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### ABSTRACT 2480

**Title:** DEVELOPING A MULTIDISCIPLINARY PROSTATE CANCER CLINIC FOR THE NEWLY DIAGNOSED PROSTATE CANCER POPULATION—DEFINING THE ROLE OF AN ONCOLOGY APN

**Focus Area:** Clinical/Evidence Based Practice

**Authors:** Lydia Madsen, RN, MSN, OCN®, AOCNS®, University of Texas MD Anderson Cancer Center, Houston, TX; Jane Williams, RN, MSN, FNP, University of Texas MD Anderson Cancer Center, Houston, TX; Catherine Craig, RN, MPH, University of Texas MD Anderson Cancer Center, Houston, TX; and Deborah Kuban, MD, University of Texas MD Anderson Cancer Center, Houston, TX.

**Content:** A Multidisciplinary Prostate Cancer Clinic (MPCC) provides opportunity to present multiple treatment options for newly-diagnosed prostate cancer patients in a single setting.

A MPCC was started in 2003 at this NCI designated comprehensive cancer center. The primary objective was to provide patients with a setting where all appropriate treatment choices related to their prostate cancer diagnosis were presented. The first year of operation, 203 patients were evaluated by physicians from Radiation Oncology and Urology in a common clinical setting. The second year of operation, the clinic expanded and developed more specific guidelines for patient inclusion.

An Oncology APN was recruited at the end of the second year, to address the following objectives: 1) Provide a coordinated experience for each patient, including comprehensive assessment, diagnostic testing, ancillary services, summary of treatment recommendations, and follow-up during the decision-making process; 2) Provide patient education regarding treatment choices and available clinical trials; 3) Assess clinic performance by compiling treatment statistics and incorporating relevant survey instruments; 4) Increase utilization of the MPCC by patients for information, decision-making and treatment.

In the third year of operation, 419 newly-diagnosed prostate cancer patients were seen in the MPCC. The APN has compiled a database with demographic and clinical data of the 1050 patients seen to date and assisted in the development of a QOL protocol to compare the various treatment decisions. A letter, designating treatment recommendations and corresponding educational information, is provided by the APN at the conclusion of each patient visit. The APN routinely provides patient follow-up to address questions and give additional treatment-specific information. Communication between the multidisciplinary team members during clinic and subsequent follow-up disposition is facilitated by the APN.

The addition of an APN has created opportunity for detailed patient education at the initial visit and follow-up as the patient moves toward a treatment decision. Formal evaluation of the MPCC has been conducted by an outside agency; patient experience mapping results demonstrate patient satisfaction with the clinic and the role of the oncology APN during the complex decision making process in this newly diagnosed cancer patient population.

### ABSTRACT 2488

**Title:** SUPPORTING EVIDENCE-BASED PRACTICE VIA AN INTERACTIVE WEBSITE FOR NURSES CARING FOR PATIENTS WITH COLORECTAL CANCER

**Focus Area:** Education

**Authors:** Susan Moore, RN, MSN, ANP, AOCN®, CancerExpertise, Chi-

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**Content:** Oncology APNs caring for patients with colorectal cancer (CRC) are challenged to gather current, evidence-based information to guide patient care. However, information from textbooks and journal articles is often outdated and difficult to access, and learning needs indicate a lack of alternative information sources for APNs and staff nurses in clinic, office, and academic settings.

The purpose of this project was to provide current, evidence-based support for nurses caring for CRC patients in various treatment settings by developing a dynamic, informational, open-access Web site.

An Expert Panel of CRC nursing leaders representing the continuum of care was recruited to develop and maintain the Web content, including evidence-based, peer-reviewed information on patient management and links to validated resources, such as treatment guidelines, assessment and teaching tools, and current journal articles. Currency is ensured through a weekly news feature alerting nurses to new findings. Interactivity allows users to submit questions to the Panel with prompt feedback.

Metrics have assessed trends in use of the Web site since its launch in March 2006. Individual page views have reached an average of 1,400/month. New users represent 89% of daily visitors, averaging 1.74 page views/visit; returning users average 3.23 page views/visit. Over 50% of the visitors are outside the United States. Oncology nurses use this site for professional and patient education.

Oncology APNs must promote dynamic and contemporary learning and provide clinical support for staff and clinic nurses. The learning needs for APNs and staff nurses on CRC nursing prompted development of an interactive, open-access Web site. The content is revised through regular monitoring of the literature, and posted text is revised every 6 months. Metrics are monitored monthly as to number of users (new and repeat); number of unique page views; duration of page visit; and top content. The metrics suggest that this informational Web site, focusing on a specific disease type and oncology nursing implications, is a cost- and time-efficient way to increase exposure to evidence-based practice. The success of this model supports recommendations for similar Web sites featuring other diseases.

### ABSTRACT 2490

**Title:** SO YOU FOUND A BREAST MASS

**Focus Area:** Education

**Authors:** Ashley Towler, RNC, WHNP, University of Texas MD Anderson Cancer Center, Houston, TX; and Mary Ann Zalewski, ANP, University of Texas MD Anderson Cancer Center, Houston, TX.

**Content:** In 2004, an estimated 216,000 women were diagnosed with breast cancer. Women's Health Nurse Practitioners assess countless numbers of these women. Therefore, it is imperative that the nurse practitioner be adequately prepared and informed when dealing with the unique issues of breast health and awareness, especially in this time of our ever-aging population.

A woman's yearly Well-Woman exam is often performed by the nurse practitioner. While performing a clinical breast exam, how does one distinguish between a suspicious mass and a cyst? What are the steps to take if a suspicious mass is found? Is the redness and swelling in the breast inflammatory breast cancer or just mastitis? The diagnosis and management of a new breast mass or irregularity requires that certain diagnostic studies be performed to assure that the patient is presented with all the available options, and receives the appropriate care and support.

The purpose of this poster is to inform the nurse practitioner about the diagnoses, management and follow-up for a patient with a suspicious breast mass. Also, it serves to improve the assessment technique of the nurse practitioner for determining benign versus suspicious mass or breast changes.

We will lay out a step-by-step diagram for the management, diagnosis and follow-up for a new found breast mass, as well as pictures and tips on how to determine between a benign or possibly cancerous mass, and how to distinguish between mastitis and inflammatory breast cancer.

Our hope is that the reader will be more aware of what resources should be used if the practitioner finds a breast mass. The outcomes is applicable to the Oncology APN, in that many nurse practitioners perform many clinical breast exams daily and would be the first to find the new breast mass or breast changes, or are the link for the patient who self palpates a new breast mass or notices changes.

The implications are identified on the poster and shown in easy to follow algorithms.

### ABSTRACT 2497

**Title:** EVIDENCE BASED PRACTICE: DEVELOPMENT OF A PLAN FOR THE EARLY DETECTION AND INTERVENTION FOR DELIRIUM IN PATIENT WITH CANCER

**Focus Area:** Clinical/Evidence Based Practice

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**Content:** During a falls quality improvement project, it was identified that 35% of patients admitted to the oncology units who fell had developed mental status changes during their admission. Delirium was also reported in patients anecdotally by nurses.

An Evidence-based practice journal club was formed and led by the Advanced Practice Nurse to develop a plan for the early detection and identification of evidence-based nursing interventions to prevent or minimize the experience and negative consequences of delirium.

