

# Oncology Nursing Society 37th Annual Congress Podium and Poster Abstracts

Each abstract has been indexed according to first author and identified as a podium or poster session on page E225.

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## 1278537

**OUTCOMES OF NURSE NAVIGATOR PROGRAMS.** Lynn Nichols, PhD, RN, Nursing Research and Evidence-Based Practice, Rochester General Hospital, Rochester, NY; Catherine Reda-Cheplowitz, BSN, RN, ONC, Lipson Cancer Center, Rochester General Hospital, Rochester, NY; Lynda Dimitroff, PhD, BSN, RN, MCHES, Nursing Research and Evidence-Based Practice, Rochester General Hospital, Rochester, NY; Andrea LaRosa, BSN, RN, Lipson Cancer Center, Rochester General Hospital, Rochester, NY

The objective of this program evaluation (PE) was to determine if outcomes warranted maintenance, change, or elimination of the Nurse Navigator (NN) programs.

Since 2008 NN programs have been established at Rochester General Hospital (RGH) for patients with lung, breast, and colorectal cancer. Approximately 500 patients have been involved in NN programs. As of 2010, these programs had not been evaluated for their outcomes.

The purpose of this PE was to determine the impact of the NN programs on patients and physicians.

Watson's Theory of Transpersonal Caring focuses on interpersonal relationships between patient and nurse. According to Watson, the patient can only change himself—healing comes from the inside out—and the nurse facilitates these changes. The goal of the NN is to facilitate a patient's journey through the cancer treatment process.

Mixed methods were utilized for this PE. Patient and physician surveys were developed based on evidence obtained from the literature and used a Likert-type scale (five = strongly agree). Descriptive statistics were generated. Constant-comparative analysis of open-ended survey questions yielded seven themes.

Of the 441 patient surveys distributed, 208 were usable for analysis, for a response rate of over 47%. The majority of patients (62.5%) were female, reflecting the high percentage of breast cancer patients served. The sample ranged in age from 30 to 94 years, with a mean age of 64.37 years (SD=11.84). The means on questions 1-10 ranged from 4.25 (SD = .88) – 4.71 (SD = .57). Surveys were mailed to 122 physicians with 36 returned. The means on questions 1-8 ranged from 3.96 (SD = .84) – 4.72 (SD = .79).

The NN programs had a positive impact on both patients and physicians. The programs helped facilitate the cancer patients' journeys. Patients agreed or strongly agreed that cancer patients

should work with a NN. The majority of physicians agreed the programs provided patients with emotional support and care. Qualitative data showed an overwhelmingly positive response to the programs. The satisfaction data support the maintenance of the NN programs. The implications of these results are that NN programs are beneficial to patients with cancer.

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## 1278655

**DETERMINING PERSONNEL EFFORT FOR CLINICAL TRIALS: AN INNOVATIVE MANAGEMENT TOOL.** Janet Briel, BSN, MBA, Oncology, Johns Hopkins University, Baltimore, MD; Jacqueline Greer, BSN, Oncology, Johns Hopkins University, Baltimore, MD; Patricia Rennie, BS, MS, Oncology, Johns Hopkins University, Baltimore, MD; John Walters, BS, Oncology, Johns Hopkins University, Baltimore, MD

To describe an effective management tool used to determine personnel effort and costs for clinical trials.

Determining the feasibility of a trial and its staffing needs is imperative in today's economic times. Accurately estimating all personnel effort and costs associated with a trial is critical. This management tool provides a measurement of a trial's acuity, correlates it with the critical elements of each study team member's role, and results in an objective assessment of personnel full time effort (FTE) required.

The purpose of this tool is to utilize objective elements to quantify workload, determine FTE, and ultimately the personnel costs associated with a trial.

Each study staff role was evaluated to determine common, measurable, objective, performance elements. Once these were determined, points were assigned to the elements of each role. The research nurse received points for measurable elements such as accrual, number of cycles, and method of drug administration. Data managers received points for elements including accrual, frequency of data entry and monitoring visits. Regulatory staff received points for amendments, consent changes, Food and Drug Administration submissions and other regulatory requirements. Each trial was categorized and assigned a multiplier based on the trial's disease type, frequency of therapy, inpatient stay and outpatient visits. The multiplier was then factored into the performance elements. When aggregated, the result provided a measurement

of workload among personnel. Determined quarterly for each personnel category, these points were converted into an FTE, and the personnel cost for each trial was computed.

Each staff member maintains weekly logs capturing study related activities. This actual data is compared to the workload predicted by the management tool. Variances of more than 0.05 percent are reviewed. In addition, budgeted personnel costs are compared to actual personnel costs to validate the tool's effectiveness.

With trials becoming more complex and regulatory bound, objective documentation of research staffing needs is imperative. Once the tool is validated, it will provide a fast and easy method to accurately determine costs. Long term, this tool will provide justification of staffing requirements.

### 1289572

#### **IS THE ADMINISTRATION OF VINCA ALKALOIDS BY MINIBAG INFUSION A SAFE RISK MITIGATION STRATEGY TO PREVENT INTRATHECAL CHEMOTHERAPY ERRORS?**

Lisa Hartkopf-Smith, RN, MS, AOCN®, Nursing, Riverside Methodist Hospital, Columbus, OH; Cynthia Hughes-McNally, RN, MSN, OCN®, Nursing, Riverside Methodist Hospital, Columbus, OH

To describe the incidence of extravasation of vinca alkaloids when administered as a minibag infusion (intravenous piggyback).

Despite safety recommendations, accidental administration of vincas into the intrathecal space continues to occur. Intrathecal injection of vincas is almost always fatal. Errors occur when a syringe containing a vinca is mistaken for a syringe containing the intrathecal medication. For over 10 years, organizations have recommended risk mitigation strategies to prevent this fatal error. One strategy is the administration of vincas as a short minibag infusion, rather than by intravenous push. By mixing the medication in a minibag, the vinca could not be confused with the syringe containing the intrathecal medication. Many nurses have been hesitant to change to minibags due to beliefs that this method increases the risk for extravasation. ONS Chemotherapy and Biotherapy Guidelines outline recommendations to administer vesicants as minibags, however, few studies have examined extravasation rates when using these recommendations. If extravasation rates were studied and the incidence was low, then administration of vincas using ONS recommendations would be supported as a safe strategy to prevent intrathecal errors.

To establish the ONS Chemotherapy and Biotherapy recommendations for administering vincas by minibag infusions as a safe strategy for preventing intrathecal chemotherapy errors.

The Roy Adaptation Model was used.

The design is descriptive using a retrospective chart review of patients who received vincas by minibag infusion from 2009-2011. Information reviewed included adherence to ONS recommendations, peripheral IV versus central line, and documentation of extravasation. Descriptive statistics were used. The proportion of patients who had an extravasation was calculated. The group was examined for the total doses of vincas, the total doses given peripherally, and the total doses given through a central line.

310 doses of vincas were reviewed. 225 doses were administered by peripheral IV and 85 were administered through a central line. There were no extravasations. The findings support the administration of vincas as minibag infusions as a safe risk mitigation strategy to prevent intrathecal chemotherapy errors.

### 1307185

#### **REFINING A PROSTATE CANCER SURVIVOR'S TOOLKIT.**

Bryan Weber, PhD, University of Florida, Gainesville, FL; Beverly Roberts, PhD, University of Florida, Gainesville, FL; Chester Algood, MD, Adult and Elderly Nursing, University of Florida, Gainesville, FL

The objective of this research is to improve QOL for prostate cancer survivors and to reduce adverse outcomes of treatment.

155,000 radical prostatectomies are performed in the US annually. Although this surgery usually cures men of prostate cancer, it commonly results in urinary and erectile dysfunction that affect quality-of-life. However, clinical practice guidelines are silent on how health care providers should provide postprostatectomy supportive care. Thus, men often do not receive the help they need in dealing with treatment side effects.

The purpose of this study was to develop and refine a standardized Prostate Cancer Survivor's Toolkit to aid men in making informed decisions about managing post-prostatectomy urinary and erectile dysfunction. The Toolkit was a collection of durable and disposable medical supplies and current information about medications and lifestyle modifications.

According to Leventhal's Common-sense Model of Self-regulation of Health and Illness, individuals with chronic and debilitating conditions (e.g., urinary and erectile side effects) need and seek information in order to respond objectively and to feel better about their problems. Leventhal explains that individual responses are temporal and are periodically reevaluated, i.e., men struggling with daily urinary and erectile side effects while continuing to reevaluate their condition over time, as the condition resolves or worsens. These ongoing evaluations lead to changes in perceived informational needs.

The Survivor's Toolkit was shown to men from three cohorts (1-month, 6-months, and 12 months post prostatectomy). Participants were asked to assess the utility of Toolkit items and for suggestions about how to streamline the Toolkit (e.g., what and why any items should be omitted). The men rated the Toolkit contents according to preference on a scale that included usefulness, ease of use, appropriateness for specific problem, appropriateness in meeting individual's needs, improvement of life circumstances, affordability, and plans to purchase in the future. Mann-Whitney U non-parametric tests of group differences were used to assess study outcomes by group. Composite scores for each Toolkit item were calculated and used to rank items according to men's preferences.

The sample included 22 men (Age 61.86 years) of whom 23% were from minority populations (18% Black, 4.5% Hispanic, and 4.5% Native American). Time since surgery (Mtime 144 days) ranged from 42 to 391 days. Thus, we were able to assess needs and preferences over time as symptoms resolved partially, completely, or not at all. Results showed men's needs and preferences for informational support changed over time, as did their conditions. Urinary items received the highest ratings during early recovery, while erectile aids scored high during late-stage recovery.

### 1308496

#### **PATIENTS' PERCEPTION OF PAIN AND PAIN MANAGEMENT.**

Danette Birkhimer, MS, RN, CNS, OCN®, The James Cancer Hospital, Columbus, OH; Deborah Hanes, MSN, RN, CNS, The James Cancer Hospital, Columbus, OH; Janine Overcash, PhD, GNP-BC, The James Cancer Hospital, Columbus, OH

The objective of this project was to evaluate patients' perceptions of pain and pain management in a Midwestern Comprehensive Cancer Center.

Pain is a highly prevalent and distressing problem for hospitalized oncology patients. Unrelieved cancer pain contributes to other symptoms such as depression, insomnia, and fatigue; creates distress; and interferes with function and quality of life. Nurses play a central, essential role in managing pain in collaboration with an interdisciplinary team.

The purpose, to develop an educational intervention aimed at decreasing pain ratings, is consistent with the ONS research agenda by exploring symptom management, nursing-sensitive patient outcomes and translational science.

The conceptual model is Relationship Based Care®, a model of nursing care which places patient involvement at the core of the relationship with health care providers in managing care.

Patients were consented to participate if they had been hospitalized greater than 24 hours, had received pain medication within the previous 24 hours, were 18 years and older, and, spoke English. On the designated study day, all patients meeting eligibility criteria were surveyed. Ten questions on causes of pain and pain management were asked. Numerical and verbal Likert scales were used to record responses. Descriptive statistics were employed to analyze data.

The mean age of the participants (N=76) was 58 years and 42% were women and 58% were men. Approximately, 96% reported receiving pain medication within 24 hours and 84% reported that their nurses believed their reports of pain. Also, 76% reported that they received pain meds when they were in need. Only 30% reported that their nurse discussed side effects of the pain medication. Only 54% of respondents strongly agreed that their pain medications worked well. Approximately, 50% reported that the healthcare team included them in decisions about pain medication. Implications from this survey demonstrate the need for additional efforts to manage oncology patients' pain, the importance of discussing side effects and the need to also include the patient in pain management strategies.

**1308580**  
**INCREASING CERTIFICATION AND ENHANCING KNOWLEDGE THROUGH A UNIT-BASED BREAST CANCER COURSE.** Erica Fischer, BSN, RN, CBCN®, Breast Medical Oncology, Memorial Sloan-Kettering Cancer Center, New York, NY; Outpatient Chemotherapy Infusion Center, Overlook Medical Center, Summit, NJ

In seeking Magnet® Recognition at a NCI-designated Cancer Center an initiative to increase breast cancer certification toward fostering professional development was launched in the outpatient breast center; a secondary objective was to increase nurses' knowledge and confidence levels in all areas of breast cancer across medical oncology, surgery, and chemotherapy subspecialties.

Nursing certification demonstrates an advanced level of specialized knowledge. Patients and families report higher comfort levels with certified nurses because of the advanced quality of care these nurses provide (<http://oncc.org/TakeTest/WhyGetCertified>). At this Breast Center, nurses lacked certification; only 38% of medical oncology and 36% of surgical nurses were certified at initial assessment

A course based on the ONCC's test blueprint and references was offered to all nurses in preparation for the CBCN® examination and expand breast care knowledge. Weekly sessions were held over a 6 month period and repeated twice in the first year. 13 nurses participated. Copies of lecture materials and practice questions were provided. Video recordings of sessions were available on the intranet. Pre- and Post-course levels of expertise and confidence were assessed.

69% (N=9) of nurses in the course were preparing for the CBCN exam and 31% participated to increase knowledge. Of those aiming to increase knowledge, 75% (N=3) now plan to take the test. 92% (N=12) reported an increase of one or more levels in knowledge and confidence on a 5-point Likert scale with all rating a high or expert level after course completion. Since inception, certification increased to 51% in both medical oncology and surgery. To date, 5/6 nurses have passed the exam at first attempt. This presentation will describe development and outline of curriculum, changes in participant confidence and expertise levels, and cumulative exam pass rate.

Our experience demonstrates nurses' willingness to participate in a course to increase specific knowledge and become certified. It also shows that unit-based education programs yield successful testing results. The recordings of this course add to its sustainability for CBCN test preparation and for teaching new staff and those seeking increased education. Other centers seeking to increase knowledge and certification could implement similar courses with expectations of success.

**1311278**  
**IMPLEMENTATION OF A STANDARDIZED MEDICATION LOG FOR PATIENTS UNDERGOING COMPLEX CHEMOTHERAPY REGIMENS REQUIRING MULTIPLE ORAL MEDICATIONS.** Kimberly Anselmi, RN, BSN, OCN®, Ambulatory Nursing, MSKCC, New York, NY

There are four objectives associated with the implementation of the medication log: Pilot implementation of a standard patient medication log across lymphoma practices; increase patients' understanding of self-administered medications to improve adherence; decrease patient and care-giver stress related to medication administration; and evaluate patient compliance with prescribed medications

No standardized medication log for lymphoma patients in the ambulatory setting exists at our center. Although drug fact cards are reviewed with patients and treatment calendars are provided, a formalized tracking tool has not yet been implemented.

Lymphoma patients receive multiple prescriptions for medications with varying schedules, frequencies, and indications. Accordingly, they are at high risk for incorrect self-administration of medications, improper use of asneeded prescriptions, or premature discontinuation of supportive medications, all of which can compromise care. A home medication log, identifying each drug (both generic and trade names) indication, frequency, and duration, structured to allow a patient or caregiver to mark each time a scheduled medication dose is given, could promote adherence.

Pilot implementation began May 2010; 1865 patient visits have incorporated the medication log. Qualitative survey of a sample of participating patients was performed as a quality assessment project; among 20 respondents, all 20 reported satisfaction with the medication log (satisfied or very satisfied). Free text responses reported improved understanding of medications, accuracy of administration, decreased stress levels associated with complex drug schedules, and high confidence in ability to avoid missing doses or taking extra doses erroneously. Lymphoma nurses at our center were surveyed, and respondents noted increased patient independence in self care as evidenced by fewer phone calls and reported errors in self-administration.

The pilot implementation of a structured and standardized medication log for lymphoma patients with complex home medication schedules has been successfully uptaken across lymphoma practices at our center, and use has been associated with positive outcomes for patients, care-givers, and nursing staff. We anticipate broadening the use of the instrument across the entire Lymphoma Service and structured assessments of its utility. Furthermore, although designed for the specifics of lymphoma patients, the instrument is not inherently disease-specific and can potentially be applied to other disease states.

**1311674**  
**OUTPATIENT ONCOLOGY PALLIATIVE CARE PROGRAM.** Vicky McGrath, MBA, BSN, RN, OCN®, Cotton-O'Neil Cancer Center, Topeka, KS; Robin Holthaus, BSN, RN, OCN®, Cotton-O'Neil Cancer Center, Topeka, KS

1. To identify patient-centered barriers to palliative care. 2. To determine the extent of modification and/or improvement in the quality of patient care. 3. To determine the cost savings of palliative care interventions.

Early palliative care as supported by research has shown to improve not only quality of life but increased survival. The majority of palliative care programs are hospital based, for inpatients only and are in academic settings. We believed that early palliative care should be an option for our patients and set out to develop a program and integration into an outpatient oncology setting.

To provide patient and family centered care that aims to relieve suffering and improve quality of life by anticipating, preventing, and treating symptoms through the collaborative efforts of the interdisciplinary palliative care team.

These will include community speaking engagements both within our cancer center and as outreach to the community at other venues. We have currently developed oncology palliative care brochures to give to our patients. The FACIT Measurement System has developed a number of QOL assessment scales and these have been highly validated and widely accepted. These four tests will be given to participants prior to palliative interventions (baseline) and after visit 1. For patients continuing to receive palliative care interventions, additional surveys will be given after 1 month post visit 1, 3 months post visit 1, and 6 months post visit 1. Effective symptom management, both physical and psychosocial

These will be evaluated and redesigned for increasing the efficacy of targeting these barriers. We will also seek to increase the awareness of our oncology palliative care program through increased physician engagement and overall publicity within our cancer center and our community. Patient and caregiver surveys; The number of appointments, emergency room visits, number and length of hospitalizations will also be quantitated and compared with a similar cohort of patients who refused PC.

Patients are screened by our oncology nurse navigators and radiation therapy nursing staff for referral into the palliative services. We have a dedicated certified oncology nurse who along with board certified palliative care physicians, social worker and spiritual care provide interdisciplinary care for our patients and/or caregivers. We utilize our nurse to provide education about palliative care not only to our patients and staff of our organization but to the community. Our dedicated oncology nurse for this program is the corner stone for success and seamless care for our patients. It was our intent to develop a model that can be implemented into other community based cancer center settings.

### 1311717

**ACUTE LEUKEMIA CARE IN A COMMUNITY HOSPITAL: WE DID IT AND SO CAN YOU!** Barbara Labriola, BA, MSW, RN, CMSRN, 5TM, Lehigh Valley Hospital, Bethlehem, PA; Donna Wegner, BSN, CMSRN, 5TM, Lehigh Valley Hospital, Bethlehem, PA

Relate action items associated with implementation of initial induction therapy for acute leukemia in a community hospital that have resulted in positive patient and staff outcomes.

Oncology nursing practice is continuously evolving in delivery of cutting edge treatments and associated highly acute and comprehensive care. As a result, availability of intensive therapies is becoming increasingly common in community hospitals.

This presentation will detail the successful implementation of initial induction therapy for acute leukemia on a 30 bed medical-surgical unit within a Magnet™ community hospital, part of a larger, regional healthcare network.

Prior to this initiative, unit staff cared for oncology patients; however, treatments and acuity were less intense than those associated with acute leukemic care. The first step was development of a wide-ranging implementation plan by a multidisciplinary stakeholder team, including nurse managers, bedside nurses, oncology clinical nurse specialists, oncologists, and pharmacists. The plan included: interprofessional education comprised of didactic sessions and small group workshops; change from team to primary nursing; establishment of a 1 to 3 nurse/patient ratio; 24/7 support by oncology clinical nurse specialists and pharmacists; implementation of varied nurse driven protocols; and, establishment of an electronic marker of all leukemic patients when subsequently treated at any point of care within the healthcare network. Initial leukemic induction began in early 2010. To date, 10 patients have undergone the treatment, with an average 4–6 week length of stay.

Since inception of initial leukemic induction, no patients experienced sepsis and minimal transfers to intensive care were required. Quantitative patient and staff satisfaction scores and nurse sensitive clinical outcomes have improved or been maintained above the national data base mean. There have been no incidents of leukemic patients receiving blood products that have not been

leukoreduced or irradiated. Qualitative comments within patient and employee satisfaction surveys relate exemplars detailing patient and family commendations for care and staff engagement.

This presentation has implications for oncology nurses in community hospitals who will experience implementation of new oncologic treatment modalities. Take home action items relate to oncologic program development planning, challenges, and care strategies that garnered successful patient and staff outcomes.

### 1315538

**GROWING OUR OWN: DEVELOPMENT OF AN ONCOLOGY NURSING RESIDENCY PROGRAM.** Emily Bracewell, RN, Emory University Hospital, Atlanta, GA; Patricia Crabtree, BSN, MHA, RN, CNE, Emory University Hospital, Atlanta, GA; Roberta Kaplow, RN, PhD, AOCNS®, CCNS, CCRNq, Emory University Hospital, Atlanta, GA; Curlissa Mapp, MSN, RN, OCN®, Emory University Hospital, Atlanta, GA; Renee Spinks, MSN, RN, NP-C, AOCNS®, Emory University Hospital, Atlanta, GA

The goal was to develop a structured, comprehensive program while providing ongoing support to the residents.

The three inpatient oncology units at Emory University Hospital were experiencing staffing shortages. The annualized turnover rates for fiscal year 2010 were close to 12% and the annualized vacancy rate was over 29%. Despite recruitment efforts, experienced oncology nurses were not applying for vacant positions. In response to the staffing needs, the oncology leadership group developed a six month residency program for new graduates. In the past, new graduate nurses underwent a three-month orientation, which was lacking in structure.

The oncology clinical nurse specialists researched nursing residency programs throughout the United States. The findings were compiled and key features were included in our program. Input from nurses, both novice and experienced, was also utilized. A six-month residency program was developed which included clinical rotations, classroom time, and shadowing experiences. The clinical nurse specialists met with the residents on a weekly basis for several months, then biweekly, for critical thinking exercises.

Twenty new graduate nurses were hired in the summer of 2010 and have completed the residency program. The program has been a major success thus far. We are now in our third group of nurse residents for oncology. Changes have been made based on feedback to improve the program for future nurses. Other nursing specialties at Emory have developed similar residency programs based on our success.

We have a 100% retention rate of our new graduates. One thing we have noticed is that we needed to provide preceptors with more support and guidance. Overall the program is a major success. We plan to continue this program.

### 1315694

**GERIATRIC ONCOLOGY: GETTING READY FOR THE NEXT GENERATION.** Peggy Burhenn, MS, RN, OCN®, City of Hope, Duarte, CA; Bow Criddle, RN, BS, OCN®, City of Hope, Duarte, CA; Shirley Johnson, RN, MS, MBA, City of Hope, Duarte, CA

To prepare oncology nurses for care of the older patient with cancer by instituting a hospital-wide educational program and using an assessment tool to evaluate the program annually.

The 2008 Institute of Medicine report focused on the healthcare needs of the aging population. They concluded that healthcare professionals are not adequately prepared to manage the social and health needs of the elderly population. Over 50% of cancers occur in patients over 65 years old and this population is growing. Currently about 12% of the US population is 65 and older; by 2030 they will represent 20% of the population. Therapeutic cancer treatments, including transplants, are more commonly

being offered to older adults as our ability to manage adverse effects improves. As oncology nurses we need to prepare ourselves for this growing demographic with unique care needs (physical and physiological changes, comorbidities, polypharmacy, social support issues).

The purpose of our project is to: review our current patient demographics; determine how to meet the educational needs of our nurses caring for older adults with cancer; improve the care of the older patient with cancer at our institution.

We will survey our nurses using the Nurses Improving Care for Health System Elders' Geriatric Institutional Assessment Profile. This assessment tool measures nurses' attitudes, knowledge and perceptions of caring for older adults. The survey will be done annually to assess for changes or trends. We are instituting the ONS educational program "Caring for the Older Adult with Cancer". We will be following the NICHE Geriatric Resource Nurse model of care. Under this model, select staff nurses with a passion for caring for older adults, will be specially trained in geriatrics to serve as resources to other staff in patient care areas.

Oncology nurses are in a unique position to impact the care of the older adult. This population is growing and we will continue to see an increasing number of older patients in our clinics and inpatient units. We need to fill the gap in our knowledge to provide the most comprehensive and compassionate care to this population.

### 1315821

#### **PUTTING THE PUZZLE PIECES TOGETHER: A COLLABORATIVE PROJECT BETWEEN A CANCER FAMILY RISK ASSESSMENT PROGRAM AND A REGIONAL AUTISM CENTER.**

Jacqueline Hale, APN, C, AOCN®, APNG, Risk Assessment, Hunterdon Regional Cancer Center, Flemington, NJ; Rachel Rando, MS, CGC, Risk Assessment, Hunterdon Regional Cancer Center, Flemington, NJ; Audrey Mars, MD, FAAP, Child Development, Hunterdon Healthcare System, Flemington, NJ; Gail Burack, PhD, Child Development, Hunterdon Healthcare System, Flemington, NJ; Susan Freedman, MSW, LCSW, Child Development, Hunterdon Healthcare System, Flemington, NJ

Attendees will be able to identify: 3 primary cancers, 3 non-cancerous physical findings, and 3 indicators of autism spectrum disorder, which facilitate identification of inherited Phosphatase and Tensin homolog (PTEN) gene mutations during family health assessment.

PTEN Hamartoma Tumor Syndromes (PHTS) are inherited syndromes characterized by noncancerous and malignant growths. Individuals with PHTS have a mutation in the PTEN gene and are at increased risk for breast, thyroid, and endometrial cancer. Non-cancerous features include benign growths, macrocephaly, cutaneous findings, autism spectrum disorders (ASD), and learning disabilities (LD). Confirmation of a PTEN mutation supports identification of at-risk family members.

Identification of inherited predisposition to cancer promotes cancer screening and risk management for affected individuals. Recognition of children at risk for ASD and LD promotes early intervention and family support.

Interdisciplinary teams at Hunterdon Regional Autism Center and Hunterdon Regional Cancer Center Family Risk Assessment Program have initiated a collaborative, expedited referral process for families in which a PTEN mutation is suspected or confirmed. The collaboration supports targeted education for Hunterdon Healthcare specialists involved in the care of high risk individuals as well as primary care providers. Referral documents were customized for the project. Individual targeted education has been provided and additional group education programs are planned.

The project will be evaluated by data collection including: number of risk assessment referrals and completed family assessments. number of referred enrollees into child development program.

number of PTEN mutations identified. number of individuals receiving personalized cancer screening recommendations specific to PTEN mutations. This data will be compared to 2011 data collected prior to collaboration.

Through early management of the effects of a PTEN mutation, this emerging collaboration should lead to improved screening, treatment outcomes and quality of life for affected individuals and families. Educating additional healthcare providers supports identification and medical management for affected individuals and families. Oncology nurses, advanced practice nurses, breast care nurses and other health care providers are encouraged to duplicate this collaboration and to promote awareness of and assessment for PTEN mutations.

### 1316089

#### **THE IMPACT OF HYPERGLYCEMIA ON HEMATOPOIETIC STEM CELL TRANSPLANT: A LITERATURE REVIEW.**

Jill Olausson, RN, MSN, CDE, Oncology, City of Hope, Duarte, CA; Denise Soltow Hershey, PhD, FNP-BC, College of Nursing, Michigan State University, East Lansing, MI; Ashley Leak, PhD, RN-BC, OCN®, Health Policy and Management, Gillings School of Global Public Health, Chapel Hill, NC; Ellen Davis, MS, CDE, FAADE, Advanced Clinical Practice, Duke University, Durham, NC; Marilyn Hammer, PhD, DC, RN, College of Nursing, New York University, New York, NY

To review literature surrounding the impact of hyperglycemia on outcomes of hematopoietic stem cell transplant (HSCT).

HSCT is a potentially curative treatment for a variety of malignant and non-malignant hematological disorders. Despite advances in transplant science, HSCT continues to be associated with high rates of mortality and morbidity due to infections, organ toxicity, and acute and chronic graft-versus-host disease (GvHD). One contributor to these outcomes is hyperglycemia, which affects 71–90% of HSCT patients. Acute hyperglycemia decreases immune function and healing time, increases oxidative stress, and decreases endothelial dysfunction. Hyperglycemia in HSCT may be induced by illness-related stress and/or the effects of adjunctive HSCT treatments such as corticosteroids, total parenteral nutrition (TPN), and immunosuppressants. Additionally, diabetes (hyperglycemia) is highly prevalent in older adults. With the growth of the aging population concurrent with increased ability to provide HSCT to older adults, hyperglycemia may be encountered even more frequently in the HSCT setting. In order to assess the degree of hyperglycemia's impact on outcomes in the HSCT population, a literature review was conducted.

To review literature surrounding the impact of hyperglycemia on outcomes of hematopoietic stem cell transplant (HSCT).

A systematic search was conducted in Medline-PubMed, Google Scholar, and CINAHL between 2000–2011 for primary source, English language articles containing the terms hyperglycemia, diabetes, and HSCT. Nine articles were reviewed and organized using Garrard's Matrix Method. Studies included one on pretransplant glycemic status, two on the early preneutropenic period and six on posttransplant status.

Associations between hyperglycemia, hypoglycemia and/or glycemic variations and patient outcomes including infection, non-relapse mortality, overall survival, and GvHD were noted. Patients with preexisting diabetes (7.6%) experienced more hyperglycemia, glycemic variations, and worse outcomes. Risk factors for hyperglycemia included preexisting glucose intolerance, older age, steroid use and dose, TPN and immunosuppressant use, unrelated donor, and increased body mass index.

Based on these studies, a causal relation between hyperglycemia and worse outcomes was evident. Oncology nurses are instrumental in the assessment and management of hyperglycemia in the inpatient setting. Increased awareness of risk factors facilitates appropriate pre and posttransplant clinical management and patient education, and may improve patient outcomes.

1316139

**STRATIFYING AND STRATEGIZING TO IMPROVE INPATIENT ONCOLOGY OUTCOMES.** Barbara Milner, RN, MSN, AOCN®, CNS, Nursing Services, Louis Stokes Cleveland VAMC, Cleveland, OH

To assess the impact of stratifying oncology inpatient needs and nurse assignments to improve medication administration safety and patient outcomes.

Oncology patients are often admitted to medical/surgical wards, where nurses may have various levels of oncology competence. A mismatch of nurse competence with the needs of a complex patient may not provide optimal outcomes. In 2008 a hospital with a 30 bed medical/surgical unit had eight rooms designated for oncology patients. All RNs received Oncology Nursing Society (ONS) based training: 61% of the nurses had a four hour class to monitor infusions and replace bags; 39% received the ONS two day class. In 2009 the unit moved to a 36 bed ward and the designated beds were changed to a virtual status to ensure efficient bed use during a period of increased admissions. The intermix of patients on a 20% larger unit with nurses of varying competence aligned with a trend of increased medication incidents and delayed discharges.

To review oncology patient admissions from 1/1/2010-3/31/2010 identifying room location (scattered) and assigned nurse competence (various) for medication administration safety and length of stay and to implement interventions to correct sub-optimal findings.

"Designated Beds/Designated Nurses" was implemented June 21, 2010. Four adjacent designated rooms were returned to the ward for high risk oncology patients (febrile neutropenia, acute leukemia, high grade lymphomas, and chemotherapy administration) to be managed by a nurse with an ONS competence card and annual clinical assessments. Oncology patients requiring symptom management (e.g. dehydration, nausea) would be cared for by the medical/surgical nurses.

Replicating the 2010 data collection over the period of 8/1/2011-10/31/2011 with clustered high risk oncology patients managed by ONS chemotherapy competent nurses appears to improve medication safety and timely discharges. Additional data continues to be collected.

Stratifying patient needs and clustering high risk patients cared for by nurses with an advanced level of training is predicted to improve patient outcomes. This hypothesis was supported by the recent Commission on Cancer reaccreditation surveyor who rendered a commendation for this innovative plan that he had only seen implemented at one other of the 128 hospitals he had surveyed.

1316254

**A PATH TO SUCCESSFUL ONCOLOGY ORIENTATION.** Ann Proctor, RN, BSN, OCN®, York Hospital, York, PA; Linda Farjo, RN, BSN, OCN®, York Hospital, York, PA

Establish an orientation program to meet the specific needs of the novice nurse within the specialty field of oncology.

Oncology nursing is a specialty that requires a unique and substantial breadth of knowledge and necessitates guidance and education which extends beyond the orientation supplied to the novice nurse. Comprehensive orientation, specialized education and support provide an environment for professional growth. Historically nurses at our facility received 8-12 weeks of general nursing orientation and a 6 day oncology core course sometime during their first year. This process lacked the depth needed leaving many nurses frustrated, overwhelmed, dissatisfied and at times leaving the specialty. Our recognition of this need served as the drive to change our oncology nursing orientation.

The purpose of establishing an oncology orientation program was to develop a structured five year professional growth pathway incorporating Patricia Benner's Novice to Expert theory. Our

program focuses on clinical collaboration, intensive education, and guidance which is critical in the first year of practice. An Oncology Nurse Educator supplies each newly hired nurse with an orientation packet outlining the five year plan. Upon completion of orientation, the nurse transitions into the Oncology Nurse Fellowship and the Post-Orientation Mentorship Programs. The Nursing Fellowship offers a variety of essential topics utilizing diverse instructional modalities throughout the year. This allows the nurse to enter the Fellowship at any time independent of date of hire. In the Post-Orientation Mentorship Program, the nurse educator and nurse meet monthly for 3-6 months to follow up and develop short and long term professional goals. This includes the incorporation of a redefined four-step chemotherapy administration plan.

The implementation of this pathway has been welcomed as a necessary and vital change. Eleven nurses have completed or are in various stages of the professional pathway. Surveys demonstrate that this program has had a salutary effect on the education of the novice oncology nurse.

The integration of these initiatives has strong implications in providing the novice oncology nurse with the confidence and knowledge to deliver comprehensive holistic care. This pathway can be adopted by other oncology programs to improve nurse satisfaction and retention.

1316502

**UPDATED MASCC/ISOO CLINICAL PRACTICE GUIDELINES FOR MUCOSITIS: AN INTERDISCIPLINARY COLLABORATION.**

Rajesh Lalla, DDS, PhD, CCRP, DABOM, on behalf of the Mucositis Study Group, Multinational Association for Supportive Care in Cancer/International Society for Oral Oncology (MASCC/ISOO), Farmington, CT; Deborah McGuire, PhD, RN, FAAN, University of Maryland School of Nursing, Baltimore, MD; Janet Fulton, PhD, RN, ACNS-BC, FAAN, Indiana University School of Nursing, Indianapolis, IN; June Eilers, PhD, APRN-CNS, BC, Nebraska Medical Center, Omaha, NE; Judith Johnson, PhD, RN, FAAN, HealthQuest, Richfield, MN; Carlton Brown, RN, PhD, AOCN®, University of Delaware School of Nursing, Newark, DE

To present updated evidence-based clinical practice guidelines for the prevention and treatment of mucositis.

Mucositis is a clinically and economically significant, dose-limiting toxicity of cancer therapy. Oncology nurses play a critical role in managing mucositis, including associated symptoms and complications. Numerous interventions have been utilized for mucositis, often with limited evidence, making it challenging for direct care nurses to know which interventions should be recommended to patients.

To conduct a systematic evaluation of the mucositis literature, resulting in a set of current evidence-based guidelines for mucositis management.

Approximately 100 multidisciplinary members (including nurses) of the Mucositis Study Group of MASCC/ISOO participated. A research librarian performed systematic searches of clinical literature indexed in Medline up to December 2010, with papers selected for review based on defined inclusion/exclusion criteria. All reviewers underwent training and calibration to ensure standardized evidence allocation. Each paper was independently evaluated by 2 reviewers who extracted data using a standard electronic form. A third reviewer adjudicated discrepancies. Each paper was evaluated for major and minor flaws per the Hadorn criteria.

Findings were integrated into guidelines based on the overall level of evidence for each intervention, using the Somerfield criteria. Guidelines were classified into 3 types: recommendation, suggestion, or no guideline possible. Guidelines were separated based on 1) prevention or treatment of mucositis 2) cancer treatment modality and 3) route of administration of the intervention.

The review process worked well to allow the multinational group to systematically evaluate a large volume of literature. A number of new clinical practice guidelines were developed and several others were updated. New guidelines include those in support of lasers, doxepin mouthrinse, morphine mouthrinse, and transdermal fentanyl. Updated guidelines include those in support of benzydamine mouthrinse, palifermin, oral care protocols, cryotherapy, and patient-controlled analgesia with morphine. New and updated guidelines were also developed against the use of several interventions (such as chlorhexidine) that are ineffective for mucositis.

These evidence-based guidelines, to be presented at this session, will be a useful resource for oncology nurses, to guide the clinical management of patients with mucositis.

**Underwriting/Funding Source:** Helsinn Healthcare, SA and BioAlliance Pharma

### 1317059

**WHO LET THE DOGS IN?** Dorene Cipriano, BSN, OCN®, Oncology, Washington University School of Medicine, Saint Louis, MO; Chris Rimkus, MSN, AOCN®, Oncology, Washington University School of Medicine, Saint Louis, MO; Lisa Kehlenbrink, MSN, Oncology, Washington University School of Medicine, Saint Louis, MO

To help create a calmer environment for patients during their chemo treatment.

Animal therapy is the use of specially trained pets, mainly dogs, working with their owners to provide visits to patients. Many support animal therapy companies train animals to be therapy pets. The benefits of pet therapy have been documented in the adult and child patient populations. These benefits include decreased blood pressure, feelings of relaxation, enhanced psychological wellbeing, and calming of agitated patients. Patients undergoing cancer therapy are often anxious thus pet therapy may be useful to reduce anxiety.

To develop and sustain a pet therapy program in our outpatient chemotherapy treatment center within a comprehensive cancer center.

Pet therapy utilizing trained dogs from a support dog company was initiated and successful in our smaller satellite office. Because of their success, the main campus center formed a project team to evaluate the feasibility of starting pet therapy at the main treatment center that treats over 135 patients per day. The project team gathered data from the pilot site, interviewed the support dog company and visited the Children's Hospital site that was utilizing support dogs. After full evaluation, the project team approved the plan to allow support dogs into the treatment center. A policy was developed that included infection control reviewing dog health history and vaccination status, a process for ensuring that patients could refuse the dogs, and assurance of patient safety. The policy was disseminated to the physicians for approval. The dog owners were required to undergo extensive training. Pet therapy was then initiated in September 2009. Initially, dogs and their owners came to the chemotherapy treatment center 2 days/month.

The patients look forward to the dog visits and ask for specific dogs by name. Staff members also enjoy the dog visits. A formal survey showed 77% of patients felt happy and/or more relaxed during the visits.

We have found this project to be very successful for both patients and staff. Based on the positive feedback we have expanded our program to 8 days a month.

### 1317905

**EDUCATING STAFF, PATIENTS, AND SIGNIFICANT OTHERS—A RECIPE FOR SUCCESSFUL ADHERENCE TO ORAL CHEMOTHERAPY.** Carol Blecher, RN, MS, AOCN®, APNC, Hematology/Oncology, Trinitas Comprehensive Cancer Center,

Elizabeth, NJ; Grisela Hidalgo, LCSW, Trinitas Comprehensive Cancer Center, Elizabeth, NJ; John Mikros, RPh, Hematology/Oncology, Trinitas Comprehensive Cancer Center, Elizabeth, NJ

To educate the professional staff of the Cancer Center regarding oral agents in order to improve their knowledge and ability to provide support of patient's adherence to therapy. To educate patients and their significant others regarding therapy and providing them with a support system that promotes adherence.

We are currently seeing a changing paradigm from chemotherapy administration in hospitals or physician offices to oral agents, self administered by patients in their homes. Health care providers need to learn how to delegate control to the patients and their significant others. Oral agents benefit patients in that there is minimal lifestyle disruption. There are approximately 45 oral agents currently FDA approved and 25%–50% of the oncology pipeline drugs are oral.

This program is designed to promote improved adherence to oral agents for our patient population, through the provision of education and multidisciplinary support services.

Staff education is necessary to increase awareness of the oral chemotherapy agents presently available as well as administration and side effect/symptom management. Patient significant other evaluation and education will cover information regarding the protocol/treatment plan, agent prescribed and how to take the agent, insurance issues, informed consent, a calendar preparation and follow up appointments for ongoing education and monitoring.

We will evaluate staff knowledge through pre and post tests regarding oral agents, methods of obtaining drugs correct administration and potential side effects. Patient adherence will be evaluated through pill counts, prescription renewals and faithfulness in keeping appointments. We will also perform patient satisfaction surveys to evaluate our effectiveness.

With a shifting paradigm of chemotherapy administration we are obligated to begin to advance best practices, developing and applying new interventions to promote adherence. It is the responsibility of the entire team to work with the patient and significant others in promoting adherence. Through the education and increased awareness of the staff regarding oral agents we will be better able to support the patients in their self administration efforts along with early and prompt symptom management and recognition and treatment of side effects.

### 1318160

**FAX TO QUIT TOBACCO CESSATION REFERRAL PROGRAM.** Joanne Ebner, RN, BSN, Anne Arundel Medical Center, Annapolis, MD; Sue Glover, RN, Anne Arundel Medical Center, Annapolis, MD

Facilitate physician referral to a community-based professional nicotine dependence counseling program to improve tobacco cessation rates.

Tobacco use remains a pervasive health threat with approximately 443,000 Americans dying prematurely as a result of smoking or exposure to second-hand smoke. Another 8.6 million people live with chronic tobacco-related diseases negatively impacting their quality of life. Studies by the Centers for Disease Control and Prevention and others report that only one-third to one-half of smokers receive smoking cessation advice from a health care provider in a given year despite the fact that physician counseling can be effective in getting people to attempt/accomplish tobacco cessation. Time constraints during routine health visits have been cited as one reason tobacco cessation is not addressed.

Develop a convenient and accessible referral program for health care providers to utilize in order to efficiently and expeditiously promote clients' participation in tobacco cessation.

This program was initiated approximately one year ago. It was promoted through medical staff meetings, cancer committee meetings and via the intranet. Response has been favorable from physicians and our community health center. The individuals

contacted through this referral system are generally motivated and a majority of those who pursue tobacco cessation join the seven week "Become Smoke Free" course. The challenge has been contacting individuals via the phone. We attempt three phone calls and if there is no response a letter is sent to their home which includes information on our programs and additional resources.

The Fax to Quit is not a completely new idea. Several state quit programs use a fax referral system to refer clients to quit lines and other resources for quitting. Our program is unique in that it is adapted to an internal fax referral process that allows physicians and other health care providers to refer their clients to a tobacco cessation program within the medical center that offers a variety of services from individual counseling, a seven-week tobacco cessation course or a monthly support group. Physicians are kept informed of the client's progress via letter or progress notes in the Electronic Medical Record (EMR).

### 1318223

**COVERAGE ANALYSIS AND HOW IT AFFECTS YOU AS AN ONCOLOGY NURSE.** Kelly Willenberg, RN, BSN, MBA, Synergism, LLC, Chesnee, SC

Train oncology nurses why Coverage Analysis are being done and why the way items are ordered for their research subjects affects whether they are compliant in billing or not.

The National Coverage Decision was put into law under the CMS Guidelines in Oct 2000. Today there are still oncology nurses who do not understand or know what this means to them as a practitioner. This course will assist them in understanding what a Coverage Analysis is and its importance if their practice or hospital is investigated by the Office of Inspector General or by a third party payer such as Medicare.

The NCD guides all rules in billing for clinical trials. Each Medicare Contractor in the country treats this in a differing way. If a nurse doesn't understand the rules, she cannot understand the process. I want to help all oncology nurses to be able to defend what she ordered and how it was billed on all clinical trial subjects.

Each attendee will learn and understand the tools in billing compliance such as the coverage analysis, the use of the informed consent and how the overall clinical trial budget and contract can mean something different than just "standard of care".

All will walk away with an understanding of the Coverage Analysis process and be able to have a sense of humor in the grueling world of clinical trial billing compliance!

### 1318270

**TOWARDS HEALING AND WHOLENESS: A MODEL OF INTEGRATIVE CANCER CARE NAVIGATION FOR UNDERSERVED POPULATIONS.** Laura Pole, MSN, Integrative Patient Navigation Services, Smith Center for Healing and the Arts, Washington, DC; Carole O'Toole, Integrative Patient Navigation Services, Smith Center for Healing and the Arts, Washington, DC

Participants will be able to list key components of integrative cancer care navigation, and describe one strategy for incorporating integrative navigation into their current care delivery system.

Patient navigation is a relatively young and minimally tested practice. Historically, it has largely focused on providing assistance at diagnosis and during treatment. Yet, demand grows for improved psychosocial support and comprehensive care throughout the cancer continuum. We've expanded the concept of patient navigation by developing an integrative navigation model that advocates using medical intervention, psychosocial support and complementary modalities to facilitate healing on all levels, from diagnosis through recovery, recurrence and end of life. Our integrative navigation programs have improved quality of life and treatment completion rates for Washington DC's medically underserved African-Americans and African immigrants.

We developed and established an integrative patient navigation program at an inner-city hospital serving African-Americans that is now offered as a permanent hospital service. We adapted our model for implementation at the community level, partnering with churches, community service providers and local organizations to serve over 9,500 underserved city residents. We have also developed an innovative navigation training program offered nation-wide.

Describe the process and outcomes of developing and implementing an integrative cancer care navigation training and care delivery model, and discuss implications for applying this model in other communities and care settings.

Data collection and evaluation have been ongoing. Our program has increased treatment completion rates by 15%. Surveys indicate that the programs are highly valued by church leaders and the community. Participants are making significant long-term improvements in wellness practices, such as exercise, healthy eating and stress management. The final phase of our process and impact evaluation will be completed in April, 2012. Results will be presented.

Oncology nurse navigators and researchers are ideally suited to influence, define and test integrative patient navigation services. Our program provides the beginnings of a best-practice model. We will provide evidence to support that this model warrants testing in other settings and communities.

**Underwriting/Funding Source:** Susan G. Komen for the Cure

### 1318716

**ULTRAVIOLET LIGHT THERAPY FOR MYCOSIS FUNGOIDES PATIENTS: NURSING IMPLICATIONS BEFORE, DURING, AND AFTER TREATMENT.** Oguna Taylor, RN, BSN, OCN®, Melanoma/Skin, MD Anderson Cancer Center, Houston, TX; Marites Domine, RN, Melanoma/Skin, MD Anderson Cancer Center, Houston, TX

Oncology nurses in the ambulatory setting will be educated on the assessment and management of Mycosis Fungoides patients receiving Ultraviolet Light Therapy.

Mycosis Fungoides (MF) is a non-Hodgkin's T-cell lymphoma that first appears on the skin as patches or plaques. Ultraviolet (UV) light therapy such as Narrowband Ultraviolet-B (NBUB-B) and Psoralen plus Ultraviolet-A (PUVA) along with proper treatment modalities has been shown to be effective in clearing these patches and plaques leading to remission. MF is the only malignant disease that is treated with Ultraviolet light, a major carcinogen. In the ambulatory setting of a major comprehensive cancer center, the nurses have an important role in caring for these patients before, during, and after light therapy. Nurses are involved in patient orientation, education, and assessment in different stages of light treatment.

The purpose of this presentation is to provide an overview of this unique and specialized treatment for MF patients.

The patient is oriented to the light treatment room and equipment. The nurse educates the patient about photosensitive medications, preparation for treatment, weekly schedules, and the duration of current and overall treatment time. Before each treatment the nurse obtains vital signs, reviews medications and assesses fall risk. Prior to each treatment the patient's skin is assessed for response to previous light treatments which includes degrees of erythema, pruritus, and pain. Based on this assessment, practice guidelines and in collaboration with the primary physician, the nurses can continue, increase/decrease UV exposure time, or hold treatment.

Nurses who view this presentation will gain basic knowledge about the oncology nurses role in managing UV treatment for MF patients.

Nurses play a critical role in treating patients with MF. The nurse provides the prescribed light treatment regimen according to light therapy guidelines. It is important that nurses are properly educated on how to assess and treat MF patients to ensure patient



safety and efficacy of treatment. Nurses are educated and trained on light treatment through unit presentations, one-on-one training and are required to complete a skills validation competency. Patients are instructed to adhere to ongoing treatment and physician follow-ups.

### 1318803

#### **OPTIMIZING PATIENT EDUCATION: THE VIRTUAL CLASSROOM FOR SHORT STAY PROSTATECTOMY PATIENTS.**

Anna Giallo-Uvino RN, BSN, OCN®, Urology, Memorial Sloan-Kettering Cancer Center, New York, NY; Jennifer Livingston, RN, BA, OCN®, Urology, Memorial Sloan-Kettering Cancer Center, New York, NY; Patricia Sheerin, RN, Urology, Memorial Sloan-Kettering Cancer Center, New York, NY; Maryellen O'Sullivan, RN, MA, Urology, Memorial Sloan-Kettering Cancer Center, New York, NY

At this comprehensive cancer center, a multidisciplinary task force was formed to implement a new surgical program which targeted discharges within 24 hours of surgery. The urology service selected minimally invasive prostatectomies to participate in the program. This abstract will discuss the development of a patient education program utilizing a virtual classroom setting for preoperative patient education.

Changes in technology are affecting the way we deliver healthcare, and minimally invasive surgical techniques have provided an opportunity for nurses to focus on alternative ways to provide education. Historically, patient education was initiated at the outpatient visit and continued throughout the inpatient stay with formal group education classes. The new challenge was to provide comprehensive education with an opportunity for return demonstration of care.

A urology nursing task force collaborated to address how to educate our patients effectively in a shorter span of time. An extensive literature search was performed.

The group developed new patient work flows, identified new educational objectives, revised educational material and standardized the teaching plan. A webinar consisting of PowerPoint presentation, 3 instructional videos and a forum for questions and answers was chosen. Sessions are held weekly and facilitated by a nurse and social worker. Patients require telephone access and a computer which allows for multiple patients and caregivers to participate. At the end of the session, a survey is completed. At the consent visit, the nurse performs a knowledge assessment, provides postoperative supplies and prescriptions. All patients complete a return demonstration of the incentive spirometer and urinary catheter care.

Since April, 87 patients have successfully participated in our educational webinars. Overall patient satisfaction is extremely positive. Patients evaluate the program based on ease, skill of the presenter, content and respect for privacy. The outcome of the results is ongoing.

This project demonstrates how oncology nurses successfully adapt to fast paced, innovative changes in clinical practice and continue to maintain consistent, quality, personalized education. This presentation will outline the methods, tools, outcomes and evaluations used for successful implementation of a virtual education session.

### 1319102

#### **AMBULATORY ONCOLOGY NURSES MAKING THE RIGHT CALL—ASSESSMENT AND EDUCATION IN TELEPHONE TRIAGE PRACTICES.**

Karen Gleason, BSN, OCN®, RN, North Shore LIJ HealthSystem Monter Cancer Center, Lake Success, NY; Eileen Brennan Oneill, BA, OCN®, RN; North Shore LIJ HealthSystem Monter Cancer Center, Lake Success, NY; Linda Moriarity, BSN, OCN®, RN, North Shore LIJ HealthSystem Monter Cancer Center, Lake Success, NY; Jennifer Horrigan,

MSN, NP, OCN®, North Shore LIJ HealthSystem Monter Cancer Center, Lake Success, NY; Jennifer Goldschmitt, MSN, NP, North Shore LIJ HealthSystem Monter Cancer Center, Lake Success, NY

The learner will demonstrate correct discussion of symptom management during telephone intervention.

The Monter Cancer Center provides adult cancer care in New York. The practice is comprised of 21 hematologist-oncologists and 13.5 faculty practice nurses (RN's). RNs facilitate physician practices, and are responsible for the triage and management of phone calls from a diverse oncology population. Telephone triage is commonly defined as the safe, effective, and appropriate disposition of health-related problems via telephone by experienced RNs using physician approved guidelines or protocols.

This initiative was intended to identify the educational needs of the RN's and design strategies to educate and improve telephone triage skills. The goal was to standardize triage practice, and ultimately improve the effectiveness of telephone triage management. Flannery discussed that RN's can help prevent symptoms from becoming unmanageable and possibly avoiding unnecessary and costly visits to emergency department. Effective management can enhance the nurse patient relationship while providing continuity of care to the oncology patient.

An RN qualitative needs assessment survey on telephone triage was conducted utilizing Survey Monkey. Analysis resulted in a multidisciplinary interventional approach to support the staff. Interventions include bimonthly educational sessions led by Nursing Leadership, NP's, and Physicians to be conducted over a six month period. Strategies will focus on evaluating subjective complaints through active listening of verbal and nonverbal cues, and skilled history taking incorporating knowledge of disease processes and treatment.

RN's will be sent a pre-test that focuses on the specific topic of that month. An anonymous post test will be conducted via Survey Monkey following each session. The initial survey will be repeated at 3 and 6 months to assess the nurses' comfort and knowledge of telephone triage and to evaluate learning.

Education, communication and collaboration of RN's enhance telephone triage skills. These skills can reduce inappropriate appointments, educate clients and reduce the risk of medical complication related to delays in care. Studies have shown that patients value the care and attention they receive via telephone triage. One study showed that reassurance was more important than the relief of symptoms.

### 1319150

#### **STAY "HOOKED UP": AN EVIDENCE-BASED APPROACH TO DECREASING PORT-A-CATH INFECTION RATES.**

Jami DeNigris, RN, BA, OCN®, Hematology/Oncology, Hahnemann University Hospital, Philadelphia, PA; Meghan Stokley, RN, BSN, Hematology/Oncology, Hahnemann University Hospital, Philadelphia, PA; Leslie Wood, RN, BSN, Hematology/Oncology, Hahnemann University Hospital, Philadelphia, PA; Barbara Fry-Arrighy, BS, MT, SM, MBA, CIC, Hematology/Oncology, Hahnemann University Hospital, Philadelphia, PA

Goal was to decrease port infections by at least 50% for 2011 on the inpatient oncology unit through evidence-based innovative strategies.

8 port infections from the inpatient Oncology unit in 2010 were reviewed and individually evaluated. Findings were that these patients' ports were being accessed greater than 10 times daily for IV therapies. None of the patients had primary IV fluids ordered and had their ports directly accessed each time it was being used.

Central line infections lead to an increased length of stay and in some cases can cause patient fatalities. According to the CDC, hospitals can incur a cost ranging from \$7,288–\$29,156 for patient treatment. Port-a-cath's are inserted and expected to last years for

treatment. With an increase in Port infections our purpose was to implement a practice to improve our quality outcomes for patient safety and decrease our infection rates.

