

# 2014 Oncology Nursing Society Annual Congress: Podium and Poster Session Abstracts

Each abstract has been indexed according to first author below.

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## Podium Sessions

### EXPLORING DISTRESS CAUSED BY BLAME FOR A NEGATIVE PATIENT OUTCOME: ONCOLOGY STAFF EXPERIENCES.

Judy E. Davidson, DNP, RN, FCCM, CNS, University of California, San Diego; Shannon Brouman Chakedis, BS, RN, OCN®, University of California, La Jolla; and Donna Agan, BS, RN, OCN®, University of California, San Diego

**Objective:** The learner will be able to describe the incidence and characteristics of distress caused by being blamed for a negative patient outcome among oncology staff.

**Topic Significance and Study Purpose, Background, and Rationale:** The personal impact of being blamed for a negative patient outcome has been studied only in the context of error-related second victim research and not specifically blame. Moral distress (MD) is distress that occurs when healthcare providers know the correct action but are prevented from doing it; a phenomenon seen higher in healthcare workers who deal repeatedly with end of life issues, such as oncology staff. We propose that the distress incurred from blame for a negative patient outcome is similar to the distress experienced with MD and includes a moral obligation, moral consequence, and at least one symptom reported in the literature associated with MD. We propose that actions published to minimize MD could extend to prevention or treatment of distress caused by blame. There is no literature regarding these hypotheses at this time.

**Methods, Intervention, and Analysis:** No tool to measure blame could be found in the literature. After IRB approval, multiple-choice questions were constructed to answer seven hypotheses. Questions were modified for use with audience-response clickers (ARCs) and iteratively subjected to construct and content validation by a panel of experts and staff nurses. The tool was piloted using ARCs during national nursing oncology seminars. Data were analyzed using descriptive statistics, Mann-Whitney U, Spearman Rho, or chi square as indicated by hypothesis.

**Findings and Interpretation:** Blame-related distress was reported in 41 (59%) of 70 participants. All with complete data disclosed a moral obligation and moral consequence. All but two had symptoms similar to those reported in the literature with MD. Therefore a small proportion of blame-related distress is different than MD. There was no relationship between previous training, resource use, intent to leave, or career length with distress level or duration of symptoms. This varies from the MD literature where career length increases residual distress. Intent to leave position was significantly greater ( $p < 0.0001$ ) with more reported symptoms.

**Discussion and Implications:** The majority of participants experienced blame-related distress with consequences on retention and/or employee health. Operationalizing a blame-free environment requires team collaboration to address blame that originates from multiple sources. This project is being replicated within other disciplines and specialties to increase generalizability.

### NURSE-LED INTERVENTIONS FOR DYSPNEA MANAGEMENT IN INDIVIDUALS WITH LUNG CANCER.

Jennifer Lounsbury, RN (EC) Adult, BScN, MN, CON(C), Grand River Regional Cancer Centre, Kitchener, Ontario, Canada

**Objective:** Do nursing interventions for dyspnea management in lung cancer patients improve dyspnea scores and quality of life?

**Topic Significance and Study Purpose, Background, and Rationale:** The purpose of this study was to evaluate the effectiveness of improving dyspnea scores and quality of life in lung cancer patients through implementation of nursing interventions for dyspnea management. The implementation of an Advanced Practice Nurse (APN) Led clinic for Dyspnea Management

was guided by pre-existing research by Corner and colleagues (1995) and Bredin and colleagues (1999) to include: assessment of breathlessness, understanding the meaning of symptom, recognition of problems that require medical intervention, offering breathing retraining, use of relaxation techniques, and goal setting. It was hypothesized that patients that attended an APN Led Dyspnea Management Clinic would have improved outcomes in dyspnea ratings, qualitative accounts of the experience of dyspnea, and improved overall quality of life.

**Methods, Intervention, and Analysis:** This study included eligible adult lung cancer patients who were referred to the Dyspnea Management Clinic at a regional cancer centre. It was an ethics review board approved study. The participants who consented were enrolled for a one hour consultation and one to three follow up visits. True understanding of the symptom from the patient perspective was guided by the patient reported Edmonton Symptom Assessment tool (ESAS), the Palliative Performance Scale (PPS), and the CCO/CPAC Algorithm and Guide to Practice. Thus, validated and reliable tools guided all initial consultations and enhanced assessments for dyspnea.

**Findings and Interpretation:** This research was a mixed methods study. During the period of May 2010 and December 2013 forty three individuals with lung cancer participated in the study. There were improvements in dyspnea and fatigue scores. This was compared to a sample size of forty individuals from a historical control group who received standard care prior to the inception of the clinic.

**Discussion and Implications:** This research builds on the best evidence of randomized controlled studies and international best practice guidelines. Study recommendations highlight the significance of oncology nurses in implementing a comprehensive approach to address symptomatology in patients with underlying lung cancer. Oncology nurses are key leaders in symptom assessment and education. This evaluation study will serve to inform health care providers, policy makers and society on how to improve quality symptom management for those living with the complex symptom of dyspnea.

### ENHANCING PATIENT EDUCATION THROUGH THE USE OF A BREAST BIOPSY EDUCATIONAL BOOKLET.

Amy Singer, MSN, RN, Megan Oroszi, BSN, RN, CBCN, Joyce Hendershott, BSN, RN, CBCN, and Grazia Sorice, BSN, RN, CCRN, all at the Ohio State University James Cancer Hospital, Columbus

**Objective:** Describe the positive impact a customized breast biopsy educational booklet can have on patient learning and satisfaction.

**Topic Significance and Study Purpose, Background, and Rationale:** Providing clear and effective patient education is essential to quality nurse-patient relationships. The literature shows that when patients' health information needs are met, they have less anxiety, a greater sense of control and report higher levels of satisfaction. This mid-west comprehensive cancer center has a dedicated nursing staff to provide one-on-one teaching to patients preparing for breast biopsy. Upon evaluation of workflow and patient feedback, nurses identified a need to enhance teaching sessions. In collaboration with the patient education department, a customized educational booklet was created to improve education for patients preparing for breast biopsy. The booklet was added to teaching sessions to promote active engagement of patients in their care in order to improve patients' preparedness for breast biopsy. The purpose of this project was to evaluate the booklet to determine if the delivery method and content were effective in meeting the patients' learning needs.

**Methods, Intervention, and Analysis:** Over a three month period a short online survey questionnaire was administered through SurveyMonkey. Likert scale questions and an area for open comments were used to gather data. During their teaching session, patients were invited to participate in the survey.

Patients were e-mailed a link to take the survey or provided a hardcopy questionnaire with a self-addressed envelope.

**Findings and Interpretation:** Forty-four patients agreed to participate in the survey. A response rate of 61% (n=27) was achieved. Survey results indicated the booklet was an effective teaching tool for patients to know what to expect before, during and after breast biopsy (100%). Respondents strongly agreed that the amount of materials provided was helpful (59%); were easy to read and understand (77%) and organized in a useful way (69%). Recommendations were made to add section tabs in the booklet to facilitate searching for specific information.

**Discussion and Implications:** Successful collaboration between nurses and the patient education department resulted in developing an effective patient education tool. A customized booklet to supplement nurse-led teaching sessions was helpful in preparing patients for a breast biopsy procedure. Survey findings are consistent with the literature that providing clear and effective patient education in a supportive environment promotes patient learning, satisfaction and quality outcomes.

**A RETROSPECTIVE ANALYSIS OF GABAPENTIN THERAPY IN THE MANAGEMENT AND PREVENTION OF PAIN IN OROPHARYNGEAL CANCER PATIENTS TREATED WITH RADIATION THERAPY.** Sarah Afonso, MS, RN, Zhi Cheng, MD, MPH, Marian Richardson, MD, MPH, MySha Allen, MS, RN, Raju Raval, MD, DPhil, and Harry Quon, MD, DPhil, all at The Johns Hopkins Hospital, Baltimore, MD

**Objective:** This study evaluates the effectiveness of gabapentin in improving symptoms in oropharyngeal cancer patients receiving radiotherapy. Outcomes measured were onset of mucositis, days to narcotic initiation, and weight loss.

**Topic Significance and Study Purpose, Background, and Rationale:** Patients undergoing radiotherapy (RT) for oropharyngeal cancer (OPSCC) experience mucositis, dysphagia, odynophagia, and weight loss. Recent evidence provides a novel role for gabapentin in blocking synaptogenesis after injury, making it an effective agent in controlling painful mucositis. The goal of this retrospective study was to evaluate outcomes in three cohorts of persons with OPSCC undergoing RT: G1) patients with a gastrostomy tube (PEG) not receiving gabapentin G2) patients with PEG's receiving gabapentin, and G3) patients without PEG's receiving gabapentin. Outcomes measured included onset of mucositis, initiation of narcotic use, and weight loss from beginning to end of treatment.

**Methods, Intervention, and Analysis:** Records of OPSCC patients treated with and without gabapentin during the course of RT at an NCI designated comprehensive cancer center between July 2010 and September 2013 were reviewed. The patient characteristics (age, disease stage, pathology, concurrent chemotherapy, RT dose, opioid/gabapentin use, weight change, and onset of mucositis) were analyzed by descriptive statistics. ANOVA and Tukey tests were used to compare weight changes (%), mucositis (grade 2 and 3), and number of days to initiation of narcotic use.

**Findings and Interpretation:** Sixty-eight patients with OPSCC receiving RT were divided into three cohorts G1 (n=24), G2 (n=25) and G3 (n=19). The mean percentage of weight loss was 8.02, 7.99, 6.36 (p=.44). The median days to appearance of grade 2 and grade 3 mucositis were 31, 24, 19 (p<.01), and 36, 31, 34 respectively (p=.54). Group 3 had the earliest incidence of grade 2 mucositis (p<.05). The mean initiation of narcotic use was 19, 33, 28 (p<.01). Group 1 had earlier use of narcotics than group 2 (p<0.05).

**Discussion and Implications:** The use of gabapentin is an effective way to manage and prevent pain. The patients using gabapentin had an earlier time to grade 2 mucositis, yet initiated narcotic use later. The percentage of weight loss was lowest in G3 indicating the routine placement of a PEG is not warranted,

reducing risks associated with this invasive procedure. These outcomes demonstrate the need for a rigorous, randomized control trial to increase the generalizability of the results.

**DISCHARGE ISN'T THE END: WE'RE STILL WATCHING.** Molley Henneberry, RN, OCN®, Kelsey Skogen, RN, BSN, Brianna Biggins, RN, BSN, Rhonda Gradwohl, RN, MSN, and Jeannine Brant, PhD, APRN, AOCN®, all at the Billings Clinic, Montana

**Objective:** Introduce a new method of follow up assessment following discharge for acute care oncology patients to reinforce discharge instructions and decrease readmissions through earlier identification of patient needs.

**Topic Significance and Study Purpose, Background, and Rationale:** Oncology nurses at a Magnet, NCI-affiliated health care system identified a need to improve patients' transition to home after discharge from the acute oncology setting. According to the literature, patients are most vulnerable during transitions of care, and calling patients post-discharge can decrease anxiety and reinforce discharge instructions. While post-discharge telephone calls are a growing practice, little is known about the outcomes of post-discharge calls in patients with cancer. Although this organization is ranked as the safest in the US by Consumer Reports, nurses sought to surpass the already high expectations.

**Methods, Intervention, and Analysis:** Oncology nurses developed guidelines to call patients 24 to 72 hours post-discharge. Telephone conversations included assessments of: 1) pain, 2) wounds, 3) nutritional intake, 4) bowel and bladder function, 5) activity tolerance, 6) medication adherence or questions, 7) confirmation of follow-up appointments, 8) and discharge education comprehension. Following implementation, data revealed that some patients were being readmitted to the hospital between the 24-72 hour post-discharge call and the next follow up appointment with the provider. Therefore, the program was modified to include an additional telephone call from the outpatient nurse navigator around day 7 post-discharge. This process further enhanced the transition from acute care to the home setting. All phone conversations are documented in the electronic record to facilitate communication between disciplines.

**Findings and Interpretation:** Since initiation of the program, over 1000 patients with cancer have been called post-discharge. Prevention of readmission and adverse events occurred due to early recognition of uncontrolled symptoms, disease exacerbation, and lack of discharge education comprehension. For example, one patient was referred to the provider for excessive wound drainage, which prompted an evaluation and emergency surgery. Another example involved educating a post-surgical patient with cancer to initiate timely anticoagulation therapy which would have otherwise been delayed. Referrals have also increased to other multidisciplinary members including dietitians, diabetes educators, providers, and the symptom management team.

**Discussion and Implications:** Nurses can easily adapt a Call Back program to facilitate transitions of care from the oncology acute care setting to the home environment. This ultimately may increase patient safety and satisfaction and potentially decrease hospital readmissions.

**INTRAVENOUS IMMUNE GLOBULIN INFUSIONS IN AN ADULT OUTPATIENT SETTING: EVIDENCE TO EFFECT POLICY CHANGE.** Gail Bower, RN, OCN®, Donna Dietz, RN, OCN®, Gail Myers, RN, OCN®, Trudy Bennett, MHSA, BSN, RN, and Adele Spegman, PhD, RN, all at Geisinger Medical Center, Danville, PA.

**Objective:** At the completion of this presentation, participants will identify the process for examining policies that have relied on traditional nursing processes rather than researched evidence.



**Topic Significance and Study Purpose, Background, and Rationale:** Intravenous immunoglobulin (IVIG) is a blood product with primary and off-label uses, typically administered monthly in outpatient hematology/oncology clinic settings. IVIG products have been purified over two decades of use. Research findings report that adverse reactions are rare; often manifest as chills, nausea or back pain; and usually occur within the first hour of initial treatment. Despite this evidence, infusion policies typically require frequent vital signs throughout an infusion. This study investigated the efficacy of traditional practices by examining safety outcomes and patient and caregiver perspectives.

**Methods, Intervention, and Analysis:** After IRB approval, retrospective data were retrieved for 176 infusion encounters at an ambulatory clinic in 2009. Prospective data were collected from 7 RNs who routinely infuse IVIG at the clinic and 33 patients who received IVIG infusions over a 3-month period. Printed surveys were used to examine nurses' and patients' experiences and perspectives of care provided during the IVIG infusions. The financial impact was calculated to examine the cost of monitoring vital signs over a one-year period.

**Findings and Interpretation:** Retrospective data identified reactions in 3 of 176 infusion encounters (1.7%), similar to those reported in professional literature (0.4-1.2%). Symptoms were self-reported; none were revealed through vital signs. All infusions were safely completed after symptom relief. Surveys indicated that patients were not bothered by frequent vital sign monitoring, and all patients perceived safe care. Nurses unanimously reported the current policy to be inefficient. Calculations identified that, for each 4 hour infusion, 120 minutes were dedicated to monitoring and recording vital signs; 150 infusions per year resulted in a cost for nursing time of more than \$8,000.

**Discussion and Implications:** This study found that, in the outpatient setting, frequent vital signs did not lead to the early recognition of adverse reactions to IVIG. In contrast, patient self-reporting of symptoms contributed to safe care. This research, endorsed by nursing leadership, director of hematology and site pharmacist, has led to adoption of a revised policy. The results highlight the value of coaching patients to self-assess for symptoms of adverse reactions and reinforce the need for nurses to scrutinize the relevance of traditional practices in the modern healthcare delivery system.

**A PILOT TO DETERMINE THE EFFECTIVENESS OF INTEGRATING NUTRITION SCREENING AND REFERRAL INTO THE NURSING ASSESSMENT PROCESS.** Nida Torres, RN MSN OCN®, Irene Siminski, RN, BSN, Leonora Renda, RN, BSN, and Marcia Gruber-Page, RN, MSN, MS, all at the University of Arizona Cancer Center at St. Joseph's Hospital and Medical Center, Phoenix, AZ

**Objective:** Our primary goal is early identification of patients at risk and the implementation of timely interventions to prevent deterioration of a patient's nutrition status.

**Topic Significance and Study Purpose, Background, and Rationale:** Adequate nutrition for cancer patients has been linked to positive clinical and patient outcomes (Cunningham, 2008). Weight-loss among cancer patients is an indication that their nutritional status is compromised. Evidence shows that this negatively impacts recovery. Early intervention is the key to achieving good nutritional status during cancer treatment. To address the weight loss observed among our patients receiving chemotherapy, our nurses collaborated with the clinical nutritionist to determine ways to identify meaningful changes in a patient's nutritional status and to refer appropriate patients for nutrition intervention. Oncology nurses providing chemotherapy are well positioned to assess the nutritional status of patients during the course of their treatments. Our primary goal is early identification of patients at risk and the implementation of timely interventions to prevent deterioration of a patient's nutrition

status. The secondary intent of this pilot is to identify ways to make the best use of our scarce clinical nutrition resources. This pilot project allows us to test the effectiveness of integrating an evidence-based nutrition screening and referral system into the established nursing assessment process.

**Methods, Intervention, and Analysis:** The Academy of Nutrition and Dietetics Oncology Tool kit was used for this project. Key elements from the screening criteria were consolidated and incorporated into the computerized daily nursing assessment and work flow was established to facilitate nutrition referrals. Screening tool training was conducted for nursing staff prior to implementation. Nurses complete the nutrition screening and refer at-risk patients to the dietitian. Monthly audits are conducted to measure nutrition screening, referrals and patient nutrition status.

**Findings and Interpretation:** The number of nutrition referrals from the Infusion Center has increased during the first 5 months of this pilot. The nurses identified 32 patients who met the risk criteria and referred them to the dietitian. Twenty six demonstrated a measurable improvement in their nutritional status while three patients did not improve due to disease progression

**Discussion and Implications:** This pilot appears to support this process as an effective method of identifying patients at risk and providing successful nutrition intervention for chemotherapy patients. The collaboration between nursing and nutrition professionals has resulted in a meaningful referral process that makes the best use of the resources and improves the patient's nutrition status. This will be expanded to include patients receiving treatment in Radiation Oncology.

**BEFORE WE BEGIN: DOES A PRE-TREATMENT EDUCATION PHONE CALL INCREASE SATISFACTION FOR THE NEW OUTPATIENT CHEMOTHERAPY PATIENT?** Denise Fleming, RN, BSN, OCN®, and Ruth Pina, RN, BSN, OCN®, both at the University of California Davis Health System, Comprehensive Cancer Center, Sacramento

**Objective:** Participants will be able to state the benefit of a pre-treatment education phone call as a nursing intervention to increase patients' satisfaction with their first chemotherapy experience.

**Topic Significance and Study Purpose, Background, and Rationale:** New chemotherapy patients were presenting to the infusion room unprepared for their first treatment. For many, a week or more had passed since their physician had presented their chemotherapy plan, creating anticipatory anxiety. In addition, these plans did not include crucial information regarding the infusion room experience. Patients were not fully aware of the length of treatment, infusion room expectations, the need to pre-hydrate and to bring their chemo-related medications. Nor were they uniformly informed about food, guests, parking, and other information. Nurses were using precious chemotherapy teaching time resolving preventable problems and conflicts. This impeded the teaching process and slowed unit efficiency.

**Methods, Intervention, and Analysis:** We designed and implemented a nursing pre-treatment education phone call as a unit-based project to improve patient satisfaction. Nursing staff was queried and a literature review was conducted. Nurses and managers worked collaboratively to author a nurse-driven, infusion-specific New Chemotherapy Patient Education Phone Call Template with a corollary Electronic Medical Record smartphrase cue. A survey to assess each patient's response to the pre-treatment call was developed. A nurse placed the calls the day before the treatment. The template was amended based on feedback and will be shared.

**Findings and Interpretation:** Forty patients were assessed over a one-month period, with 19 providing feedback about the pre-treatment phone call. 100% of those patients reported the call had increased their satisfaction and reduced their anxiety. Patients stated the education increased their feelings of control

and confidence. They valued having realistic expectations and appreciated having a pre-established relationship on their first day of treatment. Additional benefits included the identification of treatment obstacles or scheduling conflicts so that management could be notified and pre-emptive planning could occur. Nurses reported an increase in receptivity to teaching and shortened LOS because the patients were more prepared on arrival. The success we achieved from the program led us to expand it to include non-chemotherapy patients.

**Discussion and Implications:** The pre-treatment education phone call is a simple, achievable and relationship-based nursing intervention to reach, teach, and empower the new chemotherapy infusion patient. It improves clinic efficiency and sets the stage for a successful first encounter for the patient and the nurse.

**REMEMBERING THE “MAYONNAISE JAR AND TWO CUPS OF COFFEE” CONCEPT: A NEW APPROACH TO COMBATING BURNOUT AND COMPASSION FATIGUE.** Jenny Sliheet, RN, BSN, Ned Adams, RN, and Cynthia Bedell, RN, all at the Mary Crowley Cancer Research Center, Dallas, TX

**Objective:** Develop and implement a sustainable approach to combat and prevent compassion fatigue in the oncology research setting.

**Topic Significance and Study Purpose, Background, and Rationale:** Most oncology nurses will face a period of time of either burnout or compassion fatigue during their career. These stressors can lead to job turnover, absenteeism and illness. Compassion fatigue has been called the “cost of caring.” It is characterized as a secondary trauma evoked by exposure to continuous emotional conditions in the oncology research environment. Symptoms can manifest in irritability, poor attitudes and depression. Our oncology research clinic wanted to explore a new way to prevent compassion fatigue in our nursing and allied health staff. A committee of coworkers was assembled and a Compassion Fatigue Initiative created. Objectives, staff participation and emotional stressors were identified and served as the platform for the initiative. The focus of the initiative was to incorporate techniques to help individual staff members recognize destructive attitudes, identify healthy coping behaviors and provide appropriate tools. A professional psychologist assisted the group with achieving these objectives.

**Methods, Intervention, and Analysis:** The initiative consisted of six weekly sessions. Objective evaluation was performed utilizing a ProQOL questionnaire at baseline, the end of the sixth session, and a planned three month post class time point. Each hour-long class opened with a relaxation exercise followed by interactive dialogue reviewing the previous weeks events and highlighting recently implemented learned strategies. We proceeded to discuss compassion fatigue, effective communication, trigger emotions, balance management, grieving, death and dying, and coping strategies. Homework included cultivating a positive outlook on life by a regular review of our daily blessings, identification of trigger emotions, and journaling. Each class concluded with notes of affirmation and appreciation to one another.

**Findings and Interpretation:** The ProQOL evaluation at the end of the six weeks showed a relatively stable Compassion Satisfaction Scores, significantly improved Burnout Scores, and slightly improved Secondary Trauma Stress scores. Subjectively, participants expressed satisfaction with the content of the classes, improvement in the ability to recognize trigger emotions and other stressors and respond appropriately. Due to the improvement in the post questionnaire findings, we hope the proposed objectives will be sustainable. A three month post questionnaire has been scheduled. Based on those results, we will determine the long term goals of this initiative.

**Discussion and Implications:** Long term implications are pending the three month post questionnaire.

**AN EVIDENCE-BASED PRACTICE PROJECT TO DETERMINE EFFECTIVENESS OF DAILY BATHING WITH 2% CHLORHEXIDINE WIPES IN ADDITION TO EXISTING BUNDLED INTERVENTIONS TO REDUCE CENTRAL LINE ASSOCIATED BLOOD STREAM INFECTION (CLABSI) RATES IN PATIENTS ADMITTED TO A BONE MARROW TRANSPLANT UNIT.** Kavitha Nair, BSN, RN, OCN®, University of Texas Southwestern University Hospital, Dallas

**Objective:** To describe the outcomes of successfully implemented, nurse-led, evidence-based project conducted in an adult Bone Marrow Transplant unit to decrease the rate of CLABSI.

**Topic Significance and Study Purpose, Background, and Rationale:** Central line associated blood stream infection (CLABSI) constitutes one of the most frequent hospital acquired infections (HAI). Prevention of CLABSI is even more challenging in patients with a compromised immune system. Higher incidence of CLABSIs in patients admitted to a Bone Marrow transplant Unit (BMT) in spite of strict compliance with recommended guidelines resulted in an evidence based project designed to answer the question: Can daily bathing with 2% Chlorhexidine wipes in addition to existing CLABSI bundle interventions decrease the rate of CLABSI in patients admitted to BMT unit? A comprehensive search for the literature revealed a meta-analysis that included 12 studies in intensive care units and a multi-center study that included a BMT unit. Critique of the evidence provided support for the use of 2% CHG bathing in reducing HAI overall. The purpose was to assess the impact of non-rinse daily bathing with 2% CHG impregnated wipes in preventing CLABSI in patients admitted for stem cell transplant (SCT).

**Methods, Intervention, and Analysis:** Using the IOWA model as a framework, analysis of retrospective infection control data revealed evidence 80% of CLABSI occurred in patients with an absolute neutrophil count (ANC) of less than 500. A three month pilot for the use of 2% CHG wipes with daily bathing in patients with ANC less than or equal to 500 was initiated on a 18 -bed BMT unit.

**Findings and Interpretation:** A 20% reduction in CLABSI was reported during the three month period which is consistent with the evidence obtained from literature. Based on findings, it was decided to continue the use of 2% CHG wipes.

**Discussion and Implications:** CLABSIs constitute one of the most frequent hospital acquired infections in the United States, which is significant in Oncology population. In the year 2008, Center for Medicaid and Medicare services announced that it would no longer pay for adverse events that a hospital can prevent by following evidence based guidelines and CLABSI is listed as one of those events, cost of which is substantial in terms of mortality and financial resources. Outcomes of this project sheds light on the effectiveness of 2% CHG wipes in improving central line infection rates in Oncology and other non-ICU areas which facilitates patient safety and quality.

**Underwriting or funding source name:** This project was done as part of University of Texas Southwestern Medical Center sponsored Evidence Based Practice Project to improve patient outcomes through evidence-based practice.

**PARTNERING WITH A SCHOOL OF NURSING TO DEVELOP NURSING COMPETENCY FOR CHEMOTHERAPY ADMINISTRATION IN AN ACADEMIC HEALTH SYSTEM.** Tanya Thomas, BA, BSN, RN, OCN®, and Regina DeGennaro, DNP, RN, AOCN®, CNL, both at the University of Virginia School of Nursing, Charlottesville

**Objective:** Describe the process for developing oncology nurse competency in chemotherapy administration at an academic health system.

**Topic Significance and Study Purpose, Background, and Rationale:** Achieving competency in administering chemotherapy may be stressful for novice nurses. Current health care complexity demands developed critical thinking skills to address patient needs while simultaneously learning to safely administer chemotherapy. Desired clinician outcomes included: increased confidence; decreased knowledge gap related to chemotherapy administration, and reduced delays in initiating chemotherapy. The use of simulation with mannequins is employed in nursing education to teach content, develop clinical skills, apply nursing theory and validate competency. With increased complexity, procedures and need for specialized knowledge, simulation was selected for novice and experienced nurses to enhance clinical reasoning, address system complexity and invite reflective learning.

**Methods, Intervention, and Analysis:** The expertise of chemotherapy competent nurses and experiences of novice nurses guided the competency restructuring process. Revised processes included: increased frequency of offering the ONS Chemotherapy and Biotherapy Provider Course; a hands-on practicum in the School of Nursing Clinical Simulation Learning Center (CSLC), and dedicated time with chemotherapy preceptors. Five four-hour individualized training sessions allowed the learner to be the chemotherapy nurse with preceptor. The focus included learning through administration of all scheduled chemotherapy. Ten clinicians with nine months to twenty years of experience completed a simulation-based chemotherapy competency over twelve months.

**Findings and Interpretation:** Process revisions allowed most clinicians to become providers and report increased confidence with chemotherapy administration. Consistency with practice exists and time to complete competency process is reduced from seven months to two months. The process is expedited with increased nurse satisfaction, increased chemotherapy-competent nurses and maintenance of patient safety. By mid-March 2013 every nurse earned provider status. By May 2013, 100% chemotherapy competence was achieved. These findings are consistent with the literature. Consistent clinician feedback included verbalization of increased confidence and comfort when administering initial chemotherapy. No chemotherapy errors have occurred.

**Discussion and Implications:** Expanding use of simulation to teach clinicians provides consistent assessment for chemotherapy administration competency. Simulation might be expanded to other aspects of oncology clinical practice. Partnering with an interprofessional team might improve collaboration and communication and enhance teamwork. The safe learning environment allows for development of critical thinking skills and invites inquiry and reflection.

**AN ACTIVE VOIDING TRIAL PROTOCOL FOR THE POST-OPERATIVE UROLOGIC/GYNECOLOGIC SURGICAL PATIENT. A SIMPLE “JUST DO IT” TO IMPACT SATISFACTION, COST, AND QUALITY.** Joanna Ferreri, BSN, RN, and Annie Krupka, BSN, RN, both at Lehigh Valley Health Network, Allentown, PA

**Objective:** Discuss components and benefits of a protocol for active voiding trials in the post-operative urologic/gynecologic surgical population.

**Topic Significance and Study Purpose, Background, and Rationale:** Traditional post-operative care for the urologic/gynecologic surgical patient involves a passive voiding protocol trial to assure the patient's ability to independently and fully empty their bladder. The time frame for this protocol is minimally 8 hours, but can extend to 26 hours, and involves bladder scans and up to 3 straight catheterizations. One year ago, an alternative to this protocol—active voiding—was begun in an academic, community Magnet hospital on a 20 bed oncology medical-

surgical unit. The primary purpose was to decrease length of stay associated with the prolonged passive voiding trial. No literature detailing the active voiding protocol was located in nursing journals or texts.

**Methods, Intervention, and Analysis:** At 6:00 a.m. post-operative day one, patients on the active voiding protocol have 250-300 milliliters of saline instilled via their urinary catheter, followed by immediate catheter removal, retaining the saline. The patient is then requested to immediately void and if the resultant amount is 75% of the instilled volume, the patient is cleared for discharge. This contrasts to the passive voiding protocol which also begins at 6:00 a.m., and subsequent discharge not occurring for at least 8–26 hours.

**Findings and Interpretation:** Outcomes associated with the active, compared to passive, voiding protocol include: decreased length of stay; elimination of straight catheterization; decreased potential for catheter associated urinary tract infections (CAUTIs) and urethral trauma; and, more accurate assessment of urinary retention due to instillation of a defined amount of saline and immediate voiding.

**Discussion and Implications:** Many of the aforementioned outcomes have the potential to decrease cost per case. Another financial impact relates to third party payor reimbursements, which are heightened through decreased CAUTIs and enhanced patient satisfaction. Finally, the active voiding protocol is less time intensive for nurses. This presentation has implications for surgical oncology nurses in acute care settings who care for the urologic/gynecologic patient; implementation of this innovative protocol can be readily adapted to positively affect cost efficiencies, clinical nurse sensitive quality indicators, nursing workflow, and patient satisfaction.

**COMPARISON OF THE USE OF A DECISION AID FOR PATIENTS DIAGNOSED WITH PROSTATE CANCER BETWEEN THOSE WITH MID-LEVEL AND ADVANCED STAGE DISEASE.** Randy Jones, PhD, RN, FAAN, Patricia Hollen, PhD, RN, FAAN, and Terran Sims, PhD, RN, FAAN, all at the University of Virginia, Charlottesville; and Christopher Thomas, MD, Wake Forest Comprehensive Cancer Center, Winston-Salem, NC

**Objective:** To test a decision aid for patients with prostate cancer that facilitates informed, shared decisions about treatments that affect quality of life.

**Topic Significance and Study Purpose, Background, and Rationale:** Approximately 238,590 men were diagnosed with prostate cancer in the U.S. and 29,720 died due to prostate cancer in 2013, making it the second leading cause of cancer death among men. Currently, no interactive decision aids (DA) exist for treatment decision-making in prostate cancer. The purpose of this study was to explore testing a DA for patients with prostate cancer to help facilitate informed, shared treatment decisions with their nurse/physician that affect health-related quality of life.

**Methods, Intervention, and Analysis:** A single blind, pretest/posttest design using a mixed methods approach was used to measure three decisions over the course of prostate cancer directed treatment for men in a cancer center setting. These consequential decisions included starting, changing, and stopping anti-cancer treatment. The DA included immediate computer-assisted Quality of Life - Patient Reported Outcome (QL-PRO) results and an interactive DA with decisional balance sheets provided by the oncology nurse. A hermeneutic phenomenological approach was used in this study's portion to capture DA feasibility and acceptability by 49 patients/supporter pairs; baseline administration time was also assessed for feasibility.

**Findings and Interpretation:** Participants believed the DA was useful and helped them with in-depth thinking about treatment decisions. Participants believed the DA was time efficient (QL-PRO completion, <5 minutes; interactive decisional balance



sheets, physician ~5 minutes and nurse ~25 minutes). Overall themes did not vary much based on disease stage and were as follows: 1) the DA helped to understand treatment decisions; 2) quality of life was more important than quantity of life; and 3) frequent contact with the healthcare provider had a great influence on the decision.

**Discussion and Implications:** Prostate cancer patients, their supporters, and healthcare providers face complicated decisions regardless of disease stage. These findings support the feasibility and acceptability of this interactive DA to enhance treatment decisions in a collaborative team manner. This comprehensive DA has the potential to assist healthcare providers in oncology clinical practices give more efficient and acceptable healthcare.

**Underwriting or funding source name:** NIH/NCI and Robert Wood Johnson Foundation.

**DISASTER RECOVERY; MAINTAINING PATIENT SAFETY AND QUALITY CARE FOLLOWING SUPER STORM SANDY IN RADIATION/ ONCOLOGY.** Linley Rasamny, BSN, RN, ONC, Samantha Ganey, BSN, RN, and Maureen Oliveri, BSN, RN, all at New York University Langone Medical Center, New York

**Objective:** During the disaster recovery process, our objective was to maintain consistent radiation therapy treatment and quality care of patients despite loss of our inpatient radiation oncology department.

**Topic Significance and Study Purpose, Background, and Rationale:** Natural disasters create enormous challenges for healthcare systems in maintaining a high standard of care and patient safety. Radiation therapy is one of the primary treatment modalities for malignancies, destroying cancer cells with high energy particles. Radiation therapy is given daily over several weeks; interruptions to treatment can result in tumor re-growth and poor outcomes. The oncology nurse is a crucial part of the interdisciplinary team, playing a vital role in mediating the physical and emotional impact during radiation treatments.

**Methods, Intervention, and Analysis:** 1. Prior to the storm, patients were told that Monday's treatments were canceled and to await further instruction. 2. Super-storm Sandy led to evacuation of all New York University Langone Medical Center (NYULMC) in-patients. The lower levels of the hospital were flooded, destroying our in-patient treatment facility, including two linear accelerators, a high-dose rate brachytherapy unit, CT simulator, and a gamma knife radiotherapy machine. The outpatient center, although not flooded, lost electricity for a week. 3. Though without power, our interdisciplinary team convened to provide patients with updates and a treatment resumption plan. 4. Within 24 hours of power restoration, treatment resumed at the ambulatory care center with expanded hours of operation; 13 hour weekdays and additional weekend hours. 5. Space was reallocated for patients arriving from nearby hospitals in need of treatment. 6. A new in-patient transportation workflow was created to assure safe and effective transportation and handoff between facilities. 7. New roles were created, including in-patient and outpatient liaisons, to manage in-patients needing radiation therapy at the outpatient setting. Collaboration with social work, ambulance companies, and the interdisciplinary team at both in-patient and outpatient units were facilitated through use of email and telephone communication.

**Findings and Interpretation:** 1. Within five days after the storm, 80% of patients on treatment were contacted. 2. Of 117 patients, 114 (91%) completed treatment within 4.5 days of power restoration. 3. Today, we treat 130 patients daily at the ambulatory care center in comparison to the 117 patients treated between the two units. 4. Thirteen hour weekdays continue, with an additional five hours on Sundays. 5. The revised workflow has allowed roundtrip transportation for over 100 inpatients.

**Discussion and Implications:** 1. With the help of our interdisciplinary team, radiation nurses successfully maintained safe and effective care for patients despite losing our inpatient facility and electricity. 2. The disaster preparedness and management model presented above may be used as a guideline in the future.

**PERCEPTION OF ADVANCE CARE PLANNING FOR JAPANESE WOMEN WITH EARLY STAGE CANCER.** Yuki Asakura, PhD, RN, OCN®, University of Colorado, Aurora

**Objective:** To describe Japanese cancer women's perception on advance care planning and cultural implications while supporting advance care planning

**Topic Significance and Study Purpose, Background, and Rationale:** Advance care planning (ACP) is the process that allows individuals to choose a path of care in the event that they are unable to make a decision for themselves. The concept of advance care planning is much broader than merely putting wishes in writing; however, misconceptions exist. The purpose of this study was to gain understanding of perceptions of Japanese women with early stage cancer about ACP. A theoretical model for ACP was developed from review of current knowledge. This study was significant to developing culturally sensitive intervention in supporting ACP in this Asian population.

**Methods, Intervention, and Analysis:** This study utilized ethnography guided by phenomenology. Fifteen semi-structured qualitative interviews were conducted between January 2009 and March 2010 with ten Japanese women with breast or gynecological cancer, recruited from Kochi (rural) and from Tokyo (urban) prefectures in Japan. The mean age of the study participants was 46.6 years; range was 37 to 59 years. The audio-recorded interviews lasted from 21 to 110 minutes (M = 65.1). The time from diagnosis to interview ranged from 3 months to 18 months (M = 11 months). Data were transcribed and analyzed in Japanese language to preserve cultural meanings and contexts. Data were coded and categorized, using ethnographic /phenomenological technique and then were analyzed in both language in a way to derive cultural themes. These codes and categories were analyzed as a whole to preserve the cultural meanings. Quotations in Japanese and English illustrated findings.

**Findings and Interpretation:** Data analysis yielded a set of rich findings including culturally descriptive and contextual themes, and themes specific to ACP. Overall, the concept of palliative care is not well diffused in Japanese society and participants had demonstrated difficulty grasping the concepts. Regardless, participants expressed a willingness to learn about ACP and recognized the significance of developing advance directives. Enryo, sasshi and amae were identified as concepts grounded in Japanese culture and can be found in their communication style. The overarching theme was "Culture and Dynamics in Japanese Communication influencing advance care planning: Sasshi and Amae." Significant cultural implications related to the importance of families in the ACP process were identified. Through the perspectives of these participants, Japanese fundamental concepts were found to have significant influence on decision-making process in ACP.

**Discussion and Implications:** The implications of this study for practice are extensively applicable for any health care workers who are involved with ACP, because all health care providers need to work to encourage patient-centered decision-making. Cultural sensitivity in practice is one of the most important components of supporting patients and their families. The study results give us a better understanding of Japanese women's perspectives regarding ACP after having a cancer experience. While no participants had prepared an AD, they were not necessarily opposed to writing one. Participants' knowledge of AD was extremely limited. Therefore, robust strategies to disseminate the information regarding AD are necessary in Japan.



One of the most important foci of nursing education has been cultural competency. Despite this focus, teaching culturally sensitive communication skills has been challenging. Although concepts of palliative care and ACP are advanced level concepts in nursing education, entry-level nurses can be involved with ACP and patient/family decision making in everyday practice. Cultural sensitivity is critical to discussions about ACP in Japan because of social norms, including a strong sense of community. Health care providers such as registered nurses need to be trained and must become skilled in promoting ACP, which would ultimately lead to the development of AD. Awareness of cultural expectations and assumptions assists healthcare providers in developing skills that promote ACP.

#### **MALE CAREGIVERS FOR WOMEN WITH BREAST CANCER: UNDERSTANDING THE PSYCHOSOCIAL IMPACT ON SPOUSES AND ROLE OF ONCOLOGY NURSES.**

Marshalee George, PhD, MSPH, MSN, CRNP-A, AOCNP®, Johns Hopkins University School of Medicine, Baltimore, MD; Sarah Dihmes, PhD, and Jessica England, PhD, both at Johns Hopkins Bayview Medical Center, Baltimore; and Catherine Klein, MBA, BSN, RN-BC, OCN®, and Mehran Habibi, MD, MBA, both at Johns Hopkins University School of Medicine

**Objective:** To describe associations between marital distress and male caregiver adjustment to spouse's breast cancer diagnosis.

**Topic Significance and Study Purpose, Background, and Rationale:** The diagnosis and treatment of breast cancer require extreme coordination of care among a multifaceted team of providers. Outside of this team, husbands often become primary caregivers within the complex support network that breast cancer patients acquire throughout the course of this illness. Although breast cancer can alter roles within the families, the literature has traditionally highlighted women as caregivers for their spouses with cancer. Breast cancer treatment can create stress not only for patients but also for their husband caregivers. The uncertainty of a couple's future at the time of a breast cancer diagnosis may cause a spouse to adapt poorly, and the cancer treatment may also affect physical and emotional intimacy. The existing literature fails to show the prominent role men have in caregiving. This study examined the impact of several factors on men's psychosocial adjustment to their wives breast cancer.

**Methods, Intervention, and Analysis:** Recruited male caregivers of women with breast cancer (N=65) and surveyed them about breast cancer illness factors, relationship satisfaction, depression, and intimacy. Pearson correlations determined significant relations between the variables. Marital distress in relation to depression and spousal dysfunction in intimacy was measured through Baron and Kenns (1986) test with a series of regression analyses. Significance was determined by Sobel tests.

**Findings and Interpretation:** Stage of cancer was related to level of marital distress, depression and intimacy. The more advanced stage of breast cancer was associated to less marital distress. Spousal dysfunction in intimacy was associated with husbands whose wives had mastectomies or received chemotherapy. The results of this study support prior evidence that men are at risk for psychosocial deficits and strain when providing informal care to a loved one.

**Discussion and Implications:** These results will increase awareness of distress in male caregivers of women with breast cancer. A precursor to strong spousal support is the relationship between spouses. This bond can be a strong predictor of illness adjustment, emotional liability, and psychological well-being. Oncology nurses can play a role in assessing male caregiver's adjustment to spouse illness by developing programs that provide psychosocial support through education and counseling.

#### **OVARIAN CANCER: IMPROVING QUALITY OF LIFE OUTCOMES FROM DIAGNOSIS THROUGH TREATMENT.**

Elaine Zapata, MSN, ARNP, AOCNP®, and Saunjoo "Sunny" Yoon, PhD, RN, both at the University of Florida, Gainesville

**Objective:** Evaluate the efficacy of a theory-based, novel nursing intervention introduced to ovarian cancer patients at time of diagnosis to help reduce symptom-related distress and decrease levels of uncertainty throughout treatment

**Topic Significance and Study Purpose, Background, and Rationale:** Ovarian cancer is the second most common gynecologic cancer. Most patients experience late stage diagnosis followed by an onslaught of medical management, often resulting in high levels of uncertainty, increased symptom-related distress and substantial decrease in overall quality of life (QOL). Research directed at improving QOL outcomes for cancer patients meets an important ONS research priority. This study seeks to address a current research gap that exists in terms of theory-based, nursing interventions aimed at improving QOL outcomes for newly diagnosed ovarian cancer patients: 1) What factors affect their QOL outcomes; 2) Can a theory-based, novel nursing intervention TEALs for You! (Therapeutic and Educational Access Link) developed by the PI, improve QOL outcomes from outset of diagnosis through treatment? Review of the literature demonstrates these patients experience significant decreased QOL across all domains yet despite the strong link between psychosocial adjustment and QOL outcomes, no theory-based nursing intervention aims to improve these factors at diagnosis outset. Furthermore, patients who are more engaged in treatment planning have less anxiety regarding follow-up, surveillance and the possibility of recurrent disease. Collaboration between nursing scientists/clinicians working with this population can help empower patients to understand their disease management, encourage active participation in care planning and facilitate communication between patients and healthcare providers

**Methods, Intervention, and Analysis:** We hypothesize the intervention group will demonstrate significantly higher QOL outcomes and less symptom distress at diagnosis (1-2 weeks), treatment initiation (6 weeks), during treatment (3 months) and post-treatment (6 months). Thirty newly diagnosed ovarian cancer subjects will be randomized to either the intervention or control group (standard of care). Mishels Uncertainty in Illness Theory provides a framework to examine levels of uncertainty. Dependent variables will be measured in terms of QOL outcomes (Distress Thermometer, MUIS, Symptom Distress, City of Hope QOL-OVAC scales) and symptom distress (salivary cortisol levels).

**Findings and Interpretation:** Study findings will be disseminated to scientific communities through professional conferences and publications following study completion.

**Discussion and Implications:** Potential to immediately impact current clinical practice exists in terms of how oncology providers communicate disease management with patients and caregivers and lead to development of nursing interventions and complementary therapies to improve QOL from diagnosis outset.

#### **REDEFINING BLOOD STREAM INFECTIONS IN ONCOLOGY PATIENTS WHEN REPORTING CENTRAL LINE ASSOCIATED INFECTIONS.**

Wilson Yen, RN, MSN, Lauri Brunton, RN, ADN, OCN®, Jan Shepard, RN, ADN, OCN®, and Patricia Palmer, RN, MS AOCNS®, all at the University of California Davis Health System, Sacramento

**Objective:** The participant will identify on example of a common skin commensal blood stream infection and one example of a mucosal barrier injury blood stream infection.

**Topic Significance and Study Purpose, Background, and Rationale:** Healthcare associated infections are benchmarked

to evaluate inpatient nursing unit performance. Central Line Associated Bloodstream Infections (CLABSI) are monitored by the Center for Disease Control (CDC) and are a national safety goal for the Joint Commission. Our Medical Oncology/ Stem Cell Transplant (SCT) unit had a persistently high CLABSI rate (2.7/month) despite multiple improvement attempts. The Oncology Unit Manager was under scrutiny by nursing administration requiring actions to bring the CLABSI incidence within the benchmark. Neutropenic patients with long length of stay accounted for the majority of cases. An analysis of CLABSI measurement criteria identified a potentially inflated rate. In May 2013, a CLABSI nurse champion was assigned from the Quality and Safety department. A team was formed consisting of the Nurse Manager, infection control nurse and three oncology unit Clinical Resource Nurses. A literature search revealed additional CDC classification of Mucosal Barrier Injury (MBI) for neutropenic and stem cell transplant patients.

**Methods, Intervention, and Analysis:** Nineteen infections were identified and reviewed from 1/13-9/13. Group classifications were: Common Skin Commensals (CSC) (preventable, associated with CLABSI) 7/19, MBI (not preventable) 9/19 and other (not preventable infections). CSC infections were gram positive, while MBI are primarily gram negative, resulting from translocation of intestinal organisms in severely neutropenic and post allogeneic stem cell transplant patients. Other infections resulted from capnocytophaga (dog saliva) and patient repeated removal of central line caps. Interventions then centered on reducing CSC incidence with focused evidence based changes and education for the nursing staff.

**Findings and Interpretation:** The change in criteria for preventable and non-preventable infections and focused interventions reduced the CSC infection rate to zero for the months following the change in practice. Average CLABSI rate dropped to 1.0/month. The CDC estimates average CLABSI cost as \$16,550. A CLABSI case reduction of 1.7/month (20 cases annually) eliminates \$337,620 in care costs.

**Discussion and Implications:** Correctly defining and identifying BSI in oncology creates important implications for healthcare systems. Unavoidable MBI CLABSI occurrences in neutropenic patients can inflate the incidence rate and adversely affect hospital accreditation and reimbursement. Analysis of CSC infections results in appropriate interventions for prevention and control, reducing hospital acquired complications and associated costs.

**MAKING THE CALLS THAT MATTER MOST.** Michelle Wasko, MS, BSN, RN, NE-BC, Lisa Merritt, BSN, RN, OCN®, Jan Sirilla, BSN, RN, OCN®, Robin Rosset, DNP, RN, CNP, AOCN®, and Dareth Gilmore, MSN, RN, CNP, AOCN®, all at the Ohio State University James Cancer Hospital and Solove Research Institute, Columbus

**Objective:** The Ohio State University James Cancer Hospital Hematology and Transplant Clinic initiated a post discharge call-back and follow-up visit protocol for Blood and Marrow Transplant patients released from the hospital.

**Topic Significance and Study Purpose, Background, and Rationale:** The purpose of the protocol is to address concerns of the discharged patient related to care, services, medications, education, and symptom management. Additional purposes are to decrease hospital readmission rates and obtain reimbursement fees for post-discharge call backs and clinic visits within 7 days of discharge. Clinical rationale is that by calling the patient within 24-48 hours of discharge, many problems are identified and corrected immediately. Return visits allow for comprehensive systems exams and provide follow up guidelines and care. Literature suggests that these measures are instrumental in decreasing readmission rates, but many facilities lack the funding to fully support these implementations (L. Doctoroff, 2013).

**Methods, Intervention, and Analysis:** In early 2013, an interdisciplinary transition clinic team including nurses, physicians, nurse practitioners, and billing was established to determine how to incorporate the Center for Medicare and Medicaid Services (CMMS) new transitional care codes that provide fee schedules that allow for follow-up calls and early clinic visits. By utilizing the readmission data and analyzing each phone call for patient safety and billing requirements on a monthly basis, it was then researched to see if the protocol met the specific goals of decreasing readmissions and provided a higher level of patient satisfaction. Using an electronic database, the data was tracked on an ongoing basis to determine efficacy and influence. The discharged patients are entered along 30 data points that help map and track quantifiable outcomes measures.

**Findings and Interpretation:** In two months, readmission rates have decreased an average of 6%. Patient satisfaction scores remain above national benchmark. Revenue for 90 day accounts receivable is pending.

**Discussion and Implications:** In ongoing follow-up meetings, the protocol is now being introduced to other specific service line patient populations. The goal is to implement within the entire cancer hospital. As outcome measures continue to drive future reimbursements, developing and implementing approaches to continuity of care for our transitional patients is paramount. This current protocol provides an innovated approach impacting overall readmissions and improvement in total patient care delivery.

## INTEGRATING AN EVIDENCE-BASED PRACTICE PROJECT INTO A GRADUATE NURSE TRANSITION PROGRAM: A SUCCESSFUL MENTORSHIP COLLABORATION.

Katharine Derrico, RN, BSN, OCN®, Fox Chase Cancer Center, Philadelphia, PA; and Colleen Erb, MSN, CRNP, ACNP-BC, AOCNP®, and Carolyn Weaver, MSN, CRNP, ACNP-BC, AOCNP®, both at Penn Medicine, Abramson Cancer Center, Philadelphia

**Objective:** Describe the implementation and outcomes of an evidence-based project requirement within the graduate nurse orientation program.

**Topic Significance and Study Purpose, Background, and Rationale:** As oncology nursing continues to emphasize the importance of evidence-based practice, it is vital to ensure nurses are equipped with the tools and confidence to evaluate the evidence and change practice accordingly.

**Methods, Intervention, and Analysis:** At this NCI-designated comprehensive cancer center, a pilot program was designed to support nurses in developing and implementing their own evidence-based practice projects. The program focused on the eight new graduate registered nurses participating in the Graduate Nurse Transition Program. Each graduate nurse was paired with an experienced nurse mentor from the Evidence Based Practice Council. The participants collaborated with their mentors to identify appropriate clinical questions, research the supporting evidence, and present their findings. Prior to beginning the project, the graduate nurses completed a brief questionnaire to assess their experience and confidence with evidence-based practice. These measures were then re-assessed with a follow-up questionnaire at the conclusion of the program.

**Findings and Interpretation:** Evaluation of the pilot program showed that new graduate nurses were able to successfully identify and investigate questions relevant to their daily practice, and compare the institution's existing standards to the current evidence. They clearly communicated their findings in a poster presentation to the entire nursing department. As a result of these projects, some participants determined that evidence supported a revision of current nursing standards. These graduate nurses, with assistance from their mentors, had the opportunity to present this information to the appropriate council. The

policies were then reviewed and revised accordingly, ultimately giving the graduate nurse the ability to impact nursing practice throughout the institution.

**Discussion and Implications:** In response to positive feedback from participants, mentors, and nursing leaders, the evidence-based practice project is now incorporated into the graduate nurse orientation program. This mentorship experience addressed the process of integrating evidence-based practice into the nursing role, as well as demonstrated the institution's overall philosophy that the contributions of oncology nurses at every level of practice are valued, and can indeed change practice.

## HOW MANY NURSES DO WE NEED? DEVELOPING AN ACUITY TOOL FOR AMBULATORY INFUSION CLINICS.

Penny Moore, MSN, RN, OCN®, Kevin Turner, MSM-HCA, BSN, RN, Ting Chen, MSM-HCA, BSN, RN, and Ronny Suwignjo, MS, all at the James Cancer Hospital and Solove Research Institute, Columbus, OH

**Objective:** Create an acuity tool to provide an accurate reflection of infusion nurse workload in the ambulatory infusion clinic allowing for improved productivity and nurse to patient ratios.

### Topic Significance and Study Purpose, Background, and

**Rationale:** Infusion clinics in this mid-west comprehensive cancer center continue to expand with increased volume and increasingly complex patients including many who are on clinical trials. The current productivity tool captured productivity by billable units of service which did not accurately reflect the increased acuity of patients on research protocols or those with infusion complications; including hypersensitivity reactions, new patients or those receiving blood products. Infusion nurses perceived their workload was not accurately reflected and felt frustration that vital nursing functions were not able to be accurately accounted for in the current model. The inability to accurately reflect nursing workload resulted in a disconnect between administration and nursing regarding what staffing was needed to provide the best care to patients. A literature review revealed models for ambulatory infusion which assigned acuity based on length of treatment. Infusion leaders, finance leaders and front line nurses examined different models and created their own which assigned acuity based on length of treatment and also accounted for research patients needs, teaching, desensitizations and patients requiring additional assistance with coordination of care.

**Methods, Intervention, and Analysis:** A pilot of the new acuity model was done in one infusion location where a large number of clinical trial patients are treated. Productivity at this infusion clinic had been below threshold. The charge RNs used the schedule and the acuity tool to assign an acuity value to each patient. This information was entered into a dashboard created by finance and based on acuity gave a predicted number of RNs needed each day. The charge RN then adjusted staffing based on this predicted target of needed nursing staff. The acuity of patients and the number of patients on clinical trials was manually entered by finance into the current productivity model for an adjusted productivity based on the new tool.

**Findings and Interpretation:** Following a 6 month trial the productivity of the pilot unit increased from an average of 83% in fiscal year 2013 to 96% (target productivity is 100%). This increase in productivity has allowed for the posting of an additional nursing position for this unit. The pilot provided front line nursing staff the ability to impact staffing on their unit by accurately assessing the acuity of patients and adjusting staffing accordingly. Nurses feel their work in more accurately accounted for and have an increased awareness of the necessity of flex staffing. The model will be adopted by all infusion locations

with a staggered roll-out for consistency across all ambulatory infusion locations.

**Discussion and Implications:** The pilot provided front line nursing staff the ability to impact staffing on their unit by accurately assessing the acuity of patients and adjusting staffing accordingly. Nurses feel their work in more accurately accounted for and have an increased awareness of the necessity of flex staffing. The design of the model allows nurses to easily see how staffing decisions affect productivity helping to educate and empower front line nurses. The model will also help justify additional infusion nurse staffing as ambulatory infusion treatments become more complex and nursing workload cannot always be defined by billable charges. The model will be adopted by all infusion locations with a staggered roll-out for consistency across all ambulatory infusion locations.

## ACCENTS OF INTERNATIONAL NURSES AS AN ORAL COMMUNICATION BARRIER TO PATIENT SATISFACTION WITH NURSING COMMUNICATION.

Julieta Fajardo, RN, BSN, CHPN, and Kay Swint, RN, MSN, CHPN, both at the University of Texas MD Anderson Cancer Center, Houston

**Objective:** The purpose of this presentation is to describe and discuss the outcome of an Accent Modification Class for the internationally trained nurses working in a Comprehensive Cancer Center.

### Topic Significance and Study Purpose, Background, and

**Rationale:** Background: To alleviate the nurse shortage, The University of Texas MD Anderson Cancer Center has supplemented their nursing staff with internationally educated nurses (IEN). Analysis of comments from the patient satisfaction survey revealed that about 18% of negative or mixed comments related to difficulty understanding the accents of IENs. Studies have demonstrated that language and communication, particularly of American English pronunciation, remains an issue, and a paramount need for both employers and IENs to address. In addition, ineffective communication was cited by the World Health Organization Joint Commission's sentinel event database as one of the main causes of severe adverse events.

The purpose of this pilot performance improvement project was to (1) improve the patient and family satisfaction with nursing communication on inpatient units, (2) analyze the participants' progression on accent modification, and (3) describe the participants and self-assessment of benefit in improving communication skill and confidence.

**Methods, Intervention, and Analysis:** The Division of Nursing offered a 10 session accent modification course (AMC) at the MD Anderson main campus. A speech therapist instructor specializing in English as a Second Language was recruited from the private sector. Twenty two IENs from one of the inpatient units volunteered to participate in this pilot project.

Patient satisfaction survey comments will be reviewed and monitored after the course. The pre and post participant's self-assessment and instructor's assessment of American speech sounds and talking assessment dialogue was conducted. Personal interviews with the participants during the course were conducted to monitor individual progression.

**Findings and Interpretation:** Preliminary results from the AMC have resulted in IEN improvement in pronunciation and confidence in speaking to patients and co-workers. The short term AMC has shown positive effects to IENs in addressing linguistic and sociocultural problems in communication.

**Discussion and Implications:** This project is based on a limited numbers of IENs, and responses by a larger sample might be different. Therefore, it is necessary to apply this project to a larger group in order to determine the value of accent modification courses in reducing communication barriers perceived by nurses and patients.



## STRUCTURE OF THE CARE FOR PATIENTS PROVIDED BY CLINICAL TRIALS NURSES INVOLVED IN ONCOLOGY CLINICAL TRIALS.

Izumi Kohara, RN, PhD, Jichi Medical University, Shimotsuke, Japan; Noriko Morishita, RN, MSN, Shoji Yamazaki, RN, MSN, and Yukihiro Koretsune, MD, PhD, all at the National Hospital Organization Osaka Medical Center, Japan; and Taku Yoshio, MD, PhD, and Yoshika Honda, MD, PhD, both at Jichi Medical University

**Objective:** To visualize the judgments and actions in clinical practice of clinical trials nurses involved in oncology trials.

**Topic Significance and Study Purpose, Background, and Rationale:** One of the pivotal roles of the clinical trials nurse (CTN) is to provide care for patients who participate in clinical trials to protect the rights and safety of the patients and to maintain their quality of life. However, there is limited data based on clinical practice regarding the care provided by CTNs. The purpose of this research was to elucidate the structure of the care provided to patients from CTNs involved in oncology clinical trials.

**Methods, Intervention, and Analysis:** We used the grounded theory approach to collect data and perform data analysis. Semi-structured interviews and unstructured observation were conducted. The initial interview guide for the interview included questions about the actual process of care, and challenging issues in caring for patients who participate in clinical trials. The trustworthiness of data analysis was addressed through close adherence to the method of grounded theory approach.

**Findings and Interpretation:** The investigators recruited twelve CTNs involved in oncology clinical trials and working at medical institutes. The care for patients provided by CTNs included the categories of 1) understanding not only the grade of adverse events, but also patient's individual suffering, 2) setting up details of the study before evaluation of a patient, 3) promoting care continuity for patients, 4) filling the gap in care provided by medical team members, 5) enhancing patient's strength for self-management, 6) drawing strength from patients families, 7) creating shared understanding of continuing or withdrawing participation in the trial among the patient, patients family, study staff and medical staff, and 8) respecting both the patients life and research protocols. The care provided by CTNs had 3 phases including establishing a good relationship with patients, enhancing patient's strength for self-management, and following patient's self-management.

**Discussion and Implications:** The structure of the care explained by 8 categories and 3 phases visualized CTNs judgments and actions in clinical practice. This finding also shows the excellence in care to patients provided by CTNs, because CTNs provide essential care such as enhancing patients strength or drawing strength from their families, and coordinate well among patients, their family, study staff and medical staff. Visualizing the excellence in care to patients provided by CTNs is helpful for enhancing their skills in clinical practice.

**Underwriting or funding source name:** Grant-in-Aid for Scientific Research(C), Ministry of Education, Culture, Sports, Science and Technology, Japan

## INTERVENTION FIDELITY: ACUPRESSURE FOR PERSISTENT CANCER-RELATED FATIGUE.

Dawn Frambes, RN, BSN, MSA, Gwen Wyatt, PhD, RN, FAAN, and Suzanna Zick, PhD, RN, FAAN, all at Michigan State University, East Lansing; and Richard Harris, PhD, and Susan Murphy, ScD, OTR, both at the University of Michigan, Ann Arbor

**Objective:** Participants will be able to identify the importance of elements of intervention fidelity incorporated into an RCT that teaches women to self-administer acupressure for persistent fatigue following breast cancer treatment.

**Topic Significance and Study Purpose, Background, and Rationale:** Breast cancer continues to be the most prevalent cancer among American women. Many survivors experience residual treatment-related symptoms and turn to complementary and alternative medicine (CAM) approaches for relief. Utilizing self-administered CAM provides a practical approach to symptom relief. While practical, self-administration can present challenges to intervention fidelity. The purpose of this presentation is to explain how the elements of intervention fidelity, put forth by the National Institutes for Health Behavior Change Consortium Treatment Fidelity Workgroup are incorporated into a randomized controlled trial (RCT). The trial teaches breast cancer survivors to self-administer acupressure for relief of persistent cancer-related fatigue (PCRF). The intervention fidelity elements are: 1) dose (number, frequency, and duration of sessions); 2) provider training; 3) treatment delivery; 4) treatment receipt; and 5) enactment of treatment skills.

**Methods, Intervention, and Analysis:** To date, 244 women have enrolled in the ongoing exemplar study. Eligible women experiencing moderate to severe fatigue at least 12 months post-treatment for breast cancer are randomized into one of three study groups: 1) stimulating acupressure, 2) relaxing acupressure, or 3) standard care control. A study nurse educator instructs each woman in the acupressure protocol. Participants self-administer acupressure daily for 30 minutes for a period of six weeks. Women record fatigue levels three times each day throughout the study period. The study nurse educator meets with each woman for data collection and verification/reinstruction of acupressure administration skills at study weeks three and six following training. Self-report instruments measuring fatigue and other symptoms are completed during each visit.

**Findings and Interpretation:** To contrast the ongoing RCT with other acupressure studies incorporating intervention fidelity, a review of the literature was performed. Only one study examined self-administered acupressure for PCRF. Since the exemplar study uses a self-administered intervention, it incorporates all five elements of behavioral change. Details will be shared on how each element is accomplished.