The journal club, consisting of oncology nurses and a gerontology nurse practitioner, met every three weeks to review the research related to delirium in the oncology population. Based on the review of the research, appropriate screening tools were identified. The initial screening tool that is used on admission to the hospital is the short portable mental status exam. This tool identifies underlying cognitive pathology, which allows an increased awareness of cognitive function of the patient. The Confusion Assessment Method (CAM) tool was chosen for daily mental status assessment of the patient. This tool was found through the research review to be valid, reliable, easy to use, and applicable to the oncology patient population. Review of the research on nursing interventions yielded little research data. Expert opinion and published practice guidelines were used as the basis for developing guidelines for delirium interventions.

Nurses in the Oncology Department were educated on the importance of assessing for mental status changes and the tools chosen for assessment of delirium and other cognitive changes. Delirium assessments and interventions are added to the annual RN competency training for oncology.

As a result of the journal club findings and recommendations, changes in practice have been made that include initial assessment of cognitive

status and ongoing (daily) mental status evaluation at the bedside by the nursing staff. Next steps include putting the assessment tools online for computer-based charting and auditing compliance with the documentation of cognitive function. Guiding the nursing staff in the use of evidence-based research for their clinical practice is an integral activity of the APN.

### ABSTRACT 2499

**Title:** PROTON THERAPY AS A CANCER TREATMENT OPTION

**Focus Area:** Clinical/Evidence Based Practice

**Authors:** Haihong Cai, ANP-C, University of Texas MD Anderson Cancer Center, Houston, TX; Anita Mahajan, MD, University of Texas MD Anderson Cancer Center, Houston, TX; and James Cox, MD, University of Texas MD Anderson Cancer Center, Houston, TX.

**Content:** Radiation therapy is a safe and effective modality of cancer treatment for patients of all ages. There has been vast improvement in the equipment and delivery of radiation treatment over the past 20-30 years. High energy photon is the most common form of radiation. However, because of the damage caused by the similar dose to surrounding normal tissues, less than desired dose is used, which might in turn contribute to treatment failure.

Proton therapy is another form of external beam radiation. The large, energetic proton slows down as they pass through tissues, depositing most of their energy at the end of their path (Bragg Peak). Because of its precise targeting, higher dose could be applied to tumor to achieve better local control, while sparing normal surrounding tissues.

Proton therapy has been used to treat lung cancer, skull based tumors, prostate cancer, and in pediatric population at MD Anderson Cancer Center. Patients with stage IIIA, IIIB NSC lung cancer were treated 74 CGE with concurrent chemoradiation; Stage I/II, non-operable NSC lung cancer were treated with 87.5 CGE; 23.4-36 CGE was used in cranial spinal cases; 45-50.4 CGE were used in rhabdomyosarcoma cases.

In 70 NSC lung cancer patients, the occurrence of grade 3 esophagitis is between 10-15%, much lower than the reported cases in IMRT or 3 D conformal treatment. Patients with poor pulmonary function, otherwise not a candidate for any radiation treatment, were also treated with proton, with no progression of dyspnea. The biggest concern in the pediatric population is the arrest or retardation of neurologic or physical development. Because of the absence of an exit dose, in craniospinal irradiation cases, the dose to the vertebral body can be controlled and the dose to the, liver, kidneys are reduced to nil which can minimize organ dysfunction and reduce the risk secondary malignancies. In cases of skull based tumor, the dose to surrounding critical structures, such as optic chiasm, pituitary gland are also dramatically decreased, which in turn reduced the long term toxicity.

Overall, proton therapy offers treatment advantages in certain types of cancer cases. Nevertheless, more research and follow ups are needed.

### ABSTRACT 2501

**Title:** GETTING TO THE POINT: PENILE REHABILITATION WITH INTRACAVERNOSAL INJECTION THERAPY POST-PROSTATECTOMY

**Focus Area:** Clinical/Evidence Based Practice

**Author:** Joseph Narus, MA, APRN-BC, Memorial Sloan-Kettering Cancer Center, New York, NY.

**Content:** An estimated 218,000 new cases of prostate cancer will be diagnosed in 2007 making it the leading diagnosed cancer in men. Men undergoing a radical prostatectomy commonly experience erectile dysfunction (ED) regardless of "nerve sparing" procedures. With higher cancer survival rates, this result has a significant negative impact on men's quality of life as it can take 18 to 24 months for pre-operative erectile function to return. Penile rehabilitation with oral agents and/or intracavernosal injection (ICI) therapy has demonstrated beneficial outcomes to improve erectile function. This NCI-designated comprehensive cancer center has a men's sexual medicine program which addresses ED through penile rehabilitation.

A survey was conducted at our institution to determine advanced practice nurses' (APRNs) comprehension of penile rehabilitation therapy and their comfort and confidence in discussing ED with patients.

A needs assessment survey utilizing [www.surveymonkey.com](http://www.surveymonkey.com) was electronically mailed to all APRNs [(n=188): Nurse Practitioners (NPs) n=145, Clinical Nurse Specialists (CNSs) n=43]. Responses were anonymous and encrypted to protect identity. APRNs were asked twenty-eight ED questions and ten demographic questions. 54% of APRNs (71 NPs, 24 CNSs, 7 not identified by role) responded. Results revealed 90% of APRNs (n=87) are unfamiliar with pharmacologic penile rehabilitation therapy (65 NPs, 21 CNSs). Only 33% of APRNs (22 NPs, 7 CNSs) were comfortable introducing the subject of ED, while 22% of APRNs (17 NPs, 4 CNSs) were confident discussing ED with a patient.

To address the survey results, a comprehensive presentation was developed to increase core knowledge regarding penile rehabilitation and our program, and to empower APRNs to address sexual health issues. A series of lectures were delivered to reach APRNs within the institution. APRNs will be re-surveyed and referrals monitored to assess outcomes.

APRNs are instrumental in educating patients, family, and staff about early intervention of ED to improve quality of life and decrease adverse outcomes. This presentation will include survey results, lecture contents and teaching materials to encourage all APRNs to have an open dialogue with their patients regarding sexual health concerns and refer patients when applicable.

## ABSTRACT 2506

**Title:** IMPLEMENTATION OF A HOSPITAL-BASED END-OF-LIFE NURSING CONTINUING EDUCATION PROGRAM

**Focus Area:** Education

**Authors:** Jennifer Tiffen, RN, MS, APN, University of Illinois–Chicago College of Nursing, Chicago, IL; Lynne O'Donnell, MS, RN, APN-BC, Jesse Brown Veterans Administration Medical Center, Chicago, IL; Kathy Wirtz Powell, DNSc, RN, Jesse Brown Veterans Administration Medical Center, Chicago, IL; and Diana Wilkie, PhD, RN, FAAN, University of Illinois–Chicago College of Nursing, Chicago, IL.

**Content:** According to the Oncology Nursing Society Position on End-of-Life Care, mandatory palliative care nursing curriculum and continuing education programs are essential to improving quality of life. Many programs do not include sufficient preparation for end-of-life care, and both faculty and practicing nurses face constraints such as time and resources in accessing the information they need.

A solution to this problem is to distribute information via the web or other computer-based technology. The Toolkit for Nurturing Excellence at the End-of-Life Transition (TNEEL), funded through the Robert Wood Johnson Foundation, is an innovative, easy-to-access, package of electronic tools for palliative care education. TNEEL is presented in six modules (comfort, connections, ethics, grief, well being, impact) and addresses AACN's "Competencies Necessary for Nurses to Provide High-Quality Care to Patients and Families During the Transition at the End of Life." In 2006, the Jesse Brown Veterans Administration Medical Center (JBVAMC) was awarded a grant to improve end-of-life care through evidence-based learning.