A comprehensive education and hands-on plan was initiated. All patients with implantable ports will maintain a closed system and 'stay hooked up' to a primary IV line to limit and decrease direct access to the port. All IV medicine will be given secondary or through the 'y' site. Patients who do not need IV fluids will have a primary line hooked to them of 20ml/hr., unless medically contraindicated. Patients must travel with IV pumps. Blood draws from the line will be limited to once per day unless for an emergency.

As of 3rd quarter 2011 there is a 75% improvement in Port infections on the inpatient oncology unit which exceeded our original goal of at least 50%. This guideline was adopted into our hospital policy.

Central line care is essential for oncology nurses and caring for the lines correctly and keeping them infection free is our highest priority. This was the first guideline that was introduced at our hospital that addressed accessing the line. This guideline can be adopted anywhere where port-a-caths are used and accessed for a period of time.

### 1319232

**FROM 20 TO 100%: ENGAGING STAFF AS A TEAM TOWARD UNIT-BASED CHEMOTHERAPY ADMINISTRATION COMPETENCY.** Melissa Cooke, RN, AND, Duke University Health System, Durham, NC; Sharon Tobias, RN, MSN, Duke University Health System, Durham, NC

Achieve competency through a team approach.

5-3 is an inpatient oncology unit. Our customers depend on the staff to meet their treatment needs for chemotherapy administration. For RNs, this is considered a specialized skill requiring competency validation before independent administration. Previously, the unit staff included RNs who had not completed this competency, presenting obstacles to providing care for our oncology patients. This included inconsistent administration or incomplete chemotherapy which was concerning for our oncology physician partners; overtime due to chemotherapy competent nurses staying past shift time or coming in to complete patient treatment; poor coordination of chemotherapy administration with partner departments which resulted in increased cost; resistance of nurses to obtain competency due to lack of understanding and "buy in" for practice implications. Delivering a service to a specialized patient population involves providing that service 100% of the time. Success towards this goal begins by providing an opportunity for all staff to meet the expectation for the competency.

The purpose of this quality initiative was to achieve 100% compliance with the chemotherapy competency using a team approach.

Since chemotherapy administration was an expected RN competency for the unit, the leadership group held discussions to discern the obstacles towards competency. A plan was developed to move the team towards the same goal. The plan to achieve competency included clear communication from the leadership group regarding the reason for the competency which included meeting the needs of our patient population and the organization while establishing clear expectations; setting a common deadline for all staff to complete the competency allowing them to move forward as a team and assist each other with meeting expectations; study groups coordinated for all staff lead by staff who had established chemotherapy competency; completion of the clinical component of the competency by partnering with a sister oncology unit in the health system.

Since achieving 100% competency, benefits include timely and consistent chemotherapy administration; decreased pharmacy cost due to consistent administration; increased physician satisfaction; implementation of additional measures to maintain competency including clear expectations of new hires.

By achieving 100% chemotherapy competency, we realized an amazing cultural transformation. On our journey to competency, the nurses took ownership of what was asked of them and insured the success of all members. They now take ownership of this competency and skill which differentiates them as a specialty service. Measures are now in place to sustain this achievement and meet the needs of our customers, practice partners and organization.

### 1319320

**IMPROVING NURSING-SENSITIVE PATIENT OUTCOMES IN AN AMBULATORY SETTING: IMPLEMENTATION OF AN ELECTRONIC EVIDENCE-BASED DOCUMENTATION TOOL.**

Janet Gordils-Perez, MA, RN, APN-C, AOCNP®, The Cancer Institute of New Jersey, New Brunswick, NJ; Leah Scaramuzzo, MSN, RN-BC, AOCN®, The Cancer Institute of New Jersey, New Brunswick, NJ; Tareai Smith, RN, BSN, OCN®, The Cancer Institute of New Jersey, New Brunswick, NJ

Describe the development and implementation of an electronic evidence-based documentation tool to improve patient outcomes.

Providing quality cancer care that is in compliance with the highest standards and clearly documenting it is a challenge faced by nurses. Documentation provides a means for understanding the care given, effectiveness of interventions and clinical problems needing resolution. Without well-structured documentation, it is difficult to assess care delivered by the healthcare team. At an NCI-designated Comprehensive Cancer Center, nurses identified the need to improve their documentation process of patient care.

The purpose of developing an electronic evidence-based nursing documentation tool was to ensure quality oncology nursing care by using the strongest level of evidence on which to base nursing practice interventions as well as meet regulatory and institutional standards. To ensure this, our goal was to integrate all the ONS PEP® resources into the documentation tool to help guide practice.

After review of all current nursing documentation, forms were condensed and simplified into a userfriendly checklist format that prompts the nurse to complete an in-depth assessment using the Common Terminology Criteria for Adverse Events as a measurement tool, the NANDA-based nursing diagnosis and the ONS PEP resources for evidence-based interventions and evaluation. The documentation tool was piloted, nursing feedback obtained and appropriate revision made.

Nurses have expressed increased satisfaction with the new electronic documentation tool. To improve continuity of care, our partner hospital's oncology outpatient area has implemented the tool as well. Additional feedback from their staff as well as other practitioners (MD/NP) was reviewed and revisions made. Formal evaluations are planned with audits to ensure documentation is accurate, clear, and complete, standards of oncology nursing practice are met and how changing documentation has impacted nursing sensitive patient outcomes.

It is critical for nurses to assume responsibility for the standards of their practice as well as documentation. Nurses are accountable for providing evidence based, quality nursing care and documenting these services. This electronic documentation tool may be adapted for use by all ambulatory care nurses nationally to benchmark quality measures and ensure streamlined, evidence-based documentation with the goal of improving nursing sensitive patient outcomes.

### 1319350

**SMILOW SOCIETY—AN ONCOLOGY NURSING JOURNAL CLUB TO PROMOTE RESEARCH DISSEMINATION.**

Marianne Davies, MSN, APRN, ACNP, AOCNP®, Medical Oncology, Smilow Cancer Hospital at Yale-New Haven, Yale University School of Nursing, New Haven, CT; Monica Fradkin, RN, MPH, OCN®, Medical Oncology, Smilow Cancer

Hospital at Yale-New Haven, New Haven, CT; Elizabeth Blasiak, RN, OCN®, Medical Oncology, Smilow Cancer Hospital at Yale-New Haven, New Haven, CT

The objective of this project is to disseminate research relevant to patient care, enhance knowledge of the research process, enhance ability to critique research and motivate nurses to participate and collaborate on research initiatives.

Ongoing professional development and the use of evidence-based practice (EBP) are priorities of this Magnet designated hospital. Barriers to consistent use of EBP, identified by staff nurses, include lack of experience critiquing and synthesizing the research literature and translating findings into practice.

Representatives from the Oncology Nursing Council Research Committee, Oncology Nursing Education and Staff Nurse Council met to develop a mechanism to achieve these goals. Involvement of nursing staff in the planning process was encouraged within the shared governance model of this Magnet® Hospital. The group selected a journal club format using the ONS Virtual Journal Club as a framework, which facilitated the prompt start of the club. "The Smilow Society" was created to pique curiosity, promote interest and sense of membership. "Society" posters were displayed on each unit and club notebooks were distributed to participants. Access to articles and schedule meetings were posted on the nursing website. Initial articles were selected to appeal to a broad audience. A planning committee representative serves as a resource to promote discussion of research critiquing strategies. Nurses are encouraged to discuss meeting topics with their colleagues. A summary of each session including ideas for further research projects is posted on the website. It is anticipated that the club will be a vehicle to promote professional growth, clinical practice changes, collaboration amongst colleagues and participation in ones professional organization.

Early feedback is positive and two research initiatives are in development. Evaluations will be distributed every six sessions. Attendance, use of website link, and research initiatives will be tracked.

Research dissemination, utilization and promotion is challenging in a busy tertiary care environment. Use of a journal club supports these goals, encourage collaboration among staff and promote evidenced-based improvements to patient care. Future directions include promotion of staff nurses as session facilitators and utilization of web-casts for staff at community based treatment facilities.

### 1319791

#### **INITIATION OF SUBCUTANEOUS BORTEZOMIB IN AN OUTPATIENT CLINIC SETTING: A NURSE-LED PROJECT TO REDUCE THE INCIDENCE OF PERIPHERAL NEUROPATHY IN MULTIPLE MYELOMA PATIENTS.**

Michael Eckenfels, BSN, LMSW, RN, OCN®, Lymphoma Myeloma Center, MD Anderson Cancer Center, Houston, TX; Carmelita Prokopiou, MBA, MSN, RN, AOCN®, Lymphoma Myeloma Center, MD Anderson Cancer Center, Houston, TX; Sandra Horowitz, PharmD, RPH, Lymphoma Myeloma Center, MD Anderson Cancer Center, Houston, TX; RaShaundra Jacobs, MBA, Lymphoma Myeloma Center, MD Anderson Cancer Center, Houston, TX; Robert Orlowski, MD, PhD, Lymphoma Myeloma Center, MD Anderson Cancer Center, Houston, TX; Margaret Duplechan, BS, Lymphoma Myeloma Center, MD Anderson Cancer Center, Houston, TX; Toni Abbasi, BSN, MBA, RN, Lymphoma Myeloma Center, MD Anderson Cancer Center, Houston, TX

Nurses will be able to state the advantages of bortezomib administered subcutaneously, an improved safety profile through reduced incidence of peripheral neuropathy and improved patient satisfaction through improved comfort levels and reduced wait times.

Bortezomib (Velcade®), a proteasome inhibitor for use in multiple myeloma (MM) patients, has become a mainstay in MM treatment regimens. The standard treatment regimen is four doses administered IV at four day intervals. The incidence of new or worsening peripheral sensory neuropathy is 63%. This may be experienced as hypoesthesia, paraesthesia, hyperesthesia, disabling neuropathic pain, altered perception of heat and cold sensation, areflexia, and loss of proprioception which increases the risk for injury. Data suggests that efficacy is maintained via the subcutaneous route while incidence of peripheral neuropathy is reduced from 44% (IV) to 27.3% (SQ). The only adverse effect was mild local skin irritation in 6% of study participants.

The goal of this project is to reduce the incidence of bortezomib-related peripheral neuropathy by changing the route of administration from IV to subcutaneous and to improve patient satisfaction by implementing it in an outpatient clinic setting.

Process change involved seeking nursing and physician administration approval, consulting with Millennium Pharmaceuticals and outside treatment centers, collaborating with pharmacy on dosing formulation and creation of order sets, collaborating with Clinical Revenue and Reimbursement to research reimbursement implications, analysis of clinic logistics for patient scheduling and PPE supply levels, training nurses and physicians, modification of patient education materials, and creation of documentation tools.

Implementation is ongoing; evaluation will be assessment of peripheral neuropathy signs and symptoms and measures of patient satisfaction in wait times and comfort compared to IV administration.

Clinical process improvement that reduces adverse events is an important component of nursing patient advocacy. Improving tolerance profiles improves patient adherence and quality of life and reduces the need for therapeutic dose reduction and therapy discontinuation.

### 1319843

#### **CREATIVE APPROACHES TO TEACHING CHEMOTHERAPY SAFE HANDLING: TWILIGHT—EVILS LURKING IN THE ENVIRONMENT.** Elizabeth Roth, RN, BSN, OCN®, 7 Yellow, Riverside Methodist Hospital, Columbus, OH; Lisa Smith, RN, MS, AOCN®, 7 Yellow, Riverside Methodist Hospital, Columbus, OH

To describe a learning program for safe handling considering generational differences in learning.

Despite annual educational programs using traditional teaching methods, nursing staff on an inpatient oncology unit demonstrated inconsistent practice related to safe handling. Gaps in our current educational program were identified, including the need to consider generational differences in learning. A literature review of safe handling compliance demonstrated a need.

Awareness of potential surface contamination was identified as a need and a safe handling event was held. Event attendees entered a darkened room and were greeted with "Twilight" themed music, black lighting, snacks, and decor. Interactive learning stations prepped with glow lotion and powder demonstrated potential hazardous spills in the environment. Hot topics such as reusing chux and inconsistent practice with personal protective equipment were addressed. The station that received the most comments was the one that included a glow on the front of an IV pump from simulated poor safe handling technique. Other stations included safe handling cautions with linens, bed pans, urinals, chux, gowns, and body fluids. Latest recommendations to avoid surface contamination were highlighted. The conceptual model used was transformational learning which takes into consideration the different development of identity and learning styles between students of different generations.

A brief quiz was completed upon entering the room and participants were given the opportunity to revise their answers when exiting the room to measure knowledge outcomes. An instructor

was available at each station to give immediate feedback, assess knowledge level, and provide appropriate education. Observational audits on unit continue.

Conclusions are to include different approaches to unit education in consideration of generational differences and learning styles. This interactive themed approach generated many positive comments from participants of different generations.

### 1319894

#### **DEVELOPMENT OF AN ENTERPRISE WIDE ONCOLOGY CALL CENTER USING LEAN PLANNING TOOLS.**

Sharon Steingass, RN, MSN, AOCN®, City of Hope, Duarte, CA

Improve the continuum of oncology care through a performance improvement project to reengineer the organizational approach to manage phone calls.

Management of phone calls is a major component of any ambulatory oncology practice. Patient phone calls can be as simple as confirming an appointment to as complex as providing advice on the management of a post treatment complication or new symptom. Patients and family members evaluate their experience with the ambulatory setting based on their ability to connect and obtain the required information. Thus assuring that the caller has a positive experience is an important measure of success for the ambulatory practice. Given the increased complexity and volume of phone calls, ambulatory sites are looking to define new and innovative ways to manage this important dimension of the continuum of oncology care.

Design an organizational approach to provide exceptional caller access and experience in an academic oncology setting using LEAN planning tools.

A multidisciplinary team completed a four day planning event to develop an enterprise wide approach to manage phone calls from established oncology patients. Using a LEAN tool which focused on the flow of information, the team defined key functions that were the most important in management of a phone call. Using these key functions, the team brainstormed seven new ways to do each function. Using criteria, the team selected the top new ways to manage a call and then created several alternative options. The final step was simulation of the options to determine the best new way to for the organization to manage phone calls.

As an outcome of the new enterprise wide approach for call management, the team has been able to set metrics of success including customer satisfaction call abandonment rate and service level. Mean scores from patient satisfaction have increased by 3.5%, call abandonment rate decreased by 2% and service level increased by 8%.

LEAN planning tools are helpful in creating new alternatives and approaches to manage complex problems. While commonly used in manufacturing LEAN tools are now commonly being used in healthcare settings.

### 1320430

#### **PUTTING EVIDENCE INTO PRACTICE: BREAST CANCER-RELATED LYMPHEDEMA IN-SERVICE IMPROVES NURSES' KNOWLEDGE.**

Sharon Fielder, RN, MPH, OCN®, Head and Neck Surgery, MD Anderson Cancer Center, Houston, TX; Hilary Barelak, BSN, RN, OCN®, Head and Neck Surgery, MD Anderson Cancer Center, Houston, TX

A fifteen minute evidence-based in-service was developed to improve nurses' Breast Cancer-Related Lymphedema (BCRL) knowledge.

BCRL is both an acute and chronic condition affecting the quality of life for breast cancer patients. Lymphedema is considered one of the most bothersome complications of breast cancer treatment and has been shown to increase medical costs. Although BCRL is not curable, it is preventable and treatable. An important intervention for the oncology nurse who cares for breast cancer patients is to deliver evidence-based patient education concerning BCRL risk factors, prevention and treatment. A needs assessment revealed

that surgical oncology nurses frequently use BCRL educational messages that have weak supporting evidence, such as needle stick and blood pressure precautions. Other messages with stronger evidence are less frequently used. Nurses including messages about modifiable risk factors such as weight control and the importance of early intervention with complete decongestive therapy deliver stronger evidence-based education. A need exists to incorporate the latest BCRL evidenced-based knowledge into oncology nurses' practice so that patients receive the best evidence-based recommendations from their nurses. Evidence-based in-services are one method that can improve nursing knowledge of evidence-based patient education of BCRL.

A fifteen minute in-service was designed based on supporting literature to increase nurses' knowledge of evidenced-based BCRL patient education. The developed educational program sought to improve nurses' knowledge of evidence-based risk factors, prevention and treatment methods. It also taught educational strategies applicable in a time-demanding high flow post-surgical environment.

The evidence-based educational program was evaluated with a test-retest evaluation. Educational objectives were evaluated to determine participant's mastery of BCRL risk factors, preventative behaviors, and treatments. After the in-service, the nurses demonstrated a 14% increase in evidence-based BCRL knowledge.

Increasing the oncologic nurses' knowledge of evidence-based BCRL risk factors, prevention methods, and treatments increases the likelihood that the education delivered to patients will include this information. The fifteen minute in-service is a fast and cost-effective method for improving nurse knowledge of this specialized patient population. It is likely that reinforcement is needed for nurses to continue to adopt the use of evidence-based education messages in patient education.

### 1320996

#### **PATIENT EDUCATION AND MONITORING REQUIREMENTS FOR THE NEW DRUGS FOR TREATING METASTATIC MELANOMA.**

Donna Gerber, RN, PhD, AOCN®, Nursing, MD Anderson Cancer Center, Houston, TX

The objective of this presentation is to inform oncology nurses of side effects that need to be monitored for the new FDA approved drugs, Vemurafenib and Ipilimumab, in the treatment of metastatic melanoma.

In 2011, two new drugs were approved for use outside of clinical trials for appropriate patients with metastatic melanoma, and are becoming front line treatment. When using Vemurafenib, a B-Raf inhibitor, the patient must have the B-Raf mutation at V600E location, while Ipilimumab is a human IgG1 anti-CTLA-4 monoclonal antibody, which prevents CTLA-4 from prohibiting the T cells in the body from attacking the melanoma. Both of these drugs have unusual side effects for which patients must be monitored during their clinic visits and telephone conversations. Thorough education of these patients on signs and symptoms to report is essential so timely interventions can be done. Both agents cause dermatological reactions which can cause skin sloughing, cardiovascular problems of QT prolongation and atrial fibrillation, eye irritation, development of secondary squamous cell skin cancer for Vemurafenib patients, arthritis, and endocrine problems are possible.

The purpose of this presentation is to discuss the information needed to be reviewed with the patients at the initiation of treatment and during each follow-up visit. Additionally the type of monitoring these patients require at what intervals to avoid endocrine toxicities will be presented.

Because clinic nurses are usually responsible for the chemotherapy teaching for the patients and instructing them on problems they need to report to the clinic, this information is critical.

Information from this presentation will enable nurses to educate and intervene appropriately with patients taking these drugs.

As new drugs become available in the treatment of cancer, it is imperative for nurses to become aware of the possible side effects and proper monitoring of these patients.

### 1321130

#### **IDENTIFYING BREAST CANCER SURVIVOR UNDERSTANDING OF POST-TREATMENT CARE NEEDS: IMPLICATIONS FOR ONCOLOGY NURSING.**

Miriam Slevin, RN, MS, OCN®, Cancer Survivorship Program, Torrance Memorial Medical Center, Torrance, CA; Savitri Singh-Carlson, BSN, PhD, Department of Nursing, California State University, Long Beach, Long Beach, CA; Ahlam Jadalla, PhD, RN, Department of Nursing, California State University, Long Beach, Long Beach, CA; Linda Lillington, RN, DNSc, Clinical Education, Torrance Memorial Medical Center, Torrance, CA

To identify Breast Cancer Survivors (BCS) understanding of post-treatment care needs utilizing a Patientdirected Treatment Summary Form (PTSF)

Facilitating cancer survivors long-term health is a major focus for healthcare providers. In 2006 the Institute of Medicine identified the need to develop systems that enhance communication and coordination of care for long-term survivorship. Current literature supports the need to implement provider-supplied treatment summaries. Nurses can play an important role in facilitating the use of a treatment summary leading to improved survivorship care. Little is known about how such summaries are being incorporated into practice and utilized by breast cancer survivors (BCS).

The purpose of this clinical project was to determine how BCS utilize a PTSF and to identify areas for oncology nurse intervention to facilitate post-treatment communication and coordination of care needs.

A PTSF was developed based on current literature and guided by Orem's model of self-care to provide BCS with a single place to capture their cancer treatment information. To evaluate use, an 18-item survey questionnaire was developed and reviewed by a panel of experts to determine face validity. The survey was mailed to 600 BCS diagnosed with DCIS or invasive breast cancer in the prior two years who had received a copy of the PTSF. Survey questions addressed: completion of the PTSF, preference for who should complete it, and a question about how it was used.

The overall survey response was 32% (N=194). 63% (N=36) reported receiving the PTSF; 54.2% reported not using the PTSF in managing their cancer care. Interestingly, of all respondents only 54% reported knowing the frequency of follow-up tests required to monitor their health post-treatment. Most respondents favored having their doctors complete a treatment summary and preferred a written follow-up plan of care.

This evaluation indicates that BCS need education related to post-treatment follow-up care, and prefer to have healthcare providers complete treatment summaries and provide written plans for post-treatment care. Nurses can play a significant role in developing strategies to facilitate BCS understanding and adherence to coordinated follow-up care, use of treatment summaries, and communication with Primary Care practitioners to promote quality survivorship care.

### 1321811

#### **IT TAKES MORE THAN A VILLAGE . . . A COMPENDIUM OF STRATEGIES TO RAISE THE QUALITY BAR.**

Barbara Labriola, BA, MSW, RN, CMSRN, 5TM, Lehigh Valley Hospital, Bethlehem, PA; Donna Wegner, BSN, CMSRN, 5TM, Lehigh Valley Hospital, Bethlehem, PA

Detail four key elements of a successful performance improvement model implemented throughout a patient care division, inclusive of medical-surgical and critical care units, in an academic, community Magnet™ hospital.

Reimbursement changes from the Centers for Medicare and Medicaid Services and value based purchasing systems have made performance improvement more crucial than ever. Voluminous

amounts of data are the norm within acute care environments, however, robust analysis of the data and subsequent action plans that truly enhance quality outcomes is often lacking.

This presentation describes a successful performance improvement model implemented throughout a patient care division, inclusive of a medical-surgical oncology unit, in an academic, community Magnet™ hospital.

Root cause analysis and an evidence review prompted development of a quality model inclusive of four key elements: prioritization and associated exclusivity; staff awareness of data; transparency of outcomes; and, ownership, accountability and incentivization. Structural components key to the model's success and the focus of this offering are daily Chief Quality Officer Rounds; Visibility Boards; and incentivized annual goals. Chief Quality Officer Rounds are conducted at least four times weekly by the patient care unit-based master's prepared nurse educator – the unit's 'chief quality officer' - to facilitate real-time learning and improve patient care. The educator, focusing on one prioritized quality issue, assesses each patient situation, assures appropriate interventions are implemented, and educates interprofessional team members regarding opportunities for improvement. Visibility boards in public view display recent results of quality indicators, as well as goals and benchmarks. Taking transparency a bit further, the oncology medical-surgical unit staff designed a themed bulletin board to showcase each individual staff member's compliance with a designated, prioritized improvement opportunity. Unit staff members within the division and entire organization are held accountable to improve quality indicators via annual goals, incentivized in association with merit pay and financial remuneration.

Over the past 18 months, metrics throughout the division for hospital acquired pressure ulcers, restraints, medication errors, catheter associated urinary tract infections, and ventilator associated pneumonia have improved and are above the national data base mean. In the past 12-months, fall rates have slightly declined.

Oncology nurses attending this session will gain pragmatic strategies to create a culture of inquiry and passion for quality improvement in their practice setting.

### 1321867

#### **THE SIGNIFICANCE OF MANAGING COMPLICATIONS IN DIHYDROPYRIMIDINE DEHYDROGENASE ENZYME DEFICIENT PATIENTS: IMPLICATIONS FOR NURSING.**

Gina DiMeo, RN, OCN®, Nursing, MSKCC, New York, NY; Carla M. Vassallo, BSN, Nursing, MSKCC, New York, NY; Natasha Ramrup, RN, MSN, OCN®, Nursing, MSKCC, New York, NY

To heighten awareness regarding DPD deficiency. To enable recognition of 5FU toxicities to manage symptoms, anticipate patient needs, provide support & education.

The fluoropyrimidines 5-fluorouracil (5-FU) and its prodrug capecitabine are standard chemotherapeutic agents used for treating various solid tumors in adults, including digestive tract, breast and head and neck cancers. Fifty years after discovery, 5-FU is the most prescribed antineoplastic drug worldwide with approximately 2 million patients treated each year. The dihydropyrimidine dehydrogenase (DPD) enzyme is the rate limiting enzyme that metabolizes approximately 80% of 5-FU. Patients who are partially or totally deficient in DPD activity cannot adequately degrade fluoropyrimidines and this variability in enzyme activity arises from genetic polymorphisms in the dihydropyrimidine dehydrogenase gene. Some estimate that this deficiency occurs in 3-5% of patients receiving 5-FU. These patients can develop severe multi-organ system toxicities such as pancytopenia, mucositis, nausea, vomiting, diarrhea, volume depletion, neurological changes and in some cases fatality.

Screening tests for DPD deficiency are available but preemptive genetic testing of all patients expected to receive a fluoropyrimidine is controversial and not widely practiced. Therefore, recognizing these toxicities as related to DPD deficiency requires astute nursing assessment to anticipate patient needs and adapt

the necessary care accordingly. Nursing care as well as patient education is needed in the areas of oral hygiene, aggressive hydration, electrolyte management, nutrition, analgesia administration, neurologic status, supportive medications, colony stimulating factors and transfusions, and reducing the risk of infection and sepsis. Patient awareness of harmful conditions is a priority before initiating any therapy. Once therapy has begun, nursing practice will shift toward a greater emphasis on education, monitoring and followup.

Adverse effects of DPD deficiency may postpone or interrupt 5-FU treatment thereby decreasing the cure rate. Additionally, as our goal is to foster a better quality of life throughout the cancer continuum, recognizing and symptomatically treating patients with this condition remains paramount.

Early reporting of signs and symptoms of adverse/side effect is critical to both symptom management and patient safety. This abstract details the significance of nursing's role for identifying and managing symptoms associated with this enzyme deficiency and offers subsequent therapeutic advice.

### 1321945

**THE INAUGURATION OF AN ONCOLOGY REGIONAL CONFERENCE BY AN ONS CHAPTER.** Rita Steinbauer, RN, BSN, OCN®, Oncology, Duke University, Durham, NC; Susan M. Schneider, RN, PhD, AOCN®, FAAN, Oncology, Duke University, Durham, NC; Kimberly J. Camp, RN, MSN, ANP-BC, OCN®, Oncology, Duke University, Durham, NC; Faye McNaull, MPH, MBA, ACNS-BC, OCN®, Oncology, Duke University, Durham, NC

Describe the feasibility of implementing an Oncology Nursing Conference for regional ONS Chapters.

Given the current economic climate and the initiation of pharma guidelines, a needs assessment demonstrated that there was a void in educational offerings for local oncology nurses. Discussions with other ONS Chapter Boards in our region elicited similar concerns. The multiple academic medical centers in our area provide a rich source of expert oncology professionals who are knowledgeable about current treatments and evidence-based care. Our local ONS chapter decided to initiate a cost-effective regional oncology nursing conference highlighting local oncology nursing talent to meet this need. A needs assessment helped us to identify pertinent oncology topics and pick the local professional speakers with expertise in their specialty. The board identified that a one day conference, held on a Saturday, with CEU's would be most convenient for a majority of nurses. The chapter decided to invite the oncology pharmacology representatives to sponsor tables at the conference and this would support the funding of the conference and reduce the participant rate for the day. Marketing was done via listservs from the North Carolina Board of Nursing. Local ONS members served as hosts.

Offer a quality cost-effective regional oncology nursing conference utilizing local ONS talent within a one day format.

Total cost to implement the program was \$14,500 and sponsorship income, \$16,000.00. The registration of \$75.00/person included six CEU'S, food, and a recording of the conference on CD. Exceeding our expectations, ninety seven oncology nurses attended our first conference coming from 3 different states and 5 different counties within NC. Conference attendees were asked to evaluate the conference. 95% of attendees gave the conference a "superior" rating on all objectives with a commitment to return next year. Conference attendees appreciated the quality programming at less than \$13/CEU. Areas for improvement were in size of room and auditory equipment.

This program was innovative in that it coordinated with several local chapters, utilized local oncology nursing talent and was time and cost-effective. This program was a feasible alternative to traditional oncology educational programming and could be implemented in other regions.

### 1322070

**HPV-RELATED HEAD AND NECK CANCER.** Erin McMenamin, MSN, Radiation Oncology, Hospital of the University of Pennsylvania, Philadelphia, PA; Mary Catherine Hornberger, BSN, Radiation Oncology, Hospital of the University of Pennsylvania, Philadelphia, PA

At the completion of this session, the participant will be able to identify the epidemiology, clinical presentation, prevention and treatment strategies for HPV related squamous cell carcinoma (SCC) of the head and neck (H&N)

In 2011, over 39,000 Americans will be diagnosed with SCC of the H&N. Over the past decade, an alarming new pattern for H&N SCCs, specifically oropharynx, has emerged. More recently, SCC of the H&N is increasingly diagnosed in males less than 50 years of age without risk factors such as a history of smoking and/or alcohol. In addition, forty percent of these cancers are found to be positive for human papilloma virus (HPV) 16.

This presentation intends to review the continuum of care beginning with prevention and risk factors, clinical presentation, diagnosis, treatment strategies, symptom management and survivorship issues for HPV related SCC of the H&N. Current recommendations for prevention as well as emerging treatment paradigms, including transoral resection surgery (TORS) of tumors, external beam radiation therapy (EBRT) and chemotherapy/targeted therapy options will be discussed.

Historically SCC of the H&N has been treated with traditional surgical approaches followed by EBRT with or without chemotherapy sensitization dependent upon the stage. It appears that HPV16 positive tumors may be more responsive to adjuvant therapy. Risk reduction strategies and the potential impact vaccination has on incidence will be highlighted.

At the conclusion of this program, attendees will be able to describe prevention and risk factors, clinical presentation, diagnosis, treatment strategies, symptom management and survivorship issues for HPV related SCC of the H&N.

The oncology nurse in multiple settings must play a pivotal role when working with the population at risk as well as those that are diagnosed with SCC of the H&N. Awareness of the changing epidemiology, prevention and risk reduction measures is essential in providing education and appropriate nursing care. An understanding of recommended treatment approaches will facilitate the ability of the nurse to provide patient centered care. Nursing research is needed to ascertain the evidenced based approaches for risk reduction strategies, prevention, symptom management, disease treatment and survivorship care.

### 1322372

**NEUTROPENIC PRECAUTIONS.** Lyn Roos, RN, BSN, OCN®, Medical Oncology/ Telemetry/ Phase 1, MD Anderson Cancer Center, Houston, TX

Many existing non-pharmacological precautions are implemented by caregivers in the hospital setting to avoid infection. These interventions can be inconsistent and guided primarily by department traditions rather than sound evidence-based principles.

Oncology patients are highly susceptible to neutropenia and infections due to the commonly experienced immunocompromised state resulting from certain cancers and associated treatment course. Upon reviewing the research literature it was found that there are no guidelines established regarding which caregiver practices are effective in the prevention of infection. The amount of research on the effectiveness of caregiver practices regarding the prevention of infections in neutropenic patients is limited and lacks consistency.

The purpose of this presentation is to review the steps that one comprehensive cancer center took to establish guidelines for non-pharmacological precautions implemented by caregivers for the prevention of infections in the hospital setting.

Department audits were completed to evaluate the variance in practice among the institution. Aspects taken into consideration were inpatient versus outpatient settings and liquid tumors versus solid tumors diagnoses. A literature review was conducted to determine if caregiver practices such as the following: the use of personal protective equipment, hand hygiene, protective environments, diet and flower restrictions, visitor limitations and exposure to crowds can decrease the rate of infection among hospitalized neutropenia adult patients between ages 25-50. Factors analyzed include: common infections experienced by neutropenic patients, non-pharmacological caregiver practices, and medical interventions administered by the interdisciplinary team before and during an infection.

Findings show there is no difference in infection rates among patients who received caregiver-initiated precautions (personal protective equipment, protective environment, and restrictions in diet, flowers, and visitors) than patients who received standard precautions (hand hygiene and gloves) with the exception of Stem-cell transplant recipients.

Hand washing with proper drying by caregivers has been cited in the literature as one of the most effective interventions in the prevention of infection among neutropenic patients. Based on findings from the literature and evidence for the use of standard precautions, this warrants further consideration for practice guidelines in preventing neutropenic infections in oncology patients.

### 1322510

#### **A FIELD TRIP TO RADIATION: FEATURING INTERACTIVE LEARNING TO EDUCATE MULTI-GENERATIONAL NOVICE NURSES IN RADIATION BASICS.**

Stacie Davis, RN, BSN, OCN®, Oncology Administration, Regional Cancer Center at JCMC, Johnson City, TN; Marilyn J. Honeycutt, RN, OCN®, Radiation Oncology, Regional Cancer Center at JCMC, Johnson City, TN; Cathy W. Katras, RN, Radiation Oncology, Regional Cancer Center at JCMC, Johnson City, TN

To develop an interactive learning tour of Radiation Oncology designed to integrate the patient experience during radiation into the novice nurse educational experience.

Three out of four cancer patients receive radiation treatments. The magnitude of this patient population underscores the need for knowledgeable nurses. The use of effective communication decreases patient anxiety and increases satisfaction. Accurate patient assessment and teaching facilitates the treatment plan. The current novice oncology nurses are a multi generational workforce. Combining teaching methods encourages communication and interaction with the radiation nurses. Immediate feedback, questions and attention are also important issues for all generations of nurses.

This project is designed to increase the radiation oncology knowledge of the novice nurse. Expert radiation oncology nurses host the interactive fieldtrip. The linear accelerator and a variety of molds used for accurate radiation treatment delivery are viewed and explained. Using visual tours and face to face interactions with radiation nurse expert increases understanding. Using exemplars focuses on the use of the knowledge and critical thinking skills. Behaviors surrounding symptom management encourage the refining communication skills. Education will focus on the use of tools and electronic references. Targeting preferred methods within each group is designed to increase learning and retention. Articles are available to supplement tour information. Standardized tools are available electronically or in print. Immediate feedback is provided throughout the tour, exemplars and use of tools increasing the satisfaction of the multigenerational groups. Knowledge is measured using a five question pre and post test. Post tour evaluation includes assessment of the standardized tools. Our goals are to demonstrate increased knowledge and satisfaction with the standardized tools.

This program will be evaluated through comparison of the pre and post test scores and tools assessment ratings. Our expectation is that the participants will have increased their knowledge and application skills.

This program delivers information in an appealing format and experiencing radiation oncology giving the nurse some experience of the patient's treatment. Exemplars are written in first person depicting a specific clinical event or situation, leading to a discussion of positive patient outcomes with professional colleagues. Incorporation of tools increases communication and collaboration.

### 1322551

#### **A MULTIDISCIPLINARY TEAM HUDDLE APPROACH IN AN ACUTE CARE ONCOLOGY AND BONE MARROW TRANSPLANT SETTING.**

Megan Kuehner, RN, BSN, OCN®, Patient Care Services, University of California Davis Health System, Sacramento, CA; Patricia Palmer, RN, MS, AOCNS®, Patient Care Services, University of California Davis Health System, Sacramento, CA; Wilson Yen, RN, MSN, Patient Care Services, University of California Davis Health System, Sacramento, CA; Jacob Sands, MD, Division of Hematology and Oncology, University of California Davis Health System, Sacramento, CA; Ana Rodriguez-Fahrni, MD, Division of Hematology and Oncology, University of California Davis Health System, Sacramento, CA; Angela Gandolfo, BS, MBA, Clinical Operations, University of California Davis Health System, Sacramento, CA

Discuss implementation and measurable benefits of a multidisciplinary team huddle (MTH).

Patient and staff satisfaction had reached an all-time low on our inpatient Oncology/Bone Marrow Transplant (BMT) Unit. Survey results demonstrated that cohesiveness, communication and teamwork among staff was less than optimal and overall quality of care as measured by patient satisfaction exit surveys was far from outstanding. A staff RN and Clinical Nurse Specialist (CNS) proposed a change and led the MTH effort.

Implementation of an inpatient oncology MTH to improve patient satisfaction and facilitate communication between all members of the healthcare team.

The Performance Improvement Advisor was consulted for guidance. Baseline patient and staff satisfaction surveys were administered prior to initiating the MTH. Key stakeholders were identified for the leadership team (LT): including physicians, CNS, RNs, discharge planners, social workers, pharmacists, dietitians, physical therapists and clinical trials. Implementation support was obtained from nursing management and physician leaders in Medical Oncology, Surgical Oncology and BMT. Fliers were displayed to increase awareness of our planned Go-Live date and huddle training session. The training session was held to teach the LT how to effectively huddle. Huddle format, communication/minutes book, and designated times for the MTH's were developed. In-services were held for nursing staff to prepare them for the huddle. A successful pilot with scheduled chemotherapy patients was then expanded to include all medical oncology patients. Subsequent huddles were developed for surgical oncology and BMT patients. The MTH now discusses immediate patient needs, discharge concerns, plans of care, prioritizes admissions, off-the-floor patients and educational topics.

Within three months of the huddle, overall percent excellent rankings increased as follows; quality of care from 24% to 64%, communication 40% to 92%, teamwork 57% to 81% and cohesiveness 30% to 81%. Huddles became more efficient with our average time decreased from 27.3 to 14.9 minutes with 27.3 patients discussed and 18.1 staff members present.

The MTH has allowed us to work closely together as a team with improved patient satisfaction. Every member of the team now knows the plan of care for the patient which allows them to do their work proactively instead of reactively.

### 1322903

#### **IPILIMUMAB-ASSOCIATED ENDOCRINOPATHIES: EARLY DETECTION AND MANAGEMENT STRATEGIES.**

Kathleen Madden, RN, MSN, FNP-BC, AOCNP®, Oncology, NYU

Langone Medical Center, New York, NY; Krista Rubin, MS, RN, FNP-BC, Oncology, Massachusetts General Hospital, Boston, MA; Rajni Kannan, RN, MSN, ANP-BC, Oncology, NYU Langone Medical Center, New York, NY

Prevention and early intervention of potentially life threatening immune mediated endocrinopathies related to ipilimumab (Yervoy™) treatments rely heavily upon oncology nurses accurate assessments, monitoring of lab values, and timely interventions at the onset of symptom presentation.

Metastatic melanoma has traditionally had a poor survival rate with an average life expectancy of less than 12 months. In 2011 ipilimumab became the first new therapy in 13 years to be approved for the treatment of stage III unresectable and stage IV metastatic melanoma. This novel immune modulating therapy targeting the CTLA-4 receptor has greatly impacted the treatment of advanced melanoma. The pivotal phase 3 clinical trial demonstrated an impact on disease control, progression free survival, and demonstrated long term overall survival. The addition of ipilimumab to patient treatment options has contributed much needed hope in managing many patients with melanoma. However, treatment with ipilimumab is often accompanied by a unique profile of adverse effects. One such adverse effect is temporary or permanent dysfunction of the endocrine system. Although infrequent, grade 3-4 endocrinopathies during clinical trials had severe or life threatening potential.

Proper and thorough evaluation of required lab work and symptom assessments prior to infusions enhance the likely discovery of new onset endocrine dysfunction and prevent or reduce potentially life threatening adverse effects.

Nurses utilize the Yervoy™ risk evaluation mitigation strategy (REMS) Nursing Immune-Mediated Adverse Reaction Checklist and monitor routine lab work including thyroid functions prior to each infusion. Additional testing of the pituitary, adrenal, and gonadal glands are used for a global assessment of endocrine dysfunction.

With the proper recognition and early intervention, unnecessary hospitalizations, and potentially life threatening immune related adverse effects can be avoided. Patients are safely and successfully managed with replacement hormones, labwork monitoring, and symptom assessments.

Ipilimumab associated endocrinopathy symptom onset can be subtle and progressive leading to potential life threatening complications. Nurses treating advanced melanoma patients need to possess the skills to recognize, assess, and intervene promptly when immune mediated effects develop. Early recognition and intervention of endocrinopathies yield safer treatment courses and better patient outcomes.

### 1323250

**BREATHING LIFE INTO DYSPNEA RELIEF: EDUCATING ONCOLOGY NURSES ABOUT ALLEVIATING REFRACTORY DYSPNEA DURING THE END-OF-LIFE FOR ADVANCED CANCER PATIENTS WITHOUT CHRONIC OBSTRUCTIVE PULMONARY DISORDER (COPD).** Sarah Kang, MSN, Hematology-Oncology 4SW, Cedars Sinai, West Hollywood, CA and School of Nursing, UCLA, Los Angeles, CA

Educating nurses on Cedars Sinai Medical Center (CSMC) 4SW concerning the pervasive and distressing nature of dyspnea, recommended assessment, evidence-based interventions, and current research measured through pre- and post-education questionnaires.

Refractory dyspnea is the uncomfortable and subjective sensation of discomfort while breathing often described as air hunger or shortness of breath wherein the underlying cause cannot be reversed. The condition is pervasive and distressing for advanced cancer patients during the end-of-life, with estimates over 60-70%, and dyspnea consistently identified as the primary and secondary indication for palliative consultation. While dyspnea is considered

a nursing sensitive outcome, it is poorly identified, assessed or alleviated. Additionally, fear of hastening death through narcotic administration is a source of great distress for family and staff. However, a small but growing body of research strongly suggests that increasingly high doses of opioids during the end-of-life may prolong life rather than hasten death.

To educate oncology nurses concerning the nature and evidence-based interventions for alleviating dyspnea dying cancer patients who do not have COPD through an educational in-service, flier, and poster.

Fifteen pre-tests and 14 post-tests were received. Considerable increases in correct responses were found in identifying five evidence-based interventions, the percent of cancer patients experiencing dyspnea during end-of-life, and identifying the impact of the neural pathway. Pre-tests responses to the potential effects of providing increasingly high doses of opioids during end-of-life focused heavily on death and respiratory depression, while post-test responses focused on the benefits of treatment.

Examination of questionnaires confirms that this educational program positively impacted the knowledge of nurses concerning the nature of dyspnea and dyspnea relief. While no systematic method of measuring and recording dyspnea for palliative patients exists at CSMC, nurse feedback and anecdotal responses suggest that the project has also positively impacted patients experiencing dyspnea.

### 1323742

**INTERVENTIONAL PULMONOLOGY: NEW MODALITIES FOR DIAGNOSIS AND TREATMENT OF AIRWAY AND PLEURAL MALIGNANCIES.** Jason Isolda, RD, MSKCC, New York, NY

Participants will be able to describe the various aspects of care related to patients requiring interventional pulmonary procedures.

Cutting edge developments in technology have created a new role for the pulmonary/oncology nurse. The discipline is known as interventional pulmonology (IP). This subspecialty extends across the continuum of cancer care, with diagnostic, therapeutic, and palliative modalities; positively impacting the illness, disability, and mortality associated with cancer. Endobronchial ultrasound (EBUS) is a rapidly growing diagnostic tool. EBUS combines traditional visual bronchoscopy with linear ultrasound, allowing visualization, and the sampling of lymph nodes and pulmonary nodules. EBUS increases bronchoscopic yields, and can be an alternative to CT guided or surgical procedures with decreased complications and more accurate diagnosis. IP techniques can be utilized to palliate cancer and treatment related symptoms. Ambulatory pleural catheters placed with ultrasonic guidance are frequently used for control of pleural effusions. Dilatation, debulking, and stent placement are useful in management of malacia, endobronchial obstruction, extrinsic compression, and airway stenosis.

The purpose of this presentation is to enhance the knowledge of the oncology nurse related to IP modalities and their application across the disease trajectory.

Knowledge of IP methods is crucial in pre-procedure patient education. Awareness of potential complications is similarly important. Generally a same day procedure, bronchoscopy can lead to hemorrhage or pneumothorax post-discharge. Mismanagement of pleural catheter dressings can lead to local infection, empyema, and failure of the device. Endobronchial stents can become obstructed, infected, fractured, or dislodged. Astute nursing management may enhance the effectiveness of the intervention and prevent serious complications. IP nursing encompasses case management responsibilities: coordinating home care, supply procurement, education of family members, and scheduling nurse visits for management of devices may be required.

Learners will be able to explain various IP procedures and the associated nursing responsibilities related to this emerging technology.



As IP procedures become more commonplace nurses will need to broaden their knowledge and skills. Familiarity with IP procedures and the related aspects of care will expand the scope of practice for oncology nurses and improve outcomes for patients.

### 1323980

#### **IMPLEMENTATION OF AN ONCOLOGY-SPECIFIC NEW RN SKILLS ORIENTATION AT AN ACADEMIC MEDICAL CENTER.**

Reiko Torgeson, RN, MN, OCN®, University of Washington Medical Center, Seattle, WA; Lenise Taylor, RN, AOCNS®, University of Washington Medical Center, and Seattle Cancer Care Alliance, Seattle, WA

Facilitate skills acquisition for registered nurses specific to oncology who are new to this urban, tertiary academic medical center. This is to ensure standardized information is given to the new RN on topics that are vulnerable to variation in practice, align with quality measures and ensure safe practice.

This institution will be opening a new 30 bed oncology unit in October 2012, expanding inpatient oncology beds from 86 to 116. It is anticipated that an additional 70 RN FTEs will be on-boarded by the time the new unit is at full capacity. Orientation will occur on more than one oncology unit, increasing the risk variation in how things are prioritized and taught. To decrease this variability, a New Hire Skills Day was created.

The class provides an opportunity to practice skills necessary to provide basic care to oncology patients. Skills include infusion pump and patient care analgesia pump programming, central line care, blood administration, blood culturing, prevention of falls, blood/marrow transplant care standards and care of a patient receiving chemotherapy. The new hires leave with a competency checklist for tunneled line, implanted port and PICC line dressing changes to be completed on the unit. They also complete a PCA and epidural pump competency checklist while in class.

The participants are asked to complete an online survey four weeks after the class. They evaluate the applicability of the contents to practice, ease of transitioning to practice including comfort of performing the skills learned in class. The results of the survey are positive and 100% of the participants stated that they valued the course.

This class allows participants to learn as a group, following institutional policies and procedures and standards to reduce central line infections and patient falls. Experienced RNs hired have the opportunity to learn sitespecific policies and compare them to previous policies. New graduate RNs are able to continue acquiring skills and learn about how to care for oncology patients. By having both experienced and new graduate RNs in the same class, they are able to support and learn from each other; thus creating a rich learning environment.

### 1324245

#### **USE OF A COMMUNITY-BASED PARTICIPATORY RESEARCH APPROACH TO STUDY INFLUENCING FACTORS TO PAP TESTING PRACTICES AMONG VIETNAMESE IMMIGRANT WOMEN.**

Connie Nguyen-Truong, PhD, RN, PCCN, School of Nursing, Oregon Health and Science University, Portland, OR; Frances Lee-Lin, PhD, RN, OCN®, CNS, School of Nursing, Oregon Health and Science University, Portland, OR; Michael Leo, PhD, Center for Health Research, Kaiser Permanente, Portland, OR; Vivian Gedaly-Duff, DNSc, RN, School of Nursing, Oregon Health and Science University, Portland, OR; Lillian Nail, PhD, RN, FAAN, School of Nursing, Oregon Health and Science University, Portland, OR; Pei-ru Wang, PhD, Community Health, Asian Family Center a Program of the Immigrant and Refugee Community Organization, Portland, OR

To identify factors influencing Pap test receipt and adherence to screening recommendations for Vietnamese immigrant women (VIW, non U.S.-born).

Vietnamese American women (VAW) are diagnosed with later stage cervical cancer than non-Hispanic White, Korean, and Japanese Asian subgroups. Across studies, only 68-81% of VAW reported receiving a Pap test.

The purpose of this community based participatory research (CBPR) was to explore the relationships of potential influencing factors with Pap test receipt and adherence among VIW in the Portland, Oregon metropolitan area. The following were examined as potential influencing factors: demographics, awareness, having requested a doctor/nurse practitioner for a Pap test, knowledge, Pap testing health beliefs, cultural barriers, confidentiality issues, and external factors. We also described VIW's awareness of local community resources.

Health educators at the Immigrant & Refugee Community Organization identified cervical cancer as a priority problem for the Vietnamese community. The Ecological Model guided our understanding of influencing factors in obtaining a cervical Pap test.

Based on a power analysis, a sample size of 211 VIW was needed and recruited. Data were collected using a self-administered questionnaire. Items included demographics, Revised Susceptibility, Benefits, and Barriers Scale, Cultural Barriers to Screening Inventory, Confidentiality Issues Scale, Quality of Care from the Health Care System Scale, and other influencing factors. The questionnaire was translated using a team approach and pretested. VIW were recruited from twelve Asian community organizations. Descriptive statistics and logistic regression analyses ( $p < 0.10$ ) were used.

Only 74% have received a Pap test and 69% reported adherence. In the multivariate model for receipt, longer U.S. residency (OR=1.11[CI=1.06-1.17]), higher education (OR=3.07[CI=1.18-8.02]), being married/living with a partner (OR=2.83[CI=1.28-6.25]), having a friend(s) suggest Pap testing (OR=2.95[CI=1.21-7.18]) were positively associated and cultural barriers, use of Eastern/Asian medicine (OR=.78[CI=.65-.92]) and lack of family support (OR=.86[CI=.76-.97]) were negatively associated. In the multivariate model for adherence, having a doctor/nurse practitioner recommend Pap testing (OR=4.90[CI=1.20-19.98]) and having health insurance (OR=5.07[CI=1.05-24.47]) were positively associated. Only 11% knew where to obtain a free/low-cost Pap test. These results indicated that there are multiple influencing factors. Health care providers could promote screening and education among VIW by recognizing these influencing factors.

**Underwriting/Funding Source:** American Cancer Society [DSCN-08-208-01]; Beta Psi and Xi Mu Chapters of Sigma Theta Tau International Honor Society of Nursing; Dean's Award for Doctoral Dissertation of Oregon Health & Science University (OHSU) School of Nursing; Graduate Nursing Senate Research Award of OHSU School of Nursing; and Student Research Forum Fellowship Award of OHSU. Support was also provided by the Health Resources & Services Administration Professional Nurse Training Scholarship Award/TG2; Graduate Assistance in Areas of National Need Fellowship; and the Bertha P. Singer Scholarship

### 1324403

#### **DEVELOPING CHEMOTHERAPY PATIENT EDUCATION ACROSS A LARGE HOSPITAL SYSTEM THROUGH USE OF MULTI MEDIA VENUES.**

Josette Snyder, RN, MSN, AOCN®, Cancer Institute, Cleveland Clinic Health System, Cleveland, OH; Barbara Thoman, BSN, RN, OCN®, Cancer Institute, Cleveland Clinic Health System, Cleveland, OH

To incorporate use of DVD to complement current basic chemotherapy education.

Patient education is paramount in the newly diagnosed cancer patient. It is known that patients who receive education prior to treatment have less anxiety, feel in control, and can set realistic expectations regarding their diagnosis and treatment. Patient satisfaction and quality of life are increased when effective education is presented prior to chemotherapy. Implementation of patient education can be challenging due to availability of personnel, patient schedules, available materials, and time. An Oncology Nursing

Leadership group from a large hospital system representing 11 different infusion areas realized the need for basic, standardized education for patients prior to receiving chemotherapy.

A subgroup gathered the information being presented at the variety of practice locations and referenced the ONS Chemotherapy and Biotherapy Course to assess the information that was being taught. Once compiled, the information was used to develop and produce a 14 minute Basic Chemotherapy Education video. This project was grant funded. Patients and staff at different practice locations were interviewed and participated in the making of the DVD. The DVD format was easily produced and distributed to the practice sites for patients to view as an adjunct to additional individualized education they would receive.

The overall evaluation of the DVD was positive. Both staff and patients felt it to be at a basic instructional level and easy to understand. It was adaptable at all the practice settings and used in conjunction with additional resources (written material, individualized teaching and group teaching). Patients were also able to take the DVD home and share with significant care partners.

The impact of patient education prior to the initiation of chemotherapy is a cornerstone for patient understanding and adherence to the treatment plan. Patients feel valued, less stressed, and have the ability to make informed decisions regarding care management decisions. Having a standardized basic education DVD also assists the nurse by laying the groundwork for continued education. The DVD is now available on the hospital internet site and is accessible to all patients.

### 1324478

#### **ONCOLOGY STAFF EDUCATION: A PHASED APPROACH.**

Linda Abbott, RN, MSN, AOCN®, CWON, Nursing, UIHC, Iowa City, IA

To provide educational opportunities and training for staff nurses new to oncology in a phased and multifaceted approach to enhance learning.

Baccalaureate or associate degree nursing programs often do not offer oncology as a part of their core curriculum. If oncology is part of the core curriculum, it is 1-2 lectures or may only be offered as an elective. New graduates and nurses without previous oncology experience are eager to learn more about cancer, treatment options, combination therapies, supportive therapies, nurse sensitive outcomes and evidence based nursing care.

The oncology education program developed at this Midwestern comprehensive cancer center was designed to offer oncology nursing education over the first year of the staff member's employment in the cancer center. A basic overview of cancer and cancer treatment is provided within the first 8 weeks of employment. Within 3-4 months of employment, the staff member attends a 2 day chemotherapy class and then is preceptored in the art of administering chemotherapy. Beginning at 5-6 months, they are scheduled to attend a series of three, eight hour, oncology specific classes. One focuses on hematology oncology, one on solid tumors and one is on a variety of oncology specific topics such as evidence based practice and mentorship. Over the remaining 6 months of the staff members first year, they are scheduled for observational experiences in the clinic settings, the operating room, radiation oncology, the chemotherapy infusion suite, and with consulting services such as palliative care.

Evaluations are completed by nurses after they have attended each of the classroom portions of the program. Results are used to help evolve the program. In 2012, an evaluation/assessment of educational offerings and needs is being conducted via a survey monkey.

Patients who have successful treatment are less frequently seen in the in-patient area and it is the patient with poorer outcomes or complications that the in-patient nurse becomes most familiar with. Nurses who work in oncology in-patient areas can get a

skewed perspective of the successes that have been seen in oncology care. This approach provides in-patient nurses the opportunity to see the "big picture" for patients.

### 1324558

#### **MULTIDISCIPLINARY APPROACH TO PSYCHOSOCIAL DISTRESS SCREENING PROGRAM DEVELOPMENT.**

Judy Ferraz, RN, OCN®, Oncology Services, Franciscan Health System, Tacoma, WA; S. Keith Helmka, MSW, LICSW, Oncology Services, Franciscan Health System, Tacoma, WA

The objective was to utilize expertise of different disciplines to develop a program to address a gap in care that has been identified as affecting patient outcomes.