**Discussion and Implications:** Research protocols that address intervention fidelity provide results that support internal and external validity. Upon completion, the results of the ongoing study will add to the body of evidence on methods for maintaining intervention fidelity. Further, clinicians should consider recommending interventions that have incorporated fidelity methods in their efficacy testing.

**Underwriting or funding source name:** Funded by: National Institutes of Health, National Cancer Institute.

## SYMPTOM MANAGEMENT AND TREATMENT INTERRUPTIONS AMONG WOMEN WITH ADVANCED BREAST CANCER.

Gwen Wyatt, RN, PhD, FAAN, Alla Sikorskii, PhD, David Victorson, PhD, and Irena Tesnjak, all at Michigan State University, East Lansing

**Objective:** The audience will be able to discuss the relationship of symptom management and alterations in chemotherapy protocol among advanced breast cancer patients.

**Topic Significance and Study Purpose, Background, and Rationale:** Changes in chemotherapy protocol such as dose delays, reductions or stoppages can lead to suboptimal treatment of cancer. Chemotherapy interruptions may be associated with the symptom burden of treatment. Yet, little is known about the relationship of alterations in chemotherapy and symptom severity and interference with daily life. Clinicians need to understand specific aspects of symptoms as well as which symptoms may hinder dose completion, so they can provide focused symptom management interventions.

**Methods, Intervention, and Analysis:** To evaluate chemotherapy interruptions in relation to symptom severity and interference with daily life, a secondary analysis was performed on data collected in a randomized clinical trial (RCT) of reflexology for symptom management. The trial enrolled women with advanced breast cancer undergoing treatment (N=385). Symptom data were collected at baseline, weeks 5 and 11 using a valid and reliable inventory of 25 symptoms that produced summed symptom severity and interference scores. Medical records provided data on treatment interruptions and metastasis. The hypotheses of the association between dose delays, dose reductions or stoppages in chemotherapy during the study period with symptom severity, symptom interference with daily activities, and metastatic status were tested using generalized estimating equations (GEE) models.

**Findings and Interpretation:** The relationship between dose delays, dose reductions, and greater summed symptom severity was differential according to metastatic status, with higher strength of association among women with distant metastasis compared to those with loco-regional disease ( $p=0.02$ ). The interaction of summed symptom interference with daily activities and metastatic status was also significant in the analysis of dose delays and reductions ( $p=0.04$ ). When specific symptoms were considered, severity of pain was a stronger predictor of dose delays or reductions among patients with distant metastasis compared to those with loco-regional disease ( $p<.01$ ). In summary, compared to women with loco-regional disease, women with metastatic cancer had a greater chance of having alterations in chemotherapy associated with higher summed symptom severity and interference with activities of daily living.

**Discussion and Implications:** These findings underscored the importance of assessing specific details about symptoms including severity and interference with daily life, and the relationship of these symptom attributes to treatment interruptions. Among those with distant metastasis, pain may be especially problematic.

**Underwriting or funding source name:** Funding: NIH, Grant #1R01 CA 157459-01

**MINDFULNESS PRACTICE AND HEALTH-RELATED QUALITY OF LIFE OUTCOMES DURING TREATMENT FOR ADVANCED LUNG CANCER.** Rebecca Lehto, PhD, RN, Gwen Wyatt, PhD, RN, FAAN, Alla Sikorskii, PhD, RN, FAAN, and Irena Tesnjak, MS, all at Michigan State University, East Lansing

**Objective:** The learner will be able to describe outcomes of a pilot study to test feasibility and preliminary efficacy of a mindfulness intervention for patients undergoing treatment for advanced lung cancer.

**Topic Significance and Study Purpose, Background, and Rationale:** Patients with advanced lung cancer who are undergoing radiation and/or chemotherapy carry high symptom and illness burden and lower health-related quality of life (HRQOL). Novel nursing interventions are needed that patients can learn to self-manage symptoms during conventional medical treatment. Mindfulness therapy, incorporating meditation and gentle yoga practice are shown to improve quality of life for some cancer groups and support symptom management. A targeted home-based mindfulness protocol was developed with patient focus group feedback. The study purpose was to test acceptability/feasibility, and early efficacy of the home-based mindfulness therapy for HRQOL outcomes and symptom management for patients in treatment for advanced lung cancer.

**Methods, Intervention, and Analysis:** Wilson and Cleary's (1995), and Ferrans (2005) adapted HRQOL conceptual framework for symptom management guided the study. Forty patients with lung cancer [mean age:  $66.2 \pm 9.4$  years; sex:

27(67.5%) females, 13(32.5%) males; disease stage: III, 10(25%); IV, 30(75%)] receiving radiation and/or chemotherapy were randomized to receive six weekly mindfulness therapy sessions (N=20) or the attention control condition that included weekly symptom assessment interviews (N=20). HRQOL data were obtained at baseline, following the intervention, and at 11 weeks. HRQOL outcomes were measured using the validated SF-36, and symptom severity and interference were measured using the MD Anderson symptom inventory. Analysis included comparisons of study groups at weeks 8 and 11 using general linear models. Effect sizes (Cohen's  $d$ ) were estimated in addition to  $p$ -values for statistical tests.

**Findings and Interpretation:** 32 patients completed the study (16 intervention, 16 control) resulting in 20% attrition rate. The mindfulness group had significant improvement in HRQOL physical functioning parameters at week 7 ( $p=.03$ ,  $d=.80$ ) with large effect sizes at week 10 ( $p=.08$ ,  $d=.64$ ). Symptom severity and interference were also lowered in the mindfulness group compared to controls with moderate to large effect sizes.

**Discussion and Implications:** Findings from the pilot study provide preliminary efficacy data that support development of a larger scale randomized control trial for HRQOL testing. If benefits are demonstrated with a larger sample, vulnerable lung cancer patients may gain access to a scientifically sound supportive intervention for HRQOL and symptom management improvement.

**Underwriting or funding source name:** MSU Clinical Translational Science Institute Grant-GA013811.

**THE LIVED EXPERIENCE OF PRIMARY FAMILY CAREGIVER FOR A PERSONS WITH HEAD AND NECK CANCER: A QUALITATIVE STUDY.** Ann Fronczek, PhD, RN, Binghamton University, New York

**Objective:** Participants will identify at least 3 needs of family caregivers of persons with head and neck cancer.

**Topic Significance and Study Purpose, Background, and Rationale:** Oncology nurses are still in the early stages regarding research on needs specific to family caregivers of those with head and neck cancer. The purpose of this study was to describe and understand the lived experience of primary family caregivers for persons with head and neck cancer so that nurses may more fully recognize the real and potential needs of the family caregiver for a person with this specific cancer type and individualize potential interventions.

**Methods, Intervention, and Analysis:** A qualitative, phenomenological study using van Manens approach was conducted. Nine caregivers of persons with head and neck cancer were recruited from two Northeast cancer centers. Data were collected through conversational interviews that were audio-recorded, transcribed, coded, and analyzed. Rigor was ensured by writing a personal account of the phenomenon, a bracketing interview, creation of a research journal, and an audit trail. Data analysis resulted in a descriptive, interpretive exhaustive description of the family caregivers lived experience of providing care to a person with head and neck cancer.

**Findings and Interpretation:** Five themes emerged: (a) information; (b) role disruption and routines; (c) coordinating and receiving help and support; (d) vigilance, and (e) major emotions experienced. These thematic findings support previous research on the needs of caregivers including information, recognition of caregiver role changes, issues of coordination of care, and caregiver emotions. Caregiver vigilance was a new finding in the context of this population. Nurses have a responsibility to recognize the importance of family caregivers in the plans of care for persons with cancer and advocate for them by making them integral partners in cancer care.

**Discussion and Implications:** Further research is needed on family caregivers of persons with head and neck cancer.

This study described the lived experience of a small group of caregivers. Nurses must assess the family to identify care situations that have a high probability of requiring significant multidisciplinary intervention to improve outcomes.

## RESULTS FROM A PILOT EDUCATIONAL NEEDS ASSESSMENT SURVEY ON CANCER ANOREXIA-CACHEXIA SYNDROME (CACS) IN PATIENTS WITH ADVANCED NON-SMALL CELL LUNG CANCER.

Elizabeth Duus, PhD, Helsinn Therapeutics (US), Inc, Bridgewater, NJ; Mark Williams, MS, and Cassandra Matthews, MS, both at MedLearning Inc., Hasbrouck Heights, NJ; and John Friend, MD, Helsinn Therapeutics (US), Inc.

**Objective:** The objective of this pilot educational needs assessment survey was to gain understanding into areas of practitioners awareness of cancer anorexia-cachexia syndrome (CACS), as well as educational opportunities for nurses

**Topic Significance and Study Purpose, Background, and Rationale:** Cancer anorexia-cachexia syndrome (CACS) is multifactorial, whereby systemic inflammation, reduced food intake and altered metabolism contribute to loss of muscle mass and body weight. This can lead to reduced treatment tolerance/response, shortened survival, and poorer quality of life. While CACS may develop in over 50% of cancer patients, it's often under-recognized and safe/effective treatments are lacking. To gain insight into the educational needs of healthcare professionals related to CACS, a pilot educational needs assessment survey was conducted.

**Methods, Intervention, and Analysis:** A total of 1,000 fax-based surveys were distributed to practitioners specializing in medical oncology or hematology/oncology. Responses were received from 63 clinicians (47 physicians and 16 nurses). Respondents were questioned about practitioner awareness and familiarity with various aspects of CACS in patients with advanced non-small cell lung cancer (NSCLC). Data from nursing respondents are summarized.

**Findings and Interpretation:** Of the 16 nurses in this survey, 4 were nurse practitioners and 12 were registered nurses (69% specialized in medical oncology and 31% in hematology/oncology). When diagnosing cancer cachexia, 100% considered muscle loss, 87.5% considered loss of appetite, and 50% considered fatigue. The majority of nursing respondents were knowledgeable with respect to familiarity of the NCCN Practice Guidelines in Oncology for Palliative Care (19% high, 56% average, and 25% low). However, lower levels of familiarity were noted with respect to novel therapeutic interventions in development, including the role of ghrelin and ghrelin receptor agonists in CACS (81% low, 13% average, and 6% high). The top three areas where nurses indicated additional education would be beneficial were pathophysiology of cancer cachexia, treatment options and clinical evidence, and emerging FDA-approved pharmacologic options.

**Discussion and Implications:** Results of this pilot survey highlight nurses insight into key patient symptoms related to CACS, although understanding CACS pathophysiology and pharmacologic agents in development seemed to be lacking. While there appeared to be strong awareness of current palliative care guidelines, understanding of CACS diagnosis, treatment, and monitoring was average. Together, these data begin to identify potential educational opportunities for nurses to aid in better managing patients with CACS. Larger studies are ongoing/planned to confirm and expand upon these findings.

**Underwriting or funding source name:** This study was conducted by MedLearning, Inc. on behalf of Helsinn Therapeutics (US), Inc.Podium.

**PILOT: HOME-TELEMONITORING SUPPORTS SELF-MANAGEMENT FOR PATIENTS WITH LUNG CANCER.** Georgia L. Narsavage, PhD, NP-BC, FAAN, FNAP, West Virginia University Health Sciences Center, Morgantown; Yea-Jyh Chen, PhD, RN, and Trisha Petitte, PhD, RN, both at Kent State, Kent, OH; Kevin Frick, PhD, The John Hopkins Carey Business School, Baltimore, MD; and Charles Coole, BA, and Tara Forth, BA, West Virginia University Health Sciences Center

**Objective:** Participants will be able to discuss the use of telemonitors in rural areas to inform nurse coaching for patient self-management education.

**Topic Significance and Study Purpose, Background, and Rationale:** Home-telemonitoring with nurse-coaching for patients with lung cancer has potential to develop skills to self-manage symptoms and access appropriate care. A National Cancer Institute funded pilot-research used Honeywell telemonitors (GenesisDM®) to study enrolled patients in Appalachian WV. No previous studies were found.

**Methods, Intervention, and Analysis:** After the first 10 patients were enrolled for feasibility, a randomized clinical trial (RCT), descriptive design was used to study outcome differences (functional status-FS, quality of life-QOL) over 60 days post-discharge for 47 patients with and without home telemonitors (TM) (intervention N=26; control N=21): Caucasian (98%); mean age 63+/-9.9 years, male (55%), married (68%), HS+ education (85%), smoking history (96%), overweight/obese (62%), non-small-cell lung cancer (92%)-2/3 in stage IIIB-IV, 77% previous hospitalizations < 1year. RNs coached TM patients daily for 14 days using TM-data to guide phone conversations. Using an intention-to-treat approach, generalized estimating equations (GEE) tested group differences over two months' time.

**Findings and Interpretation:** Landline phones easily transmitted data; others needed monitors with built-in modems (T-Mobile®). Telemonitors captured physiological changes that could be used to explain symptom changes and inform nurse-coaching. Initial symptoms included pain, fatigue, coughing, and limited activities. Fatigue/limited activity persisted and pain/coughing decreased; poor appetite and nausea/vomiting increased by one month. TM patients showed greater improvement and more consistency in direction on both functional status and QOL than the control group. Controls had irregular levels of patient outcomes with narrower improvement compared to the TM group. Dyspnea (0 to 10 scale) showed little change for the TM group (3.7-3.8 at end); the control group had decreased dyspnea (3.1 to 2 at end) - possibly related to deaths in those who had the greatest dyspnea. Pain (0 to 10 scale) was higher initially for TM group (4 versus 3) but both groups had similar values after 2 months (2.8). Patient/family telemonitor satisfaction was high. Usual care was not satisfactory and control-group retention was problematic. TM patient self-management episodes were documented with fewer unplanned hospital episodes.

**Discussion and Implications:** Telemonitors can be used to provide real-time data from rural areas to cancer center nurses that can be used to guide care and educate rural patients to develop self-management skills in living with lung cancer.

**Underwriting or funding source name:** Funded by NIH/NCI1R15CA150999.

**A MODEL WORKSHOP FOR EDUCATING NURSES TO ADDRESS SEXUAL HEALTH IN BREAST CANCER SURVIVORS.** Andrea Smith, RN, BSN, CBCN, and Roberta Baron, RN, MSN, AOCN®, both at Memorial Sloan-Kettering Cancer Center, New York

**Objective:** To increase nurses' knowledge about sexual health issues common in breast cancer patients and to strengthen their confidence in addressing this topic with patients



**Topic Significance and Study Purpose, Background, and Rationale:** Sexuality is an important aspect of quality of life. Breast cancer survivors experience significant sexual side effects related to physical and emotional impact of disease and treatment. Review of evidence shows that nurses play a significant role in educating patients but are often reluctant to initiate the discussion on sexual health. Barriers include embarrassment, discomfort, limited knowledge, lack of time, fear of causing offense or invading privacy, low priority, and personal attitudes. At this NCI-designated comprehensive cancer center, nursing staff survey revealed similar barriers and learning needs.

**Methods, Intervention, and Analysis:** Based on survey results, a sexual health workshop was implemented and facilitated by nurses and social workers. Each session was limited in size to encourage active discussion in a more intimate setting. Content included review and management of common sexual symptoms, available resources and educational materials, and enhanced communication strategies. Learning methodologies included role playing sessions to practice communication techniques and increase confidence; use of recommended language to ease discomfort and design of a referral algorithm for more intensive interventions.

**Findings and Interpretation:** Three workshops have been conducted and a total of 16 nurses attended. Participants completed a brief program evaluation at the end of each workshop with overwhelming positive feedback and a feeling of empowerment. The nurses reported that role playing was a very effective method to practice communication skills in a safe environment. In a 3 month post-workshop survey comparison, nurses reported greater confidence (89% vs 60%); that they received adequate training (87% vs 37%) and that they discuss sexual health before a patient initiates treatment (67% vs 24%).

**Discussion and Implications:** Our early experience implementing this workshop demonstrates that an educational program can increase nurse knowledge and confidence to address sexual concerns of breast cancer survivors. This presentation will provide attendees with the curriculum, sample cases for role playing, referral algorithm and language samples and survey and evaluation tools.

## EFFECT OF INTRA-ARTERIAL CHEMOTHERAPY TREATMENT ON HEALTH-RELATED QUALITY OF LIFE IN PATIENTS WITH RECURRENT HIGH-GRADE GLIOMA.

Patricia Bruns, MSN, RN, CNS-BC, Minneapolis Clinic of Neurology, Minneapolis, MN; and Katherine Halbert, RN, BSN, John Trusheim, RN, BSN, Kathryn Gilliland, RN, BSN, Meghan Hultman, RN, MSN, and Nilanjana Banerji, RN, MSN, all at Allina Health, Minneapolis

**Objective:** To evaluate survival benefit and toxicity profile of IA chemotherapy-based treatments as well as assess magnitude of HRQOL changes reported during the course of treatment.

**Topic Significance and Study Purpose, Background, and Rationale:** Despite advances made in treatment of glioblastoma, prognosis still remains poor, with a reported median survival of 14.6 months. Various aggressive treatment modalities have been pursued for somewhat modest survival benefits. The aim of cancer treatment, especially for a dire prognosis such as glioblastoma, should extend well beyond increasing survival. Palliation of symptoms as well as maintenance (if not improvement) of quality of life (QOL) should be important goals of any treatment proposed in patients who cannot be cured of disease. We report here the effect of carboplatin based intra-arterial (IA) chemotherapy on QOL as well as toxicity profile for patients with recurrent glioblastoma.

**Methods, Intervention, and Analysis:** Patients with recurrent glioblastoma treated with IA carboplatin with/without bevacizumab were enrolled in this study. QOL was measured at

Baseline, Month 1, Month 2, and Month 4 during treatment with EORTC QLQ-30 and BN-20 questionnaires. For analysis purposes, fluctuations in scores of seven selected HRQOL domains expected to be most affected in patients with GBM were studied. These seven domains were role functioning, social functioning, visual disorder, global QOL, motor dysfunction, drowsiness, and communication deficit.

**Findings and Interpretation:** Fifteen patients have thus far completed a minimum of 4 months of follow-up in this study. Procedure-related local complications like groin hematoma, bleeding at the catheter insertion site etc. as well as distant complications including visual deficit were noticed in a few patients. Most prevalent neurological complications were headaches and focal seizures. All patients reported nausea and fatigue during therapy. Grade 4 thrombocytopenia was observed in 1 patient. Longitudinal global QOL scores were maintained or improved in all patients over the follow-up period. Improvement in scores in the role function domain was observed in 10 out of 15 patients.

**Discussion and Implications:** IA chemotherapy with carboplatin is a relatively safe and well tolerated treatment in recurrent GBM patients. In this small study cohort, no significant detrimental effects on QOL scores were noticed in the seven pre-selected domains. Rather an improvement in global QOL scores was observed in a majority of patients.

## AN EDUCATIONAL INTERVENTION TO HELP NURSES COPE WITH GRIEF AND COMPASSION FATIGUE.

Dereen Houck, RN, MSN, OCN®, WellSpan Health, York, PA

**Objective:** Identify the significance of cumulative grief and compassion fatigue and the importance of maintaining physical and emotional health by utilizing strategies and resources identified in the literature.

**Topic Significance and Study Purpose, Background, and Rationale:** The compassionate, caring relationships between nurses and oncology patients positively impact patient care. However, exposure to frequent, multiple losses and the emotional expenditures required while caring for oncology patients may lead to the development of cumulative loss and compassion fatigue. These phenomena often present significant consequences for nurses and organizations, including physical illness, substance abuse, suicidal thoughts, depression and anxiety, as well as increases in absenteeism and decreased quality of patient care.

**Methods, Intervention, and Analysis:** Oncology nurses at our community hospital have anecdotally expressed a need to handle grief alone, rather than participate in supportive activities offered by the institution. Following a literature review which revealed the importance of support for nurses frequently exposed to death and dying, a needs assessment was conducted to document the support nurses desired. A survey tool was developed, asking oncology nurses to indicate grieving preference: to grieve alone or accept assistance in the form of group support. Most nurses indicated a preference to grieve alone. Respecting these preferences, an educational intervention was developed to provide nurses with tools and resources to recognize, prevent and combat cumulative grief and compassion fatigue.

**Findings and Interpretation:** A three hour program titled Running on Empty? How to Rejuvenate, Recharge and Refill was designed. The program was divided into three sessions: Cumulative Grief and Compassion Fatigue, Holistic Self-Care, and Spiritual Self-Healing. Class content was based on current literature recommendations. Strategies such as work/life balance, boundary setting and the importance of self-care were introduced, as well as holistic health for the mind, body, and spirit. Finding activities that refresh, rejuvenate and satisfy was emphasized. Reiki and self-awareness exercises emphasized the importance of spiritual self care.

**Discussion and Implications:** In post class evaluations, nurses recognized the importance of maintaining emotional health.

Nurses reported feeling less isolated and more likely to ask for help. Post-program surveys will be conducted to ascertain the effectiveness of this intervention. While it is recognized that this educational program is not a comprehensive solution to resolving the complex issues of cumulative grief and compassion fatigue, it is anticipated that nurses will commit to better self-care and recognize when professional assistance is needed.

**DISTRESS SCREENING: MEETING THE AMERICAN COLLEGE OF SURGEONS STANDARDS (ACOS) BY 2015.** Linda Abbott, RN, MSN, AOCN®, CWON, Thoa Phan, RN, DNP, Geri Quinn, RN, DNP, and Cynthia West, MSW, LISW, OSW-C, all at the University of Iowa Hospitals and Clinics, Iowa City

**Objective:** Participants will be able to identify an electronic strategy for implementation of ACOS standard 3.2, Psychosocial Distress Screening

**Topic Significance and Study Purpose, Background, and Rationale:** Psychosocial care is recognized as one of the most important considerations when caring for people living with cancer. Less than half of psychosocially distressed patients are identified, and even fewer are treated. The National Comprehensive Cancer Network has developed guidelines and the Distress Thermometer to assist in the identification of patients experiencing distress. The American College of Surgeons Commission on Cancer has added distress screening as a standard for accreditation of cancer centers by 2015. The goal of this evidence-based practice project was to implement distress screening in the cancer clinic in a large Midwestern Academic Medical Center.

**Methods, Intervention, and Analysis:** A pilot of the Distress Thermometer was done in the first quarter of 2012. The Distress Thermometer was adapted for the electronic medical record (EMR) Welcome, Epic Systems Corporation, as a self-report distress screening. Distress screenings were done on all post-surgical and newly diagnosed breast cancer patients. Distress scores and areas of concern were displayed on an EMR dashboard in real time for providers to review. Scores of 1-5 triggered an automatic page to the American Cancer Society's Navigator and scores of 6-10 triggered an automatic page to the Cancer Clinic's social worker.

**Findings and Interpretation:** When the screening was done electronically, the percentage of patients screened increased. The percentage of referrals made to social services also increased with the electronic screening. Percentage of referrals made to the American Cancer Society Navigator decreased with the use of the electronic screening. Though providers felt that some patients had difficulty with the electronic nature of the screening, patients reported that they understood the questions and they were easy to answer on the computer.

**Discussion and Implications:** Early detection and recognition of distress can improve cancer care through timely interventions and efficient psychosocial treatment. Attending to the patients' distress can improve quality of life and increase adherence to cancer treatments. Use of an electronic versus the manual form of screening showed improved efficiency, consistent screening, and allowed distress scores to be immediately available to providers. This facilitated more timely intervention. Identifying the best location and time for patients to complete the screening continues to be a challenge.

**Underwriting or funding source name:** Daisy Foundation.

**SAFE MANAGEMENT OF PATIENTS UNDERGOING THYROID ABLATION.** Monica Beck, MSN, RN, OCN®, University of Alabama, Huntsville

**Objective:** Describe three essential principles employed when caring for the radioactive patient, while ensuring radiation exposure as low as reasonably achievable for the healthcare team.

**Topic Significance and Study Purpose, Background, and Rationale:** Knowledge of radiation safety practices is essential for oncology nurses to minimize the occupational risk of injury to health care providers and to protect the public. The prevalence of patients receiving radiopharmaceuticals in the treatment of thyroid cancer is pervasive; leading to the significant probability an oncology nurse will care for a radioactive patient. The purpose of this literature review is to provide oncology nurses with essential knowledge to minimize occupational radiation exposure while maintaining safe, effective care of the patients undergoing high-dose I-131 ablative therapy.

**Methods, Intervention, and Analysis:** Scholarly articles selected for this review were found using the CINAHL® and PubMed databases. Key words used were thyroid, thyroid cancer, iodine isotopes, and radioactive iodine ablation. Scholarly articles published in English within the last 5 years were included in the review.

**Findings and Interpretation:** Although the literature revealed current practices, guidelines, and regulations to employ the ALARA principle, a gap in the literature was found regarding evidence to support patient care practices and guidelines. In addition, innovative teaching strategies in principles of radiation safety were not found.

**Discussion and Implications:** Patients undergoing high-dose (100-150 mCi of I-131) ablative therapy for treatment of thyroid cancer place nurses at significant occupational risk due to radiation exposure. The objective employed in managing this risk is keeping levels of radiation exposure As Low As Reasonably Achievable, or the ALARA principle. Three key concepts to achieve ALARA exposure rates are time, distance, and shielding. Time spent exposed to the radioactive patient per person is minimized, generally 30 minutes per shift. The nurse bundles care for maximum efficiency, transferring care to other members of the healthcare team when time limits are reached. Patient safety risks, side-effects, and needs are assessed frequently via intercom between visits. Distance from the patient is maintained as distance and exposure are inversely related. Shielding, such as lead or concrete, blocks radiation emissions. By implementing these principles in the plan of care, the nurse mitigates the levels of radiation exposure for all individuals, such as ancillary personnel, other patients, and the public. Development of innovative teaching strategies in principles of radiation safety is the next step in advocating radiation safety in nursing.

**THE CREATION OF AN NURSING LEAD INPATIENT/OUTPATIENT ONCOLOGY HUDDLE.** Karen Schaedlich, RN, BSN, OCN®, and Noelle Clark, RN, MSN, OCN®, both at the Cleveland Clinic, Hillcrest Hospital, Mayfield Heights, OH

**Objective:** Showcase the development of a multi-disciplinary huddle between the inpatient and outpatient units with the achievements of providing increased communication and continuity of care; and unification between staff.

**Topic Significance and Study Purpose, Background, and Rationale:** Oncology patients require specialized care utilizing inpatient and outpatient resources. Collaboration between units is critical for the continuity of care. Hillcrest Hospital has an outpatient cancer center and two dedicated oncology inpatient units. A lack of partnership between the inpatient and outpatient nurses was evident with concern it was affecting patient care. Furthermore, the clinical team wanted to determine when patients were discharged if appropriate follow-up care with the oncology team was provided. Research shows that continuity of care results in better patient outcomes. However, there is limited research on nursing lead collaboration in oncology. Formation and participation was lead by the oncology units' nurse managers, nursing case-managers, nurse coordinators, and nurse educators. Social workers from each area also regularly participate in the huddle.

**Methods, Intervention, and Analysis:** The huddle occurs weekly with nurse members from each area and social work. Plan of care and discharge are discussed for all patients. Well known patients are discussed with relevant nursing care issues and the outpatient team is alerted of newly diagnosed patients to be seen upon discharge. A log of patients discussed is kept and monthly reviewed to determine if patients upon discharge had appropriate follow-up care with their oncologist.

**Findings and Interpretation:** The log has shown that we consistently follow-up appropriately with 94-100% of our patients post discharge. The findings indicate we are in line with best practice for patient outcomes.

**Discussion and Implications:** The huddle has been beneficial for multiple reasons beyond appropriate follow-up care. Nurses from all units have expressed increased knowledge of patient's course of disease, increased collaboration between units, and greater understanding for palliative care in the oncology setting. Education for nurses has increased through better understanding of oncology knowledge gaps. It has also empowered nurse coordinators to proactively advocate for their patient's current needs. An inpatient designated oncology social worker position was created as a result of the huddle identifying the need. The huddle has proven dynamic for the growth of nursing care in the oncology specialty at Hillcrest Hospital. It is recommended for any hospital with multiple oncology units. A future goal for the huddle includes helping identify patients at risk for readmission.

## EVALUATION OF AN INNOVATIVE SLEEP INTERVENTION FOR INSOMNIA IN CANCER PATIENTS: A PILOT STUDY.

Nancy (Surya) Absolon, RN, BA, BSN, Vancouver Centre, British Columbia Cancer Agency, Canada; Lynda G. Balneaves, RN, BSc, PhD, and Tracy L. Truant, RN, BSc, PhD, both at the University of British Columbia, Vancouver; Rosemary L. Cashman, RN, MA, MSc(A), NP(A), Vancouver Centre, British Columbia Cancer Agency; Margurite E. Wong, RN, MSN, Pacific Spirit Community Health Unit, Vancouver Coastal Health; and Jeremy D. Hamm, RN, MSN, Vancouver Centre, British Columbia Cancer Agency

**Objective:** To evaluate the feasibility and efficacy of a self-administered brief sleep intervention for cancer patients experiencing insomnia.

**Topic Significance and Study Purpose, Background, and Rationale:** Sleep-wake disturbances, particularly insomnia, are commonly experienced by 30-75% of oncology patients. This symptom is rarely systematically addressed by health professionals and few interventions have been found to be effective in managing this issue in cancer populations. The purpose of this pilot study was to evaluate feasibility and effect of a novel intervention to facilitate sleep in the oncology population. The intervention, based on components within mindfulness-based stress reduction and cognitive behavioral therapy, allows patients to quickly learn techniques of meditation, visualization and intonation within a clinical setting. The intervention has implications for nursing practice as it easily addresses a prevalent symptom experienced by cancer patients at the bedside.

**Methods, Intervention, and Analysis:** A mixed methods approach was used to determine whether the sleep intervention improved sleep quality and other measures. Quantitative data [Pittsburgh Sleep Quality Index, State-Trait Anxiety Inventory, and demographic variables] were collected pre- and post-intervention. Qualitative data, including field notes, sleep diary and focus group interviews, were collected to assess feasibility of the intervention, including ease with which it was learned and used by patients. Survey data were summarized using descriptive and inferential statistics to describe sample and outcomes associated with the intervention. Sleep diary, field notes, and focus

group data were subjected to thematic analysis, in which major concepts and relationships among them were identified.

**Findings and Interpretation:** The majority of participants adhered to the intervention. Significant improvement was found in global sleep quality, sleep latency and sleep quality. Qualitatively, participants reported the intervention was easy to learn, use and helped calm the mind. Sleep issues are poorly managed by health professionals. Nurses are well positioned to play a leading role in addressing and managing this symptom as part of their practice.

**Discussion and Implications:** This innovative sleep intervention holds promise as a cost-effective and minimally invasive treatment alternative that may address common, distressing and frequently overlooked sleep problems in a clinical oncology setting. Further evaluation of the intervention with a randomized clinical trial with a larger sample size from multiple study sites is recommended. This sleep intervention could become a valuable addition to symptom management guidelines for sleep-wake disturbances. Participants will be taught the intervention.

**Underwriting or funding source name:** Funding for this study and travel support for Ms. Absolon was received from the British Columbia Cancer Agency (BCCA) Stephen Berg Oncology Nursing Education and Research Endowment Fund, John Jambor Knowledge Fund, and TD Grants in Nursing Skills.

## TERMINAL PANCREATIC CANCER PATIENTS END OF LIFE EXPERIENCES: AN INTEGRATIVE LITERATURE REVIEW.

Chia-Chun Tang, RN, MSN, OCN®, and Diane Von Ah, PhD, RN, both at Indiana University Purdue University at Indianapolis, IN

**Objective:** The purpose of this review is to explore the pancreatic cancer patients end of life experiences to provide a foundation for future research, education, and practice.

**Topic Significance and Study Purpose, Background, and Rationale:** Pancreatic cancer (PC) is one of the deadliest types of cancer without a promising treatment or early detection method. At diagnosis, patients generally have low survival rates and short life expectancies. Providing comprehensive and timely EOL care is imperative yet challenging for this population. Whereas the majority of studies regarding PC focus on aggressive treatment, there is a pressing need to maximize the PC patient's comfort level at EOL. As comfort care has long been nurses' unique mission, it is nurses calling to identify and meet this population's special needs.

**Methods, Intervention, and Analysis:** An integrative literature review was conducted to examine studies published between 1980 and 2013 using key words of EOL, palliative or hospice care, and PC. Studies were obtained from the PubMed, MEDLINE®, and CINAHL® databases based on inclusion and exclusion criteria.

**Findings and Interpretation:** Among fourteen articles reviewed, half are case studies and the others are quantitatively descriptive studies (28.6%), two patients narratives (14.3%), and one phenomenology study (7.1%). The majority (42.9%) of the studies is conducted by physicians without theory guiding. Fewer studies describe EOL needs from patients or families perspectives. The top three focus areas are patients physical symptoms and signs (78.6%), communication and decision making issues (71.4%), and psychosocial aspects (64.3%). Fatigue and nutrition related symptoms are identified as the most distressing symptoms with the increasing intensity in the last 8 weeks before death. Severe and poorly controlled pain is also widely reported. Patients and families often struggle with deciding end point. Hope supports patients to fight with disease even in advanced stage.

**Discussion and Implications:** This review reveals the challenges of providing EOL nursing care: the lack of studies including nurses, unidentified theory, difficulties of deciding



end point, and underexplored patient needs. More exploratory work are needed to identify the gap between real needs and nursing practice. While symptom management is important in EOL, clinicians should also be aware of other elements such as psychosocial and spiritual needs and the interaction among them.

**Underwriting or funding source name:** The researchers are funded by BCOG Center for Symptom Management and Walter Cancer Foundation.

**EVALUATING THE IMPLEMENTATION OF A NEUROLOGIC ASSESSMENT FORM FOR PATIENTS RECEIVING HIGH-DOSE CYTARABINE.** Stephanie Szoch, RN, BSN, OCN®, Barbara Bigelow, RN, BSN, OCN®, and Karen Kaiser, RN, BSN, OCN®, all at the University of Maryland Medical Center, Baltimore

**Objective:** Describe the importance of evaluating evidence-based practice change. A standardized neurological assessment and documentation form used by nurses for patients receiving high-dose cytarabine will be used as an exemplar.

**Topic Significance and Study Purpose, Background, and Rationale:** Patients receiving high-dose cytarabine have up to a 28% incidence of neurotoxicity, requiring prompt identification and action to prevent irreversible neurologic damage. Comprehensive evidence-based assessments, accompanied by documentation and reporting of abnormal findings by nurses occur frequently in complex clinical environments. Methods that facilitate these processes are imperative to ensure adherence and promote efficient use of nurses time. Therefore, the University of Maryland Greenebaum Cancer Centers Nursing Clinical Practice Council developed a standardized neurologic assessment process and related documentation form to support evidence-based practices in patients receiving high-dose cytarabine. Evaluating nursing staff's knowledge about new processes and their impressions of the clinical utility of a tool (ease of use, time commitment and clinical helpfulness) is crucial to ensure a successful, sustainable implementation. The purpose of this project was to determine the clinical utility of new assessment processes and form and if there was an increase in staff knowledge and comfort completing the assessments. Secondary aims included determining adherence to new processes and identifying staff concerns.

**Methods, Intervention, and Analysis:** Staff completed a pre-implementation on-line survey. Questions focused on staff's knowledge regarding type of neurological assessments required, how to perform them, and ease of identifying abnormalities. Staffs perception about consistency of current assessment and documentation processes among practitioners was ascertained. Educational sessions about conducting neurologic assessments and form use were provided to address identified knowledge deficits. The form was trialed for 5 months (about one patient per week). Staff then completed a post-implementation survey using the same questions. Pre and post implementation surveys were compared using the Mann Whitney-U test and content analysis. Adherence data (form completed and correct; abnormalities reported) will be presented using descriptive statistics.

**Findings and Interpretation:** Levels of agreement were significantly higher on the post survey ( $\alpha = .79$ ) for comprehensiveness of neurological assessments and reasonable time for completion. Post-surveys showed an increase in staff knowledge regarding neurologic assessments. Nurses reported the form increased assessment and documentation consistency and facilitated communication about abnormal results.

**Discussion and Implications:** When instituting a practice change, it is crucial to evaluate its effectiveness, adherence and identify new problems. The survey can be easily adapted to assess clinical utility in similar situations.

**CANCER-ASSOCIATED ANOREXIA AND CACHEXIA IN ADULTS WITH GI TRACT CANCER: NOVEL INTERVENTION WITH ACUPUNCTURE.** Saunjoo Yoon, PhD, Oliver Grundmann, PhD, and Joseph Williams, PhD, all at the University of Florida, Gainesville; Gwen Carriere, MSN, North Florida Regional Medical Center, Gainesville; and Lucio Gordan, MD, Florida Cancer Specialist and Research Institute, Gainesville

**Objective:** At the end of the presentation, attendants will be able to provide 3 types of interventions to manage cancer-related anorexia and differentiate cancer-related cachexia from cancer-related anorexia in 2 areas.

**Topic Significance and Study Purpose, Background, and Rationale:** Cancer-associated cachexia characterized by unintentional weight loss, anorexia, systemic inflammation, and loss of muscle mass adversely impacts quality of life and overall survival. Greater than 15% of weight loss leads to impaired physiological function and 30% of weight loss can predict death in cancer patients. Despite advancements, the most common and challenging issue is to manage anorexia and nutritional status because of chemotherapy and tumor-mediated metabolic changes. Current pharmacological therapies demonstrate only short-term effects in the improvement of cancer-related anorexia and conventional nutritional support cannot reverse progression of cachexia. Studies indicate that acupuncture is beneficial for symptoms of nausea, pain and GI motility. However, acupuncture has not been studied directly for managing anorexia or cachexia. The purposes of this feasibility study were to 1) examine the feasibility of using acupuncture as an intervention in GI tract cancer patients, and 2) investigate efficacy of acupuncture as a complementary therapy to manage anorexia in patients undergoing chemotherapy for GI tract cancer.

**Methods, Intervention, and Analysis:** One group, pre-and post-test design with repeated measure was used since one major focus was feasibility of using 8 sessions of acupuncture. Convenience sample with adult GI cancer (gastric and colorectal) were included in this study. Appetite was measured with a visual analogue scale and Simplified Nutritional Appetite Questionnaire. Lean body mass and phase angle were measured with Bioelectrical Impedance Analysis (BIA). Descriptive statistics and graphs of BIA were used for data analysis.

**Findings and Interpretation:** Seven patients (4 females and 3 males; average age of 61 years) completed the intervention. Analysis indicated acupuncture was well-accepted, feasible, safe, and effective; indeed, it improved appetite in 6 out of 7 subjects. Appetite improved on average 3.47 out of 10 cm on the Visual Analogue Scale, which indicates a significant overall improvement. Subjects lost an average of 2.17 pounds, which represents a 1.25% loss over an 8 week period. The phase angle decreased on average although there was significant variability among patients.

**Discussion and Implications:** This feasibility study demonstrates that acupuncture is well-accepted among patients with cancer and potential utilization of acupuncture for anorexia and cachexia. Further studies with a control group and larger sample sizes are warranted.

**SUCCESS STORY: THE NURSES' ROLE IN DEVELOPMENT AND EXECUTION OF A LUNG SCREENING SERVICE FOR INDIVIDUALS AT HIGH RISK FOR LUNG CANCER.** Kristen Kreamer, MSN, CRNP, AOCNP®, ANP, BC, Donna Edmondson, MSN, CRNP, AOCNP®, Patricia Keeley, MSN, CRNP, AOCNP®, and Caryn Vadseth, BSN, RN, OCN®, all at Fox Chase Cancer Center, Philadelphia, PA

**Objective:** Develop a lung screening service for individuals at high risk for lung cancer at a National Cancer Institute-designated comprehensive cancer center.

**Topic Significance and Study Purpose, Background, and Rationale:** In 2012, the Thoracic Service Line at Fox Chase Cancer Center began discussing the feasibility of instituting a lung screening service (LSS) to provide evidence-based, high quality care to individuals at high-risk for lung cancer. Planning for this service included adherence to the National Lung Screening Trial (NLST) criteria. NLST results demonstrated a 20% reduction in lung cancer mortality for high risk patients screened with low dose CT. LSS intent was to create a program that not only provided low-dose screening CT but also provided the opportunity for education and referral.

**Methods, Intervention, and Analysis:** The multidisciplinary task force included nursing (practitioner, navigator and service line administrator) as well as physician colleagues. A business plan was developed including financial analysis with input regarding coding and billing. We developed a pre-screening algorithm to be used by the nurse navigator interacting with self-referred individuals. In addition, detailed procedures, follow-up mechanisms and a documentation template for initial and follow-up appointments were created along with process flow for the patient experience. The LSS went live July 2012.

**Findings and Interpretation:** A total of 28 individuals referred themselves to LSS in FY13. Sixteen individuals did not meet criteria for participation due to insufficient smoking history, age or prior diagnosis of cancer. Twelve patients were screened and triaged according to National Comprehensive Cancer Network (NCCN) guidelines: seven scheduled to return in one year, three in six months, one in three months and one patient diagnosed with metastatic lung cancer. Publicity and marketing efforts are reflected in an increase in referrals in FY14, with 18 individuals who did not meet criteria and 17 screened.

**Discussion and Implications:** A unique feature of LSS is that patients see a nurse practitioner who meets with them that same day to inform the patient of scan results and provide follow-up recommendations. This format promotes increased awareness and educational opportunity, as well as referral to our Tobacco Treatment Program to support smoking cessation efforts. The design and implementation of LSS reflects a commitment to patient centric care delivery, targets individuals at high risk, and highlights the contributions of oncology nurses in the success of the service

**DEVELOPMENT OF CLINICAL LADDER FOR ADVANCED PRACTICE.** Jerome Maxfield, BSN, MSN, CRNP, Deborah Selm-Orr, BSN, MS, AOCN®, CRNP, Janell Clark-Brown, BSN, MS, AOCN®, CRNP, Cheryl Carr, BSN, MSN, AOCN®, CRNP, Anne Ojale, BSN, MSN, AOCNP®, CRNP, and Carolyn Ruef, BSN, MSN, AOCNP®, CRNP, all at Cancer Treatment Centers of America, Philadelphia, PA

**Objective:** Describe the process of formulating a clinical ladder for advanced practice clinicians using evidence based literature.

**Topic Significance and Study Purpose, Background, and Rationale:** Currently, nursing staff within this institution are offered the opportunity for clinical ladder advancement. NP and PA practitioners expressed interest in developing a separate program for their group which includes nurse practitioners and physician assistants in clinical roles. For active engagement and job satisfaction, as well as retention, administration empowered this group to explore development of clinical ladder. Literature on clinical ladders within this specific group was scarce. This unfortunately led to utilizing literature designed for staff nurses. A recent conference regarding this issue did assist with providing direction, but the level of evidence is expert opinion, not based on any research.

**Methods, Intervention, and Analysis:** Data was analyzed from 2 articles on advanced practice clinical ladder formation. This provided framework to the subcommittee charged with developing

the program. Outcomes included reassessment of group goals and objectives. From this process it was decided to develop a foundation with mission and vision statements. These statements were based on the core values of the institution. The clinical ladder process and behavior will be based on core values and the mission and vision statement of the Advanced Practice Professional Council (APPC) group. This will ultimately improve engagement and lead to improved patient satisfaction and patient care.

**Findings and Interpretation:** Limited review articles were available from the literature review. It was determined that further opportunities exist to promote advanced practice through the development of a clinical ladder within the institution, throughout the enterprise, and possibly as a national program.

**Discussion and Implications:** Clinical ladder processes have improved staff nurse engagement and it is believed that the same outcome would be achieved with a clinical ladder for advanced practitioners. Future studies could ascertain level of job satisfaction and engagement within this group. This endeavour may provide impetus to other advanced practice groups to develop a similar program.

**RECOVERING FROM SUPER-STORM SANDY: THE ROLE OF CLERICAL STAFF IN RESTORING OPERATIONS AND MAINTAINING PATIENT SAFETY AFTER A NATURAL DISASTER.** Maureen Oliveri, MSN, RN, and Bethany Barry, BA, both at New York University Langone Medical Center, New York

**Objective:** Clerical staff played an important role in quickly and safely resuming operations, and enabling nurses and physicians to continue to provide care following a natural disaster.

**Topic Significance and Study Purpose, Background, and Rationale:** Healthcare facilities affected by natural disasters often face great challenges in continuing to deliver safe and high quality care. In the aftermath of Hurricane Sandy, New York University Radiation Oncology faced the flooding of its inpatient treatment facility and a power outage. Clerical staff played an important role in quickly and safely resuming operations, and enabling nurses and physicians to continue to provide care.

**Methods, Intervention, and Analysis:** Throughout the storm, the medical secretary was in contact with department management, organizing an immediate clerical staff response. Secretaries quickly recreated 45 destroyed charts for patients receiving treatment. Dozens were recreated over the next year. On 10/31/2012, despite the power outage, a team of physicians, nurses, secretaries and managers convened at the outpatient facility, contacting patients and informing them of plans to resume treatment. A team also met the following day to contact patients scheduled for clinical visits (consults and follow-ups). 91% of patients on treatment returned within four days of reopening. Within 2 weeks of the storm, 53% of clinical visits had been rescheduled (83% within 12 months). Patients scheduled for future visits at the flooded clinic would have to be rescheduled as well. Many patients lacked power or telephone access. Secretaries coordinated scheduled visits disrupted by the storm, such as radio-surgeries, imaging studies, and visits to other medical facilities. The four secretaries who lost workspaces to flooding shared desks and used lap top computers until a waiting area was repurposed accommodate them. In order to accommodate additional volume at the open facility, secretaries were assigned to provide support during 13 hour shifts.

**Findings and Interpretation:** Secretaries collaborated with an interdisciplinary team to ensure that patients resumed radiation treatment at NYU with minimal interruption. Changes to shift arrangements, workflow, and clerical workspaces aided in the adjustment of the department as a whole to the loss of its inpatient facility. Providing patients and clinical staff with adequate support on a clerical level is vital in a situation where facilities have been compromised.

**Discussion and Implications:** Secretaries collaborated with an interdisciplinary team to ensure that patients resumed radiation treatment at NYU with minimal interruption. Changes to shift arrangements, workflow, and clerical workspaces aided in the adjustment of the department as a whole to the loss of its inpatient facility. Providing patients and clinical staff with adequate support on a clerical level is vital in a situation where facilities have been compromised.

**BLOOD AND MARROW TRANSPLANT DONOR VERY IMPORTANT PERSON PROJECT.** Kathryn Yarkony, BSN, RN, PhD, Denise Holford, BS, RN, Laura McCoy, BS, RN, and Kathy Wojciechowski, BS, RN, all at Johns Hopkins Hospital, Baltimore, MD

**Objective:** To identify the type and frequency of symptoms following bone marrow harvests and to describe one institution's donor Very Important Person (VIP) Project.

**Topic Significance and Study Purpose, Background, and Rationale:** Bone marrow donors potentially give gifts of life. This NCI-designated comprehensive cancer center's Blood and Marrow Transplant (BMT) Programs donor Very Important Person (VIP) Project was initiated to express gratitude to our BMT donors, and as a quality improvement initiative to obtain information about donors' experiences following bone marrow harvests. Although there is a great deal in the literature about solid organ donations, nothing specifically related to bone marrow donations or donor appreciation processes was found. The literature regarding post-harvest donor complications identified pain and tiredness as the most common complaints. Infections, sciatic nerve compression, post-anesthesia cardiovascular events and staphylococcus infection causing multi-system organ failure resulting in coma were also noted. As a result of uncontrolled pain, orthostatic hypotension, urinary retention and other symptoms, BMT donor admissions were increasing at this Cancer Center. This led to questions about how to better care for this special patient population.

**Methods, Intervention, and Analysis:** BMT donors were contacted via telephone by their BMT case managers within three to five days following harvest procedures and questioned about symptoms they may have experienced, including fever greater than 100F, bleeding or discharge from the operative site, level of pain, nausea and/or vomiting, difficulty urinating, dizziness upon standing, and hospital admissions related to the harvest procedure. Patient's responses from 11/26/10 through 12/2/13 were entered into a database and analyzed for frequencies and clusters of specific symptoms. All responses were confidentially treated and no identifying information was used during data analysis. All data were reported in aggregate; no individual data were reported.

**Findings and Interpretation:** Common themes for further developing the VIP Project were identified and interventions were developed to improve donors care. Donors expressed gratitude for the VIP Project, including the specifically designed gifts, and noted the personal attention and individual-specific information that they had been given.

**Discussion and Implications:** This Quality Improvement Project was successful, and should be instructive for other BMT programs.

**THE PAIN STOPS HERE.** Mali Wold, MS, MSN, ANP-BC, Ashleigh K. Smith, MSN, ACNP-BC, Elizabeth Deiulis, MSN, ACNP-BC, and Kellyann Jeffries, MSN ANP-BC, all at Massachusetts General Hospital, Boston

**Objective:** This project sought to reflect upon cases of palliative sedation (PS) on an NP-managed inpatient medical oncology unit at MGH in order to improve the quality of patient centered care.

**Topic Significance and Study Purpose, Background, and Rationale:** PS is the use of sedating medications to relieve intolerable refractory symptoms and suffering and the degree of sedation administered is based upon the individuals level of suffering. PS is used as a last resort when a symptom cannot be controlled despite aggressive efforts to identify a tolerable therapy that does not compromise consciousness or that adequate pain relief cannot be provided within an acceptable time frame. The subjective nature of how tolerable a symptom is, is based on the patient's experience, which is different for each person. With no line drawn in the sand to distinguish a tolerable symptom from one that is intolerable, and with the usual intent of maintaining the sedation through end of life, there is significant controversy regarding the use of PS. Oncology nurse practitioners and nurses, as well as the oncologists on this unit, collaborated with a palliative care team made up of nurse practitioners and physicians. Together, these teams worked closely to facilitate a shared decision with the patients and their families for the patients to undergo PS for symptom relief.

**Methods, Intervention, and Analysis:** Data was analyzed in a qualitative manner in order to assess the benefit of palliative sedation to patient centered care. Each case was discussed and analyzed to determine whether the role of palliative sedation was appropriate on the nurse practitioner-managed inpatient medical oncology unit case by case. Outcomes were quantitatively measured based upon the open discussion held by the healthcare team.

**Findings and Interpretation:** Two such cases are summarized as follows: A middle-aged male with thyroid cancer, MM, struggled with vertebral involvement of his disease, which in turn affected his mobility and caused excruciating pain. Palliative Care was involved early in his care, providing insight into management with multiple agents. When neurosurgery was attempted for symptomatic relief and was not only ineffective, but resulted in wound dehiscence, MM and his family were faced with difficult decisions. Our treatment team continued to provide aggressive pain management with multiple agents, narcotics and adjuvants, but anticipated that his pain would be difficult to control and that PS might be the only mechanism of controlling it. After extensive conversations regarding his wishes, MM and his family were all in agreement that he would prefer PS to more time in pain. The treatment team, patient, and family made the decision together to proceed with PS. While being a witness to his mortality was difficult for the members of the care team, MMs relief when it was decided to initiate PS medications was palpable to the care team and family members in the room. Our second case was TG, a gentleman who suffered from excruciating low back and lower extremity pain due to metastatic melanoma that had invaded his lumbar spine. When opioid and adjuvant medical interventions had been exhausted he underwent a cordotomy. The goal of this surgical destruction of his functional spinal cord was for palliation of his pain that would improve his quality of life. Unfortunately, the cordotomy resulted in worsening dysesthesia and existential suffering. Given these circumstances, the decision was made to move forward with PS. In caring for TG, an extremely emotionally and spiritually centered man, his clear thinking and involvement in his end-of-life planning was atypical. He felt fortunate to have received a novel therapy that offered him 8 unexpected symptom free months. Ever alert, and unable to escape his intense pain, he would ask "why am I still here?" and "what did I do to deserve this." As days went on, his life review discussions changed his outlook on the future. He was in between waiting and suffering. His certainty in moving forward with palliative sedation helped his caregivers, many of whom had a level of distress with this choice. As he slipped into a relaxed and peaceful state, there was calm around him. His brother and primary nurse were present for his passing, and there was a general sense of his joyful spirit and levity with his release from suffering.



**Discussion and Implications:** The outcome of reflecting on these cases, and with the greatest respect for life in general, we maintain that this process should be case-by-case, thorough, and be considered only after all other options have been exhausted. Working with cancer patients to manage their suffering is part of the responsibility of their treatment team. Having a well-described process in place for such events, including the contribution of multiple providers, helps to alleviate concerns of inappropriate use of PS.

## Poster Presentations

### #1

**HELLO . . . CAN I TAKE YOUR ORDER? CREATING AN INNOVATIVE COMMUNICATION TOOL TO ASSIST APHASIC PATIENTS WITH DIETARY SELECTIONS DURING HOSPITALIZATION.** Michelle Cavuoto, BSN, MA, OCN®, and Kerri Carle, BSN, both at Memorial Sloan-Kettering Cancer Center, New York

**Objective:** To promote quality of life in brain tumor patients with expressive aphasia by providing an innovative communication tool to assist with dietary selections during hospitalization.

**Topic Significance and Study Purpose, Background, and Rationale:** Clinical staff working on a 42 bed in-patient oncology face many unique situations in implementing a relationship-based care model, focused on providing individualized, quality patient care. Patients diagnosed with brain tumors, masses or injuries are at an increased risk of having their needs unrecognized due to confusion or altered mental status changes they experience related to the brain tumor or side effects of treatment. Stress and frustration can occur with breakdowns in effective, efficient communication between patients, families, and the healthcare team. Aphasia poses a communication challenge for clinical staff seeking to meet patient needs and promote self-care and a sense of well-being. According to the National Aphasia Association, aphasia is an impairment of language, affecting the production or comprehension of speech and the ability to read or write. Aphasia is a direct result of injury to the brain. Stroke is the most common cause of aphasia, but can also occur in patients with brain tumors such as gliomas or those with metastatic disease. Purpose: To create a visual menu format for patients who cannot make their dietary selections known due to aphasia caused by a brain tumor or side effects of oncology treatment. The picture menu can also be used for patients who have had strokes (a risk factor for oncology patients), patients who cannot read or patients who do not write or speak English.

**Methods, Intervention, and Analysis:** A convenience sample of brain tumor patients with expressive aphasia was selected from an inpatient unit at a comprehensive cancer center. The pilot project involved collaborating with the dietary department to create a communication tool specific to hospital menu selections. Two senior staff nurses used the tool with patients and worked together initially to facilitate congruence in administration. They discussed the individual patient experiences and generated into a rich description of aphasic oncology patients using a novel method to make menu selections. Common themes that emerged from patients and families included enhanced satisfaction with food choices, decreased frustration with making desires known to staff and appreciation of individualized attention from nurses.

**Findings and Interpretation:** Clinical anecdotal experience with the visual menu revealed high levels of patient and family satisfaction. One patient with expressive aphasia due to a

glioblastoma, was unable to correctly express what she wanted for dinner. She asked for pizza, but really wanted ice cream. The picture menu enabled her to correctly point to the foods she wanted to eat and reduced her stress and frustration. The clinical staff experienced satisfaction in being able to engage in effective communication and accurately meet the patients needs.

**Discussion and Implications:** Having a formalized picture menu has the potential to decrease the frustration and stress levels for patients, their families and staff, by providing a means for patients to indicate their dietary selections in the hospital. The picture menu provides an excellent opportunity for collaboration between nursing and food/nutrition departments and could be used at home by family members.

### #2

**A SIMPLE MULTI-DISCIPLINARY MODEL FOR IMPLEMENTING DISTRESS SCREENING AMONG CANCER CENTER PATIENTS.** Bonnie Chapman, RN, MPH, CPH, Richard Williams, RN, OCN®, Rose Valentino, RN, OCN®, and Jacky Connolly, RN, OCN®, all at SUNY Upstate Medical University, Syracuse, NY

**Objective:** To develop and implement a process to screen all medical and radiation oncology out-patients for psycho-social distress utilizing available resources with full acceptance by staff and providers.

**Topic Significance and Study Purpose, Background, and Rationale:** Screening oncology patients for distress is a fast approaching phase in standard requirement by the American College of Surgeons Commission on Cancer for successful Cancer Center accreditation in 2015. Many cancer centers are grappling with the best model to use and at the same time the available technology is ever evolving while budgets remain tight. Healthcare professionals acknowledge the clinical and psychological importance of screening and treating patients with distress, yet adding one more patient screen and service may be met with resistance or the complexities of coordinating additional services prove daunting. Nursing is uniquely positioned to lead this collaborative effort because they work closely with various healthcare providers while negotiating the competing interests of time and work load sharing.

**Methods, Intervention, and Analysis:** A physician champion was identified and a multi-disciplinary team was formed. The general patient flow and available resources in both the medical and radiation oncology departments were assessed. A process using existing resources and structure was developed for both areas and providers and staff were asked to participate in a pilot screening one day each week. During the screenings feedback was encouraged, results disseminated to all involved, and the pilot was enhanced each week for 5 weeks. After the process had been refined, fears allayed, and the staff and providers were amicable to a full implementation.

**Findings and Interpretation:** A multi-disciplinary team, willing to engage in a rapid cycle improvement strategy in order to create a successful solution to screening all patients for distress, accomplished its mission in several short months. Each department had different strengths and weaknesses that were leveraged to find an optimal solution. Both departments now receive a distress dashboard that accounts for the number and percentage of patients screened, the number and percentage of patients with a moderate to severe level of distress, and the number of referrals to social work that were made.

**Discussion and Implications:** Developing a successful distress screening program is critical to providing quality cancer care to patients. The process of screening patients took less time than expected, and consistent with literature there was not a deluge of additional referrals.

### #3

#### IMPLEMENTING ALCOHOL IMPREGNATED PORT PROTECTORS AS A STRATEGY TO DECREASE CENTRAL LINE-ASSOCIATED BLOODSTREAM INFECTIONS.

Morgan Miskill, RN, BSN, OCN®, and Emily Bellard, RN, MSN, OCN®, both at Carolinas Medical Center, Charlotte, NC

**Objective:** Evaluate the effectiveness of alcohol impregnated port protectors in decreasing central line bloodstream infections.

**Topic Significance and Study Purpose, Background, and Rationale:** A major risk factor for the development of bloodstream infections is the presence of a central venous catheter. In neutropenic patients, this is especially a major concern. Currently, The National Health and Safety Network (NHSN) pooled mean for central line-associated bloodstream infections (CLABSI) on an oncology unit is 1.4 infections/1,000 central line days. In 2012, this unit's CLABSI rate was 1.8 infections/1,000 central line days, above the national mean. The purpose of this project is to implement the use of alcohol impregnated port protectors as a strategy to reduce CLABSI. The Centers for Disease Control (CDC) recommends appropriate disinfecting of catheter hubs, needleless connectors, and injection ports (Marschall et al., 2008). This technique, commonly referred to as "scrub the hub," is well documented and is subject to technique variations and noncompliance. Sweet et al., (2012) conducted a before/after trial on an oncology unit changing the practice of central line hub care from scrubbing the hub with alcohol wipes to using alcohol impregnated port protectors. Results revealed a rate of 0.3 infections/1,000 central line days using the port protectors as compared to 2.3 infections/1,000 central line days using the scrub the hub technique.

**Methods, Intervention, and Analysis:** This 36 bed oncology unit piloted a study that implemented the use of alcohol impregnated port protectors on all patients with central venous catheters starting in February 2013. The port protectors are one-time use luer-lock caps containing 70% isopropyl-saturated alcohol that disinfect ports in 3 minutes, keeping the ports clean for 7 days if not removed for access. All staff members were educated on the proper use of port protectors and compliance audits were performed daily March-July 2013, then twice weekly August 2013-present.

**Findings and Interpretation:** Compliance of port protector usage ranged from 90%-96% in the first 6 months of the pilot study. Since implementing the port protectors, the unit's CLABSI rate is 0.7 infections/1,000 central line days.

**Discussion and Implications:** Reduction of CLABSI and chasing zero is a hospital goal nationwide. Future plans include researching best practice for CLABSI prevention, continued use of port protectors, and monitoring CLABSI rates through collaboration with the Infection Prevention Department.

### #4

#### A DEDICATED MULTIDISCIPLINARY MESOTHELIOMA PROGRAM FOSTERS ENROLLMENT INTO CLINICAL TRIALS.

Melissa Culligan, RN, MS, Daniel Sterman, MD, Susan Metzger, MD, Sally McNulty, RN, BSN, CCRP, Mona Jacobs-Small, BS, RT, CCRP, and Joseph Friedberg, BS, RT, CCRP, all at the University of Pennsylvania, Philadelphia

**Objective:** The objective of forming a dedicated multidisciplinary mesothelioma program was to increase patient access to innovative treatment options and foster enrollment into clinical trials, enhanced by thoracic oncology nurse researchers.

**Topic Significance and Study Purpose, Background, and Rationale:** Clinical trials are the mechanism for both introducing innovative therapies and establishing the standard-of-care in cancer treatments, yet the number of patients treated on clinical

trials is typically cited as less than 5%. Malignant pleural mesothelioma (MPM), a cancer for which novel therapies are desperately needed and for which the standard-of-care is limited to palliative chemotherapy, is clearly a cancer for which clinical trials should be encouraged. In an effort to optimize the care of MPM patients at our institution, we formed a multidisciplinary program dedicated solely to treatment of patients with pleural malignancies. One of the goals of the Program was to maximize enrollment in clinical trials.

**Methods, Intervention, and Analysis:** In September 2010 a dedicated multidisciplinary mesothelioma and pleural program was established. The team consists of medical/radiation oncologists, pulmonologists, thoracic surgeons, thoracic oncology nurses, pathologists and radiologists. The format of the Program is to meet weekly to review patient cases, consider all potential treatment options amongst the team and then have each discipline meet with the patients to discuss potential treatment options. All patients are screened by the thoracic oncology nurse research team for clinical trial eligibility in advance and at the time of presentation to the team. Although patients are treated off protocol, every attempt is made to treat patients on a clinical trial, which include: surgery-based multimodal therapy, chemotherapy, immunotherapy.

