ONCOLOGY NURSING SOCIETY REPORT
• ONLINE EXCLUSIVE •

2008 ONS Research Priorities Survey

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Purpose/Objectives: To determine the priorities of oncology nursing research, including the effect of evidence-based practice resources as identified by the Oncology Nursing Society (ONS) membership in June 2008.

Design: Descriptive, cross-sectional.

Setting: A Web-based survey of ONS members.

Sample: Stratified into three groups: a representative random sample of the general membership (n = 4,460; 421 responded), an oversampled random sample of advanced practice nurses (n = 980; 149 responded), and all ONS members who were doctorally prepared (n = 589; 143 responded); 713 responded overall.

Methods: The 2004 survey was revised and the new 2008 survey was beta tested. The invitation to complete the survey was sent via e-mail with a link to the survey Web site. A follow-up reminder was sent one week after the initial invitation.

Main Research Variables: 70 oncology nursing research topic questions, divided into five categories, and two additional categories regarding ONS Putting Evidence Into Practice® resources.

Findings: Quality of life and pain were the two highest-rated topics, consistent with 2000 and 2004 research priority survey findings. Eleven topics were new to the top 20 ranked priority topics in 2008. Differences in rankings were apparent among member groups.

Conclusions: The respondents represented the broad spectrum of ONS membership. Changes in topic rankings indicate that oncology nursing research priorities have shifted since the 2004 survey. The lag in research result dissemination to clinical practice may account for differences in topic rating among groups.

Implications for Nursing: The survey results will be used to develop the 2009–2013 ONS Research Agenda. The results also will assist the ONS Foundation and other funding agencies in setting priorities.

Key Points . . .

- Quality of life and pain have remained the two top-rated oncology nursing research priorities since 2000.
- The top 20 research priorities in 2008 included 11 items that had moved up in ranking or were new topics to the survey.
- Access to care was highly ranked by clinicians and doctorally prepared nurses.

The Oncology Nursing Society (ONS) Research Priorities Survey has been conducted about every four years since 1980 (Berger et al., 2005; Funkhouser & Grant, 1989; Grant & Stromborg, 1981; McGuire, Frank-Stromborg, & Varricchio, 1985; Mooney, Ferrell, Nail, Benedict, & Haberman, 1991; Ropka et al., 2002; Stetz, Haberman, Holcombe, & Jones, 1995). The state of oncology nursing science is dynamic and evolving. Health promotion has broadened in scope since

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2004. As science continues to advance in developing prevention and treatment modalities, nursing research should explore the consequences, both intended and unintended, of the advances for patients and their families. In addition, as new modalities provide better cancer treatment, the issues of long-term survivorship require greater attention. By responding to these changes, healthcare providers seek innovative ways to deliver high-quality, evidence-based care. Because health care is not static, ONS seeks to reevaluate its research priorities every four years.

ONS has a diverse membership that encompasses clinicians, advanced practice nurses, administrators, educators, and researchers. ONS values the input of all members and has sought the opinions of its diverse membership regarding ONS research priorities. ONS Research Priorities Survey results have been used to guide the development of the research agenda and to inform the ONS Foundation about member-identified areas for research focus (Eaton, in press). The ONS research priorities have been shared with federal agencies and other funding organizations and presented as expert testimony to federal, professional, and health-related advisory boards (McGuire & Ropka, 2000). The purpose of the 2008 survey was to determine the priorities for nursing research and the development and implementation of evidence-based practice. The overall goal was to improve clinical outcomes for patients with cancer and their families. The focus of this article is to report on the 2008 oncology nursing research priorities from the perspective of the overall sample, compare the 2008 results to the 2000 and 2004 surveys, and compare the 2008 survey responses of clinicians, advanced practice nurses, and doctorally prepared nurses. The report of the evidence-based practice findings will be available in the December 2008 issue of *Clinical Journal of Nursing Oncology*.