Oncology nurses understand that cancer patients experience numerous stressors during treatment, which can negatively impact outcomes. The American College of Surgeons established new standards to address the need for psychosocial distress screening in cancer care. In response to the new standards, our healthcare system's Cancer Committee directed a subcommittee to develop a distress screening program.

The multidisciplinary subcommittee consisted of Oncology Department's two Social Workers, Registered Dietician, the on-site American Cancer Society Navigator, and two OCN RN's. The subcommittee determined that the outpatient population would be the program focus. The goal would be to improve patient outcomes through positively impacting adherence and compliance to treatment. A multidisciplinary approach utilized insights provided by different disciplines.

The Distress Thermometer Screening Tool produced by the National Comprehensive Cancer Network (NCCN) was the method of assessment. The initial chemotherapy visit was identified as the "pivotal medical visit." The RN's on the outpatient Oncology unit will ensure patients will receive the questionnaire at that visit, and review the tool at completion. Patients who identify a high level of distress or immediate needs will be referred by Nursing to the Oncology Social Worker. The American Cancer Society Patient Navigator will resource all other patients. The completed screening tool will be placed into the chart along with documentation of interventions provided by the screeners.

The multidisciplinary team approach proved to be an effective process for developing the pilot. Different disciplines provided global perspective in applying solutions that would work across the healthcare system. The pilot program will be a valuable tool in the practice of the outpatient oncology nurse in providing for the psychosocial health of patients, thus maximizing positive outcomes.

As resources for providing quality cancer care diminish, engagement of all disciplines for the creation of new programs will have increasing value. The multidisciplinary team process can be adopted by other systems to meet these new program standards set by the American College of Surgeons.

### 1324672

#### **CONTENT VALIDITY OF THE PEDIATRIC CONSTIPATION ASSESSMENT SCALE.**

Myra Woolery, MN, RN, CPON®, Nursing and Patient Care Services, National Institutes of Health, Baltimore, MD; Deborah McGuire, PhD, RN, FAAN, Organizational Systems and Adult Health, University of Maryland Baltimore School of Nursing, Baltimore, MD

To describe the content validity of the Pediatric Constipation Assessment Scale (P-CAS), a self-report instrument for children with cancer, as rated by a panel of healthcare professional experts and children representative of the target population. This study is the first phase in a sequential evaluation of psychometric properties of the PCAS.

Children with cancer receiving active treatment or palliative care are at risk for constipation. Management requires accurate assessment, but few pediatric measures are available. The P-CAS, adapted from an adult instrument, addresses this gap by expand-

ing on current approaches to assessment of constipation in children with cancer. This research is commensurate with the symptom-related research agendas of the Oncology Nursing Society, National Institute of Nursing Research, and National Cancer Institute.

The purpose of this study was to determine the content validity of the P-CAS, a 20-item self report instrument assessing severity of constipation in children with cancer.

Development and testing of the P-CAS was guided by the Model for Constipation Across the Lifespan developed by the author. The P-CAS was evaluated by 12 healthcare professionals (pediatric oncology nurses, oncologists, gastroenterologists) and 12 children with cancer aged 8-17 using a standardized questionnaire accompanied by an appropriately leveled explanation of their role and detailed instructions. Statistical analyses included descriptive characteristics, content validity index estimated at the item-level (I-CVI) and scale-level (S-CVI), and qualitative analysis according to Knafl et al.

Healthcare professionals had no difficulty completing the questionnaire and most children were able to rate the relevancy of items and offer suggestions for revisions/deletions. I-CVI ranged from .25-1.0 for professional experts, .58-1.0 for children, and .50-1.0 for the combined sample. Quantitative and qualitative comments were used to determine disposition of items, with 14 retained, 4 revised, and 6 deleted. S-CVI-average was .76 for professionals, .84 for children, and .80 combined. After 6 items were deleted S-CVI-average increased to .83 for professionals, .91 for children, and .87 combined. Results demonstrate evidence for content validity and provide a foundation for phase 2 in which the revised P-CAS will be tested.

**Underwriting/Funding Source:** American Cancer Society Doctoral Scholarship

### 1326397

**A WEB-BASED SCREENING AND ACCRUAL STRATEGY FOR CLINICAL TRIALS.** Judith Smith, MSN, RN, AOCN®, Division of Cancer Prevention, National Cancer Institute, Bethesda, MD; Arash Mohebati, MD, Department of Surgery, Memorial Sloan-Kettering Cancer Center, New York, NY; Allison Knutson, CCRP, Department of Medicine, Weill Medical College of Cornell University, New York, NY; Xi Kathy Zhou, PhD, Department of Biostatistics and Epidemiology, Weill Medical College of Cornell University, New York, NY; Eva Szabo, MD, Division of Cancer Prevention, National Cancer Institute, Bethesda, MD; Andrew Dannenberg, MD, Department of Medicine, Weill Medical College of Cornell University, New York, NY

The primary objective is to describe a novel web-based social network strategy used successfully for screening and accrual in a cancer prevention clinical trial of short duration.

Screening and recruitment of eligible subjects for clinical trials is a challenging, yet essential component of translational research. Accrual to cancer prevention clinical trials is especially challenging, since these trials target relatively healthy individuals at risk for developing cancer, but who are without evidence of disease. Typically clinical trials utilize multiple recruitment strategies to achieve accrual goals. The study we describe here used a social networking site as the sole recruitment approach.

Our purpose was to evaluate Craigslist as a viable single-modality screening and recruitment strategy for a cancer prevention clinical trial.

The study was a prospective randomized open label biomarker trial studying the role of zileuton or zileuton plus celecoxib in modulating the urinary markers of lung injury.

The targeted study population was 80 at-risk healthy smokers with no evidence of lung disease. A clinical trial advertisement with IRB-approved text was placed in the sequence of sections within Craigslist: new york>craigslist>manhattan>community>volunteers. Since there was no cost associated with placing advertisements in Craigslist, this method was chosen over other web-based strategies. Of the 430 initial responses to the ad, 198 individuals

were initially eligible based on questionnaire response. 123 people were telephone-screened, of whom 98 subjects were consented, 84 were randomized and 77 subjects completed the study successfully. The association between recruitment success (consented subjects) and subject characteristics (age, gender, distance, travel time by car, travel time by public transportation to study site) was examined, as well as the timing of ad renewal in relation to successful subject accrual. Utilizing this single web-based advertising strategy, accrual for the trial was completed seven months prior to the projected completion date.

The urban location and broad inclusion criteria made this recruitment technique an ideal choice for the study. Although Craigslist may not be an efficient recruitment strategy for all studies, the brisk accrual in this study demonstrates that this may be a viable method of accruing healthy at-risk individuals to some cancer prevention trials.

**Underwriting/Funding Source:** US Department of Health and Human Services, National Institutes of Health, National Cancer Institute

### 1326598

**CHRONIC SLEEP DISTURBANCE IN ADULT RECIPIENTS OF HEMATOPOIETIC STEM CELL TRANSPLANT.** Christine Iovino, RN, MSN, FNP-BC, Memorial Sloan-Kettering Cancer Center, New York, NY; Bridgette Thom, MS, Memorial Sloan-Kettering Cancer Center, New York, NY; Amy Lowery, PhD, Memorial Sloan-Kettering Cancer Center, New York, NY; Molly Maloy, MA, Memorial Sloan-Kettering Cancer Center, New York, NY; Ann Jakubowski, PhD, MD, Memorial Sloan-Kettering Cancer Center, New York, NY

To describe the prevalence and predictors of sleep disturbance in stem cell transplant patients.

A nurse practitioner-run survivorship clinic for patients who underwent allogeneic hematopoietic stem cell transplant (HSCT) was established to identify and address medical and psychological conditions impacting quality of life. Sleep disturbance, an issue starting to receive attention in the literature in the acute transplant setting, has been virtually ignored in survivors.

To determine the prevalence and predictors of sleep disturbance in a sample of HSCT survivors. This study addresses ONS Research Agenda priority IIC, Long-term Survivorship Issues.

Sleep is one of 12 activities of life named in the Roper-Logan-Tierney model of nursing. According to this model, nurses must care for patients holistically, attending to each activity, rather than focusing solely on care of the disease.

A retrospective chart review of 168 HSCT survivors examined responses to the Patient Health Questionnaire (PHQ-9) item, "Over the past two weeks, have you been bothered by trouble falling or staying asleep, or sleeping too much?" Differences by patient and treatment factors including gender, age, time since transplant, sleep medication use, and type of transplant (non-myeloablative, myeloablative; conventional, t-cell depleted), using Chi-square and one-way ANOVA testing.

Of respondents, 42% (n=69) were bothered by sleep disturbances: 57% of these patients reported being bothered "several days" in the past two weeks, while 19% were bothered "more than half of the days"; the remainder of patients (24%) were bothered nearly every day. Responses were re-analyzed with the latter two categories combined; statistically significant relationships were found between PHQ-9 and gender and sleep medication: women were more likely than men to report a sleep disturbance ( $X^2 = 6.27$ ,  $p = 0.04$ ), as were patients taking sleep medications ( $X^2 = 25.38$ ,  $p < 0.001$ ). Nearly half of the patients reported sleep disturbances, and many were taking sleep medication. Chronic sleep disturbance can have a significant impact on mental and physical well-being, including immune function. Nurse practitioners play a vital role in identifying, preventing and managing this issue in HSCT patients. Future research will use a more comprehensive sleep evaluation and test a cognitive behavioral intervention.

1326699

### **A PILOT STUDY TO IDENTIFY PATIENT FACTORS IMPACTING ADHERENCE TO ORAL CHEMOTHERAPY.**

Pamela Ginex, EDD, RN, OCN®, Nursing, Memorial Sloan-Kettering Cancer Center, New York, NY; Bridgette Thom, MS, Nursing, Memorial Sloan-Kettering Cancer Center, New York, NY; Venice Anthony, RN, BSN, CBCN®, Nursing, Memorial Sloan-Kettering Cancer Center, New York, NY; Corey Russell, MSN, OCN®, Nursing, Memorial Sloan-Kettering Cancer Center, New York, NY; Christopher Gromisch, BS, Clinical Research, Memorial Sloan-Kettering Cancer Center, New York, NY

To identify individual patient factors that facilitate or impede adherence to oral chemotherapy.

Increasingly, patients are being treated with oral chemotherapeutic agents, and more than 25% of all cancer drugs in development are oral formulations. Many established safeguards for infusional chemotherapy are lacking for oral agents, and ensuring the safe, accurate administration of oral chemotherapy poses a challenge for oncology nurses. Non-adherence is a particular challenge, with published adherence rates as low as 20%.

To determine individual patient factors impacting oral chemotherapy adherence, which addresses ONS Research Agenda priority F.1.1 by attempting to understand predictors of adherence.

The Necessity-Concerns Framework, which posits that individual adherence behavior is an attempt to cope with the threat caused by illness and results from cognitive and emotional appraisal processes, guided this study. The theory suggests that individuals are more likely to be adherent if they perceive their conditions as severe and their treatment to have more positive than negative consequences.

This mixed methodology study includes 100 patients prescribed capecitabine for breast or gastrointestinal cancer. Adherence is assessed via chart verification of patient self-report and using the Medication Adherence Questionnaire, which measures both intentional and non-intentional nonadherence. Independent variables include impact of side effects, beliefs about medications, self-efficacy, demographics, and satisfaction with medication information. Additionally, clinical variables, such as treatment schedule and concomitant medications, are being collected. Quantitative data analysis includes one-way ANOVA and chi-square and t-testing, along with the development of Pearson and Spearman correlation matrices, as appropriate, to assess the relationship between adherence and independent variables. A subset of the sample is being interviewed using phenomenological techniques to gain a more holistic understanding of facilitators and barriers to adherence.

Accrual is ongoing. Relationships between adherence and independent variables will be presented. As many factors are associated with medication adherence, strategies to improve adherence need to be multidimensional. Adherence to medications is a nursing-sensitive patient outcome and the findings from this study will lead to the development of nursing interventions to promote adherence.

**Underwriting/Funding Source:** Geri and ME Nursing Research Fund

1327098

**QUIET TIME IN THE ICU.** Gladys Sheila Marquez, RN, Progressive Care Unit, LewisGale Hospital Montgomery, Blacksburg, VA; Angela Williams, BSN, Progressive Care Unit, LewisGale Hospital Montgomery, Blacksburg, VA; Carolyn Newman, BSN, Progressive Care Unit, LewisGale Hospital Montgomery, Blacksburg, VA

The main objective of this study is to increase patient satisfaction.

ICUs (Intensive Care Units) have constant noise, procedures and activity. This noise, light and activity cause disruption in the natural cycle of sleep which provides hormone changes that can

affect mood, tissue repair, healing, pain and the body's immune system. Quiet time is a concept based on the need for restorative sleep. The period between 2-4 pm has shown to be a natural time to allow for the healing benefits of sleep. Prior research done on this topic supports the hypothesis that quiet time has physical and psychological benefits to the patient, improves patient satisfaction, decreases length of stay, and decreases noise levels.

The purpose of this study is to show that quiet time decreases noise level in ICU and improves patient satisfaction.

Florence Nightingale's Environmental Nursing Theory emphasized the use of environment to promote health. Control of noise was a key component to Nightingale's theory. The theory postulates that control of the environment will establish a situation conducive for healing of patients.

A decibel meter was used to measure noise in predetermined locations throughout the ICU at two randomly drawn times one week before the initiation of quiet time and one week after the initiation of quiet time. Noise levels before and after quiet times were analyzed. Second, a satisfaction survey was given to ICU patients before and after the quiet time initiation for a total of thirty patients. A comparison of indicators for patient satisfaction in the survey was statistically analyzed to determine if patient satisfaction improved after the initiation of quiet time. While all patients participated in the quiet time, only patients that were neurologically intact and able to complete the survey independently were surveyed.

Research results indicate improved patient satisfaction and decreased noise levels with the implementation of standardized quiet times in the ICU.

1327345

### **DEVELOPING AN APPROACH TO MANAGING VASCULAR PROBLEMS IN A COMPREHENSIVE CANCER CENTER.**

Sherry Wright, ANP-BC, AOCN®, Thoracic and Cardiovascular Surgery, MD Anderson Cancer Center, Houston, TX; Guillermina Verduco, FNP-C, Thoracic and Cardiovascular Surgery, MD Anderson Cancer Center, Houston, TX; Tam Huynh, MD, Thoracic and Cardiovascular Surgery, MD Anderson Cancer Center, Houston, TX

The overall increase in cancer survival rates and life expectancy has led to a greater percentage of oncologic patients and cancer survivors presenting with common vascular diseases. The use of complex therapies in cancer treatment has resulted in a higher incidence of treatment-related vascular complications. Treating these complications and co-morbidities is an important part of patient care.

Historically, patients with acute and chronic vascular disease such as aneurysms, carotid disease, peripheral vascular disease and lymphedema have been referred outside the center for treatment. Specialized knowledge and resources were not available to treat such patients.

Developing a vascular clinic and having a dedicated vascular surgeon on staff was an important addition in the multidisciplinary approach to patient care.

A dedicated vascular service and vascular clinic with a dedicated vascular surgeon was established. Collaboration occurred between many departments, including the Cardiopulmonary Service, Interventional Radiology, Operating Room, Post-Anesthesia Care Unit, Intensive Care Unit, Nursing Education Center, Business Center, Billing Center and a specialized surgical unit. The vascular surgeon provided in-services for the inpatient and outpatient clinical nursing staff and specialized training was provided to ultrasound technicians. Protocols, order sets and consents were developed for vascular surgeries and procedures. A dedicated nurse practitioner was assigned to provide outpatient and inpatient support.

Collaborative efforts and dedicated resources have allowed the development of a successful program. Carotid endarterectomy, endovascular repair of aortic aneurysm, open aortic aneurysm

repair, arterial by-pass, thromboembolism, endovascular stent placement, catheter-directed thrombolysis and arterio-venous fistula creation are now performed at the center.

The future goal is to construct a database to store and maintain data on all treated cancer patients with vascular disease. The system will analyze demographic characteristics and clinical outcomes, and assist in designing treatment plans. The database will also help identify the impact of vascular interventions performed on cancer patients.

### 1327638

#### **EMERGENCY PREPAREDNESS FOR ACUTE INFUSION REACTIONS TO CHEMOTHERAPY AND BIOTHERAPY: IMPROVING RAPID RESPONSE AND PATIENT OUTCOMES.**

Lisa Hartkopf-Smith, RN, MS, AOCN®, CNS, Nursing, Riverside Methodist Hospital, Columbus, OH; Elizabeth Weaver, RN, MSN, OCN®, Cancer Services, Riverside Methodist Hospital, Columbus, OH; Elizabeth Roth, RN, BSN, OCN®, 7 Yellow Oncology, Riverside Methodist Hospital, Columbus, OH

To describe the development, implementation, and evaluation of a process improvement project focused on the recognition, nursing response, and patient outcomes for acute infusion reactions to chemotherapy and biotherapy.

Numerous chemotherapeutic and biologic agents cause life-threatening acute infusion reactions: anaphylaxis and cytokine release syndrome. Risk identification, rapid recognition, and prompt evidencebased interventions have continually shown to improve patient outcomes to emergency events. While familiar with chemotherapy and biotherapy, many oncology RNs are not as familiar with evidence based interventions to manage emergency events and thus prevent fatalities. In addition, Rapid Response Teams are often knowledgeable of the management of cardiopulmonary events but not infusion reactions to chemotherapy.

To describe processes to improve emergency preparedness and thus patient outcomes to acute infusion reactions to chemotherapy and biotherapy

Inpatient and infusion center cases were analyzed for staff response time for the recognition and treatment of acute infusion reactions, the appropriateness of interventions, and patient outcomes. Policies and preprinted orders were compared to national guidelines and revised. Emergency equipment was evaluated to determine if it was working and easy to access, as was the availability of emergency medications. An emergency medication kit was developed for the infusion center. The Oncology Staff and the hospital's Rapid Response Team were assessed for knowledge of risk factors, early recognition and treatment of acute infusion reactions. Educational programs, including a mock code focusing on anaphylaxis, were presented. The importance, dose, and administration guidelines for epinephrine were stressed. Questions addressing the recognition and management of acute infusion reactions were incorporated in the annual chemotherapy competency test. New Infusion Center chairs that could easily be put into a flat position were purchased.

Within 6 months after implementing educational, environmental, and process changes, three patients experienced anaphylactic reactions (Paclitaxel and Carboplatin). All reactions were promptly recognized as anaphylaxis, epinephrine was administered, and the patients were discharged home without complications.

Continually evaluating oncology areas for emergency preparedness for acute infusion reactions is imperative to improve patient outcomes.

### 1330502

#### **EVIDENCE AND PRACTICE: A FALL REDUCTION PROGRAM USING IMPLEMENTATION SCIENCE.**

Keithley Warner, RN, Oncology, Texas Health Presbyterian Hospital Dallas, DeSoto, TX; Patricia Kelly, DNP, APRN, CNS, AOCN®, Center for

Advancing Professional Practice, Texas Health Presbyterian Hospital Dallas, Dallas, TX; Joyce Lee, MSN, RN, OCN®, Oncology, Texas Health Presbyterian Hospital Dallas, DeSoto, TX; Adrienne Nitsos, MA, RN, MBA, Oncology, Texas Health Presbyterian Hospital Dallas, DeSoto, TX

To develop fall reduction initiatives using implementation science determinants.

Patient falls are devastating events which lead to a downward spiral of mobility and quality of life. Patients with cancer have risk factors which compound their fall risk (psychotropic medications, anemia and fatigue, high volume fluids) and increase the chance of serious complications (bleeding with thrombocytopenia, fractures and bony metastases). Research suggests that assessment and multifactorial targeted interventions are effective fall reduction approaches; however, few studies provide guidance for implementing evidence-based fall reduction interventions. Implementation science provides a framework for intervention using determinants for knowledge, cognition, attitudes, routines, social influence, organization, and resources. In 2010, oncology unit fall rates were higher than National Database of Nursing Quality Indicators (NDNQI)/Magnet benchmarks despite standard fall reduction initiatives.

To decrease fall rates below benchmarks.

(1) Nurses added the patients' fall risk scores to the census board creating heightened awareness (knowledge, cognition, routines, and attitudes). (2) Nurses developed a communication fall risk checklist/contract which was initiated by the night shift staff. Nurses used the checklist/contract to identify patients at high (>5) Hendrich II Fall Risk score and assess current and potential interventions. This checklist/contract was used at change-of-shift handoffs to update fall risk information and reinforce fall prevention. Oncoming nurses and patient-care technicians signed the checklist/contract (attitudes, routines, and social influence). The nursing director provided organizational infrastructure and leadership and made checklist/contract spot checks during routine rounding.

Since implementation, the fall rate for 4th quarter 2011 showed a 79% decrease as compared with fall rates for 1st quarter 2010 (reported as falls per 1,000 patient days). This represents an improvement from a fall rate exceeding the 90th percentile NDNQI/Magnet facility benchmark to a fall rate below the 25th percentile.

The checklist/contract and census board indicators were easy, inexpensive ways to effect change. Audit and feedback of the positive fall reduction rates reinforced attitudes, routines, and social influence determinants. Implementation science determinants should be considered when choosing fall reduction and other nurse-sensitive quality indicator improvement strategies.

### 1330868

#### **THE RETURN OF BEDSIDE HANDOFF TO ENHANCE NURSING REPORT.**

Natasha Ramrup, BSN, MSN, OCN®, Nursing, Memorial Sloan-Kettering Cancer Center, New York, NY; Morie Davis, BSN, Nursing, Memorial Sloan-Kettering Cancer Center, New York, NY; Anna Schloms, BSN, MSN, Nursing, Memorial Sloan-Kettering Cancer Center, New York, NY; Patricia Donoghue, BSN, Nursing, Memorial Sloan-Kettering Cancer Center, New York, NY; Stephanie McEaney, BSN, MSN, NP, Nursing, Memorial Sloan-Kettering Cancer Center, New York, NY

The ultimate goal of bedside handoff is patient safety, and walking rounds encourages patient involvement by allowing them to discuss their plan of care and identify immediate concerns. Bedside handoff also conveys essential information, promotes continuity of care and improves patient satisfaction.

Bedside handoff, once a time honored tradition, was the crux of reporting. Its decline has been attributed to the advent of the electronic hand-off. Recently, the Joint Commission recognized "failure to communicate information during shift report" as

a leading cause of sentinel events in the United States. Communication issues were implicated in approximately 70% of all sentinel events. Additionally, the Institute for Healthcare Improvement (IHI) and the Robert Wood Johnson Foundation implemented the Transforming Healthcare at the Bedside program (TCAB), which highlighted bedside handoff as an improvement initiative. In order to meet these patient safety goals, a standardized approach to hand-off communication was implemented on our gastrointestinal medicine and hepatopancreatobiliary surgical service.

In an effort to standardize our approach to bedside handoff, walking rounds was implemented to address practice issues, improve communication among disciplines and improve patient safety.

Before bedside handoff was reinstated, the nurses remained in the nurses' station during change-of-shift report and verbally reported face-to-face on patients using our standardized electronic hand-off. With the implementation of bedside handoff, nurses now give report with the standardized electronic hand-off by the bedside, while briefly assessing the patient and environment.

In evaluating bedside handoff, a face-to-face method is the preferred process of change-of-shift report. Bedside handoff has created a more seamless shift transition, as both nurses are by the bedside to identify practice issues. High acuity patients are identified, and pain issues are immediately addressed. It also provides an opportunity to assess tubes, drains and dressings together. This enhanced presence decreases patient anxiety and leads to a lower level of call bell usage.

Our new standardized approach embodies our relationship-based care model. In addition to improving communication and patient safety, bedside handoff has demonstrated significant improvements in patient satisfaction in our institutions. After a successful nine-month pilot, bedside handoff will now be implemented throughout this NCIdesignated cancer center.

### 1330879

**IMPROVING THE PATIENT EXPERIENCE IN THE EMERGENCY DEPARTMENT FOR CANCER PATIENTS WITH INFECTION.** Kathleen Pelc, BSN, RN, Monter Cancer Center, North Shore LIJ Health System, Lake Success, NY; Mary Paul, BSN, RN, OCN, LIJ Ambulatory Oncology, North Shore LIJ Health System, New Hyde Park, NY; Kathleen Morrison, BSN, RN, OCN®, LIJ Ambulatory Oncology, North Shore LIJ Health System, New Hyde Park, NY; Matthew Kaufman, MD, LIJ Emergency Department, North Shore LIJ Health System, New Hyde Park, NY; Barbara Barnett, MD, LIJ Emergency Department, North Shore LIJ Health System, New Hyde Park, NY; Fatima Jaffrey, MD, LIJ Department of Medicine, North Shore LIJ Health System, New Hyde Park, NY

Decrease time from patient onset of infection to Emergency Department (ED) presentation, and improve patient perceptions about care in the ED.

Sepsis is a leading cause of death in cancer patients. Although sepsis protocols have been developed in many emergency departments (ED), there remains a need to address sepsis in the cancer population. Septic cancer patients may not manifest the vital sign abnormalities seen in patients without underlying cancer; furthermore, patients often delay necessary ED visits despite education regarding the need for emergent evaluation and treatment. Our needs assessment indicated that 80% of patients thought their wait time in the ED was long, 80% were unlikely to go to the ED, and 60% were, overall, dissatisfied with a previous ED visit.

Design an intervention to improve patient care and the patient experience, and measure the outcome and impact of the intervention using Clinical Microsystems Methodology. Nurses will identify patients at risk for infection, and educate them regarding the appropriateness of visiting the ED.

A red identification wallet-sized card was created. In the outpatient setting, these cards are distributed to patients undergoing chemotherapy, or patients at risk for sepsis secondary to hematologic malignancies or bone marrow transplant. Nurses provide written and verbal instruction, educating patients to go to the ED with signs/symptoms suggestive of infection, and to present the card to ED staff upon arrival. Since implementation (March 2011), 1100 cards have been distributed.

Patient throughput data is analyzed, and surveys are conducted after patients present to the ED. Since implementation, 44 surveys have been conducted, with 84% of respondents finding the waiting time to ED room acceptable or short, 91% finding the waiting time to physician assessment acceptable or short, and 86% indicating that the past ED visit was the same or better than previous experiences.

To improve perceptions of the ED and appropriateness of care for cancer patients, an interdisciplinary team developed an intervention to identify at-risk patients, increase likelihood of ED presentation, and improve perspectives about emergency care. Next, this project aims to improve the timeliness of assessment in the ED and standardize treatment of these patients.

### 1331107

**COMPARING THE INCIDENCE OF ACUTE PHASE REACTIONS IN PATIENTS WITH ADVANCED CANCER AND BONE METASTASES OR MULTIPLE MYELOMA FOLLOWING TREATMENT WITH DENOSUMAB OR ZOLEDRONIC ACID: RESULTS FROM A COMBINED ANALYSIS OF THREE PHASE 3 RANDOMIZED TRIALS.** Cynthia Campbell-Baird, RN, OCN®, Oncology and Hematology, Penn State Hershey Medical Center, Hershey, PA; Hans Polderdijk, RN, HagaZiekenhuis Leyenburg, Den Haag, Netherlands; Stacey Harrelson, RN, CCRC, Carolina Urologic Research Center, Myrtle Beach, SC; Nina Singh, RN, Sydney Haematology and Oncology Clinics Clinical Trials Unit, Sydney Adventist Hospital, Wahroonga, New South Wales, Australia; Judith Buechel, RN, Haematology and Oncology, Innsbruck University Hospital, Innsbruck, Austria; Tapan Maniar, MD, Hematology and Oncology, Amgen Inc., Thousand Oaks, CA

In patients with advanced cancer and bone metastases or multiple myeloma (MM), compare the incidence of acute phase reactions (APRs) following treatment with either denosumab or zoledronic acid (ZA).

Patients with advanced solid tumors and bone metastasis or MM frequently develop skeletal-related events (SREs). Results from a pre-planned, combined analysis of 3 phase 3 trials demonstrated that denosumab was superior to ZA in preventing SREs in patients with breast cancer, prostate cancer, or other solid tumors or MM. A comparison of the subject incidence of APRs, a flu-like syndrome that may decrease patient compliance, was conducted between treatment arms.

Compare the incidence of APRs during the first 3 days after treatment initiation with denosumab or ZA in patients with advanced cancer and bone metastases or MM.

Pre-planned, combined analysis of 3 identically designed, randomized, double-blind, double-dummy phase 3 trials.

Patients were randomized to receive subcutaneous denosumab 120 mg or IV ZA 4 mg (adjusted for renal function) every 4 weeks. Daily calcium and vitamin D supplements were recommended. To determine the incidence of APRs, investigator-reported adverse events (AEs) representing potential APRs during the first 3 days after treatment initiation were aggregated using 26 pre-specified MedDRA 12.1 preferred terms. Safety analysis was conducted in patients receiving at least 1 dose of denosumab (n=2841) or ZA (n=2836).

Incidence of APRs was 8.7% (n=246) with denosumab and 20.2% (n=572) with ZA, a 57% relative reduction for denosumab. Pyrexia (0.6% denosumab, 7.2% ZA), fatigue (1.7% denosumab, 2.5% ZA), bone pain (1.1% denosumab, 2.4% ZA), arthralgia (1.1% denosumab, 2.2% ZA), and chills (0.1% denosumab, 2.0% ZA) were all

reported less frequently with denosumab than ZA. The incidence of serious AEs associated with APRs during the first 3 days was <0.1% (n=2) for denosumab and 0.6% (n=17) for ZA. Denosumab was associated with significantly fewer APRs compared to ZA in patients with advanced solid tumors and bone metastases or MM in this pre-planned combined analysis. Fewer APRs can result in a better patient experience and improved compliance. By identifying APRs, nurses can implement treatment strategies and options that may further enhance patient compliance.

**Underwriting/Funding Source:** Amgen, Inc

### **1331627** **PROVIDING PROFESSIONAL DEVELOPMENT THROUGH AN ONCOLOGY NURSING MENTORSHIP PROGRAM.**

Jennifer Martens, RN, BSN, OCN®, Nursing, Beaumont Health System, Royal Oak, MI; Janette Bell, RN, BSN, OCN®, Nursing, Beaumont Health System, Royal Oak, MI; Janice Ditre, RN, BSN, OCN®, Nursing, Beaumont Health System, Royal Oak, MI; Theresa Kowalski, RN, BSN, OCN®, Nursing, Beaumont Health System, Royal Oak, MI; Cecilia Suh-Priest, RN, BSN, OCN®, Nursing, Beaumont Health System, Royal Oak, MI

To determine the benefit of implementing a nurse mentorship program for new graduate nurses on an Oncology unit.

Managing the complex dynamics of acutely ill Oncology patients and their families is extremely challenging. Upon completion of orientation, Oncology nursing staff expressed difficulty in dealing with the multidimensional needs of our patient population and their families. Nurses stated they felt technically prepared and supported to provide physical care for patients. However, they reported a lack of expertise and confidence in addressing the intangible aspects of nursing including managing the emotional and spiritual needs of patients.

The purpose of this mentorship program is to cultivate graduate nurses from orientation to become confident and proficient Oncology nurses. This program will increase nursing satisfaction and improve retention rates on the Oncology unit.

Mentors were given an initial pre-survey to rate characteristics that lend themselves to being a successful mentor. Mentees were given a pre-survey to evaluate their perceived vulnerabilities in their role as a fully functioning nurse. Upon completion of the 18-month mentorship program, a post-survey will be given to participants to analyze the effectiveness of the program. NDNQI nursing satisfaction data and unit turnover rates will be compared pre and post mentorship program.

Implications for Oncology nursing practice include a heightened awareness of the need for new nurses to receive continued support upon completion of their orientation. Managing the Oncology patient population requires a holistic approach. While orientation encompasses developing clinical knowledge and skills, lack of experience does not allow a new nurse to build and enhance their confidence in their role as a nurse in the specialty field of Oncology. By embracing the new nurse with this mentorship program, job satisfaction and nurse retention will increase. The mentorship program will be shared throughout the organization and maybe utilized by other healthcare institutions.

### **1331854** **WELLNESS DAY FOR HEMATOLOGY/ONCOLOGY/HEMATOPOIETIC STEM CELL TRANSPLANT STAFF.**

Cynthia Jodoin, RN, BSN, MHA, OCN®, Hem/Onc/BMT, Brigham and Women's Hospital, Boston, MA; Joan H. Deary, RN, Hem/Onc/BMT, Brigham and Women's Hospital, Boston, MA

Our wellness day was designed for staff renewal to combat the stress experienced by providers, primarily nurses in an acute care facility with 110 beds for Hem/Onc/BMT population.

“Caring is the foundation of professional nursing practice. . . the caring attitude in the hospital starts with the nurse.”The

need for care of the caregiver is well-documented in the literature. The risks of compassion fatigue and burnout specific to oncology nurses are described in multiple articles. Therefore, one of the priority goals in December of 2010 when we formed our HemOnc Practice was provide support for nurses.

The goal of the day was to provide stress reduction, relaxation, and emotional renewal. We designed the day to give nurses a safe, relaxed environment, a day that allowed them to be pampered. The two-fold purpose: teach self-care and allow returning to patients refreshed to facilitate a higher level of care.

The response was overwhelming, to evaluate the effects and encourage suggestions for improvement evaluations were given to all 75 participants. The results were very positive: 100% found the massage, reflexology, and Reiki as very helpful, 90% found hand massage very helpful. The environment was highly rated as relaxing and soothing. We also received a lot of positive qualitative feedback. Literature suggests that when staff are educated in the importance of self-care techniques they practice nursing more effectively, retention of staff in this highly stressful environment improves and encourages them to share these practices with patients. We found an effective way to facilitate that in our environment.

Staff nurses were able to either come in from home or take a 30minute break in the middle of the workday for one or more of the therapies. The day was scheduled to include reiki, reflexology, massage therapy (back and hand), “Tea for The Soul” (an internal program run by Chaplaincy that provides tea and cookies to providers), light snacks and beverages. A soothing and relaxing environment was created with low lighting, classical music, small gifts for staff, and comfortable seating arranged to encourage interaction among participants. The gift was bath salts to encourage continued relaxation at home.

### **1331873** **ONE LESS IV STICK: DEVELOPING A MEDIPORT NURSE PROGRAM TO INCREASE PATIENT SATISFACTION.**

Ashley Moore, RN, BSN, Nursing-Chemotherapy, Memorial Sloan-Kettering Cancer Center, New York, NY; Tricia McBride, RN, BSN, Nursing-Chemotherapy, Memorial Sloan-Kettering Cancer Center, New York, NY; Lorna Thomas, RN, AAS, Nursing-Chemotherapy, Memorial Sloan-Kettering Cancer Center, New York, NY; Beth Boseski, RN, MSN, OCN®, Nursing-Chemotherapy, Memorial Sloan-Kettering Cancer Center, New York, NY

To implement a patient centered program by using MediPorts for both labs and chemotherapy.

The solid tumor gastrointestinal outpatient chemotherapy unit at Memorial Sloan Kettering Cancer Center treats approximately 160 patients daily. In 2010, this unit administered 5,216 doses of FOLFOX and FOLFIRI, frontline treatments for colorectal cancer, requiring an implantable venous access device (MediPort). Given the nature of these treatments and patients with poor venous access, a large majority of our patient population have MediPorts. Previous workflows required that patients have their blood drawn peripherally prior to treatment. Nursing staff questioned why patients were subjected to unnecessary needle sticks – one to draw blood and another to administer chemotherapy, when both could be accomplished by accessing the MediPort. Nursing staff proposed implementing a new role, the MediPort Nurse.

The purpose of the MediPort Nurse, a patient centered initiative, is to decrease the number of needle sticks, identify problematic ports, decrease chemotherapy chair time, improve workflow, and increase patient satisfaction. By obtaining laboratory specimens from implanted ports we are fully utilizing their intended function.

An interdisciplinary task force was created to develop the program, determine the workflow and review the resources required. Data was collected to determine the volume of patients with MediPorts receiving chemotherapy treatment. A visit type was created in our scheduling system to facilitate patient appointments. Nursing, support staff, and patients were educated on the

implementation of the role and changes it would present to current workflow. Nursing staff was oriented on the responsibilities and expectations of the role.

Patient satisfaction surveys revealed 97% of patients were highly satisfied with the program and would recommend the service to other patients. Data collection continues to measure patient volume, wait time, satisfaction and workflow.

Many chemotherapy units face the challenges of high patient volume, limited treatment space, and long wait times, which affect patient satisfaction with the overall chemotherapy experience. The MediPort Nurse role is an example of how oncology nurses can improve this experience while continuing to advocate for their patients. This role has become part of our daily staffing plan and continues to serve our large patient population.

### 1332143

#### **ENHANCING MULTI-DISCIPLINARY COMMUNICATION AND NURSING SUPPORT WHILE IMPROVING PATIENT SATISFACTION THROUGH THE CHARGE NURSE ROLE.**

Christina Kiss, ANP-BC, OCN®, Acute Care, Memorial Sloan-Kettering Cancer Center, New York, NY; Aimee Chappell, RN, OCN®, Acute Care, Memorial Sloan-Kettering Cancer Center, New York, NY

In January 2010, the 14th floor of Memorial Sloan Kettering Cancer Center, an NCI designated comprehensive cancer center, was restructured from a specialized thoracic surgery and medicine unit to a diverse medical oncology unit. While retaining thoracic medicine, nurses were introduced to oncology populations including melanoma, sarcoma, head and neck medicine, leukemia, lymphoma, and bone marrow transplant. Our goal was to improve patient flow through the unit, assemble team cohesiveness, enhance patient satisfaction, and develop senior staff as support for novice nurses.

Out of 50 current clinical nurses, 29 were hired and trained since January 2010. Currently 67% of night staff have less than one year of experience, while 59% of day staff have less than two years of experience. This high acuity unit has a range of 2-14 admissions and discharges daily. Integrating multidisciplinary team members and training novice nurses on various oncology specialties in a high flow environment proved to be challenging.

The purpose of developing the Charge Nurse (CN) was to support a novice team, enhance communication and cohesiveness with team members, and improve patient flow and satisfaction.

All CNs were trained in one six hour session immediately followed by initiation into the role. Duties meeting specific needs included: attending morning team rounds, leading multidisciplinary rounds, assisting with patient education, expediting admissions and discharges, coordinating care with medical teams, ensuring safe assignments while promoting primary nursing, and acting as a resource and support for staff.

A post intervention survey was completed to validate staff opinion of CN influence. While nurses and nurse practitioners were neutral to the improvement of patient flow, enhancement in nursing support and communication were found by both groups. Positive outcomes were also proven with patient data gathered from Press Ganey surveys completed after discharge. Patient satisfaction increased by 10% and self reported recommendations for the facility increased by 15.3%.

The challenges of being a novice nurse on a highly acute and diverse oncology unit are endless. By incorporating the Charge Nurse, staff have felt more supported, communication was enhanced, and patient satisfaction was improved. Further interventions must be implemented to improve patient flow.

### 1333651

#### **INTEGRATING NEW TECHNOLOGIES TO PROVIDE CHEMOTHERAPY EDUCATION AT AN OUTPATIENT CANCER CENTER.**

Lynda Tunon, RN, MSN, OCN®, Patient Educa-

tion, UPMC Cancer Centers, Pittsburgh, PA; Caitilin M. Gnan, RN, BSN, OCN®, Outpatient Services, Hillman Cancer Center, Pittsburgh, PA; Kathleen Werwie, RN, BSN, OCN®, Outpatient Services, Hillman Cancer Center, Pittsburgh, PA; Gloria Gotaskie, RN, MSN, Outpatient Services, Hillman Cancer Center, Pittsburgh, PA; Susan L. Frank, RN, MSN, Outpatient Services, Hillman Cancer Center, Pittsburgh, PA; Kyle Bird, Outpatient Services, Hillman Cancer Center, Pittsburgh, PA

Our objective is to prepare patients for their first chemotherapy treatment by integrating computer interactive technologies that reduce one-on-one nurse teaching time while providing consistent education and maintaining nurse and patient satisfaction with the process.

Educating patients about chemotherapy is essential nursing practice to help ensure patient safety by reporting adverse side effects and compliance with symptom management at home. As patient volume increases, better management of nursing time is important to maintain patient flow through busy clinics and treatment centers. We selected a program that is easy for a computer novice and uses simple graphics, animation, text written in plain language and a speaker to engage patients in learning. Patients are allowed time to write or type questions that can be printed along with the text and answered by their nurse. This technology gathers and tracks data about patient usage in real time and invites patient feedback on an evaluation at the end of the module. Reports are sent to the oncologist and nurse for follow-up education. We piloted the on-line module in one clinic for three months and are rolling it out to 17 medical-oncology clinics in our center.

Our purpose is to integrate on-line education that patients and families can view at home or at the center before their first treatment. Introducing interactive audiovisual learning to our care plans supplements personalized patient teaching while reducing the nursing time needed to explain basic concepts such as bone marrow depression and infection prevention.

Our poster will present nine months of data from patients' evaluations of the interactive education. Results from nurses' surveys document the reduced one-on-one time needed for new patient teaching and the corresponding improved patient flow through the treatment rooms. Nursing evaluation of patients' preparation for treatment is measured.

Integrating on-line education into patient preparation for first treatments can be a win-win situation for oncology nurses challenged with time constraints at other cancer treatment centers. Interactive technologies can be incorporated into patient teaching to meet the needs of the patients and maintain the educational goals of the nursing care plans.

### 1333672

#### **WATCHDOGS FOR SKIN CARE: A PRESSURE ULCER PREVENTION (PUP) PROGRAM IN THE INPATIENT ONCOLOGY SETTING.**

Katrina Fetter, BSN, RN, OCN®, Nursing,

Lancaster General Hospital, Lancaster, PA

The objective was to decrease the inpatient oncology nursing unit acquired pressure ulcer rate through the use of a skin care program.

Oncology patients are high risk for acquiring pressure ulcers because of poor nutrition and immobilization. Ulcers can be devastating with consequences such as: infection, pain, increased hospital stays, and even death. Oncology nurses are at the patient's bedside and can have a profound effect on preventing these ulcers.

The purpose of the skin care program was to decrease the inpatient unit's acquired pressure ulcers and to improve the patient experience. The unit wanted to develop a consistent method beyond just a Braden skin score assessment to identify patients who are at risk for skin breakdown and treat them appropriately.

The unit changed Braden skin score assessments from daily to each shift so every nurse would have skin risk awareness. A lami-



nated “pup” sign with a picture of a dog on it was developed and is placed at the head of the bed of any patient who scores as a skin risk. This sign allows all interdisciplinary staff to know this patient requires increased skin care. An improved method of accurately documenting wounds was used by having drawings on the chart. Laminated cards were placed at computers showing the steps to take based on the Braden score. An inservice on correct wound staging was completed as well as education at staff meetings on the interventions.

The fiscal year 2010 unit acquired pressure ulcer rate was 4.4 prior to the start of the program. After the program the rate in fiscal year 2011 was 1.3 showing a great improvement. Staff verbalized helpfulness in bringing awareness to patients at risk and patients and families expressed appreciation for the focus on their comfort and skin needs.

This skin care program could easily be converted to any inpatient oncology unit and was actually taken to other units in the hospital that are non-oncology after its results were seen to be so positive. Oncology nurses can improve care to their patients and this is one simple but effective way to do it.

### 1333698

**A FOCUSED PLAN TO REDUCE CENTRAL LINE ASSOCIATED BLOOD STREAM INFECTIONS ON TWO ONCOLOGY INPATIENT UNITS.** Deb Bohlken, BSN, OCN®, Nursing-4JPE, University of Iowa HealthCare, Iowa City, IA; Kelly Petrulevich, BSN, OCN®, Nursing-4JPE, University of Iowa HealthCare, Iowa City, IA

The objective of this project was to decrease central line associated blood stream infection (CLABSI) rates on two oncology inpatient units.

Oncology patients are at high risk to develop infections. CLABSI are important avoidable events when acquired during healthcare delivery. Decreasing CLABSI rates help to decrease patient morbidity and mortality, decrease hospital length of stay, decrease healthcare costs, and increase patient satisfaction. CLABSI are a target of value-based reimbursement by the Centers for Medicare and Medicaid Services (CMS). Many other organizations including the Institute of Healthcare Improvement, NDNQI, and The Joint Commission have joined CMS in making the reduction of CLABSI a healthcare priority.

The purpose of this project was to analyze current practices and develop action steps to decrease CLABSI rates. The unit staff, managers and councils focused on reducing CLABSI rates to improve patient safety, increase the quality of care and align with national health care priorities.

A point prevalence study was conducted to observe current practices, assess adherence to policies and observe for proper use of products. Opportunities for improvement were identified. Data from the point prevalence survey were presented at the unit council meetings and the following performance improvement steps were identified: Develop and present a nursing educational program on central line care and maintenance standards, initiate an aggressive campaign to “scrub the hub” (access ports) on all IV’s and tubings for 15 seconds, develop a system for communicating when access caps are due to be changed (every 96 hours) and perhaps most importantly, eliminate the use of stopcocks on all IV lines to help ensure a closed system.

All planned actions steps were completed. Since implementation in October 2010, the quarterly CLABSI rates for both units have decreased and remain below the benchmark of 4.42 per 1000 clinical days (the NDNQI mean for academic medical centers).

Ongoing monitoring is important to assure compliance with central line care expectations. The implications of this project for oncology nursing practice include the need to assess current practices, develop realistic action plans and assure ongoing attention to the important goal of reducing central line associated infections in our patients.

### 1333714

**ALL NURSES NEED TO KNOW: A COLLABORATIVE CANCER EDUCATION PROGRAM FOR SPECIALTY NURSING ORGANIZATIONS AT THE LOCAL CHAPTER LEVEL.** Laura Fennimore, RN, DNP, Greater Pittsburgh Chapter of the Oncology Nursing Society, UPMC Health Plan, Pittsburgh, PA

Describe an educational program designed to increase nurses knowledge regarding oncology related topics across multiple specialty nursing organizations

Cancer related statistics remain staggering in the United States. A critical shortage of cancer specialists threatens the future ability of our country to provide timely and comprehensive cancer care. All nurses need to know about cancer care across the continuum. A collaborative grant from the ONS Foundation was awarded to the Greater Pittsburgh Chapter of the Oncology Nursing Society (GPC-ONS) to support an educational offering for nurses from specialty nursing organizations exploring common issues and concerns about caring for people with cancer and their families. A full-day conference was offered in collaboration with seven local chapters of specialty nursing organizations including: GPC-ONS, the Academy of Medical/Surgical Nurses, the American Association of Critical Care Nurses, the American Association of Neuroscience Nurses, the Emergency Nurses Association, the Hospice and Palliative Care Association, and the International Transplant Nurses Association.

The purpose of the program was to provide a continuing nursing education program to increase the knowledge, skills, and attitudes of nurses about common issues and concerns related to caring for people with cancer and to increase collaboration between nursing specialties at the community level. Topics included: How nurses make a difference to people with cancer; cancer screening guidelines; psychosocial impact of a new cancer diagnosis; oncology emergencies; health care reform; cancer pain management; and caregiver stress.

Fifty individuals attended the program including representatives from the seven participating local chapters. The overall quality of the program, facility, and location was rated by 88% of the participants as “outstanding” or “above average”. The program offered 6.2 contact hours for participants that completed a program evaluation.

Cancer care occurs across a broad spectrum of nursing specialties. All nurses need to feel comfortable in encouraging individuals to obtain cancer screening exams and to educate patients about cancer risk reduction activities. Patients with cancer are cared for in every healthcare setting. Collaboration between specialty nursing organizations at the local level is one strategy that can serve to educate non-oncology nurses about cancer care.

**Underwriting/Funding Source:** ONS Foundation

### 1334177

**INSTITUTE FOR EVIDENCE-BASED PRACTICE CHANGE AND DASH TO DISCHARGE: PRACTICE CHANGE REQUIRES MUCH MORE THAN EVIDENCE.** Lanell Bellury, PhD, RN, AOCNS®, Center for Nursing Excellence, Saint Joseph’s Hospital Atlanta, Atlanta, GA; Sally Rhodes, BSN, RN, OCN®, 7 West Oncology, Saint Joseph’s Hospital Atlanta, Atlanta, GA

List two practice change essentials

Our Magnet designated community hospital places a high value on evidence based nursing practice, yet changing practice on an acute care oncology unit presented challenges. The ONS Foundation Institute for Evidence-based Practice Change (IEBPC) was designed to overcome many of those challenges. Clinical nurses identified a need to focus on basic quality nursing care for medical-surgical oncology inpatients, specifically related to patient ambulation. Our unique challenges included the imminent sale of hospital, hospital-wide nursing initiatives that intersected project timeline, staff acceptance, lack of ambulation documentation/policy, and lack of definitive evidence related to ambulation in acute care.

The purpose of the project was to improve or return to baseline the functionality of our patients through improved mobility interventions focusing on increasing patient activity. The purpose of this presentation is to describe the components of successful practice change from an acute care perspective supported by IEBPC and to describe the implementation and results of our ambulation project.

Our goal was to provide progressive mobility tailored to individual patient needs. From 10/2010 – 10/2011 we audited ambulation practice and documentation, created a project logo and bulletin board, completed a literature review, engaged interested staff, created documentation tools, and developed process and outcome measures. Innovations included IEBPC mentorship, bundle of interdisciplinary education offerings, and partnering with patient/family for ambulation documentation.

Process outcome goals included standardization of and compliance with ambulation documentation. Patient level outcomes included increased patient activity, decreased length of stay, and decreased immobility-related complications. Despite a year of consistent effort, outcomes were limited to documentation development and compliance. Baseline audit indicated minimal documentation relative to patient ambulation. Results of two trials showed improvement; 20 out of 57 discharges used documentation tool. Anecdotally staff reported increased awareness and practice of patient ambulation.

Persistent efforts of management, charge nurse, staff RNs, physical therapy, and unlicensed staff were essential to our project. Training and structure provided by IEBPC encouraged continuation of project even though multiple barriers constrained progress over the year. Impetus for incremental change is difficult to sustain in the dynamic, rapidly changing acute care environment.

### 1334305

#### **INTRODUCTION TO CHEMOTHERAPY: A PSYCHOEDUCATIONAL INTERVENTION TO DECREASE PATIENT ANXIETY.**

Annette Roman, RN, MSN, OCN®, Nursing, Memorial Sloan-Kettering Cancer Center, Commack, NY

Decrease patient anxiety regarding chemotherapy through education.

Oncology patients commonly experience anxiety during their cancer journey, and the initiation of chemotherapy has been found to be a moment of high vulnerability. At our ambulatory practice site, which is part of an NCI-designated comprehensive cancer center, chemotherapy side effects were discussed during the physician visit as part of the informed consent process; formal chemotherapy teaching was done on the day of the first treatment, often in the chemotherapy unit. This was felt to be less than ideal as the patients were anxious and the setting lacked privacy.

The medical oncologists and nurses were surveyed to evaluate if a chemotherapy introduction course would benefit our patients. All agreed this approach would standardize the education, provide a greater opportunity for patient questions, and help decrease patient anxiety. A chemotherapy introduction class was conceptualized using “Chemotherapy and You” published by the NCI (2010) as a standard guideline. A PowerPoint presentation was developed; the slides provided a basic review of cancer, anatomy, and the general side effects associated with chemotherapy. Each side effect presented contained information, which helped define the side effect and what could be done to prevent or minimize the symptoms. New patients were informed of the chemotherapy introduction class and registered prior to starting treatment. A patient education package was given to each patient, and a certificate was provided at the completion of the class.

Each patient was given an 11question evaluation form, which used a five point Likert scale. The questions graded the class content and the patients’ feelings regarding their preparedness for their chemotherapy journey. Among the patients surveyed 79% strongly agreed and 21% agreed the introduction class helped them prepare for their chemotherapy journey, while 42% strongly

agreed and 47% agreed the class helped reduce their anxiety level about chemotherapy.

Psychoeducational interventions help reduce the anxiety of chemotherapy naïve patients. The class provided patients with the opportunity to understand the side effects chemotherapy may produce, while empowering them with knowledge they may use to become better self advocates and help decrease their anxiety.

### 1334342

#### **CANCER CENTER HOSPITAL DESIGN: CREATING AN ENVIRONMENT TO PROMOTE SAFETY, HEALING, AND COMFORT.**

Wendy Rowehl Miano, MSN, DNP, University Hospitals Seidman Cancer Center, Cleveland, OH; Terry Koeth, MSN, University Hospitals Seidman Cancer Center, Cleveland, OH; Linda Mangosh, BS, (R)RT, University Hospitals Seidman Cancer Center, Cleveland, OH; Patricia Gallagher, BSN, University Hospitals Seidman Cancer Center, Cleveland, OH; Hermione Malone, MBA, University Hospitals Seidman Cancer Center, Cleveland, OH; Susan Holick-Bade, Advisor, University Hospitals Seidman Cancer Center, Cleveland, OH; Nancy Tamburro, LISW, University Hospitals Seidman Cancer Center, Cleveland, OH

The goal in this Cancer Center Hospital Design, Construction, and Opening was to engage patients and family members in partnership with health care professionals and architectural and construction teams to create a healing environment which promoted safety, choice, and comfort.

Patients with cancer and their families know what they need for a healthy, healing, and safe environment of care, yet they are rarely included in the design or re-design of space in a cancer care center.

Over four years ago, patients, families, health care professionals, administrators, and an architectural design team collaborated to build a free-standing cancer center which was patient and family-centered. The Patient and Family Advisory Board (PFAC) provided input into the initial structural design and made recommendations throughout the building process.

PFAC recommendations emphasized space and equipment that promoted physical and psycho-social wellbeing. Patient rooms were designed with a comfortable space for a family member’s overnight stay, internet work areas, and a safe for valuables, including laptops. Select rooms were designed with a family suite including a private bath and living room space for large families or extended stays. PFAC members tested a “Mock” patient room and helped select beds, recliners, and bedside and over-bed tables. Additional space for support and socialization with other family/friends was created on each floor. In response to patients’ requests to improve physical conditioning during lengthy stays, rehabilitative services worked with PFAC members to install a recumbent bike, treadmill, and a Wii® on the bone marrow transplant unit. Quality and safety concerns were addressed by adding ‘pillow speak’ capability to control lighting and by making bathroom access easy.

As a result of the input of the PFAC, numerous advances have been achieved in the patient rooms, family gathering areas, and infusion center of the new cancer center. Patient satisfaction scores have shown significant improvement since moving into the new space.

Oncology nurses can be advocates for patient/family centered care by encouraging all patients and families to make recommendations to enhance the environment of care and by identifying members to serve on a PFAC in their community cancer centers or private practice settings.