A central component of the grant was a four phase integration of TNEEL into JBVAMC nursing continuing education. In phase one, three Advanced Practice Nurses conducted a TNEEL how-to workshop for all JBVAMC Pain/Palliative Care Resource Professionals (PRPs). All PRPs were then given three months to independently complete the six TNEEL modules. In phase two, PRPs attended a hands-on workshop to learn how to utilize TNEEL for practice, including developing palliative care competencies for nurses and developing in-services for staff. In phase three, we plan to have 20% of the nursing staff complete TNEEL. In the fourth phase of the project, we will select four nurses to complete a series of three palliative care courses offered by the University of Illinois–Chicago College of Nursing.

Presently, the project is in the third phase of implementation. 83/360, or 23% of nursing staff have registered for TNEEL and 16% have completed the course and received a TNEEL certificate.

Our findings to date indicate that implementation of palliative care education in a large organization such as the VA requires systematic approaches and follow-up to maximize and then measure the impact on patient outcomes.

## ABSTRACT 2507

**Title:** EVIDENCE BASED PRACTICE: MEASUREMENT OF KNOWLEDGE, ATTITUDE, SKILLS & HABITS OF PARTICIPANTS BEFORE AND AFTER A FORMAL EBP PROGRAM.

**Focus Area:** Clinical/Evidence Based Practice

**Authors:** Susan Storey, RN, MSN, OCN®, AOCNS®, St. Vincent Hospital, Indianapolis, IN; and Kathleen Hubner, MSN, RN, CNRN, St. Vincent Hospital, Indianapolis, IN.

**Content:** Studies have shown that Evidence Based Practice (EBP) improves outcomes by 28%; decreases costs by standardizing and streamlining care and implementing protocols that result in better treatment of acute and chronic health conditions; and promotes critical thinking and autonomy in practice. A multi-phase EBP program was developed by the CNS's and offered to interested St. Vincent Hospital associates. In this newly developed program, there was a need to measure baseline as well as post program knowledge, attitudes, skills and habits (KASH) to determine impact of the content.

To determine if a formal EBP educational program impacted the KASH participants held toward EBP.

Objectives:

1. Define current KASH of St. Vincent RNs toward Evidence Based Practice prior to participation in a formal EBP educational program.
2. Measure the impact of a formal EBP educational program on the KASH of participants in the program.

Using a validated EBP Questionnaire (EBPQ) with a scale of 1 (poor) to 7 (best), program participants' KASH prior to and immediately following completion of a 4 month Phase I EBP program were compared.

31 of 38 participants completed the post questionnaires (7 were lost due to inability to fulfill class commitments). Self assessment scores of 5 and above on the pre-EBPQ related to knowledge and skills ranged from 16-63% to 61-87% resulting in p values from 0.000 to 0.031. Self assessment scores of 5 and above on the pre-EBPQ related to attitudes and habits ranged from 39 – 84% to 52 – 97%. While there was no statistical significance at this time, we anticipate a greater change over time as knowledge and skills are assimilated into attitudes and habits.

Participants consistently rated their KASH much higher after they completed Phase I of the program. These initial results support our hypothesis that KASH toward EBP may be increased by implementing a formal EBP educational program. By understanding and learning more about EBP and the process, nurses can become more aware of how important it is to ask questions regarding their daily practice and the evidence supporting it. By ensuring nursing practice is evidence based, patient outcomes can be positively affected.

## ABSTRACT 2510

**Title:** IMPROVING PERSISTENT FATIGUE IN BREAST CANCER SURVIVORS USING A HOLISTIC GROUP-BASED MIND-BODY INTERVENTION

**Focus Area:** Research Study

**Authors:** Susan Appling, MS, CRNP, Mercy Medical Center, Baltimore, MD; Susan Scarvalone, MSW, Mercy Medical Center, Baltimore, MD; Maureen McBeth, MPT, Mercy Medical Center, Baltimore, MD; Bindu Kalesan, MSc, MPH, Mercy Medical Center, Baltimore, MD; Lisa Gallicchio, PhD, Mercy Medical Center, Baltimore, MD; Sandra Hoffman, MPH, Johns Hopkins University School of Public Health, Baltimore, MD; and Kathy Helzlsouer, MD, MHS, Mercy Medical Center, Baltimore, MD.

**Content:** Persistent fatigue following breast cancer treatment affects 30 to 40% of patients. Contributing factors are diverse and include

stress, pain, sleep disturbance, depression, decreased physical activity and menopausal symptoms. The multi-dimensional underlying etiology of fatigue calls for broad based interventions aimed at managing stress, improving diet and exercise patterns and short term cognitive therapy supporting attitudinal and behavioral changes.

The purpose of this study is to test the effectiveness of a ten week holistic, group-based mind body intervention to treat persistent fatigue among breast cancer survivors. The ONS research priority topic addressed is "identifying modifiable factors that can be targeted with interventions to reduce the late effects of cancer treatment".

The conceptual model guiding this study is Piper's Integrated Fatigue Model.

A quasi-experimental study design using a before/after evaluation of change in fatigue scores was used to evaluate program effectiveness. Subjects were between six months and five years post-completion of adjuvant chemotherapy and/or radiation therapy for breast cancer with a baseline fatigue score of < 50 as measured by the vitality subscale of the SF-36 Health Survey. Sixty-eight women entered the study but seven dropped out after attending less than two of the ten weekly sessions. The primary outcome assessed was change in severity of fatigue as measured by the Piper Fatigue Scale. Student's paired t test was used to measure change in fatigue severity.

The mean age of participants was 56.8 years; 74% were Caucasian and 18% were African-American; mean time since breast cancer diagnosis was 2.6 years. The mean Piper Fatigue score showed improvement from a score of 6.0 (SD 1.6) at baseline to 4.2 (SD 2.0) at the end of the intervention ( $p < 0.0001$ ). Two months after program completion fatigue scores continued to improve compared to baseline (mean 3.5, SD 2.0;  $p < 0.0001$ ). Six month follow-up data is still being collected but for those who completed the final assessment ( $n = 26$ ), fatigue scores remain significantly improved (mean 4.0, SD 1.9;  $p < 0.0001$ ). These findings support the use of a holistic integrated mind body intervention to reduce persistent fatigue, a common problem in breast cancer survivors.

## ABSTRACT 2516

**Title:** DEVELOPMENT OF A CLINICAL TREATMENT PATHWAY FOR A UNIQUE TOBACCO CESSATION PROGRAM WITHIN A COMPREHENSIVE CANCER CENTER

**Focus Area:** Clinical/Evidence Based Practice

**Authors:** Mary Lou Heater, MSN, APRN-PMH, BC, University of Texas MD Anderson Cancer Center, Houston, TX; Maher Karam, MD, University of Texas MD Anderson Cancer Center, Houston, TX; Michael Mallen, PhD, University of Texas MD Anderson Cancer Center, Houston, TX; Mark Evans, LCSW, University of Texas MD Anderson Cancer Center, Houston, TX; Janice Blalock, PhD, University of Texas MD Anderson Cancer Center, Houston, TX; and Paul Cinciripini, PhD, University of Texas MD Anderson Cancer Center, Houston, TX.

**Content:** Current tobacco users or recent quitters are estimated to comprise 24% of all patient admissions at The University of Texas MD Anderson Cancer Center (UT-MDACC).

Continued tobacco use after a cancer diagnosis negatively impacts survival rates, quality of life, and treatment efficacy. An estimated 40% of patients continue to smoke post diagnosis. Admission to a cancer facility has been described as a "teachable moment" yet few studies assess the design or impact of targeted smoking cessation programs for cancer patients. Primarily aimed at general clinical practice, the U.S. Department of Health & Human Services Treating Tobacco Use and Dependence Clinical Practice Guideline (Fiore, 2000) offers evidenced-based recommendations resulting from systematic review and analysis of scientific literature. However, given complex treatment/medical challenges, often including psychiatric and substance dependence co-morbidities, nicotine dependent cancer patients may represent a unique population. Therefore, applying general clinical guidelines may not meet their special needs.