Methods

Oncology Nursing Society Project Team

The 2008 ONS Research Priorities Survey project team was recruited through ONS project team applications. The project team leader worked with ONS to select team members who represented research backgrounds from the laboratory bench to bedside care and funding agencies. The newly appointed leader of the ONS Research Agenda (ONS, 2007) provided the link between the research priorities survey and the research agenda to ensure that data gathered from the survey would inform the research agenda. A statistician was added to the team to assist with power analysis, survey review, and data analysis.

Survey

The study used a descriptive, cross-sectional design. The 2000 and 2004 Research Priorities Surveys (Berger et al., 2005; Ropka et al., 2002) and the content areas of the 2007–2009 ONS Research Agenda were reviewed for relevant categories and items. The survey team finalized the oncology nursing research categories as symptoms and side effects; individual and family psychosocial and behavioral topics; health promotion; survivorship, palliative care, and end of life; and health systems research. Seventy topics were identified based on the previous priority survey results and consensus of the project team regarding important new topics to consider. The topics were assigned to the appropriate oncology nursing categories. The oncology nursing research categories were followed by an open-ended question that asked respondents to identify three additional topics for oncology nursing research.

The survey team also wanted to highlight the importance of the work ONS has been doing to promote evidence-based practice. Therefore, two new categories regarding ONS Putting Evidence Into Practice® (PEP) resources were added. The first category explored opinions on conducting research regarding the adoption of the 16 existing PEP resources and the second category asked about development of new PEP resources. The PEP resource categories were followed by an open-ended question asking participants to identify three additional topics that could be developed as PEP resources.

Each topic started with "How important is it to. . . ." The respondents were asked to rate each of the questions using a five-point Likert-type response set of 0 (not at all) to 4 (high). Ten additional questions asked respondents about demographic and professional characteristics. New to the 2008 survey was a question asking respondents to select the perspective from which they were responding to the questions (clinician, advanced practice nurse, administrator, educator, or researcher).

The 2008 survey was beta-tested by four ONS members. Testers were asked to respond regarding whether the invitation was clear and concise, whether additional survey instructions were needed, the clarity of the questions, whether the order of the questions was logical, how long it took to complete the survey, and whether any additional comments were required for improvement. The survey was further modified based on the beta testers' feedback. The final survey consisted of 90 closed-answer questions and two open-ended questions and required 15–20 minutes to complete. Human subject approval for this project was received from the University of Washington Human Subjects Division in Seattle.

Study Sample

Potential respondents were recruited from ONS membership. ONS has more than 36,000 members who represent the spectrum of oncology nursing activities. The ONS membership was stratified into three groups: those who have doctoral degrees, those who self-identify as advanced practice nurses, and the general membership. It was hypothesized that ONS members holding a doctoral degree would have advanced research knowledge and experience and would be more familiar with current nursing research. Because fewer than 2% of ONS members have earned a doctoral degree, all doctorally prepared ONS members (n = 589) were invited to complete the survey. Without oversampling, this small group would not have a voice with random sampling. The research priority team also hypothesized that advanced practice nurses would be more likely to be involved in evidence-based practice activities in their healthcare settings. To ensure that ONS members having an advanced practice degree were represented, a random sample of advanced practice nurses (n = 980) was selected. This oversampling of advanced practice nurses was performed to ensure that at least 110 responses would be received. A random sample of the general membership (n = 4,460) was invited to complete the survey; they were the ONS members who are more likely to be involved in the daily care of patients with cancer. A total of 6,029 ONS members were invited to complete the survey.

The survey was sent out with an incentive that, if 400 or more responses were received by the deadline two weeks after the initial e-mail, a donation of $500 would be given to

the ONS Foundation. The entire sample was sent a follow-up e-mail after one week to encourage participation. Because more than 400 responses were received within the two-week time frame, the donation to the ONS Foundation was made in July 2008.