### 1334442

#### **BECAUSE WE CARE: HOW STAFF NURSES LED THE IMPROVEMENT IN PNEUMONIA CORE MEASURES COMPLIANCE ON AN ONCOLOGY/MEDICAL/SURGICAL UNIT.**

Erika Rosato, RN, BSN, OCN®, MHA, Nursing, Lahey Clinic,

Burlington, MA; Margie Sipe, RN, MS, Nursing, Lahey Clinic, Burlington, MA

If given the opportunity, staff nurses are able to remove barriers and find solutions to challenging compliance issues that all hospitals face. Their leadership role in making change not only empowers the nurses but positively impacts the patient outcomes and the financial health of the facility for which they work.

Pneumonia, the 6th most common cause of death in the U.S, is one of the core measures identified by the Center for Medicare and Medicaid Services (CMS) as a hospital priority focus area. Addressing this is critical to decrease disease prevalence and healthcare costs. Additionally, CMS links hospital reimbursement to each organization's performance on all core measures, i.e. pay for performance.

The purpose of this performance improvement project was to increase the rate of compliance of pneumococcal vaccination for eligible inpatients initially on a 35 bed oncology /medical/surgical inpatient unit and subsequently throughout our 327 bed acute care teaching facility.

Staff nurses partnered with patients to share the outcomes that could be achieved through vaccination. They also worked with leadership to develop technology solutions to help them identify patients in need of vaccination and to monitor the progress of their efforts. Some examples of interventions that used these principles and helped demonstrate positive outcomes included: leadership and staff led patient rounding; a redesigned report from our bar code medication administration vendor; scripting messages for patient and family communication; redesigning workflow developed on pilot unit for implementation hospital wide; initiating vaccination at all points throughout the continuum of care; and creating formats to monitor, demonstrate, and celebrate progress.

Outcome result from this project: Compliance with vaccination on the pilot unit increased from 62% to 100 % in four months. Our global recommendations to other organizations, regardless of size or geographical location include: 1) engage and educate staff; 2) measure progress frequently and share results; 3) insist on interdisciplinary collaboration; 4) implement staff and leadership rounding; and 5) leverage technology tools to track and monitor.

Staff and patient engagement along with leadership presence are the key ingredients needed to move quality metrics to positive patient outcomes. This project also demonstrated the impact that staff nurses can have as they become unit based leaders and ambassadors for quality and safety.

### 1334446

**EMPOWERING ONCOLOGY NURSES TO HAVE GOALS OF CARE DISCUSSIONS.** Linda Baer, RN, BSN, OCN®, Seidman Cancer Center, University Hospitals Case Medical Center, Frances Payne Bolton School of Nursing, Case Western Reserve University, Cleveland, OH; Elizabeth Weinstein, MD, Seidman Cancer Center, University Hospitals Case Medical Center, Cleveland, OH

To describe an educational method for improving nurse communication skills with patients and families regarding goals of care discussions.

Oncology nurses have a pivotal role in goals of care discussions and the quality of communication influences patient satisfaction, compliance and clinical outcomes. Yet, research studies indicate that nurses tend to keep communication with patients and families at a superficial, non-therapeutic level. Processes for teaching goals of care communication skills and for implementing skills into clinical practice are not clearly defined. An effective educational method to improve practice in communication skills is introduction of content, followed by continuous skills assessment and mentored feedback.

The purpose of this project was to improve therapeutic communication skills in oncology nurses during goals of care discussions by providing an educational series based on an adaptation of Oncotalk®, a communication skills training program

for oncology fellows. Our voluntary program was tailored to nurses and social workers providing care to patients in a busy, urban outpatient oncology setting at an academic medical center. The three one-hour presentations, given one month apart, were delivered by a palliative care physician with extensive communication skills training and education. The presentations were scheduled 7–8am prior to the opening of the clinic. Topics included exploring the patient's world, eliciting hopes and concerns and dealing with conflict over goals. Opportunities to share and discuss specific difficult questions and scenarios were encouraged throughout the program.

After each session, participants rated their perceived communication skill level prior to and following the presentation using a likert scale. A second evaluation was completed for CEUs.

The sessions were well attended with more than 20 participants at each session. Evaluations revealed an overall improvement of self-reported skill level following the session and that nurses were motivated and receptive to enhancing their communication skills. Offering the class early, prior to clinic opening, facilitated participation. This series of presentations provided opportunities for outpatient oncology nurses and social workers to enhance effective communication skills in the setting of goals of care and giving bad news. Improving communication skills takes time, practice, persistence and reflection on the part of each individual nurse.

### 1334485

**EMERGING ROLE OF GENOMIC PROFILING OF ADVANCED TUMORS TO AID IN TREATMENT SELECTION—WHAT NURSES SHOULD KNOW.** Eileen Bannon, RN, MSN, OCN®, CBCN®, Penn State Hershey Cancer Institute, Penn State Hershey Medical Center, Hershey, PA

Explain the role of a new genomic assay (Target Now™) in guiding oncologic treatment plans. Describe the Target Now™ assay. Present a case study where Target Now™ was instrumental in the patient's treatment plan.

Predicting effective treatments with chemotherapy or targeted agents for our patients with advanced, heavily treated disease or rare tumors is a common but difficult clinical problem. Target Now™ is a new, commercially available, evidence-based molecular profiling biomarker test which analyses the genetic and molecular changes unique to each person's tumor. The test results predict which treatments are likely to be effective or ineffective for the individual patient.

Illustrate to nurses the use of the Target Now™ assay through a case study of a patient under my care

Case study: A 52 year old female developed progressive metastatic leiomyosarcoma arising from a retroperitoneal primary. Following surgery, she was treated for metastatic disease with several standard chemotherapy regimens. She has an excellent performance status and requested further therapy for progressive pulmonary and hepatic metastasis. There were no available Phase 1 studies. A fresh frozen sample from a biopsy of a metastatic lesion was submitted to Caris Laboratories (Phoenix, Arizona) for Target Now™ assay. The test results were available within two weeks and reported several agents that were predicted not to be of benefit and identified others which could have benefit. This allowed for a choice of temozolomide—an agent not normally used to treat sarcoma. She has tolerated this oral non-toxic agent well with stabilization of her disease

We have seen several other patients who were heavily treated or had unusual tumors for whom Target Now™ provided guidance regarding treatment options. The assay therefore allows for selection of agents of potential benefit in the individual patient while at the same time discourages use of agents that are likely to be toxic and ineffective.

Genomic profiling of tumors is a first step toward achieving "personalized medicine" in the treatment of oncology patients. Nurses should be aware of the utility of this and other assays in the current approaches to patient care.

1334609

### **EDMONTON SYMPTOM ASSESSMENT (ESAS) SCORES IN HEAVILY TREATED WOMEN WITH METASTATIC BREAST CANCER (MBC).**

Margaret Rosenzweig, PhD, APN-BC, AOCNP®, Nursing, University of Pittsburgh, Pittsburgh, PA; Su Jung, PhD, Hematology/Oncology, University of Pittsburgh, Pittsburgh, PA; Sondra Swain, RN, Hematology/Oncology, University of Pittsburgh, Pittsburgh, PA; Patricia Gordon, MSN, FNP, Hematology/Oncology, University of Pittsburgh, Pittsburgh, PA

To determine the type and pattern of symptom distress associated with sequential chemotherapy used in palliative care during mbc.

Women with MBC are often treated with chemotherapy until close to death because of available treatment options and response heterogeneity. Women receiving three or more sequential chemotherapies constitute the cohort who are "heavily treated" creating concern regarding their combined symptom burden of disease and treatment toxicity. The ESAS scores measures symptom severity through 10 point Likert scales (possible 0-90) for nine symptoms. Mean scores in general patients receiving palliative care range from 28 to 34, but expected level of MBC symptom distress during palliative care is not known.

1. To determine the expected level of symptom distress in women who have been heavily treated for MBC as compared to other palliative care patients. 2. To establish the pattern of individual symptom distress in this population. 3. To determine the correlation between symptom distress and number of previous chemotherapies in heavily treated women.

The Symptom Management Model from the University of California, San Francisco exemplifies the relationship between assessment, management and resultant outcomes.

MBC cohort from one large urban practice, of the Pittsburgh Cancer Institute was utilized. ESAS was integrated in June, 2010 for all clinic visits. Data were collected through retrospective review of medical records.

As of June, 2010, 30/285 women receiving care for MBC (9.5%) received three or greater sequential chemotherapies. The median age was 52 years of age. Women had received a mean 4.6 chemotherapies (range 3-9) prior to their ESAS assessments. Assessments were of 156 clinic visits (mean 5.2 visits/woman). There was no significant relationship between amount of pre-treatment and symptom distress in MBC. Over all visits the mean total ESAS score was 16.3 (range 0-58) with the greatest individual item scores fatigue (mean 3.4) and pain mean 2.7). The total ESAS scores showed no correlation with the number of sequential chemotherapy treatments. Individual symptom items however indicated that of 156 visits, women scored greater than "4" (indicating intervention needed) for individual symptoms at a high rate. Fatigue (n=74, 48% of visits), pain (n=50, 32.5% of visits); drowsiness (n=39, 25.3% of visits); problems with appetite (n=34, 22% of visits); poor overall well being (n=23; 15% of visits) anxiety (n=22, 14.2% of visits); depression (n=17, 11% of visits); nausea and vomiting (n=13.8% of visits); and shortness of breath (n=19, 12.3% of visits).

Globally these scores indicate mild symptom distress associated with the practice of MBC sequential chemotherapy. However, individual symptoms requiring intervention are common and must be carefully assessed.

1334725

### **THE DEVELOPMENT OF AN ELECTRONIC CLINICAL TRIAL RESEARCH FLOW SHEET TO BE USED BY STAFF NURSES TO CAPTURE CLINICAL TRIAL DATA OUTSIDE OF STANDARD OF CARE.**

Roxann Scheerens, RN, BSN, OCN®, Nursing, The Arthur G. James Cancer Hospital and Richard J. Solove Research Institute, Columbus, OH; Mindy Bowers, BS, CCRC, Multiple

Myeloma Project Manager, Clinical Trials Office, The Arthur G. James Cancer Hospital and Richard J. Solove Research Institute, Columbus, OH

Standardizing the coordination and collection of all necessary records and data for clinical trials is an important part of the process to validate the trials.

Clinical trial research often requires that nurses collect many blood research samples and perform procedures outside the standard of care. This information for sample collection times, site of infusion/blood draw and procedures for the trial may not be documented in the medical record and /or would be difficult to locate. Information may also not be specific enough for the needed data for the clinical trial. Clinical trial flow sheets were first created on paper for nurses to capture this information and added to the medical record. The paper clinical trials flow sheets were not always the ideal way to capture the information needed. There was poor communication and training surrounding all parties involved on creation, implementation, use and sharing of the clinical trials flow sheets and no follow-up to verify if all the needed information was captured or if updated information was needed. The Clinical Treatment Unit, an ambulatory outpatient chemotherapy unit doing phase I clinical trials was a founding participant in the paper clinical trial flow sheets.

The Clinical Treatment Unit approached the Clinical Trials Office to suggest a collaborative improvement in the process.

The Clinical Trials Office Process Committee, Clinical Trials Processing Laboratory and the Clinical Treatment Unit formed a committee to revise and improve the process by creating an electronic clinical trial flow sheet template in the Integrated Health Care Information System.

The clinical trial flow sheets were successfully adapted to the electronic record and were trialed in the Clinical Treatment Unit and another outpatient chemotherapy unit. Since implementation we have seen improvement in documentation, communication and compliance. A manual was created with detailed instructions for all participants.

The Clinical Trials Office has taken over implementation of the clinical trials flow sheets and is training more of their staff on the process so other areas of the hospital needing to document information for clinical trials can use this documentation tool. Ongoing quality controls for monitoring this process continue.

1334738

### **EXPLORING INDIVIDUAL SYMPTOM SEVERITY PATTERNS OF CHANGE OVER A 12-WEEK PERIOD OF RADIATION TREATMENT FOR OROPHARYNGEAL OR LARYNGEAL CANCER: A PILOT STUDY.**

Mary Ellen Haisfield-Wolfe, PhD, RN, OCN®, Acute and Chronic Care, Johns Hopkins University School of Nursing, Baltimore, MD

Explore a technique for developing individual symptom patterns (ISP) of severity for problematic symptoms among oropharyngeal and laryngeal cancer patients undergoing radiation treatment.

Difficulty swallowing, dry mouth and pain are prominent symptoms that oropharyngeal and laryngeal cancer patients experience due to the cancer's anatomical locations. Electronic medical records provide for easy collection of patients' symptoms during treatment which are generally reported as a sum, statistical mean, or graph. These reports do not capture the symptom patterns of individual patients and are unable to identify variations in symptom patterns among different individuals. Identifying ISP during cancer treatment can provide vital information for the evaluation and delivery of tailored patient care.

Identify ISP of peak intensity and resolution for prevalent symptoms among oropharyngeal and laryngeal cancer patients receiving radiation.

Symptom Management Conceptual Model: Visual Graphical Analysis (VGA) is a technique which codes and graphs individual

symptoms to identify symptom patterns or group profiles in secondary data analyses. VGA was applied to a sample of outpatients (n = 21) over four time points of radiation treatment (baseline, mid-treatment, end of treatment, one month follow-up). ISP for difficulty swallowing, dry mouth, and pain were graphed over the time points, grouped by patterns and categorized.

Mean scores of difficulty swallowing, dry mouth and pain severity over the four time points followed one pattern in which symptoms increased after baseline and resolve at one month follow-up. Using VGA, only a portion of ISP for difficulty swallowing (n = 10, 48%), dry mouth (n = 12, 57%), and pain (n = 8, 38%), had a pattern similar to that of the means. Also, three different ISP were identified for difficulty swallowing and dry mouth in which resolution did not occur one month after treatment. Three additional ISP categories were identified in which intense and elevated pain levels were present at baseline and resolution did not occur after treatment. Identifying categories of ISP provides new information about symptom variations over the course of treatment. Further research is needed to incorporate ISP techniques into large cancer center databases to evaluate symptoms and side effects related to treatment management and care.

### 1334859

**NURSING MANAGEMENT OF IPILIMUMAB-RELATED DERMATITIS.** Krista Rubin, MS, RN, FNP-BC, Center for Melanoma, Mass General Hospital, Boston, MA; Kathleen Madden, RN, BSN, MSN, FNP-BC, AOCNP®, Cancer Institute, NYU Medical Center, New York, NY

Immune-mediated dermatitis is commonly observed in patients receiving ipilimumab (Yervoy™) for advanced melanoma. Treatment depends on severity and persistence of the symptom(s), thus prompt recognition and early intervention is essential for successful toxicity management.

Until recently, advanced melanoma was associated with a median survival of less than one year. In 2011, ipilimumab, a novel immunotherapeutic agent was FDA approved after results from a randomized phase 3 trial demonstrated a statistically significant improvement in overall survival. Ipilimumab blocks cytotoxic T-lymphocyte-4 (CTLA-4), a negative regulator of the immune response thereby promoting T-cell activation and prolonging a patient's anti-tumor response. However, this may produce a mechanism-related spectrum of immune related adverse events (IRAEs) which, left unrecognized and untreated, can become severe and life-threatening. Rash and/or pruritus are common effects of ipilimumab and rarely more serious dermatitis is seen including toxic epidermal necrolysis and Stevens-Johnson syndrome. Most dermatitis is mild to moderate and resolves with symptomatic treatment. Early intervention is crucial and usually effective, however some patients will develop severe, persistent, or progressive effects requiring high-dose corticosteroids.

To review management strategies and provide a complete understanding of the mechanism of action of ipilimumab. Treatment for ipilimumab related IRAEs is unique and varies from how chemotherapy toxicities are traditionally managed.

Use of the Yervoy™ REMS symptom checklist, use of published toxicity management guidelines, ongoing communication with patients regarding toxicity.

Prompt recognition of skin toxicity with early intervention and ongoing assessment can lead to successful management; this will improve patients' quality of life and enable patients to receive the recommended treatment course yielding better patient outcomes.

Knowledge of the unique mechanism of action and related treatment effects of ipilimumab is essential for safety and positive patient outcomes. Anticipatory guidance and ongoing assessments must be an component of each patient's treatment plan, and is best provided and reiterated by oncology nurses. Failure to identify and treat IRAEs effectively may require stopping treatment either temporarily or permanently, and for some patients, before they have achieved a best response to ipilimumab.

### 1334895

**"AMBULATE WHO?" EARLY MOBILIZATION IN AN ONCOLOGY ICU—A CHANGE IN CULTURE.** Evangelina Santa Teresa, BSN, CCRN, Critical Care Nursing, Memorial Sloan-Kettering Cancer Center, New York, NY; Kate Tayban, ACNP-BC, GNP-BC, OCN®, Critical Care Nursing, Memorial Sloan-Kettering Cancer Center, New York, NY; Louis Voigt, MD, FCCP, Critical Care Medicine, Memorial Sloan-Kettering Cancer Center, New York, NY; Amanda Weeks, MS, PT, Physical Therapy, Memorial Sloan-Kettering Cancer Center, New York, NY; Vincent David, BS, RT, Respiratory Therapy, Memorial Sloan-Kettering Cancer Center, New York, NY

To (1) reduce the level of sedation to allow mobilization, (2) establish criteria for mobilization, (3) implement standards of care for early mobility in the mechanically ventilated oncology patient. (4) transform intensive care unit culture.

Common practice in intensive care units around the world, has been to keep the critically ill patient sedated until the ventilatory or hemodynamic profile shows improvement. This patient population would remain immobilized and in turn develop a host of complications that would lead to multi-system organ failure, delirium and prolonged ICU stay.

In 2010, a multidisciplinary team focused on "sedation vacation" for patients that were identified as early mobility candidates. Creation of exclusion criteria for the oncology ICU population was developed, and a standardized process was established with each discipline on the early mobility team (MD, RN, LIP/NP, PT, OT, and RT)

The multidisciplinary team met monthly to discuss the roles of each discipline. Literature reviews were utilized to formulate the necessary education required by each discipline in order to achieve the goal of safe mobility in our critically-ill population. Creation of a power point presentation by the early mobility team was used to introduce and educate the ICU staff. Revisions of order sets for early mobility were created, to ensure prompt recognition of potential candidates. Early mobility inclusion/exclusion criteria reference cards was created by the RN on the team, to reinforce the program. They included contraindications to daily interruption of sedation with exclusion criteria, and were distributed to all staff.

Since initiation of our early mobility program in 2010, mobilization of 42 mechanically ventilated patients occurred. The bedside nurse is more comfortable in identifying the patients selected with the criteria established. The RN is able to safely mobilize their patients with the early mobility team having a common goal.

Our early mobility program has improved the quality of life for the oncology critically-ill patients by changing the culture of all disciplines in the delivery of care.

### 1335023

**CENTRAL LINE BLOODSTREAM INFECTION PREVENTION: GOING BEYOND THE INSERTION BUNDLE.** Lenise Taylor, RN, MN, AOCNS®, Seattle Cancer Care Alliance/University of Washington Medical Center, Seattle, WA; Vanessa Makarewicz, RN, MN, Administration, University of Washington Medical Center, Seattle, WA

This Quality Improvement process describes factors of Central Line care that, when standardized and implemented, reduces the rate of Central Line Associated Blood Stream Infections (CLABSIs) in the oncology population.

Infections are a major cause of morbidity and mortality in the oncology patient, leading to prolonged hospitalization and increased cost of care. Much attention has been placed on preventing CLABSI with the Institute for Healthcare Improvement's central line insertion bundle. While use of this bundle has significantly reduced the rate of CLABSI, achieving zero has been challenging. At our academic medical center, data collected showed the majority of infections occur more than 7 days after insertion, suggesting

that ongoing care of the central venous catheter (CVC) is a factor in acquiring a CLABSI. This broadened attention in preventing CLABSI from insertion to include maintenance care of CVC, especially in long term catheters.

A working group was established to identify best practice in care of the CVC, develop educational plans for staff and patients, and review all CLABSI to identify trends in infections.

A maintenance bundle was developed and an on-line educational module was launched for nursing staff. Units with high rates of CLABSI received intensive education discussing maintenance issues. All patients received instruction with updated education materials. Routine reviews of all CLABSI focused on patient factors and staff-identified maintenance issues. Implementation of a regular CVC care class for patients is planned to standardize patient education.

Since implementation, a decrease in CLABSI on all oncology units has been seen as compared to the previous year. A baseline number of CLABSI on admission has been obtained to use for comparison in the coming year to evaluate outpatient care of CVC by patients.

Prevention of CLABSI should incorporate care of the CVC after insertion by the health care staff and the patient. Including standardized education followed with focused instruction, along with regular reviews of CLABSI by staff in a prevention plan can lead to an overall reduction in CVC infection and an improved patient experience.

### 1335213

**REDUCE CENTRAL-LINE ASSOCIATED BLOODSTREAM INFECTION IN A MEDICAL ONCOLOGY UNIT.** Faye Ari Inumerables, RN, Leukemia/Lymphoma Unit, MSKCC, New York, NY; Karin Swiencki, RN, MSN, AOCN®, Medical Oncology Unit, NYP/Columbia, New York, NY

To reduce the number of central line associated bloodstream infections in the Medical Oncology Unit (6HN) of NYP/CU by improving the competency of registered nurses in taking care of central venous access. Through a brief in-service that will be entitled "Five Minutes with Faye," will be conducted in the unit to all registered nurses. The main focus of the in-service is about the proper management and care of central venous access according to standards of practice and hospital protocol, especially the technique of "scrubbing the hub" with chlorhexidine for 15 seconds and letting it dry for 30 seconds. This project aims to determine if re-educating at least 90% registered nurses who are working in 6HN will help decrease the number of CLABSI for the month of December 2011.

For the past two decades the primary focus of attention has been the Intensive Care Unit (ICU) setting, however recent data suggest that the greatest numbers of patients with central lines are in hospital units outside the ICU, where there is considerable risk of CLABSIs. In New York Presbyterian/Columbia, specifically in the Medical Oncology Unit/6 Hudson North floor, the rate of CLABSI for the past few months has been fluctuating from 0 to 2 incidents of CLABSIs each month. Compared to other units in the hospital, this floor has the greatest number of CLABSIs from January to October 2011.

Central line bloodstream associated infections (CLABSIs) are important cause of increased morbidity, mortality and excess healthcare cost. Through educating staff nurses in 6HN regarding proper care of central venous catheter it will decrease length of hospital stay, decrease risk for mortality and it will decrease hospital cost as well.

The scores for the pre and post-test will be collected for this project. After the completion of the in-service, which will be on December 14, 2011. In addition to that, a revised competency checklist will be used in this project taken from NYP/CU own catheter maintenance/dressing change checklist.

For this project, it is expected that a comparison between the pre and post-test scores will be determined. A run chart (bar graph) will be presented to compare the scores from the pre test versus

the scores for the post-test. For the reported outcomes of CLABSI for the month of December by the Department of Infection Control and Prevention, a run chart will be presented to show the number of CLABSI for each unit for the said month. This will show if there was a decrease in the number of CLABSI in 6HN.

### 1335502

**FROM EVIDENCE TO PRACTICE—A MULTIDISCIPLINARY PROJECT TO ESTABLISH AND IMPLEMENT A SOLID TUMOR PATIENTS' BONE MODIFIED AGENTS (BMA'S) GUIDELINE, IN A LARGE CANCER CENTER.** Tal Granot, RN, MA, Institute of Oncology, Davidoff Center, Rabin Medical Center, Petah Tikva, Israel; Malka Shimoni, RN, BA, Institute of Oncology, Davidoff Center, Rabin Medical Center, Petah Tikva, Israel; Sarah Ben-Ami, RN, MA, Internal Division, Sheba Medical Center, Tel Hashomer, Ramat Gan, Israel; Amira Morag, RN, MA, Institute of Oncology, Davidoff Center, Rabin Medical Center, Petah Tikva, Israel

To establish safety standards regards to BMA's administration.

For patients with advanced solid tumors, metastatic bone disease is a common consequence that impairs quality of life, reduces overall survival, and requires BMA's interventions. BMA's prevent, reduce, and delay cancer-related skeletal complications, and have substantially decreased the prevalence of Skeletal Related Events (SRE) since their introduction. Until recently, as compared to chemotherapy, BMA's were perceived to be less harmful, less complicated and an almost innocent group of drugs. Based on this misconception, there were missing data with regards to patients' volume, side effects, complications and structured follow-up

The purpose of this project was to establish and perform a medical and nursing staff guideline while treating patients with BMA's.

During 2009, as a project of the Israeli Oncology Nursing Society (IONS), several nursing subgroups across the country, reviewed relevant literature on BMA's. One group established a comprehensive guideline in collaboration with physicians and management in a large cancer center. The guideline writing process incorporated five steps: A. Literature review, particularly based on two leading articles. B. Multidisciplinary discussions, which were incorporated in to the guideline after consensus. C. BMA' assessment tools. D. Patient education sheets. The BMA's guideline was composed of several chapters related to: general information, indications and contraindications, drug-drug interactions, time and course duration, special considerations like dose adjustment under renal dysfunction, complications, administration and patient education.

The implementation process included: the guideline and related materials approved by management; outcome presentation to medical and nursing staff. Discussions were held with specialists in Oral Medicine in order to assure appropriate patients flow.

Although guidelines were written in one cancer center the product was edited by a pharmaceutical company and disseminated nationwide, with mutual cooperation with the IONS. This process started and ended as a national project. It has very strong safety implications for patients and health providers as well. Further evaluation of project's outcomes regard to complications rate and patients adherences to treatments, is needed.

### 1335654

**A NEW TREATMENT OPTION FOR PATIENTS WITH RECURRENT GLIOBLASTOMA MULTIFORME (GBM).** Mary Elizabeth Davis, RN, MSN, AOCNS®, MSKCC, New York, NY

Participants will analyze the treatment options for patients with recurrent GBM considering quality of life.

Patients diagnosed with GBM have a dismal prognosis. Despite optimal resection and chemoradiation, nearly all patients with GBM experience recurrence of disease with median time to progression after initial treatment with radiation and temozolomide

of 6.9 months. Treatment options for recurrent disease are limited. Response rates for chemotherapy agents are poor and the side effects from drugs such as carmustine, irinotecan, carboplatin, and etoposide can be intolerable. Bevacizumab, a humanized monoclonal antibody, was approved for recurrent GBM with response rates of approximately 20%. Although serious side effects have been reported, it is generally well tolerated though the median duration of response is only about 4 months. For all treatment, the benefits of extended survival or progression free delay must be carefully balanced with side effects of treatment and their impact on QOL.

This presentation will introduce, the Novocure TTF-100A as a new treatment option for patients with recurrent GBM.

Novocure TTF-100A is a new FDA approved electrical device, indicated for the treatment of GBM in patients who have progressed after chemotherapy and radiation. The Novocure device utilizes tumor treating fields, which are low intensity, intermediate frequency, alternating electric fields. The electrical fields induce apoptosis on rapidly dividing cells by interfering with spindle tubules during mitosis. Electrodes, worn on the shaved scalp, transmit the electricity from a portable battery powered device, which is worn approximately 20 hours per day. The device has been shown, in a single, randomized pivotal trial of 237 patients, to have equivalent efficacy to chemotherapy with less side effects.

Oncology nurses are in a unique position to analyze the impact of new treatment modalities on brain tumor specific quality of life.

The goal of treatment for recurrent GBM is palliative. It is imperative that the oncology nurse be knowledgeable of current and emerging treatment options to enable the patient and family to weigh the benefit and burden of ongoing therapy. It is essential to assess the impact of new treatment modalities on QOL.

### 1335658

**"WE CARE . . . SO PLEASE SHARE . . ." SUICIDE SCREENING AND PREVENTION IN THE ONCOLOGY POPULATION: AN EVIDENCE-BASED APPROACH.** Janine Kennedy, RN, BSN, MA, OCN®, Nursing, Memorial Sloan-Kettering Cancer Center, New York, NY; Debra Rodrigue, BSN, MA, Nursing, Memorial Sloan-Kettering Cancer Center, New York, NY; Wayne Quashi, RN, MSN/MPH, OCN®, Nursing, Memorial Sloan-Kettering Cancer Center, New York, NY; Kevin Browne, MSN, RN, CCRN, Nursing, Memorial Sloan-Kettering Cancer Center, New York, NY; Mary Dowling, MSN, RN, CENP, OCN®, Nursing, Memorial Sloan-Kettering Cancer Center, New York, NY

The Joint Commission issued a sentinel event alert in November 2010 based on the rising trend of suicide attempts in non-psychiatric hospital settings and emergency rooms. At this comprehensive cancer center, we realized that our population was at a higher risk for suicidal ideation and intent. Through an evidenced-based review, suicide screening and prevention strategies needed to be enhanced at this cancer center to make the patient experience safer.

Oncology patients are at a four times greater risk for suicidal ideation than the general population. At this cancer center within a 6 month period, it was found that 16% of oncology patients with pain expressed suicidal ideation and 8.6% of Psychiatry consults were requested for evaluation of suicidal ideation. There have been rare instances of suicide attempts at our institution, thus making appropriate suicide screening and prevention a priority.

A multi-disciplinary group of psychiatry, nursing, social work, chaplaincy and safety convened to address the concerns brought forth by this alert, while tailoring it to the specific needs of the oncology population. Although suicide precautions were already established, we decided to embark on an evidenced based approach to review current standards and implement best practice.

This group developed and conducted a nursing wide education program on suicide risk factors, screening, interventions and plan of care. High risk for suicide screening questions and a direct intent question were added to the Urgent Care Center and Inpatient assessment forms. An evidenced-based patient care plan,

patient education documentation form, suicide precaution order, handoff notification, and constant observer checklist were developed. Constant Observers were re-educated on the importance of direct continuous observation. Upon discharge, patients receive education from the National Suicide Prevention Lifeline and how to manage an emotional crisis.

An audit tool was developed to monitor compliance and evaluate the new interventions implemented to keep our suicidal patients free from self-harm. Ongoing program evaluation will be conducted in an effort to maintain a safe and caring culture for our oncology patients.

This suicide screening and assessment initiative provided the nursing staff with the best evidence-based foundation for the nursing care of the suicidal patient.

### 1336104

**SYMPTOM PATTERNS AND RELATIONSHIPS EXPERIENCED BY SURVIVORS OF LUNG CANCER.** Pamela Ginex, EdD, RN, OCN®, Memorial Sloan-Kettering Cancer Center, New York, NY; Bridgette Thom, MS, Memorial Sloan-Kettering Cancer Center, New York, NY; Andrea Barsevick, PhD, RN, AOCN®, FAAN, Nursing Research, Fox Chase Comprehensive Cancer Center, Philadelphia, PA

To describe the pattern and relationship of symptoms experienced by survivors of lung cancer.

Treatment for lung cancer leads to multiple, prolonged symptoms, which often cooccur. Management of symptom clusters is essential to successful recovery and improved quality of life. Although research is emerging on symptom clustering in lung cancer patients, there is limited focus on survivors. Nurses play a key role in educating patients about symptom clustering, which can occur well past the completion of treatment.

This study aimed to describe symptom clustering in lung cancer survivors and determine the impact of clusters on factors influencing quality of life; it addresses ONS Research Agenda priority C, Late Effects of Cancer Treatment and Long-term Survivorship Issues.

The Theory of Unpleasant Symptoms guided this study. The theory includes factors that influence the symptom experience and consequences of the symptom experience.

This descriptive, longitudinal study assessed symptoms in a convenience sample of 211 lung cancer survivors at comprehensive cancer center. Data were collected at two time points; one and two years posttreatment completion. At both points, patients completed a bothersome symptom checklist and several self-report scales, including depression, anxiety, pain, and performance status rating. Symptom clusters were constructed using the technique suggested by Brown, Cooley, Chernecky, and Sarna, and data were analyzed using bivariate testing and multivariate model-building.

One year post-treatment, 40% (n=84) of respondents reported at least two co-occurring symptoms, and 21% (n=45) had at least three co-occurring symptoms. Two years after treatment, 28% (n=60) of the sample reported at least two co-occurring symptoms; 12% (n=26) had at least three co-occurring symptoms. At both time points, respondents with co-occurring symptoms were significantly more likely to score worse on self-report anxiety, depression, dyspnea, fatigue, pain, and performance status scales. Additional findings on cluster composition will be presented. Survivors of lung cancer have significant symptoms that require attentive follow up by oncology nurses. Knowledge of these symptoms and their patterns are important in order to plan intervention-based research on symptom management for survivors of lung cancer.

**Underwriting/Funding Source Name:** Oncology Nursing Foundation

### 1336134

**DESIGNING AN ELECTRONIC STAFFING CALENDAR FOR A LARGE OUTPATIENT MEDICAL ONCOLOGY NETWORK—A**

**SYSTEM WHICH PROACTIVELY LINKS STAFFING TO PATIENT VOLUME AND PATIENT ACUITY.** Amy Korinko, BSN, RN, OCN®, Nursing Administration, UPMC Cancer Centers, Pittsburgh, PA; Lorraine Sieminski, BSN, RN, OCN®, Nursing Administration, UPMC Cancer Centers, Pittsburgh, PA; Daniel Powell, BSCS, Information Technology, UPMC Cancer Centers, Pittsburgh, PA; Shani Weber, BSN, RN, OCN®, Nursing Administration, UPMC Cancer Centers, Pittsburgh, PA; Cheryl Steele, MSN, MPM, RN, AOCN®, Nursing Administration, UPMC Cancer Centers, Pittsburgh, PA

The goal was to ensure safe staffing levels based on patient volume and acuity while providing a centralized access to Float Staff availability.

The literature describes many attempts to quantify nursing workload based upon patient acuity directed staffing levels. UPMC Cancer Centers is a network of 23 outpatient medical oncology sites spanning 13 counties. Covering all of these centers with a limited number of float staff is a daily challenge. Determining the need for float staff coverage based on volume and acuity led to collaboration between the IT Department and the Nursing Managers of The UPMC Cancer Centers to design an electronic staffing calendar.

The goal was to ensure safe staffing levels based on patient volume and acuity while providing a centralized access to Float Staff availability. The program database contains personnel job titles, names, phone numbers and regions of assignment. The Program is linked to the Electronic Patient Appointment Scheduling System which downloads daily patient volumes for every site. The next phase of this design is to establish a weighted acuity system based on treatment complexity.

When a staff member is unavailable for their scheduled assignment, the manager edits the calendar to show an unavailable status, views the centralized calendar and reassigns float staff. Staffing levels will be determined at each site by the volume and the acuity of the scheduled treatments. Additional functionality of this application enables Managers to communicate schedules electronically to their float staff via e-mail.

The ability to justify the placement of float staff at specific locations based on volume and acuity and the future establishment of staffing benchmarks.

This program may be utilized in the outpatient oncology setting to achieve safe staffing levels and to justify the assignment of float staff. Inadequate staffing in medical oncology has been linked in the literature to an increase in adverse events. The teamwork and collaboration between Nursing and IT has been a key to the successful design and implementation of this calendar.

**1336229**  
**MANAGEMENT OF EVEROLIMUS-RELATED ADVERSE EVENTS IN POSTMENOPAUSAL WOMEN WITH ESTROGEN RECEPTOR-POSITIVE ADVANCED BREAST CANCER.** Mary Peterson, RN, MS, ANP-BC, Banner MD Anderson Cancer Center, Gilbert, AZ

To educate nurses on adverse event (AE) management strategies associated with phosphatidylinositol 3- kinase/Akt/mammalian target of rapamycin (mTOR) inhibitors.

Endocrine therapy provides a valuable treatment option for postmenopausal patients with estrogen receptor (ER)-positive advanced breast cancer (ABC). Nonsteroidal aromatase inhibitors such as letrozole and anastrozole are established first-line therapies. However, lack of response or acquired resistance results in disease progression. One mechanism of endocrine resistance is aberrant signaling via the mTOR pathway. Everolimus, an oral mTOR inhibitor administered once daily, is being evaluated in ABC.

Everolimus-associated AEs that arose during a clinical trial in postmenopausal women with ABC are described, and management strategies are discussed.

In the double-blind, placebo-controlled, phase III BOLERO-2 study eligible patients (N=724) with E R+, letrozole- or anastrozole-refractory ABC were randomized (2:1) to exemestane (25 mg/day) in combination with everolimus (10 mg/day) or placebo. In an interim analysis of BOLERO-2, primary endpoint of progression-free survival was 7.4 months (everolimus+exemestane) vs 3.2 months (exemestane+placebo) with a hazard ratio of 0.44 (P < 1 x 10-16). Most common grade 3/4 AEs were stomatitis (8% vs 1%), anemia (7% vs 1%), hyperglycemia (5% vs <1%), dyspnea (4% vs 1%), fatigue (4% vs 1%), and pneumonitis (3% vs 0%) for the everolimus+exemestane and exemestane+placebo groups, respectively. Stomatitis (≥ grade 2) was treated with oral corticosteroid low-dose (swish-and-spit) solution and analgesic mouth treatments. Dosing was interrupted for grade 3 and intolerable grade 2 stomatitis. When stomatitis resolved to ≤ grade 1 everolimus was readministered at a reduced (grade 3) or same (grade 2) dose. Grade 4 stomatitis was not reported. Hyperglycemia was managed according to guidelines, but achievement of optimal glycemic control was recommended before initiating everolimus therapy. Grade 3 (grade 2 if necessary) noninfectious pneumonitis was managed with corticosteroids and treatment interruption. Treatment was discontinued if pneumonitis did not resolve to ≤ grade 1 within 3 weeks.

Education about the most prevalent everolimus-associated AEs is recommended for oncology professionals involved in the day-to-day care of patients in order to monitor, assess, and manage symptoms and incorporate complementary supportive treatments.

**Underwriting/Funding Source:** Novartis

**1336389**  
**MANAGING OUR GROWTH: WE CAN DO THIS TOGETHER! COMMUNICATION AND COLLABORATION BETWEEN MEDICAL ONCOLOGY AND INFUSION CLINICS.** Penny Moore, MSN, RN, OCN®, OSU James Cancer Hospital and Solove Research Institute, Columbus, OH; Kristen LeRoy, BSN, RN, OCN®, OSU James Cancer Hospital and Solove Research Institute, Columbus, OH; Dottie McHenry, RN, OCN®, OSU James Cancer Hospital and Solove Research Institute, Columbus, OH; Julia Garrett, MSN, CNP, OSU James Cancer Hospital and Solove Research Institute, Columbus, OH

To improve infusion nurse satisfaction as measured by The National Database of Nursing Quality Indicators in the category of RN to MD interactions.

Infusion nurses in this breast specific clinic cited nurse to physician interactions as an area of lesser satisfaction in the 2010 NDNQI nursing satisfaction survey. Incomplete chemotherapy orders and lack of hand-off communication between medical oncology and infusion clinics contributed.

A multidisciplinary process improvement team was formed to address the need for improved communication. Team members included oncology nurses from each area, a nurse practitioner, two medical oncologists, a pharmacist, and a manager. Meetings were held weekly.

Meetings focused on strategies to improve communication and the sharing of information. Sharing diverse perspectives allowed for understanding and respect of the needs of each clinicians unique role. Data collected included infusion nurses documenting each time they had to contact the medical oncology team for order clarification, follow-up information, or pertinent clinical information that had not been shared. Weekly updates were e-mailed to all medical oncology and infusion staff. Daily huddles were implemented by each medical oncology team with an infusion nurse attending. An initiative of "packaging the patient" for infusion was implemented. Specific guidelines were shared with all medical oncology staff.

A daily huddle with an infusion nurse in attendance allows the infusion clinic to be aware of potential treatment changes, research protocol implementation, and the potential for add-on of ill patients. Packaging the patient prior to their arrival in infusion has dramatically reduced the need for infusion nurses to contact clinics



for missing information. Infusion nurses now also attend all physician team meetings where they share specific concerns related to communication between departments. The 2011 NDNQI nurse satisfaction survey showed the category of RN to MD interaction for infusion nurses reporting that they are highly satisfied with their relationship with the physician's they interact with daily, a significant improvement from the previous year.

Oncology nurses relate job satisfaction to their relationship with other members of the healthcare team, specifically physicians. Communication in oncology is important to provide safe quality care for patients. Throughput has improved in both infusion and medical oncology clinics. Nurses in the infusion clinic report they are often contacted directly by the physician to share pertinent information related to their patients care. Due to the success in the breast specific clinics these processes are being evaluated for implementation across all infusion and medical oncology clinics across the health system.

### **1336526** **BEYOND ORIENTATION: EDUCATING NOVICE NURSES USING BENNER'S STAGES OF CLINICAL COMPETENCE.**

Giselle Boward, RN, BSN, OCN®, 9300 Oncology Nursing, Duke University Health System, Durham, NC; Deborah H. Allen, MSN, CNS, FNPBC, AOCNP®, 9300 Oncology Nursing, Duke University Health System, Durham, NC

Recognize Benner's Stages of Clinical competence achieved through an educational program

A nurse educator's primary goal is to ensure safe patient care while supporting the development of the new nurse. Novice nurses (NN) are eager to learn; yet, feel insecure in acknowledging their limitations. This can impact achievement of clinical competence, critical thinking (CT), and future professional development (PD). Developing and implementing a unit-based educational program that fosters clinical competence and PD for the NN that extends beyond orientation is advantageous to support and develop clinical experts.

To develop and implement an educational program fostering CT and PD in NN on a medical oncology unit using Benner's Stages of Clinical Competence.

A control group of novice nurses with <1.5 years experience were surveyed regarding their educational goals, comfort with the patient population, and knowledge gained during daily practice. Informal staff interviews established expected timeframes to acquire clinical competence in skills most frequently used on this unit. Data directed development of a 1-year program focused on small achievement goals for the novice nurse post orientation. Specific patient or self-care topics were discussed in one-to-one or small group sessions with the unit educator. Each session focused on the assessment of the NN's progression along the trajectory of clinical competence. Sessions occurred every two weeks for 3 months, then monthly for 9 months. The educational sessions built upon knowledge gained from prior sessions and work experience. Post-intervention surveys were administered after completion of the year long sessions. Over the course of one year, five NN participated in the intervention. All reported increased comfort with topics discussed during educational sessions. 100% successfully answered questions regarding policy, procedure, and care-specific topics as compared to surveyed control subjects. They were more involved in PD activities, including organizational membership, certification and continuing education goals.

Using Benner's Stages of Clinical Competence a NN education program was developed and successfully fostered confidence, CT, and PD. Small achievement goals were identified for NN by utilizing knowledge gained from the intervention.

### **1336578** **IMPROVING PATIENT SATISFACTION SCORES BY USING A MULTIDISCIPLINARY APPROACH.** Molly Jamieson, RN,

BSN, OCN®, MSS-4JPW, UIHC, Iowa City, IA; Kelly Petrulevich, RN, BSN, OCN®, MSS-4JPW, UIHC, Iowa City, IA

Improving patient satisfaction scores for a medical surgical oncology unit by implementing a multidisciplinary quality and safety unit council.

University of Iowa Hospitals and Clinics (UIHC) uses Press Ganey for patient satisfaction scores. The medical surgical oncology unit at UIHC improved patient satisfaction scores by implementing new programs and strategies developed by staff involved in patient care through their unit council. Patient satisfaction scores rose in 2011. In addition to improving patient satisfaction, staff morale has also improved. Staff show pride in being oncology nurses and it is evident in their patients' reviews.

The unit council is comprised of social workers, pharmacists, dietitians, staff nurses, nursing assistants, nurse leadership, physicians, epidemiology, housekeeping, and rehab therapies. Monthly unit meetings identified opportunities for improvements to quality and safety in 2011.

In addition to improvements in Magnet indicators such as hospital acquired pressure ulcers, central line infections, falls, and use of restraints, the discharge process was improved, cleanliness of the unit was enhanced, and attention to the noise level were addressed.

Discharge scores were raised by 4%, room cleanliness scores were raised by 8.1% and noise level declined by 10% in 2011. The likelihood of recommending our unit rose by 20.2% in 2011. Magnet indicators have been consistently low, scoring above other UIHC units.

Home care instruction improvements were made after review and input from physicians and nurses. Drafts of the instructions are distributed soon after admission, so home care needs and questions can be addressed throughout their stay. Discharge thank you notes are now provided with the name of the patient's nurse and unit phone number for ease in getting at home questions answered promptly. Room cleanliness improved by de-cluttering of patient rooms and removal of unused linens with hourly rounding. Sanitizing wipes were placed in all patient restrooms. Nurses were encouraged to sanitize toilet seats after each use. Nursing staff recognizes how important rest is for healing. Staff offer patients white noise machines, ear plugs, and the relaxation channel on hospital televisions to assist in making the noise level acceptable.

### **1336757** **INTER-PROFESSIONAL COMMUNICATION OF NURSING AND MEDICAL STUDENTS IN A SIMULATED SHOCK ICU ENVIRONMENT.** Bernadette Milbury, RN, OCN®, Nursing, University of California, Irvine, CA; Charlotte Lee, Nursing, University of Toronto, Toronto, Ontario, Canada

To evaluate undergraduate nursing professional communication using simulation in collaboration with medical students.

In the simulated environment, the student is able to critically think, kinesthetically approach and apply concepts learned in the classroom environment all the while maintaining patient safety. A simulated exercise involving both undergraduate nurses and medical students lays the foundation for the knowledge skills and attitudes of the new nurse graduate to successfully interact with healthcare team members. Simulated experiences expose the students, both medical and nursing to alternative, methods of communication and implementing different scenarios. In the Intensive Care Unit in which all decisions are paramount because of the intensity of the sickness of the patient, we are able to simulate the environment and cases to educate the students in their roles, all the while maintaining patient safety. The nursing and medical students are able to practice in real time, a typical ICU experience, such as shock, possibly make communication errors, but have no effect on real human lives

The purpose of this simulated exercise is to expose fourth year nursing students to inter-professional communication with fourth year medical students. The simulated experience will be focused

on the Intensive Care Unit (ICU), dealing with a patient that has some form of shock. The nursing student will recognize the signs and symptoms of impending shock. At the same time, will have to call the physician with the appropriate clinical information. Upon arrival of the physician into the unit, the nursing student will work professional with the medical student to prevent adverse outcomes for the simulated patient.

In the debriefing session after the simulation experience, is the time and place to critically review the experience. The debriefing session is where the actual learning takes place. There has been little research that evaluates undergraduate nursing education teamed with the fourth year medical students using simulation, with emphasis on inter-professional communication. The debriefing session will include all, nursing and medicine students. The session moderators will be the physicians and nursing instructors. Both nursing and medicine instructors reviewed the rationale/evidence for the actions taken and supported in the simulated environment.

Preliminary results from the present study indicated that inter-professional simulation enhanced knowledge attainment and skills in collaboration. Such findings have important implications on improving the quality of patient care through ensuring timely recognition and effective management of shock. As this is one of the few studies that examine simulation with inter-professional participation, future research directions will also be discussed for advancing this body of literature.

### 1337114

**USING AVATARS IN AN ONLINE VIRTUAL COMMUNITY TO FACILITATE PEER STORYTELLING AMONG GRIEVING ONCOLOGY NURSES.** Rebecca Pujol, RN, OCN®, Acute Oncology, Ochsner Medical Center, New Orleans, LA; Karen Rice, DNS, APRN, Center for Nursing Research, Ochsner Medical Center, New Orleans, LA; Luanne Billingsley, DNP, APRN, School of Nursing, Southeastern Louisiana State University, Hammond, LA; Marsha Bennett, DNS, APRN, School of Nursing, Louisiana State University Health Sciences Center, New Orleans, LA; Sara Sporar, BSN, RN, Acute Oncology, Ochsner Medical Center, New Orleans, LA; Kristin Linde, BSN, RN, Acute Oncology, Ochsner Medical Center, New Orleans, LA

To discuss 2 benefits of using a virtual environment to facilitate grief support groups.

Cancer deaths not only affect patients and families but the nurses that care for them. Numerous studies report oncology nurses' stress with chronic exposure to death leads to illness, burnout, and attrition.

To describe the use of Second Life (SL) in facilitating nurses' peer storytelling sessions about recent patient deaths as a step towards personal grief resolution.

The Bereavement Task Model was used to analyze whether nurses verbally demonstrated the 4 activities of grief resolution.

A pilot study using mixed methods involved focus groups and questionnaires to guide inquiry about how oncology nurses express/process grief related to patient death, and the perceived benefit of using virtual peer storytelling group sessions for grief resolution. A purposive sample of 9 oncology nurses self-reporting patient related grief and working in acute, ambulatory, or infusion units at one facility were included. Peer storytelling sessions were conducted in SL, an internet accessible virtual environment. Each of the three focus groups were facilitated by a grief counselor. Each group attended SL sessions every other week for 5 consecutive sessions. Questionnaires, revised from a previous published study, were completed by each group before and following participation to assess personal loss/grief resolution. End-of-study questions addressed perceived benefit of using SL in grief support. Focus groups were recorded using Camtasia software. Questionnaire data was statistically described. Open-ended question responses and 15 hours of recordings were analyzed for thematic content using NVivo8 software.

The mean age of participants was 39.5 years (SD=10). Storytelling sessions were helpful (M=8.4, SD=1.9) in resolving grief on a 10-point scale (not at all to extremely helpful); SL was helpful (M=7.8, SD=2.6) in facilitating sessions. Analysis of recorded sessions identified 4 themes: Reliance on each other for support; Learning what to do/say from trial/error and modeling; Physicians and families as sources of conflict; and Grief as an emotional rollercoaster. This pilot study suggests a potential benefit in using SL to facilitate peer storytelling group sessions for oncology nurses' grief resolution. Additional research is warranted using a larger sample and multiple sites.

**Underwriting/Funding Source:** Patrick Barnes Research Grant (DAISY Foundation)

### 1337325

**IMPROVING HOSPITAL ADMISSION PROCESSES FOR PATIENTS AT RISK FOR NEUTROPENIC SEPSIS.** Jenny Ellis, RN, MS, AOCN®, Nursing, Texas Health Harris Methodist Hospital HEB, Bedford, TX; Cleo Deguzman, RN, OCN, Nursing, Texas Health Harris Methodist Hospital HEB, Bedford, TX

To improve the throughput process of patients admitted to the hospital with neutropenia.

While the proactive use of growth factors and evidence based medical and nursing practices have greatly impacted the care of patients with neutropenia, neutropenic sepsis continues to be a major cause of morbidity and mortality among patients with cancer. Neutropenic patients presenting to the hospital for admission either directly or through the Emergency department (ED) can encounter delays and other factors which may impact their outcomes.

This project examines neutropenic patients' special needs from the hospital perspective in order to determine what can be done to improve their care.

After a retrospective examination of the throughput process of patients admitted to the hospital with neutropenia, the following interventions were implemented; 1) Development and implementation of an Oncology Patient Alert Card, 2) Development of ED triage processes to identify and care for the neutropenic patient 3) Neutropenic risk reduction education for all persons responsible for patient throughput including nursing, medical and support staff.

The project outcome measures include the utilization of the Oncology Patient Alert Cards, time to initial antibiotic administration, and documentation of neutropenic infection prevention alerts. At this time the interventions are being put in place and post intervention data collection is expected to begin in March, 2012. Preliminary planning for the improved processes have begun in the ED by nursing staff and physicians. Neutropenic card usage will begin after nursing education with the nursing staff in the ED, physician offices and oncology inpatient unit as well as with the admission staff.

A comprehensive retrospective review of the throughput process of patients admitted to the hospital with neutropenia was key to identifying areas of potential patient risk. The interventions implemented further facilitate the care of the neutropenic patient admitted to the hospital and now it truly begins at the hospital door.

### 1337348

**EVALUATION OF A SUPPORTING ONCOLOGY FAMILY CAREGIVER COURSE FOR HEALTHCARE PROFESSIONALS.** Jo Hanson, RN, MSN, CNS, OCN®, City of Hope, Duarte, CA; Betty Ferrell, RN, PhD, MA, FAAN, City of Hope, Duarte, CA; Marcia Grant, RN, DNSc, FAAN, City of Hope, Duarte, CA

Discuss the issues and state-of-the-science for oncology family caregivers (FC) support through a FC-focused educational curriculum for healthcare professionals.

Two of every three American families will at some time have at least one family member diagnosed with cancer. Although FC provide more than 75% of patient care, there are limited resources

in our cancer centers to support them. Current trends toward earlier discharges from acute care hospitals, advances in cancer treatments, and declining reimbursement rates have led to complicated caregiving demands that may exist for months to years. With 1.5 million new cancer diagnoses annually and over 12 million cancer survivors, millions of FC are profoundly impacted by their caregiver role.

The purpose of this NCI R25 funded project is to improve QOL and the quality of care for oncology FC. An educational course was developed to train healthcare professionals regarding FC needs across the physical, psychological, social, and spiritual domains and on strategies to improve cancer centers' FC support.

Competitively selected multidisciplinary healthcare teams from cancer institutions across the country have participated in a 3-day intensive training course to enhance their knowledge of FC needs and to develop FC support in their home institution. The curriculum content, based on the City of Hope QOL Model, brings together the most current evidence-based knowledge and multiple FC resources. During the course, each team develops three goals related to implementation and dissemination of the course content and resources. Goal evaluation follows at 6, 12, and 18 months. Participants (235) from 34 states attended the first two courses in Anaheim, CA. The participants were mostly nurses (44%) and social workers (39%) coming from community cancer centers (65%) and NCI comprehensive cancer centers (29%). Others came from a variety of settings e.g. ambulatory clinics, VA hospitals/clinics, and community cancer support agencies. Overall course evaluations were positive (4.73, 5=best). With a 100% response rate for the 6-month follow up, the first course participants reported 47% goal completion with the remaining 53% in process or modified.

Improving the well-being of FC, improves patient outcomes. This FC training for oncology professionals is a positive, viable approach to improving FC support in cancer centers.

**Underwriting/Funding Source:** National Cancer Institute 1R25CA132 664-01A2

### 1337452

**A MULTIDISCIPLINARY APPROACH TO IMPLEMENT THE AMERICAN SOCIETY OF CLINICAL ONCOLOGY (ASCO) AND ONCOLOGY NURSING SOCIETY (ONS) CHEMOTHERAPY SAFETY STANDARDS.** Anna Vioral, MSN, MEd, RN, OCN®, Oncology, West Penn Allegheny Health System, Pittsburgh, PA; Heather Kennihan, BSN, RN, OCN®, Allegheny General Breast Center, West Penn Allegheny Health System, Pittsburgh, PA; Robyn Best, BSN, RN, OCN®, WPAON, West Penn Allegheny Health System, Pittsburgh, PA

To describe the process of standardizing chemotherapy practice according to the American Society of Clinical Oncology (ASCO) and the Oncology Nursing Society (ONS) 31 safety standards for chemotherapy administration.