**Findings and Interpretation:** The total number of new patients seen over the 3 year period of time, not all of whom were treated at our institution, was 282 and 79 (28%) of those patients were treated on clinical trials. The percentage of patients being treated for MPM on clinical trials in our institution is significantly higher than what is cited as the typical clinical trial enrollment rate and is also significantly higher than the historical accrual to trials for MPM in our institution prior to formation of our dedicated multidisciplinary program.

**Discussion and Implications:** We attribute this increased clinical trial enrollment rate to the increased influx of new patients, the mindset of the multidisciplinary team to support clinical trials and the impact on advanced patient screening and patient/family education by the thoracic oncology nurse researchers on the team.

### #5

#### CANCER SYMPTOMS ASSESSMENT: VALIDITY AND RELIABILITY OF A NEWLY DEVELOPED TOOL.

Susan McMillan, PhD, ARNP, FAAN, University of South Florida, Tampa

**Objective:** To describe intensity, distress, frequency and interference with life of 35 common cancer symptoms assessed with a valid and reliable assessment tool.

**Topic Significance and Study Purpose, Background, and Rationale:** Previously published instruments for assessing cancer symptoms have not included all aspects of the experience and often are difficult to interpret. The Cancer Symptoms Scale (CSS) was developed to assess presence, intensity, distress, frequency and interference from symptoms in persons with cancer on a more easily interpreted 0 to 10 scale for each item. The purpose of this cross-sectional study was to evaluate the validity and reliability of the Cancer Symptom Scale (CSS) for use with cancer patients across the disease trajectory.

**Methods, Intervention, and Analysis:** After consenting, 234 adult patients being treated for cancer or cancer symptoms completed the CSS, the Multidimensional Quality of Life-Cancer (MQOL-C) scale and a Demographic Data Form. A small subsample (N = 15) was asked to complete the CSS a second time with a brief delay. Analysis included descriptive statistics and Pearson correlations.

**Findings and Interpretation:** These predominantly white and married patients were slightly more female (56%) than male and averaged 60 years old and 28 months since diagnosis. The most common cancer diagnoses were Leukemia (15%), Breast cancer (12%), Lymphoma (11%) and colorectal cancer

(9.4%) among a variety of others. The most common symptoms reported were fatigue (75%) and feeling drowsy (54%). The most intense symptom (mean = 7.3) and the most distressing (mean=6.7) was feeling irritable, while the most frequent symptom was problems with sex (mean = 6.9) and with urination (mean=6.9). The symptom causing the interference with their lives was diarrhea (mean = 6.0). Validity of the CSS was supported by the significant correlations of its subscales, Intensity ( $r = 0.44$ ,  $p = 0.000$ ), Distress ( $r = 0.55$ ,  $p = 0.000$ ), Frequency ( $r = 0.34$ ,  $p = 0.000$ ), and Intereference ( $r = 0.56$ ,  $p = 0.000$ ), with scores from the MQOL-C at the hypothesized levels. Test-retest reliability was strong for these subscales ( $r = 0.74$ – $0.81$ ). In addition, internal consistency reliability was also strong using Cronbach's alpha ( $\alpha = 0.73$ – $0.74$ ).

**Discussion and Implications:** The newly developed CSS is valid for the purpose of assessing multiple dimensions of symptoms experienced by persons with cancer. In addition, it appears to be reliable in this group of patients as well. Thus, it can be used in future studies assessing symptoms and in clinical practice.

## #6

**AN EXPLORATION OF PATIENT SYMPTOMS FOLLOWING INITIAL CHEMOTHERAPY.** Ingrid Kupferman, MS, BSN, RN, OCN®, Janet Wojciechowski, RN, OCN®, Alice Beers, RN, OCN®, all at MedStar Franklin Square Medical Center, Washington, DC; Mary Gruver Byers, MT(ASCP) SBB, CPHQ, CSSGB, CJCP, MedStar Franklin Square Medical Center, Baltimore, MD; Mihriye Mete, PhD, MedStar Health Research Institute, Hyattsville, MD; and Joan Warren, PhD, MedStar Franklin Square Medical Center

**Objective:** We will examine the type and intensity of chemotherapy symptoms and symptom clusters of patients with lung, breast or gynecological malignancies to help guide clinical interventions and improve patient coping.

**Topic Significance and Study Purpose, Background, and Rationale:** Cancer patients receiving cytotoxic chemotherapy experience a multitude of side effects that may influence their adherence to treatment regimens, quality of life and survival. An improved understanding of these variables and often unpredictable symptoms by clinicians may decrease patient symptom distress and improve quality of life. The purpose of this multisite, longitudinal, nurse clinician driven research study was to explore the type and intensity of chemotherapy symptoms and to identify symptom clusters that may be used for clinical interventions and improved nursing care for patients with lung, breast, and gynecological malignancies.

**Methods, Intervention, and Analysis:** The descriptive, IRB approved study used the Chemotherapy Symptom Assessment Scale (C-SAS) to assess patient symptoms at baseline and for five days following the first course of chemotherapy. C-SAS consists of 24 distinct symptoms (Cronbach's  $\alpha = 0.75$ ). The C-SAS was administered by registered nurses at two Magnet hospitals located in the mid-Atlantic region, to a convenience sample of 115 patients with lung, breast or gynecological malignancy, who were 18 years of age and older. Occurrence of each symptom and intensity levels were tabulated by participants for each day at baseline and within the follow-up period. Cluster analysis with k-means clustering method was performed to group patients based on their symptoms by adjusting for the dichotomous nature of the symptom measurement (0/1).

**Findings and Interpretation:** Three mutually exclusive clusters of symptoms were generated for each of the five days. Similar to literature, a common cluster of symptoms consisting of nausea, changes in appetite, pain, weakness, tiredness and sleep

problems were common to a core and large group of patients. The number of symptoms experienced by patients and number of patients experiencing them intensified and peaked the third day after treatment.

**Discussion and Implications:** Although patients receiving chemotherapy are aware that side effects will occur; the variety and unpredictability of these symptoms makes coping very difficult. Nurses can use the symptom profiles to educate patients about anticipated symptoms, timing of these symptoms and symptom management to improve patient adherence to treatment and their quality of life. Further analysis of symptom clusters by clinicians is required to extrapolate patient symptoms associated with chemotherapy from side effects caused by adjuvant therapies.

## #7

**AMBULATORY ONCOLOGY TRIAGE NURSE: A ROLE WHOSE TIME HAS COME!** Michelle Wasko, MS, BSN, RN, NE-BC, Lisa Blackburn, MS, RN, AOCN®, Shelly Brown, MS, RN, AOCN®, Anna Connair, BSN, RN, OCN®, Kelly Lehmkuhl, BSN, RN, OCN®, Christine Maurer, BSN, RN, OCN®, all at the Ohio State University James Cancer Hospital and Solove Research Institute, Columbus

**Objective:** To evaluate the implementation of the ambulatory oncology triage nurse role in a busy outpatient Hematology and Transplant Clinic (HTC)

**Topic Significance and Study Purpose, Background, and Rationale:** The bulk of oncology patient care has shifted to the ambulatory setting in the last decade, challenging the traditional nursing role. Telephone triage and phone advice is a key skill set for the ambulatory nurse. Recent literature has shown that calls from patients are a major component of outpatient oncology nursing practice. Telephone triage can be a daunting role if the nurse is not well prepared. The purpose of this project was to evaluate the implementation of the triage role in a busy oncology clinic. The triage role had been in place for five years during a period of tremendous growth, but had not been objectively evaluated.

**Methods, Intervention, and Analysis:** The triage role had been implemented with the opening of the HTC in 2008. Since then, average patients seen per month has increased by 120%. Physicians based in the HTC have increased by 68%. Additionally, an NP-run Survivorship clinic and a Mental Health clinic have been added. The role of the triage nurse is currently being evaluated and data will be provided, including evaluation of triage documentation, and evaluation of the role by the triage nurses themselves and the oncology patients they serve. Reported data will include number of calls over time, type of call (symptom management, teaching, support), self-assessment of competence of triage staff, patient satisfaction and evaluation of professional development of this staff.

**Findings and Interpretation:** Data will show strong support for the ambulatory oncology triage role in all parameters listed above. Preliminary data indicates that positions dedicated to this role benefit staff, physicians, and cancer patients. Outcomes of the triage role include enhancement of the nurse-patient relationship, increased continuity of care, professional development of the registered nurse, decreased calls to providers, enhanced patient education, decreased risk of medical complications and delays in care and decreased inappropriate appointments and emergency room visits.

**Discussion and Implications:** The role of the ambulatory oncology triage nurse is vital in a busy hematology clinic for all of the reasons demonstrated. Clinics successfully implementing this role, such as the HTC, can be used as training grounds for implementation of the role in other oncology specialties.



## #8

### WE WII: AN EXERCISE PROGRAM TO DECREASE FATIGUE OF CANCER PATIENTS WITH HEMATOLOGIC MALIGNANCY.

Megan Baker, BSN, RN, Kashmir Horton, BSN, RN, OCN®, Alyssa Kautz, BSN, RN, OCN®, and Alison Buchanan, PT, DPT, all at Banner Good Samaritan Medical Center, Phoenix, AA; Ikuko Komo, RN, MSN, AOCNS®, Stanford Hospital and Clinics, Phoenix; and Chris Tussey, RN, MSN, AOCNS®, Banner Good Samaritan Medical Center

**Objective:** The participant will be able to demonstrate how an exercise program can significantly decrease the level of fatigue of cancer patients with hematologic malignancy during an inpatient admission.

**Topic Significance and Study Purpose, Background, and Rationale:** Despite numerous interventions, an acute care oncology unit has continued to experience a high rate of falls. Fatigue is a major symptom in 80% of cancer patients who experience a fall while hospitalized (Capone, 2010), especially during cancer treatment, muscle strength can diminish, leading to a higher fall rate. The National Cancer Center Institute (2013) recommends individually tailored exercise program for cancer patients. As a result, multi-disciplinary programs to promote exercise including collaborative team work between nurses, physical therapists, physicians, patients, and families can be effective.

**Methods, Intervention, and Analysis:** An evidence-based practice project is currently being implemented by a multi-disciplinary team on a 30-bed inpatient oncology unit. Baseline data of existing fatigue was collected on patients with hematologic malignancy admitted for induction chemotherapy over a two-month period. To implement the exercise program, physical therapists evaluated patients with leukemia prior to chemotherapy on their balance and perceived level of exertion using the Berg Balance and Borg scales. The pre-treatment assessment will determine what exercises are appropriate for each patient, thus individually tailoring the program to meet their needs. Exercise options include walking, Nintendo Wii games, stationary bike or any combination. Patients are expected to engage in activity for 20 minutes each day beginning with chemotherapy initiation continuing throughout their hospitalization. Nursing staff will evaluate the level of patient fatigue using a numeric fatigue scale weekly and encourage exercise participation. A physical therapist evaluates patients' balance and perceived level of exertion weekly. Upon discharge, patient satisfaction will be measured.

**Findings and Interpretation:** Findings will include assessment of patients fatigue, balance, and perceived exertion weekly throughout their stay. Evidence indicates improved fatigue levels prior to discharge in prolonged hospitalizations. In addition to decreasing fatigue, expected outcomes include decreased fall and increased patient satisfaction.

**Discussion and Implications:** The project is based on a solid body of evidence indicating that exercise in oncology patients can improve fatigue over time (Chang, 2008). The project describes how a multi-disciplinary team can implement evidence on a unit and tailor a program for their patients. Oncology nurses can learn how to work collaboratively to implement evidence and improve fatigue with their patients.

## #9

**WHAT A DIFFERENCE A PHONE CALL MAKES.** Megan Jilling, BSN, RN, OCN®, and Leah Jajtner, BSN, RN, OCN®, Froedtert Health, Milwaukee, WI

**Objective:** Participants will describe a guideline and intervention that assisted in decreasing the readmission rate of oncology patients over 12-month period.

**Topic Significance and Study Purpose, Background, and Rationale:** Section 3025 of the Affordable Care Act established a Hospital Readmissions Reduction Program. It required the Center for Medicare and Medicaid Services (CMS) to reduce payment to hospitals with excessive readmissions rate beginning in October of 2012. While oncology readmissions were not specifically targeted in the initial round of implementation of this regulation, the need to review and address the situation for oncology patients was timely. Nursing staff from the inpatient area and clinic areas came together to assess unique aspects of our population, review the literature, and consider a strategy.

**Methods, Intervention, and Analysis:** Oncology patients were grouped into two categories: hematological malignancies, and solid tumor. A review was done to understand the differences in reasons for readmissions in the two populations. Two interventions evolved: hematological malignancy patients were provided standard discharge planning, and an appointment to be seen in 24-48 hours in clinic post discharge. Solid tumor patients were afforded standard discharge planning and a follow up phone call by their primary clinic nurse in 24-48 hours post discharge. Priority groups of two sub populations of the solid tumor group were identified. These groups were patients hospitalized on inpatient non-oncology unit and patients discharged with home hospice. A standard phone call script was developed for the nurse to use of questions relating to common issues patients encounter post discharge.

**Findings and Interpretation:** Nurses moved follow up clinic appointment dates to an earlier time in approximately 1/3 of the calls. Interventions done in the Day Hospital (fluids, antiemetics) prevented ED visits, medication clarifications, signs and symptoms to report, who and when to call, were valued review points. Problems with central lines may be resolved via phone call education.

**Discussion and Implications:** We achieved our Fiscal Year 2013 goal of a 10% reduction in oncology readmissions, going from 26.14% in FY 2012, to 23.47% in FY 2013. While other factors were involved in decreasing the rate, the phone call intervention was considered key and was implemented as a standard of nursing practice. The process guideline, script for the call, and the documentation tool used in the EMR will be shared.

## #10

**SEPSIS AND THE ONCOLOGY PATIENT.** Dottie Wiegand, MSN, ACNP-BC, CCRN®, Eastern Regional Medical Center, Philadelphia, Pennsylvania

**Objective:** Implementation of a nurse-driven sepsis protocol, evidence-based prevention strategies, and a heightened awareness of suspicion of infection will improve recognition and earlier treatment of sepsis in the oncology patient.

**Topic Significance and Study Purpose, Background, and Rationale:** Due to frequent hospital admissions, the need for indwelling vascular catheters, and immunosuppression related to various cancer treatment modalities, the oncology patient is at higher risk for developing hospital-acquired infections and subsequent sepsis. The subtleties of early onset infection and presence of two or more SIRS variants are often masked by febrile neutropenia and the patients inability to mount an effective immunological response. Sepsis reigns as one of the leading causes of death in the ICU with an annual cost of \$17 billion and associated mortality rates between 28-50%. A literature review of the reliability and diagnosis of sepsis revealed that in patients admitted with SIRS and suspected infection, physicians correctly identified sepsis only 73% - 77% of the time. As the incidence of sepsis continues to rise at a rate of 1.5% or nearly 18 million new cases annually, it is imperative that nurses develop a higher index of suspicion and implement early goal-directed therapy within appropriate time frames.

**Methods, Intervention, and Analysis:** A needs assessment survey among nurses confirmed that SIRS criteria and their relevance to suspected or confirmed infection were frequently not acknowledged as predictors of possible sepsis. Utilizing best practices and the most recent evidence, an educational program was created and presented to the nurse residents. Additionally, SIRS criteria were added to the SBAR to reinforce learning and foster earlier identification.

**Findings and Interpretation:** Twenty newly hired nurse residents attended the educational program and follow-up program evaluations indicated immediate and intended alterations in their levels of practice and increased awareness of their roles as front-line defenders against sepsis.

**Discussion and Implications:** The newly developed sepsis program was reviewed and approved by our infectious disease physician as critical to improving outcomes in our oncology patient population by recognizing the role of nursing in the rapid identification and implementation of the initial resuscitation and septic shock bundles. Ongoing hospital-wide education and the development and introduction of nurse-driven sepsis protocols are the next immediate goals for our institution.

## #11

**EFFECTS OF INDIVIDUALIZED HOME-BASED EXERCISE ON QUALITY OF LIFE IN WOMEN WITH BREAST CANCER IN TAIWAN.** Hsiao-Fang Hu, RN, NP, Li-Yuan Bai, MD, and Ya-Jung Wang, MD, China Medical University Hospital, Taipei, Taiwan

**Objective:** The individualized home-based, moderate intensity exercise program improved the quality of life for breast cancer women who did not receive chemotherapy.

**Topic Significance and Study Purpose, Background, and Rationale:** The incidence of breast cancer is the highest among cancers affecting Taiwanese women. Although the overall survival rate reaches 85%, a majority of women with breast cancer suffer from physical issues and psychosocial burden which negatively impact their quality of life. The purpose of this study was to explore the impact of an individualized home-based, moderate-intensity exercise program on quality of life and exercise capacity in women who received breast cancer surgery.

**Methods, Intervention, and Analysis:** A total of 66 patients with newly diagnosed breast cancer (carcinoma in situ or stage I to III carcinoma) were enrolled into the two-arm, randomized, controlled trial within 24 h after operation. Patients were eligible if they were aged more than 20 years and with adequate hepatic, renal and cardiopulmonary function. They were randomized to either the exercise group ( $n = 33$ ) or the control group ( $n = 33$ ). The assessment tools included Functional Assessment for Cancer Treatment- Breast, and six minutes walking test. The outcome measurements were quality of life, and exercise capacity, with each obtained 3 times in a 5 weeks interval. Chi-square, t test, and generalized estimating equations were used in the statistical analyses.

**Findings and Interpretation:** Patients in the experimental group experienced more exercise activity compared with patients in the control group. However, this program could not improve the degree of quality of life ( $p = 0.292$ ), and exercise capacity ( $p = 0.613$ ). The subgroup analyses of patients who did not receive chemotherapy indicated that women in the walking program ( $n = 16$ ) had better quality of life compared with whom ( $n = 17$ ) in the control group ( $p = 0.014$ ). In contrast, this benefit did not exist for patients who received chemotherapy postoperatively ( $p = 0.870$ ).

**Discussion and Implications:** The individualized home-based, moderate intensity exercise program improved the quality of life for breast cancer women who did not receive chemotherapy. Chemotherapy would offset the benefit. It is

important to promote exercise program for patients with breast cancer via the collaboration between nurses and healthcare providers.

## #12

**IMPROVING THE ONCOLOGY PATIENT EXPERIENCE STARTING WITH THE FIRST CALL.** Virginia Martin, RN, MSN, AOCN®, Frances McAdams, RN, MSN, AOCNS®, Marie Riehl, RN, MSN, AOCNS®, and Leanne Lyons, BS, all at Fox Chase Cancer Center, Philadelphia, PA

**Objective:** Participants will be able to describe the process of patient access redesign created to improve the patient experience starting at the first call for an appointment at a cancer center.

**Topic Significance and Study Purpose, Background, and Rationale:** A survey of best practices and external consultant support identified process improvement opportunities with patient access in ambulatory care at a comprehensive cancer center. The purpose of patient access redesign was to create a positive patient experience from first point of contact to visit discharge. A multidisciplinary team was formed and led by a nurse. Representatives were included from the call center, navigation, pre-registration, registration, IT, financial counseling, process improvement, nursing, physician practice, and service line administration.

**Methods, Intervention, and Analysis:** The current processes were described and mapped, focus groups were convened, physicians and nurses were interviewed, best practices identified and data was summarized. Patients and families were engaged in the entire process through the patient and family advisory council. The team outlined goals for the project and targets were set for redesign. Information system upgrades were key and a necessary starting point. Baseline data was available and collected for patient satisfaction, call abandonment and average speed to answer, conversion rate of new patient calls versus visits, registration and check in and check out time at the desk. Expected outcomes were more efficient scheduling and registration, better built clinical schedules, decrease in lost revenue, decrease in patient care fragmentation and better patient experience.

**Findings and Interpretation:** The kick off began with one service line. A dispatcher was hired and calls in to the center were directed to a service line RN navigator. Appointments were made with first call and included a live hand off to registration staff. At arrival to the center centralized registration with personalized individual attention became the first stop. The care team implemented daily huddles to focus on review of daily schedules and care coordination to foster better communication among team members.

**Discussion and Implications:** The redesign process is now one year post LIVE, three service lines have implemented changes. Patient satisfaction scores have improved, express check in occurs, the planned scorecard of measures reflect success, clinician schedules are aligned with practice patterns, and the oncology patient next appointment planning in the hands of clinical staff affords the staff, patient and family time to debrief and coordinate plan.

## #13

**FROM AMBIANCE TO ZONING: IMPROVED PATIENT EXPERIENCE.** Elaine Bender, RN, OCN®, Sharon Nugent, RN, BSN, MPH, and Marcia Honisko, RN, BSN, MPH, Hickman Cancer Center at ProMedica Flower Hospital, Sylvania, OH

**Objective:** The core idea was to augment efficiency and eliminate waste without reducing positions, in order to improve overall patient care.

**Topic Significance and Study Purpose, Background, and Rationale:** A team of engineers, nurses, and pharmacists was assembled in 2012 to review processes involving the medical oncology outpatient infusion center. The main objective was to augment efficiency and eliminate waste without reducing positions. Using several tools, workflow evaluation, and discussions among the team members, a variety of solutions were identified to improve patient satisfaction and efficiency. One change involved zoning of patient bays in which two nurses are assigned to work together in one specific area. The atmosphere of the patient bays was also discussed. The infusion center has 20 bays, the majority having a window overlooking beautiful gardens. The remaining rooms have no window and are uninviting to patients. One major concern was reluctance of patients to sit in a windowless bay. A grant was awarded to enhance the rooms without garden views with framed uplifting photographs.

**Methods, Intervention, and Analysis:** The strategy involved communicating with and empowering the staff in the changes initiated, including how the bays were to be sectioned for each nursing pair. To help with the transition, scripting was provided to staff to help explain the new process, and the patient care supervisor was prepared to discuss any concerns brought forward by patients.

**Findings and Interpretation:** Since the beginning, there were only two specific patient complaints that needed addressed by the supervisor. The positive results of the zoning project have been: enriched customer service and satisfaction due to a decrease in wait time and increased nurse to patient face time; employee satisfaction through less nurse and medical assistant fatigue and a reduction in overtime; and team building. Recent studies have shown how art images in health care settings can ameliorate healing through evidence-based art. Both physiologically and subjectively, appropriate artwork has revealed a reduction in stress and perception of pain.

**Discussion and Implications:** All of the noted aspects of zoning will continually impact practice progressively with increased personal contact, scheduling of timely treatments, and balanced workload. Additionally, positive results are expected with the artwork to serve as a de-stressor, allow patients to focus on something other than their conditions, and make the entire infusion area more comfortable.

## #14

**ANXIETY REDUCTION WITH AROMATHERAPY DURING BREAST BIOPSY.** Alisa Domb, RN, John C. Lincoln Breast Health and Research Center, Phoenix, AZ; and Richard Gerkin, MD, Banner Good Samaritan, Phoenix

**Objective:** Evaluate the effectiveness of aromatherapy for anxiety reduction in women undergoing stereotactic and ultrasound guided breast core-needle biopsy (CNB).

**Topic Significance and Study Purpose, Background, and Rationale:** Women awaiting breast biopsy have high levels of anxiety and uncertainty. Although breast CNB is a less invasive procedure than open biopsy, patients experience clinically marked levels of anxiety similarly. This study evaluates the effectiveness of aromatherapy as a complementary/alternative modality (CAM) for the reduction of anxiety in women having CNB.

**Methods, Intervention, and Analysis:** Randomized, controlled, prospective study, pre/post test design with a convenience sample of women having CNB. Participants randomized to receive aromatherapy via inhalation and topical application with either; Lavender essential oil or essence of Jasmine. Anxiety measured using the State Trait Anxiety Inventory for Adults (STAI Form Y). State anxiety measured at baseline (State-1), prior to CNB and following CNB and clip placement mammogram (State-2). Trait anxiety measured at baseline. Descriptive statistics computed for all variables, student-t test used to determine group differences, Chi square for categorical data and multiple

regressions to assess predictive variables for State 2 anxiety.

**Findings and Interpretation:** One hundred and thirty five participants; 66 received Lavender, 69 Jasmine. Overall mean State-1 scores 40.9 ( $\pm 11.1$ ), which was significantly higher than STAI-Y mean normative values of female working adults; State 35.20 ( $\pm 10.61$ )  $p < .000$ , while State-2 score was 33.0 ( $\pm 11.2$ ), there was no difference between the groups, both elicited a significant reduction in state anxiety levels; Lavender -18.6% and Jasmine -19.6%. Mean Trait anxiety was 32.5 ( $\pm 7.6$ ) for both groups. The strongest correlations with State-1 were trait anxiety, marital status and age. Multiple regression revealed that State-1, trait anxiety, radiologist performing biopsy and result ( $r = 0.652$ ,  $p < 0.000$ ) as the strongest predictors of State-2 anxiety. In a Chi square assessing post procedural anxiety, women with a diagnosed malignancy responded statistically differently ( $p < 0.05$ ) to 10 of 20 questions on the State portion of the STAI-Y, in particular, those related to feeling tense, upset, worried, frightened and nervous, all of which were increased in this group.

**Discussion and Implications:** Aromatherapy reduced anxiety in women having breast CNB. Results were comparative to other studies evaluating CAM for anxiety reduction during breast biopsy procedures. Further research is recommended to examine how anxiety is influenced through communication.

## #15

**MORAL DISTRESS IN ONCOLOGY NURSES AS ASSESSED BY THE MORAL DISTRESS SCALE.** Jeanne Held-Warmkessel, MSN, RN, ACNS-BC, AOCN®, and Theresa Pody, MSN, RN, NE-BC, Fox Chase Cancer Center, Philadelphia, PA

**Objective:** Describe the results of a study of the prevalence and severity of moral distress among oncology nurses.

**Topic Significance and Study Purpose, Background, and Rationale:** Working in high touch and high technology environments places oncology nurses at risk of moral distress (MD). The purpose of this study is to determine the prevalence and severity of MD in nursing staff at a comprehensive cancer center (CCC) as the baseline of MD is not known in this nursing population. Using the Moral Distress Scale (MDS) by Corley et al (2001) as the assessment tool, 8 studies have been published on MD but none of them included a known number of oncology nurses. In order to determine the MD baseline, the authors (an oncology clinical director and an oncology clinical nurse specialist) wrote and implemented this study with the assistance of a nurse researcher.

**Methods, Intervention, and Analysis:** This non-randomized quantitative survey study used a secure web based program to collect data from a convenience sample of nurses with direct patient contact in both an inpatient and outpatient setting at a CCC. The 38 item MDS has published validity and reliability. It scores both prevalence and severity of an item. The total number of participants was 114 with 7 disqualified data sets leaving 107 complete sets and 36 partially completed sets. The data was evaluated by SAS, v.9.2.

**Findings and Interpretation:** In the severity ratings, the scores ranged from a low of 1.23 to a high of 3.14 representing low to moderate levels of moral distress severity. In terms of prevalence, scores ranged from 0.02 to 1.85 indicating a low level of prevalence. The hypothesis that nurses working in the CCC would report MDS scores congruent with the scores reported by Corley (2001) was not supported. The scores at the CCC were statistically significantly lower in every element where data was available for both.

**Discussion and Implications:** This study provides important baseline information on MD in oncology nursing by providing previously unreported scores. The full results of this study will be reported along with implications for a future interventional study. Other facilities will be able to use this data to compare their scores with this CCC.



## #16

### GENE-BASED MODERATION OF MINDFULNESS BASED STRESS REDUCTION (MBSR[BC]) IN POST-TREATMENT COGNITIVE IMPAIRMENT(CI) AMONG BREAST CANCER SURVIVORS (BCS).

Cecile Lengacher, RN, PhD, FAAN, University of South Florida College of Nursing and Moffitt Cancer Center, Tampa; Jong Park, PhD, and Richard Reich, PhD, both at Moffitt Cancer Center, Tampa; and Sophia Ramesar, BS, Carly Paterson, MSN, and Irina Carranza, MSN, University of South Florida College of Nursing

**Objective:** Participants will be able to identify if reductions in cognitive impairment (CI) following MBSR(BC) among BCS were modified by genetic variations.

**Topic Significance and Study Purpose, Background, and Rationale:** Following chemotherapy treatment(CT), BCS often report CI that may last up to 10 years. Genetic variants are found to increase susceptibility for CI. Use of pharmacotherapy to improve CI is reported to be ineffective due to methodological limitations and side effects. MBSR(BC) offers a non-pharmacological approach that can be delivered in the clinical setting by nurses, to improve executive functioning and memory through use of meditation. The purpose of this study was to determine if the benefit of MBSR(BC) is contingent on particular genetic variants.

**Methods, Intervention, and Analysis:** A subsample of 72 BCS, diagnosed with Stage 0-III BC, from a larger R01 MBSR(BC) trial were randomized to a Usual Care group or the MBSR(BC) program. Measures of clinical history, demographic data, and Everyday Cognition (ECog) were collected at baseline, 6 and 12 weeks with a blood sample only at baseline. DNA specimens were genotyped using TaqMan PCR assay. Spearman correlations were used to examine the relationships between 8 ECog measures (dependent variable) and two independent variables: MBSR(BC) condition and genotype. Four genes (ANKK1, APOE, MTHFR, and SLC6A4) were separately analyzed using the general linear model with a 2 (condition) X 2 (genotype) design.

**Findings and Interpretation:** The mean age was 58 years, with 77% Caucasian, 11% African American, and 12% Hispanic. Stage of disease was identified as Stage 0 (13%) I (39%); II (31%); III (18%); with 65% receiving radiation, 43% CT, 33% (CT and radiation). In 5 out of 8 ECog scales, rs1800497 in ANKK1 was a significant ( $p<.05$ ) moderator of the influence of MBSR(BC) on CI. MBSR(BC) was more effective in reducing CI among patients with the GG genotype as compared with those patients with AA or AG.

**Discussion and Implications:** Gene variation in ANKK1 may play a role in MBSR(BC) reduction of CI. A larger study is warranted to provide evidence for developing genetic profiles for BCS most likely to benefit from MBSR(BC). This gene, along with others identified in future studies, may facilitate development of personalized medicine treatment programs to identify patients who will experience optimal clinical treatment response. Additionally, this positive effect from MBSR (BC) could positively influence future health services utilization and costs.

**Underwriting or funding source name:** USF's Office of Research and Innovation through the New Researcher Grant Program and the NIH, NCI Grant: 1R01CA131080-01A2.

## #17

### SYMPTOM CLUSTERS IN HEPATOCELLULAR CARCINOMA PATIENTS WITH TRANSCATHETER HEPATIC ARTERY EMBOLIZATION.

Tsui Hua Lin, E-DA Hospital, Kaohsiung, Taiwan; Hsin Tien Hsu and Yu-Hua Lin, both at Kaohsiung Medical University, Taiwan; Tai bin Chen, I Shou University, Kaohsiung; and Yao Sen Chen, E-DA Hospital

**Objective:** This paper studies from the 1st day to the 7th day of TACE therapy the clusters of symptoms observed patients.

**Topic Significance and Study Purpose, Background, and Rationale:** Transcatheter Artery Chemoembolization (TACE) is currently the primary non-surgical therapy for hepatocellular carcinoma (HCC). During TACE treatment, patients typically experience a variety of unpleasant side-effects. Accordingly, psychosomatic impact typically becomes one of the key issues during TACE.

**Methods, Intervention, and Analysis:** This study was designed in a descriptive correlative and prospective longitudinal manner. Sample collection was performed using the Anderson Symptom Inventory-Taiwan Form. The complete study was accomplished at the Certain Zone Hospital of Southern Taiwan with a sample population consisting of 84 (HCC) patients who had agreed to receive TACE therapy.

**Findings and Interpretation:** Cluster analysis revealed four symptom clusters. Cluster 1: Poor appetite, pain and fatigue began on the first day and lasted persistently over the seven-day period. Cluster 2: Thirst, poor appetite, pain and fatigue were clustered starting from day 2 and persisted over the rest of the seven-day test. Cluster 3: Nausea, vomiting and drowsiness belonged to the same cluster from the first day to the fourth day. Cluster 4: Depression and sadness belonged to the same cluster from the first day to the fourth day.

**Discussion and Implications:** The findings from this study will provide the knowledge of symptom cluster encountered by HCC patients who received TACE as their primary treatment during the first seven days of the therapy. Hopefully, this will be utilized and assist the health care providers to deliver the sound total care to this kind of patients.

## #18

### MOVING ON: LIFE AFTER BREAST CANCER—SUPPORT AND INFORMATION FOR HEALTHY SURVIVORSHIP.

Teresa Titcomb, RN, OCN®, and Alicia Rosales, LCSW, OSW-C, St. Luke's Regional Medical Center, Boise, ID

**Objective:** A multidisciplinary, time limited class series model including structured education and support for breast cancer survivors can improve participant engagement in health behaviors, dietary choices, understanding and coping.

**Topic Significance and Study Purpose, Background, and Rationale:** In 2006, groundbreaking research from the Women's Intervention Nutrition Study (WINS) indicated that reduced levels of fat in the diet may decrease the risk of breast cancer recurrence. Since then multiple new studies have shown a healthy lifestyle including physical activity, good nutrition, and stress management can improve outcomes for breast cancer survivors. Breast cancer survivors are recruited to participate in a seven week multidisciplinary educational series. The series is facilitated by a registered nurse, a registered dietitian, and a clinical social worker who specialize in oncology. The 90 minute class consists of didactic instruction and psychosocial support.

**Methods, Intervention, and Analysis:** The presentations review late and long term effects of the treatment, evidence based information about nutrition and physical activity, and an overview of the psychosocial stressors and coping strategies for healthy survivorship. Three pilot classes were conducted during the spring of 2012. A total of 22 women participated in the classes. Participants were asked to complete a pre and post self assessment, and program evaluation.

**Findings and Interpretation:** Pre and post self assessments illustrated an overall participant increase in cardiovascular physical activity and strength training. They also indicated an increase in participants who strongly agree or agree with the following: knowledge of daily fat consumption (50% pretest–91% post-test), 7-8 hours of sleep most nights (47% pretest–70% post-test), and manageable stress level (40% pretest–61% post-test). Class evaluations showed that 94% of participants understood

the foods that increase/decrease risk of recurrence, 95% felt they have the information needed to change eating habits, 85% of participants made diet changes during the class, 89% understood how to minimize long term physical effects of treatment, 88% understood the long term emotional/psychological effects of treatment and 83% incorporated stress management and lifestyle changes to minimize the psychological stressors of treatment.

**Discussion and Implications:** A multidisciplinary, time limited class series model including structured education and support for breast cancer survivors can improve participant engagement in health behaviors, understanding and coping. With the pilot program evaluation data now analyzed, an opportunity remains to research long term behavior modification and health outcomes for participants.

**Underwriting or funding source name:** Susan G. Komen funds the participant “gifts” handed out each week.

## #19

**WEB-BASED PALLIATIVE CARE LEARNING: A MENTORSHIP PROGRAM.** Valerie Hess, RN, BSN, Kate Sciandra, RN, MSN, CNL, Sharon Hanchett, RN, MSN, CNL, Trish Macara, RN, MSN, OCN®, and Jan Cipkala-Gaffin, PhD, RN, PMHCNS-BC, all at the University of Pittsburgh Medical Center Shadyside, Pennsylvania

**Objective:** Describe an innovative educational intervention to improve oncology nurses’ knowledge and confidence in palliative and end-of-life care through the implementation of a web-based mentorship program.

**Topic Significance and Study Purpose, Background, and Rationale:** Oncology care encompasses curative treatments and excellent palliative and end-of-life (EOL) care. However, nursing education insufficiently prepares nurses for EOL situations. Oncology nurses on a 29 bed, inpatient unit in a tertiary center addressed the lack of palliative and EOL care education with the intervention of a mentorship program. They aimed to improve nurses knowledge of palliative and EOL care and patients quality of life.

**Methods, Intervention, and Analysis:** The nurses implemented a mentorship program using the End of Life Nursing Education Consortium (ELNEC) curriculum. Six mentors with ELNEC training were assigned two mentees each with eleven nurses completing the program (n = 11). For eight months, the mentees watched ELNEC palliative modules online. On a self-designed blog, mentees and mentors applied ELNEC concepts to monthly case studies. The mentors also facilitated learning through email exchange with their mentees. Nursing knowledge was assessed pre and post-implementation with the national, 106 question ELNEC examination. The mentees also completed pre and post-surveys, assessing their perceptions related to palliative and EOL care.

**Findings and Interpretation:** Results from a paired samples t-test showed a significant increase in mentees knowledge as measured by the national ELNEC examination with a pre-implementation mean of 74% and post-implementation mean of 81% (p < 0.002). Pre and post-implementation surveys also revealed statistically significant results for the following items: 1. Nurse satisfaction with palliative care knowledge 2. Comfort in initiating conversations about palliative care 3. Adequate communication with patients and families about palliative care. 4. Understanding ethical and legal issues surrounding palliative and hospice care. There was a significant difference in the scores for these four items: p < 0.001; p < 0.001; p < 0.024; and p < 0.002 respectively indicating that the educational intervention was beneficial.

**Discussion and Implications:** The nurses benefited from this innovative mentorship program demonstrated by increased

levels of knowledge and reports of increased confidence in palliative and EOL care. The success of online modules, a group blog, and email exchange suggest that online learning may be an educational vehicle for inpatient nurses. Palliative and EOL education should be better incorporated into nursing curriculum and hospital education programs. Further research should be done to evaluate the impact of increased nursing knowledge on patient outcomes at the EOL.

**Underwriting or funding source name:** Beckwith Institute.

## #20

### STANDARDIZED PRACTICE: PATIENT ADMINISTERED PRE-MEDICATIONS IN AMBULATORY ONCOLOGY.

Frances Fuller, RN, MS, FACHE, OCN®, Diane Lucier, RN, BSN, OCN®, Kristin Roper, RN, BSN, OCN®, Mary Lou Siefert, DNSc, RN, AOCN®, and Donna L. Berry, PhD, RN, AOCN®, FAAN, all at the Dana-Farber Cancer Institute, Boston, MA

**Objective:** Participants who view this presentation will be able to understand the process of implementing an evidence-based practice project for patients receiving pre-medications for taxanes in an ambulatory oncology setting.

**Topic Significance and Study Purpose, Background, and Rationale:** Hypersensitivity reactions in patients receiving taxanes are fairly common and can be fatal without appropriate management. Aggressive prevention measures often require ambulatory oncology patients to adhere to complicated instructions prior to treatment including at-home pre-medication dexamethasone dosing. A review of the literature was conducted and revealed that non-adherence is often related to lack of patient education, understanding, and availability of written information. The purpose of this evidence-based practice project was to evaluate a protocol for ambulatory patients receiving taxane-based chemotherapy using standardized teaching sheets and individualized instructions for pre-medications.

**Methods, Intervention, and Analysis:** A six-month retrospective audit was conducted in an ambulatory comprehensive cancer center clinic revealing incomplete nursing documentation of pre-medication teaching and patient adherence prior to taxane administration. Fifty-seven electronic medical records (EMRs) were reviewed; 50 (88%) patients received a pre-medication prescription with instructions, 21(37%) charts had documented evidence of teaching, and no chart had documented evidence of pre-medication adherence. A meeting was convened with the medical and nursing clinical leadership and the infusion nurses to institute an evidence-based dosing standard for pre-medications for patients receiving taxane based therapies. An easy-to-read instruction sheet was created and printed on vibrant colored card stock. The nursing staff identified and agreed on placement of documentation in the EMR. Reinforcement of the new practice was conducted over 1 month in staff meetings and with face-to-face communication with a goal of 90% documentation. A post-implementation audit was performed at 3 months.

**Findings and Interpretation:** The final audit revealed that there was 91% compliance with documented evidence of patient adherence and 100% compliance with documented evidence of patient teaching. Additionally, a nursing survey and patient satisfaction survey were administered which showed positive feedback.

**Discussion and Implications:** The development of a protocol using standardized teaching sheets with individualized instructions was successfully implemented in an evidence-based practice project. The findings support the importance of standardization and consistency in practice by physicians and nurses for patients receiving self-administered oral pre-medications.

## #21

**BRIDGING TO HOME: CONTINUUM OF CARE.** Shawnette Graham, BSN, OCN®, RN, Lillian Ray, BSN, RN, Juana Meza, BSN, RN, Martha Canuteson, BSN, RN, and LeeAnn Purthipatkool, OCN®, BSN, RN, all at Baylor University Medical Center, Dallas, TX

**Objective:** To develop discharge education materials that would assist the patient and caregiver in managing side effects related to transplant at home.

**Topic Significance and Study Purpose, Background, and Rationale:** For Bone Marrow Transplant patients side effects from treatments can be difficult. Most patients experience Gastrointestinal toxicity side effects such as nausea, vomiting, and diarrhea which can effect their ability to meet their nutritional needs. Their immune systems are immature and make them at risk for infections. They may continue to have weakness and fatigue that can limit their activities of daily life. Some patients and/or caregivers experience a lack of support and may need to request assistance from others who have experienced this or are currently going through a transplant. Some patients will be readmitted for control of these side effects and incur unexpected additional medical cost. Nursing collaborated with physical therapy, dietician, and outpatient support resources to develop a specific discharge education piece to assist the patient and caregiver in having a successful transition to home.

**Methods, Intervention, and Analysis:** Analysis of patients that were readmitted within 30 days was performed. The data from the analysis was used to determine where patient education needed to focus. The topics that were developed were caregiver support, patient support, activity improvement, behavior modifications, GI symptom management, and the Outpatient Evaluation and Treatment Center (OETC). Each team member was assigned a topic to research. A brochure was created to educate patients on topics and placed in discharge packets. Staff education on the brochure and discharge teaching was completed. Once the project was initiated, we monitored the readmission data.

**Findings and Interpretation:** We have monitored the patients that are readmitted due to transplant side effects within 30 days. In October 2012 we had 10 patients re-admit due to post transplant side effects, which include nausea, diarrhea, fever, and graft versus host. By July 2013, we were down to 0. Further evaluation of data is pending.

**Discussion and Implications:** There has been a decline in the readmission rates since the project was initiated in October. This could be contributed to the use of the OETC clinic, including the caregiver in symptom management education, detailed handouts, or the patients use of outpatient resources for support. Further data collection involving the outpatient clinic and OETC is needed. With this data, we could develop specific plans to improve patients life immediately after transplant and to evaluate teaching effectiveness.

## #22

**CREATING A SURVIVORSHIP CARE PLAN THAT MEETS ALL THE ELEMENTS OF THE COMMISSION ON CANCER STANDARD: THE LIFE WITH CANCER EXPERIENCE.**

Miranda Gingerich, RN, BSN, OCN®, Drucilla Brethwaite, LCSW, OSW-C, Deborah Cook, LCSW, OSW-C, and Sandra Weller, LCSW, OSW-C, all at Inova Health System, Falls Church, VA

**Objective:** There will be a greater understanding of the institutional requirements of American College of Surgeons, CoC Standard 3.3 and the process of creating and implementing a comprehensive survivorship care plan.

**Topic Significance and Study Purpose, Background, and Rationale:** In 2015, it is estimated that more than 1.6 million individuals will be diagnosed with cancer and The American College of Surgeons, Commission on Cancer (CoC) Standard 3.3 will require that EVERY one of them will need to be provided a survivorship care plan (SCP). There are a number of SCPs available from established resources and reviewing what tools meet the CoC standard can be challenging. In addition, many institutions are considering developing their own SCP; an onerous task in an over-burdened health care climate. After conducting much research, Life with Cancer undertook the challenge of creating a comprehensive SCP that meets all of the elements outlined in Standard 3.3.

**Methods, Intervention, and Analysis:** A transdisciplinary committee was formed with the goal of creating a SCP that encompassed not only the comprehensive summary of each cancer survivor's diagnosis and treatment, but also provide an outline for follow-up care based on evidence-based standards of care. Multiple care plans that are currently being utilized were assessed and compared to the elements that should be included in a SCP as described by the Institute of Medicine Cancer (IOM) Survivorship Care Plan Fact Sheet. Stakeholders were identified and organizational barriers and challenges of implementation were reviewed and strategized.

**Findings and Interpretation:** The care plan was formatted based on organizational goals and resources with the guidance of the IOM Fact Sheet, as well as a unique psychosocial component that allows for assessment of each individual's needs and appropriate referrals. Standard 3.3 states that a designated employee meet with patients to explain the purpose and use of the care plan. Designated employees could be a physician, physician assistant, nurse practitioner, oncology nurse or social worker. The tool has been formatted so that it expands as it is updated, can be transferred to a portable data device and a hard copy may be produced for each patient's records for ease of use.

**Discussion and Implications:** Discussion on timing, pathways of implementation and incorporation into an electronic medical record continue. Additional education for clinicians using the tool will also need to be developed as well as a process for the CoC required annual evaluation.

## #23

**CLINICAL TRIALS ACCRUAL HUDDLES: A NEW PATIENT SCREENING APPROACH FOR THE COMMUNITY CANCER RESEARCH PROGRAM.**

Kim Ward, RN, BSN, OCN®, Christy Arrowood, RN, BSN, Catherine Lowe, RN, BSN, Lynda Owen, PhD, CCRP, and Linda Sutton, all at Duke University Medical Center, Durham, NC

**Objective:** Participants will be able to discuss the rationale, implementation, and results of a new patient screening method for a community oncology network called Clinical Trial Accrual Huddles (CATCH).

**Topic Significance and Study Purpose, Background, and Rationale:** Clinical trials accrual is a challenge. This challenge is magnified for community cancer programs with approximately 85% of patients treated in community settings and under 3% of adult trial participation. Limited accrual delays progress in determining cancer treatments. Effective screening and accrual processes must be a priority in community cancer research programs. Project objectives: 1) develop an effective screening process; 2) increase enrollment; 3) identify enrollment barriers and opportunities for current and future trials; 4) establish clinical trials nurse (CTN) role in the screening process; and 5) enhance engagement between CTN and community provider (CP).

**Methods, Intervention, and Analysis:** Project was two-part and involved a network of six community oncology programs, eleven CPs, and two CTNs. In Part 1, the clinical trials accrual



huddles (CATCH) process was developed and piloted with six CPs over three months. CATCH was a biweekly, in-person meeting between CTN and each CP, and involved: 1) review of new and established patients; 2) discussion of available trials; 3) identification of potential trial candidates; and 4) documentation of rationale for non-trial candidates. Part 1 data was reviewed and CATCH modified to: 1) review of new and recently relapsed patients; 2) flexibility to conduct CATCH by email; 4) 48-hour response requirement for CATCH by email; and 4) provision of a key eligibility guide for available trials. Starting in September 2013, Part 2 CATCH expanded to all eleven CPs. CATCH continues to be the preferred patient screening method by CPs.

**Findings and Interpretation:** Preliminary data and participant feedback supports CATCH to be an effective screening process. The overall accrual rate has increased and the treatment trial rate is up 100% compared to six months prior to CATCH. Various enrollment barriers and opportunities have been identified and are being addressed. The CTN role in the screening process is clearly defined. CP and CTN engagement has increased. Project findings will be detailed in the presentation.

**Discussion and Implications:** Engagement, dedication, and accountability by the CTN and CP are integral components to an effective accrual process. CATCH has proven the challenges of accrual in our community network can be reduced making this a viable option for use in other community programs.

## #24

**PREVENTION STARTS HERE: ENVIRONMENTAL CONNECTIONS TO BREAST CANCER.** Connie Engel, PhD, Sharima Rasanayagam, PhD, and Barbara Sattler, PhD, all at Breast Cancer Fund, San Francisco, CA; Janet Gray, PhD, Vassar College, Poughkeepsie, NY; and Jeanne Rizzo, RN, Breast Cancer Fund

**Objective:** After viewing this presentation, individuals will be able to identify key environmental exposures linked to breast cancer and will be able to present patients with educational materials and prevention tips.

**Topic Significance and Study Purpose, Background, and Rationale:** Globally, breast cancer affects more women than any other type of cancer and is the second leading cause of cancer-related deaths among women. Widely understood risk factors for breast cancer including primary genetic mutations; reproductive history; and lifestyle factors only account for a portion of the risk for the disease. A substantial and growing body of scientific evidence indicates that exposures to common chemicals and radiation, singly and in combination, also contribute to the unacceptably high incidence of breast cancer. We will present an evidence-based framework of breast cancer and the environment that considers windows of susceptibility, low dose exposures, mixtures of exposures, and interactions with other individual (e.g., genetic) and social factors.

**Methods, Intervention, and Analysis:** Chemicals linked to breast cancer can be found in consumer products, occupational settings, and in air, water, and soil; but federal policy lacks the authority to require full safety testing and regulation of the more than 80,000 chemicals registered for use in the United States. Exposures to chemicals are often inequitably distributed in ways that exacerbate health disparities based upon race, ethnicity and socioeconomic status. We will highlight new tools oncology nurses can use to assess environmental exposures and educate patients, along with accompanying nursing education materials.

**Findings and Interpretation:** Green and colleagues highlight significant gaps in efforts to translate research into practice. They indicate that only 14 percent of biomedical research impacts patient care, and that it may take up to 17 years to integrate findings into care. These calculations are based upon clinical practice and might be different for research translation into public health interventions (Green, et al., 2009). The materials presented in this session are intended to translate the rapidly

evolving science linking environmental exposures to breast cancer into clinical practice.

**Discussion and Implications:** This presentation and the associated materials will support oncology nurses efforts to integrate environmental assessment into intake forms and patient education. Findings from patient intake forms can guide breast cancer prevention advice and support patients undergoing treatment in long-term efforts to reduce recurrence.

## #25

**IMPLEMENTING A NEEDS ASSESSMENT FOR NEW ONCOLOGY ADVANCED PRACTICE PROVIDERS: A TAILORED APPROACH TO ONBOARDING.** Heather Brom, MS, RN, NP-C, and Sharon Steingass, MSN, RN, AOCN®, both at the Ohio State University Comprehensive Cancer Center James Cancer Hospital and Solove Research Institute, Columbus

**Objective:** Individualizing the clinical onboarding process for advanced practice providers using a needs assessment tool.

**Topic Significance and Study Purpose, Background, and Rationale:** The predicted shortage of oncologists by 2020 is between two and four thousand. The consensus is that advanced practice providers (APPs) clinical nurse specialists, nurse practitioners, and physician assistants will fill this gap. A challenging issue faced with increasing APP presence within the oncology setting is the lack of formal oncology training with reports of 60-81% receiving on the job training from collaborating/supervising physicians. The majority of new oncology NPs (61-78%) feel not at all or somewhat prepared to deal with many common oncology issues such as chemotherapy, oncologic emergencies, and drug toxicities. With the oncology APP workforce growing and its known educational deficits, it is incumbent on employers to find novel solutions to this challenge. Over the past 13 months we have onboarded 37 APPs to our organization, representing 22% of our APP workforce. Of those onboarded, 75% had no oncology experience and 71% were new to the APP role. A modified needs assessment tool was created using the 2009 ONS Bridging the Gap Working Group Survey to tailor the clinical orientation process.

**Methods, Intervention, and Analysis:** As part of the onboarding process, the advanced practice educator sends each new APP a link to an electronic survey. The survey includes 40 questions (11 are demographic and 29 role and oncology knowledge related). Results are reviewed by the advanced practice educator with the new APP and preceptor to make them both aware of the new APPs educational needs. Together goals are created and integrated into their unique onboarding experience.

**Findings and Interpretation:** Fourteen new APPs have completed the surveys since the start of the process in the fall of 2013. After review of the surveys, at least two goals are developed per APP with a time-frame for completion. Further analysis will include role and oncology experience and needs assessment findings compared to national averages.

**Discussion and Implications:** In just the short time, we have found our new APPs eager to complete the survey. Both the orientee and the preceptor appreciate having more specific goals.

## #26

**IMPLEMENTATION OF AN EARLY WARNING SCORING SYSTEM TO IDENTIFY ONCOLOGY PATIENTS AT RISK FOR DETERIORATION AND IMPROVE STAFF COMMUNICATION.** Kathy Mooney, MSNc, RN, OCN®, Mikaela Olsen, MS, RN, AOCNS®, Brenda Shelton, MS, RN, AOCNS®, all at the Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins, Baltimore, MD

**Objective:** Describe the benefit of an early warning system to identify patients at risk and to improve staff communication.

**Topic Significance and Study Purpose, Background, and Rationale:** Following the unexpected death of a young patient, this nursing staff was steadfast to find meaning in their experience by asking the question, "What would it look like if we could have intervened sooner?" Early Warning Scoring Systems have been identified as a strategy to identify deteriorating patients and increase response times for these patients. The modified early warning score (MEWS) has been shown to decrease the incidence of cardiac arrest calls, admissions to the intensive care unit, and mortality. Implementation of the MEWS has been shown to increase nurses' decision-making confidence and improve reassessment of abnormals, documentation, and communication of changes in patient conditions. This National Cancer Institute designated Comprehensive Cancer Center did not have a formalized communication strategy to alert nursing leadership and providers about deteriorating patients. It was determined that the MEWS score could improve detection and communication of deterioration, and facilitate escalation of care for these acutely ill patients.

**Methods, Intervention, and Analysis:** A retrospective chart audit of 50 admissions was reviewed for documentation of patient deterioration. A pre-survey was administered to the unit RN staff to identify beliefs regarding which assessment parameters are most important in determining a change in a patient condition and how these changes are communicated.

**Findings and Interpretation:** A retrospective chart audit demonstrated inconsistency with documentation, patient reassessment, and provider notification. The results of the pre-survey indicated that nurses have varying beliefs about which assessment parameters are most indicative of a change in their patient, which was inconsistent with the published predictive tools for patient deterioration. A lack of continuity in assessment frequency, re-assessment parameters, and provider notification of patient deterioration was noted in this self-reported survey. The survey also indicated that the majority of staff believes there could be improvement in detection and communication of deteriorating patients. Color coded pocket cards utilizing the MEWS were created and all staff attended educational sessions. An early warning scoring system was implemented with current and ongoing evaluation of efficacy.

**Discussion and Implications:** The use of an early warning system in oncology patients can be a valuable tool for the identification of deteriorating oncology patients while improving staff communication and confidence.

## #27

**WALKING THE LABYRINTH: A MEDITATIVE TOOL TO ENHANCE SPIRITUAL GROWTH FOR CANCER SURVIVORS.** Marsha Komandt, RN, BSN, OCN®, Inova Health System Life With Cancer, Fairfax, VA

**Objective:** The labyrinth, a meditative tool and spiritual practice, can be utilized in healthcare settings to help restore a sense of well-being and equilibrium in cancer survivors, nurses, and clinicians.

**Topic Significance and Study Purpose, Background, and Rationale:** The labyrinth is considered an ancient and ritualistic spiritual practice that is walked as a form of meditation. Consequently, the labyrinth is incorporated in the yearly agenda of our institution's cancer education/support program's Spirituality Quest Group. For at least twelve years, we have engaged an experienced labyrinth facilitator to set up a moveable labyrinth for the utilization of our cancer survivors with anecdotal comments of its being beneficial to their well-being and spiritual growth. Interestingly, a literature research by our health science library has provided no proven studies on the topic. There is ample evidence though from many studies done on the significance of various forms of mindfulness meditation as a positive healthcare intervention. Thus, if we consider the labyrinth as a

mindful type of meditation, the exercise of walking the labyrinth for cancer survivor shows positive potential as well. In our facility, in collaboration with the hospital's Chaplaincy department, walking the labyrinth is extended to hospital staff after the cancer groups private facilitation and implementation. Not only is it proving to be a beneficial mind-body practice for cancer survivors but also for healthcare clinicians.

**Methods, Intervention, and Analysis:** The development and implementation at our institution of Walking the Labyrinth as a mindfulness meditation was based on relevant literature and has been tested for acceptability by both patients and staff. In collaboration with our institution Environmental Services, we have reserved space for two different dates in 2014 to test the program with measures that have been identified using a quasi-experimental time-series design.

**Findings and Interpretation:** The findings from our planned study to determine the benefits of Walking the Labyrinth as a complementary or integrative approach to cancer care is envisioned to be not just a treatment for cancer related symptoms and side effects, but also a form of spiritual practice. Several studies reviewed substantiate the association of spirituality and complementary and alternative medicine in oncology as having practical implications in supportive care of the cancer patient.

**Discussion and Implications:** Spirituality is such a unique component of holistic care, which if appropriately addressed and studied, may strongly influence the outcomes in a positive way for both cancer survivors and nurses. Consequently, if oncology nurses actively participate in and incorporate spiritual care in the treatment plan for each patient, this could ultimately lend to this positive outcome. Walking the Labyrinth is a means to accomplish this result, not only for themselves to decrease compassionate fatigue and burnout, but also for their patients as a part of their cancer journey.

## #28

**ENGAGING PATIENTS SCHEDULED FOR THEIR INITIAL CHEMOTHERAPY TREATMENT IN THE UTILIZATION OF A WEB-BASED EDUCATIONAL MODULE.** Marsena Pelton, RN, BSN, OCN®, Shani Weber, MSN, RN, OCN®, and Cheryl Steele, MSN, RN, OCN®, all at UPMC Cancer Center, Pittsburgh, PA

**Objective:** To empower patients to take a more active role in their own care by utilizing a standardized interactive web-based educational module to prepare them for their initial chemotherapy treatment.

**Topic Significance and Study Purpose, Background, and Rationale:** Current literature emphasizes the existing communication gap between patients and physicians and also indicates that newly-educated patients may forget up to 80% of the discussion upon exiting the medical office. In outpatient medical oncology, the stress experienced with a new cancer diagnosis combined with the lack of patient medical literacy, contributes to insufficient patient understanding and confidence in their treatment plan. Within UPMC Cancer Center, a large outpatient oncology network of 25 locations, educating patients in a consistent manner proved to be a daily challenge for the nursing staff. This challenge led to the utilization of a web-based educational module (Emmi Solutions) for newly-diagnosed patients who were scheduled to undergo their first treatment. This methodology was chosen as a standardized method of education to engage and empower patients in taking active roles in their care.

**Methods, Intervention, and Analysis:** Utilization of this web-based educational module was piloted at seven cancer center locations. Once a new oncology patient is scheduled for their initial treatment the nursing staff registers the patient for the web-based module. The patient then receives a code, password, and verbal and written instructions to access the module.

The module may be completed on-site via a provided computer or iPad. Patients can also choose to access the module in their home. Staff members are then able to ascertain if registered patients have actually completed the educational module.

**Findings and Interpretation:** The number of new treatment patients who were registered for the web-based module has been monitored over 15 months. There has been an increase in program registration from 32%–80%. Patient satisfaction surveys have indicated that patients perception of what to expect during chemotherapy has increased by 38% and their understanding of chemotherapy side effects has increased by 54%.

**Discussion and Implications:** Completion of a web-based module by patients prior to their first chemotherapy treatment has been a key to success in standardizing chemotherapy education. Engaging patients to take a more active role in their treatment plan ensures compliance and contributes to an increase in patient satisfaction. A future goal is to expand this web-based educational module to all 25 cancer center locations.

## #29

**ONCOFERTILITY PRACTICE IN A COMMUNITY CANCER CENTER: FERTILE GROUND FOR IMPROVEMENT.** Jean Ellsworth-Wolk, MS, RN, AOCNS®, The Cleveland Clinic Cancer Center at Fairview Hospital, Ohio

**Objective:** Participant will be able to list 3 responsibilities of oncology nurses in oncofertility practice.

**Topic Significance and Study Purpose, Background, and Rationale:** There are over 12 million cancer survivors in the United States today. A large percentage of these survivors are in their child bearing years or have not yet completed their families. Many cancer treatments will result in an impairment of a patient's reproductive future. Research has shown that the impact of cancer treatment on fertility is often not part of the discussion before treatment begins (Letourneau et al 2012). This same research study revealed that if a patient was given the information and opportunity to preserve their fertility at time of diagnosis, they had a better quality of life and less regret, whether or not they pursued an intervention. To address this issue the American Society Clinical Oncology (ASCO) set forth guidelines updated in 2013 that had three major recommendations concerning this issue. The recommendations included 1) early discussion of fertility risk, 2) prompt referral to a reproductive endocrinologist and 3) promotion of clinical trials to advance knowledge. As members of the health care team, oncology nurses as educators, counselors, liaisons and advocates can make a difference in this area of oncology practice.

**Methods, Intervention, and Analysis:** As a follow up to the participation of an APN in a web based oncofertility education program, a community cancer center evaluated their practice against the ASCO standard. This involved a chart audit and the subsequent development of an action plan to improve performance. The action plan included increasing awareness, improving processes, linking to resources and educating involved health care professionals. The project goals were to 1) evaluate current practice 2) provide professional education on oncofertility issues, 3) optimize patient education, 4) standardize the process of pretreatment fertility discussions and referrals for appropriate patients

**Findings and Interpretation:** This poster will outline the pre and post intervention audit results, the specific action plan for improvement and its outcomes.

**Discussion and Implications:** Oncology nurses involved in the treatment of cancer patients have a responsibility to ensure that patients receive timely information and counseling surrounding oncofertility issues. They can play a major role in improving the practice of oncofertility.

## #30

**DEVELOPMENT OF A SUCCESSFUL NURSE NAVIGATOR LUNG CANCER SCREENING PROGRAM.** Teri Parker, RN, MSN, OCN®, Buffy Jansak, RN, MBA, OCN®, Melanie Boren, RN, MBA, OCN®, Maureen Rosario, RN, BSN, OCN®, and Cynthia Kurtz, RN, BSN, OCN®, all at OhioHealth, Columbus

**Objective:** Define the role of a nurse navigator in the development and implementation of a lung cancer screening program

**Topic Significance and Study Purpose, Background, and Rationale:** The Cancer Services team in OhioHealth responded quickly to the National Lung Screening Trial (NLST, 2010) results that demonstrated 20% reduced lung cancer mortality with low-dose computed tomography screening. A multidisciplinary team, led by the OhioHealth Lung Cancer Program director, a nurse, developed a program to address lung cancer risk reduction and establish a process for early identification of lung cancer. The oncology nurse navigator model that drives the program is largely responsible for its success. The objective was to create a comprehensive program that included smoking cessation, low-dose CT scan, and patient education about the potential risks and benefits of lung cancer screening. Risk factors from the NLST were utilized, and adjusted with the release of the National Comprehensive Cancer Network guidelines (NCCN, 2013). The development process involved multiple departments in three hospitals where the program was implemented: radiology, information technology, patient education, marketing, physician relations, respiratory therapy, billing, registration, cancer services nurses and administration. Using NCCN criteria, a unique nomenclature was created. To ensure consistent reporting of the screening results, only designated radiologists interpret the scans using the same process for interpretation and recommendations. At the center of the program is the dedicated team of oncology nurse navigators. The navigators perform pre-enrollment risk assessments to ensure appropriateness for screening. They meet the patients to provide education about risk reduction, initiate smoking cessation referrals, and to show an educational video created to explain possible findings from the CT scan. Following the scan, the navigators contact the primary care physicians to communicate and coordinate the recommendations for follow-up and track findings and future appointments through a navigational data base. According to the 2011 National Cancer Database, nearly 70% of lung cancer is diagnosed at an advanced stage. Although OhioHealth's program has only been in place for three months, of the 97 patients who have completed the program, 2 were found to have early lung cancer. No advanced lung cancer was identified. These results, and the positive patient and physician response to the navigators and program clearly demonstrate the value of, and need for navigation and screening programs.