Data Collection and Analysis

The 2004 survey had several response modes (e.g., paper and pencil, Web-based); however, only four respondents requested a paper-and-pencil survey in 2004 (Berger et al., 2005) and it was hypothesized that, in 2008, most members would have access to the Web; therefore, the survey was only offered via the Web. The Web-based survey was conducted using Zarca Interactive® 8.0, an application service provider of Web-based surveys that facilitates the design, management, and analysis of surveys. A link to the survey was provided in the introduction e-mail. The survey was housed on a secure Web site, and anonymity was ensured because the survey did not ask identifiable demographic questions and did not save any links to the individual respondent. The survey was conducted over a two-week period in June 2008.

Data from the Zarca Interactive survey were saved into Microsoft® Excel® and Concurrent Versions System files and then imported into SAS® 9.1.3 for data analysis. Any item nonresponse was considered missing data. Less than 2% of the item data were missing, which is a very low rate of item nonresponse (Dillman, 2007). Mean ratings for each survey item were obtained by averaging overall responses. Weighted responses were used to adjust for unequal sampling of doctorally prepared and advanced practice nurse respondents compared to the general membership. For responses from doctorally prepared nurses, the weight was calculated as the number of members in ONS as of May 1, 2008, divided by the number of doctorally prepared members who responded to the survey. Weights for the advanced practice nurse and the general membership responses were obtained in the same way.

Results

Response Rates

Of the 6,029 ONS members invited to take the survey (16.7% of membership), 99 (1.6%) e-mails were returned as undeliverable; therefore, 5,930 e-mails were delivered. A total of 713 ONS members completed the survey for an overall response rate of 12%. The overall response rate of 12% for the 2008 survey is typical for ONS electronic surveys. The overall response rates for ONS Web-based surveys with a sample size similar to the priorities survey (N = 713) range from 10%–20%. In addition, for a population of 40,000 with a 95% confidence interval, a completed sample size of 672 provides a plus or minus 3% sampling error (Dillman, 2007). Therefore, the 2008 survey response rate of 713 members was considered a good response rate for Web-based surveys. The overall response rate of 12% was slightly lower than the 2004 priority survey response rate of 15%; however, the 2004 survey used more reminders and multiple survey methods (Berger et al., 2005). Because the 2008 survey used only one follow-up e-mail, the response rate of 12% was considered acceptable.

The response rate differed among the three ONS membership groups. The response rate was 143 of the 589 (24%) members among the doctorally prepared nurses, 149 out of 980 (15%) invited from the advanced practice nurses group, and 421 of the 4,460 (9%) invited from among the general membership. This ensured that the variety of perspectives that make up ONS members was represented in the survey results.

Demographics

The demographics of survey respondents compared to the ONS general membership for age, race, and ethnicity can be seen in Table 1. The majority of respondents identified as Caucasian (86%) is reflective of the general membership. Respondent gender was not asked because only 3% of the ONS membership is male and a male response along with other demographic data created the potential of identifying an ONS member.

Professional characteristics, years in nursing, years in oncology nursing, certifications, primary function areas, practice settings, and employment status of the respondents as compared to the ONS general membership are shown in Table 2. Some additional items were added to the research priorities survey, including whether respondents did or did not have other certifications and whether the primary work setting was in a school of nursing or in industry.

Rank Order of Mean Importance Ratings

Table 3 displays each category with its respective topics listed by mean importance rating and rank order among all of the items as determined by all respondents and adjusted for oversampling of nurses with doctoral or advanced practice nursing degrees. The use of sampling weights ensured that responses of the oversampled doctorally prepared and advanced practice nurse respondents would be in proportion to their actual representation in ONS. The top 20 priorities

Table 1. Demographics of 2008 Survey Respondents and Oncology Nursing Society (ONS) Membership