Chemotherapy involves an intricate high-risk multidisciplinary process of prescribing, dispensing, and administering complex multi-medication regimens with narrow therapeutic indices. Additionally, chemotherapeutic agents require safe handling precautions by patients and healthcare providers. A number of chemotherapy and targeted therapies have expanded to non-oncology population indications, such as rheumatoid arthritis, lupus, nephritis, multiple sclerosis, and ectopic pregnancies. Therefore, minimizing errors and increasing safety has emanated on the forefront of oncology practices. The complex process of chemotherapy administration demands standardization of chemotherapy practice for all health care providers to ensure safe outcomes.

The presentation describes how one organization standardized and integrated the national chemotherapy safety standards using interdisciplinary approaches, presents the developed standards of practice, discusses the educational processes used during implementation, and provides lessons learned along with recommendations for health care providers involved in chemotherapy administration processes.

Interventions utilized in the process includes: the development of an inter-facility multidisciplinary chemotherapy task force council; development of 16 system wide standards of practice for prescribing, ordering, mixing, dispensing, administering, and safe handling of chemotherapy; creation of 10 simulated e-learning vignettes in conjunction with the Simulation Teaching and Academic Research (STAR) Center for system wide education; and suggestions for health care providers involved in chemotherapy administration safety processes.

Evaluations address staff knowledge through the use of pre- and post- assessments and compliance.

Stakeholders must address the challenges to develop a framework for best practice to reduce errors and increase knowledge for individuals involved in both direct and indirect care. This presentation equips health care professionals with a multidisciplinary process of high quality clinical standards of practice that may potentially reduce errors and ensure safety.

### 1337485

**EFFICACY AND SAFETY OF NILOTINIB IN OLDER (≥65 YEARS) PATIENTS WITH CHRONIC MYELOID LEUKEMIA IN CHRONIC PHASE (CML-CP): RESULTS FROM THE PHASE 3 ENESTND (EVALUATING NILOTINIB EFFICACY AND SAFETY IN CLINICAL TRIALS OF NEWLY DIAGNOSED PHILADELPHIA CHROMOSOME-POSITIVE CML PATIENTS) STUDY.** Gerry Gorospe, RN, BSN, PHN, MSN, Division of Hematology and Hematopoietic Cell Transplantation, City of Hope, Duarte, CA; H. Hagop Kantarjian, MD, Department of Leukemia, University of Texas MD Anderson Cancer Center, Houston, TX; Andreas Hochhaus, MD, Klinik für Innere Medizin II, Universitätsklinikum Jena, Jena, Germany; Richard Larson, MD, University of Chicago, Chicago, IL; Giuseppe Saglio, MD, Laboratorio di Medicina e Oncologia Molecolare, Ospedale San Luigi Gonzaga, Torino, Italy; Timothy Hughes, MD, SA Pathology, Royal Adelaide Hospital, Adelaide, South Australia, Australia

Evaluate efficacy and safety of nilotinib in older patients.

Although CML affects all ages, median age at diagnosis is 65 years. Physiological changes that naturally occur with aging may affect treatment response, including efficacy and side effects, in the elderly. Nilotinib is a potent, highly selective BCR-ABL kinase inhibitor approved for adults with newly diagnosed CML-CP and those with imatinib-resistant or -intolerant CML-CP and CML in accelerated phase (AP). The ENESTnd study demonstrated the superior efficacy of nilotinib over imatinib.

Present ≥24-month efficacy and safety follow-up of nilotinib for newly diagnosed, elderly patients, and implications for nursing practice.

In ENESTnd, 846 patients were randomized to nilotinib 300 mg BID or 400 mg BID, or imatinib 400 mg QD (median age: nilotinib arms, 47 years; imatinib, 46 years); 99 patients ≥65 years old (n=36, nilotinib 300 mg; n=28, nilotinib 400 mg; n=35, imatinib) were analyzed for efficacy. Efficacy was determined by rates of complete cytogenetic response (CCyR), major molecular response (MMR; 3-log reduction in BCR-ABL transcripts), and disease progression, by age group (<65 vs ≥65 years). Safety data were also evaluated.

By 24 months, rates of CCyR and MMR in patients ≥65 years were highest in the nilotinib 300-mg arm, and comparable to those in patients <65 years old. No older patient progressed to AP/blast crisis on nilotinib. Nilotinib was generally well tolerated; discontinuations due to adverse events were lowest in the nilotinib 300-mg arm. QTcF increases >60 msec were not observed in patients ≥65 years. QTcF prolongation >500 msec did not occur in any patient treated with nilotinib.

In older patients, nilotinib 300 mg BID demonstrated higher rates of CCyR and MMR and lower rates of disease progression than imatinib, supporting its use in older patients. Nilotinib was

well tolerated. With continuing developments in the treatment of elderly CML patients, oncology nurses must be aware of potential clinical benefits and side effects of standard therapies, to provide the best care and management for their patients.

**Underwriting/Funding Source:** Novartis Pharmaceuticals Corporation

**1337538**

### **CONCEPTUAL MAPS FOR TEACHING ONCOLOGY: AN EXPERIENCE WITH NURSING UNDERGRADUATE STUDENTS.**

Edvane De Domenico, Escola Paulista de Enfermagem, Universidade Federal de São Paulo, São Paulo, Brazil; Cibelli R. Cohrs, Escola Paulista de Enfermagem, Universidade Federal de São Paulo, São Paulo, Brazil; Paula B. Ferreira, RN, Escola Paulista de Enfermagem, Universidade Federal de São Paulo, São Paulo, Brazil; Erika C. Silva, Escola Paulista de Enfermagem, Universidade Federal de São Paulo, São Paulo, Brazil; Ivan T. Pisa, Informática em Saúde, Universidade Federal de São Paulo, São Paulo, Brazil

To describe the experience of using CM to solve clinical oncology cases as an innovative teaching strategy for nursing undergraduate students.

Teaching oncology is unquestionably necessary in nursing education. However, its class subjects are complex, interdisciplinary and students sometimes feel discouraged towards learning. In order to make the learning process active and significant, clinical cases including subjects from clinical and surgical oncology were created to be studies using a teaching strategy referred to as Conceptual Map (CM), idealized by Novak and Gowin.

The CM has been used since 2007 with third-year undergraduate students, in the clinical and surgical nursing class discipline at Universidade Federal de São Paulo, School of Nursing (São Paulo, Brazil) The clinical cases are created to teach the process of caring for oncology patients, and contains data regarding the patient's clinical and psychological condition: medical diagnosis, signs and symptoms, results of laboratory tests, therapeutic regimen proposed; social information, cultural and spiritual of patients, as well as information about relatives and/or caregivers. The CM strategy consists of organizing the relevant data in a progressive order of the concepts and steps of the nursing process. These subjects are connected by intermediate connections, prepositions or connecting words that generate clarifications, complexity of relationships and the possibilities of solving the presented problems.

The students solve the clinical case in two stages: one in the beginning of the discipline, and another at the end. The students use the CMap Tools® software to solve the clinical cases, which has proved to be an important tool in developing the activity. The evaluation of the learning process showed positive outcomes, because the students show an improvement of their clinical thinking when they perform the second stage of the CM, at the end of the class discipline.

Researches using the CM to teach oncology, performed over the last five years, have proven that the CM is capable of promoting active learning, the development of clinical thinking and the knowledge of oncology subjects.

**1337549**

### **STRENGTHENING THE FOUNDATION: DEVELOPING A PATIENT CARE TECHNICIAN EDUCATION DAY.**

Rebecca Kolenik, RN, OCN®, Urgent Care Center, Memorial Sloan-Kettering Cancer Center, New York, NY; Janine Kennedy, RN, MA, OCN®, Urgent Care Center, Memorial Sloan-Kettering Cancer Center, New York, NY; Catherine Licitra, RN, MSN, Urgent Care Center, Memorial Sloan-Kettering Cancer Center, New York, NY

Providing high-quality care to an increasingly acute, oncology patient population requires all members of the nursing team to

clearly understand their roles and scope of practice. In the Urgent Care Center (UCC) of a comprehensive cancer center, the patient care technicians (PCT) play a vital role in the care delivery model in this emergency setting. Historically, ancillary staff have not benefited from continual education in role development and practice changes. We recognized that the PCTs needed to get the education and guidance to succeed on such a specialized oncology unit.

Overlooking the unique needs of the PCTs can lead to poor practice and job satisfaction, factors that can then prevent ancillary staff from pursuing further education or continued positions in oncology. This is particularly worrisome in light of the nursing shortage, since oncology patients require complex nursing interventions. Helping ancillary staff to feel satisfied working in oncology and supporting their continued education can help create a new generation of oncology healthcare professionals.

In the UCC, an educational program was developed specifically for the PCTs. Analysis of patient events and near-misses demonstrated a need for review of responsibilities, policies and procedures. This information was used to create an 8 hour program that included teamwork, relationship-based care, current trends in managing oncologic emergencies, clinical practice standards and procedures (i.e. venipuncture, EKG placement, enemas). UCC clinical and administrative leadership, along with hospital-wide specialists, provided presentations and led group discussions with actual clinical examples.

At the conclusion of this program, the staff had an overwhelmingly positive response. Return demonstration revealed improved practice, while group discussion and feedback questionnaires found that most learners felt the course "completely met" the learning objectives. Continued evaluation includes monitoring for further educational opportunities, observation of PCT skills during practice, and analysis via the employee climate survey.

This PCT Educational Day provided ancillary staff with protected time to improve skills necessary for providing quality care in an emergency oncology setting. This program also demonstrated support for the PCT role and their professional development, encouraging employee satisfaction and their continued involvement with oncology practice throughout their careers.

**1337604**

### **EXPLORING A RELATIONSHIP BETWEEN WILLINGNESS OF CHURCH-GOING AFRICAN AMERICANS TO PARTICIPATE IN CANCER CLINICAL TRIALS AND BARRIERS TO PARTICIPATION.**

Suzanne DeVandry, MSN, RN, Oncology Clinical Research, Merck, North Wales, PA; Elaine Amella, PhD, GNP-BC, FAAN, College of Nursing, Medical University of South Carolina, Charleston, SC; Jeanette Andrews, PhD, APRN-BC, FNP, College of Nursing, Medical University of South Carolina, Charleston, SC; Teresa Kelechi, PhD, GCNS-BC, CWCN, College of Nursing, Medical University of South Carolina, Charleston, SC; Marvella Ford, PhD, Hollings Cancer Center, Medical University of South Carolina, Charleston, SC

The objective of this study was to explore a relationship between barriers to participation and willingness to participate in cancer clinical trials (CCTs) among African Americans (AAs).

Significant barriers challenge the successful recruitment of AAs into CCTs, contributing to ongoing disparities between white and AA participation in innovative methods of cancer prevention and treatment.

The purpose of this pilot study among church-going AAs was to identify barriers to participation in CCTs and explore a potential relationship between barriers to participation and willingness to participate.

Using Social Cognitive Theory (SCT) framework, personal, environmental, and behavioral determinants were evaluated for impact on CCT participation.

Three churches (two African Methodist Episcopal, and one Baptist) were recruited through referrals by the Southeastern

Pennsylvania Chapter of the Health Ministry Association. All three were urban-based churches located in large northeastern cities. We surveyed 42 AAs using the Barriers to Research Participation Questionnaire (BRPQ) to measure barriers to participation and the Measurement of Attitudes Toward Participation (MATP) to measure willingness to participate in CCTs.

Most participants were somewhat to very willing to participate in CCTs as measured by the MATP. BRPQ reliability ( $\alpha = .77$ ) was higher among this diverse population than that achieved with this survey among a more homogenous group of AA college students ( $\alpha = .63$ ). Perceived incentives was the strongest potential barrier among this church-going sample (mean age 50.1 years), compared with religious beliefs inconsistent with research seen among college students (mean age 22.2 years). Significant positive correlations existed between some barrier domains and MATP questions. Previous clinical trial participation significantly correlated with willingness to participate in a CCT to benefit self or others. Significant relationships exist between barriers to participation (personal determinants) and willingness to participate (behavioral determinants) among the church-going (environmental determinant) participants surveyed in this study. Perceived incentives was the strongest barrier, but AAs surveyed were altruistically willing to participate in CCTs. Nurse researchers must address strong barriers to AA participation to ensure adequate representation of AAs in CCTs, and thereby contribute to decreasing disparities in AA access to innovative methods of cancer prevention and treatment.

### 1337776

**LYMPHEDEMA FOLLOWING AXILLARY SURGERY: AN INSTITUTIONAL APPROACH TO APPLYING EVIDENCE TO CLINICAL PRACTICE AND PATIENT EDUCATION.** Kimberly Berry, MSN, ANP, OCN®, Breast Oncology, Memorial Sloan-Kettering, New York, NY; Nancy Houlihan, MA, AOCN®, Breast Oncology, Memorial Sloan-Kettering, New York, NY

The objective is to provide evidence based guidelines for care and education of patients at risk for LE.

Risk of lymphedema (LE) following axillary lymph node dissection (ALND) is well documented. Use of sentinel lymph node biopsy (SLNB) procedures over the last decade has reduced incidence of LE; large randomized trials report risk of LE as low as 0-5%. A multidisciplinary task force at an NCI-designated cancer center recognized that institutional clinical practice and patient education standards did not reflect changes in incidence and risk associated with 2 different procedures. LE prevention and education were inconsistently applied.

Our purpose was to investigate risk associated with ALND and SLNB and set clinical practice and patient education standards to match evidence.

The task force reviewed evidence including literature and expert consultation on axillary surgery procedures and risk of LE. Findings were applied to current patient education and nursing policy and procedures for venipuncture, BP measurement, and administration of IV fluids and chemotherapy. Practice guidelines and decision making algorithm were developed and approved by Nursing and Medical Boards and hospital Clinical Council. Education materials and standards specific to axillary procedure were developed and implemented. The entire nursing staff was educated using standard videotaped presentation on the project and outcomes. Physicians were notified and electronic order sets implemented.

A 6-month survey to determine adherence with guidelines is planned. Distribution of patient education materials to breast patients is tracked; compliance with guidelines is high. Regular tracking onset of LE incidence is performed by lymphedema specialist to assess change in incidence. Presentation will include this tracking data.

Risk of lymphedema following axillary procedures is a long standing concern of patients and clinicians. Applying current evidence related to risk provides a more accurate guide for appropriate clinical practice and education of patients about preventive

behaviors. This presentation will include summary of evidence, practice guidelines, policies and procedures, patient education material and survey and tracking data. Our experience can provide a model for developing evidence based interventions reflecting current trends in practice. Questioning common oncology practices has the potential to impact patient safety and quality of life.

### 1337969

**ENHANCING NURSES' BREAST CANCER KNOWLEDGE THROUGH A UNIQUE ACADEMIC/FOUNDATION PARTNERSHIP.** Deborah McGuire, PhD, RN, University of Maryland, Baltimore, MD; Sandra McLeskey, RN, PhD, University of Maryland, Baltimore, MD; Abby Plusen, MSW, University of Maryland, Baltimore, MD; Nina Trocky, DNP, RN, NE-BC, CCRA, University of Maryland, Baltimore, MD; Kathleen Griffith, PhD, CRNP, AOCN®, University of Maryland, Baltimore, MD

Discuss the process and outcomes of an academic/non-profit foundation partnership designed to increase nurses' awareness, knowledge, and skills related to breast cancer.

The typical academic nursing curriculum contains little cancer content, despite the growing burden of cancer in an aging population. Breast cancer, the number one cancer diagnosis and number two cancer killer in women, is particularly neglected, and even nurses in general oncology settings have limited access to current breast cancer information. To address these issues, the authors partnered with an Affiliate of Susan G. Komen for the Cure® to form a unique, multi-year project focused on educating nurses in breast cancer detection, treatment, and survivorship.

To create, implement, and evaluate an innovative model with five components for educating nursing students, cancer nurses, and other health care providers.

The core of the innovative model is a set of state-of-the-science web modules that are fully integrated into baccalaureate and graduate nursing curricula and available to others locally and throughout the world via the internet. Additional components of the model include Visiting Professors and Distinguished Lecturers who educate and consult with a wide audience, Conferees who are supported to attend national/international breast cancer conferences to enhance their learning and sharing of knowledge with colleagues, and Educational Outreach to other nursing schools, cancer nurses, cancer centers, professional organizations, lay advocacy groups, and breast cancer survivors. Evaluation focuses on quality of education and scope of dissemination. All five components are consistently evaluated as high quality, relevant, and informative. To date, 4,100 individuals have been directly educated and the modules have been distributed to three million practicing nurses worldwide. Google Analytics demonstrates that the modules have been viewed by thousands of people in 31 countries on six continents.

This is an innovative approach for enhancing nurses' awareness and knowledge related to breast cancer, incorporating state-of-the-science information. It is practical and can be used as a model by other academic and/or clinical settings to initiate nursing and inter-professional educational programs on breast cancer or other health issues.

**Underwriting/Funding Source:** Maryland Affiliate, Susan G. Komen for the Cure

### 1338204

**COMPLEX HEMATOLOGY! EDUCATING AND SUPPORTING A NEW OVERFLOW UNIT.** Christina Kiss, RN, OCN®, ANP-BC, Acute Care, Memorial Sloan-Kettering Cancer Center, New York, NY; Aimee Chappell, RN, OCN®, Acute Care, Memorial Sloan-Kettering Cancer Center, New York, NY

Hematology is a unique subspecialty in oncology nursing, often taking nurses years to hone expertise. In order to create a milieu

safe for hematology and bone marrow transplant patients to receive specialized care, staff nurses must be exposed to a formal education as well as experience hands-on training.

In 2009, Memorial Sloan Kettering Cancer Center nursing administrators observed a need for the expansion of inpatient space with knowledgeable nursing staff to care for patients with hematological malignancies and bone marrow transplantations. An overflow unit was designated for treating these patients when inpatient beds were unavailable on their home units. All nurses assigned to staff the unit had minimal prior experience with the hematology population. Of the 50 nurses currently employed, 29 are new graduate nurses hired since January 2010.

The purpose of this educational endeavor was to prepare clinical nurses to provide exceptional disease specific care. A two-day course entitled Overview of Hematological Malignancies and Nursing Considerations was developed providing 14.1 CEU's designated by ONS. Objectives of the class included: synopses of leukemia, lymphoma and multiple myeloma, nursing assessment and considerations, oncologic emergencies, chemotherapy commonly used, and overview of bone marrow transplant, patient care, and complications. In addition to a formal education, supportive roles were incorporated on the unit. A clinical nurse specialist with a hematology oncology background and an experienced hematology registered nurse were hired to function as resources for the clinical setting to assist newly educated nurses in providing care.

Positive feedback was provided from participants in a post course evaluation, including increased knowledge and improved confidence in caring for these complex patients. Encouraging verbal feedback was given from clinical nurses regarding the clinicians on the unit providing continuous integrative support. Medical teams from leukemia, lymphoma, and bone marrow transplant, as well as patients, have provided positive responses.

Hematology oncology patients require specialized nursing care in terms of disease and symptom management. Therefore, nurses must be adequately prepared and trained with both formal education and hands-on experience. The interventions applied in this clinical setting resulted in a knowledgeable unit providing seamless transition for patients from their home unit.

### 1338296

**DEVELOPMENT AND IMPLEMENTATION OF AN ACUITY MODEL FOR A COMBINED ONCOLOGY OFFICE AND INFUSION CENTER.** Marjorie Leslie, DNP, CRNP, AOCNP®, West Penn Allegheny Oncology Network, West Penn Allegheny Health System, Pittsburgh, PA; Robyn Best, BSN, RN, OCN®; West Penn Allegheny Oncology Network, West Penn Allegheny Health System, Pittsburgh, PA; Noreen Doyle, MSN, RN, OCN®, West Penn Allegheny Oncology Network, West Penn Allegheny Health System, Pittsburgh, PA; Sandra Rupert, MSN, RN, OCN®, West Penn Allegheny Oncology Network, West Penn Allegheny Health System, Pittsburgh, PA; Colleen Setzenfand, MSN, RN, OCN®, West Penn Allegheny Oncology Network, West Penn Allegheny Health System, Pittsburgh, PA; Amanda Visnick, BSN, RN, OCN®, West Penn Allegheny Oncology Network, West Penn Allegheny Health System, Pittsburgh, PA

Finding evidence-based guidance regarding appropriate staffing.

Determining appropriate nursing needs for an oncology office/infusion center is challenging. Oncology patients of varying complexity make staffing decisions difficult. As an oncology practice with multiple locations, we struggled with making equitable objective staffing decisions.

Develop a tool to guide staffing decisions.

With this problem identified, the team turned to the literature. Upon literature review we did not find any reference that modeled the work of the nurse in our setting. This role of the Registered Nurse is diverse including; treatment of infusion patients, mixing chemotherapy, telephone triage and patient education. The articles

that the team reviewed consistently utilized a model of assigning a designated number of minutes of nursing time for various treatments. However, these articles did not account for time of the nurse mixing medications, performing telephone triage and patient teaching. To account for all aspects of nursing time utilized, the team assigned a number of minutes to support preparation of medications, telephone triage and patient teaching, in addition to the time assigned to support the administration of the treatment. Treatments were divided into 5 levels based on complexity and assigned an average number of minutes by level of treatment. Drug preparation was calculated based on the average number of medications prepared per level of treatment. The patient teaching and telephone triage minutes were determined by average number of patients. Microsoft Excel was utilized as the tool to compute the number of nursing minutes projected to meet the needs of nursing time per office. This was divided by the total nursing minutes available, resulting in an acuity score. The team identified that an acuity score of one reflected projected nursing minutes were fully utilized. If the score was less than one then there were more minutes available and if the score was greater than one the projected available nursing time was over utilized.

This tool has been effectively evaluating the nursing needs across the network of offices and has identified available resources to redistribute supporting patient care needs in an objective manner.

The tool continues to be refined with staff input.

### 1338501

**DELIVERING CHEMOTHERAPY ON R5 BY R5 NURSES: IT'S THE RIGHT THING TO DO! CVPH MEDICAL CENTER, PLATTSBURGH, NY 12901.** Rachael Hite, RN, CMSRN, CHPN, OCN®, CVPH Medical Center, Plattsburgh, NY; Kevin Manchester, RN, OCN®, CMSRN, WCC, CVPH Medical Center, Plattsburgh, NY

To have a competent nursing staff who could deliver inpatient chemotherapy

Historically, chemotherapy had been administered to our inpatient population by IV therapy nurses. The oncology medical/surgical inpatient team wanted to enhance the care delivered to our oncology patients from admission through to discharge. The team was highly motivated to expand their knowledge base for cancer patient care and being involved in the administration of chemotherapy.

The team began exploring options for optimal chemotherapy/biotherapy education for core RNs on the floor. It was recognized that there had to be a comprehensive educational program. The Oncology Nursing Society's (ONS) chemotherapy/biotherapy certification course was chosen and adopted as the mainstay educational requirement. The team also developed the inpatient chemotherapy competency based orientation (CBO) checklist that outlined these requirements.

In April, 2010, a core group of Chemotherapy/Biotherapy trained staff began administering chemotherapy to our inpatients under going cancer treatment. Currently, 50% of the RNs on staff have successfully completed the two-day ONS chemotherapy/biotherapy certification course, as well as the inpatient Competency Based Orientation and are administering chemotherapy. In 2011, from January 1st thru October 31st, the nursing staff have delivered 437 chemotherapy doses. This change has invigorated the nurses and they are embracing their new responsibilities as "chemotherapy" nurses.

Several positive changes have occurred as a result of our process improvement with chemotherapy administration. 1.The complexity of chemotherapy treatment has been recognized and the patient ratios have been adjusted to allow the nurses administering chemotherapy more time to spend in the patient's room providing the necessary monitoring. 2.An eight-bed cohort has been established for oncology patients receiving chemotherapy or who are admitted for other oncology-related issues. An annual competency has been developed based on ASCO (American Society of Clinical Oncology)-ONS Standards for Safe Chemotherapy

Administration. 3.CVPH now has an onsite trainer who can deliver the education of the two-day ONS Chemotherapy/Biotherapy certification course locally. This will allow the opportunity for more staff to become chemotherapy certified and will allow for more resources on R5. 4. Most importantly, and the focus of this change, the oncology knowledge of the R5 nurse has improved to take care of our patient population.

### 1338502

**THE ROLE OF THE DISCHARGE NURSE.** Eileen Collins, RN, BSN, OCN®, Urology/ GU Medicine, Memorial Sloan-Kettering Cancer Center, New York, NY

The objective of this project was to find a way to expedite discharges for patients at a Comprehensive Cancer Center in order to keep the workflow of the hospital going and to meet the needs of all of our patients.

With Cancer treatment growing we are always looking for ways to expedite the discharge process. Many patients leaving the hospital are delayed for various reasons: supplies not ready, waiting for family to come to observe teaching lessons, waiting for medications to be filled, MD's wanting to see patients prior to discharge, but at the top of the list was waiting for a ride.

In order to provide the best care in a timely manner we decided to look at what was the main reason discharges were being delayed and how we could intervene as not to back up other areas (i.e. OR, SDH, UCC) and keep the flow going. We came up with the idea that the charge nurse would assume the role as the Discharge Coordinator. This person would be responsible for coordinating the discharge care with the multidisciplinary team of Case Managers, Social Work, MD's/PA's/NP's to make sure all needs of the patients were addressed prior to discharge. The Discharge Coordinator would make sure supplies were ordered and checked for accuracy, VNS services were set up, medications were ordered the day before and filled, and lastly we would prepare the patient for discharge so they could make arrangements for family to pick them. We took it a step further and provided a car service to those patients who were truly unable to get rides from family due to work, childcare, etc. We explained to the patient if they were unable to get a ride and that was the only holdup that we would provide one for them and that discharge would be at 11am. Having a strict time for discharge enabled us to get the patients discharged, beds cleaned and prepared for new patients and kept the workflow going to provide the best cancer care in a timely manner.

We were able to significantly decrease the time of discharge and the patients felt fully prepared to go home. Many times we are unable to know when patients are going home and having a contact person made the process easier. The multidisciplinary team would meet every morning and then touch base in the afternoon to make sure we were all on the same page and to make sure the plan of care did not change.

Caring for patients with cancer can be extremely difficult and we strive to meet all their needs. Many times families are working and cannot take off to come pick up a loved one, or have other family members that they are caring for. We at MSKCC take pride in caring for our patients and family members. When something so little as providing a car service can give the family peace of mind we were glad to provide it. We were able to get patients discharge in a timely manner and we were able to provide a service to our patients.

### 1338528

**ADDRESSING NURSING-SENSITIVE PATIENT CARE: THE NATIONAL CANCER INSTITUTE (NCI) COMMUNITY CANCER CENTERS PROGRAM (NCCCP) QUALITY IMPROVEMENT INITIATIVE.** Holley Stallings, BSN, CPHQ, Administration, Norton Cancer Institute, Louisville, KY; Lucy Gansauer, MSN, OCN®, Administration, Gibbs Cancer Center, Spartanburg, SC; Kathleen Castro, MS, AOCN®, Outcomes Research, National

Cancer Institute, Bethesda, MD; Steven Clauser, PhD, Outcomes Research, National Cancer Institute, Bethesda, MD; Pam Kadlubeck, MPH, Quality Programs Operations, American Society of Clinical Oncology, Alexandria, VA; Robert Siegel, MD, Helen and Harry Gray Cancer Center, Hartford Hospital, Hartford, CT

Describe nursing-sensitive performance improvement initiatives within the National Cancer Institute (NCI) Community Cancer Centers Program (NCCCP).

The NCCCP was funded in 2007, to improve the access to and quality of cancer care and patient outcomes in the community setting. NCCCP sites are encouraged to participate in the Quality Oncology Practice Initiative (QOPI®), a quality program developed by the American Society of Clinical Oncology (ASCO). These measures assess care from multiple members at the practice level. Many of the measures included in QOPI are also nurse-sensitive measures, addressing pain, emotional distress and dyspnea.

We will describe how oncology nurses at NCCCP sites have addressed nursing-sensitive patient outcomes utilizing reliable information from QOPI participation.

Oncology practices participating in QOPI share their measure results with their NCCCP sites and other network practices, through a data sharing agreement. NCCCP affiliated practices enter their data into the ASCO QOPI system. ASCO prepares NCCCP aggregate and individual practice scores for the NCI. Blinded measures scores are reviewed with the sites via webinar twice per year. The NCCCP Quality Subcommittee then identifies areas for sites to target performance improvement (PI) initiatives. Nurses at the NCCCP sites partner with QOPI physicians to implement PI initiatives addressing nursing sensitive outcomes utilizing evidence-based resources and guidelines (ONS PEP and ONS/ASCO Chemotherapy Administration Guidelines). High performing sites, which have overcome barriers and sustained improvements, share their experience and best practices on the NCCCP Quality Subcommittee calls and webinars.

During the past 36 months, participation has increased from 10 practices representing 9 NCCCP sites to 50 practices representing 27 NCCCP sites. Pain measures have improved from 60%–70% to 80%–90% concordance, emotional well-being measures from 65% to 80% concordance and dyspnea measure concordance has remained greater than 80%. These positive results demonstrate the effectiveness of the nursing and physician partnerships in advancing quality improvement.

NCCCP's QOPI initiative allows practices to collect data, analyze performance, and monitor performance on nurse-sensitive quality metrics. NCCCP creates a "safe" environment for practices to benchmark their performance, discuss opportunities, collaborate with high performing sites, and share best practices, including use of PEP resources. This model supports the missions of NCI, ONS, and ASCO of promoting quality cancer care.

### 1338761

**IMPROVING SEXUAL FUNCTIONING IN BREAST CANCER SURVIVORS.** Danielle Escaleira, RN, MA, OCN®, Memorial Sloan-Kettering Cancer Center, New York, NY; Danielle Ferrer, RN, Memorial Sloan-Kettering Cancer Center, New York, NY

To address the educational needs and increase comfort level of oncology nurses in caring for breast cancer survivor patients experiencing sexual dysfunction issues.

With the increasing number of breast cancer survivors more attention is being paid to the consequences of treatment and their quality of life. Breast cancer patients often receive multi-modality therapies which include surgery, chemotherapy, radiation and hormonal therapy. All of these in combination can provide a cure or prolong life, however, the long term sequela can have a serious impact on a survivor's quality of life. Sexual dysfunction is one of the most common problems reported, with very few evidence-based recommendations for safe and effective treatment. Oncology nurses can play a key role in educating breast cancer survivors

experiencing sexual dysfunction, thus having a significant impact on improving their quality of life.

This presentation will focus on identified sexual side effects from breast cancer treatment and etiology, and discuss the evidence supporting interventions for management and treatment. Sexual health issues in breast cancer survivors can include vaginal dryness, dyspareunia, decreased or loss of libido, and issues with body image. Measures to improve these symptoms include non-hormonal treatments such as vaginal moisturizers and lubricants, hormonal therapy with vaginal estrogen, and the use of vaginal dilators. The psychosocial component of sexual health can be addressed with interventions such as relaxation, meditation, counseling, sexual education, and other supportive techniques. When providing oncology nurses with the appropriate tools and information they are in the unique position to address these issues from both a physical and psychosocial aspect.

Through increased education, the oncology nurse will have a better understanding, preparedness and comfort level for managing sexual dysfunction in breast cancer survivors.

Breast cancer remains the most commonly diagnosed malignancy among women today. Women found to have early stage cancer can expect to have longer disease-free lives. This has put a spotlight on quality of life issues for these patients. With an increased knowledge base and better education, oncology nurses can help anticipate future interventions that will contribute to further advances in the management of sexual dysfunction.

### 1338769

#### **SOCIAL COGNITIVE THEORY PERSPECTIVE ON RECRUITMENT OF AFRICAN AMERICANS INTO CANCER CLINICAL TRIALS.**

Suzanne DeVandry, MSN, RN, Oncology Clinical Research, Merck, North Wales, PA; Elaine Amella, PhD, GNP-BC, FAAN, College of Nursing, Medical University of South Carolina, Charleston, SC; Marvella Ford, PhD, Hollings Cancer Center, Medical University of South Carolina, Charleston, SC; Jeanette Andrews, PhD, APRN-BC, FNP, College of Nursing, Medical University of South Carolina, Charleston, SC; Teresa Kelechi, PhD, GCNS-BC, CWCN, College of Nursing, Medical University of South Carolina, Charleston, SC

This review sought to identify personal, environmental, and behavioral determinants that influence recruitment of African Americans (AAs) into cancer clinical trials (CCTs), and recruitment strategies that best address these determinants.

Despite National Institutes of Health guidelines established in 1993 and updated in 2001, most participants entering clinical trials are well-educated middle-class married white men, compared with considerably fewer AA participants. Barriers to recruitment/retention of AAs in CCTs continue to exist and require special effort and careful attention to determinants that may influence AA decisions regarding participation.

Using Social Cognitive Theory (SCT) as a framework, we present a review of barriers influencing AA recruitment into CCTs as described in peer-reviewed journals.

This review used SCT to identify personal, environmental, and behavioral determinants of AA willingness to participate in cancer clinical trials. SCT proposes a concept of Triadic Reciprocal Determinism, describing interactive influence among these factors.

A literature search yielded 39 articles examining recruitment of AAs into cancer clinical trials from 2000-2010. Factors influencing recruitment of AAs into cancer clinical trials were assessed for relevance to the three SCT constructs in Triadic Reciprocal Determinism.

We identified 14 personal, 8 environmental, and 10 behavioral determinants across the 39 studies reviewed. Addressing even one behavioral determinant seemed to help with recruitment, and addressing at least six personal determinants positively influenced recruitment success. Environments likely to contribute to recruitment success included trusted community venues,

geographically restricted areas, and healthcare institutions. Key behavioral determinants were influence of significant others and collectivism. Incorporating targeted strategies addressing all three SCT determinants into a study recruitment plan contributed to successful recruitment of AAs. Key personal determinants such as trust, gender, and health status must be addressed in the context of a comfortable, familiar, and accessible environment that empowers AAs to participate in CCTs. The AA church is the most comprehensive venue to address many of the identified SCT determinants that influence AA participation in CCTs. Additional research should seek to quantify the impact of the personal, environmental, and behavioral determinants on recruitment of AAs into CCTs and develop strategies to proactively address key determinants influencing participation.

### 1338875

#### **THE ROLE OF THE ONCOLOGY CLINICAL TRIALS NURSE (OCTN) IN RECRUITING MINORITIES AND PATIENTS WITH POOR PERFORMANCE STATUS TO ONCOLOGY CLINICAL TRIALS.**

Lucy Gansauer, RN, MSN, OCN®, Clinical Research, Spartanburg Regional Healthcare System, Spartanburg, SC; Kathryn Alexander, CRA, Cancer Clinical Research, Hartford Hospital, Hartford, CT; Gitana Davila, CRA, The Center for Cancer Prevention and Treatment, Saint Joseph Hospital, Orange, CA; Angela Steele-Tilton, MSN, RN, OCN®, Cancer Research, Christiana Care Health System, Newark, DE; Amy Thomassie, RN, CCRC, Clinical Research, Mary Bird Perkins Cancer Center, Baton Rouge, LA; Kathleen Castro, MSN, RN, AOCN®, Outcomes Research Branch, National Cancer Institute, Bethesda, MD

Describe recruitment strategies for minority and patients with poor performance status for oncology clinical trials.

Historically minorities and patients with poor performance status are underrepresented in clinical research. A variety of barriers exist when targeting these patients for oncology clinical trial enrollment including language, literacy, distrust, educational issues, misconceptions, clinical trial awareness and being physically and emotionally overwhelmed. OCTNs have a primary role in increasing awareness, educating, advocating and supporting enrollment and retention of underrepresented patients.

Our work describes how the OCTNs developed targeted recruitment plans to accrue minorities and poor performance status patients to the National Cancer Institute (NCI) Patient Reported Outcome – Common Terminology Criteria (PRO-CTCAE) instrument validation trial.

Five NCI Community Cancer Centers Program (NCCCP) sites received funding for a full-time OCTN dedicated to recruitment. OCTNs developed site specific accrual plans, conducted protocol education of physicians, site staff and patients. The Principal Investigator (PI) led highly-effective weekly conference calls with the OCTNs and study team in which study successes and challenges were discussed, allowing for dynamic accrual strategies to be tailored. On these calls, OCTNs shared strategies for identifying and accruing minority and lower performance status study participants. Recruitment strategies included spreading recruitment meetings over two visits, accommodating schedules and modifying or extending visits if a patient was experiencing symptoms. OCTN's identified nursing and staff champions in clinics who helped to identify candidates and integrated the OCTN into patient study visits.

OCTN's found it took a full-time effort to recruit and retain subjects. 27% of the participants accrued by the NCCCP sites were ECOG 2-4 performance status, and 25% were minority participants, thus meeting the accrual goals for the NCCCP sites. A significant number of potential participants were identified as ineligible due to the requirement for English fluency.

Three critical factors led to the success of this recruitment and retention strategy: 1) Dedication of full time OCTN to meet the



needs of the target population 2) PI led collaborative meetings focusing on accrual and retention strategies and 3) individually pacing study procedures to be responsive to participant needs. OCTNs emulating these strategies may find success enrolling patients from minority and poor performance status populations to clinical trials.

**Underwriting/Funding Source:** National Cancer Institute, National Institutes of Health

### 1339026

#### **CAREGIVER BURDEN IN END-STAGE OVARIAN CANCER.**

Joan Hartnett, ANP, Nursing, Memorial Sloan-Kettering Cancer Center, New York, NY; Bridgette Thom, MS, Nursing, Memorial Sloan-Kettering Cancer Center, New York, NY; Nancy Kline, PhD, RN, CPNP, FAAN, Nursing, Memorial Sloan-Kettering Cancer Center, New York, NY

To identify burden associated with caregiving of end-stage ovarian cancer patients

While caregiver burden has been studied in patients with chronic illness, there has been no focus on patients with ovarian cancer. As patients with end-stage ovarian cancer have many needs and often require continuous and high-level care at home, substantial burdens on the primary caregiver are imposed.

This study explores the impact of caring for patients with end-stage ovarian cancer and identifies demographic variables associated with caregiver burden; it addresses ONS Research Agenda priority E, Psychosocial and Family Issues.

Lazarus and Folkman's theory of stress, appraisal, and coping was used to guide this study. This theory examines the relationship between caregiver stress, appraisal of social/family support system, and coping methods.

Caregiver burden was assessed using the Caregivers Reaction Assessment (CRA), a 24-item scale, divided into 5 subscales: disrupted schedules, financial problems, lack of family support, health impact, and self-esteem. Self-identified caregivers of eligible patients completed an anonymous and voluntary survey, which included the CRA and basic demographic information. Complete data on a convenience sample of 50 caregivers was collected. Pearson correlations and independent sample t-tests were used to analyze data.

Most respondents were married/living with a partner, white, and had graduated from college; the majority reported an annual household income less than \$90,000. Caregiver age ranged from 29–81 years (mean= 56.2, sd=13.7). Respondents agreed most with the "self-esteem," scale, suggesting they enjoyed and felt privileged caring for their loved one. Of the negatively-focused subscales "disrupted schedules" and "financial problems" were the most burdensome. Nearly all of the negatively-focused subscales showed statistically positive correlation with each other. Demographic variables did not influence scores on subscales, with the exception of "financial problems," which was impacted by marital status, income, and education. Caregivers in this sample reported a sense of honor in caring for their loved one. As finances impacted caregiver burden, it is important for oncology nurses to facilitate interdisciplinary support for these patients and their caregivers. Future research, with a larger, more diverse sample, is being planned to determine the impact of nurse-led interventions on the reduction of caregiver burden.

**Underwriting/Funding Source:** Memorial Sloan Kettering Cancer Center

### 1339099

#### **HURRY UP AND WAIT: A MULTIFACTORAL PROCESS FOR IMPROVING INPATIENT CHEMOTHERAPY ADMINISTRATION WORKFLOW.**

Monica Hite, RN, MSN, OCN®, Medical Surgical Oncology, El Camino Hospital, Mountain View, CA

Validate claims offered by physicians of long wait times for inpatient chemotherapy administrations. Employ the participation

of contributing ancillary departments in making improvements in the patient as well as nursing and pharmacy staff experience.

A change in the clinical leadership for the 32 bed inpatient medical surgical oncology department, prompted anecdotal criticism from oncologists of long wait periods for inpatient chemotherapy infusion(s) and that medications were being given at a time when resources were limited.

The initial purpose of the improvement project was to substantiate the feedback from the oncologists regarding delays in treatment administrations. Data collection validated the concerns that patients were waiting on average of 5.3 hours. As the process unfolded, it was evident that the strategy for decreasing the wait required a multidisciplinary focus.

Multidepartmental participation drove the various PDSA cycles (Plan, Do, Study, Act). Nurses were encouraged and mentored in becoming chemotherapy competent as evidenced by the acquisition of a ONS Chemotherapy/Biotherapy card and completion of the organizations chemotherapy administration competency. Work groups documented the workflow process from receipt of order to administration to identify areas for improvement. Physicians were instructed to submit their orders no less than 24 hours in advance. Patients were encouraged to arrive earlier in the day for their inpatient admission for chemotherapy. A process for early inpatient registration was developed with the Patient Registration department.

After multiple PDSA cycles, the time from patient arrival to order entry into the EMR dropped from 1.8 hours to zero minutes with changes in patient registration processes. Chemotherapy drug delivery times from pharmacy to the nursing unit decreased from an average of 3.86 hours to 1.6 hours. Time from drug receipt onto the nursing unit to administration went from an average of 3 hours to 1.5 hours. Chemotherapy competent nurses increased by 16%. No less than two chemotherapy competent nurses were scheduled each eight hour shift. Advance receipt of orders provided appropriate forecasting for pharmacy and nursing staffing and assignments. The workflow process has been standardized among charge nurses.

With the goal of verifying the authenticity of anecdotal complaints, the inpatient oncology unit reaped greater rewards in this 'drill down' by identifying areas of weakness and forging through several test of change for improvements. Continued auditing of the timeliness of chemotherapy administration elements will prove if the process can be hard wired into the culture of the inpatient medical surgical oncology unit.

### 1339145

#### **EDUCATING ONCOLOGY NURSES ON BUILDING RESILIENCE.**

Diana Tam, RN, Gastrointestinal Medical Oncology, Memorial Sloan-Kettering, Manhattan, NY; Elizabeth Cruz, RN, OCN®, Gastrointestinal Medical Oncology, Memorial Sloan-Kettering, Manhattan, NY

To educate nursing staff about building resiliency and identify self care techniques to help prevent burnout and compassion fatigue.

Literature supports that oncology nurses have some of the highest incidence of compassion fatigue and burnout. Oncology nurses acquire compassion fatigue through repeated exposure to patients suffering the effects of trauma, including side effects of aggressive treatment and the end stages of cancer. A climate survey in 2008 revealed that nurses working in the gastrointestinal service at Memorial Sloan Kettering Cancer Center were experiencing the same incidence of burnout and compassion fatigue felt by their oncology nursing colleagues. In order to address this need an educational lecture series was developed to maximize coping strategies for the nursing staff.

An interdisciplinary work group was assembled to evaluate the needs of the staff. A survey was conducted to identify topics of interest relevant to nursing practice. The lecture session topics were chosen based on the results of the survey. The topics identified

were environmental stressors; dealing with complicated patient scenarios, bereavement; coping mechanisms for healthcare professionals, therapeutic communication; and discussions about death and dying. Sessions were offered twice a week over a six month period to facilitate program attendance.

The goals of these informative sessions were to provide instruction on interventions to build resiliency and self care techniques. The aim of these programs was that staff would experience less burnout and increased job satisfaction.

Post lecture series evaluations were conducted to assess staff satisfaction. The overall response from program participants was positive with a majority of respondents rating the sessions content as valuable and having an impact on their nursing practice. The building resiliency initiative continues as new staff, new topics and needs are identified.

Compassion fatigue and dealing with stressful situations are prevalent emotions experienced by oncology nurses. Recognizing the need for education in self care is essential to reduce the effects of burnout and staff turnover.

### 1339426

**ASSESSMENT OF CANCER PAIN USING SUBJECTIVE SCALES AND WAVELET ANALYSIS OF ELECTROCARDIOGRAM VOLTAGE FLUCTUATION.** Keiko Yamamoto, RN, Department of Adult Nursing, International University of Health and Welfare, Odawara, Japan

This study aimed to establish an assessment of pain in inpatients with terminal cancer who found it difficult to express their pain verbally.

We previously reported that WEVF was quantitatively effective in evaluating pain in healthy volunteers.

To evaluate the effectiveness of WEVF in comparison with use of a visual analogue scale (VAS) and a numerical rating scale (NRS) to monitor pain in inpatients with cancer pain.

Although pain is a subjective feeling, the experience of pain occurs alongside changes in physiology, circulation dynamics, and electrical skin conductance that can be objectively measured. Therefore, in this study, we continuously monitored pain with wavelet analysis of electrocardiogram voltage fluctuation (WEVF) in patients with cancer pain.

Subjects were 8 cancer inpatients (male n=3, aged 67.675±50.03 years, female n=5, aged 53.60±14.03 years) receiving a rescue dose of opioids for cancer pain management, who were selected from among volunteer inpatients with cancer pain by medical attendants. The VAS and NRS were completed several times before and after administration of the rescue dose. An electrocardiogram was recorded for around 1 h in a bed rest supine position twice for each patient. The electrodes were attached to the right palm, left collarbone, and lower left and right ribs. The potential from the left rib to the left clavicle (lead III) was used as a representative parameter of pain. The cubic spline function was determined from the time series of R wave potentials and the function was resampled at 1 KHz. The resampled time series data were used for wavelet analysis. Amplitude of the low frequency component (LF: 0.04–0.15 Hz) was calculated as the parameter indicating pain.

The average scores for the VAS and NRS were 32.58±18.88 3.80±1.91, respectively. These pain scores showed a significant relationship with LF (vs. VAS:  $r_{19}=0.691$ ,  $P=0.001$ ; vs. NRS:  $r_{23}=0.670$ ,  $P=0.000$ ). Measurement of the LF component during WEVF appears to be a quantitative and continuous index of pain monitoring. Further research with a larger patient population is warranted.

### 1339648

**CLINICAL EDUCATION AND INCREASING CLINICAL KNOWLEDGE OF ONCOLOGY NURSES.** Claire Bennett, RN, BSN, Deaconess, Evansville, IN; Aaron Stoll, BSN, RN,

CHPN, Deaconess, Evansville, IN; Debi Wilson, MSN, BSN, RN, OCN®, Deaconess, Evansville, IN

To increase the knowledge, self-assessments, and clinical competency of oncology nurses by providing extended educational opportunities.

In ever changing healthcare environments, administration and the health care system are the basis for the education and self-competencies of registered nurses. In many specialties, this education has been diminished in the harsher economic background.

The purpose of the research study was to determine the effectiveness of the professional development program that was intended to increase knowledge, self-assessments, and clinical competency of oncology nurses.

Benner's Theoretical model of Novice to Expert ANA and ONS self-assessment tools

The research was completed on a newly opened 32 bed surgery and oncology unit that opened in November, 2010. This research began in March, 2011, and included 17 subjects from the surgery oncology unit. The data was gathered by nurses completing a self-assessment tool developed by oncology experts after extensive literature review and adherence to the Oncology Nursing Society (ONS) and the American Nurses Association (ANA) standards. This tool is a four point, Likert scale that was developed to incorporate Benner's Theoretical model of Novice to Expert. This self-assessment tool was completed on three separate occasions by nurses who consented to the study to measure their professional development over time. Each nurse self-assessed his clinical skills, knowledge, and professional development in specific nursing oncological diseases and interventions. In accordance with the research, nurses in the study were provided options for educational experiences to further their knowledge and expertise. These educational experiences ranged from physicians, nurse practitioners and registered nurses presenting on a variety of subjects ranging from National Comprehensive Cancer Network (NCCN), guidelines to chemotherapy protocols, and symptom management.

The data is currently undergoing data analysis. We anticipate the results will demonstrate that nurses are more knowledgeable and prepared to care for surgery and oncology patients. The study should be replicated to determine the effectiveness of the ONS self-assessment tool for new nurses in oncology settings.

### 1339860

**FROM CLINICAL TRIALS TO COMMERCIAL USE: NEW ONCOLOGY DRUGS AND THE ONCOLOGY NURSE COORDINATOR ROLE IN AN OUTPATIENT CLINIC SETTING.**

Eileen Dehm, RN, BSN, Medical Oncology Clinic, Smilow Cancer Hospital at Yale–New Haven, New Haven, CT; Matthew Burke, RN, MSN, APRN-BC, Medical Oncology Clinic, Smilow Cancer Hospital at Yale–New Haven, New Haven, CT

The objective is to identify a key role in transitioning patients from clinical trials, bridging the gap in patient care after drugs become commercially available.

Cancer patients without response to traditional therapy may have other treatment options by enrolling in clinical trials. Research nurses are responsible for the execution of these highly regulated protocols and the daily management of patients receiving the investigational drugs. The expertise of these nurses is invaluable to patients, caregivers, and nurses. Their involvement ceases after drugs such as ipilimumab and vemurafenib, both newly Food and Drug Administration (FDA) approved, become commercially available, leaving a notable void in the practice setting. These drugs, because of their potential for serious adverse side effects, require a new approach for optimal nursing management.

The purpose of this project was to implement an Oncology Nurse Coordinator (ONC) role designed to enhance self-care knowledge of patients receiving newly FDA approved drugs in an oncology clinic setting. The ONC role evolved during the planning for a move into a new cancer hospital.

The ONC provides tools to nurses for optimal patient education and clinical management, and actively facilitates voluntary enrollment of patients and caregivers for support and resources available through drug manufacturers. To evaluate the effectiveness of this aspect of the ONC role, patients are observed by clinicians to determine if symptoms of adverse reactions are reported early in their course.

Of the 26 patients prescribed ipilimumab, 77% voluntarily enrolled in support programs, whereas, 100% of patients prescribed vemurafenib (N=11) chose to enroll. Patients participating in the personalized support programs were noted by clinicians to recognize symptoms early and effectively communicate with the Clinical Team, allowing for timely interventions to minimize complications and prevent unnecessary hospitalizations.

The ONC serves as a liaison between the clinical trials operation and develops protocols and education models for new commercial drugs that assure patients are adequately prepared for treatment. Our education model uses resources available through drug manufacturers to augment patients' drug knowledge and self-care and can be readily adopted by other settings where newly FDA approved drugs are prescribed.

### 1340175

**SAVE A LINE, SAVE A LIFE: IMPLEMENTATION OF A CENTRAL LINE RESOURCE NURSE ROLE TO ENGAGE STAFF IN REDUCTION OF CLABSI RATE ON AN INPATIENT HEMATOLOGY/ONCOLOGY UNIT.** Charlene Stein, RN, OCN®, Penn State Inpatient Cancer Institute, Penn State Hershey Medical Center, Hershey, PA; JoAnn Melcher, RN, Penn State Inpatient Cancer Institute, Penn State Hershey Medical Center, Hershey, PA; Carol Tringali, MS, RN, AOCNS®, Penn State Inpatient Cancer Institute, Penn State Hershey Medical Center, Hershey, PA.

Central Line Resource Nurses and evidence-based practice will reduce the central line associated blood stream infection (CLABSI) rate to less than 1.9/1000 line days among hematology/oncology patients in our unit.

Bloodstream infections in cancer patients, often associated with a central venous catheter (CVC), can increase length of stay, healthcare cost, and mortality. The CLABSI rate among our inpatient hematology/oncology clients frequently exceeded the hospital quality outcome goal. Audits revealed that less than 100% of nurses were compliant with evidence-based practice outlined in hospital policies. Reduction of central line associated blood stream infections is a nurse sensitive outcome and key quality initiative in hospitals. Nurses play a major role in managing CVC access and maintenance and can therefore reduce CLABSIs through consistent application of evidence-based practice techniques and careful documentation of patient assessments.

The purpose of this project is to demonstrate that through mentoring, enforcing best practice and monitoring CVC care, Resource Nurses can impact CVC infection risk and lower the CLABSI rate.

Four Resource Nurses, selected from unit staff, distributed pretest/posttest questionnaires to unit staff nurses, and shared information about unit performance in relationship to the institution quality goal. They provided education consisting of policy review and e-learning focusing on meticulous technique for CVC care. Resource Nurses evaluate return demonstrations performed by all staff, monitor compliance with CVC policies through observation and bimonthly audits, monitor central line care documentation, and assist with Real-Time Analysis of positive blood cultures.

Pretest to posttest scores improved on all but two questions. The CLABSI rate has been below our benchmark of less than 1.9/1000 line days for 6 of 12 months. The CLABSI rate was 0 for three of those months.

Prior to this project, our CLABSI rate was consistently above 3.0. Central Line Resource Nurses helped their peers embrace the goal of reducing CLABSIs among hematology/oncology patients. Staff saw that a rate of 0 for consecutive months was possible. Real Time

Analysis of positive blood cultures and audits provide information to staff about their efforts. This evidence-based practice project is ongoing and demonstrates improved patient outcomes through use of a Resource Nurse.

### 1340405

**A PROSPECTIVE STUDY OF CRYOTHERAPY DURING ADMINISTRATION OF HIGH-DOSE MELPHALAN TO DECREASE THE SEVERITY OF ORAL MUCOSITIS IN PATIENTS WITH MULTIPLE MYELOMA UNDERGOING AUTOLOGOUS STEM CELL TRANSPLANTATION.** Shin Kim, CNS, Asan Medical Center, Seoul, Republic of Korea; Yang Hee Cho, Asan Medical Center, Seoul, Republic of Korea; Seon Mae Park, Asan Medical Center, Seoul, Republic of Korea; Soon Haeng Lee, Asan Medical Center, Seoul, Republic of Korea; Mi Jin Jeon, CNS, Asan Medical Center, Seoul, Republic of Korea; Kyeong Min Lee, CNS, Asan Medical Center, Seoul, Republic of Korea

Cryotherapy during administration of high-dose melphalan will decrease the severity of oral mucositis in patients with multiple myeloma undergoing autologous stem cell transplantation.

High-dose melphalan followed by autologous stem cell support has emerged as an important treatment option for patients with multiple myeloma. This complication accounts for increased morbidity and may result in infections, the need for intravenous feeding, narcotics and extended hospitalization.

The purpose of this study is to determine the efficacy of cryotherapy on patients under high-dose melphalan treatment. First, the effect of cryotherapy on the frequency and severity of oral mucositis is examined. Second, the effect of cryotherapy on the length of hospitalization and on the administration of analgesics, antibiotics, and nutritional supplements is evaluated.