**Methods, Intervention, and Analysis:** The measure of early detection of cancer was determined with a numerator of patients with a new cancer diagnosis and a denominator of the number of patients who were screened. The final pathologic stage established early versus advanced stage. The positive physician response was determined by the increasing number of physician referrals to the program as well as subjective responses.

**Findings and Interpretation:** The measurable outcome at this early point is the result of 2 early stage (2/97, 2%), and no advanced stage (0/97, 0%) lung cancers being identified through screening, confirmed by final pathology results. In contrast, 70% of lung cancers nationally (NCDB, 2011) are identified at an advanced stage. It is unlikely that these 2 cases would have been otherwise identified, being asymptomatic, without screening. Early detection, and subsequent access to early treatment, now offers these patients, and future patients that will be identified with early lung cancer through program, their best chance of survival.



**Discussion and Implications:** The value of the nurse navigators is well established as they ensure follow-up, provide interdisciplinary communication, offer education, and facilitate coordination of care and support to patients. Managing all aspects of the entire screening program elevated their responsibility to the broader health care network that included smoking cessation, radiologists, primary care physicians, oncology specialists as well as patients. Any collaborative team anticipating similar program development would benefit from the steps we took, and the lessons we learned along the way. This multidisciplinary team, representing multiple hospitals, underscored the need for communication, the value of different perspectives, and the benefit of input from all stakeholders.

### #31

#### DEVELOPING AN AMBULATORY NURSING COMMUNICATION SKILLS PROGRAM: INTERIM RESULTS OF PILOT PROGRAM.

Christine Liebertz, NP, MSN, AOCN®, Anthony Delacruz, NP, MSN, OCN®, Susan Derby, NP, MSN, OCN®, Ruth Manna, MPH, Cassandra Pehrson, BS, and Carma Bylund, BS, all at Memorial Sloan-Kettering Cancer Center, New York

**Objective:** Present an overview and interim results of a pilot program on communication skills training in the areas of empathy, end-of-life discussions, and challenging interactions with families.

**Topic Significance and Study Purpose, Background, and Rationale:** Several studies have shown that training in communication skills has been successful in helping nurses elicit patient concerns, making assessments of psychological distress and responding to patients' emotional cues. The goal of this program is to train ambulatory nurses in a day-long nurse communication training in the areas of empathy, end-of-life discussions, and challenging interactions with families.

**Methods, Intervention, and Analysis:** Fifty-eight (58) ambulatory nurses with varying years of experience participated in the ambulatory nurse communication skills training program. Participants follow 3 modules, each lasting 2.5 hours in length, starting with a short didactic (30 minutes) including exemplary video demonstrations by senior nurses, followed by small group role-play sessions. These sessions are guided by two trained facilitators, and incorporate a clinical scenario where the nurses can role play new skills with a simulated patient (SP). These sessions are video recorded, allowing for instantaneous replay. Combined with constructive feedback from the facilitators, the sessions enhance reflective learning. We examined the impact of the intervention to-date on multiple outcomes, using the two (of the four) levels of Kirkpatrick's model, including participant self-report, recorded SP assessments, and SP evaluations.

**Findings and Interpretation:** To date, 5 training sessions have been completed by 58 nurses. Course evaluations demonstrated strong satisfaction results, for example, 96 percent of nurses rated Agree or Strongly Agree to the skills learned would allow them to provide better patient care. Self-efficacy ratings increased significantly across all three modules,  $t(169) = -3.80$ ,  $p < 0.001$  between pre-training ( $M = 3.30$ ,  $SD = 0.84$ ) and post-training ( $M = 4.21$ ,  $SD = 3.15$ ). Particularly, significant increases in self-efficacy were observed for end-of-life discussions,  $t(54) = -8.41$ ,  $p < 0.001$  and challenging interactions with families,  $t(57) = -4.98$ ,  $p < 0.001$ ; however, self-efficacy for empathic communication did not increase pre- to post-training,  $t(55) = -1.78$ ,  $p = 0.080$ . SP ratings showed promise as 6 of 14 items were significantly higher ( $p < 0.05$ ) for nurse participants post-training as compared to pre-training for the following skills, restating, asking open-questions, validating and normalizing emotions, endorsing question asking, and praising patient efforts.

**Discussion and Implications:** Overall, nurses' ratings of self-efficacy and SP-rated communication behavior increased and preliminary results are encouraging. Further work will code the communication skills in SP interactions and examine long-term effects of the program.

### #32

#### THE EVALUATION OF CANCER SURVIVORSHIP CARE

**PLANS.** Anna Schaal, RN, BScN, MSN, ARNP, Laura Urquhart, RN, BSN, ARNP, and Diane Stearns, RN, BSN, ARNP, all at Norris Cotton Cancer Center, Lebanon, NH

**Objective:** Participants will list 3 advantages of survivorship care plans for both patients and Primary Care Providers.

**Topic Significance and Study Purpose, Background, and Rationale:** Cancer survivors and their Primary Care Providers (PCPs) are faced with unique challenges following the completion of cancer therapy including complying with recommendations specific for cancer survivors and coordinating this care across multiple healthcare providers. Historically, there is a lack of knowledge regarding what follow-up recommendations are and who in the health care field should complete them. It has been recommended by the Institute of Medicine that patients be presented with a Survivorship Care Plan (SCP) at the completion of cancer care which outlines the specific therapies as well as a detailed plan of follow-up care.

**Methods, Intervention, and Analysis:** The aim of this pilot project was to evaluate the patients and their PCPs perspective of SCPs to help improve its quality, value and usefulness. Patients were asked to complete an on line survey before they received a SCP and another survey 2-4 weeks afterwards. Primary Care Physicians were asked to complete a survey after they have received a copy of their patients SCP.

**Findings and Interpretation:** 22 patients participated, with 100% completing the pre-SCP survey and (12) 52% completing the post survey. 8 (35%) of PCPs responded. 100% of the patients were either very satisfied or extremely satisfied to receive a SCP. 92% percent found the SCP helpful to reinforce understanding regarding the need for further cancer screening, the importance of resuming primary care and understanding cancer resources available for survivors. 92% also reported that they were very or extremely likely to follow the recommendations outlined in the SCP. 100% of the PCPs who responded found the SCP to be important when caring for cancer survivors. 88% felt the SCP enhanced their ability to communicate with patients regarding cancer specific information. 75% reported that the SCP reinforced understanding regarding their patient's prognosis and the need for follow up care to assess for late or chronic side effects. All PCP's who responded would like to continue to receive SCP.

**Discussion and Implications:** The results of this pilot project support the usefulness and value of SCPs. Patients and PCPs satisfaction with receiving a SCP was high. SCPs were validated to be a valuable tool which enhances quality cancer survivorship care.

### #33

#### STOMATITIS PREVENTION DURING EVEROLIMUS/EXEMESTANE TREATMENT FOR METASTATIC BREAST CANCER: A PHASE 2 STUDY OF STEROID-BASED MOUTH-

**WASH.** Archana Ajmera, RN, MSN, WHNP-BC, ANP-BC, University of California, San Francisco, Helen Diller Family Comprehensive Cancer Center; and Dianna Weikel, MS, and Sheila Lindsay, MS, both at the University of Maryland Medical Center, Baltimore

**Objective:** Evaluate an alcohol-free steroid-based mouthwash (0.5 mg/5 mL dexamethasone oral solution) in women

with hormone receptor positive metastatic breast cancer prescribed everolimus 10 mg/day orally plus exemestane 25 mg/day orally.

**Topic Significance and Study Purpose, Background, and Rationale:** Stomatitis inflammation of mucous membranes lining the mouth has been observed in approximately 44-86% of everolimus-treated patients and tends to develop within the first month of therapy. Steroid mouthwashes have been used successfully to treat stomatitis in other patient populations, and anecdotal clinician reports indicate that use of a steroid-based mouthwash can prevent and manage stomatitis in patients with advanced breast cancer treated with everolimus. However, no clinical trial data are available.

**Methods, Intervention, and Analysis:** This phase 2, single-arm study will evaluate the efficacy of 0.5 mg/5 mL dexamethasone oral solution in preventing stomatitis during treatment of HR+/HER2 breast cancer with everolimus 10 mg/day plus exemestane 25 mg/day. A baseline oral assessment will be conducted by a trained examiner, and patients will be provided instructions on how to self-monitor for stomatitis. All patients will be instructed to perform their daily oral care. Eligible patients will receive a steroid-based mouthwash (alcohol-free 0.5 mg/5 mL dexamethasone solution) prophylactically. Patients will be instructed to perform the mouthwash regimen 4 times per day and swish the mouthwash in the mouth for a minimum of 120 seconds before spitting it out. Patients will be instructed to abstain from eating or drinking for at least 1 hour after using the mouthwash. The mouthwash regimen will begin on the first day of everolimus administration after dosing, and patients will continue the regimen for 2 months, with an additional 2 months at the physicians discretion. The primary end point for the study is the incidence of stomatitis (grade 2) at 2 months; secondary end points include average number of times per day the mouthwash regimen was performed and time to resolution of stomatitis (grade 2) during the trial.

**Findings and Interpretation:** Enrollment for this in-progress study is planned for 97 patients. The definition of grade 2 stomatitis will be strictly defined using physical examination, the Normalcy of Diet subscale, and patient-reported visual analog scale scores to ensure objective and consistent grading.

**Discussion and Implications:** This study is expected to reveal specific treatment strategies to prevent everolimus-associated stomatitis or ameliorate the severity.

**Underwriting or funding source name:** Funded by Novartis Pharmaceuticals Corporation.

### #34

**PHASE 3 STUDY COMPARING THE EFFICACY AND SAFETY OF SUSTAINED-RELEASE GRANISETRON (APF530) AND PALONOSETRON IN THE PREVENTION OF CHEMOTHERAPY-INDUCED NAUSEA AND VOMITING (CINV) IN CANCER PATIENTS RECEIVING MODERATELY OR HIGHLY EMETOGENIC CHEMOTHERAPY.** Carrie Smith, RN, and Nashat Gabrail, MD, both in Gabrail Cancer Center, Canton, OH

**Objective:** To demonstrate efficacy and safety of sustained-release granisetron (APF530) compared with palonosetron in preventing acute and delayed CINV in cancer patients receiving moderately (MEC) or highly emetogenic chemotherapy (HEC).

**Topic Significance and Study Purpose, Background, and Rationale:** Nurses provide essential care for cancer patients experiencing CINV, which is often poorly controlled. APF530 is a new subcutaneous (SC) formulation providing sustained release of granisetron. A large, randomized, double-blind, phase 3 noninferiority trial compared efficacy and safety of APF530 with palonosetron in preventing acute (0-24 hours) and delayed (24-120 hours) CINV.

**Methods, Intervention, and Analysis:** Patients receiving single-day MEC or HEC received single-dose APF530 250 or 500 mg SC (granisetron 5 or 10 mg) or intravenous palonosetron 0.25 mg. Primary objectives were to establish, during cycle 1, APF530 noninferiority to palonosetron in preventing acute CINV following MEC or HEC and delayed CINV following MEC, and to determine APF530 superiority to palonosetron in preventing delayed CINV following HEC. The primary efficacy endpoint was complete response (CR; no emesis or rescue medication). Noninferiority occurred if the lower confidence interval difference (APF530 minus palonosetron) exceeded 15%.

**Findings and Interpretation:** There were 1395 chemotherapy-naïve and non-evaluable patients (MEC, n = 653; HEC, n = 742), primarily women (63%-88% across groups), mainly white (56%-67%), and mean age 55-58 years. The most common tumor types were breast and lung. Our center enrolled the highest number of patients (n = 88). Both APF530 doses were noninferior to palonosetron in preventing acute CINV following MEC or HEC (CR > 75% across groups). APF530 500 mg was noninferior to palonosetron in preventing delayed CINV after MEC (CR > 50% across groups), but not superior in preventing delayed CINV after HEC. Adverse events (AEs) were as anticipated for granisetron, generally mild, and similar across groups. The most common AE was constipation. The most common injection-site reaction was mild bruising (12%-14% of APF530 patients).

**Discussion and Implications:** In our experience, APF530 was effective regardless of patient age, sex, tumor type, and prior chemotherapy, important considerations for nurses caring for a range of cancer patients. Safety profiles of APF530 and palonosetron were similar, requiring no specialized nursing intervention. Administration of APF530 SC required no special nursing skills. A single SC injection of APF530 may provide a convenient alternative to palonosetron for preventing CINV following MEC or HEC, especially in an outpatient setting.

**Underwriting or funding source name:** AP Pharma.

### #35

**COMBATING COMPASSION FATIGUE: ONE QUESTION AT A TIME.** Linda Ouyang, RN, BSN, OCN®, Lindsay Brown, RN, BSN, OCN®, Jacqueline Patterson, RN, BSN, OCN®, Caroline Srikumar, RN, BSN, OCN®, Donna Miale Mayer, RN, MSN, CNML, and Mary Dowling, RN, MSN, CNML, all at Memorial Sloan-Kettering Cancer Center, New York, NY

**Objective:** To develop a multidisciplinary program where nursing staff can 1) discuss challenges that arise in caring for oncology patients 2) build communication across disciplines 3) identify and combat compassion fatigue.

**Topic Significance and Study Purpose, Background, and Rationale:** Our hematology oncology unit provides comprehensive care for the leukemia, lymphoma, and multiple myeloma population. The nurses develop close relationships with their primary patients and administer a wide range of care from diagnosis and treatment to end of life. Appropriate professional support for nursing staff is important in combating compassion fatigue and maintaining nursing satisfaction. A multidisciplinary program that spanned two days and included Physicians, Nurse Practitioners (NPs), Director of Nursing, Director of Social Work, Registered Nurses (RNs), Patient Care Technicians (PCTs), and Unit Assistants, was developed to discuss challenges experienced by nursing staff in caring for oncology patients.

**Methods, Intervention, and Analysis:** The unit council conducted a qualitative pre-assessment of the everyday nursing challenges experienced on the unit along with a unit specific review of the NDNQI results. Major areas of concern included end-of-life care, challenging patients, and poor communication. The Director of Social Work opened the day describing compassion fatigue. The Employee Assistance Program explored

resources for coping. Physicians/NPs participated in a QandA session concerning end of life issues (i.e., DNR discussion), communication barriers, and nursing role in clinical trials. The Director of Nursing, Nurse Leader, and Clinical Nurse Specialist addressed methods of improving quality of care and work environment. The Ethics Committee Coordinator addressed nursing frustration about ethical issues confronted daily. Finally, former patients (survivors) spoke about nursing's impact on their care.

**Findings and Interpretation:** A post survey was provided to both the nursing staff and speakers. Of the 78 staff members in attendance, 100% rated the event as excellent/and or good. A nurse wrote, "The honest discussion between RN/PCT, MD, and nurse leadership was definitely a boost to improving the relationship between all levels of care." A speaker wrote Outstanding! Would be useful if implemented on every oncology unit.

**Discussion and Implications:** Due to the overwhelming positive responses the Director of Nursing has expressed interest in developing a similar program hospital-wide.

### #36

**ENSURING ACCURATE PATIENT IDENTIFICATION AND BLOOD PRODUCT VERIFICATION ACROSS THE CARE CONTINUUM.** Katherine Ruan, RN, BSN, Donna Miale-Mayer, RN, MSN, CNML, Diane Llerandi, RN, MSN, CNML, Lauren Aho, RN, BSN, OCN®, Meagan Harrington, RN, BSN, OCN®, and Elena Lubimov, RN, BSN, OCN®, all at Memorial Sloan-Kettering Cancer Center, New York, NY

**Objective:** To ensure a standardized process of patient identification and blood product verification is performed to comply with JCAHOs #1 National Patient Safety Goal eliminating transfusion errors related to patient misidentification.

**Topic Significance and Study Purpose, Background, and Rationale:** In various clinical settings throughout our center the frequency of blood product administration varies by area. As this is a high risk procedure, Nursing Departmental Quality Safety council members identified a need for clarification of multiple steps involved to ensure hospital policy related to patient identification and blood product verification is followed each time it is performed. Malcolm Knowles suggests adult educators assess learner's specific needs and interests and work collaboratively with learner to select method of instruction. Quality Safety council members unanimously requested a video as a self-directed, easy to retrieve supplemental resource.

**Methods, Intervention, and Analysis:** Our inpatient hematology unit's 2013 year to date blood transfusions total approximately 4,000 with 100% accuracy of patient and blood product identification. Due to high volume and familiarity with this high risk procedure, two clinical nurses and a PCT from our unit were selected to act in the video. MSKCC's Nursing Practice Director developed a formal video script format to be submitted for review and approval by Departmental Nursing Practice Council and Infection Control. The RNs collaborated with the unit CNS to draft a script and once approved the video was filmed.

**Findings and Interpretation:** The use of video is to bring policy text to life and standardize practice of a high risk procedure hospital-wide. Preliminary reviews by nurses throughout the center have been very positive. The video will decrease misinterpretations of the policy text preventing severe and possibly catastrophic consequences of misidentification.

**Discussion and Implications:** Upon final review of nursing administration and infection control, the video will be added as an educational complement hospital-wide. We plan to collaborate with the Nursing Practice Director to evaluate the effectiveness of the video after implementation. As there is great interest in supplementing policy text with video of various high risk, low frequency procedures to address the learning needs of all nursing staff.

### #37

**USING A FINANCIAL ASSISTANCE PROGRAM AS A GATEWAY TO SUPPORT AND EDUCATION FOR UNDERSERVED BREAST CANCER SURVIVORS.** Catherine Creme Henry, MA, and Arin Ahlum Hanson, MPH, CHES, both at Living Beyond Breast Cancer, Haverford, PA

**Objective:** To learn about Living Beyond Breast Cancer's regional grant program and national education and support programs and to share innovative interventions to engage and support underserved breast cancer survivors

**Topic Significance and Study Purpose, Background, and Rationale:** Living Beyond Breast Cancer's Cis B. Golder Quality of Life Grant assists with the financial burden of breast cancer treatment. Since 2006, the grant has funded more than 1,100 women and helped pay bills such as rent/mortgage (53% of funds disbursed), utilities (34%), and childcare. More than \$1 million has been distributed in the Philadelphia region. 90% of recipients earn less than 300% of the federal poverty line. 41% are African-American; 60% live in urban counties. A 2010 needs assessment indicated that recipients were not familiar with LBBCs programs and had limited interactions with the organization. For many recipients, personal and financial crises made seeking information and support a low priority.

**Methods, Intervention, and Analysis:** Interventions were developed to increase contact time with recipients and provide personalized invitations to other LBBC education and support programs. All applicants receive a peer support phone call from an LBBC Breast Cancer Helpline volunteer to share information about upcoming programs and refer to resources to meet their needs. Special invitations are sent to recipients offering registration fee waivers to LBBC conferences and inviting them to tailored programs for low-income families.

**Findings and Interpretation:** 65% of applicants were previously unaware of Living Beyond Breast Cancer and its support and education programs. All applicants receive 10-20 minutes of phone peer support and invitations to two local programs. Applicants receive several breast cancer publications on topics related to their concerns or experience. A nutrition-on-a-budget education series was piloted in 2013 to address recipients other wellness needs and provide meals. 14 women participated and reported that the program increased their knowledge of other nutrition resources available to them (70%), improved their confidence in cooking healthy meals (85%), and increased their likelihood of using other LBBC services (85%).

**Discussion and Implications:** A financial assistance program provides a unique opportunity to engage underserved breast cancer survivors who may not otherwise seek support and education from an organization. The addition of peer support interventions helps assess and alleviate other concerns and connects recipients to a support system that they can access throughout their experience. Although LBBCs financial assistance is regionally restricted, its interventions can act as a model for other grant programs.

### #38

**ENERGY THROUGH MOTION (ETM): AN ACTIVITY PROGRAM FOR CANCER SURVIVORS.** Linda Abbott, RN, MSN, AOCN®, CWON; Laura Cullen, RN, DNP, FAAN, Ami Gaarde, RN, DNP, FAAN, and Elizabeth Cullen, RN, MSN, ARNP, ANP-C, GNP-C, all at the University of Iowa Hospitals and Clinics, Iowa City, IA; and Katie Huether, DNP, ARNP, FNP-C, Mercy Family Practice, Cedar Rapids, IA

**Objective:** Participants will identify strategies to implement an evidence-based activity intervention in a busy clinical setting in order to reduce the effects of cancer-related fatigue.



**Topic Significance and Study Purpose, Background, and Rationale:** Oncology nurses have long been focused on reducing cancer-related fatigue (CRF). Research has identified exercise as an intervention likely to reduce CRF during and after cancer treatment. Despite years of data to support the benefits of increased physical activity, barriers often prevent it from being discussed or encouraged with patients. The purpose of this project was to implement and evaluate an evidence-based activity intervention addressing CRF that was easy for staff to use in busy clinical settings.

**Methods, Intervention, and Analysis:** Thirty patients were recruited for the control group and 20 patients for the activity group from two Cancer Survivorship Clinics at a large Midwestern Academic Medical Center. In addition to standard treatment, the control group completed a questionnaire focused on current level of fatigue and activity at baseline and by phone, 3 months later. The activity group completed the same questionnaires. They were also given an Energy through Motion (ETM) activity kit containing educational materials, resistance bands, a pedometer, a water bottle, and weekly exercise logs. Monthly follow-up phone calls for a total of 3 months monitored activity and reinforced the benefits of exercise for the activity group. Levels of fatigue, impact on QOL, and activity level were compared between both groups.

**Findings and Interpretation:** There were no significant differences in age, gender, or disease between groups. The activity group reported engaging in more activities, lower fatigue scores and improved QOL measures than the control group. The control group's fatigue and QOL measures worsened and activity level decreased. One hundred percent of the activity group agreed they were able to stay active and manage energy better after the intervention. Both groups agreed that they knew how to stay active but results showed knowledge alone, did not correlate with increased activity. Activity kits with follow-up phone calls appear to promote activity and reduce CRF.

**Discussion and Implications:** The ETM program is effective in increasing physical activity and decreasing CRF during and after cancer treatment. The program was well received by patients and healthcare providers. Kits will continue to be given to patients in the cancer survivorship clinics. The program will be expanded to include patients undergoing active cancer treatment.

**Underwriting or funding source name:** Daisy Foundation.

### #39

**A MODEL FOR ESTABLISHING RESEARCH COMPETENCY IN AMBULATORY CHEMOTHERAPY AND OFFICE PRACTICE NURSES.** Erica Fischer-Carlidge, MSN, RN, CBCN®, and Linda Temperino, BSN, RN, OCN®, both at Memorial Sloan-Kettering Cancer Center, New York, NY

**Objective:** Identify a structured education method for oncology nurses to develop competency and increased comfort toward caring for research patients.

**Topic Significance and Study Purpose, Background, and Rationale:** The unique needs of patients on clinical trials were recognized internationally by the NIH in 2007 with launch of the Clinical Research Nursing2010 initiative, which sought to establish nurse competency and role definition ([www.cc.nih.gov/nursing/crn/crn\\_2010.html](http://www.cc.nih.gov/nursing/crn/crn_2010.html)). Literature on required skills, knowledge, and education methodology, is lacking. While Clinical Research Nurse (CRN) practice standards are defined, knowledge gaps in role definition and competency still exist for oncology office practice and treatment nurses (i.e. primary nurses). An NCI-designated cancer center expanded capacity for phase 1 drug development by creating 6 satellite developmental treatment units within existing ambulatory services. Clinical trial participation increased more than 36% in the breast service

with this expansion. A need was identified to increase CRN collaboration with the primary nurses due to increased acuity and volume. Assessment of baseline knowledge and competency was performed and curriculum was designed.

**Methods, Intervention, and Analysis:** Nurse pre-assessment data demonstrated: 77% knowledge deficit in accessing resources; 70% discomfort with research patient management; 44% were not confident in toxicity grading. 100% reported interest in improving skills and recognized importance to practice. A standardized education initiative was needed to ensure competency with basic requirements of research patient care and prepare nurses for greater participation. A training course was developed by expert nurses, combining didactic lecture and skill demonstration. Curriculum included information on phases of trials, reading protocol documents, assessing toxicity, minimizing violations, optimizing patient experience, and accessing resources. Post-assessments were completed at course conclusion.

**Findings and Interpretation:** Post-assessment demonstrated 100% improvement in knowledge and confidence in accessing resources and trial phase differentiation; 90% increased comfort with research patient management; 100% demonstrated toxicity grading competency. Since course completion the CRNs have transitioned all non-phase I protocols into the care of the primary nurses with success.

**Discussion and Implications:** This presentation will include components for model implementation including objectives, curriculum outline, assessment tools, and competency verification. Our experience demonstrates an education program targeting nursing knowledge deficits is beneficial in increasing competency and confidence in practice. Moving forward, these skills will be part of yearly competency and the course will be utilized in unit orientation. Other institutions conducting clinical trials could implement a similar training program with anticipation of success.

### #40

**IMPROVING PATIENT SAFETY AND SATISFACTION THROUGH THE IMPLEMENTATION OF A STANDARDIZED BEDSIDE HANDOFF AND WALKING ROUNDS ON AN INPATIENT SURGICAL ONCOLOGY UNIT.** Julia Taylor,

RN, BSN, Memorial Sloan-Kettering Cancer Center, New York, NY

**Objective:** Recognize how the Implementation of a Standardized Bedside Handoff can improve Patient Safety and Satisfaction on an Inpatient Surgical Oncology Unit.

**Topic Significance and Study Purpose, Background, and Rationale:** In 2009, the Joint Commission identified a standardized approach to handoff communication as a Patient Safety Goal to reduce communication errors and improve patient care. Evidence suggests a structured handoff report combined with active patient participation reduces communication errors and promotes patient satisfaction. Research shows that bedside handoff increases nurses accountability by visualizing the patient and exchanging information at the point of care. Based upon recommendations from the Joint Commission, the literature and the Robert Wood Johnston Foundation, a standardized approach to bedside handoff and walking rounds was implemented.

**Methods, Intervention, and Analysis:** At this NCD-designated comprehensive cancer center, end of shift report transitioned to bedside handoff and walking rounds in 2010 on a colorectal, gastric, sarcoma and melanoma 43 bed surgical inpatient oncology unit. At change of shift, the outgoing nurse prints a medical record handoff addressing diagnosis, comorbidities, activity level, diet, advance directives, vital signs, IV access, fluids, pain, labs and a brief summary of the patients systematic and psychological concerns. Nurses discuss the handoff and when possible,

initiate walking rounds by making an introduction and addressing concerns of the patient and family. The length typically lasts 3 minutes for each patient. Outgoing nurses update and print the handoff for oncoming nurses. Bedside handoff allows the nurse to prioritize needs, while enabling the patient to be involved in their care.

**Findings and Interpretation:** Walking rounds is not always completed due to distraction and compliance barriers. To evaluate the process, qualitative data from a convenience sample of nurses and patients was gathered. 71% of nurses were moderately satisfied with bedside handoff and walking rounds. The top three benefits to nurses were initial introduction to the patient and family, improved communication and task prioritization. Patients reported benefits were nurse introductions and enhanced communication.

**Discussion and Implications:** Bedside handoff and walking rounds has a positive impact on patients, families and nurses. Implementing change of shift report at the bedside through the use of a standardized electronic handoff promotes a cohesive atmosphere of patient safety and satisfaction. Satisfaction data and a case-study will be presented on this topic to further demonstrate a nurse-driven intervention to improve patient safety and satisfaction.

#### #41

### REDUCING BARRIERS TO EARLY DETECTION OF BREAST CANCER IN FIRST-RELATIVES OF PRE-MENOPAUSAL AFRICAN-AMERICAN BREAST CANCER SURVIVORS.

Griffie Julie, MSN, RN, AOCN®, ACNS-BC, Froedtert Hospital, Milwaukee, WI; Bonnie Anderson, LPN, and Elaine Drew, LPN, both at Milwaukee Catholic Home; and Sandra Underwood, PhD, RN, University of Wisconsin-Milwaukee

**Objective:** Participants will describe findings of four focus group sessions consisting of pre-menopausal first degree relatives of Milwaukee inner city African American survivors of breast cancer.

**Topic Significance and Study Purpose, Background, and Rationale:** On a national level, breast cancer mortality is highest among ethnic minorities, the poor and the underinsured. Studies have shown that medically underserved women have lower rates of routine repeat mammograms, and African-American women in particular are more likely than any other ethnic group to present with a late stage breast cancer at initial diagnosis (Institute of Medicine, 2003). In Milwaukee County, we confirmed that African-American women have the highest breast cancer mortality rate when compared to women of other ethnic groups. We hypothesized that they are also less likely to undergo genetic counseling if they have a first-degree relative diagnosed with pre-menopausal breast cancer. Nursing implications for patient family education needed to be better understood.

**Methods, Intervention, and Analysis:** To address our hypothesis, a collaborative team of health clinicians and community members came together to consider approaches. We conducted a community-based participatory research (CBPR) project using focus group methodology. Four focus groups of first degree relatives of premenopausal African American breast cancer survivors were conducted, audio recorded, and verbatim transcribed. Utilizing content analysis procedures, focus group data was coded (beginning with line-by-line coding, followed by axial coding) and reviewed to assure rigorous, systematic, and comparative analysis of emerging themes. Focus group moderators assisted to assure content validity.

**Findings and Interpretation:** The overriding finding was lack of knowledge of what genetics is, means, and its possible impact on personal health care. The collaborative responded with the development of a documentary film to showcase the stories of local women who had survived breast cancer and to share

information about risk and genetic testing alongside messages about overcoming fear, early detection, body image, and the importance of not keeping it a secret. The film is titled, *Sharing the Wisdom: the Legacy of Breast Cancer*. It contains the following segments:

- Reaction (to diagnosis)
- Early Detection
- Family History
- Body Image (breast removal and reconstruction)
- Knowing Your Options

**Discussion and Implications:** The documentary has been disseminated to approximately 300 community members, as well as placed on internet sites. Minority support groups have provided feedback for nursing implications.

**Underwriting or funding source name:** American Cancer Society.

#### #42

### AROMATHERAPY AND ONCOLOGY STAFF WORK-STRESS: DON'T TURN UP YOUR NOSE!

Kelly Tomlinson-Pinkham, MSN, RN, OCN®, Kirsten Roblee, BSN, RN, OCN®, Sara Achor, BSN, RN, OCN®, Lisa Blackburn, MS, RN, AOCNS®, Danielle Dunnington, RN, OCN®, and Erin Ferlet, RN, OCN®, all at the James Cancer Hospital, Columbus, OH

**Objective:** To determine if oncology staff perceived work-stress would decrease after a six-week intervention of diffusion of selected essential oils in the central nurses station.

**Topic Significance and Study Purpose, Background, and Rationale:** The problem of oncology work-stress and related burnout has been well documented in literature, and can be an obstacle to staff retention. The literature suggests that long-term effects of work-stress can negatively impact health and performance, and thereby have significant implications for efforts to maintain a competent and caring staff. In concert with growing interest in complementary alternative medicine (CAM), these therapies have been increasingly studied. However, many studies have not the scientific rigor to make results generalizable. Several previous studies have shown potential to decrease staff work-stress with aromatherapy. The purpose of this project was to determine if oncology staff perceived work-stress would decrease after a six week intervention of aromatherapy in the nurses station. A secondary purpose was to educate oncology staff regarding aromatherapy and assess support for a future aromatherapy project focused on patient symptom management.

**Methods, Intervention, and Analysis:** Oncology staff work-stress was measured pre and post aromatherapy intervention using the Perceived Staff Work-Stress Questionnaire (PSWSQ). This 30 question, Likert-type survey has four subscales: tension, worry, demands and lack of joy. Unit Council selected several pleasing scents that might benefit staff in terms of stress reduction. Unit square footage and diffuser placement were considered. Over six weeks, one of the three chosen essential oils was diffused.

**Findings and Interpretation:** Staff response rate to PSWSQ = 63%, including RNs, Patient Care Associates, and Unit Clerical Associates. Findings indicated statistically significance ( $p < 0.05$ ) on a two-tailed paired t-test in three of the four subscales: 1) TENSION subscale average scores decreased from 43 to 37 ( $p = 0.002$ ), 2) WORRY subscale average scores decreased from 26 to 20 ( $p = 0.013$ ), and 3) DEMANDS subscale average scores decreased from 41 to 34 ( $p = 0.049$ ). Ninety-two percent of staff felt more knowledgeable regarding aromatherapy, and 96% of staff were interested in supporting a future project.

**Discussion and Implications:** The findings of this study could impact oncology practice through the use of CAM techniques to relieve work-stress. One obstacle identified was the

difficulty in targeting aromatherapy to a group rather than an individual. This project was definitely effective in teaching the basic tenants of aromatherapy and was an effective step in garnering support for future projects.

**Underwriting or funding source name:** DoTerra supplied one essential oil diffuser and 12 bottles of essential oils.

#### #43

**COGNITIVE COMPLAINTS AMONG KOREAN WOMEN WITH BREAST AND THYROID CANCER: EXAMINING ASSOCIATIONS WITH NEUROPSYCHOLOGICAL PERFORMANCE, SYMPTOM DISTRESS, AND CULTURAL FACTORS.** Mi Sook Jung, PhD, RN, and Heeyoung So, PhD, RN, both at Chungnam National University, Daejeon, South Korea

**Objective:** To examine the relationship of cognitive complaints with neuropsychological performance and possible covariates such as cancer-specific, symptomatologic, and cultural factors in Korean females following breast or thyroid cancer treatment

**Topic Significance and Study Purpose, Background, and Rationale:** Although cognitive complaints are frequently reported in breast cancer patients following treatment, their relationship with neuropsychological changes is not well-established. Thyroid and breast cancer are the two most prevalent cancers among Korean females. Our previous studies showed evidence of cognitive dysfunction related to psychological distress, sleep problems, and cultural propensity in Korean women treated for either breast or thyroid cancer. In this study, we further compared the severity of cognitive dysfunction between these two types of cancers, examined the relationship between patient-reported difficulties and neuropsychological performance, and determined possible predictors of cognitive complaints.

**Methods, Intervention, and Analysis:** Korean women treated for breast cancer (n=59) or thyroid cancer (n=59) and healthy controls (n=59) were tested with neuropsychological tasks (Digit Span and Controlled Oral Word Association tests [COWA]) and self-reported questionnaires of cognitive dysfunction (Attentional Function Index), fatigue, depression, sleep problems, and cultural factors related to housework and childrearing burden. Multiple regression models were used to examine the relationship among cognitive complaints, neuropsychological performance, symptom distress, and cultural factors.

**Findings and Interpretation:** The breast cancer group scored significantly greater cognitive complaints than the thyroid cancer and the healthy control groups ( $p < 0.01$ ). Both cancer groups showed significantly greater neuropsychological dysfunction, fatigue, depression, and sleep problems compared to the healthy group. Overall, the thyroid group fell between other two groups. Notably, a difference in cognitive complaints remained across groups, even after controlling for demographic, disease-specific, symptom distress, and cultural factors. The multivariate modeling demonstrated that cognitive complaints were explained by worse digit span backward and COWA performance, greater fatigue, higher depressive symptoms, more sleep problems, and greater childrearing burden in Korean women.

**Discussion and Implications:** Women treated for breast cancer reported more cognitive complaints than healthy women or even women treated for thyroid cancer. Self-reported cognitive function was significantly related to neuropsychological performance, fatigue, depression, sleep, and childrearing burden. These findings suggest that perceived cognitive dysfunction partially reflects cognitive performance with symptom distress and culture-specific burden, highlighting the importance of assessing self-reported cognitive function and of developing the culturally relevant and comprehensive interventions to alleviate cognitive symptoms following cancer treatment.

#### #44

**DEVELOPMENT OF A STANDARD PROCEDURE FOR ACCELERATED PARTIAL BREAST IRRADIATION DEVICE INSERTION, EXCHANGE AND DRESSING MANAGEMENT.** Carol Stalzer, BSN, RN, CBCN®, Gildy Babiera, MD, FACS, Julie Nguyen, MD, FACS, Elizabeth Bloom, MD, Linda Graviss, MT, CIC, and Laura Pantoja, MT, CIC, MD Anderson Cancer Center, Houston, TX

**Objective:** Nurses will be able to apply this interdisciplinary process in their practice setting to standardize procedures in order to reduce infection rates.

**Topic Significance and Study Purpose, Background, and Rationale:** Accelerated Partial Breast Irradiation (APBI) is a method of administering radiation therapy to a select group of breast cancer patients who undergo segmental mastectomy. A brachytherapy device is inserted into the cavity that is created when the tumor is removed. Studies have suggested a possible higher infection rate with APBI compared to whole breast irradiation (WBI). At a comprehensive cancer center, we sought to standardize the procedure for insertion and management to ensure continuity, safety and decrease infection rates.

**Methods, Intervention, and Analysis:** To develop this standardization process, an intradisciplinary team was formed including representatives from Infectious Disease, Nursing, Surgery and Radiation Oncology. Surgeons provided the template for the methods of placing the APBI brachytherapy device. Nursing enumerated pre-procedure set up, safety measures, education and patient preparation. Infectious disease recommended processes to decrease the potential for infection. Radiation Oncology provided the template for removing the catheter and for dressing changes. The team ultimately developed an APBI Insertion/Set-Up and Dressing Change Procedure.

**Findings and Interpretation:** In December of 2011, an APBI Guideline was approved by the Department of Performance Improvement where it was added as an attachment to the Invasive Procedures Performed Outside the Operating Room Policy. An APBI Implementation Process was then created with supporting documents to ensure execution of the procedure in a standardized manner. Infection rates were evaluated to see if the use of a standardized procedure and validation process impacted patient outcomes. Data from a registry showed that from January 2009 to November 2011, 91 patients were treated with APBI. Of those patients, 13 developed a breast infection (14.3%). After implementation of the standardized procedure in December of 2011 to present, 73 patients were enrolled in the same registry. Of those, 5 developed a breast infection (6.8%).

**Discussion and Implications:** By working as an intradisciplinary team, an APBI Insertion/Set-Up and a Dressing Change Procedure was created. Once these standardizations were implemented, we experienced a 7.5% reduction in infection rates. This exercise demonstrates the benefits of utilizing the expertise of an intradisciplinary team. Other procedures that are performed at multiple locations within an institution may benefit from utilizing this standardization process.

#### #45

**AN ANALYSIS OF ADHERENCE TO NCCN ANTIEMESIS GUIDELINES TO IMPROVE PATIENT OUTCOMES.** Janet Greco, RN-BC, MA, OCN®, Kristine Cappel, RN, BSN, OCN®, Lesley Fessenden, RN, BSN, OCN®, Janet Hughes, RN, Clarissa Tojos, RN, and Staceyann Rookwood, RN, all at White Plains Hospital, White Plains, NY

**Objective:** To gain knowledge of the NCCN Clinical Guidelines on Antiemesis and ONS Measuring Emetogenic Risk of Chemotherapy/Biotherapy Agents and how they can be used



collaboratively to ensure patients receive appropriate antiemetic agents.

#### **Topic Significance and Study Purpose, Background, and**

**Rationale:** This topic is significant because management of chemotherapy induced nausea and vomiting is critical to patient comfort, adherence to treatment plan and quality of life. The oncology nurse plays a vital role in advocating for evidenced based management of acute and delayed nausea and vomiting. The purpose of this project is to examine a sample of patients receiving multi-agent chemotherapy/biotherapy to determine if they receive appropriate antiemetic therapy based on current NCCN Guidelines Antiemesis. The ONS tool "Emetic Risk of Chemotherapy and Biotherapy Agents" will be used to calculate the NCCN Level of emetogenicity and this will be compared to the guidelines to determine if the patient has been adequately treated. Currently our standard pretreatment generally includes only a serotonin 5-HT<sub>3</sub> receptor antagonist and a steroid. Existing evidence supports use of a serotonin 5-HT<sub>3</sub> receptor antagonist, a steroid and a neurokinin 1 antagonists before the start of high emetic risk IV chemotherapy. The oncology nursing staff is integrally engaged in this study and have been able to identify patients who may need additional treatment prescribed for improved management of acute and delayed nausea and to collaborate with the care team for improved outcomes.

**Methods, Intervention, and Analysis:** Patients receiving multi-agent chemotherapy will be included in the study. The emetogenic risk of their treatment will be calculated using the ONS tool and a score of 1-5 assigned. Patients with scores of 3-5 are considered at moderate to high risk. Their treatment orders are compared to NCCN guidelines to assure they are receiving appropriate treatment. As needed the nurse can then collaborate with provider to assure adequate prophylaxis is ordered.

**Findings and Interpretation:** Our findings to date reveal only 12% of our patients are currently receiving antiemesis prophylaxis as per the NCCN consensus guidelines. Patients symptoms are assessed on post discharge call backs. Our oncology nurses are now empowered to use the evidence to advocate for improved antiemesis management for their patients. Data collection remains ongoing and should continue to demonstrate improved compliance.

**Discussion and Implications:** Findings from our study have had immediate impact on current practice. Oncology nurses reviewing treatment orders are now empowered to determine the emetogenic potential of the treatment orders and to review for appropriate management of acute and delayed emesis. Our findings have been shared with our nursing staff, cancer committee, performance improvement team and oncology section providers. Our findings have contributed to improved patient satisfaction and nursing empowerment.

#### **#46**

**A 10 YEAR PROFILE OF A BEST PRACTICE PROGRAM TARGETING CANCER SCREENING IN RURAL SOUTHEAST INDIANA.** Adrienne Lane, BSN, MSN, EdD, CNE, University of Cincinnati, OH

**Objective:** Describe a ten year profile of a best practice breast health education and screening program aimed at overcoming cost, distance and fear for underserved, rural women seeking such services.

**Topic Significance and Study Purpose, Background, and Rationale:** Maximizing the percentage of women who overcome breast cancer is currently dependent on routine breast cancer screening. Rural women are particularly at risk because they do not take advantage of screening procedures that are commonly available to their urban counterparts. The purpose of this project

was to develop a best practice program aimed at overcoming the barriers of cost, distance, and fear in order to provide breast health education and screening to women in five rural, underserved counties in southeastern Indiana. Three advanced practice nurses developed, implemented, and secured funding to sustain this program over time through partnering with local, regional, and national stakeholders.

**Methods, Intervention, and Analysis:** A logic model was developed to serve as the foundation for developing the program. The major goals and desired outcomes of the program were to: 1) increase the number of resources (personnel and materials) available to provide ongoing breast screening education programs; 2) increase the number of women who attended a program on breast cancer screening and cancer risk factors; 3) increase access to mammography and clinical breast exam screening to women in the identified rural counties; and 4) increase linkages among health care professional services and community organizations in the rural area.

**Findings and Interpretation:** The best practice program focused on partnering with local health departments and other community stakeholders to overcome the barrier of trust, using mobile mammography overcame the barrier of distance, and securing external funding to offer the service at no cost addressed the barrier of cost. The ten year profile of over 3500 participating underserved rural women was compared with data available from the National Breast and Cervical Cancer Early Detection Program for the concurrent period uncovering the impact of economic and political policy on the provision of such community based programs.

**Discussion and Implications:** This program serves as a best practice model for advanced practice nurses seeking to provide outreach cancer education and screening services aimed at overcoming barriers of cost, distance, and fear. The logic model and the program design provide a foundation for collaborative teams, including community stakeholders and advanced practice nurses, for the development of sustainable quality cancer education and screening outreach programs.

**Underwriting or funding source name:** Greater Cincinnati Affiliate of the Susan G. Komen Foundation Avon Breast Foundation Breast Care Fund Indiana Breast Cancer Awareness Trust.

#### **#47**

**MANAGING RELAPSED/REFRACTORY ACUTE LYMPHOBLASTIC LEUKEMIA (B-ALL) PATIENTS ON A PHASE I TRIAL RECEIVING AUTOLOGOUS CAR (CHIMERIC ANTIGEN RECEPTOR) T-CELLS GENETICALLY MODIFIED TO TARGET B CELL SPECIFIC ANTIGEN CD19.** Elizabeth Halton, RN, MS, NP-BC, AOCNP®, Hilda S. Quintanilla, RN, ANP-C, AOCNP®, Donna Miale-Mayer, RN, ANP-C, AOCNP®, and Diane Llerandi, RN, MA, AOCNS®, all at Memorial Sloan-Kettering Cancer Center, New York, NY

**Objective:** Provide an overview and describe a novel non-chemotherapy based treatment, CAR-T Cells and our challenges in recognizing and minimizing side effects, without sacrificing desired results.

**Topic Significance and Study Purpose, Background, and Rationale:** Adult patients diagnosed with B-ALL have an unfavorable prognosis, even though 80-90% achieve complete remission (CR) after first induction, most will relapse and their median survival rate is approximately six months. The only potential curative option at this junction is an allogeneic stem cell transplant; finding treatment regimens that induce a second CR thus allowing an Allo-BMT is challenging. Sharing our experience managing and caring for patients receiving CAR T-cells for relapsed/refractory B-ALL will assist clinicians with this challenge.

**Methods, Intervention, and Analysis:** We developed a plan of care focused on close inpatient observation, prompt recognition, accurate documentation and reporting of side effects, (persistent fevers, changes in mental status and seizures), while maintaining patient safety through individualized nursing care. In collaboration with the trial's principal investigators, interventions were carefully carried out and their response evaluated. Through these steps we developed guidelines, standards of care, and nursing care plans to optimize favorable patient outcomes.

**Findings and Interpretation:** There are predictable significant side effects, manageable by step by step guidelines to maximize efficacy of CAR T-Cell therapy while ensuring patient safety. There were 16 patients treated, 14 (88%) achieved a CR, time to CR 24.5 days and of the 14 patients in CR, 7 (50%) went on to receive an allo BMT 2 refused all BMT and are being monitored.

**Discussion and Implications:** Challenges experienced by our inpatient leukemia unit in treating this acutely ill patient population with this novel therapy has dramatically changed our team's approach and outlook on a population that had a dismal prognosis less than a decade ago. CAR T-Cell therapy is a promising and effective treatment option that may be used in the future for other types of cancers. Our experience and development of nursing care guidelines can help clinicians and future eligible participants.

#### #48

**TRANSITIONING EXPERIENCED MEDICAL-SURGICAL NURSES INTO COMPETENT ONCOLOGY NURSES: INSPIRING CHANGE.** Heidi Bentos-Pereira, RN, MSN, MBA, OCN®, St Francis Hospital, Roslyn, NY

**Objective:** Medical-Surgical nurses will have a successful transition into the oncology specialty as competent oncology nurses as evidenced by competency demonstration, progression towards certification, and unit retention.

**Topic Significance and Study Purpose, Background, and Rationale:** Significance and Background: The St Francis Hospital, the Heart Center (SFH) embarked on an exciting venture by opening the new Cancer Institute in December 2012. SFH answered the demand for oncology outpatient services by supporting the development of competent staff. The introduction of a new specialty challenged nurses to commit to an educational plan to facilitate the development from novice to expert in oncology care. Purpose: The purpose of implementing an educational development plan is to achieve a successful transition for nurses changing from a medical-surgical specialty to the oncology specialty. A successful plan will inspire nurses through a change process to face the challenges of learning and demonstrating competency while progressing through Benner's stages of clinical competence from novice, advanced beginner, competent, proficient, to expert.

**Methods, Intervention, and Analysis:** Experienced medical-surgical nurses interviewed for the infusion unit based on the Nyberg's Caring Assessment Scale, performance appraisals, and expressed interests. Fifteen nurses were selected. Following Benner's Novice to Expert Theory, an educational development plan was introduced. The nurses successfully completed the ONS Chemotherapy-Biotherapy Provider course. Nurses were offered weekly in-services, online oncology resources, reference books, and physician lectures, an interactive online monthly chemotherapy module, monthly case studies and sharing journal articles. Nurses were encouraged to join the Oncology Nurses Society for professional development.

**Findings and Interpretation:** The educational plan successfully facilitated the nurses' transition to competent oncology nurses within one year. All infusion nurses succeeded in their

initial and annual competency demonstration. One hundred percent of infusion nurses became members of the ONS. Thirty-two percent are OCN certified, and ninety percent of non-certified nurses are registered for the OCN exam in 2014. Three nurses attended the ONS Annual Congress in 2013. Two nurses retired, one nurse advanced to oncology unit manager, and zero resignations.

**Discussion and Implications:** This unique situation of facilitating the nurses' transition required a structured educational development plan. The nurses stepped up to the challenge of embracing a new specialty. Implementing continuous education with a variety of teaching methods exemplifies the process of a successful educational plan that adapted to the needs of infusion nurses in response to the complex needs of cancer patients.

#### #49

**SIGN CHI DO AND EXPRESSIVE WRITING FOR SLEEP AND FATIGUE IN BREAST CANCER SURVIVORS: PHASE I.**

I. Carol Rogers, PhD, RN, Melissa Craft, PhD, RN, AOCN®, and Karen Rose, PhD, RN, AOCN®, all at the University of Oklahoma Health Sciences Center, Oklahoma City

**Objective:** Participants will be able to discuss how a Sign Chi Do/Expressive Writing exercise intervention was revised to meet the needs of breast cancer patients in treatment.

**Topic Significance and Study Purpose, Background, and Rationale:** Early recognition and aggressive therapies have raised survivorship rates among women with breast cancer. However, many survivors experience decreased quality of life (QOL) due to symptoms of fatigue and disturbed sleep that continue long after treatment. Exercise, meditation, and expressive writing (EW) have been effective in reducing fatigue among breast cancer patients. Sign Chi Do (SCD), a novel low-intensity exercise which incorporates diaphragmatic breathing, meditation, gentle movement, has shown improved function, endurance, and physical activity among sedentary older adults. We theorize that SCD, enhanced by EW is more enjoyable, increases adherence to weekly practice, improves sleep, mood, and QOL, and reduces fatigue in breast cancer patients during treatment. Some studies support group class delivery while others are in favor of home delivery to meet the demands of breast cancer survivors in treatment and living in rural communities. This study is in alignment with the Oncology Nursing Society goal to design physical activity interventions for survivors to improve physical, functional, and psychological outcomes and survival.

**Methods, Intervention, and Analysis:** Aims: Use participant feedback to adapt the original SCD/EW intervention, to meet therapeutic limitations, time constraints and accessibility needs of breast cancer patients in treatment. Methods: This study consisted of 4 breast cancer survivors post treatment, recruited from breast cancer survivor groups. They received a six-week home based SCD/EW class followed by a six-week face-to-face class. Post-intervention evaluation included class field notes, exit surveys, and a focus group discussion.

**Findings and Interpretation:** Participant preference was to receive the intervention in a live class due to the interaction with others and the instructor. One recommendation to reach women with breast cancer in the rural setting was to provide an internet delivery simultaneous with a live group.

**Discussion and Implications:** Findings informed Phase II which will test the effect of the SCD/EW on fatigue and sleep outcomes. A specifically adapted SCD, with meditation enhanced by EW, may be both feasible and acceptable to breast cancer survivors during treatment. If effective, this SCD/EW intervention will impact the long-term QOL of breast cancer patients in a variety of urban and rural settings.

**Underwriting or funding source name:** Stephenson Cancer Center Breast Cancer Seed Grant.

## #50

### CREATING A SAFE AND CONSISTENT CHEMOTHERAPY PRACTICE ON AN ACUTE HEMATOLOGY ONCOLOGY UNIT.

Mary Gormley-DiPinto, RN, MSN, OCN®, Sheena Dacquel, RN, BSN, OCN®, Donna Miale-Mayer, RN, BSN, OCN®, Diane Llerandi, RN, MA, AOCN®, CNS, Jacqueline Patterson, RN, BSN, OCN®, and Katherine Ruan, RN, BSN, OCN®, all at Memorial Sloan-Kettering Cancer Center, New York, NY

**Objective:** To develop a standardized practice for safe administration of complex hematology chemotherapy/biotherapy regimens through the creation of a nursing-user friendly reference guide.

**Topic Significance and Study Purpose, Background, and Rationale:** Our 43 bed hematology-oncology unit administers a significant amount of chemotherapy to our inpatient population. Previously, there had been much confusion and lack of education regarding a multitude of chemotherapy regimens. Institutional guidelines for chemotherapy provide descriptions of each drug regimen and how to prepare and administer them. However, there was a lack of instruction on sequence of drug administration, type of IV hydration, and other pertinent orders, such as urine collections and blood draws. With the increasing number of clinical trials being conducted on our unit, there's been growing concern over the lack of consistency and increased demand to reevaluate and establish new methods.

**Methods, Intervention, and Analysis:** A review of the most frequently administered regimens and newly established protocols was conducted. Based on institutional standards and existing practice, a step-by-step practical unit based reference guide for frontline treating Registered Nurse (RN) was created by an experienced Masters prepared Oncology Certified Nurse. This instructional guide was then submitted to the Nurse Practitioner (NP) group for feedback. Based on their suggestions, the instructions were edited as necessary then submitted to the unit's Clinical Nurse Specialist for final review. Upon approval, the unit based instructional guides were placed into a reference binder titled "Chemo and You" for easy accessibility.

**Findings and Interpretation:** Of the 15,700 treatments of chemotherapy given hospital wide in 2012, our hematology-oncology unit administered 5,982 of those treatments with a less than 1 % rate of error. Treating RNs have reported increased confidence in the safe administration of chemotherapy.

**Discussion and Implications:** Creating the "Chemo and You" reference binder has greatly increased nursing's knowledge and comfort of chemotherapy regimens and new clinical trial drugs allowing for better management and more efficient administration. As a result, safer, more cohesive and consistent care is being provided to our patients.

## #51

### THE HEMATOLOGY/ONCOLOGY/BLOOD AND MARROW TRANSPLANT ADMISSION NURSE: NAVIGATING PATIENTS THROUGH THE HOSPITAL ADMISSION.

Courtney Rohloff, BSN, RN, OCN®, Michelle Horgen, BSN, RN, OCN®, Trista Henning, BSN, RN, OCN®, Chelsea Lubahn, RN, Alison Meisheid, MS, RN, OCN®, NE-BC, and Amy Hansen, MS, RN, OCN®, NE-BC, all at the Mayo Clinic, Rochester, MN

**Objective:** Describe the benefits of the Admission Nurse role in the Hem/Onc/BMT specialty and the improvement in patient and staff satisfaction with the admission process.

**Topic Significance and Study Purpose, Background, and Rationale:** The Hematology/Oncology/Blood and Marrow Transplant (Hem/Onc/BMT) division at Mayo Clinic has seen a significant increase in its patient population. Many admis-

sions are planned but most are not. The four units can see 10-14 unplanned admissions daily. This has resulted in multiple demands and burdens on the bedside RN, disruption and fragmentation of care, overtime to complete documentation, required screenings omitted, and difficulty staffing to workload. To alleviate these time consuming duties, the Hem/Onc/BMT Specialty Practice Committee initiated a pilot of an Admission Nurse.

**Methods, Intervention, and Analysis:** The Admission Nurse floats between units ensuring each admission is consistent and complete. This allows for uninterrupted time spent with the patient and family. To measure the satisfaction among staff, surveys were done at three months and again at six months. Data was collected using chart audits to evaluate the admission components, patient education, and medication reconciliation. Before the Admission Nurse process started, the specialty implemented a daily, informal morning meeting among the charge nurses from each floor called Charge Chat. During this meeting, each charge nurse would discuss planned admissions, staffing requirements for upcoming shifts, bed availability and any current unit issues. This provides the Admission Nurse with a global view of the day, fostering communication and collaboration within the specialty.

**Findings and Interpretation:** A total of 758 patients were admitted between June and September of 2012 with an average of 11 admissions per day. 338 were completed by the admission nurse having an average time of 55 minutes. The remaining data collected included 229 charting audits and resourcing specialty units for 91 hours. Different shift schedules were trialed to determine the best utilization of the Admission Nurse. With this in mind, the shift selected was Monday through Friday, 1100-1900. Medication reconciliation was 92.8% in September compared to 52.3% pre-implementation.

**Discussion and Implications:** This role has made a positive impact on patients and staff. It has increased patient satisfaction and promoted teamwork and relationship building among the specialty units.

## #52

### BE SAFE AND BE ACTIVE: A COLLABORATIVE INITIATIVE TO IMPROVE SUN SAFETY AWARENESS AMONG THE HISPANIC COMMUNITY IN HUNTERDON COUNTY.

Mary Vecchio, MSN, RN APN, OCN®, CTTS, Miriam Ramirez, and Bonnie Duncan, all at Hunterdon Regional Cancer Center, Flemington, NJ

**Objective:** Participants will be able to state five key principles of sun safe behavior and identify strategies to motivate the Hispanic community to incorporate the principles into their lifestyle.

**Topic Significance and Study Purpose, Background, and Rationale:** All people, regardless of their skin color, are at risk for the development of skin cancer. CDC data states that Hunterdon County has the second highest melanoma rate in New Jersey. The 2011 Latino Health Behavior Risk Factor Surveillance Survey for Hunterdon County revealed that 44% of the participants reported never using sunscreen when going outside on a sunny day for more than one hour. Oncology nurses can serve as an excellent resource to educate this targeted population on the value of appropriate lifestyle choices and early detection skin cancer screening.

**Methods, Intervention, and Analysis:** The Hunterdon County Latino Healthcare Access Committee, collaborating with the outreach staff of Hunterdon Regional Cancer Center (HRCC), offered a series of "sun safety" educational programs to the Hispanic community. Committee members secured venues at faith-based and community service organizations. Attendance to the program was enhanced through the provision



of childcare, healthy snacks, and door-prizes. The educational program addressed sun safety behaviors and the technique for skin self-assessment. Attendees were also given the opportunity to visualize their sun damaged facial skin with a Dermascan. Information was provided for a free, bilingual community skin screening being offered at HRCC. Participants were given pre and post-test evaluations to address their knowledge of unsafe behaviors and the ability to recognize abnormal skin markings.

**Findings and Interpretation:** A total of 40 participants attended the educational sessions. Data analysis showed that 16 of the attendees were connected to a health care home and 13 were covered by health insurance. The average improvement in test scores ranged from 10-32%. Two attendees participated in the community skin screening. Committee members witnessed several attendees exhibiting positive sun safe behaviors at outdoor church activities.

**Discussion and Implications:** Traditionally, the Hispanic community engages in reactionary rather than preventative health care behaviors. Eliminating the barriers of language, limited finances, and lack of childcare while offering incentives of gift cards and referral to community resources prove to be effective strategies in motivating this targeted population. Providing a positive and enjoyable experience may serve as a platform to offer additional health promotion programs on topics such as tobacco cessation, balanced nutrition, physical activity, and additional cancer screenings.

**Underwriting or funding source name:** The Hunterdon County Latino Healthcare Access Committee received funding from Johnson and Johnson to support educational programs.

## #53

**EARLY RECOGNITION AND MANAGEMENT OF POSTERIOR REVERSIBLE ENCEPHALOPATHY SYNDROME (PRES): A NEWLY RECOGNIZED COMPLICATION IN PATIENTS RECEIVING TYROSINE KINASE INHIBITORS (TKIS).** Ashley Przybylski, RN BSN OCN®, and Mikaela Olsen, MS, RN, AOCNS®, both at Johns Hopkins Hospital, Baltimore, MD

**Objective:** Describe four signs and symptoms of PRES in patients receiving TKIs.

**Topic Significance and Study Purpose, Background, and Rationale:** Adult oncology patients receiving anti-neoplastic, targeted and other immunosuppressive therapies in inpatient and ambulatory settings are at risk for severe side effects. There are studies linking Posterior Reversible Encephalopathy Syndrome (PRES) with cyclosporine, sirolimus, and tacrolimus used for transplant patients, and select tyrosine kinase inhibitors (TKIs) and anti-VEGF in patients with cancer. PRES is reversible with early recognition and management; however, permanent neurologic toxicity and death have been reported. This case study presentation educates oncology nurses about pathophysiology, early warning signs, and management of PRES.

**Methods, Intervention, and Analysis:** Literature review of PRES to define causes, manifestations, pathophysiology, and management was used to develop the educational plan. The literature demonstrated that early detection and intervention are essential for prevention of long-term neurological defects. Education for patients diagnosed or suspected of having PRES includes early signs and symptoms, causative agents, and management. Additional education includes frequency of neurologic and mental status assessments, blood pressure monitoring, with mean arterial blood pressure goal, and seizure precautions. Using a case study and flipped classroom model, staff participated in an online lecture and personal concept engagement with peers and the instructor. Educational technology and active learning are key components of the flipped classroom

model. Nursing knowledge about pathophysiology, causes, and clinical manifestations of PRES, was evaluated with pre- and post-testing.

**Findings and Interpretation:** Evaluation before and after education revealed improved knowledge in recognizing and managing patients with PRES related to TKIs. The flipped classroom approach was perceived as a valuable tool for busy staff nurses.

**Discussion and Implications:** PRES is well documented in transplant populations; however other agents are known to cause PRES in cancer patients. Early recognition, assessment, and management are essential to prevent long-term damage or death. Inpatient and outpatient oncology nurses are integral to identifying the signs and symptoms of PRES when caring for patients at risk. Patients at risk should receive specific education, including symptoms to report.