	Survey (N = 713)		ONS (N = 37,650)[a]	
Characteristic	**n**	**%**	**n**	**%**
Age (years)				
20–29	14	2.0	2,952	7.9
30–39	72	10.1	6,887	18.4
40–49	130	18.2	10,805	28.9
50–59	179	25.1	11,361	30.4
60–69	41	5.6	2,775	7.4
> 69	1	0.1	280	0.7
Race				
Native American/Alaskan Native	2	0.3	166	0.4
Asian	35	5.0	2,222	5.9
Black/African American	26	4.9	1,459	3.9
Caucasian/White	615	86.3	29,564	79.3
Native Hawaiian/Pacific Islander	2	0.3	94	0.2
Mixed race	8	1.1	277	0.7
Other	13	1.8	777	2.0
Ethnicity				
Hispanic	30	4.2	1,133	3.0
Non-Hispanic	664	93.1	28,429	76.3

[a] Data are derived from ONS membership applications. Application survey added characteristics over time; therefore, N varies by characteristic.

Note. Percentage of nonresponses is not shown.

Table 2. Characteristics of 2008 Survey Respondents and Oncology Nursing Society (ONS) Membership

Characteristic	Survey (N = 713) n	Survey (N = 713) %	ONS (N = 37,650)[a] n	ONS (N = 37,650)[a] %
Highest degree in nursing				
Diploma	53	7	4,044	10.8
Associate	134	19	9,685	26.0
Bachelor's	233	33	14,585	39.1
Master's	148	21	5,897	15.8
Doctorate	140	20	527	1.4
Highest non-nursing degree				
Diploma	–	–	404	1.0
Associate	86	12	1,648	4.4
Bachelor's	144	20	5,011	13.4
Master's	55	8	2,007	5.3
Doctorate	34	5	289	0.7
Years in nursing				
< 4	25	4	4,710	12.6
4–10	68	10	4,658	12.5
11–15	85	12	5,054	13.6
16–20	87	12	4,821	12.9
≥ 21	410	58	14,444	38.6
Years in oncology nursing				
< 4	65	9	10,550	28.3
4–10	152	21	7,376	19.8
11–15	131	18	5,424	14.5
16–20	120	17	5,103	13.7
≥ 21	214	30	5,438	14.5
Certification				
OCN®	341	48	15,587	41.8
CPON®	7	1	148	0.3
AOCN®	59	8	1,081	2.9
AOCNS®	12	2	202	0.5
AOCNP®	15	2	422	1.1
Other	135	19	–	–
None	162	23	–	–
Primary work setting				
Inpatient	200	28	13,161	35.3
Outpatient	363	51	18,725	50.2
School of nursing	78	11	–	–
Industry	24	3	–	–
Other	43	6	3,396	9.1
Inpatient				
Bone marrow transplantation unit	30	4	1,409	3.7
Intensive care unit	6	1	181	0.4
Medical unit—general	13	2	860	2.3
Medical unit—oncology	104	15	8,350	22.4
Surgical unit—general	3	< 1	188	0.5
Surgical unit—oncology	12	2	631	1.6
Other	36	5	1,542	4.1
Outpatient				
Hospice	3	< 1	459	1.2
Hospital-based clinic	145	20	7,127	19.1
Physician office/infusion center	122	17	7,683	20.6
Radiation—free standing	11	2	442	1.1
Radiation—hospital based	30	4	1,140	3.0
Other	50	7	1,625	4.3

[a] Data are derived from ONS membership applications. Application survey added characteristics over time; therefore, N varies by characteristic.

Note. Percentage of nonresponses is not shown.

were distributed among all of the categories. Individual and family psychosocial and behavioral topics had six priority topics; quality of life was rated the most important topic in the 2008 priorities survey. Cancer symptoms and side effects had five priority topics, including pain, which ranked second in priority. Survivorship, palliative care, and end of life had four priority topics, with late effects of treatment being rated as the third-most important topic in 2008. The health promotion category had three topics that rated in the top 20, including stress management (10), diet and nutrition (11), and screening and early detection (12). Health systems research had two topic ratings in the top 20, including access to care (4). Research priorities entered by respondents often were those included in the survey. The highest frequencies of write-in responses were pain and genetics, each with a frequency of four.