From October 2009 to September 2011, 61 patients with multiple myeloma scheduled to receive melphalan 200 mg/m<sup>2</sup> were provided cryotherapy. Patients were instructed to continue this procedure 5 min before, 30 min during and for 30 min after the infusion of melphalan. The control group consists of patients who had received high-dose (200 mg/m<sup>2</sup>) Melphalan treatment from October 2006 to September 2009.

Apart from the cryotherapy, the two groups were otherwise similar. Upon comparison of the frequency of occurrence of oral mucositis, the experimental group exhibited significantly lower incidences than the control group ( $p = 0.028$ ). While only 13 patients (21.3%) in the control group did not develop oral mucositis, as many as 27 patients (39.1%) in the experimental group ( $p=0.002$ ) did not. Among those who developed oral mucositis, 26 in the experimental group (37.6%) exhibited Grade 2 or above vs. 43 in the control group (70.3%). No patient developed oral mucositis of Grade 4 or higher in either group. Patients in pain due to oral mucositis received analgesics as follows: 30 in the experimental group (43.5%) who received cryotherapy vs. 44 in the control group (72.1%), showing a lower rate of pain killer usage in the experimental group ( $p=0.001$ ). Antibiotics usage was less frequent in the experimental group: 25 patients (36.2%) did not receive antibiotics vs. 8 patients (13.1%) in the control group ( $p=0.003$ ).

The results of the study confirm that cryotherapy reduces oral mucositis among high-dose Melphalan recipients. Furthermore, a significant difference was observed in the frequency of incidence of oral mucositis and in the duration of analgesics administration. Cryotherapy reduces the risk of infection during high-dose Melphalan treatment of patients as well the patient's level of discomfort.

### 1340500

**ROBOT-ASSISTED LUNG CANCER SURGERY: LESSONS IN EDUCATING NURSES AND PATIENTS ABOUT POST-SURGICAL SYMPTOM MANAGEMENT.** Kathleen Hopkins, RN, AC/T, University of Pittsburgh School of Nursing, Pittsburgh,

PA; Patty Williams, MPH, BSN, RN, Speciality Services, University of Pittsburgh Medical Center, Hillman Cancer Center, Pittsburgh, PA; Lynda Tunon, RN, MSN, OCN®, Education, University of Pittsburgh Medical Center, Hillman Cancer Center, Pittsburgh, PA

The objective was to evaluate the lessons learned in educating nurses in about post-operative symptom management for lung cancer patients undergoing robotically assisted surgery using the da Vinci® system.

Robotically-assisted thoracic surgery using the da Vinci® system has emerged as a promising technical innovation. The da Vinci® System offers several potential benefits over a thoracotomy including a shorter hospital stay, less pain, less scarring, less risk of infection, less blood loss, and more rapid return to normal activities. However, its use involves a steep learning curve for the entire surgical team including nurses who educate patients regarding post-surgical care. Comparatively, few studies have addressed problems unique to lung cancer patients and even fewer have addressed management of symptoms following robotically-assisted thoracic surgery using the da Vinci® system. Consequently, we have limited knowledge of the most appropriate teaching in this situation. This study will assist in making improvements in nursing education at our institution.

This study will provide additional information needed to best educate nurses and patients about postsurgical symptom management following thoracic robotic surgery.

Robotically assisted thoracic surgery using the da Vinci® system is a relatively new surgical technique and therefore may create new instructional needs for the nursing staff and patients. This study will provide information regarding similarities and differences of nursing assessment and management of symptoms in patients whose surgery is managed using this new technique and standard approaches. The intervention has two parts. First, nursing staff will be asked to complete a questionnaire listing ten (10) common post-surgical symptoms and management techniques. Secondly, nursing staff will complete a questionnaire listing ten (10) common post-surgical symptoms and symptom management that identifies those unique to robotically assisted thoracic surgery using the da Vinci® system. Data from the two questionnaires will be compared for similarities and differences.

This paper will explore oncology nursing educational needs and provide suggestions for developing education to close gaps and better assist nurses to provide post-surgical symptom management for lung cancer patients undergoing robotically assisted surgery using the da Vinci® system.

### **1340524** **APPLYING EVIDENCE-BASED PRACTICE TO HYPERSENSITIVITY AND ANAPHYLACTIC REACTIONS IN THE OUTPATIENT ONCOLOGY INFUSION CENTER.**

Robyn Best, BSN, RN, OCN®, West Penn Allegheny Oncology Network, West Penn Allegheny Health System, Freedom, PA; Marjorie Leslie, DNP, CRNP, AOCNP®, West Penn Allegheny Oncology Network, West Penn Allegheny Health System, Freedom, PA

To adhere to current evidenced-based practice to assure positive patient outcomes when adverse events occur in the outpatient oncology infusion center.

All medications involve risk of infusion related adverse events. Many chemotherapy/targeted therapy agents are associated with an increased risk of serious and even life threatening reactions. Effective management of infusion related adverse events is critical to patient safety. In 2010 it was identified that new guidelines surrounding the management of hypersensitivity/anaphylactic reactions had been published by the Oncology Nursing Society (ONS) and The Journal of Allergy and Clinical Immunology.

To update hypersensitivity/anaphylactic policy to reflect evidence based practice.

A multidisciplinary approach initiated by nursing and including pharmacists and physicians, was taken to update the hypersen-

sitivity/anaphylactic policy to reflect evidence-based practice. The policy was revised as per the guidelines outlined in the ONS Chemotherapy and Biotherapy Guidelines, 3rd edition. In addition to the updated policy, all medication order sets within the West Penn Allegheny Oncology Network/West Penn Hospital Outpatient Services practice now include the order, "implement hypersensitivity/anaphylactic protocol as needed for hypersensitivity or anaphylactic reaction to medications". This allows the nursing staff to immediately implement the protocol while simultaneously alerting the provider on site. This decreases the time between identification of an adverse reaction and administration of the appropriate treatment. Nurses were educated on the policy changes including the addition of albuterol to the emergency drug boxes and use of an in-line nebulizer for administration as needed. To address the issue of educating 60 nurses over a large geographical area, the policy is also posted on the intranet for immediate access. In addition, laminated cards with the policy and ONS reference table are located in all treatment areas and in the emergency drug boxes.

Compliance with the policy was evaluated by reviewing management of reactions utilizing our online occurrence reporting system.

Creating policies and procedures based on current clinical evidence and educating chairside nurses is crucial to assure positive patient outcomes.

### **1340616** **PREVENTION AND CONTROL OF SUBCLINICAL LYMPHEDEMA FOLLOWING BREAST CANCER SURGERY: A PILOT STUDY.**

Carmel Nail, MSN, FNP, Department of Surgery, University of Virginia, Charlottesville, VA; Anneke Schroen, MD, MPH, Department of Surgery, University of Virginia, Charlottesville, VA; Gina Petroni, PhD, Department of Public Health Sciences, University of Virginia, Charlottesville, VA; Mark Smolkin, MS, Department of Public Health Sciences, University of Virginia, Charlottesville, VA

This pilot study was conducted to evaluate chest wall compression therapy as a way to prevent or ameliorate subclinical lymphedema.

Lymphedema is a morbidity frequently associated with breast cancer. Lymphedema following breast cancer surgery can affect the arm and chest wall. Early intervention may inhibit subclinical presentation from advancing to clinical symptoms.

To assess modalities that may inhibit or decrease breast cancer associated lymphedema.

Levels of Prevention Model: This model provides for the application of preventive measures that can be used to promote health and/or arrest disease at varying points along the disease process (breast cancer associated lymphedema).

Twenty patients ages 34–74 undergoing breast cancer surgery (modified radical mastectomy, simple mastectomy and sentinel node biopsy, lumpectomy and axillary node dissection) were randomized to receive the Belisse Compressure Comfort Bra®. Those undergoing immediate reconstruction or no axillary surgery were excluded. Patients were randomized to early (first 6 months following surgery) or delayed (second 6 months following surgery) intervention. All patients received the following measures: arm circumference at 4 cm increments, chest circumference and range of motion. Subjective measures were evaluated using the DASH (Disabilities of the arm, shoulder and hand) tool. Measurements occurred at the following intervals: preoperative baseline, postoperative follow up, and every 3 months for 1 year.

Objective measures of arm abduction and chest and arm measures were similar in the delayed and early intervention groups. However, an increase in the summed arm measurements of 14.8 cm was noted in the delayed group as compared to 9.4 cm in the early group at 12 months. Additionally, DASH scores were lower in the early intervention group suggesting that early intervention may be beneficial. Conclusions - We hypothesize that early intervention of compressive therapy may be more beneficial than

waiting for symptoms to manifest. Given the high degrees of variability in objective measures additional studies would require larger numbers to conclude absolute differences. Subjective measures suggest differences in small numbers and should continue to be included as outcome measures in further lymphedema studies. Additional studies are needed to evaluate early interventions for lymphedema prevention.

**Underwriting/Funding Source:** Charlottesville Women's Four Miler Funds/University of Virginia Breast Care Center

### **1340663** **IMPROVING PATIENT SAFETY IN AMBULATORY CLINIC EMERGENCIES USING SIMULATION-BASED EDUCATION.**

Jennifer Kenderski, RN, BSN, OCN<sup>®</sup>, Radiation Oncology, Ohio State University Medical Center–The James, Columbus, OH; Amy Rettig, MSN, RN, CNS, CBCN<sup>®</sup>, Nursing Excellence, Ohio State University Medical Center–The James, Columbus, OH; Paula Garvey, BSN, RN-BC, HS–Nursing Education, Ohio State University Medical Center, Columbus, OH; Diana McMahon, MSN, RN, Nursing Staff Development, Ohio State University Medical Center–The James, Columbus, OH

The objective of this program is to improve patient safety by providing simulation-based education of acute care emergencies in ambulatory breast clinics at a Midwestern comprehensive breast cancer center.

Emergency curriculum specific to oncology is not regularly offered in many hospitalbased cancer ambulatory facilities. High-Fidelity simulation in acute care curriculum has been found to promote critical thinking and staff teamwork among critical care nurses and in inpatient units, emergency departments and in medical transport teams. Little simulation content has been developed for ambulatory oncology care for nurses, clinical support staff and/or radiation therapists. In the ambulatory care setting, emergency equipment such as crash carts and much of the necessary medicine may not be readily available. Therefore, it is important that the healthcare team is aware of early recognition signs and symptoms of an emergent situation. This project is innovative in that High-Fidelity simulation emergency care content has not been comprehensively developed and consistently implemented in oncology ambulatory care.

The purpose of this education project is to develop and implement an emergency care simulation curriculum specific for ambulatory care oncology nurses and radiation therapists. The conceptual model is Relationship-Based Care<sup>®</sup>, a model of nursing care that considers relationships among nurses and patients as a key factor to providing quality healthcare.

Evaluation data will be obtained using educational program surveys that address satisfaction with content, perceptions of acute care skills, team cohesiveness, and use of equipment among the healthcare team (nurses, clinical support staff, radiation therapists).

Education about emergency care in ambulatory oncology settings is vital to positive patient outcomes. Developing content and methods that can be translated to a variety of healthcare settings and cancer diagnoses can enhance the probability of efficient management of medical emergencies in the ambulatory care setting.

### **1340667** **CORRELATION BETWEEN BASELINE HEALTH-RELATED QUALITY OF LIFE (HRQOL) OR SYMPTOM BURDEN AND CLINICAL OUTCOMES IN PATIENTS WITH NEWLY DIAGNOSED CHRONIC MYELOID LEUKEMIA IN CHRONIC PHASE (CML-CP) TREATED WITH NILOTINIB OR IMATINIB.**

Jennifer Beaumont, MS, Medical Social Sciences, Northwestern University Feinberg School of Medicine, Chicago, IL; Cindy Nowinski, MD, PhD, Medical Social Sciences, Northwestern

University Feinberg School of Medicine, Chicago, IL; John Coombs, PharmD, MBA, Global Health Economics and Market Access, Novartis Pharmaceuticals Corporation, East Hanover, NJ; Tomasz Szczudlo, MD, Novartis Oncology, Florham Park, NJ; Rick Blakesley, PhD, Novartis Oncology, Florham Park, NJ; Neil Gallagher, MD, PhD, Oncology Clinical Development, Novartis Pharma AG, Basel, Switzerland; James Burns, MS, Medical Social Sciences, Northwestern University Feinberg School of Medicine, Chicago, IL; David Cella, PhD, Medical Social Sciences, Northwestern University Feinberg School of Medicine, Chicago, IL

Evaluate effect of baseline QoL on patient outcomes.

Nilotinib targets the BCR-ABL kinase that causes CML and is approved for treatment of newly diagnosed CML-CP. Nilotinib demonstrated superior efficacy versus imatinib in the phase 3 ENESTnd (Evaluating Nilotinib Efficacy and Safety in clinical Trials of newly diagnosed Philadelphia chromosome-positive CML patients) study. Quality of life and symptom burden may be predictive of treatment response and management of the CML patient.

To assess whether baseline HRQoL or symptom burden predict clinical outcomes in patients enrolled in the ENESTnd study.

Patients received nilotinib (300 or 400 mg BID; n=563) or imatinib (400 mg QD; n=283). HRQoL was assessed using the Functional Assessment of Cancer Therapy-Leukemia (FACT-Leu) questionnaire, administered at baseline and 3, 12, and 24 months. The FACT-Leu consists of 4 general subscales (FACT-G) measuring physical, social/family, emotional, and functional well-being, and a 17-item leukemia-specific subscale (LeuS); higher scores reflect better HRQoL. Patients with low, mid, and high baseline scores were compared on response by 24 months, treatment discontinuation, hospitalization, dose modification, grade 3/4 adverse events (AEs), and missed cytogenetic tests.

Baseline FACT-G score was not associated with cytogenetic or best molecular response by 24 months. Higher baseline LeuS score correlated with best molecular but not cytogenetic response. There was a significant (P=.007) association with baseline FACT-G score and treatment discontinuation: 31%, 26%, and 18% of patients with low, mid, and high scores, respectively, discontinued treatment. Baseline LeuS score correlated with frequency of hospitalization; fewer patients with high baseline scores were hospitalized during study than patients with low scores. There was no correlation between baseline FACT-G or LeuS scores and dose modification, grade 3/4 AEs, or missed cytogenetic tests.

In patients with newly diagnosed CML-CP, worse general HRQoL at baseline was predictive for treatment discontinuation but not for treatment response. Leukemia-related symptoms at baseline were predictive of hospitalizations and moderately predictive of treatment response. These findings suggest that assessment of baseline HRQoL and symptoms may allow patients and their healthcare teams to better anticipate outcomes such as hospitalizations and duration of therapy, and improve patient functioning.

**Underwriting/Funding Source:** Novartis Pharmaceuticals Corporation

### **1340903** **BREAKING THE BLOODSTREAM INFECTION CONNECTION: CENTRAL VENOUS CATHETER (CVC) HUB DISINFECTION UTILIZING A SWAB CONTAINING CHLORHEXIDINE GLUCONATE (3.15%) AND ISOPROPYL ALCOHOL (70%), CHLORASCORB™.** Debra Hillman, BSN, RN, OCN<sup>®</sup>, BMT, Franciscan St. Francis Health, Indianapolis, IN

To reduce the incidence of blood stream infections (BSI) in patients on a bone marrow transplant (BMT)/hematology unit.

The St. Francis BMT unit is a 17 bed unit caring for hematology patients in all aspects of care from routine to critical care. Bone marrow transplant/hematology patients with central ve-

nous catheters (CVC) have an increased risk of developing BSI. Minimizing this risk improves outcomes. Developing an evidence-based intervention was needed to decrease BSI rates.

To decrease the incidence of BSI in our bone marrow transplant/hematology patient population using a swab with 3.15% Chlorhexidine Gluconate and 70% alcohol for central line hub and lumen care.

Chlorhexidine-impregnated sponge dressing was added to our CVC site care in 2009. A literature review identified that current guidelines recommend cleaning hubs prior to each access. All nursing staff members were educated regarding the use of the swab. A data collection sheet was completed by each nurse after any access of the CVC. Nurses on the in-patient bone marrow transplant/hematology unit apply pressure and friction for 10 seconds in a 360 degree circular motion with the swab. The CVC hub/lumen is dried completely before being accessed. All Isopropyl alcohol swabs were taken out of the room to ensure compliance.

Preliminary data indicates a current decrease in BSI rate with prolonged periods of no BSIs occurring.

Although previous intervention using chlorhexidine-impregnated sponge dressing lowered the BSI rates by 50 percent, the reduction could not be consistently sustained. Adding the 3.15% Chlorhexidine Gluconate and 70% alcohol swab for central line hub and lumen care has further reduced BSI rates with periods where no BSIs have occurred. Evaluating practice of staff and minimizing practice variations decreases the patient's risk of developing BSI.

### **1341004 DETERMINING CHEMOTHERAPY RELATIVE DOSE INTENSITY IN OUTPATIENTS RECEIVING TREATMENT FOR BREAST CANCER, LUNG CANCER, AND LYMPHOMA.**

Suzanne Cowperthwaite, MSN, RN, NEA-BC, Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins, Baltimore, MD; Dina Lansey, MSN, RN, OCN®, Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins, Baltimore, MD

Determine the actual chemotherapy relative dose intensity (RDI) administered to 150 outpatients treated for breast cancer, lung cancer, and lymphoma and identify factors negatively influencing optimal RDI delivery in order to assess and improve dose intensity.

Advances in cancer therapy have resulted in significant improvement in cure rates and survival. Literature shows, however, that treatment outcomes are determined by both choice of treatment and the intensity with which chemotherapy is delivered. Expressed as a percentage, RDI is the ratio of the actual chemotherapy dose delivered as compared to the planned dose. In various studies, reductions in dose intensity are reported to negatively affect progression-free and overall survival in early-stage and advanced cancers. Clinical and non-clinical events, such as toxicity management and appointment changes due to patient preference, may lead to dose reduction or treatment delay. RDI greater than 85% should be achieved for optimal disease-free and survival outcomes.

Despite its documented importance, few cancer centers have assessed their practice to determine the extent of sub-optimal RDI, or reasons for deviating from the planned dose and schedule of chemotherapy.

Retrospective analysis of adult patients' electronic records was performed to determine the RDI of the last 50 patients each with breast cancer, lung cancer, and lymphoma treated with standard chemotherapy. Records of patients demonstrating RDI  $\leq$  85% were further reviewed to determine reasons for reductions and delays. Findings were analyzed using SPSS 18.0 and presented to clinical staff.

RDI  $>$  85% was achieved in 86% of the breast group, 62% of the lymphoma group and 44% of the lung group. Additional data for each diagnosis are presented and include age, gender, race, treatment regimen, treatment location, and administration of growth factor. Data presented for groups achieving  $\leq$  85% RDI include demographics and reasons for delays and dose reductions, both

treatment-related and unrelated. Case examples are also presented and provide significant insight.

Results of the study were revealing, providing helpful information about chemotherapy delivery, side effects and practice. Results were presented to a wide audience of physicians, nurses and mid-level providers, generating lively discussion and interest. Suggestions for practice changes are also discussed.

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### **1341066 ENGAGING NEW ONCOLOGY NURSES USING THE DEDICATED EDUCATION UNIT (DEU).**

Martha Kershaw, RN, MS, OCN®, Roswell Park Cancer Institute, Lockport, NY; Megan Hayes, RN, Roswell Park Cancer Institute, Lockport, NY; Karla Kirbis, RN, Roswell Park Cancer Institute, Lockport, NY; Kim McMahon, RN, BSN, Roswell Park Cancer Institute, Lockport, NY; Cathy O'Connor, RN, OCN®, Roswell Park Cancer Institute, Lockport, NY; Deborah Coplin Hall, RN, MS, Roswell Park Cancer Institute, Lockport, NY

Discuss an innovative way to engage nursing student's interest in oncology nursing.

The ONS position on the Nursing shortage indicates a decrease in nurses entering the workforce as the number of oncology patients increases. Dolan quotes Mary Seitz who identifies "fear and anxiety related to cancer and cancer care." Engaging students in the oncology setting directly interacting with expert oncology nurses decreases that anxiety and encourages an interest in oncology nursing.

Bring student nurses into the oncology setting to demystify oncology care.

Nursing students are assigned to a comprehensive cancer center for the clinical component of their senior nursing course. The classroom content that accompanies this clinical setting includes oncology topics. Initial reactions from students verbalized to faculty prior to entering the oncology setting include fear of death and not being able to care for patients at end stage. The DEU clinical experience involves student nurses working directly with expert oncology nurses in a 2:1 ratio (2 students to 1 nurse). The nurse determines the student's assignment and acts as a role model as well as providing direct supervision of the care provided by the student nurse. The student nurse is allowed to experience real life examples of the theoretical content they are learning while working with an expert.

The Dean and Chair of the College of Nursing conduct separate focus groups with the nursing students and oncology nurses to determine the effectiveness of the experience. Verbal feedback is received by the faculty person from the students regarding their excitement with connecting theoretical content in the clinical setting.

Students also express how different the setting was from initial expectations. The clinical experience lasts multiple weeks so students are able to see improvement and discharge of patients. Approximately 50 % of students who complete this experience verbalize a plan to apply for a nursing job in oncology nursing.

### **1341083 USING A TELEHEALTH NETWORK TO PROVIDE EDUCATION TO ONCOLOGY NURSES PRACTICING IN A RURAL SETTING.**

Carol Bush, BS, RN, Midwest Cancer Alliance, Wichita, KS; Traci McCarty, BS, Midwest Cancer Alliance, Wichita, KS; Hope Krebill, RN, BSN, MSW, Midwest Cancer Alliance, Wichita, KS; Ryan Spaulding, PhD, University of Kansas Medical Center, Kansas City, KS; Gary Doolittle, MD, University of Kansas Medical Center, Kansas City, KS

Increase access to ONS Chemotherapy - Biotherapy training for rural oncology nurses in the state of Kansas.

The Midwest Cancer Alliance (MCA), The University of Kansas Cancer Center and The University of Kansas Center for Telemedi-

cine and Telehealth (KUCTT) host the course using ITV, providing a live, interactive communication experience for the rural participants. The MCA, established in 2007, is a membership-based organization that supports health care professionals to increase access to cancer research and to advance the quality and reach of cancer prevention, early detection, treatment and survivorship in Kansas and western Missouri. The overlying goal of the MCA is to provide more options to patients and professionals closer to their communities. In order to promote evidence-based care, the MCA uses Interactive Televideo-conferencing (ITV) to broadcast their professional education courses to members, some as far as 400 miles away. This technology has been used for over 20 years by KUCTT to deliver clinical telemedicine services, saving time, expense and ultimately facilitating the speed at which evidence-based care is adopted into practice.

Availability of certified trainers is limited to metropolitan areas of the state. To meet the growing demand for chemotherapy certified nurses, the course is delivered bi-annually to MCA member oncology nurses with less than 2 years of oncology experience, as well as newly hired nurses that don't have current ONS certification.

As a result of this initiative that began in 2008, 174 nurses from seven communities across the state have completed the course via ITV and received their provider card.

The increased number of nurses certified in ONS Chemotherapy Biotherapy through the MCA demonstrates that this method of delivery is successful and supports our plan to expand our professional development opportunities using ITV as the delivery mechanism. While the MCA members have access to the ONS Chemotherapy Biotherapy course online, they indicated that they would prefer to participate in an in-person delivery of the course.

### 1341226

#### **MULTI-SITE COLLABORATION IN NURSING RESEARCH.**

Mary Ellen Coglianesi, RN, BSN, Regional Care Network, Memorial Sloan-Kettering Cancer Center, Commack, NY; Gina Beloff, RN, Radiation Oncology, Memorial Sloan-Kettering Cancer Center, New York, NY; Kathleen Mazzarella, RN, OCN®, Regional Care Network, Memorial Sloan-Kettering Cancer Center, Rockville Centre, NY; Amy Gleason, Regional Care Network, Memorial Sloan-Kettering Cancer Center, Basking Ridge, NJ; Deborah Thomas, RN, Regional Care Network, Memorial Sloan-Kettering Cancer Center, Sleepy Hollow, NJ; Ethel Law, RN, ANP-BC, OCN®, Radiation Oncology, Memorial Sloan-Kettering Cancer Center, New York, NY

Nurses will learn collaborative strategies implemented to conduct multi-site research.

Nurses at a NCI-designated comprehensive cancer center utilized collaborative strategies to achieve target accrual and ensure accurate and consistent data collection for a study conducted across separate locations. It is the first time a Nurse Principal Investigator (NPI) engaged nurses and physicians at the institutions' main location and regional sites to meet the goals of a research project.

Our purpose was to use effective collaborative strategies when initiating and conducting a research study across multiple sites evaluating an intervention measuring patient quality of life, in order to reach target accrual, collect patient information and maintain regulatory compliance.

Each site successfully contributed to the target accrual of 115 patients in two years with 24 accruals from the four regional sites, unprecedented at our center. Initiation meetings, frequent communication, consistent patient education, and close data management produced the following outcomes: 13 protocol deviations identified and submitted by nurses to the IRB avoided study violations; data collection and entry of patient responses by nurses had a high degree of accuracy and timeliness; four serious adverse events, although unrelated to the intervention were identified by nurses and reported; study integrity consistently met full regulatory compliance; and annual IRB reviews were submitted on time and internal audits scored as "outstanding".

Our experience demonstrates that collaboration can produce positive research outcomes, even under challenging conditions. Strong NPI and CRN leadership combined with educated, engaged and empowered staff nurses were at the core of our success. These strategies can be applied in similar settings where distance and complexity are challenging to conducting clinical research.

### 1341246

#### **A YOUNG PERSON'S AGONY: THE RELATIONSHIP BETWEEN DISTRESS AND UNCERTAINTY IN ADOLESCENT AND YOUNG ADULT CANCER PATIENTS: AN INTEGRATIVE REVIEW.** Erin Fusco, DNP, FNP, RN, School of Nursing, State University of New York Stony Brook, Stony Brook, NY

Provide an overview of psychosocial issues pivotal to adolescent and young adult cancer patients. Define distress, uncertainty in illness and the relationship between the three.

Distress is defined as a mix of anxiety and depressive symptoms that may cause sleeplessness, lack of appetite, trouble concentrating and difficulty carrying on regular activities. Some distress is normal, but a third of cancer patients experience significant distress. Only five percent of those with cancer obtain psychological help. While distress doesn't affect the cancer itself, it does affect how patients cope with their cancer and their ability to follow treatment recommendations. Uncertainty in illness has been shown in research to negatively affect coping in cancer patients. Patients have reported that with more information regarding their illness their coping would be improved. Adolescent and young adult (AYA) cancer patients are a statistically significant population due to poor outcomes. Data in the AYA population shows improvements in survival for AYA cancer patients have been at a standstill at 70% since 1986. This patient population ranges from high school students to career and family minded people. They are exposed to extreme periods of stress and uncertainty while undergoing extensive treatment during periods of crucial developmental milestones.

This study identifies the available research on psychosocial concerns of AYA cancer patients, further evaluating available research on distress and uncertainty while establishing a relationship between the three.

An integrative literature review was carried out using a defined framework for data collection, analysis, and synthesis.

Three main areas were identified that warrant additional discussion: the relationship between AYA cancer patients and distress, the relationship between AYA cancer patients and uncertainty in illness, and an indication for screening of uncertainty and distress in AYA cancer patients.

The outcome of review will be used to increase awareness of uncertainty and distress among AYA cancer patients and the increasing specific psychosocial needs of this population. Results will aid the provider in recognizing psychosocial symptoms of concern before these affect patient outcomes. Finally, this study will lay the foundation for longitudinal research regarding long term outcomes of distress and coping in AYA cancer survivors.

### 1341248

#### **DISCHARGE COMMUNICATION DURING TRANSITION FROM INPATIENT TO OUTPATIENT CARE.**

Kristen Reeb, MSN, CRNP, Medical Oncology, Johns Hopkins Hospital, Baltimore, MD; Karen Maylor, BSN, RN, Medical Oncology, Johns Hopkins Hospital, Baltimore, MD; Nancy Magee, BSN, RN, OCN®, Medical Oncology, Johns Hopkins Hospital, Baltimore, MD; Susan Meusel, BSN, RN, Medical Oncology, Johns Hopkins Hospital, Baltimore, MD; Marie Swisher, MSN, RN, OCN®, Medical Oncology, Johns Hopkins Hospital, Baltimore, MD; Suzanne Cowperthwaite, MSN, RN, NEA-BC, Medical Oncology, Johns Hopkins Hospital, Baltimore, MD; Kitty Vio-

lette, MSN, RN, Medical Oncology, Johns Hopkins Hospital, Baltimore, MD

Ensure safe transfer of patients from the inpatient to outpatient setting.

The Joint Commission's 2009 National Patient Safety Goal "improving the effectiveness of communication among caregivers" is important because ineffective communication is the most frequently cited root cause for sentinel events. TJC further states that an organization should "implement a standardized approach to hand-off communications, including an opportunity to ask and respond to questions". Hand-off reports are often utilized when patients are admitted from outpatient to inpatient units and upon transfer between inpatient units. However, no standardized process was utilized when patients were discharged from inpatient units to the Oncology Outpatient Department (OPD) at this NCI-designated cancer center. This led to miscommunication of important information and unsafe follow-up appointments. The need for a standardized discharge process including an opportunity for interactive communication was identified.

The OPD Comprehensive Unit Based Safety Program Committee identified inpatient to outpatient hand-off as a high priority safety concern, deciding to develop a discharge process with the goal of improving workflow, nursing communication and ultimately, patient safety and satisfaction.

In January 2011 a team of outpatient and inpatient nurses designed a pilot program. Prior to patient discharge, the inpatient nurse pages the "OPD discharge pager". The inpatient and outpatient nurse then engage in interactive communication that includes exchange of relevant information and an opportunity for questions and suggestions, culminating in a thorough exchange of information and an appropriate outpatient appointment. Standardized algorithms and forms were developed to support this process. Inpatient and outpatient nurses viewed a specially-designed, web-based, educational video prior to pilot implementation.

The discharge hand-off is now utilized in an average of 126 discharges each month, demonstrating exceptional adoption of the process. The process was implemented as standard practice for all inpatient to OPD hand-offs in April 2011. Nurses are satisfied with the new process. The nursing inpatient to outpatient hand-off process is often inadequate or non-existent. The practice described in this presentation has been successfully adopted and is a highly effective method for ensuring patient safety. This process, and the tools presented, may be adapted to other cancer practices to improve patient safety.

### 1341252

**SHARED GOVERNANCE: IMPROVING ONCOLOGY CARE ACROSS A HEALTHCARE NETWORK.** Sylvia Danko, RN, BSN, OCN®, CBCN®, Oncology, Seton Healthcare Family, Austin, TX; Lisa Brannan, RN, BSN, OCN®, Oncology, Seton Healthcare Family, Austin, TX

Shared Governance empowers oncology nurses to use their clinical expertise to develop quality nursing practices. This is a description of how shared governance is enhancing oncology care in our organization.

The Seton Healthcare Family expanded rapidly in the past three years, resulting in the addition of units where oncology care is provided with varying levels of frequency and nurse experience. Concerns surfaced for ensuring safe, standardized, evidenced based oncology nursing care network wide. We have a long tradition of shared governance. Creating an Oncology Subspecialty Council as a forum for bringing forward practice concerns evolved naturally. Nursing Congress's Acute Care Specialty Council granted our charter, the first for such a subspecialty council.

Council goals are to increase oncology clinical competency, improve network oncology patient care processes, and support less experienced nurses at lower volume sites. Members are nurse

representatives from each unit and clinic providing oncology care. Variations in practice are discussed, and a consensus is reached on what best practice standards are.

At our first meeting, we invited pharmacy and infection control representatives, brainstormed topics, and developed a prioritized list of initiatives. We reviewed and categorized the past year's incident reports involving agent administration (N= 49), and found that 63% of the errors resulted from unclear communication between pharmacy and nursing. Nurses at the newer, lower volume sites also reported low confidence with chemotherapy administration, and requested a tool to facilitate the process. We worked with pharmacy to revise our Chemotherapy/Biotherapy Policy and develop a chemotherapy/biotherapy communication checklist, implemented in October 2011.

A three month evaluation of the checklist by nursing and pharmacy by survey with Likert scale is being conducted in January. The poster will present these results. We will report on up to 5 months of incident report data involving chemotherapy/biotherapy administration post checklist implementation. To date, anecdotal feedback on the tool has been positive.

The Council has made an impact and so has selected future initiatives- development of an Oncology Resource webpage, and expansion of the acuity indicators for staffing ratios to better reflect complexity of oncology care. Both will further enhance network oncology care.

### 1341301

**ADVANCED CARE PLANNING BEFORE AGGRESSIVE CANCER TREATMENT BEGINS.** Joyce Neumann, RN, MS, AOCN®, MD Anderson Cancer Center, Houston, TX; Joaquin Buitrago, RN, BSN, MD Anderson Cancer Center, Houston, TX; Colleen Gallagher, PhD, MD Anderson Cancer Center, Houston, TX; Susan Gaeta, MD, MD Anderson Cancer Center, Houston, TX

Increase patients' participation in advanced care planning.

Stem cell transplantation (SCT) is a high risk/reward proposition. Based on the literature, many experienced SCT practitioners perceive that SCT patients are not consistently prepared for life threatening complications and poor outcomes. The SCT department was selected to pilot a novel, patient-centered intervention to improve advanced care planning (ACP) discussions. ACP is an extraordinarily complex process, and multiple factors influence whether discussions occur.

Increase SCT patients' awareness of the possibility of life threatening complications and poor outcomes by examining the number of advance directive (AD) documents and/or documentation of ACP conversations in the medical record by at least 10% .

Our institution developed a patient-centered intervention including a nurse taught admission class and distributing a previously created document. Salient points were discussed and patients were encouraged to express their concerns and talk to their healthcare providers for any additional questions.

The success of the project was measured by a chart audit for documentation of ACP discussions and AD documents, and patient survey to assess the patients' response to ACP class presentation. Forty percent (n=14) AD documents were found in the medical records after the intervention as compared to 37% (n=12) before the class. Documentation of the conversations between patients and healthcare providers increased to 89% (n=31) compared to 72% (n=23) before intervention. Patient evaluations showed a strong agreement that the information was understandable, useful and prompted them to think about decisions and discussions with family and care providers.

Because of the brief duration of the project, we were unable to identify cost savings. However, based on improved understanding of ACP and best practice patient-centered care, further investigation is warranted to include review of length of stay, changes in ICU usage and related cost savings. We are continuing the intervention and subsequent 12-month data showed an improvement



in the number of SCT patients with AD to approximately 50%. Our institution has improved documentation of ACP discussions and we plan to examine more specifically the meaning of a substantive conversation. We plan to develop guidelines, continue training thenurses and providers to promote the importance of ACP.

### 1341306

#### **ENHANCING OUTCOMES IN ONCODIABETIC PATIENTS THROUGH GLYCEMIC CONTROL.**

Kevin Browne, MSN, RN, CCRN, Nursing, Memorial Sloan-Kettering, Brooklyn, NY; Patricia McTague, MSN, FNP-BC, Nursing, Memorial Sloan-Kettering, Brooklyn, NY; Ellen Coonerty, BSN, RN, CDE, Nursing, Memorial Sloan-Kettering, Brooklyn, NY; Melanie Harold, MSN, RN, OCN®, Nursing, Memorial Sloan-Kettering, Brooklyn, NY

Program objectives were to improve glycemic control, shorten length of stay (LOS) and decrease costs.

Prompted by research findings linking cancer and diabetes incidence, this NCI designated Comprehensive Cancer Center targeted diabetic management for program enhancement opportunities. Review of profit/loss reports demonstrated significant differences between average patient admission costs and LOS for diabetics versus non-diabetics for all oncology services. For this analysis, patients with ICD-9 codes for diabetes, a serum or fingerstick blood glucose (BG) of greater than or equal to 200 mg/dl or who received insulin during hospitalization were included in the diabetic group. Average cost per case was 56% higher and LOS was increased by 40% for diabetics within Colorectal Surgery (CRS). In 2009, of 1036 CRS cases, 275 (26%) met target criteria. Meaningful practice enhancements were identified.

In addition to the primary objectives, other goals included insulin regimen refinement, decreasing hyperglycemic and hypoglycemic incidences and their unfavorable sequelae and standardization of comprehensive, multidisciplinary practice. Consequent outcomes expected include decreased comorbidity exacerbation.

Interventions included development of insulin treatment algorithms, a carbohydrate counting menu with accompanying patient education booklet, reports identifying patients with (BG) of 140 mg/dl or greater for program inclusion and education of healthcare team members. In collaboration with nutritionists, diabetic nursing specialists facilitate appropriate diet selection, carbohydrate counting, perform initial and ongoing assessments and adjustments, provide related education and ensure optimal insulin delivery.

Patients meeting criteria are evaluated daily by dedicated diabetes nurse specialists. Patient specific clinical summary graphs track BG values with corresponding insulin administration and facilitate data analysis and treatment evaluations. Recommendations for treatment modifications are discussed in multidisciplinary patient rounds. Resource utilization is monitored for future program planning. Evaluation of annualized costs and LOS in CRS is underway.

In support of this initiative, a standing hypoglycemic order set and revised patient education documentation tool for diabetes was implemented. Next steps include annualized evaluation of diabetes related LOS and associated costs in other oncology services with program expansion. For all services, preventive screening and risk assessment for diabetes and discharge transition continuity via a nurse practitioner based outpatient diabetes clinic is being considered.

### 1341310

#### **NAIL CHANGES: EVIDENCE-BASED PRACTICE CHANGE TO IMPROVE NURSING-SENSITIVE PATIENT OUTCOMES IN AN AMBULATORY SETTING.**

Maria Fenina Morales, RN, OCN®, The Cancer Institute of New Jersey, New Brunswick, NJ; Leah Scaramuzzo, MSN, RN-BC, AOCN®, The Cancer Institute of New Jersey, New Brunswick, NJ

Describe the development and implementation of a teaching sheet to improve managing nail changes oncology patients may experience as a result of their cancer treatments.

Although nail toxicities is an uncommon adverse effect of cancer therapy; it can significantly affect the patient's quality of life. The incidence of nail changes reported can range from 0% to 44% with the majority referring to docetaxel therapy. Management of nail changes of cancer therapies is integral to the role of the oncology nurse. At an NCI-designated Comprehensive Cancer Center, anecdotal data revealed discrepancies in practices and methods for assessment, prevention and management of nail changes in populations at risk. A patient education tool was developed to standardize nurses' teaching regarding nail changes.

This project was implemented to review current nail change evidence and create a standard teaching guideline for use to ensure quality oncology nursing care by using the strongest level of evidence on which to base nursing practice interventions.

A thorough literature review was performed to identify reviews, guidelines and expert opinion on cancer treatment induced nail changes. After review of all current literature, a patient education document was developed, reviewed by the Institute's Patient Education Committee and appropriate revisions made. Nurses were taught about the document, it's development, and current evidence curing nursing meetings.

New teaching guidelines developed for managing nail changes were based on the current evidence. After implementation of the teaching sheet, anecdotal evidence suggests that nurses feel more comfortable providing education to their patient regarding nail changes. Formal patient as well as nurse surveys are planned to assess how this change has impacted nursing sensitive patient outcomes.

Oncology nurses play an important and unique role in teaching patients of potential or actual complications related to their cancer therapy. It is critical for nurses to assume responsibility for the standards of their practice and for providing evidence-based, quality nursing care. This patient teaching tool may be adapted for use by all nurses nationally to ensure streamlined, evidence-based practice with the goal of improving nursing sensitive patient outcomes.

### 1341316

#### **RETROSPECTIVE STUDY OF MULTIDISCIPLINARY ROUNDING ON A THORACIC ONCOLOGY UNIT.**

Aaron Begue, MS, RN, FNP, Nursing, The James Cancer Hospital and Solove Research Institute, Columbus, OH; Rebecca Grimmert, RN, Nursing, The James Cancer Hospital and Solove Research Institute, Columbus, OH; Taletha Askew, MS, RN, CNS, CCRN, Nursing, The James Cancer Hospital and Solove Research Institute, Columbus, OH; Elaine Cutler, PharmD, BCOP, Pharmacy, The James Cancer Hospital and Solove Research Institute, Columbus, OH; Andrea Yagodich, BS, RCP, RRT, Respiratory Therapy, The James Cancer Hospital and Solove Research Institute, Columbus, OH; Patrick Ross, MD, PhD, Thoracic Surgery, The James Cancer Hospital and Solove Research Institute, Columbus, OH

The objective is to enhance the care of hospitalized thoracic oncology patients, consistent with ONS research agenda, by addressing nurse sensitive indicators.

Multidisciplinary rounding (MDR) improves the quality of patient care for hospitalized patients. This study is significant in showing that MDR can reduce hospital length of stay (LOS) which can translate into cost savings for hospitals, patients, and payers. Also, this study has the potential to enhance the care of hospitalized oncology patients through effective multidisciplinary team practices.

The purpose of this research was to evaluate LOS, patient satisfaction, discharge to a skilled-care facility (SNF) following hospitalization, and the use of home healthcare or hospice following hospitalization in patients who received MDR compared to those who did not receive MDR.

The conceptual model is Relationship Based Care®, a model of nursing care placing patient involvement, communication, and satisfaction at the front of managing patient care.

This retrospective study reviewed records of 3,124 thoracic oncology patients admitted to a Midwestern National Cancer hospital between January 1, 2006 and July 1, 2011. Analyses were a calculation of means and frequencies.

Overall, patients receiving MDR experienced a LOS of 5.3 days compared to 6.6 days for patients who did not receive MDR. Patients discharged home from the hospital after experiencing MDR had a LOS of 3.8 days compared to 5.3 days for those who did not receive MDR. MDR Patients discharged to hospice experienced a LOS of 8 days compared to 10 days for those not receiving MDR. For those discharged to a SNF, LOS was 9.6 days for those who received MDR and 12.3 days for those who did not. MDR patients discharged with home health services had a LOS of 8.2 days compared to 9.5 days for those who did not receive MDR. No statistically significant differences in Press Ganey Patient Satisfaction scores were reported by patients who received MDR compared to those who did not. In conclusion, MDR reduces hospital LOS in thoracic oncology patients discharged to home, home with home care, SNF, and hospice. Patient satisfaction scores were not shown to statistically improve in patients who received MDR.

### 1341350

#### **A BMT (BONE MARROW TRANSPLANT) PROGRAM TO INCREASE PATIENT KNOWLEDGE ABOUT FATIGUE.**

Debra Hillman, BSN, RN, OCN®, BMT, Franciscan St. Francis Health, Indianapolis, IN; Alison Sharp, RN, OCN®, BMT, Franciscan St. Francis Health, Indianapolis, IN; Theresa Weisenbach, MBA, BSN, RN, OCN®, BMT, Franciscan St. Francis Health, Indianapolis, IN

To provide bone marrow transplant/hematology patients with evidence-based fatigue symptom management at the bedside and to increase patient knowledge about fatigue management

It is common knowledge that fatigue is the number one complaint of oncology patients. Current practice on the 17 bed in-patient unit is to discuss fatigue symptom management when there is time or when the patient asks for information. A standard teaching plan was not in place. This problem was identified at the Institute for Evidence Based Practice in 2010.

To provide nursing staff with symptom management information at the bedside that can be utilized in a structured education plan for patient management of fatigue.

A boxing theme was developed for the symptoms identified in the Oncology Nursing Society (ONS) Putting Evidence into Practice (PEP) Cards. Fatigue is chosen as the first symptom. A fatigue care plan is posted in each patient room and the nursing staff goes over key teaching points with the patient within the first three to five days of admission on the BMT/hematology unit. "Flatten Fatigue" is the boxing theme applied to this symptom. Educational materials include an overview of the program, exercise sheets, a symptom management booklet which includes information about fatigue, and an informational sheet regarding spirituality and meditation. All materials are placed in a "pail" decorated with stickers representing the boxing theme "We Are in this Fight with You!" Nursing is also assessing fatigue twice a day and recording the score.

A fatigue knowledge assessment tool has been used to assess fatigue knowledge on admission and discharge during standard practice as described. Currently, the fatigue knowledge assessment tool is being utilized on admission and on discharge after the implementation of the fatigue knowledge care plan. Fatigue scores and data from the fatigue knowledge assessment tool will be analyzed.

By providing patient education materials at the bedside, this team hopes to show consistent patient education and an increase in patient knowledge about fatigue and fatigue management. Additionally, other symptom management programs will be added to the teaching care plan.

### 1341390

#### **NURSE NAVIGATORS PLAY KEY ROLE IN THE EVOLUTION OF A NAVIGATION DATABASE: THE FOX CHASE CANCER CENTER JOURNEY.**

Bonnie Miller, RN, BSN, OCN®, FAAMA, Women's Cancer Center, Fox Chase Cancer Center, Philadelphia, PA; Tracey Newhall, RN, BS, OCN®, Women's Cancer Center, Fox Chase Cancer Center, Philadelphia, PA; Jessie Schol, RN, BSN, OCN®, Women's Cancer Center, Fox Chase Cancer Center, Philadelphia, PA; Joanne Stein, RN, Women's Cancer Center, Fox Chase Cancer Center, Philadelphia, PA; Caryn Vadseth, RN, BSN, CCRP, Women's Cancer Center, Fox Chase Cancer Center, Philadelphia, PA

This program illustrates the impact of nurse navigator contributions to the development of a database influencing cancer care across the continuum.

Oncology Nurse Navigation continues to grow in importance as nurses assist with the diverse needs of this population. An effective tool to document and measure accurate and timely interventions that is not labor intensive is critical. Demonstrating the impact of Nurse Navigation along the continuum of care not only supports better outcomes, but allows for sustainment of a Navigation program.

A Nurse Navigation program piloted and tested several database programs starting with an excel spreadsheet which evolved to an ACCESS Database. Nurse Navigators, Nursing Administration and the IT research team developed a web based application. This application links existing systems within the institution thus supporting clinical care. It also provides the ability to run reports allowing administrators to demonstrate the impact of Navigation through the continuum of care and the return on investment. All navigators utilize this application and actively participate in the continued upgrades and modifications meeting Navigation program needs.

By instituting this application, time and effort of the Nurse Navigator in documentation has decreased. This allows Navigators to focus on patient needs while permitting accurate, timely and effective documentation. Data collected and reported has helped sustain Nurse Navigators in Breast, and provided data supporting proposals for additional Navigators in GYN ONC, Head & Neck, Thoracic and GI.

The database allows measurement of specific goals related to timeliness of patient care from initial call to first appointment and referral to clinical trials. The database assists with the evaluation of interdisciplinary metrics and goals across disease sites. The Navigation Database was developed by Oncology Nurse Navigators to provide an avenue of documentation that is tailored to the needs of the oncology patient.

Oncology nursing practice includes patient education and advocacy. The evolution of the development of the Navigation Database demonstrates the impact that Oncology Nurses can have in creating a patient documentation tool while providing data that impacts sustainability of this important role. The information gleaned from the Navigation Database supports the nurse navigator role in our institution.

### 1341411

#### **VALIDATING CHEMOTHERAPY CLINICAL COMPETENCY: PATHWAY TO EXCELLENCE.**

Gail Kwarcianny, MSN, RN-BC, OCN®, AOCNS®, Nursing Education Advancement and Resources, University of Texas Medical Branch, Galveston, TX

1. Discuss the professional responsibilities of nurses validating chemotherapy clinical competency. 2. List potential resources for clinical competency measurement for chemotherapy administration. 3. Describe the development and implementation of a chemotherapy clinical validation process.

Clinical competency is a combination of didactic learning and the validation of skills in the clinical setting. The ONS Chemotherapy and Biotherapy Course is the "gold standard"

for the didactic portion of chemotherapy competency. A clinical validation process is necessary to translate learned knowledge into clinical practice and provides documentation for protection of the institution. Nurses who serve as preceptors may be unsure of effective approaches to assess competency and inconsistencies may result. This presentation will describe one institution's experience in developing a clinical validation process in response to an identified lack of direction and need for standardization for nurse clinicians assessing competency for chemotherapy administration.

The purpose of this presentation is to share one institution's development and implementation of a clinical validation process for chemotherapy and biotherapy administration. Nurses who attend this presentation will learn about the responsibilities of precepting and validating competency for chemotherapy administration.

67% of oncology nurses at this hospital-based cancer center identified discrepancies in clinical validation for chemotherapy and biotherapy administration. An existing clinical validation tool was used as the basis for the development of a detailed pathway for preceptors and preceptees. This pathway delineates goals, daily tasks, and available resources. The goal of the 5 day pathway is independent practice. The pathway has been 100% successful to date.

Nurse satisfaction and patient outcomes will be assessed following 6 months of implementation. Initial responses are 100% positive.

The goal of the ONS Chemotherapy and Biotherapy Course is to provide education for nurses to safely care for patients receiving chemotherapy and biotherapy agents. Institutions are responsible for demonstrating the competency of nurses who administer and care for patients receiving chemotherapy and biotherapy agents. This institution's experience may be applicable to other institutions as an example of an effective strategy for competency measurement.

### 1341413

#### **APPLYING THE LEAN PROCESS TO A GASTROINTESTINAL MEDICINE ONCOLOGY PATIENT FLOW PROJECT.**

Anna Schloms, RN, BSN, MSN, Nursing, Memorial Sloan-Kettering Cancer Center, New York, NY; Natasha Ramrup, RN, BSN, MSN, OCN®, Nursing, Memorial Sloan Kettering Cancer Center, New York, NY

The ultimate goal of this Patient Flow Project is to improve the discharge time from 4pm to 1pm, thereby, improving bed availability for admissions and establishing a safe and timely discharge plan that meets the goals of quality care.

The intent of this multidisciplinary team project was to identify practice issues of our discharge process and create a workflow to enhance the current system. Practice issues often lead to unnecessary delays in discharge, bed turnover and frustration for patients, caregivers, administration, physicians and nursing staff. The "Lean Process" was utilized to carefully examine the current process and provide significant opportunities for improvement.

The Lean Process is a framework for optimizing the production and delivery of a service with the intent of creating an efficient process. The current state was analyzed by the multidisciplinary team and a more efficient flow was identified for the future state. Improving the discharge process is of vital importance for administration as well as other disciplines.

Medical house staff was instructed to input discharge instruction orders no later than 4pm for patients scheduled for discharge the next day. Hospitalists piloted a new rounding regimen to allow house staff adequate time to focus on discharge planning. A new electronic retail scripts system facilitated prescription processing on the floor, ultimately reducing turnaround time; and discharge order sets were standardized and simplified in the electronic order system. A daily plan for patients was created to allow for better coordination amongst clinicians.

In evaluating the initiatives that were implemented to improve the discharge process, our data indicates that discharge instructions were entered approximately 9.4 hours prior to discharge for 126 patients, compared with 7.3 hours. Turnaround for retail pharmacy scripts was reduced from 4 to 2 hours.

The "Lean Process" provided an opportunity to improve patient discharges, including changes in the discharge order set, and new electronic retail script which enabled enhanced processing on the floor. Strong commitment, inspiring leadership and shared vision amongst all stakeholders helped with the success of improving the discharge process.

### 1341444

#### **DEVELOPMENT, IMPLEMENTATION, AND IMPACT OF A COLLABORATIVE PRACTICE MODEL FOR DELIVERING BAD NEWS USING PLANNED CHANGE THEORY.**

Deborah Allen, MSN, CNS, FNPBC, AOCNP®, Inpatient Oncology, Duke University Health System, Durham, NC; Pam Bowman, OCN®, Inpatient Oncology, Duke University Health System, Durham, NC; Kim Slusser, CHPN, Inpatient Oncology, Duke University Health System, Durham, NC; Camille Lambe, AOCN®, School of Nursing, Duke University, Durham, NC

Describe Planned Change Theory processes used to develop and implement a collaborative practice model for delivering bad news.

Results can be devastating to patients and families (PAF) when delivering bad news (DBN) is suboptimal and creates moral distress for the healthcare team (HCT). Essential components for delivery have been well described. Research has primarily focused on PAF preferences, impact on care decisions, and HCT roles; however, literature lacks information on development and implementation of DBN through a collaborative practice model (CPM).

Explore perceived HCT practices for DBN, strategies for optimal DBN through development and implementation of a CPM, and physician-nurse communications and satisfaction.

Lewin's Planned Change Theory proposes opportunities to move practice by design into a new direction while recognizing resistive forces. This research demonstrates the 3-phases of change (unfreezing, moving, and refreezing).

This descriptive study was performed on one medical oncology unit. HCT surveys regarding DBN practices directed a multidisciplinary focus group to consider DBN components and HCT roles (unfreezing). Discussion themes and DBN components were used to develop the CPM. Implementation processes (moving) included sessions on practice survey results, focus group outcomes, and CPM algorithm; change agent presence in daily rounds; weekly reminders. Pre- and post-implementation surveys, structured interviews, and six-month frequency data for DBN events were acquired. HCT structured interviews were used to highlight successes and missed opportunities (refreezing). Descriptive statistics, Pearson correlations, t-tests and repeated-measures ANOVA were performed on demographics, pre- and post-intervention surveys to indicate practice change, CPM engagement, and perceptions of impact on patient care. Constant comparative analysis facilitated theme development from structured interviews.

98%, n=62, HCT consented to participate. Surveys revealed significant DBN practice inconsistencies: 95% nurses desired participation yet 75% reported no prior involvement; 88% nurses learned about DBN from PAF; 100% physicians expected nurses to provide PAF support yet perceived staff too busy to participate. Post-implementation surveys, 78% return-rate, yielded significant findings (p<0.05): early notification of DBN events; increase in nurses' DBN involvement, HCT communication skills and satisfaction, and successful CPM-DBN incorporation. HCT practice inconsistencies created opportunity to examine practices, barriers, and role expectations in order to create change for CPM-DBN implementation.

**Underwriting/Funding Source:** Duke Translational Nursing Institute

### 1341462

#### **LEVERAGING A STATE-WIDE TELEMEDICINE NETWORK TO DELIVER SUPPORT SERVICES FOR RURAL CANCER PATIENTS AND THEIR FAMILIES.**

Carol Bush, BS, RN, Mid-

west Cancer Alliance, Wichita, KS; Angela Banitt Duncan, PhD, University of Kansas Medical Center, Kansas City, KS; Eve-Lynn Nelson, PhD, University of Kansas Medical Center, Kansas City, KS; Brooke Groneman, MSM, Midwest Cancer Alliance, Wichita, KS; Cathy Pendleton, LCSW, Turning Point, Shawnee Mission, KS

Test the efficacy and satisfaction with delivery of facilitated support group services to patients in rural communities using a state-wide telehealth network.