Taking an interdisciplinary approach, the treatment team at UT-MDACC developed a Tobacco Treatment Program (TTP) whose goal

is provide free tobacco cessation assistance integrated with concurrent cancer treatment. Combining standard and specialized interventions, an advanced practice nurse and addiction psychiatrist developed a clinical treatment pathway to provide structured plans of care.

This pathway supports the interdisciplinary clinical management of care including pharmacotherapy; behavioral therapy, motivational interviewing, and supportive counseling. Individualized treatment plans and ongoing counseling are informed by an initial assessment of patients' cancer experience, tobacco use and motivation to quit, psychosocial, medical, mental health, and substance use histories. Evidenced-based counseling components include: 1) promoting self-efficacy; 2) benefits of quitting, 3) risk awareness; 4) alternative coping strategies; 5) relapse prevention; and 6) management of cancer related distress, depression and anxiety. Pharmacotherapy options balance current cancer therapies with optimal tobacco cessation interventions. In-house and outside referrals are made as indicated.

Overall treatment efficacy is based on point prevalent abstinence rates biochemically verified with expired carbon monoxide readings post program completion.

This clinical pathway focuses on the quality and coordination of care and is presented as a model for future tobacco treatment programs in comprehensive cancer centers.

## ABSTRACT 2519

**Title:** LEPTOMENINGEAL DISEASE

**Focus Area:** Education

**Authors:** Christi Bowe, RN, APN, University of Texas MD Anderson Cancer Center, Houston, TX; and TaCharra Woodard, RN, MSN, ACNP, University of Texas MD Anderson Cancer Center, Houston, TX.

**Content:** Dissemination of cancer cells to the lining of the central nervous system, also known as leptomeningeal disease (LMD), is a devastating diagnosis that carries a grim prognosis. About 5%-10% of patients with metastatic cancer will develop LMD. For most, survival is about six weeks without therapy and six months with therapy. Distressing symptoms associated with LMD can include: convulsions, confusion, dysphagia, diplopia, drowsiness, difficulty breathing, weakness and numbness. These distressing symptoms can respond to nursing and pharmaceutical interventions thus promoting patient comfort. The APN plays a key role in identifying patients at risk for developing LMD and recognizing signs and symptoms at early stages. Once LMD is suspected it is important for the APN to be knowledgeable in ordering diagnostic tests and initiating the appropriate referrals.

The purpose of this project was to enhance the APN's competence and proficiency in the identification and management of patients with LMD.

A review of the literature was conducted and a neuro-oncologist representing a renowned cancer center was interviewed as to current clinical practices in that institution. A power point presentation was then developed and presented to oncology APN's. The information contained in the presentation included the pathogenesis, signs and symptoms, and treatment options for LMD. An algorithm was developed from the evidence based literature and was included in the presentation to guide the APN in management of the patient with LMD. Three case studies were presented and the audience participated by using the evidence based algorithm to suggest plans of care for the patient. The APN who is proficient in educating the patient regarding the disease process and therapies will be effective in partnering with the patient in planning treatment.

After completion of presentation, surveys were collected to evaluate effectiveness of intervention

Knowledge gained through attendance of this presentation increased the oncology APN's understanding and management of the patient with LMD. Early recognition of LMD and its devastating symptoms can promote patient comfort and improve quality of life. Information presented can be translated into evidence based practice guidelines applicable to oncology APN's.

## ABSTRACT 2521

**Title:** AN ANALYSIS OF THE ADVANCED PRACTICE NURSE WORK ENVIRONMENT

**Focus Area:** Clinical/Evidence Based Practice

**Authors:** Lisa Fuson, RN, MSN, ANP-C, University of Texas MD Anderson Cancer Center, Houston, TX; Brenda Hagen, RN, MSN, FNP, University of Texas MD Anderson Cancer Center, Houston, TX; Jana Kelley, RN, MSN, ANP/GNP, University of Texas MD Anderson Cancer Center, Houston, TX; Annette Bisanz, RN, MPH, CNS, University of Texas MD Anderson Cancer, Houston, TX; and Harriett Chaney, RN, PhD, CNS, Self Employed, Portland, OR.

**Content:** The purpose of this study was to obtain information from Advanced Practice Nurses that could be used to increase awareness of issues associated with their work environments and to support relative improvements.

A review of the literature was performed using Pubmed utilizing key words: advanced practice nurse, job satisfaction, and work environment. Various studies have demonstrated that nursing is a stressful occupation with a high incidence of stress-related burnout. Difficulties in retaining and recruiting nurses are documented.

A committee of five APN's at The University of Texas M. D. Anderson Cancer Center was formed to assess the working environment of APNs within our facility. We e-mailed 2 surveys anonymously to 250 APNs currently employed at our institution. The purpose of the first survey was to collect data about work hours and work environment. The follow-up survey was used to collect additional data related to work environment. The findings were analyzed by descriptive and inferential statistics.

Eighty-eight nurses responded to the first survey and 91 to the second survey. Eighty-five percent of respondents reported working 41 to 60 hours/week in clinic, and 69% reported working an additional 1 to 5 hours/week at home completing administrative tasks (i.e., paperwork and dictation). Over half reported having no designated time for professional development. Over 80% had attended conferences but had to use vacation time. Many were unaware of the institution's policy limiting them to a maximum of 60 work hours/week. All respondents indicated a desire to work 40- to 50-hours/week, time during the work hours to complete administrative tasks, and for a flexible work-hour scheduling option. Several felt that a "float pool" would provide staffing support to allow APN's to complete administrative tasks and pursue professional development.

On the basis of our findings, the time allotted for professional development has been increased, and recommendations have been made for instituting a float pool to accommodate routine staffing requirements and offering flexible work-hour scheduling, such as four 10-hour/day work weeks. Improvements in APNs' work environment will increase opportunities for professional development and improve job satisfaction.

## ABSTRACT 2522

**Title:** A MODEL OF CARE DELIVERY TO REDUCE FALLS IN A MAJOR CANCER CENTER

**Focus Area:** Clinical/Evidence Based Practice

**Authors:** Nancy Kline, PhD, RN, CPNP, FAAN, Memorial Sloan-Kettering Cancer Center, New York, NY; Bridgette Thom, MS, Memorial Sloan-Kettering Cancer Center, New York, NY; Wayne Quashie, MPH, RN, Memorial Sloan-Kettering Cancer Center, New York, NY; Patricia Brosnan, MPH, RN, Memorial Sloan-Kettering Cancer Center, New York, NY; and Mary Dowling, MSN, RN, Memorial Sloan-Kettering Cancer Center, New York, NY.

**Content:** Falls are a leading cause of injuries sustained by hospitalized patients. Injuries sustained as result of patient falls in a cancer hospital are often severe, due to the nature of the underlying medical condition. These can include predisposition for fractures due to bony metastases, or uncontrollable bleeding from thrombocytopenia or medications used to prevent deep vein thrombosis.

As the vast majority of falls risk assessment instruments have been developed for use in long-term care facilities, a case-control study to determine risk factors for falls within a major cancer center was conducted, and a new falls risk assessment instrument was developed. The PPV of the new instrument is 91%, where the PPV of the previous instrument was 66%. A demonstration project targeting the neurology/orthopedic unit was initiated in March 2007 and consisted of implementing a new model of care delivery to reduce patient falls and falls with injury.