## #54

**CARE THAT MATTERS: CARING FOR THE HEAD AND NECK CANCER PATIENT WITH A LARYNGECTOMY OR TRACHEOSTOMY TUBE.** Torina Lane, RN, BS, MSN, CCRN®, and Shannon Popper, RN, both at MD Anderson Cancer Center, Houston, TX

**Objective:** To decrease the number of readmissions due to the patient's inability to care for their tracheostomy or laryngectomy tubes by 10% from December 2013 to April 2014.

**Topic Significance and Study Purpose, Background, and Rationale:** The purpose of this initiative is to standardize tracheostomy and laryngectomy tube teaching among nursing staff, so the patient is psychically and physiologically able to care for their new airway device effectively post discharge. The number of head and neck cancer patients that are discharged with a tracheostomy or a laryngectomy continues to grow. Tracheostomy and laryngectomy teaching have a profound effect on patients and those caring for the patient. Thus it is imperative that the caregiver and the patient feel comfortable with the care and maintenance of these tubes at discharge. There is little to no teaching prior to the tracheostomy or laryngectomy. As a result, the bedside nurse is challenged with the task of ensuring that the patient receives a condensed version of education prior to discharge. Often times the patients and caregivers feel a great deal of anxiety as they undergo this teaching and leave the hospital wondering if they know enough to properly care for this new airway. A retrospective analysis of our head/neck patients readmitted identified that more than 15% of our patients are readmitted due to misunderstanding the discharge instructions.

**Methods, Intervention, and Analysis:** Several clinicians reviewed the literature, current process, and identified practices that were effective in education of patients with tracheostomy or laryngectomy patients. A lesson plan was developed and the project was rolled out in two phases. Phase one: Education of nurses, Phase Two: Implementation of weekly class presented by nurses. Using a champion and a train-the-trainer process the nurses were educated and provided pre and post surveys to education roll-out.

**Findings and Interpretation:** The number of readmissions will be reviewed over a 5 month span to determine if the patient returned due to problems of care of the tracheostomy or laryngectomy tube.

**Discussion and Implications:** Patients require observation and specialized care management in order to feel comfortable post hospitalization in the management of their tracheostomy and laryngectomy tubes. Knowledge and proper education of these procedures, review of anatomy and physiology, daily care and emergency management can make the difference in providing patient comfort in adjustment as well as effective patient outcomes.

## CREATING A CULTURE OF SAFETY: PROJECT TO REDUCE FALLS ON AN INPATIENT MEDICAL-ONCOLOGY UNIT.

Jamilyn Kennell, MSN, RN, OCN®, Dori Kuchta, MSE, RN, Victoria Perla, MSE, RN, Patricia Macara, MSN, RN, OCN®, and Sharon Hanchett, MSN, RN, OCN®, all at UPMC Shadyside, Pittsburgh, PA

**Objective:** To reduce falls on an inpatient medical oncology unit through the use of multiple tools including frequent rounding, safety huddle, equipment usage, fall debriefing, safety checks, education, and awareness.

**Topic Significance and Study Purpose, Background, and Rationale:** Falls are not only a hazard to patients' health but are also costly for institutions. There is no universal strategy to reduce falls. Interventions need to be unit-specific. Tools focusing on risk assessment, falls evaluations, bedside signage, patient/family and staff education, equipment usage, frequent observation, medication evaluation, and staff engagement have shown to be useful. The purpose of this project is to use a variety of these tools from the literature to create a culture of safety for this medical-oncology unit and thus reduce falls.

**Methods, Intervention, and Analysis:** This project occurred on a 29-bed inpatient medical-oncology unit in Pittsburgh, Pennsylvania. During the year, a variety of falls risk prevention tools were implemented to impact patient safety. Purposeful hourly rounding focused on the "4 P's: pain, potty, position, possession." A unit-based falls committee was created to analyze recent falls, obtain necessary equipment, educate, and implement more tools. A "variable rounder" nursing assistant without a patient assignment assisted with call bells, toileting, ambulation, etc. Following report, nurses conducted a safety check of patients before transferring care. A daily safety huddle was initiated sharing information about high fall risk patients, recent falls, telemetry, or critical patients. Various equipment (bed alarms, low beds, call bells, non-slip socks) was used to reduce falls.

**Findings and Interpretation:** In FY2012, prior to implementation of this project, the inpatient oncology unit had 58 falls with a rate of 6.8. During FY2013 when tools were implemented, the unit observed a reduction in falls to 29 with a rate of 3.9. Thus, the medical oncology unit reduced falls by 50% in one year. Some of the fall prevention tools were found to be too burdensome for staff (hourly rounding), whereas others have become part of the unit's culture (variable rounder, daily safety huddle).

**Discussion and Implications:** Reducing falls is a never ending battle. While all falls cannot be prevented, there are measures to reduce the risk to a patient. Other units can work to implement similar strategies. This unit continues to explore other means by which to reduce falls. This project shows that falls can be reduced by 50%; however, there is no magic bullet to prevent falls.

## TIMELY END-OF-LIFE COMMUNICATION FOR PARENTS OF CHILDREN WITH A BRAIN TUMOR: A REPORT OF THE COMPLETE INTERVENTION OUTCOMES.

Verna Hendricks-Ferguson, PhD, RN, Saint Louis University, MO; Joan Haase, RN, PhD, FAAN, Kamnesh Pradhan, RN, PhD, FAAN, and Chie-Schin Shih, MD, all at Riley Children's Hospital and Indiana University, Indianapolis; Javier Kane, MD, Scott and White Children's Hospital and Clinic, Temple, TX; and Karen Gauvain, MD, St. Louis Children's Hospital and Washington University, MO

**Objective:** To describe parents appraisal of receiving a palliative and end-of-life communication intervention titled a Com-

munication Plan: Early through End of Life (COMPLETE) delivered by a collaborative physician-nurse team.

**Topic Significance and Study Purpose, Background, and Rationale:** Compassionate, clear, and timely palliative and end-of-life care (PC/EOL) communication is not routinely provided to parents of children with cancer and a poor prognosis. A national health care priority is to initiate early and compassionate communication about PC/EOL to parents of children with a poor prognosis. The study purpose was to pilot test a PC/EOL communication intervention titled Communication Plan: Early through End of Life (COMPLETE). COMPLETE was developed to be delivered to parents of children with a brain tumor during routine clinic visits. The COMPLETE features: (a) a unique physician-nurse (MD/RN) collaborative approach to engage in early and sustained PC/EOL communication discussions; (b) visual aids and resource forms, indicating both treatment and PC/EOL options; and (c) hope-sustaining and non-abandonment messages, tailored to the communication style of our MD/RN teams and parents' information preferences.

**Methods, Intervention, and Analysis:** This study was designed to report descriptive data on feasibility and usefulness of COMPLETE and was not powered to make definite conclusions regarding efficacy. A prospective, single group, repeated measures design and convenience sampling was used. A total of 11 families (i.e., 13 parents of 11 children; 54% of our targeted sample size) were enrolled across 2 sites. Evaluation of COMPLETE indicated parents reported: (a) significant increasing hope ( $p=.0001$ ); (b) significant decreasing uncertainty ( $p = 0.04$ ); (c) significant differences in emotional resources ( $p = 0.0079$ ); and (d) marginal differences in decision regret ( $p = 0.07$ ). Parents appraisal of: (a) emotional distress, indicated significant decreasing guilt and worry ( $p = 0.05$ ) and (b) general satisfaction of delivery of their child's care over time indicated marginal significant differences over time ( $p = 0.07$ ). Also, parental preferences to receive advance care planning information about their child's care did not change over time. Comprehensive quality assurance monitoring was implemented to assure consistent delivery of COMPLETE across the sites.

**Findings and Interpretation:** Our findings provide evidence that delivery of COMPLETE contributed to parents having increased hope and decreased uncertainty, guilt and worry. Our findings support ongoing evaluation of COMPLETE using a randomized clinical trial design to determine the efficacy of COMPLETE with a larger sample of parents of children diagnosed with other types of cancer with a poor prognosis.

**Discussion and Implications:** Our findings provide evidence that early discussions of PC/EOL increased parental hope and decreased their sense of uncertainty. We believe our findings support ongoing evaluation of COMPLETE using a MD/RN collaborative approach to determine the efficacy of COMPLETE with a larger sample of parents of children diagnosed with other types of cancer with a poor prognosis.

**Underwriting or funding source name:** This research was funded by an exploratory/development grant, awarded under the American Recovery Act of 2009 at the National Institute of Health and National Institute of Nursing Research (R21N-RO11071-O1A1) to Verna Hendricks-Ferguson (2009-2012).

## IMPACT OF ACUPRESSURE THERAPY ON INCIDENCE/SEVERITY OF CINV, QUALITY OF LIFE, AND PERCEIVED SELF-EFFICACY/EMPOWERMENT.

Marilyn Haas, PhD, ANP-BC, Briana Sabaj, Lac, HTP/APP, and Lourdes Lorenz, Lac, HTP/APP, all at Mission Health System, Asheville, NC

**Objective:** Summarize the steps and implications of acupressure when employed for CINV with breast cancer patients.

**Topic Significance and Study Purpose, Background, and Rationale:** Chemotherapy-induced nausea and vomiting (CINV) has been identified by cancer patients as one of the most dreaded side effects associated with treatment. Despite the wide-spread use and availability of prophylactic interventions, a significant number of patients continue to suffer from this devastating complication, with incidences as high as 61.2% in a 2011 study. Of the patients experiencing CINV, 37.2% reported a reduction in daily functioning, with 90% of the most poorly managed patients reporting a significant impact on functional status. Estimated costs averaged \$778.58/ patient from day of chemotherapy administration through day 5 of first cycle, with costs higher for patients with severe CINV. Acupressure point stimulation (APS Pericardium 6) is a common choice as complementary modality for management of CINV. Cochrane Review (2006) APS was an effective adjunctive treatment for acute CINV. Effects of APS on patient's perceived sense of self-efficacy and quality of life (QOL) has not been explored. The purpose of this study is investigate effects of APS on the incidence and severity of acute/delayed CINV, assess impact upon patient's overall QOL, and create a sense of control and empowerment of patients through active engagement in their symptom management.

**Methods, Intervention, and Analysis:** A quasi-experimental design will investigate adult female breast cancer patients undergoing moderately or highly emetogenic chemotherapy with standard treatment (prophylactic and rescue anti-emetic therapies, verbal and written communication on recommended pharmacological and dietary interventions effective in minimizing CINV) and the intervention group (standard treatment plus instructions and demonstration on the appropriate technique for administration of acupressure to the P6 acupoint). Descriptive statistics will include measures of central tendency and frequency measures, and will be calculated for the entire sample as well as by group. Frequency distributions will be analyzed for normal distribution, outliers, and missing data. Group differences will be analyzed using independent t-tests for Likert-scale items and Pearson's chi-square/Fisher's exact test for binomial items.

**Findings and Interpretation:** Study began in 2013 and will conclude early 2014. New information on QOL and self empowerment are expected to be a positive impact.

**Discussion and Implications:** If results are positive as expected, then oncology nurses will have another intervention to add to their toolbox.

**Underwriting or funding source name:** Daisy Grant.

## #58

**A RANDOMIZED STUDY TO COMPARE THE EFFECT OF SHORT- AND LONG-TERM SCHEDULES OF CRYOTHERAPY ON THE INCIDENCE AND SEVERITY OF MUCOSITIS IN HIGH-DOSE MELPHALAN IN AUTOLOGOUS BONE MARROW TRANSPLANT PATIENTS.** Misty Lamprecht, MS, RN, CNS, AOCN®, Karen Tackett, RN, BSN, OCN®, and Janine Overcash, RN, BSN, OCN®, all at the Ohio State University Comprehensive Cancer Center, Columbus

**Objective:** Review the results of a study comparing the effectiveness of cryotherapy used for 120 vs. 360 minutes in reducing the incidence and severity of mucositis in patients receiving melphalan.

**Topic Significance and Study Purpose, Background, and Rationale:** Mucositis is a painful side effect associated with certain chemotherapeutic agents, including melphalan, which is administered in autologous bone marrow transplant (BMT) patients. Oral cryotherapy (ice chips) is a nursing intervention that has been shown to decrease the incidence and severity of mucositis caused by certain agents, including melphalan. Cryotherapy for a prolonged duration can cause discomfort to patients. While

research has shown its efficacy, no research had been performed on how long oral cryotherapy should be administered while receiving melphalan. The purpose of this study is to compare if using ice chips for 120 minutes has the same effect on incidence and severity of mucositis as cryotherapy administered for 360 minutes (current protocol).

**Methods, Intervention, and Analysis:** Patients diagnosed with multiple myeloma, aged 18 to 79 years and receiving melphalan as a single agent BMT conditioning regimen were eligible for enrollment. Eligible patients were identified, consented and randomized. Each group received shaved ice beginning 15 minutes prior to melphalan administration and continuously replenished the ice for the prescribed study period. BMT RN data collectors administered the Patient Experience with Cryotherapy tool and the Patient-Reported Oral Mucositis Symptoms Scale. Mucositis grading was performed by BMT nurse practitioners using the World Health Organization's Oral Toxicity Scale.

**Findings and Interpretation:** The sample consisted of 35 men and 25 women (n = 60). Most patients (47) were in the age range of 50 to 69 years. 87% were white, non-Hispanic. 58% of all patient reportedly developed mucositis, 48% and 68% respectively in the 120 and 360-minute groups. There was no associated difference between the study arm and incidence of mucositis (p = 0.19) or the post-BMT length of stay (p = 0.10). Preliminary analysis shows no difference in severity of mucositis. No association was found between the study arm and symptoms reported by PROMS scores.

**Discussion and Implications:** No significant differences were identified between cryotherapy administration for 120- vs. 360-minutes in mucositis severity and incidence. This evidence supports reducing the time patients perform cryotherapy with Melphalan. This practice change would reduce the staff time burden and the patient discomfort associated with the current prolonged duration of cryotherapy. Further research regarding associated symptoms is recommended.

**Underwriting or funding source name:** The Daisy Foundation.

## #59

**A MOUSE CLICK AWAY: IMPROVING NURSE COMPUTER PROFICIENCY WITH A TRI-FOCAL EDUCATIONAL INTERVENTION.** Rosemary Semler, MA, RN, OCN®, and Amanda Euesden Hughes, RN, MSc, OCN®, both at Memorial Sloan-Kettering Cancer Center, New York, NY

**Objective:** To educate nurses in an ambulatory setting in basic computer use. Development of skills will improve communication among staff, improve efficiency, allow nurses to access resources and enhance patient care.

**Topic Significance and Study Purpose, Background, and Rationale:** In this age of increasing information technology, computer proficiency can be a challenge. At our large institution, we found that many nurses did not have the skill set required to perform basic tasks: locate nursing policies, send attachments or develop a contact list in email, locate staff meeting minutes, keep up with hospital based data on quality initiatives.

**Methods, Intervention, and Analysis:** To increase staff's ability to perform tasks on the computer, we developed multiple interventions for learning. We considered the three styles of adult learning: visual, auditory, and kinesthetic. Most learners favor a combination of these styles. With that in mind, we developed a PowerPoint demonstration utilizing step-by-step instruction to guide the nurse to complete the intended task. This PowerPoint was delivered to staff in small group settings where they could hear the steps and simultaneously see locations on a screen. The PowerPoint was emailed to each staff member for reference. Finally, multiple opportunities for hands on learning



were offered so staff could have time to perform the skills on a computer while the instructors were available to provide assistance.

**Findings and Interpretation:** A confidential survey was sent to all nurses to determine their knowledge and proficiency in performing certain tasks prior to any intervention. Specific tasks were queried along with a section of free text to inquire on skills that staff might like to learn. Post intervention, a second survey was sent out asking if the nurses felt that both their knowledge and comfort level at performing the tasks had increased. All tasks showed an increase in the number of nurses who were able to perform them. This data will be presented.

**Discussion and Implications:** For today's nurse, increasing amounts of data are stored on computers: medical records, resources, unit and hospital based policies and activities. Efficient access to this information will result in improved care to patients and satisfaction for staff.

## #60

### OPTIMIZATION OF INFUSION CENTER UTILIZATION.

Debra Stillwell, BSN, RN, OCN®, PSJMC, DFCC, Burbank, CA, and Tom Chentnik, MBA, McKesson Specialty Health-US Oncology Network, Houston, TX

**Objective:** Gain measurable control over infusion scheduling to maximize chair usage and minimize time when staff is waiting for patients yet still have available staff when needed.

**Topic Significance and Study Purpose, Background, and Rationale:** Ambulatory infusion scheduling is a perpetual problem. Most patients want to come between 10 am and 2 pm, which leaves holes in the beginning and end of the day and an ineffective use of both the staff and vacant chairs. Designing a mapping of chairs per RN and an infusion time calculator gives tools to schedulers to offer the patient choices of when to arrive but within parameters. Existing literature discusses the problem with suggestions for fixes, but none as complete as the project undertaken by this team.

**Methods, Intervention, and Analysis:** Direct collection of data from multiple sites was completed to determine how much time staff needs to complete selected tasks with one patient before they can start another patient. Time blocks were assigned to tasks such as how much time it takes to start an IV or complete an RN assessment, etc. The infusion time calculator allows a lay scheduler to calculate chair time by selecting drugs from a drop down menu. Once the chair time is calculated, the scheduler accesses the template and offers the patient arrival times. Templates were tested at one infusion center for one month. After the second stage rollout, the data was evaluated for reliability of the time blocks in the calculator with site specific customization adapted (nurse mixed versus pharmacy mixed drugs).

**Findings and Interpretation:** The findings include removal of guesswork of the lay schedulers more accurate scheduling of chair time allowing for more availability to treat patients, less downtime for nursing at the beginning and end of the day and more even scheduling in the 10 am to 2 pm timeslot allowing for lunch breaks more consistently. Best practice showed removal of sequential visit of labwork, MD office visit and treatment but that continued to be a barrier. Current literature does not reflect this work but does reflect ineffective use of chair time, patient wait time, and difficulty for nursing to take timely lunches. While adoption of this practice has happened at selected sites it is not a universal adoption.

**Discussion and Implications:** With healthcare economics being foremost in most practices, adoption of these tools would improve scheduling allowing more patients to be seen without stressing the resources of practice. Innovation of ideas being put into practice is the key to success. Future work could tie the time blocks and scheduling into the EMRs removing the human fac-

tor of scheduling patients - a great area of research for the field of nurse informatics.

## #61

### NEUTROPENIC BARRIERS-REDUCING INFECTIONS OR SACRIFICING QUALITY OF LIFE.

Mary Peterson, RN, ANP-BC, AOCNP®, Deb Seleen, RN, Chris Adams, RN, Carolyn Sweeney, RN, OCN®, Karla Liberatore-Burch, RN, and Meilani Jamias, RN, all at Banner Gateway Medical Center, Gilbert, AZ

**Objective:** Prevention of Infection in Hematopoietic Stem Cell Transplant Patients

**Topic Significance and Study Purpose, Background, and Rationale:** The concept of "Neutropenic Precautions" originally emerged in the 1960s when myelosuppressive therapy came to the forefront of cancer care. While the concept certainly made sense, it was based on clinical philosophy and has been continued based on tradition. The idea continues to be debated in institutions world-wide, yet there is limited literature or data in support of, or against neutropenic barriers (i.e., gloves/gowns). What data is available is limited by small sample size, inconsistencies in patient selection and does not clearly support current practices. Some of the more recent data goes so far as to suggest a negative impact on the psychosocial well-being of the patient, and may lead to a sense of increased isolation. Healthcare providers and institutions are being asked to meet exceedingly stricter challenges in the delivery of healthcare and to practice using evidence-based medicine. Obtaining a clear understanding of how to protect our patients, yet provide them with an experience that is less traumatizing and isolating may be challenging given the current evidence. An evidence based practice (EBP) team was formed for the purpose of performing a literature study to compile a knowledge base summarizing evidence based practice regarding use of gloves and masks by healthcare providers in the daily care of neutropenic patients, specifically stem cell transplant patients. To date, there are limited comparative studies on preventing hospital acquired infections in neutropenic hematopoietic stem cell transplant (HSCT) patients employing hand washing alone versus mask/gloves and hand washing. This is an ongoing EBP, led by the Director of Advanced Practice Providers and the HSCT NP, in collaboration with the Director of Professional Practice, and staff RNs in both the inpatient and outpatient units of our cancer center and inpatient oncology/stem cell transplant unit.

**Methods, Intervention, and Analysis:** Systematic literature review by a two-person review panel primary and secondary reviewer, using best practice as defined by Oncology Nursing Society (ONS) on systematic reviews. Efficacy of gloves/mask in prevention of infections in neutropenic patients, specifically HSCT population. Facilitation of Reliability/Validity: two-person review panel (primary/secondary) Analyze the data based on the ONS systematic review template.

**Findings and Interpretation:** With the resource burden associated with maintaining protective measures, there are surprisingly few studies systematically monitoring infection rates in neutropenic patients and limited evidence supporting masks/gloves in the prevention of infection. Well-designed randomized trials need to be opened to evaluate the effectiveness of personal barriers in severely neutropenic patients. Literature review yielded limited results on evidence to support or refute the use of gloves/masks as effective barriers in neutropenic patients, and even more limited data available in the stem cell transplant population. Across the board, the articles expressed the need for further randomized trials. The data that was consistent throughout the articles reviewed was that "hand hygiene is the most important measure to protect patients, healthcare workers and the environment from microbial contamination" (World Health

Organization (WHO) Guidelines for Hand Hygiene 2009) In regards to the use of gloves, one study highlighted the risk related to universal gloving in increased device-related infections (Bearman GM et al, Am Jour of Inf Cont, 2007). Several other studies found that healthcare workers who wore gloves were less likely to cleanse their hands upon leaving a patient's room and two established an association between inappropriate glove use and low compliance with hand hygiene. In contrast, three other studies found that healthcare workers who wore gloves were more likely to cleanse their hands following patient care. (Girou E et al., Jour of Hosp Inf., 2004) Most of these studies were focused on hand hygiene performance after glove removal only and did not consider other indications. The use of gloves in situations when their use is not indicated portrays a waste of resources without leading to a reduction of cross-transmission. The wide-ranging recommendations for glove use have led to frequent and unsuitable use in general, over and above the frame of tangible indications and conditions for appropriate glove use that remain poorly understood among healthcare workers. (WHO, Guidelines for Hand Hygiene, 2009) In regards to the use of masks, the data was even more limited. The use of HEPA filters and private rooms were the only proven environmental barriers that were currently recommended. In review of current guidelines, "Researchers have proposed that HSCT recipients wear surgical masks and gloves when exiting their hospital rooms before engraftment" (Guidelines of Care, 2007), but there are no additional recommendations after engraftment for the use of masks and gloves.

**Discussion and Implications:** Impact Current Practice: The onset of the EBP was to review the literature and find supporting evidence for or against the use of mask/gloves in the neutropenic patient, more specifically the severely neutropenic SCT patient for the opening of a new transplant unit at our facility. The nursing staff felt strongly that the evidence would support that hand washing alone can and does prevent hospital acquired infections in neutropenic stem cell transplant patients and additional barriers such as gloves/masks could actually pose an increased risk for this patient population by creating a mind set of false protection. Whereby, hand-washing is not necessary and the repeated use of a mask prevents respiratory exposure. The ongoing debate regarding protective barriers in neutropenic and HSCT patients continues to rage on. The last guidelines/recommendations authored by Centers of Disease Control (CDC), Infectious Disease Society of America (IDSA) and the American Society of Blood and Marrow Transplantation (ASBMT) were adapted in 2000. Despite these guidelines, no consensus exists between HSCT centers or healthcare providers working in the field of transplant. As a result of the review the EBP team has begun additional research to design and write a protocol for a randomized trial evaluating gloves/masks vs. no gloves/masks for neutropenic patients with hematological malignancies and those undergoing SCT in an attempt to bring about evidence base changes at our institution.

## #62

**STRATEGIES TO IMPROVE BCMA ADOPTION BY ONCOLOGY NURSES.** Joanne Abbotoy, MSN, Roswell Park Cancer Institute, Buffalo, New York

**Objective:** Explain reasons why oncology nurses resist bar code scanning for medication administration, how workarounds can increase risk for medication errors and actions hospitals can take to decrease nursing resistance.

**Topic Significance and Study Purpose, Background, and Rationale:** The impact of preventable errors on health care was the focus of the Institute of Medicine (IOM) report *To Err is Human: Building a Safer Health System* (2000). The IOM estimated that there were over 7,000 deaths annually resulting

from medication errors. Oncology nurses administer very potent medications and antineoplastic drugs, that when administered as directed can have severe side effects. When administered incorrectly, these medications can be fatal for the patient and career ending for the oncology nurse. Barcode medication administration (BCMA) has been shown to reduce medication errors by nurses. Nursing resistance can be a major obstacle in the implementation and adoption process. The purpose of this project was to understand why nurses resist adoption of BCMA into their clinical practice, improve the adoption of BCMA and promote nursing involvement and empowerment throughout the entire BCMA planning process so that the need for workarounds is decreased and nursing adoption and ownership are increased.

**Methods, Intervention, and Analysis:** An extensive literature search was completed exploring implementation of BCMA. The review of the literature makes it clear that despite the evidence of decreased medication errors when using BCMA nurses continue to resist incorporating this process into practice. Rogers' Diffusion of Innovation Theory (2003) provided the theoretical framework used in incorporating adoption theory into educational information. Four content experts voluntarily participated in the review of the educational information for content validity.

**Findings and Interpretation:** Resistance documented in the literature focused on many issues including inefficient workflow processes and poor equipment functionality. The repeated theme demonstrates the lack of adequate consideration of nursing practice needs. This indicates lack of oncology nurses participating on planning and implementation committees, a knowledge deficit about adoption theory, and/or a rush toward implementation.

**Discussion and Implications:** Including nurses in the planning, and decision-making processes increases the likelihood of successful implementation and adoption of BCMA. This also increases user satisfaction and perceived usefulness of the system. Evidence based, theory based educational process provided to oncology nurses would help to meet the educational needs of the oncology nurse.

## #63

**IMPLEMENTING PSYCHOSOCIAL DISTRESS SCREENING AT THE CALAWAY YOUNG CANCER CENTER.** Mary Crann, RN, MSN, OCN®, Diane Carnoali, LSW, Ann Wilcox, LSW, Bruce Greene, MD, Douglas Rovira, MD, and Armando Armas, MD, all at Calaway Young Cancer Center at Valley View, Glenwood Springs, CO

**Objective:** Incorporating evidence-based tools and policies and procedures to meet the emotional and psychosocial needs of patients and comply with American College of Surgeons accreditation standard 3.2 Psychosocial Distress Screening.

**Topic Significance and Study Purpose, Background, and Rationale:** Receiving a diagnosis of cancer is very overwhelming and stressful for patients and their families. The Institutes of Medicine (IOM) recognizes emotional and psychosocial issues of cancer survivors needs to be addressed along with physical issues. To comply with IOM recommendations the American College of Surgeons Commission on Cancer (CoC) established accreditation standard 3.2 Psychosocial Distress Screening. An assessment of the current practice at the Calaway Young Cancer Center (CYCC) revealed inconsistent screening and delayed referrals. There was no written policy and procedure nor were there procedures in place to collect outcome measures. A multidisciplinary subcommittee led by the Oncology Nurse Navigator (ONN) and Oncology Social Worker (OSW) developed a policy and procedure for implementing a process to monitor distress and collect outcome measures.

**Methods, Intervention, and Analysis:** It was agreed to use the evidence-based NCCN Distress Screening Tool and this has been incorporated into the electronic medical record (EMR) with permission from NCCN. A baseline assessment will be completed at the first new patient appointment. Assessments will be repeated at the second treatment visit, chemotherapy and/or radiation, at completion of chemotherapy and/or radiation, and at pivotal time-points during treatment. Referrals will be made on the day assessment is completed based on NCCN guidelines. In-service and training will be offered to the multidisciplinary team to create buy-in from all stakeholders.

**Findings and Interpretation:** The effectiveness of the policy will be monitored by collecting outcome measures from data in the EMR and patient and physician satisfaction surveys. A patient task force will be formed for feedback. The ONN and OSW will present the data to the Cancer Care Committee and the policy will be modified if necessary.

**Discussion and Implications:** Distress is a barrier to care that should be recognized and treated. CYCC has implemented a policy for assessing distress utilizing the NCCN tool to comply with IOM recommendations and CoC standard 3.2. Incorporating evidence-based tools and changing the current practice will help meet the emotional and psychosocial needs of patients.

## #64

**STIFF PERSON SYNDROME: A RARE PARANEOPLASTIC NEUROLOGICAL SYNDROME.** Carolyn Kuberski, BSN, RN, and Patricia Kelly, DNP, APRN, CNS, AOCN®, both at Texas Health Presbyterian Hospital, Dallas

**Objective:** The nurse will be able to describe “Stiff Person Syndrome” as a rare, but treatable, under-diagnosed paraneoplastic neurological auto-immune disorder and list symptoms, treatments, and patient/family resources.

**Topic Significance and Study Purpose, Background, and Rationale:** Stiff person syndrome (SPS) is a rare (< 1:1,000,000) paraneoplastic neurologic disorder associated with malignancy and central nervous system impairment. It is an immune-mediated antigenic response to the tumor. Symptoms include progressive muscle rigidity with cognitive and functional decline. The diagnosis is made with electrophysiologic studies and serum/spinal fluid testing for anti-amphiphysin (inhibitory central nervous neurotransmitter) antibodies. SPS treatment includes treatment of the underlying cancer, pharmacologic symptom control, and immunotherapy and often results in stabilization/reversal of the neurological damage. SPS is frequently misdiagnosed as an anxiety, addictive, or other neurological disorder. This is a case report of a 64 year-old woman with stage 3 breast cancer, multiple comorbidities, and pain and stiffness in her legs. During four months of routine breast cancer treatment, she deteriorated physically, cognitively, and became bedbound. She continually screamed in pain and had leg spasms that increased with sudden noises such as doors opening or closing. After ruling out other diagnoses, she had serum anti-amphiphysin antibody testing and was diagnosed with paraneoplastic SPS. She was treated with plasma exchanges, rituximab infusions, botulinum toxin injections, and diazepam. One year after completing treatment for breast cancer and SPS, she walks with a rolling walker, performs activities of daily living, and is in remission with her cancer.

**Methods, Intervention, and Analysis:** We did a literature search for paraneoplastic SPS and found some articles in the medical journals but none in the nursing literature. We located comprehensive patient/family and healthcare team educational resources at the National Institute of Neurological Disorders and Stroke and the National Organization for Rare Disorders.

**Findings and Interpretation:** Providing care for this patient was frustrating and difficult because of her confusion, unrelenting pain, and downward spiral despite treatment for her breast cancer. After rituximab infusions, we noted dramatic improvement with her SPS symptoms. Having a diagnosis and understanding SPS pathophysiology helped the nurses establish a symptom treatment plan and overcome judgmental attitudes.

**Discussion and Implications:** Sharing information and resources about rare disorders is important for the healthcare team, patient, and family. Through formal systematic studies, publications, presentations, and sharing of patient experiences, we can improve patient outcomes for patients with SPS and other rare disorders.

## #65

**IMPROVING ONCOLOGY PATIENTS’ PERCEPTION OF PAIN MANAGEMENT IN THE INPATIENT SETTING USING A MULTIDISCIPLINARY, MULTIFACETED APPROACH.**

Jayne Cotter, MS, RN, AOCNS®, Aurora Health Care, Milwaukee, WI

**Objective:** The reader will be able to identify a distinct process driven by nurses and pharmacists to enhance patients’ perception of pain management in the clinical setting.

**Topic Significance and Study Purpose, Background, and Rationale:** The literature states that cancer pain is often under treated. At least half of patients in all stages of disease have pain, and inadequate control can lead to increased morbidity, mortality and healthcare costs while decreasing patients’ quality of life. Nurses are well positioned to assess, address, and improve patient’s perceptions of pain. The goals for this project were to increase patient perceptions of pain management, improve pain control with defined patients, and increase nurses’ knowledge of pain management.

**Methods, Intervention, and Analysis:** Nurses knowledge of pain management principles were measured before and after the intervention period. Education was developed to enhance nurses’ knowledge of pain management principles. The electronic health record was utilized to identify patients with pain issues based on specific criteria. Patients could also be identified by nursing assessment or patients subjective concerns regarding pain management. Pain medication profiles, use of and response to pain medications, and appropriateness of medication types were assessed for all identified patients. Nursing and pharmacy collaborated to review pain regimens, and patients’ perceptions about pain control. If the pain regimen was suboptimal, a conversation was initiated with the physician by either the nurse or pharmacist to alter the medications available. Nursing also involved patients by partnering with them to discuss their medication regimen and thoughts about pain control and use of pain medications to assure optimal usage and compliance. Thirty-three patients were part of the intervention group. Every intervention included a discussion between the nurse, pharmacist and patient. Six patients required intervention from the physician.

**Findings and Interpretation:** The desired outcome was met by increasing patient satisfaction in regards to pain management as measured by survey responses by ten percent. In addition, nursing knowledge regarding pain management increased from 57% to 85% based on the results of the pre- and post-intervention questionnaires. The increase in patient satisfaction scores indicates the translation of knowledge to practice occurred.

**Discussion and Implications:** By aggressively reviewing the medication profile and its efficacy as well as involving the patient, nursing and pharmacy were able to make pain management a priority. This project could be replicated by nursing/pharmacy teams to improve pain management in other inpatient settings.



## #66

### CREATING AN ONCOLOGIC EMERGENCY EDUCATIONAL PROGRAM TO ADDRESS THE UNIQUE NEEDS OF THE ONCOLOGIC TELEHEALTH COMMUNITY.

Tahitia Timmons, MSN, RN-BC, OCN®, VA-BC, Cancer Treatment Centers at Eastern Regional, Philadelphia, PA

**Objective:** The goal was to create an educational program that addressed the common oncological emergencies within a telehealth framework.

**Topic Significance and Study Purpose, Background, and Rationale:** The prediction for the future of oncology is by 2030 practice will be guideline driven. Our institution houses a call center that triages calls from across the nation, follows national algorithms, along with hospital dictated protocols. The nurses answering calls are familiar with guideline utilization, with this trend comes an increase in knowledge synthesized in shorter time frames. The request was the creation of an oncologic emergency course specifically tailored to address the challenges of telehealth triage.

**Methods, Intervention, and Analysis:** The education coordinator developed a one hour contact hour course based on meetings with the staff and management of the call center. During the meeting it was determined that the education would focus on tailoring case studies regarding oncologic emergencies versus implementing protocols. A review of the literature related to oncologic emergencies, American Academy of Ambulatory Nursing Care, and recent articles shaped the education. The validity of the intervention was measured by post evaluations and surveys.

**Findings and Interpretation:** A literature review revealed articles highlighting the importance of algorithms, guidelines and the necessity of quickly identifying client complaints. During discussion with staff concern was raised this did not meet their current needs. They felt they had protocols and algorithms and knew how to address patient concerns, but did not have tailored oncology education specifically for emergencies. Case studies were developed based on ones they might see using telehealth principles. A 12 question Likert scale evaluation was given. The average score was a 4.93. One month later a 4 question anonymous survey was given. 100% of the respondents had used information from the course, and felt more prepared and confident to deal with incoming calls then previously.

**Discussion and Implications:** The importance of the how and what we educate oncology call centers on may be as important as the utilization of algorithms and protocols. Standard oncologic emergencies are not necessarily what call center nurses may encounter. They need the tools to rapidly assess the situation, quickly determine where to send the patient, and tailored emergency education. Creating an educational program that addresses telehealth oncologic emergencies appears to boost confidence and perhaps may be of value to other institutions' call centers.

## #67

### THE RELATIONSHIPS BETWEEN SELF-CARE ABILITY TO MANAGE CANCER-RELATED PAIN, AND PAIN INTENSITY AND PAIN INTERFERENCE IN UROLOGICAL CANCER PATIENTS IN JAPAN.

Yasuko Fujimoto, RN, Mika Miyashita, RN, PhD, Akio Matsubara, RN, PhD, and Katsumi Nasu, RN, MSN, all at Hiroshima University, Japan

**Objective:** To describe relationships between self-care ability to manage cancer-related pain, and pain intensity and pain interference in urological cancer patients in Japan through cross sectional survey.

**Topic Significance and Study Purpose, Background, and Rationale:** Urological cancer accounts for about 12% in all cancer inci-

dents in Japan. Prostate cancer which is the third most prevalent cancer in men is representative of urological cancer. Bone metastases occur frequently in prostate cancer patients, and cause severe pain. Self-care for cancer-related pain is a critical issue in cancer patients with metastases. The purpose of this study are to describe the self-care ability to manage cancer-related pain, pain intensity and pain interference, and to examine the relationships between them in urological cancer patients.

**Methods, Intervention, and Analysis:** This study was a cross-sectional survey. Urological cancer patients with metastases were recruited in an outpatient clinic. Participants completed the Japanese Brief Pain Inventory (BPI-J) which consists of four pain intensity and seven pain interference 0-to-10 NRS, the measurement of self-care ability to manage cancer-related pain which were constructed from seven subscales containing 45 questions four-point Likert-scale, and demographic information questionnaire. Medical data were collected from patients' charts after having obtained the patients' consent. Descriptive statistics were calculated for the data. Three subscales, which are pain intensity, activity interference, and affective interference, were generated from the questions of the BPI. Higher score of the BPI and the measurement of self-care ability indicated worse pain intensity or interference and better self-care ability. Spearman's rank correlation coefficient between the subscales of the BPI and the subscales of the measurement of self-care ability were calculated.

**Findings and Interpretation:** Nineteen patients with a mean age of  $68.4 \pm 8.5$  years completed the questionnaire. The averages of the questions of the BPI were 1.00-2.16. There were significant correlations between all subscales the measurement of self-care ability to manage cancer-related pain and pain intensity, activity interference, or affective interference. "Practicing pain management continuously" and "Attention and concern to pain" were significantly correlated to three subscales of the BPI ( $r = -0.603, p = 0.006$ ;  $r = -0.506, p = 0.032$ ;  $r = -0.500, p = 0.034$ ;  $r = -0.643, p = 0.003$ ;  $r = -0.522, p = 0.026$ ;  $r = -0.600, p = 0.009$ ).

**Discussion and Implications:** The current study suggested that oncology nurses should relieve cancer-related pain in urological cancer patients through enhancing the self-care abilities to continuously manage cancer-related pain. It is important to support cancer patients so that they could pay attention to their cancer-related pain and manage it by themselves.

## #68

### IS HYPNOSIS A FEASIBLE AND EFFECTIVE INTERVENTION FOR HOT FLASHES?

Debra Barton, RN, PhD, AOCN®, FAAN, Kelli Fee-Schroeder, RN, BSN, OCN®, Breanna Weisbrod, RN, BSN, OCN®, and Sherry Wolf, RN, MS, OCN®, all at the Mayo Clinic, Rochester, MN; and Gary Elkins, PhD, ABPP, ABPH, Baylor University, Waco, TX

**Objective:** List at least three reasons why hypnosis is both feasible and effective for reducing hot flashes.

**Topic Significance and Study Purpose, Background, and Rationale:** Hot flashes can negatively impact women's quality of life and emotional well-being. The most effective treatment, estrogen, is not an option for many women due to cancer risks and serious side effects; therefore, other options are needed. Symptoms have both a psychosocial as well as physiologic component, as described in the Theory of Unpleasant Symptoms. Addressing both of these etiologies may result in better symptom management. Medical hypnosis is well known in the field of psychology. The purpose of this study was to evaluate the effect of hypnosis with/without venlafaxine versus a placebo/sham hypnosis condition.

**Methods, Intervention, and Analysis:** Postmenopausal women with at least 28 hot flashes per week were randomized to receive either: hypnosis + venlafaxine (HV), sham hypnosis +

venlafaxine (SV), hypnosis + placebo pill (HP), or sham hypnosis + placebo pill (SP). The dose of venlafaxine was 75 mg. After a baseline week, the hypnosis intervention involved four weekly sessions with a nurse, including instruction in self-hypnosis. The sham hypnosis condition involved listening to white noise. The primary endpoint was the change from baseline in hot flash score (severity x frequency) at week 8, measured by a prospective hot flash daily diary. The study was powered to detect a difference of 16% between the HV arm and the SV arm.

**Findings and Interpretation:** Seventy-one women, mean age 55, were randomized. At 8 weeks, hot flash scores decreased 25% in the SP group, 51% in HP, 51% in SV and 52% in the HV group. All active arms were significantly better than the control group. 70% of women in the hypnosis group felt it was worth the time and effort. Hypnotizability, but not expectancy, significantly predicted outcomes. Women on SV reported significantly more side effects than the controls (SP).

**Discussion and Implications:** Hypnosis alone (HP) reduced hot flashes similarly to venlafaxine alone (SV), but the combination did not appear to be additive. Hypnosis reduces hot flashes more than other mind body interventions, such as paced breathing, and nurses are able to deliver hypnosis effectively. Given the side effects associated with venlafaxine, future research should focus on even lower doses of pharmacologic agents in combination with mind body interventions.

## #69

**HOME ENTERAL NUTRITION SUPPORT FOR THE HEAD AND NECK CANCER PATIENT.** Noreen Luszcz, RD, MBA, CNSC, and Donna Ford, RN, BSN, both at Walgreens Infusion Services, Deerfield, IL

**Objective:** To understand why head and neck cancer patients are at risk for malnutrition and the impact of home enteral nutrition coordinated by a multidisciplinary team in their overall treatment plan.

**Topic Significance and Study Purpose, Background, and Rationale:** An estimated 53,640 people will develop head and neck cancers in 2013. Patients with head and neck cancer are at high risk for malnutrition due to dysphagia from the tumor and treatment. In addition to weight loss prior to the diagnosis, the patient may lose an additional 10% of pre-therapy body weight during treatment. Home enteral nutrition coordinated by a multidisciplinary nutrition support team is safe, effective, and essential to the well-being of patients with head and neck cancer. The purpose of this study was to collect and analyze data on this patient population.

**Methods, Intervention, and Analysis:** A randomized, retrospective medical record review was performed by a large home infusion company on head and neck cancer patients receiving enteral nutrition between July 1, 2012 and June 30, 2013. Patient information was de-identified before the analysis was completed.

**Findings and Interpretation:** Data was collected on 172 patients: 121 male; 51 female; average age of 63 years. The majority of patients (96%) had gastrostomy tubes. Tubes were placed proactively (before treatment began) in 50%; 41 % did not have their tube placed proactively and 9% were unknown. The calculated degree of malnutrition prior to the start of enteral therapy was as follows: 55% mild; 17% moderate; 8% severe and 20 % unknown. The initial goals of therapy included weight gain for 27%; weight maintenance for 64% and other for 9% of patients. The average length of therapy for the 62 patients who completed enteral therapy was 131 days; 46% met their initial goal. Of those patients remaining on enteral nutrition, 70% were progressing toward their goal.

**Discussion and Implications:** It is well established that enteral nutrition is required for a large proportion of head and neck cancer patients undergoing treatment to minimize weight loss,

maintain quality of life, manage symptoms and improve treatment tolerance. It was interesting to note that 50% of the patients had their tube placed proactively, only 8% of patients had severe malnutrition at start of therapy, and only 27% required weight gain. Further investigation is needed on this challenging patient population to understand how to best meet their nutrition goals.

## #70

**CANCER SURVIVORS TOOLCASE FOR HEALTH.** Fran Zandstra, RN, MBA, OCN®, Katherine Gilmore, MPH, CCRP, and Guadalupe R. Palos, MPH, CCRP, all at the University of Texas MD Anderson Cancer Center, Houston

**Objective:** To describe a novel educational toolcase used in an interdisciplinary wellness program to empower cancer survivors in self-management.

**Topic Significance and Study Purpose, Background, and Rationale:** The Institute of Medicine's report on delivery of high-quality cancer care stresses the importance of providing user-friendly information to patients about their care and treatment options. Helping survivors better understand their "new normal" can contribute to knowledgeable decision-making about their long-term care and subsequently lead to improved outcomes. In this abstract, we describe the development of educational tools packaged together and titled "A Cancer Survivor's ToolCase" to educate survivors and support recommendations outlined in a personalized survivor's summary care plan.

**Methods, Intervention, and Analysis:** A three-tiered approach to determine satisfaction, use, and perceptions of survivors and their providers towards the tool case has been initiated and is ongoing. The first step focused on gathering information to develop the educational material for cancer survivors. Information related to survivorship was obtained from a review of current evidence-based research, clinical practice algorithms, and expert clinicians' feedback. Next, content validity of the educational material will be assessed and then a pre/post-test survey will be conducted to assess satisfaction with education and material received on post-treatment topics and self-care techniques. Simple descriptive statistics will be used to analyze and present the data.

**Findings and Interpretation:** During a clinic visit, the provider tailors the survivor's care, counseling, and referrals to their individual health and wellness needs. The SCP provides the foundation from which to teach about potential post treatment toxicities and self-management methods that can promote wellness. The "Cancer Survivor's ToolCase" is designed to support the information given to the survivor. The toolcase consists of the survivorship care plan and accompanying booklets on general survivorship concerns, cardiac health, sexuality after cancer, and nutrition/lifestyle after cancer. Using these tools, a survivor can become an active partner in learning how to self-manage adverse effects, such as cardiac toxicities and reduce risks by engaging in a healthy lifestyle. The educational toolkit will be available in hard or electronic formats.

**Discussion and Implications:** The risk of late treatment effects can be overwhelming to a survivor. The Cancer Survivors ToolCase can be used by oncology nurses and other team members to provide a uniform approach to educating about topics that can significantly a survivor's quality of life.

## #71

**PSYCHOSOCIAL AND SPIRITUAL DISTRESS SCREENING AT A COMMUNITY HOSPITAL CANCER CENTER.** Gianna Laiola, RN, MSN, OCN®, and Mary Wickman, RN, PhD, both at St. Jude Medical Center, Fullerton, CA

**Objective:** Create a strategy for implementing the Psychosocial Distress Screening (PDS) Tool, evaluate the implementation

process for success and barriers, and create a policy for implementation in Radiation and Hematology Oncology.

**Topic Significance and Study Purpose, Background, and Rationale:** The National Comprehensive Cancer Network defines distress as multifactorial, unpleasant experience of an emotional, psychological, social, or spiritual nature that interferes with the ability to cope with cancer (2013). Distress is a common emotion for cancer patients and their families (American Cancer Society, 2012) with 40%–50% of patients experiencing significant distress (Fulcher & Gosselin-Acomb, 2007). The American College of Surgeons Commission on Cancer has psychosocial distress screening as one of its 2015 standards.

**Methods, Intervention, and Analysis:** An interprofessional oncology team was selected to be a part of the Distress Workgroup. The team decided to utilize the NCCN PDS and Art of Sacred Living's Spiritual Assessment tools. A process flow was developed and pivotal moments for screening tool administration identified. An algorithm was developed to ensure appropriate referrals for patients requiring additional psychosocial and/or spiritual support. The entire oncology team was educated on the significance of distress and on the implementation screening tool. Monthly audits were completed to track metrics.

**Findings and Interpretation:** At the 90 day audit, Hematology Oncology had a 60% and 53% implementation rate for the Psychosocial and Spiritual Distress Screening, respectively, on day of consultation. Radiation Oncology had an 89% implementation rate for both the Psychosocial and Spiritual Distress Screening on day of consultation.

**Discussion and Implications:** Screening tool implementation was challenging, so additional pivotal moments were not implemented. Between the 60 and 90 day audits, the PDS form was edited to include "please turn over" because patients did not know there were additional screening questions on the back. Patients with significant psychosocial and/or spiritual distress were connected with various resources for support. Interventions included counseling, education, Healing Touch, and assistance with insurance, finance issues, transportation issues, and other practical issues. Ongoing audits will be completed to assess successful implementation and sustainability. Notably, distress screening will also be implemented in the Breast Center.

## #72

**IT'S EVERYONE'S ROOM! OPEN ROOM ALLOCATION SYSTEM IN A CLINICAL SETTING.** Lisa Merritt, BSN, RN, OCN®, Michelle Wasko, MS, BSN, RN, NE-BC, and Jennifer Bowen, MS, BSN, RN, NE-BC, all at the Ohio State University James Cancer Hospital, Columbus

**Objective:** To develop a workflow that streamlines patients through a high volume, complex outpatient hematology/oncology clinic The Ohio State University James Cancer Hospital minimizing wait times and maximizing room capacity.

**Topic Significance and Study Purpose, Background, and Rationale:** The clinic averages 36,000 patients a year and facilitates 17 physician clinics each week. With eleven exam rooms, the challenge has been to develop a workflow that allows 150 patients a day to be seen by their physician and or nurse practitioner. Assigning specific rooms to each provider has been the standard workflow. Due to increasing census and space restraints, other high customer volume non-industry workflows, for example, airlines and restaurants were analyzed. If rooms could be allocated not by physician teams but rather by appointment times, would the workflow improve? Would clinics run on-time? Would patients experience less wait to see their provider? Would staff be utilized more consistently throughout the day?

**Methods, Intervention, and Analysis:** A nursing workgroup developed a process where patients were assigned

rooms based on the following criteria: the time of appointment, allowing each team to have another patient in the queue, the movement of currently roomed patients, and the allowance for special circumstances. The charge nurse would facilitate the patient allocations, while working with ancillary and nursing staff to delegate clinic and patient needs. Several methods of evaluation were utilized to determine efficacy. A pre and post survey was distributed to staff to assess satisfaction. End of shift reports provided wait time and room turnover rates. Verbatim and survey data provided patient's perspective and response.

**Findings and Interpretation:** Feedback has been overwhelmingly positive. Wait times have decreased in 95% of clinics. Patients have reported very positive remarks such as "I have never been roomed so quickly", and satisfaction scores remain above benchmark. Consistent physician workflow, accountability of personnel and improved staff utilization have been other indirect outcomes.

**Discussion and Implications:** The growing patient population demanded a change in operation workflow. A system of Open Room Allocation was trialed. Due to overwhelming success, the patient flow will become the standard operating practice. Other departments with similar constraints are evaluating the new model to determine feasibility within their operations.

## #73

**WE JUST WANT YOU TO KNOW: EDUCATIONAL TOOLS TO INCREASE COMPLIANCE AND MANAGEMENT OF ORAL ONCOLOGY MEDICATIONS.** Jeanne Hammond, BSN, MAEd, RN-BC, Sheri Guarino, RN, OCN®, and Karen Mietus, RN, OCN®, all at the University of Rochester Medical Center, New York

**Objective:** To standardize patient education and monitoring adherence on oral cancer therapy in an ambulatory oncology setting.

**Topic Significance and Study Purpose, Background, and Rationale:** There has been a large increase in the development of oral therapy for treatment of cancer diagnoses. The range of cancers being treated with oral therapy is increasing at a rapid rate. At our institution the range of cancers includes solid organ tumors and hematologic cancers. Problems identified by clinic nurses and physicians caring for patients on oral therapy are medication procurement, safe handling and disposal, management of side effects, and monitoring toxicity and compliance. As an institution, there is a goal to standardize patient education regarding these medications and a method to monitor compliance. Using currently published standards, a teaching tool was created along with a medication adherence calendar that can be downloaded into the patient's electronic medical record. We request that patients actively use this calendar as a tool and check off or initial on the days they take the medication. If medication is held for toxicity we encourage our patients to indicate this on the calendar. The process of developing this patient education tool included input from clinic nurses, cancer center pharmacists and providers. The standardized patient education addresses the diagnosis, treatment regime, lab frequency, self-care while on oral therapy, when to call the doctor/nurse and adherence calendar. By addressing these points, the goal is for patients to be better educated and therefore will be more compliant. The prediction is that the written information and calendar guidance will empower our patients to assume an active role in their therapy and lead to better medication adherence. This program is in its infancy. It is a work in progress that may need refinement as we move forward. There is no data available regarding past compliance with oral medications. Anecdotal information on past compli-



ance is available. By asking patients to bring their calendars to each clinic visit, we will be able to monitor compliance through audits of physician notes with regard to adherence. It is anticipated that consistent use of these tools will lead to compliance, increased knowledge and improved quality of life.

**Methods, Intervention, and Analysis:** Our design includes interventions for improving patient education regarding oral cancer medications and strategies to improve compliance with self-administration of oral cancer therapy. Tools used for measuring the outcome of our education process will be review of charts to assess compliance with medication schedules and audit the frequency of phone calls with questions related to medication schedules.

**Findings and Interpretation:** This was not a research project. The impetus for this project was a result of reviewing the published standards from ASCO and ONS and to improve patient outcomes with compliance through standardized patient teaching. Moving forward, chart audits will determine if the desired outcomes of compliance and medication management were met.

**Discussion and Implications:** As the number of oral therapies increase, patients need more guidance and education to self administer these medications at home. This impacts the amount of time nurses need to educate the patients. Using the calendars will provide the collaborative team a more complete record of the patient's medication adherence and lead to discussions of side effect management. Patient's will become more empowered to actively participate in their care. More complete documentation of patient's adherence will allow us to evaluate how we can build upon and improve patient education tools.

#### #74

**ONCOLOGY NURSING IN THE ACUTE CARE SETTING: A MULTI-NATIONAL VOLUNTEER EXPERIENCE WITH HEALTH VOLUNTEERS OVERSEAS IN VIETNAM.** G. Jean Logan, DrNP(c), MSN, RN, Drexel University, Bowie, MD; Thi Hoa Nguyen, RN, Hue Central Hospital, Hue, Vietnam; and Meg Plaster, RN, Perth, Australia

**Objective:** To compare and contrast the effect of multi-national volunteer efforts on the oncology nursing practice paradigms of the hosts and volunteers.

**Topic Significance and Study Purpose, Background, and Rationale:** Coordinated by HVO, ASCO, and ONS, a team of physicians and nurses from 3 continents was sent to Hue, Vietnam. Nurses provided oncology nursing education to nursing students, medical and nursing staff providing a unique multi-national experience which impacted the practice paradigms of all involved. A systematic review by George and Meadows-Oliver (2013) confirms there is little in the literature ( $n = 9$ ) about the effect of international collaboration among nurses. This paper contributes to the developing literature by exploring the impact of the interaction between oncology nurses from developed and developing countries

**Methods, Intervention, and Analysis:** The authors reflections have been compiled and compared concerning: intended goals and expectations, observations of activities and practice paradigms, description of personal practice paradigms, evaluation of intended goals, and intent to alter current practice.

**Findings and Interpretation:** Madame Huy expected evidence based education for entry level oncology nurses. She expressed appreciation for efforts to adapt evidence based practice to their context and culture. Madame Huy found validation of her current practice paradigm and an increased understanding of professional nursing development. She expressed a desire to increase the level of interaction between nurses and both patients and physicians.

The visiting nurses intended to promote multi-disciplinary practice, incorporating patient education in nursing practice, re-

view the principles of chemotherapy delivery and explore palliative care in the Vietnamese culture. The visiting nurses developed a new understanding of culturally appropriate care within the context of community dynamics which can be incorporated into their practice relating to minority populations in their home countries.

**Discussion and Implications:** An open exchange of information within a multi-national team resulted in improved understanding of care that is context specific, culturally sensitive and effective. Adapting teaching strategies and incorporating an appropriate evidence base are key to successful exchange of ideas in an effort to improve current practice. Expanding one's understanding of other cultures and working environments helps each participant to value what is unique and effective in their own practice while evaluating the possibility of adapting their practice based on an expanded practice of culturally sensitive care.

#### #75

**EDUCATING NURSES ON SAFE ADMINISTRATION AND MANAGEMENT OF ORAL CHEMOTHERAPY.** Stephanie Lee, BSN, RN, ONC, and Sarah Mendez, MA, RN, AOCNS®, both at New York University Langone Medical Center, New York

**Objective:** To educate non hematology/oncology nurses at New York University Langone Medical Center (NYULMC) regarding safe administration and management of oral chemotherapy.

**Topic Significance and Study Purpose, Background, and Rationale:** Oral chemotherapies are potent drugs that can be hazardous not only to the patient, but also the nurse handling the medication. They are most commonly used in the outpatient setting; however they can also be encountered in the in-patient setting when a patient is continuing treatment or when they are starting on a new regimen during their hospital stay. Many nurses are not familiar with the safety precautions and protocols regarding oral chemotherapy, often consulting the nurses on the hematology/oncology unit for assistance. Given that the nurses on the hematology/oncology unit regularly administer oral chemotherapy to their patients, they are well aware of the protocols regarding proper handling of these drugs and where to find additional educational resources.

**Methods, Intervention, and Analysis:** Senior nurses on the hematology/oncology floor developed a standardized script for educating nurses about safe administration and management of the patient receiving oral chemotherapy. For one month, they traveled to different units in NYULMC on both day and night shifts, providing nurses with a brief in-service on how to verify patient's medication, consent, treatment plan, and the necessity of utilizing two nurses for this process. They also educated nurses on use of personal protective equipment (PPEs) when handling oral chemotherapy, proper disposal of drug packaging, and bodily excrement. Flyers containing important points from the in-service were distributed to the nurses during the education, and copies were left on the units.

**Findings and Interpretation:** The frequency of in-person and phone consultations were recorded before and after the education was performed on the units. Preliminary results indicate that there was a noticeable decrease in the frequency of consultations following the one month education period.

**Discussion and Implications:** Providing this type of education throughout the hospital helped nurses become familiar and confident when caring for patients receiving oral chemotherapy. Hematology and oncology nurses received fewer interruptions from consultations. Overall, it improved quality of care and safety to both patients and nurses.

## #76

**MANAGEMENT OF NONINFECTIOUS PNEUMONITIS ASSOCIATED WITH MAMMALIAN TARGET OF RAPAMYCIN INHIBITORS IN HORMONE RECEPTOR-POSITIVE/HER2-NEGATIVE ADVANCED BREAST CANCER: CLINICAL EXPERIENCES.** Mary Peterson, RN, MS, ANP-BC, AOCN®, Banner MD Anderson Cancer Center, Gilbert, AZ

**Objective:** Educate nurses on noninfectious pneumonitis associated with mammalian target of rapamycin (mTOR) inhibitors in hormone receptor-positive advanced breast cancer and assist nurses with additional management techniques to improve patient outcomes.

**Topic Significance and Study Purpose, Background, and Rationale:** Noninfectious pneumonitis (NIP) associated with mammalian target of rapamycin (mTOR) inhibitors is a nonmalignant noninfectious infiltration of the lungs. When working closely with oncologists who treat breast cancer (BC), nurses may encounter this condition. Because NIP symptoms are nonspecific and its consequences are potentially serious, it is essential for nurses to understand this adverse event. This analysis will evaluate NIP associated with mTOR inhibitors from a nurse's perspective.

**Methods, Intervention, and Analysis:** Clinical data and techniques to manage NIP in patients with HR+, HER2-negative advanced BC will be highlighted from BOLERO-2, a randomized phase 3 study of everolimus (EVE) plus exemestane (EXE) versus placebo plus EXE for HR+, HER2-negative advanced BC that recurred or progressed on previous letrozole and anastrozole. Additional experiences and best practices from a single clinical center will be also be highlighted.

**Findings and Interpretation:** In BOLERO-2, all-grade NIP occurred in 16% of patients for EVE+EXE. The majority of events were grade 1/2; 3% experienced grade 3 NIP. No grade 4 events were reported. Of patients with grade 3 NIP and related events in the EVE+EXE arm, 80% experienced resolution to grade 1 within a median 3.8 weeks. Before initiating EVE therapy, pulmonary history should be obtained, patients should be educated about potential risk for NIP, and patients should be encouraged to contact the nurse regarding unexplained cough or dyspnea or worsening of baseline symptoms. For management of grade 1 events (asymptomatic patients with only radiologic changes), treatment can continue but development of clinical symptoms should be closely monitored and reported. For management of patients with mild-to-moderate symptoms, therapy should be interrupted until resolution of symptoms, and treatment with antibiotics and corticosteroids should be considered for respiratory distress. Dose reductions and discontinuation of therapy may be warranted.

**Discussion and Implications:** Management recommendations for mTOR inhibitor-induced NIP are based on radiographic and clinical assessments; prompt recognition and early intervention are key. Because of the nonspecific nature of symptoms and their potentially serious consequences, nurses should be aware of and should vigilantly monitor for this adverse event.

## #77

**RADIUM-223 DICHLORIDE (RADIUM-223) FOR THE TREATMENT OF PATIENTS WITH CASTRATION-RESISTANT PROSTATE CANCER AND SYMPTOMATIC BONE METASTASES: THE ESSENTIAL ROLE OF NURSES IN PATIENT CARE AND MANAGEMENT.** Tracy Curley, RN, Gabrielle Arauz, RN, OCN®, and Trine Jensen, RN, OCN®, both at Memorial Sloan-Kettering Cancer Center, New York; Mona Wahba, MD, Bayer HealthCare, Whippany, NJ; and Anthony Delacruz, NP, OCN®, Memorial Sloan-Kettering Cancer Center

**Objective:** Present an overview of radium-223 in the treatment of patients with castration-resistant prostate cancer

(CRPC) and bone metastases, and discuss important handling, administration, safety, and patient counseling information for radium-223.

**Topic Significance and Study Purpose, Background, and Rationale:** Nurses are essential members of the multidisciplinary team involved in the care of patients undergoing treatment with radiopharmaceuticals. Radium-223 is a first-in-class alpha-emitting radiopharmaceutical and new treatment option for men with CRPC and symptomatic bone metastases. To guide nurses, we present key information regarding radium-223 administration and patient management.

**Methods, Intervention, and Analysis:** The efficacy and safety of radium-223 were evaluated in the randomized phase 3 ALSYMPCA trial, which included 921 CRPC patients with symptomatic bone metastases and no known visceral metastases. Patients were randomized 2:1 to 6 injections of radium-223 (50 kBq/kg IV, every 4 wk) or matching placebo. All patients received best standard of care throughout the trial.