Comparison to Previous Research Priorities

Table 4 compares the 2008 rank order of the top 20 priority topics identified by the general membership sample with those of 2000 and 2004. When comparing the rank order, note that the Likert-like response sets are different between surveys. Nine of the same items were ranked among the top 20 priorities in both 2008 and 2004: quality of life, pain, late effects of treatment, palliative care, end of life, screening/early detection, treatment decision making, fatigue, and cancer recurrence. Seven of these nine items also were ranked in the top 20 in 2000.

Three items in the 2008 top ranking were new to the survey: palliative care decision making, stress management, and continuum of care. Eight items increased in importance from 2004–2008: access to care, neuropathy, coping, diet/nutrition, caregiving, family adjustment to cancer, functional impairment, and mucositis.

Doctorally Prepared Sample Rankings Versus Advanced Practice Nurse and Clinician Rankings

Table 5 displays the top 20 research priorities ranked by mean importance ratings for clinician, advanced practice, and doctorally prepared nurses. Advanced practice nurses and doctorally prepared respondents ranked three topics in the top 20 that were not represented in the overall rankings: survivorship, exercise/physical activity, and survivor wellness. Advanced practice nurses additionally ranked family functioning and skin changes in the top 20 research priorities. Access to care as a concern was ranked highly by all three groups. Respondents with doctorates identified five additional top 20 research priorities that neither the clinicians nor advanced practice nurses identified: sleep/wake disturbances, cognitive dysfunction, symptom clusters, sleep, and communication. Five top 20 priorities were unique to the clinicians: coping, end of life, diet/nutrition, screening/early detection, and mucositis.

Discussion

The 2008 ONS research priorities are a key component in the development of the 2009–2013 ONS Research Agenda. ONS has been at the leading edge of nursing societies with its focus on the generation of knowledge for evidence-based practice. The 2000 and 2004 surveys called for greater opportunities to respond not only to the knowledge development but also to implementation of research findings into clinical practice (Berger et al., 2005; Ropka et al., 2002). An innovation

of the 2008 survey was the addition of questions regarding the implementation of evidence-based practice. The results will be reported in the December 2008 issue of *Clinical Journal of Oncology Nursing*. Interest exists in diffusion of research findings to nurses in their workplaces, but scientific knowledge is lacking regarding the best methods for dissemination and adoption of new knowledge into practice.

Determining the changes in rank order every four years assists with the development of the ONS Research Agenda. The rank order of topics also provides important information for the ONS Foundation and other funding organizations regarding areas of oncology research to support. Nurse educators and researchers also can use this information to guide master's projects and doctoral dissertation topic choices, recommending newly emerging, highly ranked topic areas so that individual programs of research may be developed around those topics. Some newly emerging, cutting-edge topics such as informatics and telehealth might have ranked lower because the survey respondents were less aware of the need for research in the particular areas rather than from a lack of importance.

The rank order of mean importance ratings ranged from 1.98–2.81 on a 0 (low) to 4 (high) scale. No clear break in scores was apparent to determine which topics were believed to be more important than others. All categories were represented in the top-rated topics. This may be a result of the relevance of all topics on the 2008 ONS Research Priorities Survey to oncology nurses. The respondents address these issues across the entire scope of cancer care, including prevention, detection, treatment, survivorship, and palliative care. Researchers reflect the spectrum of research interests from laboratory bench to bedside care.