The Swiss Cheese Model, developed by Dr. James Reason, provided the theoretical basis for the training and subsequent care delivery changes. Didactic presentations on safety and change theory, unit-specific falls and falls with injury data, team work, accountability, communication, and delegation were developed and presented by unit-based staff with guidance from nursing directors. All nurses and assistive personnel attended the day-long training. The staff spent time in small groups studying patient scenarios to identify safety hazards and also developing a unit-specific patient safety model. Staffing changes for assistive personnel have been made based on the times of day when fall rates were highest.

Outcome measures including falls and falls with injury rates, and patient satisfaction are being tracked prospectively as the program moves forward. The program has been in place for one quarter, and we have seen a decline in falls on this unit as compared to the first quarter of 2007 (16 falls vs 8).

Bringing staff together to work as a team towards this common goal is imperative to reducing falls rates. APNs are in a unique role to use their experience and education to develop and facilitate innovative unit-based programs to bring all staff on board and improve patient safety.

## ABSTRACT 2528

**Title:** IT TAKES A VILLAGE: DEVELOPMENT OF A MULTIDISCIPLINARY HEAD AND NECK SUPPORTIVE CARE PROGRAM

**Focus Area:** Clinical/Evidence Based Practice

**Author:** Wendy Crabbe, RN, MSN, AOCN®, Cancer Therapy & Research Center, San Antonio, TX.

**Content:** The American Cancer society estimates that in 2007 more than 24,180 men and 10,180 women will be diagnosed with head and neck cancer (ACS, Cancer Facts & Figures, 2007). Surgery is the main treatment for those patients with localized node negative disease; but pts with recurrent or locally advanced disease often receive combined modality treatment with chemotherapy and radiation therapy. Advanced practice oncology nurses (APN's) play a key role in preparing patients and educating them in how to manage and cope with the many and severe symptoms that can occur as the result of combined modality treatment.

The National Comprehensive Cancer Network (NCCN) Guidelines for the treatment of head and neck cancer has a list of multidisciplinary team members needed to get the head and neck cancer patient through this difficult treatment; however, the literature is lacking in information about the supportive care issues that face this patient population as they proceed with multi-modality treatment. Our multidisciplinary team includes: ENT surgeons, radiation oncologists and nurses, medical oncologists and advanced practice nurses (APN's), dentists, psychologist, and dietician.

A pre-treatment checklist was developed by the APN to ensure patients had everything they needed prior to therapy. After working with head and neck cancer patients for over a year, a clinically evident pattern emerged of side effects that developed and intensified just before the second cycle of chemotherapy; such as mucositis, weight loss, difficulty and painful swallowing, thick, ropy sputum, fatigue, and difficulty coping with symptoms. The APN now meets with patients once a week to manage symptoms and call in other team members such as the dietician as needed. Documentation of symptom management issues and sharing documentation with the team is essential.

Weekly visits with an APN along with seeing other multidisciplinary team members regularly keeps patients on track and enables them to

have the supportive care they need to finish their treatments and prolong their survival.

Creating a village or a multidisciplinary head and neck supportive care program is essential in the management of head and neck cancer patients receiving combined modality treatment.

## ABSTRACT 2529

**Title:** PROTOCOL TO MANAGE VASOMOTOR SYMPTOMS OF WOMEN WITH DUCTAL CARCINOMA IN SITU RECEIVING TAMOXIFEN

**Focus Area:** Clinical/Evidence Based Practice

**Authors:** Carol Bell, RN, BSN, Stanford University Hospital, Stanford, CA; Christine Schurman, RN, BSN, MSNc, Stanford University Hospital, Stanford, CA; and Jane Bryce, MSN, Istituto Nazionale Tumore di Pausi, Naples, IT.

**Content:** The rate of Ductal Carcinoma In Situ (DCIS) has increased as more women get annual screening mammograms. DCIS now accounts for 20% of newly diagnosed breast cancers. Standard treatment of DCIS is surgery, radiation, and adjuvant tamoxifen (TAM) for 5 years. Vasomotor symptoms (VMS), predominantly hot flashes (HF) are problematic for women receiving TAM. Studies show that HF effect over 60% of women on TAM. No single therapeutic option has proven uniformly successful treating VMS. Women experiencing VMS side effects from TAM are less likely to maintain the treatment regimen over 5 years. Duration of TAM therapy is directly correlated to decreased breast cancer events and increased disease free survival rates, attention must be given to relief of HF to promote compliance with five-year TAM treatment regimen.

The purpose of this protocol is to establish practice guidelines for nurse practitioners to treat vasomotor symptoms in women with DCIS on TAM to keep women on treatment over the recommended five-year period.

A comprehensive search of MedLine, CINAHL, and PubMed was undertaken to identify relevant studies of non-hormonal, pharmacologic and non-pharmacologic treatments of VMS. Using current research of published literature we have written a protocol for the evaluation, treatment and management of VMS of women with DCIS on TAM. The review of the literature is presented in an Evidence Table with a treatment algorithm identifying the weight of evidence classification of specific therapies.

This protocol aims to ensure compliance with therapy by minimizing HF frequency and severity to maintain optimal quality of life.

Therapies evaluated are from studies showing statistical difference reducing HF. Since many breast cancer survivors are interested in non-pharmacological management evaluations of alternative therapies were included regardless of statistical significance as long as the treatment was considered safe. Intervention with gabapentin and venlafaxine reduce HF in a significant number of women and are recommended for practice. Alternative treatments with acupuncture, hypnosis, and relaxation therapy hold promise and need further study, but are likely effective treatments for HF.

## ABSTRACT 2530

**Title:** HIGH RISK BREAST CANCER SCREENING: THE APN ROLE

**Focus Area:** Clinical/Evidence Based Practice

**Authors:** Anna Purdy, RN, MSN, APRN, BC, Medical College of Wisconsin, Milwaukee, WI; and Julie Griffie, APRN, BC, CS, Froedtert Lutheran Memorial Hospital, Milwaukee, WI.

**Content:** APNs that practice in breast care centers have unique knowledge of breast cancer risk, surveillance, and chemoprevention. In 2007, over 178,480 women will be diagnosed with breast cancer in the United States. Advanced imaging technologies, increased emphasis on the role of family history, genetic testing, risk scale utilization, and opportunities for breast cancer prevention are areas that women are requesting personal implications of and guidance for their individual breast cancer surveillance plan. Providers must determine:

- \* Who is at greater risk?
- \* How is risk determined?

\* Is genetic testing appropriate?

\* What is the role of MRI as a screening tool?

\* What can be done in the area of prevention and early detection?

A model, developed at a breast care center in a tertiary care teaching hospital in the Midwest, reflects a practice that allows interdisciplinary collaboration of the APNs, Genetic Counselor, Radiologist, and Primary Care Physician (PCP).

Beginning with a targeted phone assessment, patient information is gathered to direct the course of the patient through the interdisciplinary model of care. A personal surveillance plan is developed for each patient based on personal and family history, physical examination, breast imaging findings and psychosocial needs. Consideration for genetic counseling, testing, chemoprevention and prophylactic surgery is individualized. Central to the model is education and psychological support. The goal of this model is to provide each patient with an individualized, risk appropriate surveillance plan. At the "hub" of the model, are the interventions and focused education provided to the patient by the APN. If the patient does not have a PCP, or wishes focused breast care clinical follow up, the APN can continue to see the patient on a regular basis for continued evaluation.

Patient compliance with clinical management and early recognition of changes in clinical findings are the outcomes measured in such a model program.