Little literature exists evaluating the use of professionally-led support groups using videoconferencing. Emerging evidence suggests that televideo support is a promising strategy to facilitate cancer survivorship in rural areas. The Midwest Cancer Alliance (MCA) established in 2007, is a membership-based organization of hospitals and cancer centers designed to increase access to cancer research and advance the quality and reach of cancer prevention, early detection, treatment and survivorship in Kansas and western Missouri. In order to promote evidence-based care, the MCA uses Interactive Televideoconferencing (ITV) to broadcast professional education courses to members, some as far as 400 miles away. This technology has been used for over 20 years by The University of Kansas Medical Center to deliver clinical telemedicine services, saving time, expense and expediting the adoption of evidence-based care.

Describe implementation steps for holistic cancer support services using videoconferencing; and list advantages and challenges related to televideo support groups from patient, family, rural coordinator, and facilitator perspectives.

Collaboration was sought with a metropolitan community support organization, Turning Point, in adapting their programming for the telehealth setting. Turning Point offers holistic educational and support services to help individuals and families manage the illness process, reduce symptoms, and increase coping skills. Three rural MCA partner sites worked with staff and Turning Point leaders to select topics for the initial televideo groups. The programs are delivered monthly. A coordinator is present at each local site to provide emotional support, promote participation and build rapport over televideo. Participants complete a program evaluation tool currently used by Turning Point so that comparison to in-person support groups can be made.

Presenters will give an overview of qualitative feedback concerning advantages and challenges and will summarize ongoing feasibility evaluation including satisfaction and program costs.

The initial success of the pilot has led to plans to pilot multi-point technologies as well as broader community programming over televideo.

**Underwriting/Funding Source:** Office for the Advancement of Telehealth (OAT) grant

### 1341465

**UNDER-TREATMENT OF CANCER PAIN: PREVALENCE AND IMPACT ON QUALITY OF LIFE.** Horng-Shiuann Wu, PhD, RN, Wayne State University, Detroit, MI; John Natavio, MSN, RN, Wayne State University, Detroit, MI; Jean Davis, PhD, RN, Wayne State University, Detroit, MI

To understand the importance of adequate pharmacologic management in managing cancer pain.

Cancer pain continues to be an unmitigated clinical phenomenon. Despite the availability of guidelines, there is considerable variability in treating cancer pain. Although non-traditional/adjuvant analgesics in conjunction with traditional (opioid or non-opioid) analgesics is recommended in current practice guidelines, the effectiveness of the combined regimen in managing cancer pain has been far less studied compared to traditional analgesic agents alone.

To investigate adequacy of pharmacologic pain management based on the World Health Organization analgesic ladder and to assess impact of inadequate pharmacologic treatment on pain and quality of life in patients treated for breast cancer.

Based on the UCSF Symptom Management Model, to effectively manage a symptom, the symptom experience, management strategies, and symptom outcomes, should all be considered.

This cross-sectional descriptive study enrolled 114 chemotherapy outpatients from urban and rural settings. Ages ranged 29-75 years (Mean=51.3±9.4), majority Black (63%) and unemployed (69%). Pain and quality of life were self-reported using Brief Pain Inventory-Short Form and EORTC-Quality of Life Questionnaire, respectively. Treatment-related information was obtained from medical records. Adequacy of pharmacologic pain management was examined by computing Pain Management Index; the most potent analgesic prescribed relative to patient's reported pain. Negative scores indicated inadequate analgesia or undertreatment. Factorial ANOVA and MANOVA examined impact of inadequate pharmacological management on pain and quality of life.

Nearly three quarters (70.2%) of participants were treated with traditional analgesics; 32.5% received both traditional and adjuvant analgesics. However, more than half of the patients (52.3%) were undertreated (received inadequate analgesia). Those who received inadequate analgesia reported more pain, greater pain interferences ( $p=0.003$ ), and more symptomatology ( $p=0.043$ ). Those who received adjuvant analgesics reported more pain, greater pain interference ( $p=0.018$ ), more symptomatology ( $p=0.032$ ), and lower functioning ( $p=0.029$ ). The findings demonstrate that there is a lack of congruence between levels of pain reported by patients and the most potent analgesic prescribed. Effectiveness of pharmacologic pain management needs to be monitored. Other treatment modalities in conjunction with pharmacological treatment are needed, in light of negative effects of adjuvant analgesics on pain and quality of life.

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

### 1341474

**BALANCING EFFICACY WITH TOLERABILITY: THE CONVERSATIONAL MECHANICS OF SHARED DECISION-MAKING IN METASTATIC CASTRATION-RESISTANT PROSTATE CANCER.** Lorie Ellis, PhD, RD, Janssen Scientific Affairs, LLC, Horsham, PA; Brad Davidson, PhD, Ogilvy CommonHealth Insights and Analytics, Parsippany, NJ; Matthew DiChiara, MS, Ogilvy CommonHealth Insights and Analytics, Parsippany, NJ; Mekre Senbetta, PharmD, Janssen Scientific Affairs, LLC, Horsham, PA

To bring awareness to the importance of communication between physicians and patients with metastatic castration-resistant prostate cancer (mCRPC).

Discussions of therapeutic risk or benefit have a different tone in patients with metastatic cancer. The literature predicts differences in prioritization between patients and physicians when considering treatment goals and therapy selection. Communication gaps such as these may hinder the mCRPC patient's ability to make fully informed decisions.

To describe communication patterns and to identify communication gaps that exist between mCRPC patients and their treating urologist or oncologist.

Non-interventional socio-linguistic study.

This institution review board-approved, observational, linguistic study describes naturally occurring conversations between mCRPC patients ( $n=42$ ; 69% African American) and their treating urologist ( $n=7$ ) or oncologist ( $n=7$ ) during a normal clinic visit in Summer 2011. Clinic interactions were videotaped without 3rd party observation. Patients/physicians were interviewed separately after the clinic visit. All conversations were transcribed and analyzed using standard anthropology and discourse analysis techniques.

At both a lexical and goal-oriented level, several disparities were observed. When discussing treatment options and goals for mCRPC, the words used by physicians differed from those

used by patients. This difference was found in physicians' use of technical language and in language describing goals and results of therapy. Of interest, physicians consistently used vague language to describe therapeutic effect (e.g. "working"), and frequently presented treatment options without presenting treatment risks. Patients and physicians also differed in the way they framed goals of therapy. The current research highlights communication gaps between clinicians and mCRPC patients about treatment options and risks. These results suggest that patient decision-making may be hindered by a lack of clear understanding of treatment choice implications and poorly defined treatment goals. Treatments with an optimum balance of efficacy and tolerability may present an opportunity to improve this dialogue.

**Underwriting/Funding Source:** Janssen Scientific Affairs, LLC

### 1341476

**FEASIBILITY OF AN EVIDENCE-BASED NURSING PROJECT TO ENHANCE ADHERENCE AND KNOWLEDGE OF ERLOTINIB IN PATIENTS WITH NON-SMALL CELL LUNG CANCER.** Jean Boucher, PhD, RN, Nursing, Dana-Farber Cancer Institute, Boston, MA; Catherine Hooper, RN, BSN, OCN®, Nursing, Dana-Farber Cancer Institute, Boston, MA; Joan Lucca, RN, MSN, AOCN®, Nursing, Dana-Farber Cancer Institute, Boston, MA; Lillian Pedulla, RN, BSN, MSN, Nursing, Dana-Farber Cancer Institute, Boston, MA

The primary objectives were to: 1) Implement an evidence-based practice project to enhance oral anticancer therapy knowledge of erlotinib to improve medication adherence, and; 2) Utilize the involvement of thoracic oncology program (TOP) nurses in the education and monitoring of patients starting erlotinib therapy. The MASCC (Multinational Association for Supportive Care in Cancer) Oral Adherence Teaching Tool (or MOATT®) was adapted for use as part of this nurse-led feasibility pilot project.

This evidence-based practice project (EBPP) evolved through the work with Dana-Farber Cancer Institute's program for Science and Practice Aligned Within Nursing and the Oncology Nursing Society's IEBPC (Institute for Evidence-based Practice Change) regarding the significance of increased use of approved oral anticancer agents in the ambulatory setting. Concerns involve proper medication usage, intensity of side effects, and issues surrounding home self-administration such as monitoring self-reported side effects, adherence and detection/management of adverse events.

This purpose of this Thoracic Oncology Program (TOP) EBP project was to test the feasibility of a nurse-led educational/behavioral intervention with adult patients receiving erlotinib prescriptions.

An IRB approved feasibility pilot study of 30 adult thoracic oncology patients in the outpatient clinic setting at DFCI was conducted for participants receiving erlotinib for the first time. Four encounter participant sessions with thoracic oncology patients included review of the educational plan using the MOATT®/MASCC tool. The Direct Care Nurse (DCN) documented each encounter and completed a Feasibility Form regarding the patient education sessions.

Evaluation of this nurse-led EBP project revealed average time spent by the nurse with participants was very feasible including the usefulness of the adapted MOATT®/MASCC tool. Overall, the nurse-led structured teaching protocol provided patients with knowledge of treatment plan, instructions, drug specific information, and questions to ascertain understanding of information. In addition, participants acknowledged important benefits of follow-up contact with the DCN for questions regarding prescription procurement and side effect management. Descriptive analyses of the MMAS-8® adherence and Knowledge Rating Scale indicated positive medication adherence and high knowledge rating scores.

Practice implications of this nurse-led pilot study include providing structured, episodic teaching and monitoring of oral an-

ticancer therapy as a feasible method relevant to patient benefits for evidence-based practice. Further larger study of EBP implementation in the ambulatory oncology care setting is warranted.

### 1341482

**OPERATIONALIZING RELATIONSHIP-BASED CARE: HAND-OFF AT THE BEDSIDE.** Patricia Brosnan, RN, MPH, CNML, OCN®, Acute Care Nursing, Memorial Sloan-Kettering Cancer Center, New York, NY; Thomas Bracken, RN, BSN, OCN®, Acute Care Nursing, Memorial Sloan-Kettering Cancer Center, New York, NY; Korkoh-jah George, RN, BSN, Acute Care Nursing, Memorial Sloan-Kettering Cancer Center, New York, NY; Joan Lynn, RN, BSN, OCN®, Acute Care Nursing, Memorial Sloan-Kettering Cancer Center, New York, NY; Wayne Quashie, RN, MSN, OCN®, Acute Care Nursing, Memorial Sloan-Kettering Cancer Center, New York, NY

Create a handoff process which supports the principles of Relationship Based Care

The traditional handoff from nurse-to-nurse was an exchange of information: what happened during the previous shift and what needs to be done on the upcoming shift. While the process was about patients, the exchange of information rarely focused on patient priorities.

This presentation describes our unit based practice council's implementation of bedside handoff.

The unit based practice council, composed of staff RNs, unit assistants and patient care technicians reviewed the literature on handoff. The pros and cons of bedside handoff were discussed and barriers to change were addressed. A standardized process was created which included the use of an electronic handoff report.

A qualitative evaluation of the process supports this change. The nurses feel empowered as the handoff is more comprehensive and enables them to prioritize their care more effectively. The unit assistants report that there are fewer nursing requests during change of shift. Patients describe feeling less anxious about their care as they are part of the daily discussion.

Bedside handoff is an ideal representation of the three relationships of RBC. It supports the self-care relationship by fostering accountability for one's practice, which requires the nurse to have self-awareness so that a clear and valid appreciation of the process can be acknowledged and communicated to the patient and one's self. The collegial relationship also is enhanced through handoff at the bedside for it requires mutual trust and respect among nursing team members. This process fosters open and honest communication about the plan of care and nurses' respective clinical practices. Finally, the relationship with the patient is promoted through handoff at the bedside as the process includes the patient. This encourages patient's participation in their care by giving them the opportunity to evaluate their care from the previous shift and identify their priority for the upcoming shift. Handoff at the bedside has transformed both how and where handoff takes place. By including patients in the process the exchange of information is patient-centered, clinically-focused and outcome-oriented.

### 1341506

**DEVELOPMENT AND IMPLEMENTATION OF A NURSE-LED INTERDISCIPLINARY ORAL CHEMOTHERAPY MANAGEMENT PROGRAM IN AN NCCN AMBULATORY CARE CENTER.** Deborah Leslie, RN, BSN, OCN®, GI Oncology, Seattle Cancer Care Alliance, Seattle, WA; Judith Fihn, RN, BSN, CHPN, GI Oncology, Seattle Cancer Care Alliance, Seattle, WA; Lisa Buchanan, RN, GI Oncology, Seattle Cancer Care Alliance, Seattle, WA; Juanita Madison, RN, MSN, AOCN®, GI Oncology, Seattle Cancer Care Alliance, Seattle, WA; Marshall Helen, PharmD, BCPS, BCOP, GI Oncology, Seattle Cancer

Care Alliance, Seattle, WA; Lynn Maleta, RN, GI Oncology, Seattle Cancer Care Alliance, Seattle, WA

Objectives of this project were to develop standardized processes for patients receiving self-administered oral chemotherapy, including: 1) use of pre-printed oral chemotherapy prescription forms, 2) verification of prescriptions, 3) patient education, and 4) follow-up assessment of adherence and side effects 7-10 days postinitiation of therapy.

The number of patients receiving oral chemotherapy agents in the outpatient setting continues to increase. Standard processes for two-person verification of outpatient oral chemotherapy prescriptions was lacking in our center. Additionally, a pilot project at our center in 2009 demonstrated 63% of patients receiving oral chemotherapy experienced adverse effects 7-10 days post-initiation, supporting the need for patient education with follow-up assessment of adherence and side effects.

The purpose of this project was to develop and implement a multidisciplinary process to improve management of patients receiving oral chemotherapy.

A multidisciplinary task force comprised of nurses, pharmacists and IT was formed. Standard management of patients initiating oral chemotherapy in the outpatient setting was developed including: verification of oral chemotherapy prescriptions by clinical pharmacists, patient teaching, and follow-up phone calls to assess adherence and side effects 7-10 days post-initiation of therapy.

The process was evaluated after 3 months. Patient demographics, adherence to therapy, and side effects were assessed. Audits (N=40 pts) verified use of pre-printed prescription forms (75%), verification of prescriptions by clinical pharmacists (77.5%), and documentation of initial patient education (88.5%). Follow-up phone calls were documented in 53% of patients. Most patients reported adherence to their prescribed chemotherapy regimen. A high percentage (90.5%) of patients experienced side effects 7-10 days post initiation. Most common: diarrhea (33.3%), fatigue (33.3%), and nausea (23.8%). Barriers to completing follow-up phone calls were identified. Scheduling processes and documentation tools are under revision. Additional audits are planned.

The high percentage of side effects experienced by patients receiving oral chemotherapy in this project supports the need for standardizing approaches to patient management and scheduling of post-initiation follow-up. This nurse-led multidisciplinary process to managing patients receiving oral chemotherapy in the outpatient setting could be adapted by other oncology centers.

### 1341514

#### **KNOW IT OR LOSE IT: ENHANCING PATIENT SAFETY FOR MEDICAL EMERGENCIES IN THE OUTPATIENT AREA THROUGH RAPID RESPONSE ALGORITHMS AND SIMULATION.**

Yuk Wong, MA, BSN, RN, OCN®, The Cancer Institute of New Jersey, New Brunswick, NJ; Kira Lynn Voitle, RN, BSN, OCN®, The Cancer Institute of New Jersey, New Brunswick, NJ

Describe use of rapid response algorithms and hands-on simulation during emergent situations to improve patient safety and outcomes.

Administration of cancer treatment to large volumes of oncology patients in an efficient and safe manner is a challenge in the ambulatory setting as oncology patients are receiving many agents known to cause hypersensitivity/allergic reactions. The ability to manage patients quickly, competently and safely with acute emergent needs is paramount. At an NCI-designated Comprehensive Cancer Center, nurses identified the need to improve our emergency care by developing a rapid response algorithm and a hands-on simulation teaching method to bridge the gap between mock and actual situations.

The purpose of developing a rapid response algorithm and a hand-on nurse simulation teaching method was to ensure quality care for those patients experiencing a medical emergency. Oncol-

ogy nurses utilize the rapid response algorithm for role delineation and a step-by-step approach during emergencies. The hands-on simulation uses mock scenarios with the code cart and defibrillator to rapidly detect changes in patient status and improve responses during all emergencies.

After review of three current emergency response situations, development and implementation of a rapid response algorithm was piloted. Hands-on simulations using BCLS skills were initiated with a defibrillator connected to a device able to produce lethal arrhythmias. Nurses followed the steps in the AED's 'safe mode' and practiced using all equipment from the code cart.

Nurses have verbally expressed increased competence and comfort in use of emergency equipment during urgent situations. Formal evaluations are planned to evaluate the effectiveness of the algorithm with pre and post implementation surveys including case scenario testing and mock practices and a SWOT analysis of each 'live' emergency situation.

With the advent of numerous novel cancer medication regimens administered in the ambulatory setting, the number of treatments which have the potential to cause hypersensitivity and/or anaphylactic reactions has dramatically increased. Nurses need to be competent and not feel intimidated during emergency situations. This rapid response algorithm and simulation may be adapted for use by all ambulatory care nurses nationally to ensure a significant difference is made in patient safety and patient outcomes.

### 1341566

#### **ELECTRONIC SHADOW FILE: ELECTRONIC MEDICAL RECORD (EMR) SOLUTION IN STORING MATCHED UNRELATED DONOR (MUD) HEALTH INFORMATION AND SEARCH-RELATED PAPER DOCUMENTS.**

Mei Cheung, RN, City of Hope, Duarte, CA; Jody Reyes, MSN, City of Hope, Duarte, CA; Gerry Gorospe, MSN, City of Hope, Duarte, CA; Jody Seerup, BSN, City of Hope, Duarte, CA; Adrienne Beauvios, BS, City of Hope, Duarte, CA; Kathy Patane, RN, City of Hope, Duarte, CA

To identify an innovative and regulatory compliant solution to store MUD records.

There are regulatory and research requirements for maintaining recipient and donor charts, however, when storage and office space becomes an issue, then an alternative in maintaining these charts is important. The number of transplanted patients at COH reached the milestone of 10,000, and while a recent restructuring of the MUD program, we needed to standardize document maintenance and find an alternative in storing volumes of paper chart belonging to the recipient and donor. The alternative solution was to find an EMR solution to store the valuable patient information that is both private and easily accessible to those who require access to the records.

To find MUD documents electronic storage solution while meeting regulatory requirements without compromising patient's confidentiality and privacy.

Management, nursing staff, search technologist, clerk, physicians, and health information system office were organized to review the information contained in the MUD chart, how it is maintained and stored. We organized meetings to review the charts, redesigned the forms, created a 'Purge Plan', standardized the chart content, and developed a plan for the retention of documents taking into considerations regulatory requirements surrounding storage and maintaining of the documents. HIMS were instrumental in creating the electronic "double lock" requirement for storing unrelated donor records.

After a multi-disciplinary review of the chart, we were able to redesign the forms to meet COH template requirements; follow our plan for standardization & maintenance the chart content the same way; follow the purge plan to eliminate duplicated or unnecessary documents prior to sending for storage; follow an electronic process of scanning the documents to the COH EMR.

The MUD program records are contained in an electronic folder within the EMR that is only visible to those with privilege access thus maintaining the double lock storage. MUD program staff has privilege electronic access in the private section of the EMR. This solution allows for less physical storage of paper documents and it is easily accessible electronically whenever the document is required to be reviewed for patient care, regulatory or research purpose.

### 1341570

**CHEMOTHERAPY HANDLING PRACTICES OF RNS IN AN OUTPATIENT ONCOLOGY INFUSION CENTER.** Ashley Verzyvelt, BS, OPC 21, The Methodist Hospital, Houston, TX; Rosemary Pine, PhD, Center for Professional Excellence, The Methodist Hospital, Houston, TX; Beverly Hughes, MSN, Center for Professional Excellence, The Methodist Hospital, Houston, TX

To determine relationship between perceptions of chemotherapy handling practices of RNs and observed practices of RNs.

Safe handling of chemotherapeutic agents during preparation, administration and disposal is critical for nurse safety. Nurses working in an outpatient oncology infusion center must know how to handle hazardous materials safely to protect patients, visitors, colleagues and themselves. The safety precautions include wearing personal protective equipment (PPE), correctly preparing and administering the agent and properly disposing of the equipment and agent and finally handling a spill or an exposure.

The purpose of this project was to determine the perceptions of the current patterns of use of PPE through an internally developed survey among nurses and to compare actual use of PPE practices through direct observation and monitoring.

This was a descriptive observational project conducted in an academic medical center. A survey was sent through email to all nurses employed on two outpatient units. Of the 14 employee 71% completed the internal survey. Nurses were then observed during a two week period on their use of PPE. The guidelines for chemotherapy safety issued by the Oncology Nursing Society (ONS) and National Institute for Occupational Safety and Health were used to guide survey development and the direct observations. The findings showed that 100% of the participants reported wearing gloves and gown. Use of protective eyewear was less than 90%. During direct observation it was noted that 80% wore PPE gowns and gloves whereas 20 % used protective eyewear .

Nurses adherence to the guidelines needs to be reinforced and further barriers to safe handling of chemotherapy should be explored. The interventions of extended vigilance, management and educational support and use of peers to cue others each other will be evaluated for quarter 2.

Results show that there is a mismatch between what is said and what is actually performed among this group of nurses

### 1341578

**HEREDITARY HEMOCHROMATOSIS: WHAT THE NURSE PRACTITIONER NEEDS TO KNOW.** Kathy Leonard, RN, NP, MA, NP-C, AOCNP®, Oncology, NYUMC, New York, New York, NY

The purpose of this presentation is to bring an awareness of Hereditary Hemochromatosis to nurses and nurse practitioners in the field of hematology and oncology.

Hereditary hemochromatosis is a disorder in which excessive iron absorption occurs leading to an increase in deposits of iron in major organs of the body; resulting in end organ damage. This is the most common genetic disorder in individuals of Northern European ancestry. The history of this disease can be traced back to the time of the Vikings and Celts. Although it was known for many years that this was a hereditary disease presenting with the classic triad of diabetes, bronze pigmentation of the skin and cirrhosis of the liver, it was not until 1996 that the HFE gene was identified. This is an autosomal recessive disorder where a muta-

tion occurs at on the 6th chromosome of the short arm of the HFE resulting in 2 changes in which Tyrosine is substituted for Cysteine at position 282 of HFE protein (C282Y) and the substitution of aspartic acid for histidine at position 63, (H63D).

The treatment for Hereditary Hemochromatosis is therapeutic phlebotomy. If this intervention is initiated early end stage organ diseases , such as hepatic carcinoma, diabetes and heart diseases can be prevented.

Treatment of this genetic condition is simple and cost effective. Active participation with patients, family members and health care members can result in significant quality outcomes. Patient education is of utmost importance in combating this health issue.

Those individuals who have this mutation are asymptomatic until their ferritin levels are markedly elevated and at this point penetrance of the disease may present in affected organs. This disease may manifest itself as diabetes, arrhythmias, liver disease, arthritis and sexual dysfunction. It is most important that nurses and nurse practitioners have a familiarity with the disease as well as how to screen, diagnose and treat.

### 1341582

**QUALITY ONCOLOGY PRACTICE INITIATIVE . . . THE BLUEPRINT FOR ONCOLOGY PRACTICE.** Beth Hayden, RN, BSN, MBA, OCN®, Oncology, OSF Saint Anthony Medical Center, Rockford, IL

To Identify tactics for oncology nursing administrators to use to ensure successful Quality Oncology Practice Initiative (QOPI) data abstraction and utilization of benchmark data results to improve care.

Delivering quality cancer care is a growing necessity for cancer programs. Organizations that maintain a quality focus will be well positioned to address current and future care expectations of patients, regulatory agencies and payers.

In 2006, the American Society of Clinical Oncology (ASCO) launched the Quality Oncology Practice Initiative (QOPI) with the goal of promoting excellence in cancer care by helping practices create a culture of selfexamination and improvement for oncology practices. The on-line, web-based audit application looks at 25 core measures, as well as domain and disease-specific modules. Data collection is completed twice a year, in the spring and fall. Following each data collection, QOPI releases reports that compare specific practice results to the QOPI aggregate data. This data can then be used to benchmark nursing and physician practice and for development of targeted improvement measures.

Tactics that lead to our success included identifying a physician QOPI champion early in the process, developing a core group of nursing experts to serve as QOPI resources for the physicians, implementing a physicianto- physician chart audit methodology, incorporating specific questions into the physician dictation template and "smart phrases" to aid in nursing documentation.

The OSF Saint Anthony Center for Cancer Care (CFCC) has participated in the QOPI fall 2010 and spring 2011 data collection rounds. The fall 2010 overall quality score was 81.58% and the adjuvant measure score was 80%. The spring 2011 overall quality score was 88.14% and the adjuvant measure score was 95.45%. Additionally, Improvement has been seen in most of the indicators in the spring 2011 data collection round after implementing numerous targeted improvement strategies.

It is imperative that oncology nurse administrators stay abreast of emerging methods to measure quality. Participating in QOPI data collection is one such tool that allows practices to embrace improvement strategies and improve clinical outcomes.

### 1341591

**MAINTAINING THE NURSE PATIENT RELATIONSHIP WITH ELECTRONIC MEDICAL RECORDS IMPLEMENTATION.** Susanne Suchy, MSN, RN, AOCNS®, Patient Services, Karmanos Cancer Center, Detroit, MI; Clara Beaver, MSN,

RN, AOCNS®, ACNS, BC, Patient Services, Karmanos Cancer Center, Detroit, MI

Describe a process to maintain the nurse patient relationship when introducing electronic nursing documentation.

The use of electronic medical records (EMR) documentation in health care is the trend. While there are many positives associated with EMR, it can negatively impact the nurse patient relationship. Literature supports nurse discomfort experienced with new technology and change in delivery and documentation of care.

When preparation for implementing EMR nursing documentation began, the planning committee considered the importance of our Relationship Based Care Model of nursing care delivery known in our institution as Partners in Practice (PIP). It was decided that EMR nursing documentation orientation would include PIP Model content. Further, the mobile computer, known as wireless on wheels (WOW), use as a tool and not the foci of communication was necessary to include.

The unit clinical nurse specialists (CNSs) were given the responsibility to create patient scenarios to accomplish this goal. Six scenarios were developed and spaced throughout the all-day EMR nurse orientation. They focused on review of PIP Model principles, the nurse patient relationship, and the delivery of nursing care with the aid of a computer. Video presentations were developed to ensure a content standard and minimize required instructor manpower. The presentations included PowerPoint slides of important points and role play of concepts through patient situations. Examples of integrating the WOW into nursing care and still maintain the patient as the focus of care were graphically demonstrated including some “not to do’s”.

Evaluation was accomplished by comparing the Press Ganey patient satisfaction questions before and after EMR nurse documentation implementation. While patient satisfaction is not totally influenced by how the nurse documents, there was not a significant change with implementation. Nurse behavior was also monitored by anecdotal staff discussions and clinical observation.

With the emphasis on the use of electronic medical records continued focus on maintaining an effective nurse patient relationship must be addressed. One of the greatest complaints voiced by consumers is “more attention was paid to the computer than to me”. Nurses are constantly learning new skills and new technologies, which should enhance nursing practice, not impede it.

### 1341599

**CREATING A CULTURE OF CLOSURE: IMPLEMENTATION OF ICU MEDICAL, INC® CLOSED SYSTEM FOR ANTINEOPLASTIC AGENT ADMINISTRATION.** Amy Moore, MSN, RN, ACNS-BC, Nursing, HUP, Philadelphia, PA; Kathleen Wiley, MSN, RN, AOCNS®, Nursing, HUP, Philadelphia, PA; Kristen Maloney, MSN, RN, AOCNS®, Nursing, HUP, Philadelphia, PA; Marianna Holmes, BSN, RN, Nursing, HUP, Philadelphia, PA

Identify the need to implement a chemotherapy closed system for antineoplastic administration. Describe the process for implementing the closed system and standardizing anti neoplastic administration at two academic medical centers. Describe the process for evaluating the outcomes of a closed system for antineoplastic administration.

Environmental and human exposure studies confirmed the presence of contamination of antineoplastic agents throughout pharmacy and Nursing units at cancer centers. Repeated occupational exposure to hazardous drugs has adverse health effects on healthcare professionals preparing, dispensing and administering these drugs. Findings from these studies contribute to the need for both hospitals and clinics to implement safe handling programs reflecting the recommendations of professional and safety organizations.

The purpose of implementing the ICU Medical, Inc® closed system for antineoplastic administration was to reduce environmental and human exposure, as well as standardize the chemotherapy

preparation and administration practices at two academic medical centers across the Healthcare system .

After obtaining clinical nurse, pharmacy and administrative approval, system trials were initiated in both the inpatient and outpatient antineoplastic administration areas. Printed self learning modules with procedural photographs and return demonstration were two strategies utilized to educate both nursing and pharmacy staff. Multidisciplinary meetings with pharmacy and nursing were held throughout the trial to track the progress of the trial. Clinical nurse surveys were administered to ensure staff agreement on the adoption of the system.

Environmental swipe tests were performed prior to implementation of the ICU Medical, Inc® System with institutional commitment for ongoing swipes of preparation and administration areas. Qualitative reports indicate increased satisfaction and perception of safety while preparing and handling antineoplastic agents. Furthermore, administration of antineoplastic agents became standardized across entities.

Successful implementation was not without challenge. Financial justification, massive educational efforts and initial user error added to the complexity of the project. However, implementation of a closed chemotherapy administration system was of high priority for nursing leadership, clinical staff and the pharmacy department across entities. Over 160 clinical RNs were trained and demonstrated successful implementation of ICU Medical® devices. Multidisciplinary collaboration ensured a transition of chemotherapy preparation and administration agreeable to all stakeholders.

### 1341612

**THE OUTREACH RESEARCH NURSE: AN ACADEMIC ONCOLOGY RESEARCH TEAM'S APPROACH TO UTILIZING ONCOLOGY NURSING SKILLS FOR SUCCESS IN MULTI-CENTER STUDIES.** Christy Arrowood, BSN, GI Oncology Clinical Trials, Duke Cancer Institute, Durham, NC; Wanda Honeycutt, RN, BSN, GI Oncology Clinical Trials, Duke Cancer Institute, Durham, NC; Anthony Amara, MSW, GI Oncology Clinical Trials, Duke Cancer Institute, Durham, NC; Kellen Meadows, GI Oncology Clinical Trials, Duke Cancer Institute, Durham, NC

To facilitate the management and conduct of our multi-center investigator-sponsored trials (ISTs), we developed the Outreach Research Nurse (ORN) role. Our objectives were: 1) provide sites with a single point of contact for all study conduct aspects such as protocol-related clinical assistance, regulatory matters, and on-site monitoring, and 2) have a team member focused on the development of processes to improve our multi-center IST program.

Our academic oncology research team began conducting multi-center ISTs in 2004. This responsibility was shared by our clinical trial nurses (CTNs) and research coordinators. Our challenges included: 1) CTNs were overwhelmed with juggling multi-center ISTs and patient care of their own site's studies, 2) efforts were fragmented with involvement of numerous team members, 3) site inquiries were primarily of clinical nature requiring the attention of a nurse versus a non-clinical research coordinator, and 4) lack of toxicity management was potentially affecting trial outcomes.

With new multi-center ISTs on the horizon, in 2008, we initiated the ORN role. ORN responsibilities included: 1) care for limited number of patients to gain first-hand experience with the disease under study, treatment regimen, and toxicity management, 2) develop study tools to help site CTNs properly conduct trial and manage patient care; 3) provide nursing-tailored site start-up training and education, 4) communicate regularly with sites to monitor the subjects' status and ensure protocol adherence and understanding, 5) monitor sites allowing opportunity to provide clinical feedback as well as source verification of data, and 6) edit protocol drafts to include nursing care content and information applicable to multiple sites.

We will provide: 1) anecdotal feedback about the impact of the ORN on patient care from investigators and CTNs, 2) retrospective



analysis of an ongoing (since 2007) multi-center (four sites) IST's frequency and quality of protocol deviations, and 3) results of upcoming site surveys of research staff evaluating the ORN role.

In the setting of multi-center ISTs, we appreciate the increased need of a dedicated nurse to provide the clinical and protocol expertise necessary to optimize clinical trial outcomes and patient care. The ORN role is integral to the success of multi-center studies.

### 1341619

#### **PERCEPTION OF FUTURE AND ADVANCE CARE PLANNING FOR JAPANESE WOMEN WITH EARLY STAGE GYNECOLOGICAL AND BREAST CANCER.**

Yuki Asakura, RN, MS, OCN®, University of Colorado, Aurora, CO

To understand perception of advance care planning in Japanese women with early stage cancer

Current Japanese nursing practice demonstrates significantly late initiation of discussion of Advance Care Planning (ACP) that lead unethically inappropriate time to make patients learn what they have to decide while undergoing very difficult time. Necessity of early intervention to support cancer patients to learn regarding ACP in early time has been suggested by professional organizations. However, the recommendation is hampered by health care provider's assumption of not willing to discuss on ACP in the early stage population without evidence of their perception of ACP. This study is necessary to not only gain understanding on women with early stage cancer but also to draw an effective approach to promote ACP discussion early.

Specific aims are: 1) To describe the lived experience of Japanese women with early stage gynecological and breast cancer with respect to their perspectives about their future, 2) To explore these women's perspectives on advance care planning, and 3) To describe cultural influences on advance care planning in Japan.

Philosophical framework of this study is ethnography guided by phenomenology. This philosophical background allows women to describe their own perception. Personal decision is believed to be largely influenced by cultural beliefs and the philosophical approach is appropriate for this inquiry.

Ethnographical qualitative interviews was utilized for this study. The researcher obtained rich data from interviews of participants in rural and urban Japan in addition to actual visit to local area and observe their lives. Data were analyzed by using Atlas ti to coding and categorizing.

Japanese women are educated and many of the participants were conscious about possible End-of-Life issues. Culturally, Japanese people are unwilling to express their thoughts because clearly expressing their thoughts were believed to be showing ego. Despite of their cultural belief, most of the participants are willing to learn about ACP because of their consciousness of availability of high unnecessary technologies at EOL and knowledge of possible EOL problems. Their perception of themselves as a survivor was a significant factor to make them easy to discuss about ACP. Although cultural sensitivity is necessary to initiate ACP education, this study suggests providing ACP education in early time is needed.

### 1341638

#### **REDEFINING THE ONCOLOGY NURSE EDUCATOR ROLE ON THE INPATIENT ONCOLOGY UNIT: DEVELOPING CREATIVE APPROACHES TO FACILITATE LEARNING.**

Maryann Dzibela, RNC, MSN, OCN®, Inpatient Oncology, Community Medical Center, Toms River, NJ; Donna Reinbeck, RN, OCN®, Inpatient Oncology, Community Medical Center, Toms River, NJ

The director of the oncology unit of a community medical center created an innovative plan to develop and ensure that there is ongoing staff education, evidence based practice methods utilized and integrated into daily practice on the unit and development of an ongoing education plan for chemotherapy updates throughout the year.

The Oncology Nurse Educator is a role vital to meeting the needs of the staff on the oncology unit. The budget no longer allows for a full time Oncology Nurse Educator. This obstacle was used as an opportunity to engage the staff to assume the responsibility for both staff and patient education and to implement strategies for success.

The purpose of this project is to incorporate the Oncology Nurse Educator Role into the Nursing Clinical Ladder program on the oncology unit which recognizes nursing expertise in clinical practice, leadership, professional development and evidence based practice methods. The clinical ladder structure provides staff nurses career advancement and recognition while remaining in direct care positions.

Over the course of a year a measurable plan was implemented using both visual learning tools and outlined presentational educational programs by the staff Oncology Nurse Educator. The visual learning tools were presented on an oncology resource board updated monthly by the educator. Monthly updates included ONS chemotherapy updates, ONS approved websites with monthly articles posted on the board, hot topics in oncology, continuous quality monthly assurance projects and local ONS Chapter activities. Oncology presentations included partnering with the Medical Center's Educational Department to outline the objectives of monthly in-services and submitting them for continuing education accreditation. Evaluation of the project was measured using qualitative staff nurse interviews and written evaluation of learner satisfaction.

This hospital based change project integrated ongoing oncology education into a cost effective oncology staff education model to foster best practices in oncology nursing.

### 1341652

#### **EVIDENCE OF ASSOCIATIONS BETWEEN CYTOKINE GENES AND ANXIETY IN ONCOLOGY PATIENTS AND THEIR FAMILY CAREGIVERS.**

Janine Cataldo, PhD, RN, Physiological Nursing, University of California, San Francisco; Christina Baggott, PhD, RN, Physiological Nursing, University of California, San Francisco; Brad Aouizerat, PhD, Physiological Nursing, University of California, San Francisco; Christine Miaskowski, PhD, RN, Physiological Nursing, University of California, San Francisco

To confirm latent classes of oncology patients and their FCs with distinct depressive symptom trajectories, and to examine differences in phenotypic (demographic and clinical) and genotypic characteristics among these classes.

Anxiety symptoms are common in cancer patients and their family caregivers (FCs). These symptoms are characterized by substantial interindividual variability, yet factors that predict this variability remain largely unknown.

The purposes of this study, were to identify distinct latent classes of oncology patients and their FC's based on state anxiety scores and to examine differences in demographic, clinical, and symptom characteristics between the classes. Variations in pro-and anti-inflammatory cytokine genes were evaluated between the classes.

It is assumed but not yet verified that genetic variation accounts for a substantial amount of heterogeneity in risk for anxiety.

Among 167 oncology outpatients with breast, prostate, lung, or brain cancer and 85 of their FCs, growth mixture modeling (GMM) was used to identify latent classes of individuals based on State Trait Anxiety Inventory-State (STAI-S) scores obtained prior to, during, and for four months following completion of radiation therapy. Single nucleotide polymorphisms (SNPs) and haplotypes in candidate cytokine genes were interrogated for differences between the two largest latent classes. Multiple logistic regression was used to assess the effect of phenotypic and genotypic characteristics on Anxiety group membership.

Three distinct classes of anxiety symptom trajectories were identified using GMM: Low Stable (36.9%), Intermediate Decelerating (32.5%), and High (30.6%). Phenotype analysis revealed

that participants who were younger, female, non-white, with lower performance scores and with children at home were more likely to be in the High Anxiety Group. In the genetic association analyses, after controlling for ancestry informative markers, there were no differences in cytokine gene variations between the three classes of anxiety. Evidence was found for latent classes with distinct anxiety symptom trajectories. This study is part of a larger study in which we examined 15 candidate cytokine genes and found impressive associations with cancer symptoms (i.e. pain, depression, sleep disturbance and fatigue). It makes sense that with a study of 104 SNP's across 15 genes, with power to detect large effect sizes, that not all symptoms will produce significant associations. The absence of significance does not rule out the possibility that complaints of anxiety from patients receiving cancer adjuvant therapy may actually be caused by cytokines acting in the brain.

**Underwriting/Funding Source Name:** This research was supported by a grant from the National Institute of Nursing Research (NR04835) Cataldo was funded by the ONS Foundation, Baggett was funded by the American Cancer Society, Aouizerat was funded through the National Institutes of Health Roadmap for Medical Research Grant (KL2 RR624130). Miaskowski is funded by the American Cancer Society as a Clinical Research Professor.

### 1341654

**DIRTY LITTLE SECRETS: HAZARDOUS DRUG CONTAMINATION AT THE CHAIRSIDE.** Lisa Hodges, RN, BSN, OCN®, Hematology and Oncology, Wake Forest Baptist Health, Winston-Salem, NC; Celeste Caskey, CSP, Environmental Health and Safety, Wake Forest Baptist Health, Winston-Salem, NC

To assess surface contamination levels at the point of administration in an outpatient infusion center and evaluate the effectiveness of close system transfer device (CSTD) for administration to decrease the incidence of accidental exposure and levels of surface contamination.

A safe level of exposure to hazardous drugs has not been established; therefore, due to the potential health risk of these drugs, the safest level of exposure is no exposure.

Reduce the level exposure at the chairside by maintaining an intact system; thereby, preventing accidental hazardous drug spillage or leakage via accidental disconnects or improper connections that can lead to exposure leading to potential health risk for healthcare workers.

ChemoGLO™ wipe samples were collected pre-implementation of a CSTD for administration and repeated 6 and 15 months post implementation. Samples were taken from the infusion chair arm and side table as well as adjacent utility cart. Docetaxel and paclitaxel were analyzed by liquid chromatography coupled with tandem mass spectrometry. The lower limits of detection (LLD) assays are 1ng/ft<sup>2</sup>; therefore, concentrations that are less than the LLD were considered non-detectable.

The chair arm and cart revealed no evidence of contamination. The side table revealed contamination of docetaxel and paclitaxel at 847.4 ng/ft<sup>2</sup> and 1530.9 ng/ft<sup>2</sup> respectively. Samples collected post CSTD implementation was negative both at 6 and 15 months. In addition, no incidence of exposure has been reported due to an inadvertent line disconnects, free flow, or improper connections.

The use of CSTD in preparation to reduce surface contamination has been well documented in the literature by the pharmacy community. There is limited documentation on the impact of CSTD during administration leading to hesitation to implement these systems at the point of administration due to cost, lack of evidence and compliance. The valve of a closed system device placed at the end of a syringe or tubing can prevent leakage or accidental discharges during and after administration as the valve only operates when it is activated; therefore, preventing free flow of fluid when the tubing is disconnected. At disconnection, the valve will close, occluding the line.

### 1341655

#### SHARING PATIENT AND CAREGIVER TRANSPLANT EXPERIENCES: A RESOURCE FOR BMT PATIENT EDUCATION.

Elizabeth Murphy, EdD, RN, NMDP, Minneapolis, MN; Ellen Denzen, MS, NMDP, Minneapolis, MN; Viengneese Thao, NMDP, Minneapolis, MN; Heather Moore, NMDP, Minneapolis, MN; Emily Peterson, NMDP, Minneapolis, MN

To describe the benefit of DVDs and patient/caregiver experiences in education curricula and an educational DVD of patient/caregiver stories including evaluation results.

Oncology nurses provide direct patient care but also help patients learn about and discuss their diagnosis/treatment options. DVDs are among the most effective formats nurses can use to communicate health-related messages to patients. Words of Experience. Stories of Hope. (WOE) is a DVD which offers a look into the transplant experience from the perspective of patients/caregivers, and transplant center staff. This DVD is designed to help patients/caregivers understand the transplant process; define the role of the medical team and caregiver; and provide strategies for preparing for transplant. Incorporating patient/caregiver transplant experiences in patient education curricula can improve understanding of the transplant process, reduce anxiety, and increase patient satisfaction.

To assess the helpfulness of WOE in understanding the transplant process and to evaluate whether WOE: (1) improves understanding of the caregiver role and (2) provides useful strategies for preparing for transplant.

Primary data was collected via mail survey from December 2008-September 2011. This survey utilized a cross-sectional design and assessed (1) helpfulness of WOE stories; (2) change in transplant knowledge; and (3) change in anxiety regarding the transplant process. Surveys were mailed to 2,982 individuals with a response rate of 7% (N=209). Among patients (70%), 82% were White and 54% had at least a Bachelor's degree. 97% of respondents indicated a better understanding of the transplant process after watching the DVD; "Transplant" and "Engraftment" were rated most useful (81%; 77%). More than 60% indicated their anxiety regarding the transplant process was reduced/remained the same after watching WOE. Education level significantly influenced how anxious respondents felt about the transplant process (p>0.05).

Overall, respondents found WOE very useful. There was an association between level of education and how anxious individuals felt about transplant. DVDs such as WOE can be utilized in education curricula to explain complex concepts and facilitate discussions about transplant with the medical team. This educational tool is a resource for oncology nurses designed specifically to help patient and caregivers understand the transplant process by sharing others' transplant experiences.

**Underwriting/Funding Source:** Health Resources and Services Administration [contract HHS234200637018C]

### 1341657

#### EXPERIENCE PROVIDING A YOUTUBE-BASED E-JOURNAL CLUB FOR ONCOLOGY NURSES: NURSING RESEARCH NEWS YOU CAN USE (NRNYCU).

Ellen Carr, RN, MSN, AOCN®, Multispecialty Clinic, Moores UCSD Cancer Center, La Jolla, CA; Caroline Brown, EdD, CNS, UC San Diego Health System, San Diego, CA; Mario Quitoriano, MSN, RN, Palomar Medical Center, Escondido, CA; Mary Wickline, MLIS, M.Ed, UC San Diego Biomedical Library, La Jolla, CA

To provide a digital-era method to update oncology nurses about evidence-based practice (EBP) and nursing research.

Integrating EBP into patient care remains challenging for clinical nurses. As a universally-adopted, digital-era technology, YouTube is an accessible platform for education and clinical updates.

To establish a YouTube platform to post periodically-produced videos as a form of an e-journal club for oncology nurses. The plat-

form also enables nurses to access information from a trusted colleague, a frequently-used, information-seeking method of learning.

In February 2010, a project team was formed to develop the Nursing Research News you Can Use (NRNYCU) YouTube platform, targeting oncology nurses. During 2011, six NRNYCU videos (approx 5 min/each) were produced and then posted on the YouTube University of California San Diego (UCSD) channel. (<http://edr.ucsd.edu/Nursing+Research+News+You+Can+Use.htm>) Articles highlighted in the videos were also easily accessible for background and review. The six video topics included Patient Education, Post-Treatment & Exercise, Pain Management, Patient/Family-Centered Care, Symptom Management Resources and Distress Management.

A survey of UC San Diego HealthSystem oncology nurses (n = 20), who had viewed the videos, evaluated the effectiveness of the NRNYCU platform to update oncology nurses. Survey highlights: (a) 85% of respondents reported videos were easy to access, (b) 79% of respondents reported they were very interested in content, (c) 62% of respondents learned a lot from the content, (d) 67% of respondents accessed only the videos (not the articles), (e) 88% of respondents considered NRNYCU a very effective method to update practice. The survey included many questions about how NRNYCU video content affected clinical practice. Respondents reported that content significantly informed practice toward improved patient outcomes.

The NRNYCU platform via a YouTube channel is a proven method to promote and integrate nursing research evidence into clinical practice. Refinement of the platform continues so that regular production of YouTube accessible videos is a skill set that can be easily adopted by other cancer care facilities or nursing specialties.

### 1341663

**IMPROVING HANDWASHING COMPLIANCE IN THE AMBULATORY SETTING.** Robert Davis, RN, Head and Neck Oncology, The Ohio State University Comprehensive Cancer Center Arthur G. James Cancer Hospital, Columbus, OH; Katie Sanders, RN, Head and Neck Oncology, The Ohio State University Comprehensive Cancer Center Arthur G. James Cancer Hospital, Columbus, OH

To educate staff and physicians regarding the importance of effective hand hygiene in the ambulatory setting.

The Centers for Disease Control and Prevention (CDC) has said that hand washing is the single most important tool in preventing infections in the healthcare setting. Two million people in the United States acquire hospital-related infections every year, and more than 90,000 of them die. Previous unit based hand hygiene audit results led us to believe that 100 % of our staff washed or sanitized their hands before and after each patient contact. When our organization conducted a "secret shopper" hand hygiene audit and found a compliance rate of less than 30%.

Education and re-education are essential in achieving 100% compliance with proper hand hygiene practices. Information about the hazards of improper hand hygiene practices should be presented to staff and physicians

Staff members and physicians were educated in meetings and viewed a required hand washing video. Managers were encouraged to make hand hygiene compliance a measurable outcome in staff member's annual reviews. In addition, the organization now has a zero tolerance for hand hygiene noncompliance. Non-compliant staff members are coached but staff and physicians have the potential for termination if non-compliance persists. Each Unit Council member conducts 10+ hand hygiene audits per week. Results are reported to staff during meetings. Measures to improve hand hygiene compliance on our unit include: placing additional alcohol hand rub dispensers in the department, increasing availability of pocket size alcohol hand rubs for all staff, providing bank of new/changing visual cues for hand hygiene for patient room doors all aimed at our goal of 100-percent hand-hygiene compliance.

A hand hygiene audit tool was developed and changes in practice will be monitored and measured on an ongoing basis. To date, audit data have yielded compliance rates of 88%–100%, respectively.

Improper hand hygiene in the hospital-ambulatory setting has resulted in countless infections and needless deaths. The goal of 100% hand hygiene compliance is non-negotiable and sustained compliance can only result in reduced numbers of ambulatory acquired nosocomial infections.

### 1341667

**PATIENTS DON'T LEARN BY DVD ALONE: THE IMPACT AND IMPORTANCE OF NURSE-LED CHEMOTHERAPY EDUCATION ON PATIENT UNDERSTANDING, CONFIDENCE AND MOTIVATION FOR MANAGING SIDE EFFECTS.** Kelli Fee-Schroeder, RN, BSN, OCN®, Mayo Clinic, Rochester, MN; Janine Kokal, RN, MS, OCN®, Mayo Clinic, Rochester, MN

To enhance patients and families knowledge, confidence and motivation in managing chemotherapy side effects.

Educating patients and families about chemotherapy side effect management is standard practice throughout most cancer centers, with some variability on where, when and how the teaching is provided. Providing concise, consistent, and individually relevant patient education about chemotherapy and side effect management is critical.

A nurse-led chemotherapy class utilizing a DVD and group discussion was offered to patients and families regardless of time since initiating chemotherapy. Content of the instruction focused on self-care strategies for 13 specific side effects.

Adult learning theory principles and social cognitive theory were utilized in the development of the DVD and class curriculum. Participants attended a chemotherapy education class which included viewing an 11-minute DVD and a facilitated group discussion with an oncology nurse educator. A post-class and 8 week follow-up survey assessing understanding of treatment side-effects, self-care management and confidence in managing side effects was administered. Descriptive statistics were used to summarize the data collected.

Eighty-one participants were enrolled in the study completing a post-class survey with 42 participants also completing the follow-up survey. Results from the immediate post-class survey and 8 week follow-up were very similar. Ninety-seven to 100% of participants reported an increased understanding of side effects and how to manage them. Similarly, participants reported increased motivation to use self-care strategies and increased confidence in managing chemotherapy side effects. Of note, 73% of the participants listed specific new behaviors they planned to use to manage chemotherapy side effects following the class. At follow-up, 70% of respondents reported having used strategies presented in the class. Based on the quantitative and qualitative data, a major outcome suggested that the DVD, oncology RN facilitation and group discussion was highly valued and provided the ultimate combination of consistent information, content adaptation, and expert knowledge in empowering patients and families through their chemotherapy experience.

### 1341668

**PREPARING A COMMUNITY CANCER CENTER TO MEET THE STANDARD OF INTEGRATING AND MONITORING ON-SITE PSYCHOSOCIAL DISTRESS SCREENING AND REFERRAL FOR THE PROVISION OF PSYCHOSOCIAL CARE.**

Teresa Money McLaughlin, APRN, MSN, AOCN®, Integrative Oncology, St. Vincent's Medical Center, Bridgeport, CT; Genevive Foley, RN, MSN, Integrative Oncology, St. Vincent's Medical Center, Bridgeport, CT; Cindy Czaplinski, RN, MSN, Integrative Oncology, St. Vincent's Medical Center, Bridgeport, CT; Carol Tibor, RN, OCN®, Integrative Oncology, St. Vincent's Medical Center, Bridgeport, CT; Mary McCartney, RN, BSN,

OCN®, Integrative Oncology, St. Vincent's Medical Center, Bridgeport, CT

To explain the process and implementation of a pilot psychosocial distress screening process in a community cancer center. Mandated for 2015 by the Commission on Cancer, a multidisciplinary program of The American College of Surgeons who underscores the findings of an IOM report in 2007, that the importance of providing screening for patients distress and psychosocial health is essential to providing high-quality cancer care.

A Community Cancer Center has its unique challenges but one being how to accomplish all the set standards to achieve accreditation by the Commission on Cancer. This task is driven and governed by the Cancer Committee in the medical center. A subcommittee was established and given the task of developing and implementing a process to integrate and monitor on-site psychosocial distress screening and referral for the provision of psychosocial care by 2015.

To share and collaborate about the experience and lessons learned of a community cancer center implementing a psychosocial distress screening program. Describing the teams' members, the literature review and how we established an evidenced based tool and interventions, the implementation of a modified validated screening tool that worked in the described setting, and the obstacles we encountered during the implementation and evaluation process.

The distress management tool was piloted on breast cancer patients in the Radiation Oncology Department. The patients completed the distress self assessment tool periodically during the treatment process and the RN's then determined interventions based on the findings. The team also developed a patient education booklet that outlines resources that are available to the patients both on and off site.

The evaluation was done in collaboration with the quality management team at the medical center. A spread sheet was created that monitored distress scores, service and program recommendations, frequency/interval of tool use, documentation, follow-up, and nurse and patient compliance. Evaluation also included direct patient and nurse feedback by interview technique.

This was just the first step in the launch and implementation of a full psychosocial distress screening program in our community based cancer center. The next step is to utilize on more diagnoses and then to other service lines, i.e. Hereditary Risk Assessment Program, Nurse Navigation, Integrative Cancer Survivorship Program, The Ambulatory Infusion Center and finally to the inpatient unit. Institutions from around the country will be implementing psychosocial distress screening programs due to the COC mandate and this is one community cancer centers experience which we are happy to share.

**Underwriting/Funding Source:** St. Vincent's Medical Center

### 1341669

**CLINICAL TRIAL EDUCATION: INTERACTION AND SIMULATION.** Susan Ottman, RN, BSN, Clinical Trials Office, Ohio State University Comprehensive Cancer Center, Columbus, OH; Heather LeFebvre, Division of Surgery, Ohio State University, Columbus, OH; Janine Overcash, PhD, GNP-BC, Nursing Research, Ohio State University Medical Center–The James, Columbus, OH; Amy Rettig, MSN, MALM, RN, ACNS-BC, CBCN, Nursing Excellence, Ohio State University Medical Center–The James, Columbus, OH; Nancy Single, PhD, Clinical Trials Office, Ohio State University Comprehensive Cancer Center, Columbus, OH

To establish foundations of knowledge concerning clinical trials at a Midwestern comprehensive breast cancer center.