Table 3. Rank Order of 2008 Category and Topic Mean Importance Rating by the Total Membership Sample[a]

Category and Topic	Importance Rating $\bar{X}$	Importance Rating SD	Overall Rank
Symptoms and side-effect topics			
Pain	2.76	0.495	2
Neuropathy	2.67	0.533	7
Fatigue	2.60	0.594	14
Functional impairment	2.56	0.586	19
Mucositis	2.55	0.598	20
Cognitive dysfunction	2.53	0.586	22
Immunosuppression	2.51	0.669	26
Skin changes/cutaneous reactions	2.49	0.592	30
Symptom clusters	2.47	0.631	34
Nausea/vomiting	2.46	0.689	37
Depression	2.45	0.622	38
Dyspnea	2.43	0.665	42
Anorexia/appetite changes	2.43	0.618	43
Lymphedema	2.42	0.659	45
Sleep/wake disturbances	2.40	0.666	48
Anxiety	2.37	0.662	55
Bleeding	2.33	0.740	57
Cachexia	2.32	0.678	58
Diarrhea	2.31	0.709	60
Hormone disturbances	2.30	0.666	63
Sexual dysfunction	2.27	0.674	65
Constipation	2.21	0.713	67
Incontinence	1.98	0.751	70
Individual and family psychosocial and behavioral topics			
Quality of life	2.81	0.437	1
Palliative care decision making	2.68	0.567	6
Coping	2.66	0.560	8
Treatment decision making	2.61	0.589	13
Caregiving	2.59	0.593	15
Family adjustment to cancer	2.57	0.587	18
Communication	2.51	0.640	25
Grief	2.50	0.578	27
Adherence	2.50	0.631	29
Family functioning	2.49	0.618	31
Hope	2.47	0.600	35
Prevention or screening decision making	2.47	0.640	36
Clinical trials decision making	2.44	0.685	39
Social support	2.44	0.628	40
Individual and family psychosocial and behavioral topics *(continued)*			
Intimacy	2.44	0.655	41
Advanced care planning	2.42	0.688	46
Self-management	2.39	0.646	50
Body image	2.39	0.613	51
Self-care	2.39	0.668	53
Spirituality	2.39	0.650	54
Self-efficacy	2.31	0.689	59
Resilience	2.30	0.637	62
Health promotion topics			
Stress management	2.64	0.561	10
Diet/nutrition	2.62	0.581	11
Screening/early detection	2.61	0.595	12
Exercise/physical activity	2.53	0.592	21
Sleep	2.48	0.604	32
Community education	2.42	0.648	47
Obesity	2.40	0.686	49
Health risk appraisal	2.35	0.664	56
Genetic counseling	2.30	0.685	61
Tobacco use	2.29	0.712	64
Substance abuse (e.g., alcohol, drugs)	2.21	0.716	68
Survivorship, palliative care, and end-of-life topics			
Late effects of treatment	2.74	0.478	3
Palliative care	2.70	0.541	5
End of life	2.66	0.567	9
Cancer recurrence	2.59	0.573	16
Survivorship	2.52	0.589	23
Survivor wellness	2.52	0.604	24
Bereavement care	2.42	0.622	44
Rehabilitation	2.39	0.597	54
Healthcare systems research topics			
Access to care	2.71	0.526	4
Continuum of care	2.58	0.581	17
Health literacy	2.50	0.608	28
Quality improvement	2.48	0.621	33
Informatics	2.23	0.700	66
Telehealth	2.12	0.727	69

[a] Adjusted for oversampling of nurses with doctorates and advanced practice nurses

Table 4. Top 20 Research Priorities Ranked by Mean Importance Ratings for the Total Membership Sample

Topic	2008 Rank Order	2004 Rank Order[a]	2000 Rank Order[b]
Quality of life	1	1	2
Pain	2	5	1
Late effects of treatment	3	17	24
Access to care	4	47	12
Palliative care	5	9	17
Palliative care decision making	6	–	–
Neuropathy	7	31	–
Coping	8	36	–
End of life	9	18	6
Stress management	10	–	–
Diet/nutrition	11	50	35
Screening/early detection	12	7	3
Treatment decision making	13	4	43
Fatigue	14	12	9
Caregiving	15	48	36
Cancer recurrence	16	13	20
Continuum of care	17	–	–
Family adjustment to cancer	18	39	–
Functional impairment	19	46	–
Mucositis	20	56	–