The APN plays a pivotal role in identifying and meeting the needs patients at high risk for breast cancer. A model program that utilizes interdisciplinary roles assures the development of individualized personal surveillance plans for breast cancer screening, and maximizes patient compliance and clinical outcomes.

## ABSTRACT 2531

**Title:** BREAKING UP THE MONOTONY: PROTOCOL SPECIFIC PATIENT EDUCATION PATHWAYS

**Focus Area:** Education

**Author:** Christine Rimkus, RN, MSN, AOCN®, Barnes-Jewish Hospital, St. Louis, MO.

**Content:** Educating blood and marrow transplant (BMT) patients can be challenging. The challenges include the need to communicate complicated information coupled with the emotional aspect of a life threatening treatment. An additional factor is the known cognitive dysfunction encountered by patients receiving high dose chemotherapy. This cognitive dysfunction has been described as similar to attention deficit disorder causing difficulty concentrating and remembering information. Yet another challenge is the variability of information given by the nursing staff.

The purpose of this project was to develop patient education that was appropriate for BMT patients as well as easy to administer by the staff.

Given these challenges, the Clinical Nurse Specialist on a 26 bed BMT unit initiated a systematic education process. A protocol specific education pathway was developed for the most common BMT protocols. The goal of an education pathway is to standardize education as well as to distribute the education throughout the hospital stay on a need to know basis. The day before a new procedure, treatment, or medication is started, a teaching sheet is given to the patient. The nurses review the teaching sheets with the patients to ensure understanding. To streamline the process for the nurses, packets are pre-assembled in the order of distribution and on admission are placed on the patients working clipboard. All teaching sheets are written at a 6th grade or lower reading level. The education topics were purposely brief and to the point having no more than four pages per subject.

Staff and patients have evaluated the new education process and their suggestions for improvement have been incorporated. Patients feel that it is very helpful to get the information as needed instead of all at one time. One patient commented that she knew that if she received all sheets at once, she would have read it all but not remembered anything. The nursing staff feels that the process is easy and has standardized the education process.

This process can be adapted to other general oncology admissions such as pain control, nausea/vomiting/dehydration and for standard chemotherapy admissions.

## ABSTRACT 2532

**Title:** "TELL ME YOUR STORY": USE OF AN EXPLANATORY MODEL IN NURSING EDUCATION

**Focus Area:** Education

**Authors:** Genevieve Hollis, CRNP, MSN, AOCN®, BC, University of Pennsylvania School of Nursing, Philadelphia, PA; Janet Deitrick, PhD, FAAN, RN, University of Pennsylvania School of Nursing, Philadelphia, PA; Kim Mooney-Doyle, MSN, CRNP, CPON®, University of Pennsylvania School of Nursing, Philadelphia, PA; Catherine Barrell, MSN, NP, CPON®, Morgan-Stanley Childrens Hospital, New York, NY; and Beth Storey, MSN, CRNP, CPON®, Childrens Hospital of Philadelphia, Philadelphia, PA.

**Content:** A gap in published curriculum guidelines for undergraduate oncology nursing education exists regarding synthesis of bio-medical aspects of disease with critical cultural and psychosocial competencies. This deficit was highlighted in student evaluations of an undergraduate cancer case study at the University of Pennsylvania School of Nursing which revealed significant anxiety when communicating with cancer patients and families and attempting to provide psychosocial support. To address this striking need, the advanced practice nurses (APNs) coordinating this course decided to incorporate Kleinman's Explanatory Model (EM) into the courses didactic, clinical experiences, and evaluation methods. This clinical anthropological assessment model has been used in clinical practice and research to elicit a patient's personal beliefs and perceptions regarding the illness experience which are influenced by ethnicity, social environments, past experiences, and personal knowledge. Eliciting personal beliefs and perceptions may enhance the patient-provider relationship and facilitate the development of treatment plans that are tailored to the patient's EM with the goal of increased adherence and improved outcomes

To describe the impact of integrating an EM into an undergraduate cancer case study on students understanding of the patients and families' personal beliefs/perceptions regarding the cancer experience, comfort communicating with patients and families, ability to provide psychosocial support, and future nursing practice

Use of an EM in leading discussions with a panel of cancer patients and families, analysis of fine arts/literature/videos, and guiding student interviews with cancer patients and families. Interviews were analyzed in self-reflective clinical logs and shared during case presentations

Analysis of pre- and post- course surveys and significant themes extrapolated from student's clinical logs indicated that students had significantly increased knowledge of EMs, heightened insight into the beliefs/perceptions of cancer patients and families, increased comfort in eliciting beliefs/perceptions of health and illness and communicating with patients and families across the illness continuum, and anticipated using EM in future nursing practice

Integration of an EM into an undergraduate cancer case study by APNs is feasible and enjoyable with many positive outcomes experienced by students. Recommendations include expanding classroom opportunities for students to further develop competency in tailoring interventions based upon assessment of personal beliefs/perceptions

## ABSTRACT 2536

**Title:** MANAGING ERLOTINIB-INDUCED RASH IN NSCLC PATIENTS; A PRACTICAL ASSESSMENT OF A PROPOSED ALGORITHM

**Focus Area:** Clinical/Evidence Based Practice

**Author:** Beth Eaby, MSN, CRNP, OCN®, Hospital of the University of Pennsylvania, Philadelphia, PA.

**Content:** Introduction: In October 2006, at an EGFR1 dermatologic toxicity forum, the underlying mechanisms of EGFR1 induced toxicities were discussed and existing therapeutic interventions evaluated. This is

a prospective, 10 patient trial to assess the practical implementation of the consensus treatment algorithm from this meeting.

**Objectives:** To confirm that the algorithm is effective in treating erlotinib-induced rash.

**Methods:** The patient's skin was evaluated at baseline, 2 weeks and 4 weeks after starting the drug. The consensus group recommended patients should moisturize dry areas of the body twice a day with a thick alcohol-free emollient and minimize exposure to sunlight. A physical sunscreen (zinc oxide or titanium oxide) with an SPF  $\geq$  15 should be applied 1-2 hours prior to sun-exposure. Should dermatologic toxicity occur, a three-tiered, toxicity grading system is proposed, allowing the development of the following step-wise treatment algorithm. Mild toxicity: generally localized rash that is minimally symptomatic, with no sign of superinfection; no impact on daily activities; not requiring intervention but may be treated with topical hydrocortisone (1% or 2.5% cream) or clindamycin (1% gel). Moderate toxicity: generalized rash, accompanied by mild pruritus or tenderness; minimal impact upon daily activities; no signs of superinfection; treated with either hydrocortisone (2.5% cream), clindamycin (1% gel), or pimecrolimus (1% cream), with the addition of doxycycline or minocycline (100 mg PO BID). Severe toxicity: generalized rash, accompanied by severe pruritus or tenderness; has a significant impact upon daily activity; has the potential for superinfection. Treat as for moderate toxicity with the addition of methylprednisolone dose pack. A reduction in the dose of EGFR1 is also recommended for severe symptoms, in accordance with prescribing information. If the dermatologic symptoms do not abate, interruption of EGFR1 therapy is recommended, but should be restarted once the cutaneous reactions have sufficiently diminished in severity.

**Results:** This trial will run from June to September 2007. Currently 1 patient has been entered into the study. The final patient will be enrolled by October 1st, 2007 and the results will be available in October 2007.

The implications and suggestions are in the algorithm.