**Findings and Interpretation:** ALSYMPCA established radium-223 as the first bone-targeted agent to significantly improve overall survival (HR = 0.70) and prolong time to first symptomatic skeletal event (HR = 0.66). Radium-223, in comparison to placebo, was associated with a slightly higher incidence of myelosuppression (thrombocytopenia, 12% vs 6%; neutropenia, 5% vs 1%) and gastrointestinal adverse events (AEs) (diarrhea, 25% vs 15%; vomiting, 18% vs 14%). The number of patients who discontinued treatment due to AEs was lower in the radium-223 group than in the placebo group (16% vs 21%). Furthermore, radium-223 had a positive impact on pain, significantly delaying time to opioid use (HR = 0.62). Radium-223 patients also experienced a meaningful improvement in quality of life (p = 0.02) versus placebo. Our experience has shown that treatment with radium-223 is consistent with the data reported from ALSYMPCA. Educating patients on the unique properties and therapeutic benefits of radium-223, along with radiation safety, myelosuppression, and interventions for AEs, is an essential part of the nursing role. Nurses need to be knowledgeable about administration guidelines, workflow, and reimbursement options to provide optimal patient care and management.

**Discussion and Implications:** Radium-223 is a highly effective, well tolerated, easy-to-administer treatment for patients with CRPC and symptomatic bone metastases. Nurses are an essential part of the oncology team, providing invaluable education about radium-223 as a new therapeutic option, its clinical relevance, and the incorporation of this knowledge into clinical practice. This information will help guide treatment considerations and patient care.

## #78

**FINDING MEANINGFUL USE IN PATIENT PORTALS.** Barbara Van de Castle, MSN, ACNS, OCN®, Koko Takatori, BA, and Monica Wilt, BA, all at Johns Hopkins University School of Medicine, Baltimore, MD

**Objective:** To understand the process of increasing patient participation in an electronic health record portal within an outpatient oncology clinic while meeting the requirements of Meaningful Use.

**Topic Significance and Study Purpose, Background, and Rationale:** The American Recovery and Reinvestment Act of 2009 provides for incentive payments to hospitals that demonstrate "Meaningful Use" of data from an electronic health record (EHR). One of the measures that qualify for Meaningful Use is the use of a patient portal where results/reports can be accessed by the patient. A portal can play an important role in a cancer patient's treatment by providing secure communication with their care team. As part of our implementation of a new EHR in the outpatient oncology clinic we introduced patients to

the affiliated patient portal. Our goal was to help patients learn about the portal, demonstrate the portal's usefulness and assist in portal registration.

**Methods, Intervention, and Analysis:** Our NCI-designated Comprehensive Cancer Center has a weekly Patient Education Series in the lobby where there is an opportunity for patients, families, staff and visitors to ask questions and receive handouts on a given topic. We held five sessions with two computers set up in the lobby to assist patients with accessing the portal. We had access to a "playground" environment of the patient portal for demonstration purposes, allowing patients to see how information was displayed within the portal. Interested patients could request an account and get help in setting up the account.

**Findings and Interpretation:** A total of 23 patients were assisted during the sessions. Nine patients requested activation of their portal, five had access already, fourteen requested demos. We felt that the setup required too much time and effort in the lobby so an alternative location in the patient education room of the outpatient oncology clinic was used for the last two sessions. This location had permanent computers with attached printers that required no additional setup. Feedback from the patients and staff was positive.

**Discussion and Implications:** There will be a monthly educational portal session in the outpatient clinic to help patients and care givers with questions and registration. The use of an electronic patient portal by oncology patients is an effective way to foster communication between nurses, prescribers and the patient. Oncology patients benefit from access to lab values and secure messaging with their providers to help with decision support.

## #79

**DEVELOPING AN EDUCATION PLAN FOR A NEW STEM CELL TRANSPLANT UNIT.** Heather Brown, RN, BSN, OCN®, and Lisa Sabol, RN, BS, Cancer Treatment Centers of America-Eastern, Philadelphia, PA

**Objective:** The purpose of this presentation is to discuss the structure and impact of a comprehensive nursing education plan in the development of a new Stem Cell Transplant Unit.

**Topic Significance and Study Purpose, Background, and Rationale:** A literature search did not reveal standardization or recommendations on how best to approach nursing education for a Stem Cell Transplant Unit (SCTU) that cares for patients at every stage of transplantation. In some circumstances, transplant patients may require a higher level of care that would traditionally be offered in an ICU. This unit was developed to make those services available to patients within the transplant unit; therefore the educational component to this program is crucial to its success. Using the various resources made available by the institution, a structured nursing education plan was developed and implemented.

**Methods, Intervention, and Analysis:** Nurses hired for this unit described varied clinical experiences and backgrounds, but all were required to participate in educational offerings outlined by the unit manager and educator. The educational plan was conceived and designed to accommodate a unit that cares for patients receiving inpatient as well as outpatient services throughout the entire transplant continuum. Included in the educational plan were classroom lectures, online offerings, and bedside clinical experiences. Clinical experiences included shadowing nurses on an established SCTU, as well several weeks of ICU practicum under the mentorship of experienced critical care nurses and management. Competency was evaluated in several areas such as stem cell collection, mock transplantation, management of central venous access devices, and recognition and appropriate intervention for complications associated with hematopoietic stem cell transplants (HSCT).

**Findings and Interpretation:** All nurses hired completed the outlined educational program and continue to participate in educational programs as offered. Nurses expressed overall satisfaction with the education provided as well as their ability to care for patients throughout the transplant continuum.

**Discussion and Implications:** The unit model and associated nursing education provides for greater continuity of patient care and has led to appropriate and timely nursing interventions for complications associated with HSCT. Enhanced patient satisfaction and safety is achieved with the ability to manage patients requiring an ICU level of care in the Stem Cell Unit. In addition, the program may provide a framework for future programs to model.

## #80

**REDUCING CENTRAL LINE RELATED INFECTIONS IN ADULT HEMATOLOGY-ONCOLOGY PATIENTS.** Elizabeth Conderman, BSN, OCN®, Lisa McLaughlin, BSN, OCN®, Crystal Yero, BSN, OCN®, Karen Abbas, MS, RN, AOCN®, Michelle Miller, MSN, AFNP, OCN®, and Michael Becker, MSN, AFNP, OCN®, University of Rochester Medical Center, Wilmot Cancer Center, New York

**Objective:** The objective is to reduce the incidence of CLABSI in the adult hematology/oncology patient populations.

**Topic Significance and Study Purpose, Background, and Rationale:** Central line associated bloodstream infections (CLABSIs) are a major cause of patient morbidity, increased length of stay and higher costs. In 2008 Wilmot Cancer Center Inpatient Oncology units participated in the NYS CLABSI Collaborative/DOH study. Over a 2 year period, implementation and reinforcement of evidence-based practices for central line insertion and maintenance was a priority. By 2010 a 50% reduction in CLABSI rates was achieved in patients with peripherally inserted central catheter (PICCs) and with implanted venous access devices; CLABSI rates in patients with tunneled central venous catheters (TCVCs) remained above the NHSN Benchmark of 1.9.

**Methods, Intervention, and Analysis:** In March 2011, a task force driven by oncology nurses met to identify factors contributing to the higher CLABSI rates and implement strategies to reduce CLABSI incidence. In order to understand best practices several methods were employed: Focused literature reviews regarding use of central lines, CLABSI rates, and prevention in the neutropenic adult hematology patients. Benchmarking and direct communication with other centers. Root cause analysis of documented CLABSI cases. The findings demonstrated the majority of CLABSIs occurred in TCVCs. The literature review revealed that PICCs were associated with lower CLABSI rates in the hematology/oncology patient population. In September 2011, strategies implemented included. Trials and acquisition of preferred catheter, preferred site of PICC placement, and preferred needle-less access device (neutral fluid displacement).

Staff routinely demonstrate competency in dressing and line changes. Development and implementation of Central Line Selection Standard of Practice Bedside rounding checklist including specific aspects of central line care (dressing integrity, insertion date, determination of need). Results disseminated to staff

**Findings and Interpretation:** The number of CLABSIs declined another 60% in this population following the implementation of these evidence-based changes. These findings add evidence to the recommendations found in the literature related to PICCs and CLABSIs in the adult hematology population.

**Discussion and Implications:** The number of CLABSIs continues to remain below NHSN benchmark however, the use of alteplase for declotting PICCs remains high. Our next initiative is to trial a PICC that is both antimicrobial and antithrombotic. We will continue to monitor the incidence of CLABSI and also monitor the use of alteplase for declotting the PICCs.



## #81

**EXAMINING ONCOLOGY NURSES KNOWLEDGE OF CHEMOTHERAPY ERRORS USING TWO SELF-DIRECTED LEARNING STRATEGIES.** Anna Vioral, MSN, MEd, RN, OCN®, PhDc, Allegheny Health Network, Pittsburgh, PA

**Objective:** To investigate knowledge retention outcomes of the American Society of Clinical Oncology (ASCO) and Oncology Nursing Society (ONS) chemotherapy safety standards using self-directed learning approaches in oncology nurses administering chemotherapy.

**Topic Significance and Study Purpose, Background, and Rationale:** Significance: Examining the effects of standardizing chemotherapy practice according to the ASCO and ONS chemotherapy safety standards; determining if pedagogical approaches increase oncology nurses' knowledge retention (KR) of the standards; and exploring if selected demographic variables influence KR may increase knowledge and decrease errors during the chemotherapy administration process. Background: The Institute of Medicine (IOM) has estimated that hospitalized patients receive at least one medication error per day. According to the Institute for Safe Medication Practices (ISMP), chemotherapy tops the list of high-alert medications. Research has identified 41%-50% of errors occur during administration, 23%-38% during dispensing, and 4%-21% during prescribing. The multidisciplinary complex high-risk process of administering chemotherapy creates challenges to increase knowledge and reduce errors. Nurses are instrumental in the chemotherapy process. However, the literature lacks sufficient evidence describing oncology nurses' knowledge of chemotherapy administration. Purpose: This study sought to determine if oncology nurses' use of self-learning packets (SLPs) versus video-taped simulated electronic learning vignettes (SELVs) increased their KR of the ASCO/ONS chemotherapy safety standards over time. This study also explored if selected demographic variables influenced KR.

**Methods, Intervention, and Analysis:** Methods: A quasi-experimental longitudinal repeated measures design was used to assess oncology nurses' knowledge of the ASCO/ONS chemotherapy safety standards before, immediately following, and four weeks after participants completed the learning interventions. Of the 66 participants from selected healthcare facilities, 53 completed the entire study. A demographic questionnaire, SELV instrument, and two SDL educational interventions were used. Reliability and validity was established in a previous pilot study.

**Findings and Interpretation:** Findings will reveal how SDL educational approaches impact KR. Data analysis will measure absolute and adjusted knowledge of the standards over time. The findings will also reveal how SLPs or SELVs affect KR within each group and whether there were main effects for each of the independent variables (generational learning preferences, oncology certification, and years of administering chemotherapy).

**Discussion and Implications:** The findings will provide implications for educators on how SDL strategies impact knowledge over time. Oncology nurses with increased clinical knowledge may decrease chemotherapy administration errors. Studies should investigate the multidisciplinary team's knowledge of chemotherapy errors using SDL strategies to measure KR over time.

## #82

**COMPASSION FATIGUE AND WORK RELATED STRESS: CONDUCTING AN ACUPUNCTURE AND MASSAGE THERAPY PILOT PROJECT FOR INPATIENT ONCOLOGY NURSES.** Jessica Berry, RN, BSN, OCN®, Barbara Cashavelly, RN, MSN, AOCN®, NE-BC, Irene Martyniuk, RN, MSN, AOCN®, NE-BC, Michael Keamy, CMT, Nisha Wali, RN, BSN, and Theresa McDonnell, RN, BSN, all at Massachusetts General Hospital, Boston

**Objective:** To conduct a pilot project that provides acupuncture and massage therapy to oncology nurses on an inpatient oncology unit. Staff satisfaction, effectiveness and feasibility of the interventions will be evaluated.

**Topic Significance and Study Purpose, Background, and Rationale:** Inpatient oncology nurses provide increasingly complex, supportive, specialized care to patients who are facing life-threatening illnesses and profound physical and emotional distress. Oncology nurses are also primary sources of support and information for families. Ongoing patient loss for the inpatient nurse is inherent in this population. Work related stress and compassion fatigue are risk factors associated with oncology nursing. These factors may lead to emotional exhaustion, depersonalization and a reduction in a sense of self efficacy. Research has shown that providing support to nursing staff has a positive effect on the work environment and can lead to a reduction in physical, emotional, social and spiritual distress. Acupuncture and massage therapy can relieve anxiety and other symptoms of stress. Identifying tools which help prevent stress related compassion fatigue may help reduce the negative effects of work related stress. The purpose of this pilot is to offer acupuncture and massage sessions to inpatient oncology nurses and assess effectiveness and feasibility of these interventions. Understanding effective ways to support stress-related compassion fatigue in the oncology nurse may help reduce potential effects related to work related stress and compassion fatigue.

**Methods, Intervention, and Analysis:** A focus group of inpatient oncology nurses discussed their work related stress and concerns about compassion fatigue. The group identified the need for additional support on the unit to help manage these critical issues. A staff survey was conducted. Staff identified acupuncture and massage as potential stress relieving interventions. Over a three month period, weekly sessions of acupuncture and massage therapy are provided to inpatient nursing staff: 3-4 staff will be treated each week. Participants will complete the Maslach Burnout Inventory Scale (MBI) pre and post intervention and an evaluation tool.

**Findings and Interpretation:** The MBI will provide preliminary data about effectiveness. The evaluation will assess feasibility and acceptability.

**Discussion and Implications:** Results of the pilot will inform possible program expansion; along with understanding impact on staff wellbeing and satisfaction.

## #83

**COMPROMISED HOST ISOLATION PRECAUTIONS (CHIP).** Patricia Minkler, MS, RN, OCN®, ACNP, and Carolyn Scott, BSN, RN, CIC, both at Stratton Veterans Medical Center, Albany, NY

**Objective:** To identify a standardized multidisciplinary approach to care utilizing evidenced based guidelines when managing patients who are neutropenic as a result of therapy, autoimmune diseases, or unknown etiology.

**Topic Significance and Study Purpose, Background, and Rationale:** Patients with acute and chronic immunosuppression are at risk for development of infection. An interdisciplinary approach including all health care workers, visitors, and patients is crucial so that a consistent approach exists. The Standard Operating Procedure Committee reviews policies biannually and updates content to include current practice based on evidenced based guidelines. Clinical practice guidelines and consensus statements obtained from the Oncology Nursing Society and the Center for Disease Control and Prevention were utilized to update current practice. The prior policy contained interventions in which effectiveness was not established. Terms such as protective versus reverse isolation were used interchangeably causing confusion and inconsistency in clinical practice. A review of

the literature and consensus statements from national nursing organizations was completed by identified clinical experts in the organization. Best practices and well established evidenced based interventions were included in the updated policy. Because of the confusion that existed with the current verbiage in the title the committee members change the name of the policy to reflect all patients who are immunocompromised. The policy was all inclusive for all patients with immunosuppression and not disease specific. The new title of the policy was renamed to Compromised Host Isolation Precautions (CHIP) and interdisciplinary education was provided to all staff involved in patient care. Laminated colored signs were given to all nursing units to post on the outside of the patient's door with key practice points.

**Methods, Intervention, and Analysis:** The policy was updated at the Samuel S. Stratton VA Medical Center by committee members. A standard review of the literature included a retrospective analysis of evidenced based guidelines in the neutropenic population. The population impacted by the review included patients, staff, and all hospital employees. Upon completion of the retrospective literature the policy was updated. Anecdotal feedback from staff and patients included inconsistencies in care. Although no measurement in the population was obtained clinical practice and feedback relayed inconsistencies. Data collection included obtaining current practices from the literature review.

**Findings and Interpretation:** The education department provided house wide inservices for all staff. Individual committee members participated in providing education to interdisciplinary staff on all shifts utilizing computer and on site inservices. The laminated colored CHIP signs were reviewed with staff and also given to all unit Managers to use in the clinical setting. 100% of nursing staff were provided with education of the new policy. 100% of housekeeping, dietary, and ancillary staff received education of the updated policy. 100% of all staff have access to the policy on the share point drive on the intranet.

**Discussion and Implications:** The outcome of the updated policy provided a consistent approach by all staff utilizing evidenced based guidelines for the care of a patient who is neutropenic. The updated policy provides an interdisciplinary approach as all staff were included in the process.

## #84

**TRANSFORMING PEER REVIEW FOR ADVANCED PRACTICE NURSES.** Marianne Davies, RN, MSN, CNS, ACNP, AOCNP®, Vanna Dest, RN, MSN, APRN-BC, Catherine Lyons, RN, MSN, APRN-BC, and Ruth McCorkle, PhD, FAAN, all at Yale University School of Nursing, New Haven, CT

**Objective:** To develop a collaborative approach to the peer review process of oncology advanced practice nurses that promotes self regulation of practice and professional development.

**Topic Significance and Study Purpose, Background, and Rationale:** Peer review is the evaluation of professionals by a peer who practices in a similar role and scope of practice. It is deemed an essential component of credentialing for licensed providers by The Joint Commission (TJC) and by the ANCC Magnet Recognition Program. Yale-New Haven Hospital (YNHH) credentials 463 Advanced Practice Nurses (APNs) to practice. Ongoing professional practice evaluation (OPPE) is the mechanism used by the Medical Staff office to conduct peer review, following a traditional medical model. There has been wide variability in peer review, level of APN involvement and incorporation of APN metrics into the credentialing process.

**Methods, Intervention, and Analysis:** A survey by the YNHH Advanced Practice Nursing Council of APNs indicated that 25% had nursing involvement in their peer review. The remainder had performance reviews done by physicians and

administrators. An APN council work group was formed to explore a meaningful peer review process for APNs. The committee proposed a template utilizing the six domains monitored by TJC for ongoing professional practice evaluations (OPPE). The process included two peer reviewers, self-review and chart audit to be conducted twice yearly. A Peer Review Coordinator will be appointed by each division to facilitate the process.

**Findings and Interpretation:** In the oncology division, most participants indicated that they had little involvement in their evaluations and desired to have their practice evaluated by a peer who had knowledge of their role and scope of practice. Two-thirds expressed the need for increased peer support and advocacy. A focus group adapted several metrics from the Oncology Nursing Society Nurse Practitioner Competencies. The new process was endorsed by Nursing and Oncology Leadership and the Medical Staff Office in October 2013. Prior to the launch of the new process APNs were asked to complete a survey describing their prior experience with peer review, benefits and barriers of the process, and level of comfort in ability to provide meaningful peer review. It is the intention of the Oncology peer review team to repeat this survey prior to the next review process.

**Discussion and Implications:** This process will provide structure for self-regulation, measurement of APN contributions and opportunity for professional growth and APN driven research initiatives.

## #85

**THE USE OF HUDDLES TO IMPROVE COMMUNICATION AND COHESIVENESS IN A CANCER CENTER.** Karen Parks, BSN, RN, OCN®, Veronica Brill, MSN, RN, Kimberly Leake, MSN, RN, Dawn Kidd, Bridget Peterson-Fennell, LCSW, ACSW, and Phillips Joann, LCSW, ACSW, all at the University of Virginia Health System, Charlottesville

**Objective:** The learner will be able to articulate the benefits of the huddle in improved communication and team cohesiveness.

**Topic Significance and Study Purpose, Background, and Rationale:** Communication among team members is known to be important to team effectiveness however at times thoughtful, timely communication can be challenging to achieve in the busy healthcare environment. The Institute for Healthcare Improvement endorses them stating "(huddles)allow fuller participation of front-line staff." It was identified that huddles could be used in a cancer center setting to improve communication as well as increase team cohesiveness.

**Methods, Intervention, and Analysis:** The University of Virginia outpatient cancer facilities are spread over several buildings and include staff providing patient direct patient care but also those that provide administrative support as well as those involved in population based activities. It was identified that there were few opportunities for these groups that were wide ranging in both physical location but also specialty to meet and build relationships. A shared governance approach was utilized starting with the creation of a multi-disciplinary huddle steering committee. This committee worked with various staff members to identify the best times and locations to encourage participation. The structure included a daily huddle in a different geographical location, at a different time with the topic repeated daily for one week with the topic being repeated daily for one week. This framework was selected to meet the needs of our diverse employee groups. This committee was also responsible for vetting proposed topics from various groups

**Findings and Interpretation:** Data was collected approximately 60 days after implementation. Review of this data allowed for alterations in the structure of the original plan to include changes in times and locations of certain huddles in response to feedback from staff. Approximately 40 individuals

attend each topic weekly with representation from 3-5 different geographic regions at each huddle.

**Discussion and Implications:** The implementation of huddles has shown to be a useful tool in improving communication as well as building teams. The utilization of a shared governance framework allowed for the inclusion of many perspectives enhancing attendance and support as well as helping to facilitate meeting the needs of the varied workforce.

## #86

**THE HUDDLE WITH A "TWIST."** Marie Decker, MSN, RN, AOCN®, NE-BC, and Gerry Finkelston, MSN, RN, CCRN®, both at Cancer Treatment Centers of America, Philadelphia, PA

**Objective:** To enhance our inpatient huddle communication that addresses a Joint Commission recommendation wherein acute care communication failures lead to increases in patient harm, length of stay, and resource use.

**Topic Significance and Study Purpose, Background, and Rationale:** The original purpose of our huddle was to focus upon safety prevention issues. Yet, in light of the recent National Safety Goal to improve the effectiveness of communication among caregivers, an innovative method of communication needed to be developed. Thus, the huddle evolved to encompass a threefold goal: to identify the flow of activity on the unit, to share any safety issues, and to update staff on the latest events in the hospital. Lastly, we focus on the Alignment Message. This holistic framework addresses coping strategies, reflection messages and appreciative inquiry that relates to the oncological nursing community.

**Methods, Intervention, and Analysis:** The practice of huddling has developed by gathering the entire care team for a brief 15 minute informational and sharing session. The charge nurse on each shift is responsible for facilitating the meeting. A positive thought highlights each session as the following topics are addressed: acuity of the patients, fall risks identification, any psychological or social issues, and patient discharge needs. To enhance teamwork and collaboration these additional questions are asked: is there any support required; what assignments need to be changed; and any insights from teachable moments. The entire care team is encouraged to add comments or questions. This communicative interaction fosters team building and professional growth. While this type of verbal, in the moment communication was effective in being current, it lacked consistency and accountability. Thus, a weekly written Huddle was created as an adjunct to the daily huddles. The Huddle has become a treasured newsletter that is emailed to all staff members and nursing leadership.

**Findings and Interpretation:** The Huddle newsletter is the dynamic twist that has assisted in communicating safety issues, documenting teachable moments, and alerting staff of important dates and expectations. It is a valuable resource for times when nurses can't simply get away to attend the huddle.

**Discussion and Implications:** All members of the multidisciplinary team are encouraged to be part of this communication tool. The intertwining of the daily huddles and the newsletter has proven to be an effective method for collaboration among the oncology team.

## #87

**EFFECTIVENESS OF CHANGING NURSING PRACTICE TO REDUCE CENTRAL LINE-ASSOCIATED BLOOD STREAM INFECTIONS.** Donna Miale-Mayer, RN, MSN, CNML, Diane Llerandi, RN, MA, AOCNS®, Megan Leary, RN, MA, AOCNS®, Susan Khaleghi, RN, BSN, Bryn Vandermark, RN, BSN, and Faye Inumerables, RN, BSN, all at Memorial Sloan-Kettering Cancer Center, New York

**Objective:** To determine the impact of changing nursing practice to decrease central line associated blood stream infections.

**Topic Significance and Study Purpose, Background, and Rationale:** Central line associated blood stream infection (CLABSI) is one of the most common hospital acquired infection. CLABSI increases patient's length of stay, hospital cost and risk for mortality. To decrease CLABSI rates, a change in nursing practice, using a new CLABSI bundle, was implemented through evidence-based literature. Educational intervention to support the adoption of the new initiatives is the key to improve adherence.

**Methods, Intervention, and Analysis:** During the last quarter of 2012, the CLABSI committee implemented a CLABSI bundle prevention education. All registered nurses attended this project where they were educated on the new central line catheters (CVCs) policy and updated equipment. This four-hour class introduced new initiatives in caring for CVCs including: (1) use of tegaderm chlorhexidine gluconate (CHG) dressing instead of biopatch and tegaderm, (2) intravenous line change every 7 days instead of every 4 days, and (3) continued use of swab caps. Post lecture, RNs were required to return demonstrating changing central line dressing using tegaderm CHG and their competency was reviewed by a checklist. The new equipment and policy went live in the beginning of 2013 hospital wide. CLABSI champions were present as resource nurses in each unit. Infection Control Department of MSKCC collected data comparing CLABSI rate in 2012 and 2013.

**Findings and Interpretation:** Based from the data collected by Infection Control Department at MSKCC, CLABSI rate per 1,000 central line decreased by approximately 51% hospital wide and 70% on the leukemia/lymphoma unit, from the last quarter of 2012 to the first quarter of 2013. This implies that the new interventions were effective.

**Discussion and Implications:** By implementing evidence-based data to alter our CLABSI protocol, CLABSI rates decreased, patient outcomes improved, quality of nursing care increased and hospital costs decreased. The results of the new protocol can be used in future studies to show the effectiveness of bundling protocols and staff education.

## #88

**COMMITMENT TO COMMUNITY: ONE ONS CHAPTER'S INNOVATIVE TRANSPORTATION ASSISTANCE PROGRAM.** Katrina Fetter, BSN, RN, OCN®, Lancaster General Hospital, Pennsylvania

**Objective:** Participants will identify two interventions to assist their local communities with transportation and finance needs.

**Topic Significance and Study Purpose, Background, and Rationale:** Many oncology patients struggle financially and cannot work or drive during treatment. Transportation can be difficult to find. There are local programs in existence but they can take a week or more to get set up. This delay can lead to missed treatments. Oncology literature supports that compliance with treatment schedules leads to improved mortality rates for patients. The Lancaster Red Rose ONS Chapter developed two programs that could be funded to assist with transportation and financial concerns for these patients.

**Methods, Intervention, and Analysis:** The Chapter started with an end goal of supporting the local community with costs and transportation for a short period of time for oncology patients found to be in need of financial and/or transportation assistance. The program consists of two potential forms of intervention. The first is a monetary gift card reimbursing up to one hundred dollars a year for transportation needs if a patient fills out an application demonstrating financial need. Two board members approve the application and receipts are provided by the patient. The second intervention is through a local taxicab company to offset the amount of time it takes for other free programs to process patient requests for assistance. Staff members



at local hospitals and clinics have a brochure which explains the program in detail. A local staff member identifies a need and calls one of the chapter contacts listed in the brochure who then get in touch with the taxi company to arrange transportation. This taxi service can be used no more than three times per year and has a distance restriction of 12 miles.

**Findings and Interpretation:** The program is new enough to not have a lot of concrete findings yet, but in its short tenure it has already helped one local patient in need.

**Discussion and Implications:** This idea is not financially straining for even a small chapter to take on but can be widely effective in helping patients. The program is easily reproducible and builds relationships and trust between oncology nurses and the community. The chapter continues to monitor the program and make changes as deemed necessary.

## #89

**SAFE BLOOD TRANSFUSIONS AND THE 20-GUAGE CATHETER: ESSENTIAL OR FABLE.** Catherine Stupnycky, RN, Sheryl Smolarek, BSN, RN, OCN®, Colleen Reeves, BSN, RN, OCN®, Judith McKeith, BSN, RN, CMSRN, and Morris Magnan, PhD, RN, all at Karmanos Cancer Center, Detroit, MI

**Objective:** Nurse participants will be able to identify a safe range of catheter sizes that can be used to transfuse blood without increasing the risk for post-transfusion hemolysis or hyperkalemia.

**Topic Significance and Study Purpose, Background, and Rationale:** Aggressive therapies used to treat cancer patients can interrupt the normal production of RBCs necessitating blood transfusion(s). Registered nurses start the IV and are responsible for administering blood transfusions safely and monitoring patients for adverse effects. Typically, nurses are guided by institutional policy to attend to patient comfort and safety, while protecting the fragility of the RBCs being infused. By convention, nurses have come to believe that nothing smaller than a 20-gauge catheter should be used for transfusion. However, it is unclear whether this “20-gauge catheter” convention is based on scientific evidence or fable. The purpose of this evidence-based project was to determine whether a less-than-20-gauge catheter could be used to transfuse blood safely without substantially increasing the risk for hemolysis or post-transfusion hyperkalemia. To achieve this purpose, best-evidence from the scientific literature and other authoritative sources (e.g., American Association of Blood Banks; Infusion Nurses Society) was assimilated, reviewed, and critiqued.

**Methods, Intervention, and Analysis:** Over 20 abstracts accessed and reviewed. Only eight abstracts met criteria and were distributed for appraisal. Evidence table assembled and the accuracy of the data extracted from manuscripts was critically appraised cross-validated by ALL committee members. Information was synthesized into summary statements related to the major outcomes: Post-transfusion hemolysis and hyperkalemia. These findings suggest that oncology nurses have much greater latitude in choosing a smaller-than-20-gauge needle for blood transfusions than one might think.

**Findings and Interpretation:** No significant or clinically important hemolysis when blood was infused through catheters of varying sizes. No significant increase in potassium when a syringe infusion pump was used to infuse blood through a 25 g thin-walled-needle at rates of 70 ml/hr, 20.5 ml/hr and 10.6 ml/hr and there was only mild variability (-8% to +18%) in potassium levels when PRBCs infused through 22 g, 20 g, 18 g, and 16 g catheters while varying pressure (0 mmHg, 150 mmHg, 200 mmHg) and dilution (0 mls NS, 100 mls NS., 250 ml NS).

**Discussion and Implications:** Using a less than 20-gauge catheter to transfuse blood has significant potential for improv-

ing patient comfort and cost savings due to fewer patient sticks. Our findings indicate that the practice of using a 20-gauge or larger catheter is non-essential and not supported by scientific evidence.

## #90

**DEVELOPING A TOOL TO ASSESS THE COMPLEXITY OF NURSING SKILLS REQUIRED IN AN INDIVIDUAL INVESTIGATIONAL PROTOCOL.** Theresa Rudnitzki, MS, RN, AOCNS®, ACNS-BC, and Laurie Cariveau, RN, OCN®, CCRC, both in Froedtert Hospital, Milwaukee, WI

**Objective:** To provide guidance to members of the healthcare team to appropriately place patients in an environment that can meet the unique demands of the clinical trial protocol.

**Topic Significance and Study Purpose, Background, and Rationale:** The purpose of the Translational Research Unit (TRU) is to provide an environment that meets the needs of patients on Phase 1 and 2 and other complex oncology clinical trials. The TRU is staffed with nurses who are specially trained to understand the detail required of Phase 1 and 2 clinical research studies. Maximal utilization of their skill set in providing individualized patient care is a goal. The opening of 13 treatment bays in the TRU created scheduling challenges. Until the volume of patients on earlier phase trials and the number of studies increase, it is important to utilize the space for all patients on clinical trials. In the interim, it was apparent we would have to clearly distinguish which patients on clinical trials required the skill set of the TRU nurses versus which patients could be safely placed in the Day Hospital (DH), our cancer care infusion/treatment area. This may vary treatment day by treatment day based on the unique requirements of each study. Some studies may require 1:1 care; where as other studies require our standard nursing care ratio (1:3).

**Methods, Intervention, and Analysis:** Information was gathered from different sites and the topic was researched. We collaborated with physicians, research staff, and schedulers on how to best approach this topic, looking at workflow and the impact of patient needs in our setting. A rating score of 1 - 4 was determined, based on the complexity of the treatment required. The criteria for each level of score was developed by the TRU service coordinator and Clinical Nurse Specialist. Each study was evaluated and assigned a score for each day of treatment by the TRU Service Coordinator. The score provides quick and easy direction to the health care team who may not be familiar with the idiosyncrasies of each clinical trial day. It guides placement of the patient in the best environment (TRU versus DH) to assure safe delivery of complex care needs.

**Findings and Interpretation:** The TRU opened in October 2013. The utilization and impact of the complexity score will be further presented in the poster.

**Discussion and Implications:** Discussion and implications will be further discussed in poster.

## #91

**SUCCESSFUL DEVELOPMENT AND IMPLEMENTATION OF THE ADVANCED PRACTICE NURSE ROLE IN AN INTEGRATED CANCER PROGRAM.** Hannah Tracey, RN(EC), MSc Nursing, and Donna Holmes, RN, both in Grand River Hospital, Kitchener, Canada

**Objective:** In order to successfully develop, implement and evaluate Advanced Practice Nurses roles within an Integrated Cancer Program a designated working group used a nursing based framework to gain better preparation.

**Topic Significance and Study Purpose, Background, and Rationale:** Research has indicated that North American will continue

to see a steady incline in the number of individuals affected by cancer. Although cancer survival rates continue to climb, in 2007 Canadian statistics revealed that cancer surpassed cardiovascular disease to become the most leading cause of death in Canada. These individuals affected by cancer will continue to receive treatment (active, surveillance, or palliative) and require on-going surveillance through well follow-up care, and additional screening for other types of cancers. The Advanced Practice Nurse role is gaining recognition and acceptance amongst Integrated Cancer Programs across North America. Advance Practice Nurse have advanced competencies to provide patient-centred, health-focused, and holistic care to patients with a past, current and new diagnosis of cancer.

**Methods, Intervention, and Analysis:** The PEPPA Framework (Participatory, Evidence-Based, Patient-Focused Process for Advanced Practice Nursing Role Development, Implementation and Evaluation) was developed to provide Advanced Practice Nurse researchers, health care providers, administrators, and policy makers with a guide to promote the optimal development, implementation and evaluation of Advanced Practice Nurses. The PEPPA Framework allowed a designated working group to promote the full integration and utilization of Advanced Practice Nurses knowledge, skills, and expertise from all role dimensions related to clinical practice, education, research, organizational leadership, and scholarly/professional practice.

**Findings and Interpretation:** Increased access to care and patient education, improved patient satisfaction, cost-effectiveness, patient compliance, fewer hospital admissions, and decreased lengths of stay, readmission rates, emergency care visits and healthcare costs are some of the significant improved outcomes of implementing Advanced Practice Nurses roles within an Integrated Oncology Program.

**Discussion and Implications:** Full development and implementation of the Advanced Practice Nurse role may take three to five years. During this period, efforts are made by the designated working group to monitor the progress in role development and to modify or initiate strategies to support the implementation of the Advanced Practice Nurse role.

## #92

**IMPACT OF RENEWAL AND REJUVENATION INTERVENTIONS ON NURSES WORKING IN INFUSION UNITS.** Anne Gross, PhD, RN, FAAN, Barbara Kalinowski, MS, RN, Janet Bagley, MS, RN, Lillian Pedulla, MS, RN, Nancy Hilton, MS, RN, and Kimberly Straub, MS, RN, all at Dana-Farber Cancer Institute, Boston, MA

**Objective:** To demonstrate how low cost renewal and rejuvenation offerings for nurses at work can have a significant impact on both nursing practice and personal self-care practices.

**Topic Significance and Study Purpose, Background, and Rationale:** Oncology nursing practice in outpatient infusion areas is challenging and demanding. Constant use of complex clinical and technical skills and the required inner capacity for empathy and caring in therapeutic interactions with patients and families can be depleting over time, threatening staff burnout (Penson, 2000). Various studies and reports describe burnout and presenteeism (Nedd, 2006; Pilette, 2005; Hemp, 2004; Stewart, 2003) in the workplace, concluding that costs of burnout or lack of full presence on the job can significantly affect employee productivity. Studies outline the importance of workplace social networks, and psychosocial wellness programs as interventions to eliminate burnout and increase staff retention (Garret, 2001; Medland, 2004).

**Methods, Intervention, and Analysis:** We implemented a program of acupuncture, massage and music therapy interventions during work hours, and opportunities for pizza

lunches, birthday acknowledgements and participation in social events outside of work. All nurses are encouraged to participate and relieved of duties for the 20 minute interventions offered weekly on patient units. The impact is measured through formal evaluations. Quantitative and qualitative data are collected in an online survey, tested for reliability. Quantitative feedback is tabulated and qualitative comments analyzed in themes.

**Findings and Interpretation:** One hundred twenty-six nurses responded to the survey evaluation. 83 percent reported the program had a positive impact on their practice environment. 81 percent felt more valued as employees, 69 percent reported enhanced ability to be present to patients, and 67 percent reported enhanced ability to concentrate on practice; 72 percent felt relaxed and renewed by program offerings and 45 percent reported they investigated other ways to manage stress as a result of participation in the program. Suggestions for program enhancements were made and offerings ranked by nurses. These findings support the literature indicating a positive impact and the beginnings of lifestyle changes outside work as a result of participation.

**Discussion and Implications:** The program continues, and will expand. Ongoing measurement of immediate and long term effects will be further refined and expanded. A cost-benefit analysis planned to explore the hypothesis that the benefit of staff renewal, rejuvenation and psychosocial wellness programs is well worth the resources invested in the program.

**Underwriting or funding source name:** Our hospital's resources and monies from a grateful donor (former patient) fund this initiative.

## #93

**BOARDING PASS PROCESS TO DECREASE WAIT TIMES AND IMPROVE PATIENT SATISFACTION.** Margaret Hawin, BSN, RN, OCN®, Janice Kolsovsky, BSN, RN, OCN®, and Angela Primeau, BSN, RN, OCN®, all at Stanford Hospital and Clinics, Palo Alto, CA

**Objective:** Participants will be able to describe the Boarding Pass Process and verbalize ways to implement this process into their own infusion center institutions.

**Topic Significance and Study Purpose, Background, and Rationale:** Stanford's Infusion Treatment Area (ITA) serves approximately 1800 solid tumor oncology patients per month. Over the years, patient census has continually grown creating an environment of long wait times, escalating frustration, and decreased satisfaction among patients and staff.

**Methods, Intervention, and Analysis:** An assessment was completed to reveal the primary causes of delayed treatments. Multiple factors were shown to be responsible. Before treatment could begin, the patient must have many items completed such as: insurance authorization, complete and correct treatment orders, as well as current lab and/or radiology test results. If any of these were incomplete or absent, it was the treatment nurse who was left responsible to resolve these issues. This process could run from a couple minutes to a couple hours; sometimes, delaying patient treatment until the following day. It was clear that a new process needed to be developed. This process was named "The Boarding Pass". The Boarding Pass Process started as rooming holds. Instead of a patient waiting in an infusion chair watching others get treated, they waited in the lobby until all care issues were resolved. Data was gathered to illustrate the problems, causes, departments involved, and RN times expended; as well as bring awareness of these defects to the organization. If a patient was delayed 15 minutes or more, the Boarding Pass Nurse would seek out the patient, explain the reasons for the extended wait, as well as actions taken to rectify the problem. Eventually, patients

became their own advocates ensuring their providers completed everything at the time of their MD visit, before they arrived at the ITA.

**Findings and Interpretation:** Since its inception, the Boarding Pass has shown decreased wait times up to 60% for some specialties. Patients have reported an increase in efficiency when roomed, improved communication, enhanced involvement in care, and increased satisfaction.

**Discussion and Implications:** This project has been able to show the profound amount of nursing time spent on these non-direct care issues, up to 108 hours in one month, and prompt many other process improvement projects throughout the Cancer Center.

## #94

**ONCOLOGY NURSING INTERVENTION: CHEMOTHERAPY ORIENTATION CLASS EFFECT ON ANXIETY.** Nicole Muscari, BSN, RN, OCN®, Kristen LeRoy, BSN, RN, OCN®, Lea Eldridge, BSN, RN, OCN®, Keri Mast, RN, Michael Berger, PharmD, and Amy Rettig, PharmD, all at the Ohio State University Wexner Medical Center, Columbus

**Objective:** Participants will discover the effect of a targeted intervention on anxiety of newly prescribed chemotherapy patients with breast cancer.

**Topic Significance and Study Purpose, Background, and Rationale:** Increased anxiety and depression are identified as psychological responses to the diagnosis of breast cancer as well as with the initiation of chemotherapy treatment. Oncology nurses and the multidisciplinary team can reduce this response through supportive, relationship-based education that provides an overview of chemotherapy. The purpose of this program was to provide a multidisciplinary-supported nursing intervention to decrease anxiety during the time period of the initiation of chemotherapy treatment.

**Methods, Intervention, and Analysis:** A chemotherapy orientation class was developed for newly prescribed chemotherapy patients with breast cancer. The class, a one-hour power point presentation in a relaxed atmosphere and a tour of the infusion unit, provided 5 key messages: explain what chemotherapy is and how it works; learn different ways chemo can be given; discuss common side effect and ways they are managed; describe what to expect during treatment; answer patient/family questions. All newly diagnosed patients beginning chemotherapy were registered for class prior to their first treatment. To assess effectiveness of the class, patients completed a one page survey before and after the class. Patients were asked to rate their level of anxiety on a scale from 1-10 with 1 being no anxiety and 10 being very anxious. Knowledge was assessed in 3 True/False questions to determine if the course increased patient knowledge. Attendance and survey participation was voluntary.

**Findings and Interpretation:** Over 11 months, 105 patients attended the chemotherapy orientation class and 44 completed surveys. Patient surveys were gathered and tabulated monthly. Decreased anxiety was shown in 97.7% of patients by an average of 2.34 points following the class. Average patient anxiety before class was 7.17 versus average patient anxiety after class of 4.80.

**Discussion and Implications:** After the orientation class, patients consistently reported decreased anxiety. The class is easily replicated and can supplement, through the key messages introduced, focused chemotherapy education provided by oncology nurses at the first chemo visit. Factors not measured and potential future research were improved patient provider relationships and impact of the tour. The rapport between the care provider teaching and the patient and family may be an important factor reducing anxiety.

## #95

**THE UTILIZATION OF AN E-MODULE FOR EDUCATIONAL SUPPORT OF PATIENTS RECEIVING CONCURRENT CHEMORADIATION.** Eirena Calabrese, RN, BScN, MN, Claire Moroney, RN(EC), BScN, MN, Tamara Harth, RN(EC), BScN, MN, and Mykella Van Cooten, BA, all at Sunnybrook Health Sciences Centre, Toronto, Canada

**Objective:** The purpose of this poster is to discuss the development, implementation, and evaluation of an E-module for patients with a primary glioblastoma, who have been started on concurrent chemoradiation treatment.

**Topic Significance and Study Purpose, Background, and Rationale:** Patients with a diagnosis of a primary glioblastoma are often overloaded with information on their first visit to the Cancer Centre. The prognosis for these patients is often poor, and treatment plans complicated. When treatment consists of concurrent chemoradiation, specific instructions and information are given to the patient that is crucial to their treatment. Given that oral chemotherapy presents unique compliance issues, and the importance of precise timing for concurrent chemoradiation, it was identified that patients required further educational support to compliment teaching by the Central Nervous System (CNS) nursing team. With an emerging trend towards online resources, an E-module for patients and their families was developed collaboratively between members of the CNS nursing team, including the Nurse Practitioner and the Advanced Practice Nurse, and members of the Patient Education Team. The E-module aims to improve compliance of oral chemotherapy and concurrent treatment regimens, as well as provide an additional resource for patients and their families.

**Methods, Intervention, and Analysis:** In clinic, 100 patients will be approached with information about the E-module. Patient surveys will be made available through a link at the end of the E-module. This will evaluate the usefulness for patients and their families, as well as usability. Demographics will be collected during the survey, to identify the users of the E-module as patients or family members. Further, calls to the CNS nursing site phone line will be evaluated for questions regarding concurrent treatment for this patient population.

**Findings and Interpretation:** Evaluation of the use of the E-module by patients and their families, the efficacy of the E-module in providing adequate educational support, and the calls to CNS nursing team, will provide valuable feedback regarding the feasibility and efficacy of the E-module. Feedback from users and team members will be used to enhance the E-module.

**Discussion and Implications:** The E-module was developed to support education provided by the CNS nursing team, and so it is hoped that the E-module will impact practice by reducing anxiety for patients and their family members in regards to their treatment plan. If the E-module proves successful, these findings could be used to develop E-modules for other sites within the Cancer Centre.

## #96

**NURSES NEED OF A LEARNING PROGRAM FOR EVIDENCE-BASED PRACTICE: FOCUSED ON PROMOTING AND LIMITING FACTORS IN USING RESEARCH EVIDENCE IN CANCER NURSING PRACTICE IN JAPAN.** Reiko Makabe, PhD, RN, and Noriko Nemoto, MS, RN, both at Fukushima Medical University, Japan

**Objective:** The purpose of this study was to describe Japanese nurses' needs for EBP learning programs as continuing education, focused on describing promoting and limiting factors in using research evidence.



**Topic Significance and Study Purpose, Background, and Rationale:** Previous studies have reported that Japanese nurses at center hospitals for cancer care had inadequate knowledge of evidence-based practice (EBP), and a high number of experienced nurses were without education in EBP. However, little is known about nurses' needs for EBP learning programs. Therefore, the purpose of this study was to describe their needs for EBP learning programs as continuing education at center hospitals for cancer care. This report focused on describing promoting and limiting factors for the nurses in using research evidence.

**Methods, Intervention, and Analysis:** A qualitative study was conducted, and participants were a convenience sample of 24 Japanese nurses who work at center hospitals for cancer care (11 novice nurses and 13 expert nurses). They were interviewed using semi-structured interview questions. A content analysis was then performed to find out the promoting and limiting factors of using research evidence in cancer nursing practice.

**Findings and Interpretation:** Eighteen participants (9 novice nurses and 9 expert nurses) stated that they needed an EBP learning program. The novice nurses stated that promoting factors in using research evidence were easy access to research articles, and opportunities for EBP learning. The expert nurses stated that promoting factors in using research evidence were easy access to research evidence, among others. The novice nurses stated that the limiting factors were lack of opportunities to learn EBP and inadequate time to do EBP. The expert nurses stated that a limiting factor was "inadequate time to do EBP."

**Discussion and Implications:** These findings suggested that an EBP learning program needs to be developed to provide higher quality care at center hospitals for cancer care in Japan, with consideration of these promoting and limiting factors in using research evidence in cancer nursing practice. Moreover, these findings suggests the development of an EBP learning program as continuing education at center hospitals for cancer care in Japan, considering the promoting and limiting factors for using research evidence in cancer nursing practice. Further studies are required to develop and evaluate an effective EBP learning program in cancer nursing practice, consideration the promoting and limiting factors for implementing EBP.

## #97

**THE IMPACT OF ORDER PREPAREDNESS ON PATIENT WAIT TIMES.** Jill Evans, BSN, RN, OCN®, Lynn Czapslewski, MS, RN, ACNS-BC, CRNI, AOCNS®, and Sarah Gibart, MS, RN, ACNS-BC, CRNI, AOCNS®, all at Froedtert Hospital, Milwaukee, WI

**Objective:** Participants will be able to verbalize the benefits of order preparedness as it relates to patient wait times.

**Topic Significance and Study Purpose, Background, and Rationale:** Patients in the Cancer Center at Froedtert Hospital have historically waited 90 minutes or more from the time they check in for treatment until their first infusion is begun. This has been a significant source of patient dissatisfaction. A group, led by three RNs, considered a proactive approach to processing infusion orders to decrease wait times and prepare patients efficiently for treatment. Our original process for preparing patient orders began when the patient checked in. RNs would review orders for signature and ensure labs were appropriate for treatment. Then orders were given to pharmacy to check for accuracy and completeness before drugs were made. All of this was done before patients were placed in a treatment room.

**Methods, Intervention, and Analysis:** We evaluated the RN order review process, and developed a proactive approach for checking next day orders. This included checking for correct labs, BSA, and appropriate orders with the provider's signature the day prior to treatment. We developed an algorithm highlighting which components of the patient chart to review, and

how to collect necessary information. We streamlined the process of contacting providers to maximize efficiency and educated providers on how RN staff would contact them for next day order information. We piloted this process in August 2013, with one RN dedicated to reviewing all next day orders and contacting providers. We collected data on order issues and patient wait times throughout.

**Findings and Interpretation:** We discovered preparing orders in advance improved efficiency and decreased patient wait times. While our patient volumes have increased 41 percent since January 2010, patient wait times from August through October 2013 decreased 15 percent when compared with the same period in 2012. Issues with incomplete or inaccurate orders also decreased 38 percent.

**Discussion and Implications:** Order preparation done in advance has decreased wait times, and shown less order discrepancies for patients on the day they arrive for treatment. In September 2013, we trained additional RN staff on the process and how to contact providers effectively. Our RN order review process now begins prior to patient arrival.

## #98

**A SOLUTION FOR PERIPHERALLY INSERTED CENTRAL CATHETER QUALITY IMPROVEMENT DATA COLLECTION AND ANALYSIS.** Marie Swisher, MSN, RN, CWCN, AOCNS®, Mikaela Olsen, MS, RN, AOCNS®, and Anela Kellogg, MS, RN, AOCNS®, all at Johns Hopkins Hospital, Baltimore, MD

**Objective:** Identify three benefits and limitations of utilizing a secure electronic database for the collection and analysis of data.

**Topic Significance and Study Purpose, Background, and Rationale:** A collaborative project was initiated by the nurse-led peripherally inserted central catheters (PICC) team of a National Cancer Institute- designated Comprehensive Cancer Center (NCI-CCC), the University affiliated Information Technology (IT) Department, and Oncology Clinical Nurse Specialists. The purpose of the collaboration was two-fold. Efficient data collection and analysis are important considerations for quality improvement (QI) initiatives and processes that facilitate these efforts provide value for the users and the Institution. Important characteristics for database development identified in the literature include the ability to customize, rapidly develop, and remain cost effective. The use of a REDcap database in healthcare settings is supported in the literature and was facilitated by a collaborative interprofessional process and chosen for this project.

**Methods, Intervention, and Analysis:** A trial database was created, customized based on currently collected data and piloted for usability by PICC nurses. Study data were collected and managed using REDCap electronic data capture tools hosted at the NCI-CCC. REDCap (Research Electronic Data Capture) is a secure, web-based application designed to support data capture for research studies, providing: an intuitive interface for validated data entry; audit trails for tracking data manipulation and export procedures; automated export procedures for seamless data downloads to common statistical packages; and, procedures for importing data from external sources. A comprehensive, in-depth comparison and rationale for choosing REDcap over a spreadsheet program and examples of on-demand reports are included.

**Findings and Interpretation:** The use of this electronic database for this QI project allowed improved user-friendly, real-time data collection and analysis, and represents a viable way for nurses to participate in data collection when primary data collection from existing IT systems is not available or data must be manually collected. This database allows for real-time clinical

issue identification and on-demand reporting. PICC nurses can query the real time database to review information on existing and previously placed PICC insertions.

**Discussion and Implications:** The usability of this database represents technology that can positively impact stakeholders. This innovation can be disseminated to different departments of the Hospital system to facilitate future quality improvement initiatives.

## #99

**STATE OF THE SCIENCE: RANDOMIZED CONTROLLED TRIALS IMPLEMENTING COUPLES INTERVENTIONS ADDRESSING SEXUALITY AFTER BREAST CANCER TREATMENT.** Carly Paterson, MSN, RN, and Cecile Lengacher, PhD, RN, FAAN, both at University of South Florida College of Nursing, Tampa

**Objective:** The participant will interpret and be able to communicate the current state of the science related to randomized controlled trials implementing couples interventions addressing sexuality after breast cancer treatment.

**Topic Significance and Study Purpose, Background, and Rationale:** The purpose of this review was to determine the state of the science on randomized controlled trials (RCTs) for couples based interventions after breast cancer (BC) treatment. Adjustments to the breast cancer survivors (BCS) altered self, particularly related to sexuality and body image, is reported to be highly influenced by the support they receive from their intimate partners after treatment. Although this is a recognized problem, there continues to be a scarcity of research testing effectiveness of couple-based interventions to assist survivors and partners to cope with these changes.

**Methods, Intervention, and Analysis:** Through a synthesis of published research, PsycINFO, CINAHL®, ScienceDirect, PubMed and Web of Science databases were reviewed from 2000-2012. Search terms included: couples intervention, breast cancer and couples, intervention, breast cancer. Searches were further limited to include only RCTs. Inclusion criteria: 1) Studies published after December 1999; 2) Examination of body image in breast cancer patients; 3) Original research studies; 4) randomized controlled trials and 5) Research published in English. Exclusion criteria: 1) Anecdotal notes; 2) Studies published in a language other than English; 3) Reviews; 4) non-RCTs; and 5) Dissertations. Analysis of these searches identified 90 potential results following the search terms in the five databases, with five of these studies meeting the outlined inclusion criteria.

**Findings and Interpretation:** A total of five studies with five unique interventions met the inclusion criteria. All of the interventions included communication skills content and four included content addressing sexuality and/or body image concerns. The content of the interventions and the outcomes measured varied widely between studies. All interventions were delivered face-to-face and ranged from four to nine sessions, lasting 60-120 minutes. Results were limited by small sample size across all RCTs. In addition, one intervention was delivered in-home to couples on an individual basis, a delivery method that may have limited feasibility and cost-effectiveness. Although the studies evaluated the couple as a dyad, there was limited investigation into unique psychological symptoms experienced by the partner.

**Discussion and Implications:** This review of the literature suggests a continued need to establish strong research evidence testing effective couples based interventions to improve distress among BCS and their partners as the survivor transitions into survivorship.

**Underwriting or funding source name:** Funded in part by the National Institute of Nursing Research Pre-doctoral Fellowship Grant F31NR013585.

## #100

**MAINTAIN INPATIENT RN CHEMOTHERAPY COMPETENCIES THROUGH REGULAR ROTATION INTO THE OUTPATIENT INFUSION SETTING.** Anne Bailey, RN, MN, OCN®, and Donna Haight, RN, BBA, OCN®, Valley Medical Center, Renton, WA

**Objective:** Participants will understand the requirements implemented in this professional project to enhance and maintain oncology RN chemotherapy competencies in the Inpatient setting.

**Topic Significance and Study Purpose, Background, and Rationale:** Chemotherapy administration in the inpatient care setting has decreased with the majority of chemotherapy being administered in the outpatient setting. The aim of this professional project was to develop an RN competency program where inpatient RNs would have comprehensive orientation and ongoing experience with chemotherapy administration in the Infusion Center. The orientation would be with an experienced chemotherapy certified preceptor.

**Methods, Intervention, and Analysis:** The nurse managers of these inpatient and outpatient units recognized the difficulty of maintaining chemotherapy competencies with limited opportunities to administer chemotherapy in the inpatient setting. These managers collaborated to redesign the chemotherapy competency program which includes a four day class entitled "Fundamentals of Oncology," a two-day ONS Chemotherapy/Biotherapy course and a preceptorship experience in the Infusion Center. During the competency program, the participant must administer six different chemotherapy agents following ONS guidelines under supervision. A chemotherapy competency record is maintained on each individual. All chemotherapy RNs are encouraged to become Oncology Certified. To ensure ongoing competency, inpatient chemotherapy certified RNs must float to the Infusion Center at least once per month. As well as maintaining competency, this process has the added benefit of providing additional RN support for the growing outpatient population.

**Findings and Interpretation:** Outcome measurement: Over the last fourteen months the number of Chemotherapy Certified nurses in the inpatient setting has increased from three RNs to eight RNs to provide 24-hour coverage for chemotherapy inpatients. The managers have developed a comprehensive Chemotherapy Education policy and a Chemotherapy Competency validation checklist, as well as an RN evaluation tool for the program. The evaluation results have been overwhelming positive. In addition, patient satisfaction comments have indicated appreciation for care being provided by the same RNs in both care settings.

**Discussion and Implications:** Leadership collaboration resulting in a comprehensive competency program for the inpatient and outpatient care settings has been highly effective. Three important objectives have been accomplished. The ongoing development and maintenance of chemotherapy competent RNs Patient experience enhancement by care provided by the same RNs in both care settings. The number of inpatient chemotherapy competent RNs now ensures 24-hour coverage to support the inpatient chemotherapy population.

## #101

**NUTRITIONAL AND WEIGHT MAINTENANCE OUTCOMES IN PATIENTS RECEIVING CONCURRENT CHEMORADIO THERAPY FOR LOCALLY ADVANCED ESOPHAGUS CANCER.** Amanda Choflet, MS, RN, Sara Alcorn, MD, MPH, and Russell Hales, MD, MPH, all at Johns Hopkins Hospital, Baltimore, MD

**Objective:** There is currently no consensus around optimal nutritional support for esophagus cancer patients. This study

identifies variables for a predictive model of nutritional outcomes for this vulnerable patient population.

**Topic Significance and Study Purpose, Background, and Rationale:** Maintenance of caloric intake and nutritional health is a therapeutic obstacle in patients with locally advanced esophagus cancer who are treated with chemoradiation. While supportive measures, including feeding tube or parenteral nutrition are used, little evidence exists to predict the optimal supportive measures for an individual patient.

**Methods, Intervention, and Analysis:** Clinical and treatment related features were coded for patients with locally advanced esophagus cancer treated with curative intent with chemoradiation between July 2010 and July 2013. T-tests and chi-square analyses compared patient and treatment characteristics related to nutritional status.

**Findings and Interpretation:** For 72 patients included in the analysis, median percentage of body weight loss at the time of consultation was 6.6% (range 0% to 30%) and over the course of treatment was 4.7% (range 5% weight gain to 18% loss). Neither the extent of pretreatment weight loss nor the presence of pretreatment dietary restriction were predictive of significant weight loss over the course of therapy ( $p = 0.12$  and  $p = 0.72$ , respectively). Patients with pretreatment weight loss of greater than or equal to the median of 7.1% were statistically more likely to have feeding tubes placed prior to therapy ( $p < 0.001$ ). However, feeding tube status did not significantly affect the percentage of weight loss measured. Concurrent chemotherapies included a variety of approaches. Treatment with any 5-FU-containing regimen was significantly associated with weight loss greater than or equal to the median of 4.7% ( $p = 0.018$ ), whereas treatment with any paclitaxel-containing regimen showed a trend toward reduction in significant weight loss ( $p = 0.053$ ).

**Discussion and Implications:** These data demonstrate significant weight loss both prior to and over the course of treatment with combined chemoradiation for locally advanced esophageal cancer. Although placement of a feeding tube was more common among patients with substantial pretreatment weight loss, feeding tube status did not statistically affect weight loss patterns over the course of treatment. Moreover, these data suggest the importance of considering the type of chemotherapy used when predicting nutritional outcomes. This analysis provides a foundation for future work to model predictors of nutritional outcomes to guide clinical decision-making for this patient population.

## #102

**MANAGEMENT OF ODOR IN FUNGATING WOUNDS WITH METRONIDAZOLE VERSUS POLYHEXANIDE: RANDOMIZED CLINICAL TRIAL.** Diana Castro, MS, AC Camargo Cancer Center, Sao Paulo, Brazil, and Vera Santos, MS, University of Sao Paulo.

**Objective:** To identify the effectiveness of metronidazole 0.8% versus polyhexanide in odor management by a double-blind randomized trial in fungating wounds.

**Topic Significance and Study Purpose, Background, and Rationale:** The odor has emerged as one of the main signs of fungating wounds. It has been described as intolerable and sickening being caused by the interaction of aerobic and anaerobic microbiota that colonize and infect fungating wounds. It was proposed a study to verify the efficacy of polyhexanide in fungating wounds versus metronidazole. In Brazil we do not have metronidazole solution 0.8%, but we have polyhexanide 0.2%. So, if the polyhexanide is efficacy in management of odor, it could be useful in fungating wounds.

**Methods, Intervention, and Analysis:** It was randomized 64 patients with fungating wound with odor in any body place. They was randomized in two groups—topical metronidazol

0.8% or polyhexanide 0.2% applied twice a day. The patient and nursing staff did not know which solution has been applied. The odor was measured at day 0, day 4, day 8 and day 12 by TELLER scale. The data collection was finished when patient, nurse staff and researcher measure the value as non odor, or zero.

**Findings and Interpretation:** It was randomized 32 patient in each group. The study is a postdoctoral (work in progress), and it is not finished yet. We are still collecting the final data and it is scheduled to finish at February 2014. Even now polyhexanide has shown to be more efficient in management of odor in fungating wounds when it is compared with metronidazol solution.

**Discussion and Implications:** We expect that polyhexanide could be equal or better than metronidazole solution on odor management. In Brazil all the people can not buy antibiotics without a physician document, but they can buy antiseptics. So, patient with odor in fungating wounds can be benefited if the polyhexanide shows the same results as metronidazole.

**Underwriting or funding source name:** FAPESP.

## #103

**DEVELOPMENT OF A MEDICAL RECORD ABSTRACTION INSTRUMENT FOR QUALITY IMPROVEMENT IN PALLIATIVE CARE.** Nina Grenon, DNP, ANP/GNP-BC, AOCN®, Dana-Farber Cancer Institute, Boston, MA, and Magen Lorenzi, MSN, FNP-BC, Mill River Internal Medicine, Boston

**Objective:** To describe the development and testing of an abstraction instrument for quality improvement.

**Topic Significance and Study Purpose, Background, and Rationale:** Retrospective medical record (MR) reviews are a relatively low cost option for data collection. In order to obtain quality and reliable data from the MRs, abstraction instruments must be developed and adequately tested. Some studies report developing instruments but offer no detail on the methodology used to develop and evaluate them. Other studies provide some guidance for instrument development, but the evidence is limited.

**Methods, Intervention, and Analysis:** The development of this abstraction instrument was part of a larger quality improvement (QI) study to describe quality indicators for palliative care and to discover when palliative care was introduced during the course of the illness in patients with pancreatic cancer. The abstraction instrument was based on the literature review utilizing the 8 domains of palliative care identified by the National Consensus Project and the National Quality Forum. The instrument was tested for face and content validity with four experienced clinicians and an additional 10 providers with expertise in pancreatic cancer and palliative care. A pilot study of 15 MRs was conducted using systematic sampling with 2 independent coders. Inter-rater reliability (IRR) was calculated using percent agreement. For the remaining records in the larger study, IRR was calculated for every 10th MR.

**Findings and Interpretation:** Face validity was confirmed by the raters with 100% readability. The overall content validity index was determined to be 0.96. The IRR for the pilot study was determined to be 82%. The IRR for the larger QI study was 78%.

**Discussion and Implications:** Retrospective MR review studies are only as relevant as the strength of resulting validity and reproducibility. In order to improve performance, standardization of MR reporting and careful selection of study methods and abstraction instrument development are important. MR abstractors must be trained using a protocol and standardized training program. Researchers must be willing to describe the reasoning behind their methods to aid in reproducibility for future studies. Pilot studies must be utilized to establish the initial IRR and then monitored throughout the study. Understanding the limitations and issues with designing MR abstraction instruments can contribute to the improvement and promote the validity of future research using retrospective designs.