[a] Berger et al., 2005
[b] Ropka et al., 2002

The survey team must assess the general membership's knowledge of putting evidence-based care processes into practice and determine the gaps between research findings and standards of practice because staff nurses comprise the majority of the ONS membership. One of the challenges faced when surveying the ONS members regarding oncology nursing research priorities is that fewer than 600 members (< 2%) are doctorally prepared and some that are doctorally prepared have employment mainly in an education role. This makes it difficult to represent the goals and priorities of nurse researchers within the greater membership, who represent the goals and priorities of the consumers of research. These issues were successfully addressed in the 2008 Research Priorities Survey by distributing the survey to a representative sample of each category of ONS members.

Advanced practice or doctorally prepared nurses were more likely to complete the survey (15% and 24% response rates, respectively) and generally had a greater number of years of oncology nursing experience. Advanced practice or doctorally prepared nurses may have had greater access to computers or time to complete the survey. ONS surveys have better response rates when the topic of the survey is more relevant to the respondent; therefore, another potential cause of the higher response rate from researchers could be their greater interest in the ONS research priorities. These findings, although not surprising, highlight the importance of exploring how to encourage involvement of other oncology nurses in the process of establishing oncology nursing research priorities. The respondents represented the wide variety of primary roles and work settings, including both inpatient and outpatient, which ensured that differing perspectives on a variety of issues that arose from varied experiences in various settings were represented in the survey results.

Ten of the top 20 items from the 2004 and 2000 surveys were represented in the 2008 top 20 survey results. Nine topics moved up in ranking from the 2004 survey results and three topics were new to the 2008 survey. This demonstrates the importance of surveying the membership periodically to ascertain changes in oncology nursing research priorities. Topics new to the top 20 rankings included access to care, continuum of care, diet and nutrition, neuropathy, mucositis, functional impairment, palliative care decision making, coping, caregiving, and family adjustment to cancer. This may reflect an increasing awareness of the need for better approaches to address these topics in patients with cancer, their families, and the healthcare system.

Access to care and the continuum of care have been highlighted as areas where healthcare disparities are clearly seen. All categories of ONS members highly prioritized access to care. Patients with cancer from under-represented groups lack full access to quality cancer care and this gap affects morbidity and mortality in these population demographics. Under-represented groups also lack smooth transitions across the continuum of care (Fortier & Bishop, 2004; Smedley, Stith, & Nelson, 2003). Diet and nutrition also have been recently highlighted with the well-publicized increase in obesity rates in the United States as well as the link between obesity and cancer (Eaton et al., 2008).

Table 5. Top 20 Research Priorities of Clinicians, Advanced Practice Nurses, and Doctorally Prepared Nurses in 2008 Ranked by Mean Importance Ratings

Topic Rank	Clinicians	Advanced Practice Nurses	Doctorally Prepared Nurses
1	Quality of life (1)	Late effects of treatment (3)	Late effects of treatment (3)
2	Pain (2)	Access to care (4)	Survivorship (23)
3	Late effects of treatment (3)	Quality of life (1)	Functional impairment (19)
4	Palliative care (5)	Neuropathy (7)	Neuropathy (7)
5	Access to care (4)	Palliative care decision making (6)	Caregiving (15)
6	End of life (9)	Pain (2)	Access to care (4)
7	Coping (8)	Survivorship (23)	Exercise/physical activity (21)
8	Palliative care decision making (6)	Continuum of care (17)	Quality of life (1)
9	Neuropathy (7)	Exercise/physical activity (21)	Sleep/wake disturbances (48)
10	Diet/nutrition (11)	Palliative care (5)	Survivor wellness (24)
11	Stress management (10)	Family adjustment to cancer (18)	Cancer recurrence (16)
12	Screening/early detection (12)	Survivor wellness (24)	Palliative care decision making (6)
13	Treatment decision making (13)	Treatment decision making (13)	Cognitive dysfunction (22)
14	Fatigue (14)	Fatigue (14)	Family adjustment to cancer (18)
15	Caregiving (15)	Family functioning (31)	Symptom clusters (34)
16	Cancer recurrence (18)	Stress management (10)	Fatigue (14)
17	Mucositis (20)	Functional impairment (19)	Palliative care (5)
18	Continuum of care (17)	Cancer recurrence (16)	Sleep (32)
19	Functional impairment (19)	Caregiving (15)	Pain (2)
20	Family adjustment to cancer (18)	Screening/early detection (12)	Communication (25)