## ABSTRACT 2539

**Title:** SAFETY CONSIDERATIONS FOR TEMSIROLIMUS (TORISEL™), A NOVEL INHIBITOR OF MAMMALIAN TARGET OF RAPAMYCIN, IN THE TREATMENT OF PATIENTS WITH ADVANCED RENAL CELL CARCINOMA

**Focus Area:** Clinical/Evidence Based Practice

**Author:** Susan Roethke, CRNP, MSN, AOCN®, APRN, BC, Fox Chase Cancer Center, Philadelphia, PA.

**Content:** Temsirolimus, a novel mammalian target of rapamycin (mTOR) inhibitor, was recently approved by the US Food and Drug Administration for first-line treatment of advanced RCC. As a central regulator of the cell cycle and tumor angiogenesis, mTOR is a rational target for treatment of RCC.

This presentation introduces oncology nurses to the potential adverse reactions of temsirolimus, as well as important monitoring and management considerations.

Temsirolimus is administered weekly as a 25-mg intravenous infusion lasting between 30 and 60 minutes.

In the pivotal trial, temsirolimus significantly prolonged overall survival (P=.008) and progression-free survival (P<.001) compared with interferon alpha, a standard treatment, in previously untreated patients with advanced RCC and poor-prognostic features (Hudes et al. N Engl J Med 2007;356:2271). The percentage of patients with severe adverse events was lower with temsirolimus than with interferon alpha (P=.02), and fewer dose reductions or discontinuations due to adverse events were required. More temsirolimus patients developed mild-to-moderate rash, peripheral edema, stomatitis, hyperglycemia, hypercholesterolemia, and hypertriglyceridemia than interferon patients, whereas asthenia was more common with interferon. Hematologic abnormalities (anemia, thrombocytopenia, leukopenia, and neutropenia) were also reported with temsirolimus. Laboratory abnormalities, besides increased glucose and lipids levels, included hypokalemia, hypophosphatemia, and elevated aspartate aminotransferase, alkaline phosphatase, and creatinine levels.

Most laboratory abnormalities associated with temsirolimus were metabolic in nature and hence were manageable without negatively impacting quality of life. Hypersensitivity reactions, pneumonitis, and renal failure were uncommon but clinically significant adverse reactions in patients receiving temsirolimus.

Despite pretreatment with diphenhydramine, patients should be monitored closely for hypersensitivity reactions during temsirolimus infusions; most are low grade and rarely cause treatment discontinuation. Patients who experience hypersensitivity may require famotidine or ranitidine and a slower infusion rate. Cimetidine should be avoided because of potential pharmacologic interactions. Routine monitoring should include complete blood counts, lipid profiles, serum chemistries, and comprehensive patient assessment. Patients should be monitored for hypokalemia and hypophosphatemia and repleted as needed. Temsirolimus is a promising new treatment option for patients with advanced RCC. It is important that oncology nurses know how to monitor and manage potential side effects to ensure safe administration and optimal care.

## ABSTRACT 2542

**Title:** KIDNEY CANCER SURVIVORS: A CLINICAL MODEL FOR FOLLOW-UP CARE

**Focus Area:** Clinical/Evidence Based Practice

**Author:** Mary Schoen, CRNP, MPH, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY.

**Content:** Kidney cancer, the third most common urological malignancy will be diagnosed in an estimated 51, 190 Americans in 2007. Over the past ten years, there has been an increased detection in small renal tumors, such that 70% of these tumors are less than 4 cm. This phenomenon is partially explained by the number of incidental tumors detected as a result of the widespread use of abdominal imaging modalities. Earlier diagnosis, improved staging and refinement in surgical technique have made it possible to tailor treatment to select patients, improving 5-year survival to over 90%. Kidney cancer survivors require periodic evaluation of their kidney function, surveillance for recurrence, and monitoring for risk factors including cigarette smoking, obesity, and hypertension.

In response to the growing number of survivors, our institution expanded its established prostate cancer survivorship program to include kidney cancer survivors with localized disease. In addition to the routine surveillance for patients who have undergone either a partial or radical nephrectomy, the survivorship program offers services with an emphasis on wellness and cancer prevention. A nurse practitioner with training in survivorship is the independent care provider.

Patients are referred to the survivorship program at 1 year post surgery for ongoing surveillance that includes a history with physical examination, serum chemistries, and radiological testing. This program has a wellness component utilizing national screening recommendations, such as colonoscopy, PSA testing, cervical cancer evaluation and mammography. Preventive health practices including weight loss and exercise are encouraged. After each visit, a follow-up letter is sent to the local physician with a copy of the physical examination, plus any recommendations.

In the first year of the program 86 patients were referred and seen by the Survivorship NP. The patients ranged in ages from 42 to 84 with over 75% of the patients undergoing renal sparing surgery, also known as partial nephrectomy.

The incidence of kidney cancer is growing and will most likely continue to expand because of the aging of the population and the increase in comorbid conditions associated with kidney cancer. Advanced practice oncology nursing care is critical in providing care to kidney cancer survivors.

## ABSTRACT 2547

**Title:** TOOLS FOR LEARNING FOR OUR ONCOLOGY NURSING ASSISTANTS

**Focus Area:** Education

**Authors:** Laura Houchin, MSN, RN, OCN®, Duke University Hospital, Durham, NC; and Katrina Green, BSN, RN, OCN®, Duke University Hospital, Durham, NC.

**Content:** The role of the APN has a responsibility to provide educational opportunities about the special needs of the oncology population to both licensed and unlicensed nursing personnel.

An educational program was developed based on the basic premise that the nursing assistant needed to understand the physiological processes, as well as how to function as a strong team member, and support both the patient and nursing. Caring for the physical and emotional needs of the oncology patient and family, requires an understanding of the disease itself and the symptoms patients experience as a result of the treatment process.

A series of four classes were developed to educate on topics of cancer, treatment modalities, symptom management, skin care, nutritional needs, respiratory therapy, spiritual needs, professional development, teamwork, and end of life issues. Each class was a four hour session which included didactic and lab. There was a post test at the end of each class over the material presented that day and homework assigned for the next session. There was also a cumulative test completed after the last class.

Evaluation of the effectiveness of the classes will be reviewed both through the tracking of patient satisfaction scores and through management evaluations of the participating staff.

The advanced practice nurse is charged with the responsibility of being both a role model and a resource to the oncology staff and patients. The nursing assistants that completed the first four sessions received a certificate stating they were Duke trained Oncology Nursing Assistants and a pin of recognition. Oncology staff nurses were included as instructors in some of the classes and made aware of their role in providing leadership and support to all members of the oncology team. By providing learning opportunities for the oncology nursing assistants, they have become more interested in continuing to learn and a small group is interested in receiving national certification from HPNA within the next year. The APN role is to provide pathways for growth of oncology personnel and promote optimal care for oncology patients and support for their families.

## ABSTRACT 2548

**Title:** ADVANCED PRACTICE ONCOLOGY CERTIFICATION: ROLE SPECIFIC EXAMINATIONS

**Focus Area:** Research Study

**Authors:** Julie Ponto, RN, APRN-BC, AOCN®, Winona State University, Master's Program in Nursing, Rochester, MN; and Cyndi Miller Murphy, MS, RN, CAE, Oncology Nursing Society, Pittsburgh, PA.

**Content:** Since January 2005, the Oncology Nursing Certification Corporation has administered two advanced practice exams. The development of these exams was based on a role delineation study of 525 advanced practice oncology nurses which revealed that while overlap exists among advanced practice roles in oncology, sufficient differences in the roles exist and warranted separate examination blueprints.

The purpose of this abstract is to describe the role delineation study which led ONCC to develop two advanced practice exams, and describe the status of advanced practice certification in oncology to date, including, number of current certificants, pass rates and qualitative data regarding the examination and process.