Despite the fact that cancer clinical trials improve patient care, National Cancer Institute (NCI) reports less than 5% of patients participate. Eighty-five percent of oncology patients were unaware or unsure that participation was an option. NCI identified barriers specific to Health Care Professionals (HCP, e.g., nurses,

technologists, physicians) that impact patient clinical trial participation including, but not limited to: lack of knowledge of clinical trials; personal bias or ethical concerns; or the perceived administrative burden of a clinical trial. Staff nurses and others can advocate patient involvement in clinical research. Moving beyond a traditional didactic course, this symposium incorporated innovative methods: props, YouTube, Turning Point, and simulation. Clinical Education credits were provided for nurses and radiology technologists. The significance of this program was enhanced awareness and knowledge of clinical trials among multidisciplinary health teams, achieved by using an innovative, educational symposium format.

The purpose of this educational program was to minimize HCP barriers that impact patient clinical trial participation. The conceptual model is Relationship-Based Care, a model of nursing care that considers relationships among nurses, other HCPs, and patients as key factor to providing quality healthcare.

54 staff members participated and completed evaluations for the education program. Attendees included nurses, technologists, registrars, laboratory technologists and physical therapists. The educational program resulted in increased knowledge and fewer HCP barriers to trials which contributed to a 73% increase in clinical trial participation calculated on numbers of patient participants enrolled in clinical trials prior to the delivery of the educational symposium (92 patient participants in 2010) and after completion (160 patient participants in 2011).

Symposium participants developed personal work goals regarding clinical trials and defined further learning needs concerning profession roles in cancer clinical trials. Future outreach strategies are underway to collaborate with our regional healthcare partners. Through enhancing clinical trials knowledge among HCPs, we were able to achieve increased knowledge of trials and minimize related barriers, contributing to increased participation in clinical trials for cancer patients at a Midwestern comprehensive breast cancer center.

### 1341720

**WHAT IS AN ONCOLOGY CNS TO DO? ELEARNING AND SOCIAL MEDIA.** Amy Rettig, MSN, MALM, RN, ACNS-BC, CBCN®, Nursing Excellence, The Ohio State University Cancer Program, Columbus, OH; Danette Birkhimer, MS, RN, CNS, OCN®, Nursing Excellence, The Ohio State University Cancer Program, Columbus, OH; Jamie Ezekielian, MS, RN, OCN®, Nursing Excellence, The Ohio State University Cancer Program, Columbus, OH

To educate Oncology Clinical Nurse Specialists (CNS) in eLearning content development and social media application in healthcare.

An important component of the Oncology CNS mission is education of patients/caregivers, to understand and manage disease, and healthcare staff, to understand the continuum of care. The Oncology CNS is instrumental in producing and reviewing educational material that is sensitive to gender, age, race, ethnicity and education levels. Multiple learning styles and preferences require adaptability in education. Social media and eLearning is increasingly used among younger and older people due to ease of scheduling and privacy. Electronic or online learning (eLearning) opportunities allow expert oncology nurses the ability to reach broad audiences of cancer patients, caregivers, and healthcare staff.

The project purpose is to educate the Oncology CNS in development, coordination, and facilitation of eLearning and social media for patients, caregivers, and healthcare staff. The conceptual model used is Relationship-Based Care®, a model of nursing care that considers relationships as established through educational activities among nurses and patients as a key factor to providing quality healthcare.

The activity is a series of 6 one-hour sessions focused on building the knowledge, skills, and abilities regarding eLearning and social media in healthcare. Sessions are presented by an expert, in at least one of the following, from a healthcare perspective: general

eLearning; podcasting; webinars; blogs; Facebook; Twitter; and technology. During the activity, the Oncology CNS practices the skill being presented and dialogues about best practices with the tools available.

Each Oncology CNS developed an eLearning/social media strategic plan for their specific disease population. Interventions that will highlight nursing expertise include: website clinical management, podcasting, and webinars. Basic oncology coursework for staff orientation will be developed and the next generation of curriculum developers and producers will be trained and mentored.

It is important for Oncology CNSs to use various modalities to provide patient, caregiver, and healthcare staff education that is current and reliable. Engaging with current technologies is vital to productive and efficient educational opportunities. This program provides the foundation for eLearning and social media in healthcare.

**Underwriting/Funding Source:** eLearning Professional Development Grant

### 1341732

**REDUCING PRESSURE ULCER PREVALENCE IN AN ONCOLOGY SETTING.** Elizabeth Grahn, MSN, NP-C, CWOCN, Memorial Sloan-Kettering Cancer Center, Bay Shore, NY; Hyun Joo Lee, MSN, RN, Memorial Sloan-Kettering Cancer Center, Bay Shore, NY; MaryAnn Connor, MSN, RN, Memorial Sloan-Kettering Cancer Center, Bay Shore, NY; Judy Graham, MSN, RN, Memorial Sloan-Kettering Cancer Center, Bay Shore, NY

This project's objective was to facilitate analysis of pressure ulcer prevalence and treatment efficacy in an oncology setting via electronic database implementation.

In the oncology population, disease and treatment related cutaneous manifestations may be misidentified, mistreated and reported as pressure ulcers, resulting in erroneously high prevalence rates. This NCI designated comprehensive cancer center collects monthly pressure ulcer data and benchmarks prevalence with the National Database of Nursing Quality Indicators® (NDNQI®) quarterly. An electronic database was created to facilitate efficient data collection and trend analysis. Eradication of wound misidentification allowed for real-time, targeted pressure ulcer interventions and appropriate oncologic related topical treatments.

A multidisciplinary team gathered to automate the processes of collecting and reporting pressure ulcer survey data, streamline and standardize the workflow, reduce cost and time, extract and utilize data efficiently and improve user satisfaction. Clinical purposes included identification and analysis of pressure ulcer assessment, prevention, etiology, treatment and documentation for specific trends. Additionally, clinicians sought ability to target interventions more effectively.

To collect prevalence data, a team of interdivisional registered nurses surveys pressure ulcer prevalence monthly. Representatives across all nursing divisions participate in full day educational activities including pressure ulcer prevention, identification, documentation and treatment. Case presentations and trend analysis directs patient specific and overall program interventions in close time proximity to data collection. Inter-rater validity is ensured through pressure ulcer staging confirmation by Wound Care Specialists.

Prior to the database innovation, the pressure ulcer survey process was manual. Outcome analysis was labor intensive and time prohibitive. Timely decision support, meaningful use, user satisfaction, and efficiency of various processes were evaluated. Users rated database performance and benefits highly via Likert scale evaluation tool at the conclusion of implementation. With oncology related cutaneous lesions excluded, pressure ulcer prevalence data showed a dramatic decline.

This project demonstrates an enhancement for a nursing quality outcome measurement. Technological benefits include data accessibility, query capability and information calculation and inter-program exportability for analysis and reporting. Resulting clinical benefits include identification and analysis of hospital-wide and unit pressure ulcer specific data and patterns, capability of real time interventions and evaluation of quality outcomes.

### 1341733

**EMPOWERING BLOOD AND MARROW TRANSPLANT PATIENTS THROUGH A COMPREHENSIVE, MANAGEABLE EDUCATION BOOK.** Anne Rosenblatt, RN, MSN, Blood and Marrow Transplant, Cedars-Sinai Medical Center, Los Angeles, CA; Snoussi Laura, RN, BSCN, OCN®, Blood and Marrow Transplant, Cedars-Sinai Medical Center, Los Angeles, CA; Carolina Caso, RN, CPON®, Blood and Marrow Transplant, Cedars-Sinai Medical Center, Los Angeles, CA; Seda Gharpetian, RN, MSN, FNP, OCN®, Blood and Marrow Transplant, Cedars-Sinai Medical Center, Los Angeles, CA; Sandra Rome, RN, MN, AOCN®, Blood and Marrow Transplant, Cedars-Sinai Medical Center, Los Angeles, CA

The aim of developing these Books was to provide a user friendly, effective tool to educate and empower patients undergoing BMT.

The previous BMT Education Binder had multidisciplinary contributors, was disjointed, with a textbook feel. RN Coordinators determined patients were not reading the material. Education was being done verbally and knowledge, retention was deficient. Compliance with important instructions related to the patient's care pre /post transplant was sub-optimal, as evidenced by readmissions for preventable problems. Inpatient staff had limited time to compensate with comprehensive education prior to discharge.

The revision was authored by an RN Transplant Coordinator and reviewed and edited by the Coordinator team, physicians, the in-patient CNS and ancillary staff. Content was divided into two books, available in English and Spanish. Book one focuses on pre-transplant. Book two details transplant, discharge and self care. The role of the caregiver, often overlooked, is described. The writing is at a 7th grade level. Pictures and images are interspersed with text accommodating different learning styles. Chapters contain quizzes testing the patient's knowledge. The RN coordinator and patient review these to determine the degree of patient mastery and discuss any additional informational needs.

Currently, anecdotal evidence suggests that the books have had a favorable impact. Coordinators are engaging patients in comprehensive, interactive discussions earlier in the transplant process. Patients are asking more specific questions, demonstrating a higher level of understanding. This project is addressing a need in the rapidly developing specialty of BMT. It will be available on our hospital educational intranet. It has met a need for patients, families and staff. Quantitative outcomes on readmissions are forthcoming.

Nurses play an essential role in patient/family education for self care. Development of comprehensive teaching tools such as accomplished through this process facilitate safe care and optimum outcomes. Others involved in patient/family teaching can adapt this process for their settings.

### 1341734

**DIMENSIONS OF CLINICAL RESEARCH NURSE COORDINATOR'S COMPETENCIES BASED ON ONCOLOGY NURSING SOCIETY CLINICAL TRIAL NURSE COMPETENCY GUIDELINES: USING EVIDENCE-BASED PRACTICE TO DEVELOP A JOB DESCRIPTION, EVALUATION FORM AND COMPETENCY ASSESSMENT PARADIGM.** Bernadette Pulone, RN, OCN®, City of Hope Comprehensive Cancer Center, Duarte, CA; Sharon Steingass, MSN, AOCN®, City of Hope

Comprehensive Cancer Center, Duarte, CA; Gerardo Gorospe, MSN, City of Hope Comprehensive Cancer Center, Duarte, CA

Use evidence-based practice concepts to develop COH CRN roles & responsibilities.

The specialized role of the clinical research nurse (CRN) coordinator is being redefined. The CRN organizes all aspects of clinical trial activity, coordinates patient clinical trial participation, including follow-up care, and provides patient education, in collaboration with a multidisciplinary team. The CRN is responsible for duties delegated by the physician-researcher, which include organization and management of proper clinical trial conduct to meet all regulatory requirements imposed by Institution Review Boards (IRB), Food and Drug Administration (FDA), and trial sponsors. City of Hope (COH) has contributed to innovation in the science of medicine by participating in all phases of clinical trials. With the release of the ONS "Oncology Clinical Trials Nurse (CTN) Competencies" in 2010, COH revised the job description to coincide with these core competency standards. From this, COH nursing is developing a new CRN evaluation form and CRN skills competencies assessment form.

Utilize evidence-based practice, according to the current ONS CTN Competency Guidelines to develop COH CRN roles & responsibilities, to create CRN coordinator role specific evaluation forms and assess gaps in competency.

Nursing administration, CRN, Nurse Manager, preceptor, Clinical Nurse Specialist, and a nursing consultant created and evaluated a new CRN job description, evaluation form and developed competency categories for assessment. All CRN will complete a self-assessment to rate their skill competency. The rating scale is based on novice to expert. The self-assessment rating will be reviewed and the dimensions of competency will be validated with CRN.

CRN job description and newly created evaluation form is part of defining the COH CRN coordinator's role. We are preparing to administer a skills competency self-assessment survey to all CRNs. We will utilize the skills competency self-assessment to determine gaps in CRN skills, to develop CRN educational programs, and to create individualized practical orientation.

ONS CTN Competency Guidelines were the foundation in revising the roles and responsibilities of COH CRN. These responsibilities are requisite for independent practice and for making professional nursing decisions.

### 1341742

#### **BENCH TO BEDSIDE: CURRENT PERCEPTION THRESHOLD TESTING (CPT) TO MEASURE SENSORY FIBER CHANGES AFTER CHEMOTHERAPY.**

Lori Tanguay, RN, OCN<sup>®</sup>, Stoler Outpatient Infusion, University of MD Medical Center, Baltimore, MD; Susan Dorsey, PhD, RN, Research, University of Maryland School of Nursing, Baltimore, MD; Darren Couture, PhD, CRNA, Research, University of Maryland School of Nursing, Baltimore, MD; Cynthia Renn, PhD, RN, Research, University of Maryland School of Nursing, Baltimore, MD; Nancy Gambill, MS, CRNP, Stoler Outpatient Infusion, University of MD Medical Center, Baltimore, MD

Current Perception Threshold testing (CPT) will identify changes in sensation following the initiation of chemotherapy and be predictive in determining patients who develop peripheral neuropathies.

Chemotherapy induced peripheral neuropathy (CIPN) remains a significant complication of cancer treatment. For patients receiving taxanes and/or platinum chemotherapy, the incidence is as high as 84%–100%. With no preventative or curative treatment, patients report symptoms ranging from constant numbness and tingling of the hands and/or feet to debilitating burning pain. Symptoms often persist for several months or even years after the completion of treatment. As no "gold standard" measure exists, diagnosis depends upon the patient's report of symptoms, often when permanent

neuronal injury has occurred. When symptoms limit function, current practice is to limit or discontinue treatment. A need exists for a standard measure to accurately identify and predict CIPN, in an effort to limit long-term neuronal damage and improve prognosis.

The study purpose was to determine if CPT measurement accurately identifies CIPN and whether this measure predicts CIPN in patients receiving taxane and/or platinum regimens.

Prospective longitudinal study with a convenience sample of 35 patients of newly diagnosed solid tumor patients who were chemotherapy naive.

The study purpose was to determine if CPT measurement accurately identifies CIPN and whether this measure predicts CIPN in patients receiving taxane and/or platinum regimens. At 2000 Hz, 250 Hz, and 5 Hz, the CPT identified 78%, 56%, and 33% of participants who developed CIPN, respectively. However, the falsepositive rate was 70%, 50%, and 45%, respectively. Generalized linear mixed model analysis determined that CPT measures do not predict the outcome of CIPN. However, the number of treatment visits was predictive of CIPN (OR=1.88, 95% CI=1.10-3.20, p=0.02). This suggests that a one-treatment increase in visits from a mean of 9.4, increases the odds of CIPN development by 88%.

While this measure accurately identified a majority of patients with CIPN at 2000 Hz, the false-positive rate was unacceptably high. This study demonstrated that CPT measurement did not predict the outcome of CIPN. The lack of predictive significance demonstrated in this investigation is likely attributed to the small sample size.

### 1341748

#### **FRONTLINE LEADERSHIP AND LEAN SIX SIGMA METHODS IN CHANGING THE CULTURE OF A MEDICAL ONCOLOGY HEALTH SYSTEM.**

Patricia Palmer, RN, MS, AOCNS<sup>®</sup>, Patient Care Services, University of California Davis Health System, Sacramento, CA; Wilson Yen, RN, MSN, Patient Care Services, University of California Davis Health System, Sacramento, CA; Kay Harse, RN, MS, AOCN<sup>®</sup>, Cancer Care Network, University of California-Davis, Sacramento, CA

Identify four key elements of change from the Lean Six Sigma (LSS) model that create effective process improvement (PI).

Improving patient satisfaction measures, quality, cost effectiveness, efficiency and safety are the focus of many health systems PI. The LSS model is now being adopted by health systems for PI. The clinical leader/expert nurse may improve the culture of an organization using the LSS model's four key areas: gathering data, delighting customers, team-work, and improving processes. These frontline leaders work daily with the patients and can generate ideas for cultural changes to improve patient outcomes, patient/staff satisfaction and efficiency while maintaining quality.

To describe the experience of an Oncology Clinical Nurse Specialist (CNS) who has implemented PI initiatives using LSS principles that have changed the culture of care for patients/staff and have improved patient/staff satisfaction and efficiency.

The University Hospital-based CNS has implemented five PI initiatives addressing chemotherapy order writing, safety and efficiency, care of sickle cell disease (SCD), teamwork and symptom management. Using the LSS principles the CNS formed teams including RNs, physicians, management and clinical operations to address the four key elements. These projects will be presented as case studies demonstrating the influence of the LSS model and the measurable changes in patient/staff satisfaction, efficiency, safety, cost effectiveness and culture while delivering quality patient care.

Professional Research Consultant discharge interview data identified significant improvements in 5 areas of patient satisfaction as a result of one initiative; overall quality of care, nurse and doctors instructions/explanations of treatments/tests, discharge process, and doctors communication with patient/family. The chemotherapy order process is more complete and accurate. Inpatient chemotherapy admissions are more efficient with average length of stay reduced by 2 days. The care of the SCD patient is

now a hospital wide LSS project. Improved communication and teamwork have resulted from the inpatient huddle initiative.

The role of using a CNS to identify PI problems for the health system is significant. The CNS who understands the system, patients and problems using a LSS approach can lead ultimately to improved patient/staff satisfaction and a culture of quality, efficiency and safety.

### 1341761

#### **A HOUSE WIDE EDUCATIONAL INITIATIVE—“BACK TO BASICS” BILIARY OBSTRUCTION: INTERVENTIONS AND NURSING IMPLICATIONS.**

Carla Vassallo, RN, BSN, Nursing, Memorial Sloan-Kettering Cancer Center, New York, NY; Margaret Wilson, RN, Nursing, Memorial Sloan-Kettering Cancer Center, New York, NY; Natasha Ramrup, RN, MSN, OCN®, Nursing, Memorial Sloan-Kettering Cancer Center, New York, NY

Optimal education is imperative for nurses when caring for patients outside of their Disease Management Team (DMT).

Our DMT at this NCI designated cancer institution treats patients with Hepatopancreatobiliary (HPB) cancers. These cancers often result in biliary obstruction which, in turn, leads to cholangitis, pruritus secondary to jaundice, liver failure and malabsorption. Obstruction can be caused by tumors, gallstones, post surgical strictures and trauma, or enlarged lymph nodes. The majority of HPB cancers are unresectable at the time of diagnosis, resulting in poor prognosis. These cancers result in malignant obstructions which are treated palliatively with biliary drainage. Palliation by stenting becomes a pivotal issue in alleviating these symptoms, potentially prolonging survival time and improving quality of life. These procedures are performed using either percutaneous or endoscopic drainage or open surgical decompression. Internal wall stents, internal-external drainage catheters or external-only drainage catheters are placed based on level obstruction. Interventions are patient specific and may be used to decrease bilirubin in pre-surgical and pre-chemotherapy patients.

An educational initiative called “Back to Basics” was created to familiarize other DMT’s on the care of patients with biliary stents or drains and the sequelae unique to the HPB patient population.

During four, one-hour educational sessions, this initiative reached approximately 200 members of our nursing staff.

Prior to creating this educational initiative, the presenters spent a day in the procedural areas observing the aforementioned interventions. The general content covered the anatomy and functions of the biliary system, causes and symptoms of obstruction, interventions, complications and nursing implications. Nursing considerations discussed were: monitoring of bilirubin levels, kidney function, drain output, and pre and post procedure sepsis risk. An interactive component included daily nursing care of the external biliary drainage catheter. Demonstration of dressing and system change, catheter flush, managing drain malfunctions and visualization of the internal stents. Educational materials provided to participants consisted of: Nursing Policy Guidelines “Caring for the Patient with Percutaneous Transhepatic Biliary Drainage Catheter” and Patient Education Pamphlet “Caring for Your Biliary Drainage Catheter.” Intensive nursing management of patients with biliary obstructions is critical.

### 1341771

#### **DELIVERING THE SAFEST AND QUICKEST CARE IN THE INPATIENT ONCOLOGY UNIT: MAKING THE CASE FOR THE “CHEMOTHERAPY READY” ADMISSION.**

Klara Bevanda, RN, MSN, OCN®, Nursing, NYULMC, New York, NY; Mai Ho-Law, RN, MSN, OCN®, Nursing, NYULMC, New York, NY; German Rodriguez, RN, MS, Nursing, NYULMC, New York, NY

To streamline the inpatient chemotherapy admission process, reduce wait times by 50 percent while maintaining patient safety.

Inpatient oncology setting chemotherapy regimens have become increasingly complex. Upon admission, patients wait long periods of time to receive their chemotherapy drugs. This resulted in patient dissatisfaction and prolonged patient length of stay.

The multidisciplinary team attended a four-day workshop, which utilized a Lean Six Sigma methodology focusing on the inpatient chemotherapy experience. Members mapped out the current chemotherapy process and were encouraged to create a future state, focusing on eliminating “wasteful” steps and adding “valuable” steps to the process. The concept of “fast forwarding” patients through the admission process was shared by all members of the team and led to the creation of the term “chemo ready patient.” This presentation will include the design, development, implementation and future challenges of this process.

Prior to the workshop, admission testing and chemotherapy orders were initiated at the time of patient’s arrival to the unit, resulting in a 9.45-hour wait time for chemotherapy administration. In the new process, preadmission criteria were standardized. Outpatient clinicians utilizing standardized chemotherapy treatment plans entered admission orders in advance. A “Pre-admission Form for Elective Chemotherapy Admissions” checklist was created to facilitate a handoff from outpatient to the inpatient setting. The admitting department reserved beds for elective chemotherapy admissions. The project was implemented in October 2011.

Today we are allocating nursing resources to treat this population by being active participants in the preadmission process. The nurses are encouraged to be part of the improvement by providing ideas and feedback. As of January 2012, preliminary data show that the wait times have been reduced by 42 percent.

The interdisciplinary team improved communication by providing transparency and clarity about patient care expectations. Patient safety has improved by involving outpatient and inpatient clinicians in the admission process. We are planning to reassess the process and refine it as we move forward while evaluating nursing feedback and patient satisfaction data.

### 1341801

#### **A MELTING POT OF SUCCESS—INTEGRATION OF A CANCER PROGRAM.**

Timothy Clyne, RN, Trinitas Regional Medical Center, Elizabeth, NY; Carol Blecher, RN, MS, AOCN®, APNC, Trinitas Regional Medical Center, Elizabeth, NY

To integrate the inpatient unit with a newly acquired outpatient program. To develop staff and achieve 100% OCN certification in both areas.

Webster defines integration as the process of incorporating an organization of individuals of different groups. Many hospitals are currently involved in the purchase of oncology practices and are challenged with the task of incorporating them into their current programs. When two organizational cultures are merged there must be a melding of the two in order to create a stronger and productive new culture.

The Cancer Center purchase presented an opportunity for growth and the adoption of an environment of evidence based practice throughout the program. The inpatient unit has seen change with a new manager and an infusion of new young nurses. The outpatient area lost its upper management team, but has not had much staff turnover in the past 5 years. Being that there is change with purchase and new leadership, this is an ideal time to strengthen communication and ties between the two units. We will be integrating the two cultures by combining educational programs, developing a monthly educational calendar, promoting certification and inviting all staff to participate in patient holiday celebrations and survivorship programs. Select Cancer Center employees, the APN, Social Worker and Dietician will be integrated into the inpatient area through an additional set of weekly patient rounds

Success of this program will be evaluated through the increase in evidence based practice and sharing of information among the groups, as well as by competition in reaching the goal of 100% certification.

There has been no oncology educator in the inpatient area while the outpatient area has had an educator for the past 5 years. This individual taught the basic oncology content and the ONS chemotherapy biotherapy course for the in and outpatient areas. The manager and CNS decided to move forward with an assessment of learning needs and the motivation for certification. Most of the inpatient nurses are currently not OCN Certified, while about 2/3 of the outpatient nursing staff is certified. The plan is to use socialization, education, evidence based practice and certification to unite the two areas.

### **1341802 BUILDING THE ONCOLOGY NURSING BREAST BIOPSY TEAM: A MIDWESTERN COMPREHENSIVE BREAST CENTER EXPERIENCE.**

Heidi Basinger, BSN, RN, Ohio State University Medical Center–The James–Stefanie Spielman Comprehensive Breast Center, Columbus, OH; Megan Oroszi, BSN, RN, Ohio State University Medical Center–The James–Stefanie Spielman Comprehensive Breast Center, Columbus, OH; Jillian Garrick, MSN, RN, CNP, Ohio State University Medical Center–The James–Stefanie Spielman Comprehensive Breast Center, Columbus, OH

To enhance breast biopsy patient care through a Registered Nurse (RN) and Advanced Practice Registered Nurse (NP) team functioning at full scope of practice.

Patients needing biopsy receive news a variety of ways from: the radiologist at time of diagnostic imaging; primary care providers after results received; or a breast surgeon. Patients needing further assessment and evaluation, based on current medications or health status, may have further delays. Difficulties arise when primary care providers request surgeon referral prior to the biopsy. Surgeons often do not have immediate new patient appointment times, creating lags and possible fragmented care. Patients report moderate to high rates of anxiety during the interval between suspicion of malignancy and biopsy confirmation.

The purpose of this project was to evaluate the feasibility of a RN-NP team to facility breast biopsies in a Midwestern comprehensive breast cancer center. The conceptual model is Relationship-Based Care®, a model of nursing care that considers relationships among nurses and patients as a key factor to providing quality healthcare.

A process was developed where a RN in the breast imaging department provided first contact with the patient after the radiologist determined the need for a breast biopsy. The RN navigates the patient by communicating with the provider, educating the patient, and then establishing an appointment with the oncology NP from the breast surgical oncology department. The patient is assessed, evaluated, and followed by the NP who collaborates with the breast surgeons if further surgical evaluation is required.

This process has facilitated faster navigation through a busy system. The breast imaging department performed 14,300 diagnostic imaging appointments in 2011. Of those, 1163 required a biopsy. 21% of those biopsies were positive, meaning that 79% could be followed by an oncology NP. The RN-NP team has off-loaded 1/3 of the surgical biopsy referrals breast surgeons would formerly have received. Narrative reports from patients will be analyzed.

Utilizing all members of the breast cancer team to their fullest scope allows for better navigation through a busy system. Building the oncology nursing relationship with the patient, educating about the process as well as the procedure, and supporting the over-taxed system create enhanced patient care.

### **1341809 THE ONCOLOGY NURSE-PATIENT RELATIONSHIP AT THE CENTER OF CARE: IMPLEMENTATION OF PRIMARY NURSING.**

Diane Llerandi, MA, RN, AOCNS®, Nursing, Memorial Sloan-Kettering Cancer Center, New York City, NY; Donna

Miale-Mayer, MSN, RN, Nursing, Memorial Sloan-Kettering Cancer Center, New York City, NY; Donna Braccia, BSN, RN, OCN®, Nursing, Memorial Sloan-Kettering Cancer Center, New York City, NY; Lauren Aho, BSN, RN, OCN®, Nursing, Memorial Sloan-Kettering Cancer Center, New York City, NY; Katherine Ruan, BSN, RN, Nursing, Memorial Sloan-Kettering Cancer Center, New York City, NY; Mary Dowling, MSN, RN, OCN®, Nursing, Memorial Sloan-Kettering Cancer Center, New York City, NY

A Primary Nursing model provides humane, individualized, comprehensive and continuous nursing care. The model will improve the patient experience and deliver the highest standard of care through consistent nurse-patient relationships over the continuum of care as nursing's focus shifts from task-based to relationship-based care.

Our national comprehensive cancer center recently embraced Relationship Based Care (RBC) as our Professional Practice Model with Primary Nursing as our care delivery model. The medical staff frequently rotates; nursing has historically provided a continuous presence for patient/family in the face of a life altering diagnosis. Primary Nursing provides the framework for the delivery of care for these patients.

To actualize Primary Nursing a 43 bed inpatient hematology/oncology unit was selected as pilot due to patient's long length of stay and complex medical and psychological needs. The pilot's goal was to strengthen the unit's Primary Nursing model by incorporating RBC principles thus increasing patient/family and nurse satisfaction.

To lead the transition a primary nursing committee consisting of front-line staff and leadership was formed. The first objective was to redesign the primary nursing teams. The committee developed workshops to review the Primary Nursing Model. The Nursing staff took the charge to self schedule primary teams balancing work-life issues while upholding continuity of patient care as paramount. On admission the nurse is assigned utilizing a computerized order set, staff have the ability to retrieve primary nurse team data ensuring continuity of patient care upon readmission. The primary nurse will educate patient/family on their role and responsibility to coordinate all aspects of care through a personalized plan of care. This plan is reviewed and updated each handoff to ensure continuity between shifts.

We will utilize Press Ganey Patient Satisfaction scores and NDNQI RN Satisfaction Survey scores to evaluate interventions. A review of medical records to target 90% continuity of care from admission to discharge by Primary RN will be monitored monthly.

An increase in professional satisfaction is directly correlated to Primary Nursing and multiple requests of patient/family for "my primary nurse" demonstrate the tremendous impact our pilot is having on patient satisfaction.

### **1341813 NURSING MANAGEMENT WITH AGGRESSIVE SYSTEMIC MASTOCYTOSIS (ASM) AND MAST CELL LEUKEMIA (MCL) PATIENTS: FOCUS ON A NOVEL AGENT MIDOSTAURIN.**

Andrea Linder, RN, MS, Hematology, Stanford University, Palo Alto, CA; Jason Gotlib, MD, MS, Hematology, Stanford University, Palo Alto, CA

To increase understanding of the disease process of ASM /MCL and nursing management with Midostaurin

ASM/MCL is characterized by abnormal growth and pathologic infiltration of mast cells into major organs resulting in the impairment of function of the bone marrow, liver, spleen, gastrointestinal and skeletal systems. Mediator symptoms caused by the burden of mast cells can include anaphylaxis, flushing, syncope, night sweats. Infiltration of major organs by mast cells can produce cytopenias, pathologic fractures, malabsorption, and hepatosplenomegaly. There is no approved standard treatment to treat ASM/



MCL. Midostaurin is a novel oral investigational agent that has shown strong inhibitory activity on neoplastic mast cells to reduce histamine levels and symptomatic relief. Nursing management includes the recognition of treatment of mediator symptoms associated with ASM/MCL and of the side effects of midostaurin.

To recognize and understand the disease process of ASM/MCL with mediator related mast cell burden symptoms and nursing implications related to the intervention of Midostaurin side effects

Nursing management of patients with ASM/MCL include recognition of mediator related symptoms that can be controlled with medications such as epinephrine, corticosteroids or antihistamines. Midostaurin is a novel investigational oral agent given twice daily. Side effects most commonly associated with administration are GI complaints of nausea, vomiting, diarrhea, headaches. Zofran is given prophylactically to prevent the GI symptoms most associated with the morning dose. Cytopenias, thrombocytopenia, elevation in liver enzymes must be closely monitored to decrease the risk of infection and bleeding. Nursing management with Midostaurin must also include patient adherence to oral therapy. Medication diaries to ensure compliance with medication is essential.

Evaluating the efficacy of interventions with ASM/MCL patients involve understanding mast cell burden mediator symptoms. Nursing management of patients must include the understanding the Midostaurin side effect profile. Assessments of the severity of symptoms ongoing is essential with close monitoring of blood counts.

ASM/MCL are diseases occurring because of mast cell burden into multi organ systems. Mast cell mediator symptoms such as anaphylaxis, syncope, flushing, rash must be closely monitored. Nurses must be able to recognize and manage the multiorgan system side effects. There is no standard treatment and Midostaurin is currently under study. Nursing management includes understanding the side effect profile and efficacy of the interventions. Nursing management may include the use of medication diaries to promote compliance with an oral therapy.

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### 1341851

**CHRONIC CARE MODEL AND THE PATIENT EMPOWERED CARE MODEL IN MANAGING CHEMOTHERAPY-RELATED NAUSEA AND VOMITING.** Deborah Selm-Orr, CRNP, AOCN®, 5th Floor Clinic, Cancer Treatment Centers of America, Philadelphia, PA

Describe the use of care models in improving chemotherapy related side effects of nausea and vomiting.

Nausea and vomiting continue to plague cancer patients undergoing chemotherapy, in spite of guidelines. One of the limitations of guidelines is the presence of a disconnect between patient and provider assessment of symptoms. There is also a lack of clarity in describing steps to utilize when initial antiemetics are ineffective. At Cancer Treatment Centers of America (CTCA), patients are empowered to actively participate in all treatment decisions using the Patient Empowered Care Model. This model is similar to the Chronic Care Model, developed by Dr. Edward Wagner in the 1990s.

The purpose of this study is to describe the interrelationships between the patient assessment of care, using the Patient Assessment of Chronic Illness Care instrument, and the Incidence of Nausea Vomiting and Retching scale. Quality of Life using EORTC will also be utilized.

This study is a descriptive quantitative study, comparing 2 groups of patients. All patients must be diagnosed with cancer for at least 6 months. One group will be patients new to CTCA with the other group being existing patients.

The study is currently undergoing IRB review. It is anticipated that there will be 100 patients in each group

The use of models of care assists in exploring all opportunities to address multiple issues in caring for chemotherapy patients. This study will only address nausea and vomiting, but will demonstrate the usefulness in this approach in other symptoms.

### 1341852

**USE OF STANDARDIZED PATIENTS AND SIMULATION FOR TRAINING OF NOVICE NURSES: THE CHEMOTHERAPY EXPERIENCE.** Linda Dial, RN, MN, AOCN®, Cancer Patient Care, Vanderbilt University Medical Center, Nashville, TN; Melissa Powell, MS, RN, Cancer Patient Care, Vanderbilt University Medical Center, Nashville, TN; Judy Johnson, BSN, RN, Cancer Patient Care, Vanderbilt University Medical Center, Nashville, TN

The learners will discover the value of simulation using standardized patients, describe its theoretical underpinnings, and discuss possible application as a clinical training tool and competency development strategy.

Historically, education for nursing skills has been didactic instruction followed by variable precepted experiences in the clinical setting. Our innovative approach was experiential learning using simulation. Didactic training may address knowledge and can influence attitudes, but to fully develop skills and to alter attitudes, experiential training is likely to be most effective. Therefore, following a gap analysis, the authors involved leadership, clinical educators, simulation experts, and pharmacists in planning a novel four hour chemotherapy administration simulation utilizing standardized patients. The curriculum was based upon common complex chemotherapy regimens including safety processes, untoward effects requiring urgent critical thinking and patient management, patient education, and effective team communication.

The purpose of the Chemotherapy Simulation Lab was to bridge the gap between cognitive knowledge from the ONS Chemotherapy/Biotherapy course and its application to clinical practice for the novice chemotherapy nurse. Using Experiential and Accelerated learning theories, and concepts of continued competency assessment, a simulation lab using standardized patients and realistic clinical scenarios was implemented.

Kirkpatrick's four level model of training evaluation was applied to the chemotherapy simulation experiences. Qualitative and quantitative evaluation of the learner's reactions was conducted. Participant, faculty and standardized patient evaluations of learning were conducted through the use of checklists and surveys, group reflective discussions, and through real-time and video observations. Preceptor inquiries and participant follow up surveys at four weeks, and ongoing review of the impact of competency training through analysis of risk management data and quality results have been included in the evaluative process.

Simulation with standardized patients can be a useful strategy for additional training as part of the chemotherapy clinical practicum. Integration of hands-on simulation and standardized patients improved nurse confidence and assimilation of chemotherapy course content as initially demonstrated by lab participant responses and evaluations. Ongoing evaluation of the outcomes of simulation training and clinical competency assessment is a timely endeavor for oncology nursing practice and professional competency measurement.

### 1341880

**SIMULATION OF ONCOLOGIC EMERGENCIES IN PRACTICE: "... INVOLVE ME AND I WILL UNDERSTAND."** Amy Taylor, RN, BSN, OCN®, Inpatient Oncology, Duke Cancer Institute, Durham, NC; Annette Potak, RN, OCN®, Inpatient Oncology, Duke Cancer Institute, Durham, NC; Deborah McPeck, RN, Clinical Education and Professional Development, Duke Medical Center, Durham, NC

Describe outcomes from simulation use to foster oncologic emergency proficiency.

Oncologic emergencies (OE) can be anxiety-producing and overwhelming for staff, especially those with little clinical experience. This hematology-oncology unit has the unique capacity to

provide progressive care support for OE in step-down status. A recent unit-based Needs Assessment indicated >50% staff desired basic/advanced knowledge in three OE categories: hypersensitivity reactions, anaphylaxis, and sepsis/septic shock (HAS). Simulation provides a risk-free environment protecting both patient and staff; experience and knowledge gained by exposing staff to OE is reproducible, consistent, and encourages critical thinking development and refinement.

To develop and implement HAS simulation-based scenarios providing authentic emergency experiences in a controlled environment to ultimately maintain staff proficiency and deliver quality patient care. Following Needs Assessment data review, informal interviews with staff of varying experience levels and nursing educators provided the foundation for developing two HAS scenarios. Input suggested scenarios should range from good outcomes to code blue emergencies directed by unlimited decision options made by participants. Both scenarios incorporate disease-specific events and prompt participant emphasis on symptom identification, initiation of emergent treatments, and response recognition. The 4-hour educational session involves a brief introduction of each HAS scenario, group interaction with specific role assignment, and debriefing that encompasses scenario discussion including desired outcome, group understanding of OE, and acknowledgement of actions that could improve their performance. Behavioral observations of participant performance and post-session evaluations are used to improve current scenarios and develop additional OE simulations.

50% staff participated in 5 HAS simulation sessions; 5 additional sessions are planned. Preliminary results indicate increases in knowledge, perceived comfort with scenario skills, and use of knowledge in practice. All participating staff were extremely satisfied and perceived both scenarios as "real to life." Several staff have reported use of skills in daily practice as it relates to symptom identification, instituting early emergency precautions, implementing treatments, and recognizing responses.

OE simulations have been highly successful to maintain proficiency when infrequently faced with emergent events; additional scenarios are being developed. Participation fosters staff confidence and ultimately improves patient care.

### 1341923

**ENGAGING PATIENT CARE TECHNICIANS: A COG IN THE WHEEL OF OPTIMAL PATIENT CARE.** Tara Caltabiano, RN, Critical Care Nursing, Memorial Sloan-Kettering Cancer Center, New York, NY; Carina Marasigan-Stone, RN, Critical Care Nursing, Memorial Sloan-Kettering Cancer Center, New York, NY; Patricia Spellman, RN, Critical Care Nursing, Memorial Sloan-Kettering Cancer Center, New York, NY

Education of registered nurses (RNs) is standardized, consistent, and routinely evaluated. A need was identified to provide a similar level education to ancillary staff.

RN education is formalized and documented in literature. The same cannot be said of nursing ancillary staff education. In the intensive care unit (ICU) at our national comprehensive cancer center, Patient Care Technicians (PCT's) are a cog in the wheel that enables us to deliver outstanding patient care.

It was recognized that continuing education and support of our PCTs were key in maintaining current practices and consistent delivery of quality care. For this reason, a "Back to Basics PCT Day" was developed by ICU nurses familiar with the PCT job expectations. Attendance was required by all ICU PCT's.

A program was developed consisting of skills review and lectures from various members of the multidisciplinary team. Included were a review of point-of-care tasks, such as blood glucose monitoring, tracheostomy care, and tube feedings, with return demonstrations. Their roles in averting 'never-events' such as catheter associated urinary tract infections, ventilator associated pneumonia, wrong patient identification, decubitus, and falls

were explored under the umbrella of "patient safety". Due to the physical demand of these patients, and promotion of staff wellness, a review of proper body mechanics and use of lifting devices was demonstrated. An interactive forum was provided to promote self care and combat compassion fatigue. This program not only provided technical skills education but also an opportunity for the PCTs to explore and address the challenges of their job and work relationships. The day concluded with a formal program evaluation. Overall, this program was well received and the recognition of their learning needs was appreciated. We will annually evaluate the skills reviewed and strive to continuously improve work relationships.

This program met the objectives of providing formal education and its evaluation to the PCTs. It was also recognized that collaborative work relationships are essential for continuous optimal patient care delivery. Consistent support and guidance from RN's to PCT's will ensure that this is achieved.

### 1341928

**REDUCING CENTRAL LINE ASSOCIATED BLOODSTREAM INFECTIONS: LINE BY LINE, DAY BY DAY.** Patricia Spellman, RN, MSKCC, Patterson, NY; Riza Santillan, RN, MSKCC, Patterson, NY; Joyce Kane, RN, MSKCC, Patterson, NY

The Centers for Disease Control and Prevention (CDC) identified a decrease in central line infection rates within Intensive Care Units. We identified an upward trend. We knew we needed to achieve better outcomes for this critically ill oncology patient population.

Central line associated bloodstream infections (CLABSI) are associated with prolonged hospitalizations, increased medical costs and a substantial mortality risk. The CDC, in 2009, identified a decrease in the number of CLABSI's seen in Intensive Care Units (ICU), with no significant decline noted throughout other areas of the hospital. This National Comprehensive Cancer Center, the ICU experienced an upward trend in CLABSI's rates to 2.23 (rate per 1,000 Central Lines Days). This prompted the unit to review overall practice and follow the CDC recommendation regarding the education and training of healthcare providers.

In an attempt to reduce the CLABSI rates, an educational program was developed to address best practices regarding central line dressing changes, IV tubing changes, swab care, and bathing guidelines. Data regarding this upward trend was received from our Infection Control Department and a literature review was performed. An evidence based power point presentation was developed as an educational tool to review with all the ICU staff nurses on the hospital policy regarding care of central lines. In August, a four week program reviewed central line dressing changes, scrub the hub, frequency of tubing changes, and bathing patients with chlorhexidine. The two areas of focus were scrubbing the hub for 15 seconds along with the implementation of disposable alcohol based swab caps to use on intravenous values. The second area was proper techniques on the use of chlorhexidine for bathing patients and not diluting it.

By the end of the third quarter of 2011, the CLABSI rate in the ICU dropped from 2.23 to 0.72. We will continue to re-evaluate quarterly to identify possible trends.

To improve patient outcomes and reduce health care costs, there is an extensive interest to reduce the incidences of these infections. This back to basic educational program was identified as best practice and will be implemented throughout this Comprehensive Cancer Center.

### 1341947

**CARE OF THE RADIATION THERAPY PATIENT WITH A PACEMAKER/DEFIBRILLATOR.** Pamela Laszewski, RN, Radiation Oncology, The Barbara Ann Karmanos Cancer Center, Detroit, MI; Lena Andriths, RN, ONC, Radiation Oncology, The Barbara Ann Karmanos Cancer Center, Detroit, MI; Clara Beaver, RN, MSN, AOCNS®, AONS, BC, Radiation Oncology, The

Barbara Ann Karmanos Cancer Center, Detroit, MI; Eva Vera Cruz, RN BSN, Radiation Oncology, The Barbara Ann Karmanos Cancer Center, Detroit, MI; Cindy Zelko, RN, Radiation Oncology, The Barbara Ann Karmanos Cancer Center, Detroit, MI

To provide radiation safely to the patient with an ICP/ICD.

The number of patients with an implanted cardiac pacemaker/defibrillator (ICP/ICD) treated with radiation therapy has been increasing. A literature review revealed that our policy of weekly manufacture assessment of the ICP/ICD was not current with standards of practice.

The aim of our study was to demonstrate evidence based nursing interventions in the care of the radiation patient with an implanted cardiac device.

At the time of the radiation consult patients with ICP/ICDs were identified, a copy of their pacemaker card was placed in their chart; and the radiation oncologist and physicist were notified. The physicist calculated the total direct dose of radiation that the ICP/ICD would be exposed to and the physician was notified of this dose. The manufacturer's clinical specialist came to clinic and verified the function and settings of the ICP/ICD prior to starting treatment and on a weekly basis during treatment. The findings were reported to the nurse. Patients were assessed for any cardiac signs and symptoms (dizziness/lightheadedness, fatigue, shortness of breath, irregular heart rate) on a weekly basis by the nurse and physician.

During this study period, 23 patients were treated with weekly ICP/ICD manufacturer assessments. No malfunctions or changes in the settings were found. The results of this study were presented to the leadership committee. The policy was updated so the ICP/ICD was assessed prior to the start and at the completion of radiation treatment. During the next year 8 patients were treated with an ICP/ICD using the new policy. These devices also experienced no changes or malfunctions. The patients continued to have weekly evaluations by the nurse and physician for any cardiac changes. At the completion of treatment the patients were instructed to follow up with their cardiologist.

Patients receiving radiation therapy with an ICP/ICD requires a multidisciplinary approach. The radiation nurse must coordinate with members of the health care team, educate the patient and family members and assess the patient's cardiac status. This study provided us with evidence to change our policy to deliver care safely to our patients with a cardiac device.

### 1342015

**GETTING A HEAD START: ACHIEVING MEANINGFUL USE WITH EARLY MORNING LABS AT AN ACUTE CARE ONCOLOGY SETTING.** Jacqueline Patterson, BSN, Memorial Sloan-Kettering Cancer Center, New York, NY; Linda Ouyang, BSN, Memorial Sloan-Kettering Cancer Center, New York, NY; Megan Leary, BSN, Memorial Sloan-Kettering Cancer Center, New York, NY

To show how drawing early AM labs have allowed oncology nurses to intervene earlier and improve patient outcomes

Our 43 bed inpatient hematology unit provides comprehensive care for patients with leukemia. Our oncology nurses understand that these patients require close monitoring of blood work because of their high risk for infection, anemia, bleeding, and electrolyte imbalances. They know the results from tests such as complete blood count, basic metabolic panel, and coagulation studies are vital, and depending on when the labs are drawn, anticipating results may delay plan of care.

To establish a structure and process for oncology nurses to provide early intervention by drawing early AM labs.

A pilot project was initiated early 2011 and involved a multidisciplinary team consisting of the LIPs, RN's, and Laboratory Services. A designated time was strategically chosen in which all leukemia patients' labs are drawn. At 5am, RN's draw all leukemia patients' blood work and send to laboratory services. Anticipating it, the lab will run and post electronically the results. If there are

any critical values the lab will notify both the RN and LIP. The 5am hour was chosen because the time in which early morning labs are drawn correlates with the time in which patients are woken up to get vital signs and morning weights, all crucial in deciding the plan of care. While a patient may be asymptomatic, blood values may indicate severe anemia, bleeding, and hyper-conditions from chemotherapy such as electrolyte imbalances, which may indicate tumor lysis syndrome. To prevent patients from becoming symptomatic, providing nursing and medical staff with these values early, expedites interventions such as blood transfusions, anticoagulation, and electrolyte repletions.

Nursing staff have found drawing early labs expedited the care of their patients. In turn, patients have reported increased confidence in their care.

As a result of early AM labs on our hematology unit, earlier chemotherapy initiation and patient discharges have occurred.

### 1342016

**HEEDING THE CALL TO IMPROVE QUALITY AND SAFETY IN THE DELIVERY OF NURSING CARE; REDESIGNING ONCOLOGY NURSING ORIENTATION COMPETENCY ASSESSMENT TOOLS.** Altagracia Mota, RN, MSN, OCN®, Nursing Professional Development, Memorial Sloan-Kettering Cancer Center, New York City, NY

This presentation will demonstrate the application of quality and safety initiatives in the redesign of oncology orientation competency assessment for nurses. The redesign of competency assessment tools was based on the Quality and Safety Education for Nurses Initiative (QSEN) and the Novice to Expert theories of skill acquisition.

Academic and practice partnerships have suggested bridging nursing education and the assessment of nursing competencies across all learning environments. This led to a collaborative departmental initiative to revise current competency assessment tools for oncology nursing orientation at this comprehensive cancer center.

Existing competency assessment tools were redesigned and competency statements re-grouped to reflect the QSEN competencies of patient centered care, team work and collaboration, evidence-based practice, quality improvement, safety and informatics. With the incorporation of the skill acquisition theory, competencies were divided into three levels. Level one, identifies competencies that demonstrate the acquisition of knowledge of concepts and theories required for the management of the oncology patient and general orientation to the institution. Level two, identifies general nursing skills required for the care and management of patients regardless of the oncology sub-specialty. Level three, delineates competencies requiring higher level psychomotor and critical thinking skills in applying focused nursing concepts to a specific oncologic patient population.

The purpose of this project was to redesign tools with a focus on the assessment of quality and safety competencies for the delivery of oncology nursing care. These competencies were designed to assess nurses at different dimensions of learning during orientation, incorporating the theories of skill acquisition

These assessment tools were implemented into our current orientation program. Newly hired nurses are assessed based on these criteria. Surveys will be distributed to stake holders for the evaluation of new tools. Outcomes will focus on improved orientation to the role of oncology nurse and the delivery of safe, quality care.

The Institute of Medicine has put out a call for the improvement of education systems that will ensure the delivery of safe, quality care across settings. The development of QSEN competencies has established a framework for using these concepts to enhance the orientation of oncology nurses.

### 1342024

**BREAST AND CERVICAL CANCER SCREENING INTERVENTIONS FOR ASIAN AMERICAN WOMEN: SYSTEMATIC REVIEW.** Jongwon Lee, PhD, RN, College of Nursing, University

of New Mexico, Albuquerque, NM; Mauricio Carvallo, PhD, Psychology, University of Oklahoma, Norman, OK

(1)To have a better understanding of breast and cervical cancer screening interventions that reflect the unique culture and meet the needs of Asian American women. (2)To determine the type of breast and cervical cancer screening interventions that best help maximize the access to hard-to-reach populations.

Disparities in cancer screening continue to be a significant health problem among ethnic minority women, particularly, among Asian American women. A number of intervention studies have been conducted in an effort to increase the screening rates for breast and cervical cancer in this population, yet little attention has been paid on evaluating the effectiveness of such interventions. Interventions that are culturally sensitive and cost-effective must be identified to maximize the access to hard-to-reach populations in the U.S., for example, Vietnamese women who have never been screened for cervical cancer.

The purpose of this study is to: (a) systematically review the literature on breast and cervical cancer screening interventions among Asian American women, (b) evaluate the effectiveness of such interventions in improving breast and cervical cancer screening of this population, and (c) provide guidance with respect to appropriate interventions available to help maximize cancer screening in this population.

To identify the intervention studies aimed to increase breast and cervical cancer screening among Asian American women, four electronic databases (i.e., PubMed, CINAHL, PsycINFO, and Web of Knowledge) were searched using the following key words: breast cancer, cervical cancer, screening, intervention(s), and Asian American. Twenty-four articles were considered relevant and retrieved for the review. To organize and synthesize the findings of the selected studies, Garrard's guideline for review of the literature will be applied.

To determine interventions that work best for this population, the findings will be synthesized and reported in terms of the type of intervention: (a) approaches (i.e., single vs. multifaceted), (b) components (i.e., individual-directed, peer-directed, or community-directed), (c) means (i.e., written material-based vs. media-based), (d) strategies (i.e., access-enhancing vs. awareness-enhancing), and (e) places (i.e., individual home vs. community site visits). Besides, the interventions that work for Asian American women as a whole will be discussed.

Findings from this review will contribute to informing all aspects of future development and implementation of culturespecific interventions that help maximize the access to breast and cervical cancer screening of Asian American women.

### 1342026

**EXPAND THE SCOPE OF PRACTICE FOR INSERTION OF PERIPHERALLY INSERTED CENTRAL CATHETERS (PICC) BY A REGISTERED NURSE.** Roxanna Man, BSN, MHA, City of Hope, Duarte, CA

To increase efficient and quality of PICC line insertion, maintenance of PICC line, through the implementation of a standardized procedure and orders.

Insertion of PICC lines has become the primary responsibility for a registered nurse. Assuring there is a standard process to document insertion and patency of PICC line in the medical record is essential from a risk management perspective. Delay of patient care can occur when there is unclear ownership for the tip confirmation after insertion. Assuring there is clearly defined organizational responsibility and policy and procedure are important to ensure PICC RN practices competently within scope of practice.

Develop an organizational wide approach in collaboration with physicians for the insertion, placement confirmation, management and follow up care for PICC when inserted by a registered nurse.

The following interventions/activities were completed to clearly define the scope of practice for a RN inserting a PICC line: developed standardized policy and procedure which allowed the

nurse to read and determine preliminary tip location, develop a process to assure informed consent by the physician and procedure consent by the PICC RN, developed Pre-Printed Orders for PICC insertion and post-insertion line maintenance, created patient education tools in written and audio-visual format to assist with informed consent process and development of standardized documentation into the medical record through a dictated note.

Preliminary results of these new products have demonstrated increased efficiency for confirmation of placement and use. The proctoring physicians have also reported competency in the nurse's ability to determine preliminary tip location. The teaching tools have greatly alleviated the patient's anxiety prior to the insertion procedure and patients have expressed that they feel more adequately informed. Additional metrics are pending.

As nurses expand their scope of practice, it is important to clearly defining the scope of practice from a legal and risk management perspective. Identifying and creating all of the required elements, while timely and labor intensive were important to assure that the needs of the organization, patients and end users were met.

### 1342044

**COLORECTAL SCREENING DECISIONS IN ADULTS AT INCREASED RISK.** Karen Greco, RN, ANP, College of Nursing, University of Arizona, Tucson, West Linn, OR; Barbara Piper, DNSC, RN, AOCN®, FAAN, College of Nursing, University of Arizona, Tucson, AZ

Generate a grounded theory model that describes the social processes associated with participant's colorectal cancer screening decision-making.

Colorectal cancer is the third most common cancer in adults with twenty percent of cases occurring in individuals with a family history of the disease. Only half of adults over age 50 and 25 percent under age 50 with a family history of colorectal cancer undergo recommended screening. Understanding factors that influence colorectal cancer screening decisions in populations at increased risk is limited. Early detection is necessary since early stage colorectal cancer is asymptomatic and treatment of advanced disease is not that effective.

Develop a theory that describes and explains colorectal cancer screening decision-making processes in adults at increased colorectal cancer risk.

A qualitative design based on grounded theory. Builds upon and extends a previously developed theory that described and explained breast cancer screening decision-making processes in women age 55 and older at increased risk for breast cancer.

Open ended interviews using a semi-structured interview guide were conducted with 32 adults ages 26 to 83 meeting National Comprehensive Cancer Network criteria for being at increased risk for colorectal cancer. Interviews were digitally recorded and transcribed. Using grounded theory analysis, transcripts were examined, validated codes and themes developed, and emergent relationships identified, to build the theoretical model.

Participants were aware of their colorectal cancer risk, focused on guarding against cancer in their own lives and often took on strong advocacy roles with their family, friends and community promoting colorectal cancer screening. Colorectal cancer was described as "the hidden cancer" that isn't talked about. Being diagnosed with cancer was described as shocking and devastating, especially in males who describe colorectal cancer as "not on the radar" prior to diagnosis. Prior to individuals being aware of their risk, colorectal cancer screening is often put off due to the inconvenience, need to take time off work, cost and other priorities. Understanding how individuals at increased risk for colorectal cancer make screening decisions is crucial to designing effective interventions that facilitate adherence to screening guidelines. Nurses play critical roles in assessing colorectal cancer risk and facilitating screening behaviors.

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