, Froedtert Hospital, Milwaukee, WI

At a large academic medical center that cares for a significant population of immune-compromised patients, Clostridium difficile (C. diff) can be a serious and life threatening infection. Clostridium difficile is a bacterial infection which results in approximately half a million cases per year in this country alone. C. diff is an easily transmissible bacterium which can colonize the gut flora of patients, especially those on antibiotics, and cause colitis. The C. diff bacterium can proliferate and release damaging toxins that cause damage to the cells of the intestine resulting in diarrhea, abdominal pain, and fever. The purpose of our project is to determine the source of C. diff infections on the hematology/oncology unit and whether patients have a positive surveillance culture upon admission to the unit. New admissions are screened both on admission via a stool sample to determine if patient had Clostridium difficile upon admission to the unit. Every patient on the hematology/oncology units are screened weekly via a stool sample. Samples are sent daily to lab, where they are tested and from there are potentially subjected

to further testing such as DNA sequencing. Data collection is ongoing but so far data has shown that a positive surveillance culture is a strong risk factor for the development of *C. diff*. Of all of the positive surveillance cultures, approximately two-thirds of these patients were positive upon their admission surveillance

cultures. Thus it is important to analyze the specific type and genome of each individual patient strain. The next step is to determine the clonality of the individual strains. By determining the clonality more can be understood regarding the temporality of the gut microbiome and its changes.