A role delineation study (RDS) is a commonly used framework designed to obtain descriptive information about job activities and knowledge required to adequately perform those activities. ONCC contracted with The Chauncey Group International, an expert in RDS, to conduct survey development and dissemination, compilation of results and test specifications development.

A role delineation study is conducted at least every five years in accordance with ONCC policy. A role survey was developed based on the past survey and content expert interviews and meetings to update content. A pilot survey was administered to 20 oncology APN's. The final survey was distributed to 4447 oncology APN's and completed by 565 nurses, for a total sample of 625 including content experts. Results were analyzed using descriptive statistics and t-tests for differences between NP and CNS practice groups. Based on these findings, two test blueprints were developed.

While oncology NP's and CNS's share a common knowledge base, statistically significant differences exist among certain work responsibilities. These are reflected in the two test blueprints. To date, 495 individuals have taken the AOCNP® exam and the AOCNS® exam has been administered to 221 individuals. Currently there are 412 AOCNP®s and 174 AOCNS®s. For the past 2 years, the average pass rate for the AOCNP® exam was 82% (range 76% - 88%) and for the AOCNS® exam was 72% (range 61% - 84%). Qualitative data from satisfaction surveys reflect very favorable responses to the exams overall. The exams will continue to be updated based on future role delineation studies.

## ABSTRACT 2549

**Title:** DEVELOPING ONCOLOGY CNS AND NP COMPETENCIES

**Focus Area:** Clinical/Evidence Based Practice

**Authors:** Julie Ponto, RN, APRN-BC, AOCN®, Winona State University, Master's Program in Nursing, Rochester, MN; Cyndi Miller Murphy, MS, RN, CAE, Oncology Nursing Society, Pittsburgh, PA; and Barbara Sigler, MEd, RN, Oncology Nursing Society, Pittsburgh, PA.

**Content:** Defining oncology CNS and NP practice through basic competencies for each role can lead to standardized oncology APN regulation, education and practice. While ONS previously published documents describing standards of advanced oncology practice, role specific competencies are needed to clearly describe current CNS and NP practice. Clearly describing role competencies for CNS's and NP's in oncology will promote role clarity, provide competency goals for students and may be used by employers to determine competency standards for CNS's and NP's.

The purpose of this initiative was to develop oncology CNS and NP role competencies using a national validation and consensus process.

A taskforce including oncology CNS and NP educators and practitioners, ONS staff, and representatives from the American Association of Colleges of Nursing (AACN), National Association of Clinical Nurse Specialists and National Organization of Nurse Practitioner Faculties was convened to review existing advanced practice standards and competency documents and draft oncology specific competencies for each role. These draft competencies are put through a national vetting process prior to final publication. Progress to date for each of the role competencies will be described.

Oncology CNS and NP competencies are being developed with consideration to existing and developing CNS and NP competency documents. Comments received during each phase of the vetting process will be reviewed and revisions made based on consensus.

Once developed, oncology CNS and NP role competencies will provide important information for educators, practitioners and regulators and will be a useful guide for future advanced oncology practice. Role competencies will be reviewed and updated on a regular basis to ensure consistency with current advanced oncology practice.

## ABSTRACT 2550

**Title:** USING COMMON DATA ELEMENTS TO DESCRIBE ONCOLOGY PRACTICE OUTCOMES

**Focus Area:** Clinical/Evidence Based Practice

**Authors:** Dorothy Dulko, PhD, RN, MS, NP, Memorial Sloan Kettering Cancer Center, Manhattan, NY; Christopher Friese, PhD, RN, AOCN®, Dana Farber/Harvard Cancer Center, Boston, MA; Regina Cunningham, PhD, RN, AOCN®, Cancer Institute of New Jersey, New Brunswick, NJ; Diane Otte, RN, MS, OCN®, Mayo Clinic, La Crosse, WI; and Linda Jones, DNS, RN, AOCN®, Memorial Health System, Springfield, IL.

**Content:** Advanced practice nurses (APN) in oncology care have the potential to impact outcomes for patients, families, and institutions. The measurement of outcomes in APN practice requires identifying the outcomes most influenced by a specific APN role or area of specialization. Careful consideration of the current outcome measures and ease of measurement is imperative. There are many outcomes that can be used to evaluate the impact of APN care, but no one set of measures is appropriate for all APN settings.

The 2007 ONS Common Data Elements (CDE) project team was convened to begin to identify and define CDE and instruments that measure nursing sensitive patient outcomes (NSPO), as well as to begin development of policies and procedures for oncology nursing data sharing, collection and storage. APNs must effectively manage NSPOs because they represent the consequences or effects of nursing interventions and result in changes in patients' symptom experience, functional status, safety, psychological distress, and/or costs. Establishing a data repository as a resource for APNs through identification of a set of CDEs and instruments can accelerate the translation of evidence into practice and facilitate the demonstration of the impact of APN interventions on quality cancer care.

Building on work done by the ONS PEP (Putting Evidence into Practice) project team and data collections organized and implemented by other national groups, the CDE project team defined the CDEs for a pilot project that will determine the feasibility of using CDEs and instruments, data capture, analysis, and data sharing.

The focus of this pilot program will be to test the outcomes based on PEP-defined interventions on patient outcomes and the development of an oncology data repository. The project team will describe the developing system for collection of CDEs and the roles for involvement in collecting and using the data.

The leadership role of APNs in clinical, education and research settings will impact the use of the oncology CDEs and is essential for successful measurement of the impact of nursing interventions.

## ABSTRACT 2551

**Title:** CLINICAL PRACTICE REVIEW: UTILIZING EVIDENCE-BASED PRACTICE TO DEVELOP STANDARDS OF CARE FOR CANCER PATIENTS ACROSS THE SPECTRUM

**Focus Area:** Clinical/Evidence Based Practice

**Author:** Christine Rimkus, RN, MSN, AOCN®, Barnes-Jewish Hospital, St. Louis, MO.

**Content:** Ensuring that care is consistent throughout the healthcare continuum can be challenging in a large cancer center. At one large comprehensive cancer center, inconsistencies in care of immune-suppressed patients existed among care settings. Patients expressed confusion and frustration over the inconsistencies. In an attempt to standardize practice across the care continuum, the Clinical Nurse Specialist (CNS) initiated a meeting among the 5 inpatient oncology nursing units, the discharge coordinators, the infection control liaison the outpatient infusion center, and the outpatient nurse coordinators.

The purpose is to ensure that care is consistent across the spectrum of a large comprehensive cancer center.

The CNS reviewed the evidence-based literature on care of the immune-suppressed BMT patient in various care settings as well as reviewed the National Comprehensive Cancer Network (NCCN) and Centers for Disease Control (CDC) guidelines for infection control in BMT patients. The group looked at the evidence and discussed the specific issues each care setting encountered. Consistent guidelines that are evidenced based were adopted. The staff in each care setting was educated using sample scripting. Printed patient education material was also reviewed to ensure that it reflected the newly established guidelines. The group then identified the need to review the new evidence on immunizing BMT patients set by the European Group for Blood and Marrow Transplantation (EBMT). New immunization recommendations were presented to the physician group and adopted as well. The group was energized by the accomplishments and opted to continue meeting bimonthly to review all practice standards that cross the care continuum.

This meeting not only accomplished the desired endpoint to incorporate evidenced-based practice across care settings, but it also brought the group together collegially to discuss other practice issues.

The group has now taken on the PEP cards as task to develop standards of care in oncology. Mucositis and Skin care standards are the first to be completed based on evidence-based guidelines.

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