## #104

### DEVELOPMENTAL CONSIDERATIONS FOR YOUNG CHILDREN IN NURSING ASSESSMENT AND NON-PHARMACOLOGIC MANAGEMENT OF PAIN DURING CANCER TREATMENT: A NARRATIVE REVIEW.

Susan Thrane, RN, MSN, OCN®, Shannon Wanless, PhD, Susan M. Cohen, PhD, and Cynthia Danford, PhD, CPNP-PC, all at the University of Pittsburgh, Pennsylvania

**Objective:** Learners will restate why understanding child development is important to the assessment and non-pharmacologic treatment of pain in young children.

**Topic Significance and Study Purpose, Background, and Rationale:** Pain assessment and management in children is inconsistent or lacking. Children with cancer often present with pain and may suffer pain from cancer treatment, procedures, disease progression, and side effects of medications. Understanding key aspects of child development is a critical need in nursing so that pain assessment and non-pharmacologic management can be more effective in children with cancer. The purpose is to review key aspects of child development that inform nursing selection and implementation of effective pain assessment and non-pharmacological management strategies during painful procedures and cancer treatments.

**Methods, Intervention, and Analysis:** A narrative synthesis of the findings from an electronic search of PubMed and University of Pittsburgh library using the keywords pain, assessment, treatment, alternative, complementary, integrative, infant, toddler, preschool, young, pediatric, and child\* was completed resulting in 117 articles (92 studies, 5 informational, 19 reviews).

**Findings and Interpretation:** Awareness of developmental cues during the assessment of pain is essential for nonpharmacologic management of pain and leads to better outcomes. Crying, facial expression, and body posture are key developmental behaviors in infancy that indicate pain yet these behaviors in toddlers are not definitive. The sucking response and swaddling are important during infancy while distraction is more effective than parental empathy for non-pharmacologic pain management for toddlers, preschoolers, and school age children. Non-pharmacologic techniques include reading a story or picture book, blowing bubbles, or listening to music. Preschoolers begin to use self-report assessment tools which by school age, is the gold standard.

**Discussion and Implications:** Development plays a key role in both the assessment and management of pain in children. While medications should be used in cases of severe pain, the evidence supports that non-pharmacologic methods are effective for children during painful procedures ranging from venipuncture to bone marrow aspirations. Non-pharmacologic methods are within the scope of nursing practice. Moreover they are easy, take little time, and relieve both physical and emotional pain. Research supports that the long-term consequence of unrelieved pain in childhood continues resulting in an increased risk of chronic pain in adult survivors. Continued research in non-pharmacological management of pain is an important part of the national agenda.

## #105

### CHEMOTHERAPY ORDER REVIEW, ACTIVATION, PREPARATION, AND ADMINISTRATION REDESIGN AT A LARGE ACADEMIC CANCER CENTER.

Erika Rosato, RN, OCN®, MHA, Ellen Fitzgerald, RN, MSN, Barbara Cashavelly, RN, MSN, Nie Boehlen, RN, MSN, Inga Lennes, MD, and Katie Lafleur, MD, all at Massachusetts General Hospital, Boston

**Objective:** Through an interdisciplinary chemotherapy redesign process, the total number of medication safety reports related to chemotherapy errors decreased by 67%.

## Topic Significance and Study Purpose, Background, and

**Rationale:** Chemotherapy medication errors are potentially catastrophic due to the small window of therapeutic index, high toxicity, and the compromised clinical status of most recipients. Although compliant with major guidelines for chemotherapy administration, MGH Cancer Center still experienced chemotherapy medication errors tracked in the safety reporting system. Analysis of the safety report data prompted the chemotherapy order review, activation, preparation and administration redesign project with two aims: 1) establish the standard for safety checks for chemotherapy order review, mixing, product verification and administration across all areas of adult chemotherapy infusion by April 2013 and 2) reduce to zero the number of chemotherapy related medication errors by January 2014.

**Methods, Intervention, and Analysis:** A multidisciplinary team including nursing, pharmacy, and physicians was convened and a problem statement, aim statement, project scope, boundaries and measures of success were delineated. Process maps of each chemotherapy administration area (four in total) were created in an iterative fashion via meetings with front line staff and administration. Cause and effect diagrams were created by small groups of staff members from each area and improvement projects were brainstormed and implemented by nursing directors. Error data from safety reports was compiled quarterly and shared with all workers.

**Findings and Interpretation:** A single gold standard for MGH Cancer Center chemotherapy order review, activation, preparation and administration was created for all areas that administer chemotherapy to adults. The total number of medication safety reports related to chemotherapy errors has decreased by 67%. The time since our last major chemotherapy administration error is 239 days and we are on track to meet our second project aim. Conclusions: This project employed quality improvement tools and practices to redesign and standardize chemotherapy administration.

**Discussion and Implications:** This redesign project has led to several spin off improvement projects including a medication error awareness project led by nursing and a new competency assessment for oncology nurses.

## #106

### THE ROLE OF THE RADIATION ONCOLOGY NURSE IN MAINTAINING QUALITY CARE FOR PEDIATRIC PATIENTS AFTER A NATURAL DISASTER.

Linley Rasamny, BSN, RN, Maureen Oliveri, MSN, RN, and Amelita Miranda-Ty, MSN, RN, all at New York University Langone Medical Center, New York

**Objective:** Following the storm and subsequent closure of our inpatient pediatric treatment facility, our objective was to maintain safe and effective care of our pediatric patients at our outpatient facility.

**Topic Significance and Study Purpose, Background, and Rationale:** Radiation therapy is a primary treatment modality for pediatric malignancies, destroying cancer cells with high energy particles. Radiation therapy is typically given daily over several weeks and requires the patient to remain still by themselves in the treatment room. In order to achieve this, often pediatric patients require anesthesia during treatment.

**Methods, Intervention, and Analysis:** 1. Prior to the storm, approximately 20 pediatric patients were treated annually at our inpatient facility. 2. Post storm, the lower levels of NYULMC were flooded, destroying our inpatient pediatric treatment facility and presenting the challenge of planning for outpatient treatment of pediatric patients. 3. Nurses were trained in Pediatric Advanced Life Support (PALS). 4. Education services were conducted by nursing education for use of

the emergency cart, mock codes, and code pink. 5. The facility was evaluated to meet child-proofing standards. 6. An exam room was designed to function as a pediatric recovery area for close monitoring following anesthesia. 7. A contract was created for a pediatric critical care transport vehicle to remain on site during all pediatric anesthesia cases. 8. A new pediatric standard of practice was created to include a multidisciplinary team and assure safe monitoring during and after the procedure. 9. All necessary equipment for anesthesia was ordered and stored appropriately.

**Findings and Interpretation:** 1. Within one month our department began treating pediatric patients who did not require anesthesia. 2. Within 6 months, clearance from regulatory organizations was achieved and our department was authorized to begin treating pediatric patients under anesthesia. 3. One year following the storm, we have now treated 15 pediatric patients, one of which was under anesthesia.

**Discussion and Implications:** 1. With the help of management, nurse educators, anesthesia department, physicians, transportation company, and other members of the pediatric interdisciplinary team, radiation nurses successfully maintained safe and effective care for pediatric patients despite losing our inpatient pediatric facility. 2. This model demonstrates how the radiation oncology nurse facilitated the guidelines to successfully implement a post-disaster plan for safe treatment of pediatric patients in an outpatient setting. 3. The model presented above may be used as a guideline in the future for planning and implementing new workflow for pediatric patients.

#### #107

### A PROTOCOL FOR CHEMOTHERAPY-RELATED INFUSION REACTIONS: DEVELOPMENT AND EDUCATION.

Deborah Thompson-Carry, MSN, RN, OCN®, Medical Center, Langhorne, PA

**Objective:** Enhance nursing knowledge of Chemotherapy Infusion reactions and the ability to implement a standardized management regimen.

**Topic Significance and Study Purpose, Background, and Rationale:** In the current healthcare environment, chemotherapy is most often administered in an office based infusion room where oncologists are readily available for assessment, diagnosis, and management of any infusion reaction. Registered nurses in the acute care oncology environment and the Rapid Response Team nurse's demonstrated inexperience, and self-reported decreased confidence in managing infusion reactions. These observations created awareness of the need for a collaborative, standardized plan of care during a time of crisis.

**Methods, Intervention, and Analysis:** A multidisciplinary team of nurses, pharmacists, and oncologists developed an evidence-based protocol based on the Educator Resource Center of Oncology Nursing Society (ONS). The protocol included an algorithm encompassing recognition of symptoms, assessment parameters, and treatment modalities to manage chemotherapy related infusion reactions. Prior to education and protocol implementation, the registered nurses from the oncology department and Rapid Response Team completed a hypersensitivity case scenario to obtain a baseline knowledge level. In addition to the provision of a protocol, the registered nurses participated in a structured educational intervention that included types, severity, incidence, symptoms, assessment, and management of chemotherapy reactions.

**Findings and Interpretation:** Following completion of the education sessions, the registered nurses completed the hypersensitivity case scenario to assess their knowledge of infusion reaction management. All nurses were remediated to 100% scores and were required to discuss all elements of the Chemotherapy Infusion Reaction Protocol. Participating nurses expressed an

increased confidence in their ability to recognize and manage an infusion reaction.

**Discussion and Implications:** The infusion reaction protocol offers a standardized management regimen thus increasing the registered nurses confidence in their knowledge and skills. Rapid Response Team nurses are better prepared to provide support to the oncology nurses and to meet the urgent needs of patients experiencing chemotherapy reactions. The Case Scenario is utilized during annual nursing competencies to maintain the nurses' confidence in their ability to manage chemotherapy reactions. In addition, all newly hired nurses for the Rapid Response Team and the oncology department will receive education on the Infusion Reaction and Management Protocol. A consistent protocol, education, and collaborative support are the keys to the successful management of any infusion reaction related to chemotherapy.

#### #108

### A STUDY ON VASCULAR PAIN DUE TO GEMCITABINE AND RELATED CLINICAL FACTORS.

So Ryoung Seong, MSN, RN, Nam Ju Lee, MSN, RN, Mi Jin Lee, MSN, RN, Hyun Ah Jang, BSN, RN, Se Jung Park, BSN, RN, and Min Ju Song, BSN, RN, all at the Asan Medical Center, Seoul, South Korea

**Objective:** This study was to examine intensity and onset time of vascular pain according to gemcitabine infusion and related clinical factors.

**Topic Significance and Study Purpose, Background, and Rationale:** According to the 2013 statistics of the outpatient chemotherapy infusion room, Asan Medical Center (AMC), 16% of the total visiting patients were receiving gemcitabine infusion, and 60% of them had experienced vascular pain. However, some reports of the prior literatures showed that the incidence rate of gemcitabine related vascular pain was reported only 4%. Besides gemcitabine has been classified as non-vesicant drug that does not cause any reaction to the injection site in some reports. Thus, in this study, by finding out the intensity and onset time of the vascular pain of patients administered gemcitabine and related clinical factors, we want to improve their quality of life and to provide fundamental data for vascular pain relief interventions.

**Methods, Intervention, and Analysis:** The data collection period was from June 30th, 2013 to August 30th, 2013. 525 subjects were randomly selected among cancer patients who visited the AMC outpatient chemotherapy infusion room to be administered gemcitabine. The collected data were the intensity and onset time of the vascular pain, and 16 clinical factors. The intensity of vascular pain was measured by the NRS tool (range: 0-10). The onset time of vascular pain was examined by the reporting of the subjects when they had pain. Clinical factors were collected via reviewing medical records, researchers' observation and self-reported questionnaire.

**Findings and Interpretation:** The average intensity and onset time of vascular pain were  $3.06 \pm 2.16$  (range: 0-10) and  $8.13 \pm 13.13$  minutes (range: 0-95 minutes). Regarding as the correlation between the intensity and onset time of vascular pain, there was a negative correlation ( $r = -0.21$ ,  $p < 0.001$ ). Degree of the intensity of vascular pain had a significant effect on a gender ( $p = 0.003$ ), age ( $p = 0.004$ ), weight ( $p = 0.019$ ), BMI ( $p = 0.005$ ), BSA ( $p = 0.030$ ), infusion time ( $p = 0.000$ ), dose (mg/BSA) ( $p = 0.027$ ), dose per minute (total mg/min) ( $p = 0.000$ ), the number of administered gemcitabine ( $p = 0.005$ ), combination chemotherapeutic drug ( $p = .013$ ), and tumor type ( $p = 0.002$ ). Degree of onset time of vascular pain had a significant effect on infusion time ( $p = 0.044$ ), combination chemotherapy ( $p = 0.001$ ), and injection site ( $p = 0.001$ ).

**Discussion and Implications:** Many patients administered gemcitabine were experiencing a variety of vascular pain. Also,

clinical factors appeared to have an effect on vascular pain. Therefore, the findings of this study provide fundamental data for intervention of vascular pain due to gemcitabine, and could be used as educational materials of chemotherapy.

## #109

### END OF LIFE CARE AND COMMUNICATION WITH THE ADULT TERMINALLY ILL PATIENT: A LANGUAGE OF ITS OWN.

Sharon Lebovic, RN, BSN, Jacqueline Ligorski, RN, BSN, and Mary Swarthout, RN, BSN, all at Medstar Georgetown University Hospital, Washington DC

**Objective:** After reviewing this abstract, participants will be able to identify at least one problem with the current code status system when discussing advance directives and end of life care.

**Topic Significance and Study Purpose, Background, and Rationale:** Terminally ill patients and families are often faced with challenges regarding code status decisions. Many healthcare providers find end of life conversations difficult to conduct, which may lead to patients making uninformed decisions. Only 2.2% of patients with terminal illness who undergo CPR survive to hospital discharge. Consequently, terminally ill patients and their family may experience a compromised death with an unchanged outcome. The purpose of this project was to review the literature and to evaluate the effectiveness of end of life language and discussions with patients and families among inpatient hospital settings.

**Methods, Intervention, and Analysis:** A literature review was conducted yielding thirteen articles. Ten of the articles surveyed healthcare providers' opinions toward code status discussions and terminology, which provided mostly qualitative data. However, limited research reflected the effects of the phrases Allow Natural Death (AND) vs. Do Not Resuscitate (DNR) on outcomes of patients' care or quality of life. Following the literature review, twenty nurses were surveyed on two hospital units at an academic medical center for their opinions toward the usage of DNR vs. AND regarding code status orders.

**Findings and Interpretation:** Among participants surveyed, one hundred percent favored the usage of AND over DNR. The evidence identified problems with the current system which included: lack of communication in discussion and reality of prognosis between caregiver and patient, as well as misuse and misunderstanding of the phrases DNR and AND by both providers and patients. Lastly, due to latent code status changes, surrogates become burdened with difficult decision-making.

**Discussion and Implications:** A change in hospital culture and policies regarding end of life discussions that involve multi-interdisciplinary providers is suggested. Early discussions about treatment goals should be initiated by the primary team within 72 hours of hospital admission. Medical staff and nurses should be further educated on how to have an appropriate code status discussion. Finally, the current code status form should be accompanied by the Physicians Orders for Life-Sustaining Treatment (POLST) model for clarification of patients' goals. By implementing these recommendations, code status orders would be unequivocal and oncology patients would be directly involved with their plan of care from start to finish.

## #110

### STATE OF THE SCIENCE: SEXUALITY AND HEAD AND NECK CANCER-INFORMATION FOR ONCOLOGY NURSES.

Bethany Rhoten, PhD, RN, Vanderbilt University Nashville, TN

**Objective:** To educate oncology nurses about the state of the science regarding sexuality in survivors of head and neck cancer.

**Topic Significance and Study Purpose, Background, and Rationale:** Head and neck cancer and its treatment can cause significant disfigurement as well as psychosocial distress. This has the potential to cause sexual impairment in survivors. It is important that oncology nurses have current knowledge about sexual function after treatment for head and neck cancer in order to provide holistic care to this population of patients. The purpose of this review is to examine what is known about sexuality following head and neck cancer treatment as well as propose recommendations for future study.

**Methods, Intervention, and Analysis:** PubMed, PsycINFO, CINAHL®, and Ovid databases were searched using the terms sexuality and head and neck cancer. Included publications were peer-reviewed, written in English, and published within the last ten years. Publications that did not examine sexuality in head and neck cancer patients were excluded. Publications that examined human papillomavirus-related head and neck cancer and not human sexuality were also excluded.

**Findings and Interpretation:** Of the publications reviewed (N=488), only eight met the criteria for this analysis. Thirty-eight percent (n=3) mentioned sexuality as important in the context of examining quality of life. One article examined the information needs of head and neck cancer patients. Fifty percent (n=4) specifically examined sexuality in this population. Of those, one study utilized a qualitative approach and was nurse-led, while the other studies utilized surveys to examine this phenomenon and were initiated by other healthcare professionals. Among the studies that specifically examined sexuality, 25%-100% of participants expressed that head and neck cancer treatment had a negative effect on their libido and sexual relationships.

**Discussion and Implications:** A limited number of descriptive studies are available that specifically examine sexuality after head and neck cancer treatment. The studies that do exist are cross-sectional and provide limited information needed by oncology nurses to effectively provide holistic care for this population in the post-treatment setting. With the improvement in survival outcomes of patients with head and neck cancer and the unique post-treatment supportive care issues faced by these patients, it is important that oncology nurses facilitate research in area of sexuality.

## #111

### DEVELOPING ONCOLOGY NURSING COLLABORATION TO IMPROVE THE CANCER PATIENT'S EXPERIENCE.

Miriam Slevin, RN, MS, OCN®, Mary Hersh, PhDc, RN, FPCN, CHPN, and Char Cottrell, PhDc, RN, FPCN, CHPN, all at Torrance Memorial Medical Center, California

**Objective:** Identify strategies for the development of a collaborative approach for nurses aimed at improving the cancer patient experience in a community hospital setting.

**Topic Significance and Study Purpose, Background, and Rationale:** Providing optimal oncology care becomes increasingly challenging when care delivery occurs in several locations throughout the campus of a large community hospital. In 2001 the Institute of Medicine recommended the creation of optimal care delivery systems that are safe, effective, patient centered and efficient across settings. Providing optimal cancer care is frequently multimodal; its complexity necessitates seamless interdepartmental coordination and a bidirectional information exchange along with regular communication among providers. In our facility, patient feedback demonstrated that fragmented care was occurring across settings. Care was hindered by inconsistent, interdepartmental communication and less than robust collaboration among providers. This analysis uncovered a need to optimize care delivery, and offered an opportunity for nurses to improve oncology patients illness experiences. To meet this challenge, oncology nurse leaders organized a collaborative



focused on developing mechanisms for maximizing communication across the continuum of care and positively influencing and improving oncology patients experiences.

**Methods, Intervention, and Analysis:** Clinical and administrative nurses representing inpatient oncology, outpatient infusion, palliative care, radiation oncology, the Breast Diagnostic Center, and the Cancer Resource Center met monthly to plan, implement and evaluate projects focused on improving cancer services throughout the care continuum. Ad hoc members were included as needed. Strategies used to develop an effective collaborative group included professional education, team development and consistent interdepartmental communication.

**Findings and Interpretation:** Consistent meeting attendance fostered ongoing focused problem-solving. Identified issues and projects spanned the scope of oncology nursing practice and the patient experience including: nursing practice projects focused on improved safety and patient education such as chemotherapy administration and pain management, and interdisciplinary projects involving navigation, survivorship, rehabilitation and palliative care. Public and professional education across settings was also demonstrated in a successful community-based consortium.

**Discussion and Implications:** Perpetuation of this successful forum for communication and collaboration will continue to positively impact the patient experience. Strategies implemented are reproducible and renewable over time. The group's shared intention to improve cancer patients' experiences by identifying patients' needs and addressing barriers across settings has led to safer, patient centered, more efficient care. Addressing optimal care delivery issues as a group has also positively influenced patient education and patient satisfaction within the scope of care delivered.

## #112

**EXPLORING HPV VACCINATION IN WOMEN WHO HAVE SEX WITH WOMEN.** Nicole Makris, BA, and Catharine Vena, PhD, RN, both at Emory University, Atlanta, GA

**Objective:** To examine rates and associated correlates of Human Papilloma Virus (HPV) vaccine uptake in women who have sex with women (WSW).

**Topic Significance and Study Purpose, Background, and Rationale:** Certain strains of HPV cause genital warts and many types of cancer, including cervical, anogenital, and oropharyngeal. HPV prevalence among U.S. women ages 14-59 in the United States is 26.8%, with oncogenic types having an overall prevalence rate of 15.2%. To guard against the adverse effects of HPV, the Centers for Disease Control recommends a three-dose vaccination for girls beginning at age 11 and for previously unvaccinated women ages 13-26. When compared to heterosexual women, WSW have comparable to higher rates of infection with HPV. Despite this rate of infection, research has shown that WSW are less likely to seek screening and preventive services than their heterosexual counterparts. Exploring the rate and sociodemographic correlates of vaccination against HPV in WSW can inform clinical practice related to HPV screening, prevention, and education of this population.

**Methods, Intervention, and Analysis:** Data from two consecutive National Health and Nutrition Examination Survey (NHANES) databases (2009-2012) were used to compare rates of HPV vaccination in WSW and heterosexual women. Further sociodemographic correlates of vaccine uptake were examined. Statistical approaches included descriptive statistics, Spearman correlations, and Chi square analysis.

**Findings and Interpretation:** The sample included 1317 women between the ages of 18 and 32; mean age 24.45 ±4.43. In the sample, 12.5% were WSW. There was no significant difference in HPV vaccine uptake among WSW (24.3%) as compared

to heterosexual women (21.8%) ( $p = 0.738$ ). In the total sample, correlates of vaccine uptake were younger age ( $p < 0.0001$ ), white non-Hispanic race/ethnicity ( $p = 0.016$ ), higher education level ( $p = .001$ ), having health insurance ( $p < 0.0001$ ), and younger age at first sex ( $p < .0001$ ). In WSW, only younger age ( $p = 0.0001$ ), having health insurance ( $p = 0.0490$ ), and younger age at first sex ( $p = 0.015$ ) remained as significant correlates.

**Discussion and Implications:** While sexual preference was not a correlate of vaccination, less than one quarter of women at risk for HPV infection and subsequent cervical cancer received at least one dose of HPV vaccine. This study reinforces the importance of health promotion and prevention regarding HPV in both heterosexual women and WSW in order to reduce the incidence of adverse oncological consequences.

## #113

**THE EFFECTS OF CHLORHEXIDINE BATHING ON REDUCING CENTRAL LINE-ASSOCIATED BLOOD STREAM INFECTIONS.** Charlene Stein, ADN, RN, OCN®, Penn State Hershey Medical Center, and Laura Lau, ADN, RN, Select Specialty Hospital, York, both in Pennsylvania

**Objective:** Participants will explore evidence regarding effectiveness of chlorhexidine bathing to lower central line associated bloodstream infections (CLABSIs) in hematology/oncology populations

**Topic Significance and Study Purpose, Background, and Rationale:** CLABSIs have been found to be the second most deadly hospital acquired infection. According to Joint Commission, the yearly cost of CLABSIs nationally is greater than \$1,000,000,000. Estimated costs per individual patient diagnosed with a CLABSI can exceed \$16,000. Development of a CLABSI can result in extended length of hospital stay of up to three weeks, increasing financial cost of treatment considerably. Oncology patients require central venous access devices (CVAD) for extended periods of time. Sporadic control of high rates of CLABSIs on an oncology unit, despite adoption of standard prevention techniques, motivated the literature review to determine if chlorhexidine bathing could make a difference in oncology patient populations.

**Methods, Intervention, and Analysis:** A systematic search of published literature was performed using the following keywords/phrases in CINAHL® and PubMed databases: chlorhexidine bathing, central line infection, effects of daily chlorhexidine bathing on central line infection, chlorhexidine bathing AND central line infections, chlorhexidine bathing central, and CLABSI prevention. Thirteen articles were reviewed and 8 were selected for in-depth review. The John Hopkins Nursing Evidence Based Practice Appraisal was utilized to determine strength of evidence of each study.

**Findings and Interpretation:** Eight studies were reviewed, majority being level one or two strength of evidence. A level one study revealed a greater than 50% reduction in rate of CLABSIs with use of chlorhexidine bathing instead of bathing with soap and water. A randomized controlled study performed in nine intensive care and bone marrow transplantation units in six hospitals revealed a CLABSI rate that was 28% lower with chlorhexidine-impregnated washcloths ( $p=0.007$ ). Furthermore, when chlorhexidine wipes were utilized, there was a 90% reduction in rate of fungal blood stream infections. These and other findings from the review of the research studies will be presented in table format.

**Discussion and Implications:** CLABSIs are a prevalent and costly issue in the healthcare industry today. CLABSIs are a preventable type of infection, and evidence-based interventions should be utilized by nurses in their efforts to reduce them. Existing evidence supports use of daily chlorhexidine bathing as an effective intervention in prevention of CLABSIs in adult pa-

tients with a central venous access device in comparison with traditional soap and water bathing.

#### #114

**CENTRAL LINE-ASSOCIATED BLOOD STREAM INFECTION (CLABSI) REDUCTION IN THE ONCOLOGY SERVICE LINE.** Cathy Zmolik, BSN, RN, OCN®, and Christina Barrow, BSN, RN, both at Baylor University Medical Center, Dallas, TX

**Objective:** Improve patient safety and quality of care by implementing measures to reduce the central line associated blood stream infection rates in the oncology service line.

**Topic Significance and Study Purpose, Background, and Rationale:** Infections, such as central line associated blood stream infections (CLABSIs) remain a leading cause of morbidity and mortality in the oncology population. A variety of educational and maintenance interventions have been identified in literature that positively impact CLABSI rates. The oncology service line consists of 72 beds, two medical oncology units and one bone marrow transplant (BMT) unit. The 2012 CLABSI rate for the two medical oncology units was 4.76 and 1.14 per 1,000 central line days. The BMT unit was 1.75 per 1000 central line days. A quality improvement project was implemented in September 2012 to decrease the CLABSI rate to 0.9 per 1000 patient days for the service line.

**Methods, Intervention, and Analysis:** Monthly rates were evaluated to track the progress of the project and determine the effectiveness of interventions implemented. Interventions Implemented: Scrub the Hub Campaign Central Line Maintenance bundle Neutral connector. Securement device dressing change validation. Three month Chlorhexidine (CHG) impregnated dressing trial CLABSI prevention online lesson and test

**Findings and Interpretation:** A combination of interventions succeeded in reducing the CLABSI rates in the oncology service line through February 2013. However, in January 2013, the Centers for Disease Control (CDC) CLABSI definitions were updated to include Mucosal Barrier Injury Laboratory Confirmed Bloodstream Infections (MBI-LCBIs). Beginning in March, a negative impact was noted relative to the CLABSI rate. Further evaluation determined the increase was related to MBI-LCBIs.

**Discussion and Implications:** CLABSI prevention measures can positively impact rates in the oncology population. Though the service line did not achieve a rate of 0.9 by the end of the evaluation timeframe, new interventions continue to be evaluated in an effort to achieve the overall goal. The interventions and methods used in this project can be universally applied to any inpatient oncology or BMT unit seeking to reduce CLABSI rates Future investigations should focus on identifying potential risks/interventions to reduce MBI-LCBI related CLABSI rates as defined by the CDC.

#### #115

**TRAINING FOR NURSES TO USE PROTOCOLS WHEN PROVIDING REMOTE SYMPTOM SUPPORT TO ONCOLOGY PATIENTS: A RETROSPECTIVE PRE-POST STUDY.** Dawn Stacey, RN, PhD, CON(C), Meg Carley, BSc, and Myriam Skrutkowski, BSc, all at Ottawa Hospital Research Institute; and Barbara Ballantyne, RN, MScN, CON(C), CHPCN(C), and Erin Kolari, BScN, CVAA, both at Health Sciences North, Sudbury, and all in Canada

**Objective:** To evaluate training for nurses on use of the pan-Canadian Oncology Symptom Triage and Remote Support (COSTaRS) protocols when providing symptom support to patients undergoing cancer treatment.

**Topic Significance and Study Purpose, Background, and Rationale:** Nursing guidelines require that nurses receive training to provide nursing care through remote technologies. However, few programs provide formal training and for those that do, most programs have not been evaluated.

**Methods, Intervention, and Analysis:** A retrospective pre-post study involved one-hour interactive workshops with role-play at two Canadian ambulatory oncology programs. Workshop content included didactic presentation (principles for remote support by nurses, introduction to COSTaRS symptom protocols, fit with organizational documentation) and role-play with the protocols. Participants completed a questionnaire post-training on self-rated confidence in ability to provide symptom support and use protocols, as well as satisfaction with training. One-tailed paired t-test evaluated change in perceived confidence.

**Findings and Interpretation:** Twelve training sessions held between June and October 2013 included 61 nurses, reaching over 90% and 80% of eligible nurses at each site, respectively. Post-training, participants indicated improved confidence in their ability to a) assess, triage, and guide patients in self-care for their cancer treatment related symptoms ( $p < 0.01$ ); and b) use the COSTaRS protocols to facilitate symptom assessment, triage, and care ( $p < 0.01$ ). Participants rated the workshop as somewhat easy or very easy to understand (97%), comprehensive with just the right amount of information (88%), and indicated it provided new information on remote symptom management (84%). Participants agreed the workshops met the stated learning objectives including elements of evidence-informed remote symptom support (98%), how to assess and triage patients cancer treatment related symptoms (97%), tailoring symptom self-care to patient's needs (93%), using evidence and theory-based protocols (97%), basic principles for remote support (97%), and how to document the remote support interventions (95%). Half (51%) specified that there was not enough time for role-play. Qualitative comments were mostly positive and the only suggestions for improvement were to provide longer workshops with more time for role-play, booster sessions to reinforce learning, and monitoring. Most participants (95%) indicated that they would recommend the workshop to others.

**Discussion and Implications:** The training workshop for using the COSTaRS symptom protocols increased nurses confidence with providing remote support and was well received by nurses. Subsequent training interventions should consider planning longer sessions and/or booster sessions to further enhance nurses skills in using protocols.

**Underwriting or funding source name:** Funded by a grant from the Canadian Institutes of Health Research.

#### #116

**PERSISTENT FATIGUE IN HEMATOPOIETIC STEM CELL TRANSPLANT SURVIVORS: RECRUITMENT AND DATA COLLECTION FEASIBILITY FOR A HIGH-RISK, LOW-VOLUME POPULATION.** Eileen Hacker, PhD, APN, AOCN®, Ann Fink, PhD, RN, Tara Peters, PhD, RN, Damiano Rondelli, MD, Giamili Fantuzzi, PhD, and Chang Park, PhD, all at the University of Illinois at Chicago

**Objective:** Discuss feasibility issues related to recruitment strategies and data collection procedures for a high-risk, low volume population, such as hematopoietic stem cell transplant survivors.

**Topic Significance and Study Purpose, Background, and Rationale:** Persistent fatigue following hematopoietic stem cell transplantation (HCT) is a high-priority problem for oncology nurses. It is not known why some HCT survivors continue to experience persistent fatigue in the absence of cancer/cancer treatment and/or how this fatigue compares to occasional tiredness

found in the general population. The ultimate aim of our work is to characterize the constellation of symptoms associated with persistent fatigue in HCT survivors. We report the feasibility of recruitment strategies and data collection procedures in a population at high-risk for problems, yet low in volume.

**Methods, Intervention, and Analysis:** This pilot study compares differences in persistent fatigue in HCT survivors to age- and gender-matched healthy controls (HC) with occasional tiredness. Recruitment strategies include web-based study information dispersed by a national BMT organization, local institution medical record review, and collaboration with transplant physicians at other institutions. We use a variety of methodological approaches to collect data: (1) computerized real-time assessments of fatigue; (2) objective, real-time assessments of physical activity and sleep disturbances using wrist actigraphy; (3) self-reported computerized assessments using the Adult Short Forms of the PROMIS system (fatigue, sleep disturbances, and emotional distress); (4) computerized objective testing of cognitive functioning; and, (5) various blood serum tests.

**Findings and Interpretation:** Fifteen subjects (HCT,  $n = 8$  and HC,  $n = 7$ ) completed research activities. Web-based recruitment strategies were more effective and less time-intensive. The majority of subjects provided usable real-time fatigue assessments. Only four of the HC (57%) wore the wrist actigraph continuously over seven days while all HCT subjects ( $n = 8$ ) wore the device as instructed. All subjects were able to complete the computerized cognitive function tests. Although these tests are self-administered, a member of the research team needed to be present for questions. Inaccurate labeling led to one unusable blood sample (7%).

**Discussion and Implications:** The need for feasibility testing of recruitment and data collection procedure is imperative to effectively address methodological issues associated with high-risk, low-volume populations, such as HCT survivors. Substantial interest from non-local HCT survivors generated via web-based recruitment led to a revision in data collection procedures to develop off-site testing procedures to include geographically diverse HCT survivors with persistent fatigue.

**Underwriting or funding source name:** Funded by the National Cancer Institute, Alliance for Clinical Trials in Oncology. (CA037447).

## #117

**STOP SEPSIS: WHAT EVERY ONCOLOGY NURSE NEEDS TO KNOW.** Janine Kennedy, MA, RN, OCN®, and Kevin Browne, RN, MS, CCRN®, both at Memorial Sloan-Kettering Cancer Center, New York

**Objective:** At the end of the session, the participant will be able to describe the sepsis education initiative for oncology nurses and apply it to their care setting.

**Topic Significance and Study Purpose, Background, and Rationale:** Sepsis is a worldwide healthcare emergency. Annually in the United States, over 750,000 people are diagnosed with sepsis, with 250,000 dying from it. Oncology patients are at a higher risk for developing sepsis and have an increase in morbidity and mortality from it. Due to the complex nature and presentation of sepsis, it can be misdiagnosed. No longer can presenting symptoms of sepsis be minimized or attributed to post therapy complications. At a comprehensive cancer center, accurate and efficient sepsis identification and management was identified as a priority goal within the Department of Nursing in order to improve patient outcomes.

**Methods, Intervention, and Analysis:** In response to a new law in New York State, a sepsis screening standard and management guideline was developed to facilitate early identification and treatment of patients with severe sepsis and septic shock with the goal of ultimately improving patient outcomes. An

innovative task force comprised of advanced degree nurses in all care settings convened to develop an education program for nursing staff that addressed the impact of sepsis across the oncology patients care continuum. After an extensive evidenced-based review, a four hour educational program focusing on statistical findings, risk factors, clinical manifestations, pathophysiology, quality events, telephone triage, and the sepsis screening and management guideline was developed. These sessions also included interactive case studies, showcasing the risk factors an oncology patient presents with, manifestations during various phases of the care continuum, and application of the screening and management guidelines. In order to ensure that knowledge was gained, a pre and post assessment was developed and administered to the participants, either via an electronic audience response system or paper and pen.

**Findings and Interpretation:** To date, over 1,800 registered nurses have attended these mandatory sepsis education classes. Overwhelming positive responses have been collected via the evaluation forms. Data from the pre and post assessments have demonstrated a marked increase in knowledge from the beginning to the end of each educational session.

**Discussion and Implications:** Prompt recognition of sepsis and intervention is imperative to improve patient outcomes. By providing education and standardizing screening and management guidelines, nurses can make a difference and save lives of oncology patients.

## #118

**THE RAINBOW CONNECTION: COLLABORATIVE ACADEMIC PARTNERSHIPS IN ONCOLOGY NURSING DESIGNED TO RECRUIT AND RETAIN GRADUATE NURSES.**

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**Objective:** Participants will be able to discuss an innovative academic partnership in oncology nursing that resulted in a structured process designed to facilitate recruitment and retention of graduate nurses.

**Topic Significance and Study Purpose, Background, and Rationale:** Oncology is a specialty within medical surgical nursing. Generally, nursing students have minimal exposure to oncology care settings within their nursing program. Hiring nurses who have a passion for oncology based on experience or perception of the oncology nurse role is difficult and can lead to nurse turnover. A collaborative academic partnership between the school of nursing and oncology nursing leadership within an academic medical center created a precepted oncology clinical capstone experience. This experience would immerse the student into the continuum of care for an oncology patient including inpatient care, outpatient follow-up, and infusion visits. The program engages students in oncology nursing as a specialty area to help them refine their nursing skills, develop their leadership ability, and prepare for the reality of nursing. Students spend 240 clinical hours with a nurse preceptor working side-by-side to care for a team of patients in the inpatient setting and 120 hours in the outpatient setting. Students also complete two clinical rotations to a specialty area within oncology such as palliative care, radiation oncology, breast center, and dermatology. Their experience culminates with a clinical project pertinent to the patient population and an identified need.

**Methods, Intervention, and Analysis:** Using a Self-Assessment Tool for Oncology Nurses which measures clinical skill and comfort level using a 1-4 scale; where 1 = no experience and 4 = highly experienced, students rated their proficiency at the beginning and end of their clinical experience.



**Findings and Interpretation:** Students demonstrated an increase in their clinical skill and comfort level as indicated by higher scores at the conclusion of their clinical capstone experience. These higher scores reflect a change in knowledge, values, and attitudes toward oncology nursing care that have the potential to lead to higher nursing satisfaction and retention.

**Discussion and Implications:** Collaborative academic partnerships designed to provide in-depth clinical experience in a specialty area benefit the student, school of nursing and academic medical center and lead to recruitment and retention of graduate nurses that possess the knowledge, skills and attitudes to be successful in their career specialty.

## #119

### APPEARANCE-RELATED DISTRESS AMONG PATIENTS RECEIVING TREATMENT FOR CANCER PRE AND POST PARTICIPATING IN A LOOK GOOD FEEL BETTER PROGRAM.

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**Objective:** To examine appearance related distress among patients who have begun cancer treatment pre and post participation in a face-to-face workshop or a self-directed web-based program.

**Topic Significance and Study Purpose, Background, and Rationale:** Investigators report that appearance related concerns among patients undergoing cancer treatment are a cause of distress and diminished quality of life. The Look Good Feel Better (LGFB) program has provided workshops for 24 years to more than 1.2 million patients with cancer to address appearance related concerns. Although the program is in demand, there is an absence of literature that demonstrates its efficacy. The current study aims to learn about the perception of body image disturbance associated with appearance changes pre and post a web based and face to face workshop LGFB program. The oncology nurse plays a pivotal role in ensuring patients access to community resources that are tailored to individual needs. This study provides information that will help the oncology nurse to address individual needs and concerns, and preferences when choosing between the workshop and or web based program.

**Methods, Intervention, and Analysis:** An IRB approved flyer containing a description of the study is provided at the study site. Confidentiality and voluntary consent are reviewed. Patients are randomized to the workshop or web-based program. The Derriford Appearance Scale (DAS24), a psychometrically robust, factorial 24 item self-report questionnaire captures five dimensions that explain body image disturbance. The DAS24 is completed pre and post each LGFB. The study (N = 100) is powered at 80% with a two-tailed alpha of 0.05 (medium effect size). A mixed effect model will compare changes from baseline in total score between the two groups. The ranges, means, standard deviations will be presented for each item and the total scale.

**Findings and Interpretation:** The study will complete accrual by March, 2014, based on 500 patients daily visits at the study site and ability to increase the number of LGFB programs if needed.

**Discussion and Implications:** The ONS (2009-2013) research agenda stresses the need to improve the capacity of clinicians to screen, assess, and deliver effective interventions and optimize oncology nursing care quality and outcomes (p.4) and to "investigate methods to exploit technology and system redesign to link screening, assessment, interventions, and outcomes (p.7). Data from this study will inform additional research and supportive program planning that will address these high priority needs.

## #120

### PROMOTING HEALTH LITERACY IN NURSING PRACTICE: STRATEGIES AND TOOLS FOR MAKING PATIENT EDUCATION DOCUMENTS PATIENT-FRIENDLY.

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**Objective:** To provide strategies and tools for nurses to use in the development and evaluation of patient education documents.

**Topic Significance and Study Purpose, Background, and Rationale:** In the US, nearly 77 million adults have basic or below basic health literacy skills and only 12% have proficient health literacy. Health literacy is "the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions." For patients facing life-threatening diseases such as cancer, decisions regarding complex procedures like hematopoietic cell transplantation (HCT) can be a challenge. Stress and cognitive effects of chemotherapy and radiation can impact patients' ability to understand complicated health information such as research outcomes. Therefore, it is imperative for nurses to utilize patient-friendly communication strategies designed to maximize comprehension.

**Methods, Intervention, and Analysis:** A framework was developed for creating patient-friendly summaries of HCT research articles that implement plain language recommendations. Evidence-based plain language principles were applied to abstracts of published research on HCT. Principles included: organizing the information so that the most important points came first; breaking complex information into easy to understand paragraphs; using simple language and defining technical terms; and using the active voice.

**Findings and Interpretation:** The Flesh-Kincaid readability test was used to assess reading level and a suitability assessment of materials (SAM) was utilized to evaluate the degree of user friendliness. The SAM is a commonly used set of questions to evaluate suitability of health information materials. SAM evaluates six factors: content, literacy demand, graphics, layout and type, learning stimulation and motivation, and cultural appropriateness. Finally, a committee of patients and advocates (N = 9), were invited to review the abstracts and provide feedback. Their feedback was then incorporated into the final development of the patient-friendly summaries.

**Discussion and Implications:** Patients facing life-threatening diseases and complex treatment options benefit from simple, basic and easy to understand health information. Health literacy principles maximize patient comprehension and acceptance of information by applying best practices. Helping patients comprehend complex health information reduces the risk of negative outcomes and is an optimal approach to patient-centered care. Effective communication is an essential component of nursing practice and key to helping patients achieve optimal health status. Nurses can be powerful advocates for health literacy in the development and utilization of patient education resources.

## #121

### SUCCESS AT HOME STARTS IN THE HOSPITAL: TRANSITION DAY.

Brianna Biggins, RN, BSN, OCN®, Kelsey Skogen, RN, BSN, Molly Henneberry, RN, BSN, Rhonda Gradwohl, RN, MSN, and Jeannine Brant, PhD, APRN, AOCN®, all at Billings Clinic, MT

**Objective:** Introduce a novel approach, Transition Day that identifies opportunities to improve the discharge process and

strategizes ways to prevent patients from being readmitted to the oncology acute care setting.

**Topic Significance and Study Purpose, Background, and Rationale:** One in five Medicare patients is readmitted within 30 days of hospital discharge, costing the nation over 17 billion dollars annually. Heart failure, acute myocardial infarction, and pneumonia are among the common diagnoses examined in which readmission is a problem; however studies that include oncology patients are limited. The lack of an optimal discharge process is commonly linked to readmission. This led to the initiation of a quality improvement project, to review discharge processes and identify potential areas for improvement.

**Methods, Intervention, and Analysis:** A nurse-led team was formed, which used lean six-sigma tools to review the discharge process, identify causes to discharge delays, and formulate strategies to begin discharge teaching prior to the day of discharge. Common reasons for delayed and suboptimal discharge included lack of medication reconciliation, lack of home oxygen preparation, and lack of patient readiness related to self-care needs. A targeted discharge date and Transition Day were created to increase patient/family preparedness for discharge, allow for early recognition of potential discharge delays, and expedite the time it takes to transition the patient to the home environment.

**Findings and Interpretation:** Patients have responded favorably to the transition day process. As one patient reported, I'm glad I learned how to give my shot the day before I left. I wouldn't have been comfortable at home if I hadn't practiced it a couple of times in the hospital. The team will continue to track patient satisfaction and readmission rates, which will be reported at the podium or poster session.

**Discussion and Implications:** Oncology nurses play a key role in the successful transition of patients from acute care to the home setting. Implementing a process to promote earlier and more interactive patient education may better prepare patients and caregivers for home care responsibilities and prevent avoidable readmissions. Oncology nurses from other hospitals can successfully take this program and adapt it to their setting.

## #122

**THE SCOPE AND SEVERITY OF WORK-PLACE FATIGUE AT AN NCI-DESIGNATED CANCER CENTER.** Morris Magan, PhD, RN, Clara Beaver, MSN, RN, AOCNS®, ACNS-BC, and Suesanne Suchy, MSN, RN, AOCNS®, ACNS-BC, all at the Karmanos Cancer Center, Detroit, MI

**Objective:** Participants will be able to describe the scope and severity of both mental and physical fatigue experienced by nursing personnel working at a NCI designated Comprehensive Cancer Center.

**Topic Significance and Study Purpose, Background, and Rationale:** Work-place fatigue is common among occupations that have prolonged work hours, rotating shifts, night-time work hours, inadequate time for rest during work, and insufficient time for recovery between shifts, all of which are characteristic of the nursing profession. Available evidence suggests that work-place fatigue poses a substantial threat to patient safety. However, little is known about work-place fatigue among nursing personnel working in an NCI designated Comprehensive Cancer Centers. Moreover, the extent to which work-place fatigue affects nursing personnel working in ambulatory care settings is virtually unknown. The purpose of this study was to describe the scope and severity of work-place fatigue among nursing personnel working in the inpatient and ambulatory care settings of an NCI designated CCC located in the Midwest.

**Methods, Intervention, and Analysis:** A descriptive correlational design was used. With IRB approval, a convenience sample of nursing personnel (N = 203) was surveyed. Using 10-point Likert-type scales, participants self-rated their real-time levels of

physical and mental fatigue while at work. In addition, participants recorded the actual number of hours worked at the moment they completed the fatigue scales.

**Findings and Interpretation:** A majority of respondents (54.5%) rated themselves high (> 5 on a 10 point scale) on physical fatigue whereas 62.4% self-rated high on mental fatigue. Among inpatient personnel 59.3% self-rated high on physical fatigue and 61.5% self-rated high on mental fatigue. Among ambulatory care personnel, 44.8% self-rated high on physical fatigue and 64.2% self-rated high on mental fatigue. In the aggregate, self-ratings of mental fatigue severity (m = 5.39) were significantly (t201 = 32.17, p < 0.001) higher than self-ratings on the severity of physical fatigue (m = 4.92). Both physical and mental fatigue correlated significantly (p = 0.002) with hours on duty. Mean levels of fatigue did not differ significantly across shifts. These results suggest that severe physical and mental fatigue are problematic for most nursing personnel whether working in inpatient or outpatient cancer settings.

**Discussion and Implications:** To minimize risks to patient safety, nursing personnel need to learn about and employ valid fatigue countermeasures. Further work is needed, across settings, to determine to what extent workplace fatigue is actually associated with patient harm.

## #123

**NURSES' PERCEPTION OF PATIENT ROUNDING.** Kathleen Neville, PhD, RN, Kean University School of Nursing, Union, NJ; Kristen Lake, MS, RN, PVVN, Danielle LeMunyon, MS, RN, PVVN, Darilyn Paul, MS, APN, ACNS-BC, CCRN, and Karen Whitmore, MS, RN-BC, CWS, all at Somerset Medical Center, Somerville, NJ

**Objective:** At the conclusion of the presentation, nurses will demonstrate an understanding of the practice of patient rounding.

**Topic Significance and Study Purpose, Background, and Rationale:** The practice of routine rounds has traditionally been a standard practice in both nursing and medicine. Rounding has re-emerged as a standard practice initiative among nurses in hospitals to promote safe, quality care in health care delivery systems. Patient's perception of excellence in care is based on the perceived availability and visible presence of nurses. The practice of rounding has been associated with a decrease in call lights and falls, increased patient satisfaction and safety, and quieter nursing units. While the conduct of patient rounding in hospital settings is increasingly becoming standard practice, continued controversy regarding its use in nursing exists. Due to a dearth in evaluation to determine staff nurses' perceived value, beliefs, and attitudes towards the practice of rounding, the Nurses' Perception of Patient Rounding Scale (NPPRS) was developed.

**Methods, Intervention, and Analysis:** A descriptive exploratory design was used. A newly constructed questionnaire, the Nurses' Perception of Patient Rounding Scale, a 42-item scale in five-point Likert format was developed to gain an understanding of nurses' perceptions of rounding. Using a convenience sampling approach, participants completed the anonymous survey with additional qualitative items geared towards identifying challenges, barriers and facilitators towards this increasingly mandatory practice. Content validity was established. Through factor analysis, Cronbach alpha coefficients determined the NPPRS and its three subscales to be reliable.

**Findings and Interpretation:** Means scores reflected that nurses perceived rounding to be beneficial; however, statistically significant differences were noted in that nurses perceived rounding to be a greater benefit for their patients, rather than to themselves. Qualitative inquiry identified rounding as valuable, with the factors of skill mix, time, interprofessional collabora-

tion, and professional sense of autonomy identified as challenges to provision of care.

**Discussion and Implications:** The findings of this study identify the need to explore the challenges to the practice of rounding and to engage nursing staff in redesigning and evaluating workflow to facilitate successful patient rounding to maximize nurse and patient benefits.

## #124

**REVITALIZING PATIENT EDUCATION ACROSS THE CONTINUUM IN HEMATOLOGIC MALIGNANCY AND BLOOD AND MARROW TRANSPLANT PATIENTS.** Karie Brandmeier, MSN, RN, AOCNS®, Jean Esselmann, RN, Stacie Lahr, RN, Lori Jemison, RN, ONC, Rebecca Martin, BSN, RN, ONC, and Emily Richter, BSN, RN, ONC, all at Froedtert Hospital, Milwaukee, WI

**Objective:** To promote standardization, assure consistency of content, and provide current evidence based patient education throughout the oncology service line.

**Topic Significance and Study Purpose, Background, and Rationale:** Over the past five years, the Division of Hematological Malignancies experienced a 56% increase in total number of hematologic patients seen and a 55% increase in transplants performed, which has resulted in an increasingly complex organization for patients and providers. As research has proven, patients have more positive outcomes when treated and educated with evidence based standards and guidelines. Therefore it was essential to eliminate inconsistent education sources, improve knowledge and usage of supplemental education and renovate outdated institutional patient education materials. In order to enhance adherence to institutional recommendations, a disease-specific taskforce was formulated which consisted of clinical nurses, specialists, educators, nurse coordinators and registered nurses.

**Methods, Intervention, and Analysis:** The process for revitalizing patient education occurred in multiple phases including compiling, reviewing and approving supplemental education, standardizing basic oncology education and reviewing and updating current transplant education. During this process, the taskforce reviewed the literature and other currently used BMT education materials and identified many gaps in pre and post-transplant care information. The Division of Hematological Malignancies guidebook was then formulated and sent to educational services to confirm adherence to health literacy standards. Physicians were provided the opportunity to review and approve the information. Staff education was completed at "Onctober Fest", where the taskforce educated oncology staff regarding changes. In order to determine effectiveness of standardized patient education, alternative evaluation tools are being considered to determine true impact; although existing tools, such as patient and staff satisfaction surveys could serve as a pre and post evaluation method.

**Findings and Interpretation:** Initial analysis after education was completed was through word of mouth. Many staff members found the changes favorable. Continued analysis will be completed through ongoing taskforce meetings, consistent communication and soliciting feedback from staff.

**Discussion and Implications:** Providing standardized education removes confusion and variability regarding information provided to patients. Standardization of patient education can be the foundation for curriculum of future patient education classes. Also, this process can be used as a guideline to standardize education within other medical oncology disease groups across cancer networks; providing an opportunity to analyze the correlation between enhanced education, readmission rates and length of stay.

## #125

**A PEER TO PEER APPROACH TO SUPPORTING ONCOLOGY NURSES; IS IT FEASIBLE?** Diana Tam, BSN, RN, OCN®, Elizabeth Cruz, BSN, RN, OCN®, Penelope Damas-kos, BSN, RN, OCN®, and Pamela Ginex, EdD, RN, OCN®, all at Memorial Sloan-Kettering Cancer Center, New York

**Objective:** Our objective is to determine if a Peer to Peer Support Program is feasible in an outpatient setting due to the impact of compassion fatigue and burnout in oncology nurses.

**Topic Significance and Study Purpose, Background, and Rationale:** Literature has shown that oncology nurses experience high rates of compassion fatigue and burnout (CF andB). A survey conducted at our institution confirmed that outpatient oncology nurses were experiencing CF andB. As a result of this finding an educational series focused on maximizing nurses coping strategies was developed by an interdisciplinary work group. A survey post-series found that attendees wanted continued support regarding CFandB. A multidisciplinary team worked to develop a Peer to Peer Support Program (PPSP) that is currently being tested at our institution.

**Methods, Intervention, and Analysis:** This PPSP is being tested in a feasibility study that includes a convenience sample of 10 pairs of nurses from the Outpatient Gastrointestinal/Melanoma/Sarcoma unit. Prior to intervention, the nurses will receive education on the purpose of the study and the concept of resilience. The intervention will occur over a five-month period, with each pair scheduling a peer to peer meeting away from their work environment, twice a month, for one hour. Discussion topics and questions will be given to the pairs each month, which are based on literature that looks at the development of personal resilience in nurses. These topics are; building nurturing professional relationships and networks, maintaining positivity, fostering emotional insight, life balance and spirituality, and becoming reflective about the content of one's clinical practice (Jackson, 2007). This will help structure their monthly discussion and will focus on the impact of their work rather than the everyday stressors of the job. Qualitative feedback will also be gathered each month. Outcome measures include validated instruments that measure CFandB and resilience. These measures will be administered at baseline and at 5, 8, 10 and 12 months post-study to determine any lasting effects.

**Findings and Interpretation:** The program will be considered feasible if nurses are able to attend 80% or more of the peer to peer sessions. Secondary objectives of change in resilience, CFandB will be measured by a pretest-post test design.

**Discussion and Implications:** This study is still ongoing and baseline data will be presented. If determined feasible, the findings could be used for future studies to determine an effective program to combat compassion fatigue and burnout in oncology nurses.

## #126

**PATIENT NAVIGATION: A SYSTEMS-LEVEL APPROACH TO NURSING PRACTICE.** Jackie Foster, MPH, RN, OCN®, Ellen Denzen, MS, Heather Moore, MS, Lensa Idossa, MPH, Jill Randall, MSW, LICSW, and Elizabeth Murphy, MSW, LICSW, all at the National Marrow Donor Program, Be The Match, Minneapolis, MN

**Objective:** To describe a process for applying systems-level assessment and planning to patient navigation services.

**Topic Significance and Study Purpose, Background, and Rationale:** Patient navigation (PN) is an evidence-based process aimed at addressing healthcare disparities and facilitating timely access to quality care for hematopoietic cell transplantation (HCT) and cancer patients from diagnosis through survivorship.



Nurses often serve as patient navigators, although a licensed social worker or trained lay navigator may also perform this service. No single PN model fits the needs of all medical settings or systems. When implementing a PN program, it is important for nurses to assess the needs of the audiences served and tailor the intervention to those needs. The George Washington Cancer Institute (GWCI) provides a systems-level approach that nurses can use to apply PN principles to their program or organization.

**Methods, Intervention, and Analysis:** Following the GWCI model, an assessment of an existing PN program was conducted to: 1) identify the need; 2) determine program structure; and 3) describe the program plan. Patient education, advocacy and support services were inventoried and organized by intended audience along the HCT care continuum. Feedback was elicited from patient surveys and semi-structured interviews of staff to understand how staff roles support PN.

**Findings and Interpretation:** Through this process, gaps in services were uncovered for: 1) the pre-HCT phase of the cancer care continuum; 2) adolescent and young adult patients; and 3) patients with limited English proficiency. A major strength discovered was services that fill gaps at the medical system level, such as post-HCT resources and caregiver support. The process also helped clarify staff roles and responsibilities regarding PN services. Findings were utilized to enhance the PN program plan and close gaps in services. Finally, areas for improvement in evaluation were identified, resulting in a more comprehensive plan to assess whether process and outcome objectives are met.

**Discussion and Implications:** Establishing PN as a systems-level process is relevant to all organizations aiming to improve access to and timeliness of care for HCT and cancer patients. Nurses can apply the GWCI process to improve care, engage staff, and enhance program and evaluation planning. By aligning PN services across medical settings and advocacy organizations, patients are less likely to experience barriers to care during transition periods in the HCT and cancer care continuum.

## #127

**A NURSING MODEL TO SUCCESSFULLY SUPPORT SURGICAL ONCOLOGY PRACTICES IN MULTIPLE LOCATIONS.** Keri Wagner, RN, NP, Memorial Sloan-Kettering Cancer Center, Commack, New York

**Objective:** To outline the process behind establishing a nursing care model to support a multi-location surgical practice.

**Topic Significance and Study Purpose, Background, and Rationale:** In an effort to increase patient access, multi-location surgical practices were established in regional settings. The goal was to offer a variety of services closer to the patient's home while balancing space constraints and staffing. To accomplish this, surgeons from our NCI designated comprehensive cancer center, came to the regional sites one day every other week. This allowed multiple services to utilize the same clinical space on different days. When staffing these practices we were challenged with offering the same level of support and continuity of care available at the main hospital.

**Methods, Intervention, and Analysis:** Initially, patient calls were routed to the surgeon's main office. This created role confusion and fragmented care as these nurses were unfamiliar with the regional patients. Routing the calls to the regional office was also challenging, as the nurses were assigned to other practices when the surgeon was not on site. As we added more surgical services, we needed to build a model to provide continuity of care and support the staff nurse. It was decided that every two surgeons would share one part time nurse. The nursing days were distributed to allow for coverage every day. This model covered most but not all aspects of care. The missing piece was the Advanced Practice Nurse. Once APNs were added patients were afforded a full complement of coverage despite their surgeon being on site two days a month.

**Findings and Interpretation:** To create cohesive coverage the traditional idea of "my practice" needed to be expanded. Each network team covered two practices and some portion of support services. Support services included a variety of nursing visits and pre-surgical testing as well as a team approach to triage calls. Teams were cross trained to cover each other, thus adding to the experience of the team, value of the service and comprehensive management of the patient.

**Discussion and Implications:** Deciphering the skill mix needed to support multi-site surgical practices allows you to capitalize on the increased desire to utilize ambulatory care for a variety of services. This successful model allowed for increased patient access, increased patient and staff satisfaction and the opportunity to create specialty care nursing teams.

## #128

**"THE CHEMOTHERAPY TUBING MAPS:" CHALLENGES FOR STANDARDIZATION OF HOW TO SET UP CHEMOTHERAPY TUBING BY USING PRINCIPLES.** Massey Nematollahi, RN, MSN, and Tomoko Uemoto, RN, CON(c), both at Stronach Regional Cancer Centre, Newmarket, Canada

**Objective:** To ensure and improve safe practice by standardizing the chemotherapy tubing across the organization, and other centres across the region.

**Topic Significance and Study Purpose, Background, and Rationale:** IV tubing set up for chemotherapy administration can be as complicated as a subway map in a big city due to increased complexity and volume of recent combination chemotherapy / bi-therapy protocols. Chemotherapy nurses may have to draw a map before setting up the IV tubing for each complicated protocol. To date, there is little direction in which nurses can follow in the setup of this map. Our systemic suite at Stronach Regional Cancer Centre in Newmarket, Ontario, has been operating for four years by Chemotherapy-Certified Oncology Nurses who previously worked in multiple oncology settings. Our problem was ensuring consistent practice among all nurses in the IV tubing setup of complicated protocols. We were motivated to standardize the chemotherapy tubing maps for patient / staff safety and to maximize the effectiveness of chemotherapy through our consistent practice.

**Methods, Intervention, and Analysis:** Principles were generated as guidelines for the consideration of minimizing exposure to biohazard drugs, drug compatibility, special requirements, and risk / symptom management. Soon after, the new tubing maps on each protocol have been developed and implemented strictly from the principles as a pilot project. All Chemotherapy-Certified Oncology Nurses in our unit have been trained to set up the tubing in the same way by using the combination of these principles and the Chemotherapy IV tubing maps.

**Findings and Interpretation:** As a result, our consistent and higher-level practice has improved the quality and safety in chemotherapy treatment in our centre significantly.

**Discussion and Implications:** This poster presentation will introduce our challenging journey of the standardization and explain the concept of principles and IV tubing maps. This innovation has a great potential for the consistent practice without borders.

## #129

**NURSING TRANSFORMATION IN THE POST-OPERATIVE CARE OF THE SURGICAL ONCOLOGY HEAD AND NECK PATIENT.** Karen McGarry, BSN, RN, CORLN, Deb Virant, BSN, RN, and Vickie Thomas-Januska, BSN, RN, all at University Hospitals Case Medical Center, Seidman Cancer Center, Cleveland, OH

**Objective:** Describe the process for implementing and evaluating a practice change for providing immediate post-operative

care to complex head and neck cancer patient on a surgical oncology nursing division.

**Topic Significance and Study Purpose, Background, and Rationale:** The complex head and neck (HN) cancer patient requires expert nursing care in the immediate postoperative period due to altered airway and reconstruction with tissue and an arterial free flap. Traditionally, these patients are cared for postoperatively in the surgical intensive care unit (SICU) for one to three days. The purpose of this project was to design, implement, and evaluate a novel model of nursing care that would directly transfer these patients from the post-anesthesia care unit (PACU) to the surgical oncology nursing division. The goals of this project were to: (1) decrease length of stay, SICU days, and readmission rate; (2) improve utilization of beds; and (3) avoid delays in patient/family education.

**Methods, Intervention, and Analysis:** Planning for this transformation involved an interdisciplinary team of nurses, surgeons, and personnel from the quality, admitting, and environmental service departments. Specialized patient care rooms with telemetry, continuous pulse oximetry, suction/oxygen outlets, and windows to allow increased visibility were designed. Specialized staff training and education, including emergency transfer procedures, occurred over three months. Staffing was increased to allow for the reduced nurse-patient ratio. The HN carepath was revised to reflect the changes.

**Findings and Interpretation:** In the first year, 102 patients received their immediate post-operative care on the surgical oncology nursing division. The average length of stay was 9.72 days (SD 4.12), which was similar to the previous expected stay. The percent of patients utilizing the SICU decreased from 29.08% to 8.21%. The 30-day readmission rate did not change. Patient education began on postoperative day one. Postoperative complications were within expectations and managed by the nurses; four patients were transferred to the SICU for non-surgical related issues.