Note. Numbers in parentheses indicate overall 2008 topic ranking.

Neuropathy, mucositis, and functional impairment ranking increases may be the result of the increase of these side effects with the newer chemotherapeutic agents and the dose-intensive chemotherapies that are being administered to many patients (Armstrong, Almadrones, & Gilbert, 2005). Palliative care decision making may have increased in importance in part because of the amount of healthcare expenditures that occur at the end of life and the ascendancy of palliative care into the spotlight of American society. In 2004, decision making about treatment in advanced disease was ranked the second-most important topic (Berger et al., 2005). A National Institute of Nursing Research (2008) priority is end of life. Coping, caregiving, and family adjustment to cancer highlight the increasing importance of the family caregiving roles and the importance of focusing on family psychosocial issues and the individual. The burden of cancer care is increasingly being shifted to caregivers; therefore, oncology nursing research should identify what can be done to assist caregiver and family adjustment (Honea et al., 2008).

Among topics that were highly ranked in 2008 and prior surveys were quality of life and pain. The findings highlight that, although quality of life and pain have been highly ranked for the past eight years, a perception exists that more needs to be known about the two topics. Quality of life is a complex, multifaceted topic that affects many aspects of the patient's trajectory of cancer care from prevention to survivorship or end of life. Research has demonstrated that quality-of-life information provided to clinicians improves outcomes (Guyatt et al., 2007). Because a major goal in cancer care is to improve patient outcomes, quality of life is likely to remain an important topic in the future.

By continuing to rank pain as a priority topic, ONS members are indicating that more research is needed in the area of pain control. A review of the literature supports this opinion. The percentage of patients with advanced cancer or receiving active treatment reporting moderate to severe pain has not changed in the past 30 years (Miaskowski, 2005). More research is needed to develop a stronger evidence base for effective cancer pain interventions and to determine effective ways to disseminate this information for adoption into standards of care.

Differences in rankings existed among the doctorally prepared ONS membership, the advanced practice nurses, and the clinicians—understandable because clinicians are providing care during the acute phases of cancer care while advanced practice and doctorally prepared nurses may be more focused on issues such as survivorship and survivor wellness. Symptom clusters also are likely to be more relevant to researchers than to clinicians because they offer insight into underlying biologic processes and pharmacokinetic responses. Clinicians are more likely to focus on coexisting symptoms where the treatments require consideration of drug interactions or where one symptom may be a secondary effect of the treatment for another symptom. The differences in rankings also may be a result of the lag between research results and implementation into clinical practice. It has been noted that it can take as long as 17 years to turn 14% of original research into evidence-based practice (Green, 2001). Four years from now, items that have been ranked highly by researchers, such as late effects of treatment and survivorship, may have sufficient research results to provide evidence-based practice recommendations.

Conclusion

The 2008 ONS Research Priorities Survey was successful in obtaining a response from the full spectrum of ONS membership and included the perspectives of administrators, advanced practice nurses, educators, researchers, and staff nurses. Respondents covered the continuum of cancer care from primary prevention to end of life and from laboratory bench to bedside care. These broad-based survey results can be used to guide the ONS Research Agenda and funding for oncology nursing research with the goal of improving clinical outcomes. The results support the ONS mission to promote excellence in oncology nursing and quality cancer care (ONS, 2008).

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