**Discussion and Implications:** Challenges included extensive time requirements for staff education, need for additional staff on every shift, and the increased patient acuity level requiring monitoring and interventions. Oncology nurses took ownership of these patients from admission to discharge, providing continuity of care and allowing for early engagement of patients and families in education and discharge planning. Nurses, with their expertise in surgical oncology and patient education, were essential in all phases of this project to assure skillful and humanistic care to the complex HN patient.

### #130

**DEVELOPING A CULTURE OF SAFETY AND SATISFACTION THROUGH CERTIFICATION.** Tracy Weddle, MS, RN, CNS, OCN®, Sharp Memorial Hospital, San Diego, CA

**Objective:** Describe the interventions used to increase oncology certification to over fifty percent in an inpatient oncology unit.

**Topic Significance and Study Purpose, Background, and Rationale:** From the Oncology Nursing Society's Position Statement on Certification: Certification benefits patients and their families, nurses, and employers. Oncology nursing certification validates that nurses have met stringent requirements for knowledge and experience and are qualified to provide competent oncology care. In an effort to enhance patient safety, patient satisfaction, professional nursing practice and Magnet status, an inpatient oncology unit created a strategy to increase the percentage of Oncology Certified Nurses (OCN). In 2009, 16% of eligible nurses were OCN. In 2010, a three year plan was developed to achieve 50% certification.

**Methods, Intervention, and Analysis:** The Clinical Nurse Specialist began by raising awareness on the value of certifica-

tion. Weekly review classes were offered. Clinical knowledge learned in the classes was disseminated via peer to peer interactions in clinical situations thereby improving patient care and increasing the perceived value of certification knowledge. Reward and recognition were emphasized with each nurse's initial certification. Photo displays, banners, hospital wide celebrations, scrub jackets and reimbursement for exam certification also incentivized the nurses. As more nurses became certified, interest in certification also increased. Each newly certified nurse encouraged their peers to become certified. This gradually led to a change in the culture of the unit. Nurses no longer talked about if they would take the exam but when they would take the exam.

**Findings and Interpretation:** In 2013, 58% certification was achieved. From the Culture of Patient Safety survey, overall perception of patient safety ranked above the 90th percentile. Press Ganey patient satisfaction ranked at the 98th percentile and the increased certification contributed to Magnet redesignation. Certified nurses verbalized increased perception of their competence in caring for the oncology patient population. The efforts to increase certification contributed to positive outcomes and a culture of nursing professionalism.

**Discussion and Implications:** The implications for oncology nursing are tremendous. Emphasizing the importance of professional certification and supporting nurses to achieve their certification results in improved outcomes and satisfaction

### #131

**EDUCATIONAL INTERVENTION TO INCREASE PANCREATIC CANCER PATIENT PREPAREDNESS FOR STEREOTACTIC BODY RADIATION.** Kathryn Han, BSN, RN, Marian Richardson, DNP, RN, Nicole Mills, DNP, RN, Kai Ding, PhD, DABR, and Joseph Herman, MD, all at the Johns Hopkins Hospital, Baltimore, MD

**Objective:** The objective of this retrospective study was to evaluate the impact of an educational intervention to increase pancreatic cancer patient's preparedness for stereotactic body radiation treatment.

**Topic Significance and Study Purpose, Background, and Rationale:** Stereotactic body radiation (SBRT) is a new technology to treat pancreatic cancer (PC) in which high doses of radiation are given in fewer fractions. Proximity of the pancreas to the small bowel and tumor movement caused by breathing present unique difficulties. Radiation to the small bowel is associated with late stenosis, ulceration, bleeding, and perforation. To limit tumor movement, an active breathing coordinator device (ABC) is employed during SBRT. However, patients had difficulty implementing the breath hold techniques, leading to longer treatment times, delayed treatment of other patients, and patient and staff frustration. The purpose of this retrospective study was to evaluate the impact of an educational intervention to increase patient preparedness for treatment.

**Methods, Intervention, and Analysis:** An intervention consisting of an ABC screening form, patient education materials, and an education plan was developed by a multidisciplinary team. At consultation, nurses completed the ABC screening form and provided instructions for practicing the ABC procedure at home. Records of PC patients treated pre-intervention and post-intervention were reviewed. Patient characteristics (age, gender, pathology, SBRT dose, number of fractions, and number of beams) were analyzed to determine homogeneity of groups. Radiation beam on times during the first radiation fraction were recorded (n=11 in each group) and T-tests were used to compare groups.

**Findings and Interpretation:** There was no significant difference between the treatment times of the two groups ( $p > 0.05$ )

because of the small sample size and the number of variables in the treatment set up. Duration of simulation could be a more accurate representation of the effectiveness of the intervention, however this was not measured. Staff reported that intervention patients arrived at both simulation and treatment better prepared for the ABC procedure. Intervention patients were able to maintain their breath hold with less coaching.

**Discussion and Implications:** Pre-procedural education is an important component of ABC treatment for PC patients. Future research should examine patient and staff satisfaction with the education, and duration of simulation to evaluate effectiveness of intervention. This educational intervention has become the standard of care and will soon be made into a video for patients to review.

### #132

**TALKING ABOUT SEX: IMPROVING NURSING KNOWLEDGE AND COMFORT.** Rebecca Steed, MSN, WHNP-BC, Joy Jarrett, RN, BSN, OCN®, Bridgette Thom, RN, BSN, OCN®, and Joanne Frankel Kelvin, MSN, RN, AOCN®, all at Memorial Sloan-Kettering Cancer Center, New York

**Objective:** To describe a process to improve nursing knowledge and comfort when educating patients about sexual activity during cancer treatment

**Topic Significance and Study Purpose, Background, and Rationale:** Sexuality is an important aspect of quality of life. While patients with cancer can be sexually active during treatment, they must take precautions to do so safely. Nurses are in a unique role to educate patients on safe sexual practices, but numerous studies highlight their reluctance to discuss sexuality with patients, for reasons including lack of knowledge and personal discomfort. A nurse-led multidisciplinary group collaborated to develop resources to overcome these challenges and improve practice.

**Methods, Intervention, and Analysis:** A systematic process was used. The group 1) collected baseline data on ambulatory nurses knowledge, attitudes, and practices related to patient education on sexual activity; 2) surveyed other institutions to identify best practices; 3) reviewed and summarized evidence on contraceptive options, risks of infection from sexual activity, and risks to partners from exposure to chemotherapy in body fluids; 4) developed clinical practice guidelines based on evidence and expert consensus; 5) created patient education cards; and 6) educated staff through nursing grand rounds and unit-based inservices on how to implement the guidelines in practice. A follow-up survey was sent to all ambulatory nurses to evaluate the impact of this initiative.

**Findings and Interpretation:** Surveys were completed by 258 nurses at baseline and 197 nurses at follow-up. Within the follow-up group, 70 reported attending an inservice. When compared to baseline responses, more nurses who attended an inservice felt they received adequate training regarding safe sexual practices (57% vs 15%) and knew where to find information to educate patients (86% vs 33%). In addition, more felt knowledgeable (67% vs 36%) and comfortable (66% vs 57%) discussing contraceptive options.

**Discussion and Implications:** Although a systematic approach can be effective in improving education of patients by nurses on sexual activity during cancer treatment, a key challenge is how to best disseminate information so nurses are aware of and use available resources. To overcome this challenge, a web-based learning module was developed. Beginning 12/2013, module completion will be required of all new ambulatory nurses, and the module will be available to current staff to access when convenient. Nurse-led multidisciplinary team initiatives using this same systematic approach can be effective in improving challenging areas of practice.

### #133

**COMMUNICATING BEYOND WORDS: IMPLEMENTING A COMMUNICATION TASK FORCE TO IMPROVE PATIENT SAFETY.** Morie Davis, RN, BSN, OCN®, Natasha Ramrup, RN, MSN, OCN®, and Karshook Wu, RN, MSN, OCN®, all at Memorial Sloan-Kettering Cancer Center, New York

**Objective:** One of the 2013 national patient safety goals established by JCAHO was to improve communication amongst staff. A Communication Taskforce was implemented as an impetus to address this goal.

**Topic Significance and Study Purpose, Background, and Rationale:** The focus was to improve communication between shifts and amongst all staff. Communication is an important part of Relationship-Based Care, our professional practice model that focuses on three critical relationships, one being relationship amongst our colleagues. The nurse/PCT team is on the frontline of patient care. Therefore, it is our responsibility to establish and maintain healthy interpersonal relationships. Communication is of utmost importance in meeting the needs of the high acuity patients on this disease management team (DMT).

**Methods, Intervention, and Analysis:** The members of the communication taskforce identified issues and concerns that were encountered. Taskforce chairpersons acted as mediators to resolve communication issues and refer to leadership, when necessary. The primary concern identified was limited communication amongst staff and inter-shifts. Other issues recognized were that the PCT coordinator role was not clearly defined and that there were many assignment disagreements. Most importantly, the floor lacked adequate coverage during inter-shift, a period that was found by the IOM report to have the most patient falls.

**Findings and Interpretation:** Many positive outcomes that were accomplished include the buddy system and inter-shift report. Partners were assigned to PCTs to help reduce the stress of the workload. Additionally, a set of guidelines was developed to characterize the PCT coordinator role. The PCT coordinator is responsible for creating the assignments, breaks and making adjustments based on the dynamics of the unit. This role became more successful when both the PCT and RN coordinator were facilitating care. Finally, to improve inter-shift workflow, PCTs make rounds while nurses are conducting bedside hand-off, ensuring maximum coverage on the unit.

**Discussion and Implications:** In evaluating this project, we recognized that improving communication is an ongoing process. Interaction and cohesiveness has increased significantly amongst staff and inter-shift on the unit. This DMT is committed to sustaining a culture of professional communication and respect in the pursuit of delivering excellent patient care. In establishing this communication taskforce, we have opened a continuous line of communication that will be maintained over time.

### #134

**GI NAVIGATOR TEAM FORMALIZES CLINICAL PATHWAYS TO IMPROVE PATIENT CARE AND CLINICAL OUTCOMES.** Despina Seremelis-Scanlon, RN, BSN, CHPN, OCN®, Norma Fenerty, BSN, RN-C, OCN®, and Catherine MacFarland, BSN, RN-C, OCN®, all at Fox Chase Cancer Center, Philadelphia, PA

**Objective:** Participants will be able to list three ways nurse navigators can improve the patient experience.

**Topic Significance and Study Purpose, Background, and Rationale:** Background Fox Chase Cancer Center (FCCC), an NCI designated Cancer Center, formalized a Nurse Navigation (NN)



program in April 2010 and over a 3.5 year period has grown to encompass 6 disease sites including: Breast, Gynecologic Oncology, Thoracic, Head and Neck, Genitourinary and Gastrointestinal. Each team focuses on supporting the needs of their disease specific population by decreasing barriers to care, streamlining access to care and coordinating care along the cancer continuum. The GI Nurse Navigators link with all new patients coming to FCCC, and provide a clinical review, education and care coordination beginning with the first appointment. With the uniqueness of each disease site, the GI NN team led the process in clinical pathway development/algorithms to assure timeliness and appropriateness of care. The NNs lead the multidisciplinary team to develop these tools that would impact care coordination, and clinical outcomes for patients. The formalized pathways consisted of Pancreas, Rectal and Esophageal malignancies.

**Methods, Intervention, and Analysis:** Methods Navigators led multidisciplinary team meetings for each organ site and focused discussion on clinical pathway development. The teams included GI nurse navigators, medical oncologist, surgical oncologist, radiation oncologist, gastroenterologist and service line administrator. Mapping of the current processes, NCCN guidelines, and quality drivers led to the development of the hardwired clinical pathways.

**Findings and Interpretation:** Results Algorithms were developed depicting the clinical pathway of each complex cancer diagnosis including: Pancreas, Rectal and Esophageal. Access to formalized clinical pathways enables the GI NN to streamline patient access and care coordination. These focused team meetings forged a stronger relationship with the GI interdisciplinary team. The team works together, utilizing the clinical pathways as road maps to better patient care coordination, improvement of patient satisfaction and impacting clinical outcomes.

**Discussion and Implications:** Conclusion Clinically appropriate disease specific pathways/algorithms contribute to appropriate care coordination and streamlining of patient care. A focused multidisciplinary team can develop processes to enhance care coordination for complex cancer patients. Outcome measures include: decrease time to first appointments, time to care delivery, and staff and patient satisfaction. This exercise has proven to enhance the patient experience, improve care delivery and impact clinical outcomes.

### #135

**EFFECT ON IMATINIB-RELATED, NON-HEMATOLOGIC, LOW-GRADE ADVERSE EVENTS AFTER SWITCHING TO NILOTINIB IN PATIENTS WITH CHRONIC MYELOID LEUKEMIA IN CHRONIC PHASE: UPDATE FROM THE ENRICH STUDY.** Christine Hopmann, RN, MSN, OCN®, St. Agnes Hospital, Baltimore, MD; Michael Mauro, MD, and Luke Akard, MD, both at Memorial Sloan-Kettering Cancer Center, New York; Javier Pinilla-Ibarz, MD, H. Lee Moffitt Cancer Center and Research Institute, Tampa, FL; and Jorge Cortes, MD, MD Anderson Cancer Center, Houston, TX

**Objective:** Improving low-grade adverse events during CML therapy

**Topic Significance and Study Purpose, Background, and Rationale:** ENRICH assessed changes in imatinib-related, non-hematologic, low-grade adverse events (AEs) upon switch to nilotinib in patients with Philadelphia chromosome positive chronic myeloid leukemia in chronic phase (CML-CP).

**Methods, Intervention, and Analysis:** Patients treated with imatinib 400 mg/day for 3 months experiencing non-hematologic AEs that were persistent (2 months duration or with 3 recurrences with best supportive care) and of grade 1 or 2 severity were eligible. Reverse quantitative polymerase chain reaction was used to monitor response and a short quality of life (QoL) questionnaire

and the MD Anderson Symptom Inventory (MDASI)-CML were used to evaluate patient-reported outcomes following switch from imatinib to nilotinib 300 mg twice daily.

**Findings and Interpretation:** As of data cut-off (November 14, 2011), 47 patients had been enrolled. Thirty-seven patients who completed 3 months of nilotinib treatment had 154 imatinib-related AEs; of these, 103 improved (11 from grade 2 to 1; 92 resolved), 47 were unchanged, and 4 had worsened by 3 months. Nilotinib-related AEs led to dose reductions in 13 patients, of whom 8 re-escalated following AE resolution or reduction to grade 1. Fifteen patients had 34 grade 3 AEs, with no reported grade 4 AEs. There were 19 suspected nilotinib-related AEs (bronchitis; pruritus; rash; arthralgia; dehydration; hypokalemia; hypophosphatemia; pleural effusion; lipase, bilirubin, or blood glucose increases) and 8 nilotinib discontinuations (AEs, n = 6; withdrawal of consent, n = 2). At study entry, 32 patients had a major molecular response (MMR; 3-log reduction of BCR-ABL [BCR-ABL 0.1%IS]) and 18 and 10 patients had a 4-log and 4.5-log reduction in BCR-ABL, respectively. While on nilotinib treatment, MMR, 4-log reduction, and 4.5-log reduction was achieved by an additional 16, 16, and 13 patients, respectively. Over half of 34 evaluable patients reported improved QoL from baseline, both in the previous 24 hours (62%) and in the previous 7 days (53%). Reductions from baseline were also observed in MDASI-CML scores at 3 months (mean reductions, 1.21 [severity; n = 34] and 1.55 [interference; n = 33]).

**Discussion and Implications:** Results from ENRICH showed that CML-CP patients switching to nilotinib experienced improvement in imatinib-related AEs and QoL, with maintenance or improvement in molecular response.

**Underwriting or funding source name:** Novartis Pharmaceuticals Corporation.

### #136

**INCREASING CLINICAL TRIAL ACCRUAL: OUT OF THE BOX STRATEGIES.** Tricia Montgomery, RN, BSN, OCN®, Kathy Wilkinson, RN, BSN, OCN®, and Jeannine Brant, RN, BSN, OCN®, all at Billings Clinic, Montana

**Objective:** Describe strategies and implementation of best practices to increase cancer clinical trial accrual and staff satisfaction in a Community Cancer Center

**Topic Significance and Study Purpose, Background, and Rationale:** Clinical trials are designed to make breakthrough discoveries in the treatment of cancer and its toxicities and advance the science of standard cancer care. But according to the National Cancer Institute, only 3-5% of patients nationwide participate in a clinical trial. Barriers include patient and staff fears and misperceptions regarding clinical trials, lack of time to enroll patients, and lack of an infrastructure to support clinical trial enrollment. Despite these barriers, one Magnet, National Comprehensive Community Cancer Program (NCCCP) organization has been able to implement a nurse-led research program to increase and maintain clinical trial enrollment well above the national average.

**Methods, Intervention, and Analysis:** Using evidence based resources such as the Oncology Nursing Society (ONS) Manual for Clinical Trials Nursing and resources available through the NCCCP, strategies to increase enrollment were employed including: 1) utilization of the nurse navigator program to identify patients for trials at diagnosis, 2) presenting a Study of the Week to physicians weekly at multidisciplinary rounds, 3) creating a Priority List of open studies that can be seen in each exam room by the physicians at the time of patient visits, 4) participation in tumor boards by the research nurses to help identify potential research patients, 5) using telemedicine to reach patients in rural areas, and 6) assigning research nurses to specific disease sites, allowing them to focus on that patient population.

**Findings and Interpretation:** Following the implementation of the accrual strategies, clinical trial enrollment is maintained at 10%. In a survey of work place culture comparing results from 2010-2013, there was an increase in teamwork and coordinated team job satisfaction. Enrollment of minority patients remains a challenge, and further work is needed in this area.

**Discussion and Implications:** With the NCORP redesign at the National Cancer Institute, organizations are increasingly seeking novel strategies to increase clinical trial enrollment. Cancer centers and clinics can easily use the strategies and lessons learned from this organization to reach new clinical trial enrollment goals.

### #137

**CIRCULATING TUMOR CELL NUMBER AS A PROGNOSTIC INDICATOR IN METASTATIC CASTRATION RESISTANT PROSTATE CANCER: THE ROLE OF THE NURSE IN PATIENT CARE AND MANAGEMENT.** Anthony Delacruz, NP, OCN®, Tracy Curley, RN, OCN®, and Gabrielle Arauz, RN, OCN®, all at Memorial Sloan-Kettering Cancer Center, New York

**Objective:** Present an overview of circulating tumor cells (CTCs) in the management of patients with castration-resistant prostate cancer (CRPC) and discuss key concepts and clinical implications and patient counseling.

**Topic Significance and Study Purpose, Background, and Rationale:** The clinician caring for patients with metastatic castration resistant prostate cancer (mCRPC) assesses the potential benefits of treatments and prognosis. Serum prostate specific antigen levels are not consistently a predictor of treatment response or prognosis. The development of a more reliable tumor marker is an unmet need. CTC number has the potential to fulfill this need.

**Methods, Intervention, and Analysis:** Provide an overview of key concepts in understanding CTC number for mCRPC patients. Including: 1) Clinical significance and implication, 2) Interpretation of results, 3) Overview of technology, and 4) Key points to review with patients. The overview contains information from a review of the literature providing evidence based data. Data reviewed supports the importance of baseline CTC number as a prognostic indicator for survival in mCRPC. Prospective data clinically qualified the prognostic significance of baseline CTC and led to the FDA clearance of the CTC assay as an aid for evaluating patients with mCRPC. Additionally, a report was published on an analysis of a randomized, double blind, placebo controlled trial evaluating CTCs as a potential biomarker for overall survival.

**Findings and Interpretation:** CTCs are cells that have broken away from a tumor and flow in the blood stream. Evidence that CTCs in peripheral blood of patients with solid malignancies correlates with clinical outcomes has been accumulated. This information will be presented in a quick reference guide format to allow nurses to have easy access to this valuable information.

**Discussion and Implications:** This technology represents a viable and accessible new tool in managing patients with mCRPC. While favorable changes in CTC count are associated with a better prognosis, this alone cannot guide treatment decisions and prognosis. CTCs used in combination with other testing will help determine a patient's prognosis. Nurses are an essential part of the oncology team involved in the care and management of patients with mCRPC, this information will help guide them in treatment considerations and patient care. The nurse can provide invaluable education about this technology, its clinical relevance and incorporate this knowledge into their practice. As technology changes, nurses will continually need to be educated on the significance of these changes for their clinical practices.

### #138

**BIOSIMILARS: CONSIDERATIONS FOR ONCOLOGY NURSING PROFESSIONALS.** Kelley Mayden, MSN, FNP, AOCNP®, Southwest Virginia Cancer Center, Norton, VA; Paul Larson, MSN, NP, and Danielle Geiger, MSN, NP, Vermont Cancer Center, Burlington; and Holly Watson, MS, ANP-BC, Amgen Inc., Thousand Oaks, CA

**Objective:** Review biosimilar guidelines, differentiate between biosimilars and generic drugs and between biosimilars and their reference products, and describe the need for nurse and patient education.

**Topic Significance and Study Purpose, Background, and Rationale:** Biosimilars may become available in the US in the near future and are hoped to lower healthcare costs by stimulating price competition for biologics. Biosimilars of a number of biologics for cancer treatment (e.g., bevacizumab, cetuximab, rituximab, and trastuzumab) and supportive care (eg, epoetin alfa, filgrastim, pegfilgrastim) are being developed as patents expire. It is important for nurses who administer biologics to be informed about these emerging agents, including their properties and potential impact on clinical practice.

**Methods, Intervention, and Analysis:** Review the current literature and US biosimilar guidelines and report key nursing implications.

**Findings and Interpretation:** Generics are identical copies of small-molecule drugs that are synthesized by predictable chemical reactions. Biosimilars are not generics; they are highly similar, but not identical, to a previously approved biologic reference product with no clinically meaningful differences in safety, purity, or potency from their reference product. Given that biologics are large, complex proteins, they are sensitive to storage and handling conditions and may cause immune reactions in patients. Biologics are manufactured using living cells, and because manufacturers use unique cell lines and production processes, a biologic cannot be copied exactly by another manufacturer. Consequently, biosimilars may have subtle structural differences from their reference products, or such differences may emerge over time as the respective manufacturing processes evolve. Postapproval safety monitoring will be important to attribute AEs to the correct product, with efficient AE tracing depending in part on the biosimilar naming convention selected by federal regulators. Current guidelines will allow some biosimilars to be designated interchangeable with the reference product if certain criteria are met, allowing substitution without the intervention of a prescriber. Thus, precise recordkeeping by nurses will be critical for effective safety monitoring.

**Discussion and Implications:** Nurses will play an important role in incorporating oncology biosimilars into patient care as they become available. Knowledge of biosimilar-related principles and policies should be included in learning needs assessments and incorporated in educational planning. Nurses will need comprehensive continuing education on this rapidly developing class of biologics to ensure safe practice and effective patient education, particularly regarding any differences in delivery methods, the potential for immune reactions, and the importance of documenting product substitutions.

### #139

**SENTINEL LYMPH NODE MAPPING SUCCESS IN EARLY STAGE BREAST CANCER.** Giustina Brechbill, CNS, AOCN®, CBEC, and Linda Devine, RN, BSN, CBEC, both at Aultman Hospital, Canton, OH

**Objective:** Nurses take the lead in measuring quality. What is the SLN mapping success rate for Aultman breast surgery

compared against the standard? Is improvement needed in our mapping techniques?

**Topic Significance and Study Purpose, Background, and Rationale:** An unusual amount of (SLN) mapping failures were noted in the summer of 2012 by the Breast Cancer Nurse Navigator. The Navigator, in her patient advocate role, raised the question during the weekly Breast Multidisciplinary Conference. A study of the SNL mapping success rate was requested by the Medical Director of the Cancer Program to be reported to the Breast Program Leadership. Breast cancer prognosis and treatment are determined by the stage of disease at diagnosis. Stage is dependent on the size of the tumor and if there is spread of the disease to the lymph nodes and other organs. The surgeon identifies and removes the first lymph node(s) that drain the breast; the sentinel lymph node (SLN). If the SLN are found to be negative for cancer in the operating room, a full axillary node dissection is not completed because the axillary nodes are unlikely to be involved with cancer. If the SLN cannot be identified through mapping, the surgeon removes all the axillary tissue in a full axillary dissection, to stage the disease. Avoiding axillary dissection when the SLN is negative for cancer, benefits the patient.

**Methods, Intervention, and Analysis:** Aultman's 2012 SLN mapping success rate was compared with the 2005 guidelines from the American Society of Clinical Oncology and other studies. Individual surgeons mapping success rates were calculated. The failed breast SNL mapping procedures were reviewed for evidenced based criteria to discover patterns and areas for improvement.

**Findings and Interpretation:** A 91% SLN mapping success rate was found for all surgeons combined; this is above ASCO's standard of 85%. Of the SLN failures, 10 out of 12 were negative for cancer and could have potentially avoided a full dissection if the SLN had been identified.

**Discussion and Implications:** Patient variables such as obesity or prior breast surgery cannot be altered and cannot exclude a patient from the procedure since SLN biopsy is the standard of care. Isotope dwell times and other alterable variables will be studied for possible process improvement. Collective and individual mapping success rates were shared with the surgeons.

#### #140

**FOX CHASE CANCER CENTER NURSING DEPARTMENT: CARING PROTOCOL.** Patricia Keeley, MSN, RN, OCN®, Linda Regul, MSN, RN, OCN®, and Anne Jadwin, MSN, RN, OCN®, all at Fox Chase Cancer Center, Philadelphia, PA; and Zane Robinson Wolf, PhD, RN, FAAN, LaSalle University, Philadelphia

**Objective:** Determine the difference in inpatient patient satisfaction with overall nursing care and perceived nurse caring when an Institutional Review Board-approved evaluation study of nursing staff caring protocol is implemented.

**Topic Significance and Study Purpose, Background, and Rationale:** Patient satisfaction, a nursing-sensitive quality indicator proposed by American Nurses Association, is an outcome of interest to healthcare agencies, with nurse caring valued by nursing staff as elemental to clinical practice. Nursing leadership at this Magnet-accredited, National Cancer Institute Comprehensive Cancer Center-designated healthcare agency envisioned and supported the initiative in collaboration with a university professor whose research interest encompasses nurse caring. The goal of this evaluation study (Protocol) is to integrate caring activities into Nursing Department and determine effectiveness on patient satisfaction with nursing care. Six Protocol constructs (respectful, knowledge and skill, connectedness, assurance, attentiveness and collaboration) provide a framework for caring activities.

**Methods, Intervention, and Analysis:** A mandatory registered nurse (RN) educational program described the creation,

constructs, and caring activities of the Protocol. An invitation was extended for Caring Crusaders to support unit-based implementation, determined by ability to understand the research study, ability to explain the study to patient, and demeanor considered patient-focused. Investigators provide Crusaders with role orientation, information, updates, and support regarding the Protocol. Bi-weekly meetings and on-going communication facilitate dissemination to the RN cohort and ensure intervention fidelity through consistent reinforcement of Protocol by co-investigators.

**Findings and Interpretation:** The measurement phase is scheduled January to March 2014 with inpatients surveyed randomly for satisfaction with hospital care through the integrated survey mailed to homes following discharge. A convenience sample of inpatients from designated units will complete instrument related to perceived nursing care immediately before discharge. Patient selection is limited to English speaking patients whose condition does not impair their ability to understand the study and respond to the Caring Behaviors Inventory-24 (CBI-24). Recruitment involves approaching patients to discuss the study with an Information Sheet provided as a reference. Should patients choose to participate, they will complete CBI-24 and place it in a sealed envelope to maintain confidentiality. Data analysis begins April 2014 with calculation of descriptive and inferential statistics on patient satisfaction.

**Discussion and Implications:** Local implications of the study include continued quality improvement of RN oncology care delivery and Protocol adaptation as standard of care for the Nursing Department. Extended implications include persistence of results, applicability to other clinical settings, and impact on patient satisfaction tools.

#### #141

**IMPLEMENTATION OF REIKI THERAPY BY THE CERTIFIED NURSING ASSISTANT FOR ONCOLOGY PATIENTS.** Sarah Merkle, RN, CNS, OCN®, Kelly Sanchez, RN, BSN, and Suzanne Barone, RN, BSN, all at PIH Health, Whittier, CA

**Objective:** To explore the effectiveness of training Certified Nursing Assistants (CNA) to integrate Reiki therapy as part of their standard care.

**Topic Significance and Study Purpose, Background, and Rationale:** Reiki is a type of biofield therapy that is said to promote relaxation, decrease stress, pain, and anxiety, and increase a person's general sense of well-being. Reiki as a complementary health approach has gained popularity in the oncology care setting and has been shown to have a positive effect on cancer related symptoms. The use of complementary therapy in nursing practice is innate as both possess similar philosophies such as therapeutic use of self and use of kindness, compassion, and presence to improve patient well-being. Such philosophies of care are usually not integrated into the training of the CNA. However, the CNA can have a significant role in patient care and the patient's overall experience. Purpose: To determine if Reiki applied by a CNA has a measurable impact on cancer related symptoms or provides a more positive patient experience. To determine if providing specialized training such as Reiki has a positive impact on CNA job satisfaction.

**Methods, Intervention, and Analysis:** The CNA Reiki pilot program was conducted on a 28 bed Medical/ Surgical Oncology unit. Six CNAs were selected to undergo Reiki Level 1 Certification training along with a course in the Energetics of Compassionate Care for the Health Professional. Mentoring was provided by a Reiki Master to implement the practical application of Reiki throughout the course of the shift as a standard intervention and a philosophy of care.



**Findings and Interpretation:** Over a three-month period 140 patient surveys will be distributed to assess the patient experience from Reiki trained and non-Reiki trained CNAs. The perceived impact on pain, anxiety, quality of sleep and overall sense of wellbeing will be evaluated. A second survey will be administered to the CNAs to determine the effect that learning and providing Reiki to patients has had on job satisfaction and perceived quality of patient care.

**Discussion and Implications:** Equipping the CNA with training in the use of Reiki therapy has potential to offer patients a more effective approach to standard care.

#### #142

**IMPROVING THE PATIENT EXPERIENCE: UTILIZING FOCUS GROUPS TO ENHANCE EDUCATION AND PATIENT ENGAGEMENT.** Lydia Wall, DNP, RN, Connie Feiler, RN, MSN, UPMC, Christine Stanesic, RN, MSN, UPMC, Kate Ross, RN, OCN®, and Amy Ranier, BA, all at UPMC, Pittsburgh, PA

**Objective:** To recognize the value of gaining insight into the patient experience as the foundation to making improvements in the patient education process.

**Topic Significance and Study Purpose, Background, and Rationale:** Patient engagement is a collaborative effort between patients and providers that promotes patient involvement in their health and healthcare decisions. Oncology nurses play a significant role in promoting patient engagement by utilizing effective communication, forming trusting relationships, providing appropriate information, and facilitating coordination of care and patient education. Patient engagement is associated with improved outcomes, patient experiences, self-management of illnesses and adherence, and decreased costs. Therefore, in order to improve the patient education experience, we felt it necessary to ask: What information do our patients feel is necessary?

**Methods, Intervention, and Analysis:** To evaluate current patient education, patient focus groups were conducted to better comprehend the impact of educational materials being distributed. One current patient and nine former patients were contained in the focus groups and participation was voluntary. Each focus group was approximately 90 minutes and consisted of a facilitated discussion focused on evaluating and improving patient education materials provided to new patients.

**Findings and Interpretation:** Currently, new patients receive education on three occasions: a mailer prior to the first visit, a hospitality packet during the first visit, and a patient binder for those who will receive chemotherapy. Patients in the focus group noted that the educational materials were not only overwhelming and redundant but also lacked important information they need (for instance, a map of the facility). Both short- and long-term recommendations were made to streamline the educational materials that should be contained in the mailer, hospitality packet, and patient binder. Results and recommendations were shared with a multi-disciplinary workgroup consisting of nurses, education specialists, and communication experts responsible for developing the new educational materials.

**Discussion and Implications:** Patients receiving the new educational materials will be surveyed for overall satisfaction. The use of patient focus groups to enhance education and engage patients in their care is an ongoing effort that will require continued collaboration between nurses, education specialists, and communication experts. In addition, the use of focus groups can be successfully applied to any discipline and at various levels of patient engagement to enhance the patient experience.

#### #143

**DEVELOPMENT OF A CHEMOTHERAPY ALERT CARD FOR AMBULATORY ONCOLOGY OUTPATIENTS: RAISING AWARENESS OF FEBRILE NEUTROPENIA.** Heidi Bentos-Pereira, RN, MSN, MBA, OCN®, St. Francis Hospital, Roslyn, NY

**Objective:** To raise awareness of febrile neutropenia by implementing a chemotherapy alert card that will promote a rapid neutropenic fever management plan for oncology patients presenting in the Emergency Department.

**Topic Significance and Study Purpose, Background, and Rationale:** St. Francis Hospital opened a Cancer Institute, in December 2012. This new specialty challenges SFH, in particular recognizing febrile neutropenia. Febrile neutropenia that progresses to sepsis poses a risk of morbidity and mortality. Although neutropenic sepsis is a medical emergency, care providers may fail to recognize the need for rapid triage and treatment of oncology patients at risk. Additionally, patients may be reluctant to entering the emergency department for fear of exposure to pathogens. The purpose of implementing a chemotherapy alert card Red Card is to enhance febrile neutropenia awareness. The card will provide information for patients that would necessitate further medical attention. The card will also signal health care providers to facilitate the triage time in the Emergency Department and reduce patient risk by ensuring early identification and prompt treatment of this high-risk group of patients.

**Methods, Intervention, and Analysis:** The Red Card was developed and implemented on the outpatient infusion unit. A collaborative team including the clinical nurse specialist, oncology director, pharmacist, emergency department director, Sepsis Committee, and nursing administration approved the Red Card. Staff and patient education commenced. Post infusion follow-up phone calls will elicit patient feedback. Emergency department triage staff identified the Red Card as an effective tool for early identification of febrile neutropenic patients. The clinical nurse specialist and the Sepsis Committee are drafting a PI tool to measure process outcomes.

**Findings and Interpretation:** Red Card distribution and education are in progress. Preliminary staff feedback is positive, supporting the project. The PI tool will measure the percent of febrile neutropenic patients flow through the Emergency Department and compliance with initiating antibiotic therapy within one hour as per policy. Patient feedback from post infusion follow-up phone calls will be analyzed.

**Discussion and Implications:** The adoption of this innovative tool has the potential to reduce patient risk by enhancing a collaborative team approach among care providers and ensuring early identification and prompt treatment of febrile neutropenic patients. Consistent with the ONS's statement of the scope and standards of oncology nursing practice, the Red Card may serve as a necessary resource to facilitate the coordination of safe patient care.

#### #144

**GROWING OUR OWN: CULTIVATING ONCOLOGY OUTPATIENT UNIT EDUCATION CHAMPIONS.** Renee Shalvoy, BSN, RN, and Diana McMahon, MSN, RN, OCN®, both at the James Cancer Hospital and Solove Research Institute, Columbus, OH

**Objective:** Illustrate a unit champion model that bridges the classroom to practice challenge while supporting the development of expert nursing practice in unique oncology settings.

**Topic Significance and Study Purpose, Background, and Rationale:** Nursing education departments excel at developing classes and teaching concepts but the transfer of learning to practice

is challenging. While the classroom learner gains knowledge to implement a new skill they also require support to integrate the newly acquired knowledge into the oncology setting. Outpatient nurses working in specialty oncology clinics provide complex patient care utilizing new equipment and resources daily. During 2013, The James provided 302,611 visits in 24 specialty clinics resulting in a challenge for clinic nurses and educators who are dedicated to providing quality patient care. Skills are frequently high-risk, low volume resulting in fewer nurses learning and consistently practicing a skill. A simple check-off doesn't fully embrace the comprehensive nature of most educational needs; instead a collection of skills, abilities, and behaviors focusing on the evolving role of the nurse is necessary.

**Methods, Intervention, and Analysis:** The unit education champion has the autonomy to identify educational needs and the responsibility to implement the education. The educator collaborates with the champion to ensure policy and regulatory criteria are met and that the education template is organizationally consistent. The educator can provide support, resources and infrastructure to the educational process integrating evidence-based practice and oncology standards of care. While the champion has a full patient assignment, they are recognized as the go to expert. Eleven units have utilized 32 unit champions for educational initiatives.

**Findings and Interpretation:** Literature anecdotes illustrate this unit-based role can facilitate the implementation of evidence-based practice, improve nursing satisfaction, and enhance patient outcomes. Using the results of the 2013 NDNQI RN Satisfaction Survey, the implementation of this role demonstrated improvement in RN-RN Interactions (73.86), decision making (53.25), professional status (77.66), and professional development (70.27). Outpatient applications for Clinical Ladder promotion increased during unit champion implementation by 29 percent.

**Discussion and Implications:** Champions are unit based, globally supported, direct-care nurses who identify, prioritize and provide just-in-time education improving patient outcomes. Nurses practice with confidence utilizing oncology professional practice standards, enhancing professional growth and job satisfaction in an ever-changing environment. Specialized oncology clinics can implement this model using interdisciplinary support to enhance role effectiveness.

#### #145

**ASSESSING AND MANAGING PATIENT DISTRESS: A JOURNEY TO IMPROVING PATIENT OUTCOMES.** Talisha Sneeringer, BSN, RN, Jeannie Wirth, RN, MSN, AOCN®, CNS, and Kelly Kuhns, RN, MSN, AOCN®, CNS, all at Pinacle Health, Harrisburg, PA

**Objective:** Analyze the efficacy of the implementation of a distress assessment tool and related interventions among hospitalized patients being treated for cancer.

**Topic Significance and Study Purpose, Background, and Rationale:** Patients with cancer are particularly vulnerable to distress. When patients with cancer experience unidentified and unaddressed distress, their well-being and psychosocial health are further jeopardized. On one oncology unit in a community-based hospital, we identified that while nurses were unconsciously assessing oncology patients' distress experiences, there was no standardized method to document this assessment, and as such, interventions to mitigate distress were not organized. Through collaboration with oncologists, social work, nursing informatics and other departments, the use of the NCCN Distress Thermometer and Problem Checklist was implemented for use at any pivotal moment in the patient's cancer journey. The purpose of this presentation is to highlight the experience of implementing this process.

**Methods, Intervention, and Analysis:** Admittance to the hospital related to cancer diagnosis, recurrence, or treatment was defined as a pivotal moment in the journey of a patient with cancer. This project defined that all patients admitted to one oncology unit in a non-profit community-based hospital would be screened for distress. Prior to implementation of the assessment tool, interventions for identified distress were identified and added to the available options within the automated patient plan of care system. Collaboration with nursing informatics was crucial, as auto-generated prompts encouraged completion of the distress tool at the time of admission if the patient was identified as currently being treated for cancer. Following education for each nurse on the unit, use of the tool and related plan of care was implemented.

**Findings and Interpretation:** Data related to completion of the assessment tool and translation to the plan of care is being collected to identify the impact on referral frequency, re-admission rates and patient satisfaction scores. Analysis of this data will be presented as part of this presentation.

**Discussion and Implications:** Existing evidence has noted early assessment and intervention for distress increases treatment adherence, enhances communication within the healthcare team, improves patient coping and decreases patient anxiety. Too often, the focus of hospital-based care is in the physical dimension. Through the use of a systematic plan for assessing and intervening for distress, the unique psychosocial and spiritual needs of the oncology patient can be better recognized, leading to better outcomes and patient satisfaction.

#### #146

**EXPLORING SOCIAL DISCONNECTION AND TREATMENT ADHERENCE IN AFRICAN AMERICAN WOMEN WITH BREAST CANCER: DESIGN AND IMPLEMENTATION OF A QUALITATIVE STUDY.** Sue Heiney, PhD, RN, FAAN, Tisha Felder, MSW, PhD, DeAnne Hilfinger Messias, MSW, PhD, Ken Phelps, and Jada Quinn, APRN, FNP-BC, ACNP-BC, all at the University of South Carolina, Columbia

**Objective:** Discuss the processes, challenges and preliminary results of implementing a qualitative design to understand treatment adherence in African American women with breast cancer as described by breast cancer survivors.

**Topic Significance and Study Purpose, Background, and Rationale:** Oncology nurses in multiple roles are ideally situated to improve treatment adherence (TA) and promote her social network's involvement in care. Poor TA is highly associated with mortality. African American women with breast cancer (AAWBC) have higher mortality rates than whites. Improved TA improves survival. Social disconnection may be a powerful negative influence on TA. The purpose of our study is to explore the role of relationships with family, friends, and providers on the chemotherapy and radiation TA of AAWBC. The long term goal is to develop interventions for implementation by oncology nurses. The interdisciplinary team includes the nurse PI, two nurse co-investigators, a public health disparities researcher with a social work background and a medical family therapist.

**Methods, Intervention, and Analysis:** Using purposive sampling with the aim of obtaining multiple perspectives on treatment adherence, we are recruiting participants from the control arm of a previous study on AAWBC who were willing to be contacted for future study. To date we have interviewed 12 participants and anticipate a sample of 15 to 20 dependent on the evolving analysis. We will continue accruing participants until we have sufficient evidence of data saturation. Our narrative analysis approach is appropriate for examining illness experiences which disrupt life course. We are implementing Morse and Fields guidelines for rigor in qualitative research including credibility, applicability, consistency and confirmability.

Currently, the research team is completing open coding of the interview transcripts. Further analysis will follow in a collaborative and iterative manner until storylines are established and consensus among investigators is obtained.

**Findings and Interpretation:** Tentative themes identified are passive decision-making, muted disclosure about treatment to family and long-term negative emotional impact of a cancer diagnosis. Preliminary results do not concur with other studies in which participants described cancer as a blessing or having post traumatic growth.

**Discussion and Implications:** Our study has implications for the design of interventions for AAWBC to promote better understanding of treatment and involve social network members. Nurses need to provide AAWBC clear information about treatment options and assist patients in communicating concerns to family and psychosocial support to deal with cancer distress from the point of diagnosis through their treatment experiences.

## #147

**RE-VITALIZING ONCOLOGY STAFF THROUGH A NOVEL AND ENTERTAINING PRESENTATION ON GRIEF RESOLUTION.** Jean Godfroy, BSN, RN, OCN®, CBCN, and Mary Jo Burgoyne, MSN, PMH-CNS, APNP, both at Froedtert Hospital, Milwaukee, WI

**Objective:** Oncology staff will have an increased comfort level caring for dying patients and will be able to address their own grief process. Effectiveness was measured by pre and post survey.

**Topic Significance and Study Purpose, Background, and Rationale:** It is evidenced in nursing literature that nursing staff experiencing patient terminal illness and death on a regular basis are exposed to unique stress (Aycock et al., 2009). Nursing and other staff requested attention to this concern and a presentation was provided for all staff. Our purpose was to creatively address the expressed need for assistance in dealing with grief using visual allegory, art therapy, cognitive strategies, spirituality and personal validation.

**Methods, Intervention, and Analysis:** A presentation was held at Froedtert and The Medical College of Wisconsin Outpatient Cancer Center where approximately 800 appointments occur daily. Staff participation was voluntary and an evening dinner was supported by the Froedtert Foundation. The participant limit was 20 but due to overwhelming response additional sessions were held. The "Elephant Team" gave four presentations to a total of 54 staff members focusing on staff physical, emotional and spiritual needs to help them better support their dying patients and themselves. Our team included an RN Bereavement Coordinator, Psych-Oncology CNS, Chaplain, RN Coordinator, and Art Therapist. Humor, storytelling, art therapy, spiritual reflection and an "elephant" were used to discuss the "elephant in the room" no one wants to talk about, death. A survey pre and post presentation was administered. Each participant received a thank you note affirming the unique value she adds to her team.

**Findings and Interpretation:** Survey findings indicated a significant increase in staff comfort to deal with the stress of terminal patients, lost patients and loved ones, and maintaining a personal/work life balance. The survey results were very positive and better than anticipated. The majority of participants requested a subsequent presentation and ongoing attention to this previously unmet need.

**Discussion and Implications:** The review of staff feedback showed that nurturing body, mind, and spirit with this unique presentation was beneficial to help staff continue to give exceptional care to their patients and themselves. Further efforts to repeat the program for new outpatient staff and to expand the program to inpatient areas have been undertaken.

## #148

**VALIDATION OF THE PSYCHOSOCIAL SCREEN FOR CANCER (PSSCAN) AS A SCREENING TOOL FOR DEPRESSION AND ANXIETY IN PATIENTS DIAGNOSED WITH ACUTE MYELOGENOUS LEUKEMIA (AML) OR MULTIPLE MYELOMA (MM).** David Moynan, III, BA, MSN, RN, OCN®, TriStar Sarah Cannon Cancer Center, Nashville, TN

**Objective:** To determine the correlation between anxiety and depression between the PSSCAN questionnaire and a one-on-one interview in patients with AML or MM regardless of treatment trajectory.

**Topic Significance and Study Purpose, Background, and Rationale:** Depression and anxiety-related disorders in patients with hematologic malignancies, specifically Acute Myelogenous Leukemia (AML) or Multiple Myeloma (MM) are often underdiagnosed and untreated. Depressive episodes and anxiety that are related to the diagnosis of AML or MM and to a proposed treatment regimen that may involve hematopoietic stem cell transplant (HSCT) can hinder how a patient copes with cancer and can diminish a patient's quality of life. The purpose of this research was to validate an existing screening questionnaire for depression and anxiety for use with a specific group of malignant hematologic patients in treatment regimens that may or may not include HSCT.

**Methods, Intervention, and Analysis:** The Psychosocial Screen for Cancer (PSSCAN) 21-item questionnaire has been identified as having high sensitivity and reliability in screening for depression and anxiety in patients with cancer (Linden et al., 2009). The PSSCAN, in conjunction with a one-on-one interview, was administered to 23 (twenty-three) patients diagnosed with AML or MM in two local clinic settings and in one in-patient hospital setting, each of which specializes in hematologic malignancies and HSCT, and each of which are located in mid-central Tennessee. Significant correlations were evidenced by calculating the Pearson r correlation coefficient based on cut-off scores of 7 and 11 for sub-clinical depression and anxiety and clinical depression and anxiety, respectively.

**Findings and Interpretation:** There was a significant correlation at 0.024 (where  $r = -0.468$ ) of anxiety scores on the PSSCAN to 'feelings of anxiety' as stated in the one-on-one interview and there was significant correlation at 0.006 (where  $r = -0.554$ ) of depression scores on the PSSCAN to 'feelings of depression' as stated in the one-on-one interview. The prevalence of depression was 47.8% ( $n=11$ ) and the prevalence of anxiety was 60.8% ( $n = 14$ ) as scored on PSSCAN and correlated to the interview data.

**Discussion and Implications:** Recommendations include the screening of cancer patients for depression and anxiety at specific time-points in care and that a positive screening result must involve further assessment by clinicians with a coordinated and personalized intervention. It is also recommended that clinicians include questions related to a patient's emotional feeling as well as questions related to physical well-being.

## #149

**FEASIBILITY AND EFFECTIVENESS OF MINDFULNESS-BASED STRESS REDUCTION (MBSR) IN PATIENTS WITH LUNG CANCER AND THEIR PARTNERS: A MIXED METHOD PILOT STUDY.** Desiree van den Hurk, PhD student, Melanie Schellekens, PhD student, Miep vd Drift, PhD student, Anne Speckens, prof.dr., Johan Molema, dr., and Judith Prins, dr., all at Radboud University Medical Centre, Nijmegen, Netherlands

**Objective:** The impact of lung cancer on patients and their partners is enormous. Besides psychological screening and guiding, is there more to offer by oncology nurses?



**Topic Significance and Study Purpose, Background, and Rationale:** Screening for psychological distress and guiding patients and partners with cancer, is part of the daily work of oncology nurses. The impact of the diagnosis lung cancer is enormous. Many studies described the impaired quality of life and distress, while there is not much known about psychosocial treatment. As part of a psychosocial treatment, MBSR has been proven to be effective in reducing anxiety and depressive symptoms in cancer patients. The generalization of these results is limited because most participants of these studies were female with breast cancer. Therefore, we examined whether MBSR might be a feasible and effective intervention for lung cancer patients and their partners.

**Methods, Intervention, and Analysis:** Nineteen patients and sixteen partners participated in the eight-week MBSR training, based on the original program developed by Kabat-Zinn. Assessment took place at baseline, post intervention and three-month follow up. Measurements included questionnaires on anxiety, depressive symptoms, quality-of-life, caregiver-burden, mindfulness-skills and worry. More in-depth and personalized information was obtained by semi-structured interviews to explore participants experiences of the MBSR training. Paired t-test were performed on an intention-to-treat basis to examine differences between scores, at baseline, directly and three months after the MBSR training. Interviews were analyzed according to the thematic analysis approach.

**Findings and Interpretation:** Fifteen patients and eleven partners completed the training. Participants who dropped out did not differ from completers. Patients undergoing cancer treatment did not miss more sessions than those who were not currently being treated. Interviews showed participants felt positive about participating with their partner and in a peer group. Among participants, changes in anxiety and depressive symptoms after MBSR were consistently in the direction of improvement, but did not achieve statistical significance. Among partners, caregiver burden decreased significantly after following MBSR at post and follow-up measurement.

**Discussion and Implications:** Though the MBSR training seems to be feasible for patients and partners with lung cancer, it remains unknown whether MBSR is as effective in reducing their psychological distress. Therefore a RCT is needed to examine this. When research shows that MBSR is effective intervention, this will be one of the few available psychosocial intervention for lung cancer patients and their partners, in which nurses can inform and guide them.

**Underwriting or funding source name:** This research is funded by Foundation Alpe d'Huizes and the Dutch Cancer Society.

## #150

**PROPEL®: TRANSFORMATIONAL UNIT CULTURE CHANGE THROUGH POSITIVE PSYCHOLOGY.** Michelle Teel, MSN, MBA, RN, OCN®, Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins Hospital, Baltimore, MD

**Objective:** The learner will be able to describe the principles of positive organizational psychology and how they can be used to improve staff performance, resiliency, and satisfaction.

**Topic Significance and Study Purpose, Background, and Rationale:** Oncology nurses are facing unprecedented challenges in today's healthcare environment. The changes wrought by the Great Recession, the nursing shortage, and healthcare reform require nurses to work under demanding conditions which can lead to physical and mental fatigue, injury, and job dissatisfaction/burnout, all of which impact the safety and health of our patients. There is, however, opportunity for transformational culture change through a positive psychology performance improvement program which changes the dynamic from stress and anxiety to opportunity and challenge.

**Methods, Intervention, and Analysis:** This medical oncology unit in an NCI-designated comprehensive cancer center was part of the third cohort of nursing units to participate in the PROPEL® performance improvement model. Eight PROPEL® leaders were chosen by the Nurse Manager (NM) for their optimistic attitude and ability to influence others. PROPEL® leaders participated in focus groups, an educational session, and weekly meetings with a PROPEL® coach. The Coach reinforced the guiding principles with the team to facilitate effective collaboration and communication in order to achieve staff-driven unit-based goals. The initial interventions developed by the PROPEL® leaders were to: improve communication through monthly staff meetings; improve communication and teamwork through the implementation of all-staff huddles; acquire a daily goal from every patient as a Patient and Family-Centered Care initiative; and foster collaboration through scheduled senior staff nurse/NM meetings.

**Findings and Interpretation:** To measure the effect of PROPEL® on staff morale and perceived safety pre- and post-implementation, comparisons include the results of Gallup Staff Surveys, hospital Safety Culture Survey, and NDNQI surveys. Press Ganey and HCAHPS surveys will measure the impact on patient satisfaction

**Discussion and Implications:** Embracing the PROPEL® program has had a profound effect on the morale of the unit through the promotion of a positive work environment. PROPEL® has empowered all staff to advocate for themselves and to amplify strengths rather than focusing on repairing weaknesses. It will enable the unit to continue to make the changes necessary to successfully meet the demands of the changing healthcare landscape. Weekly PROPEL® meetings are ongoing and future goals include advancing Patient and Family-Centered Care initiatives.

## #151

**INCIDENCE AND MANAGEMENT OF CARDIAC AND PULMONARY ADVERSE EVENTS FOLLOWING SINGLE-AGENT CARFILZOMIB TREATMENT IN PATIENTS WITH RELAPSED AND/OR REFRACTORY MULTIPLE MYELOMA.**

Tiffany Richards, RN, ANP-BC, MD Anderson Cancer Center, Houston, TX

**Objective:** Review incidence and management of cardiopulmonary complications reported in clinical trials of carfilzomib, a selective proteasome inhibitor approved in the US for treatment of relapsed and refractory multiple myeloma (MM).

**Topic Significance and Study Purpose, Background, and Rationale:** Patients with MM often present with comorbid conditions, which increases their risk of developing cardiopulmonary complications associated with antimyeloma therapy.

**Methods, Intervention, and Analysis:** The incidence of cardiac and pulmonary adverse events (AEs) was calculated from safety data comprising 526 patients from four phase 2 trials of single-agent carfilzomib (PX-171-003-A0, PX-171-003-A1, PX-171-004, and PX-171-005). Patients with New York Heart Association Class III-IV congestive heart failure (CHF), uncontrolled conduction abnormalities, symptomatic cardiac ischemia, and myocardial infarction in the previous six months were not enrolled. Single-agent carfilzomib was administered intravenously over 210 minutes at starting and target doses of 20 and 27 mg/m<sup>2</sup> in 28-day cycles for all studies except PX-171-005 (15-27 mg/m<sup>2</sup>). AEs were graded by NCI Common Terminology Criteria for Adverse Events (CTCAE) v3.0.

**Findings and Interpretation:** Overall, 73.6% of patients had a cardiac medical history and 70% had taken antidiabetic or cardiovascular medication before enrollment. Cardiac-related AEs were reported in 22.1% of patients with 14.3% developing hypertension and 7.2% developing cardiac failure (CHF, pulmonary

edema, and decreased heart function). Grade 3 CHF events occurred in 5.7% of patients. The discontinuation rate of carfilzomib due to cardiac events was 4.4% (CHF [1.5%], cardiac arrest [1%], myocardial ischemia [0.6%]). Pulmonary AEs primarily consisted of dyspnea (42.2%), cough (26%), and pneumonia (12.7%). Dyspnea events were primarily grade 1/2 (37.3%). Grade 3 dyspnea occurred in 4.8% of patients with no grade 4 events reported and one grade 5 event occurring in the setting of concurrent CHF. Dyspnea resolved in the majority of patients (68%) with 1.3% of patients discontinuing treatment and 1.1% of patients requiring dose reductions.

**Discussion and Implications:** In patients with cardiac risk factors, baseline and repeated echocardiograms are recommended as well as evaluation by a cardiologist before initiating carfilzomib. Based on our experience at our institution, cardiopulmonary toxicity may be minimized by infusing carfilzomib over 30 minutes and limiting intravenous fluids to 250 mL before dosing. Carfilzomib is a safe and effective therapy for patients with advanced MM. Nurses play an important role assisting patients to remain on therapy through identification of patients at risk for cardiopulmonary complications and through patient/caregiver education.

## #152

**MEETING THE CHALLENGES OF ONCOLOGY PATIENTS' SKIN THROUGH S.W.O.T.** Joseph Rudolph, RN, BSN, CWOCN, WCC, DWC, Salvador Benitez, RN, PhD, MSN, WCC, COCN, DNC, DAPWCA, and Dottie Wiegand, RN, PhD, MSN, WCC, COCN, DNC, DAPWCA, all at Cancer Treatment Centers of America at Eastern Regional, Philadelphia, PA

**Objective:** Oncology patients will have better outcomes through implementation of evidence-based skin and wound care practices by the skin wound ostomy members as staff resources.

**Topic Significance and Study Purpose, Background, and Rationale:** Due to their status, oncology patients are at higher risk for skin issues for a variety of reasons. The institution has a two-person WOCN team that sees about 75 patients weekly. This includes the inpatient and outpatient populations. In addition, they conduct quarterly prevalence studies. Based on those results, they conducted a literature review. Utilizing the latest evidence, they decided to implement a skin wound ostomy team or S. W. O. T., as nicknamed. The objective was to provide education to improve patient outcomes and overall awareness of available skin and wound care products.

**Methods, Intervention, and Analysis:** The WOCN team met with the Directors of Quality and Nursing to outline their plan for increasing education to the staff through the use of advanced skincare-educated nurses. Each nurse would undergo a four-hour training course, spend a day with a WOCN, and then conduct Wound Care Wednesdays. This new team would also participate in the quarterly prevalence study. The DON and quality directors approved the program and its implementation. The WOCN team evaluated the process through the use of surveys.

**Findings and Interpretation:** Over 50 nurses volunteered to participate in the program and, since its inception, has been implemented hospital-wide for two quarters. The SWOT reports a high satisfaction with their role as resources and has also assisted with competencies. Based on existing surveys, the program appears to have improved the general nurse's education related to skin care. It can be theorized that the SWOT nurses contribute to improved practice on a daily basis.

**Discussion and Implications:** The implementation of the SWOT has improved general education. The most recent prevalence studies have shown zero hospital acquired pressure ulcers, and with pay for performance, increasing the ability to show better outcomes is paramount. The utilization of skin teams may be a cost-effective resource that all oncology hospitals may want to implement.

## #153

**DEVELOPMENT OF A NURSING-LED RESIDENT ORIENTATION PROGRAM TO ENHANCE TEAMWORK.** Megan Howe, RN, BSN, Greg DeMatteo, RN, BSN, and Melissa Davis, RN, BSN, all at Dartmouth Hitchcock Medical Center, Lebanon, NH

**Objective:** Develop a nursing-led orientation program to help resident physicians transition to the Hematology/Oncology service and to enhance collaboration and communication between nurses and residents.

**Topic Significance and Study Purpose, Background, and Rationale:** On the 2010 National Database of Nursing Quality Indicators (NDNQI), Medical Hematology/Oncology (MHO) staff nurses at our 25-bed unit in an academic medical center rated nurse-physician interactions at 47.89, below the NDNQI Academic Medical Center mean of 61.22 (where less than 40 is low satisfaction, 40-60 is moderate satisfaction, and greater than 60 is high satisfaction). Scores are based on teamwork, respect, appreciation and cooperation between nursing and physicians. Nurse-physician relationships have an impact on nurse job satisfaction and retention, as well as quality of patient care and patient outcomes. Resident orientation programs have been found to improve communication and teamwork.

**Methods, Intervention, and Analysis:** Establish a monthly orientation program for internal medicine residents rotating onto the Hematology/Oncology service. The program consists of three parts: (1) Distribution of a resident orientation packet with practical information pertaining to the Hematology/Oncology service; (2) Introduction of residents to staff nurses at morning huddle; and (3) Review of roles and expectations for nurses and residents at an informal meeting with nursing and physician leadership. Prior to this intervention, we implemented a four-question (numerical response) survey regarding RN views on nurse-physician communication. Surveys were administered to all RNs working during a four-day period. Five months into the intervention, the survey was repeated.

**Findings and Interpretation:** On the survey statements Nurses, physicians and other staff on 1West communicate directly and professionally and I feel comfortable discussing challenging issues with medical interns/residents on 1West, favorable post-intervention responses increased compared to pre-orientation program responses. While these results do not reflect statistical significance, they do suggest a positive trend. Following implementation of the resident orientation, the NDNQI survey found that staff nurses rated nurse-physician interactions at 63.72, which is at the Academic Medical Center mean of 64.43 and considered to be a high level of satisfaction.

**Discussion and Implications:** The NDNQI survey and the five-month post-intervention survey indicate increasing satisfaction with nurse-physician relationships. It is not possible to rule out other factors that may affect these relationships; however, the resident orientation program is the only intervention directly targeting these relationships that has been implemented since either sets of prior data were collected.

## #154

**THE SELF-REPORT AND ASSESSED PHYSICAL, PSYCHOSOCIAL, SPIRITUAL, AND FINANCIAL NEEDS OF BREAST CANCER SURVIVORS ONE YEAR POST COMPLETION OF RADIATION THERAPY AT A TERTIARY CARE FACILITY.** Nancy Ehmke, RN, MN, AOCN®, Brooke Hoverman, CCRC, Breck Hunnicutt, CCRC, and Doshi Riddhi, MBBS, MPH, all at Parkview Health, Fort Wayne, IN

**Objective:** To determine the self-reported and assessed physical, psychosocial, spiritual, and financial needs of breast

cancer survivors one year post completion of external beam radiation.

**Topic Significance and Study Purpose, Background, and Rationale:** It is estimated that over 14 million cancer survivors currently are living in the United States with the number expected to increase to 18 million by 2012. Cancer survivors face many challenges such as late and long-term effects of therapy, fears regarding recurrence, financial concerns, spiritual disequilibrium, uncertainty regarding follow-up care and various other psychosocial issues. The Institute of Medicine (IOM) recommends that patients with cancer and their primary care providers receive a written survivorship care plan at the end of active treatment that describes what occurred during treatment. This plan should also include specific steps for follow-up care and who should provide that care. Located in an urban area, Parkview Comprehensive Cancer Center is piloting a survivorship program entitled "GPS: Getting Prepared for Survivorship". A component of the GPS program is to provide patients with ongoing support through educational offerings and consultations with resources (e.g. dietitians, psychologists). This study was conducted to determine the needs of breast cancer patients with the intent of incorporating the results in our institution's survivorship program. The needs of patients were assessed by oncology nurses in an outpatient radiation oncology setting. Nurses, research assistants and students collected the data by conducting chart audit.

**Methods, Intervention, and Analysis:** A retrospective chart review determining patient-reported needs and health care provider assessments was performed. Data was collected on 455 female breast cancer patients.

**Findings and Interpretation:** Pain was the most common late and long-term physical need identified by patients and their health care professionals. This was experienced by 24% of patients. The study revealed that while the physical needs of patients were assessed by health care professionals the psychosocial, financial and spiritual needs of patients were not. Common symptoms such as depression, fear, and sadness were not assessed in 95% of patients.

**Discussion and Implications:** This study indicated a need to improve the assessment of psychological, spiritual, and financial needs of cancer survivors. As a result of this study, our institution will be administering a distress tool to all patients who receive treatment. Results of the study will also be incorporated into developing educational programs and support groups for our survivorship program. In addition, as a result of this study we are currently conducting a prospective study on the needs of breast and prostate cancer patients at regular intervals. Results of this study will be incorporated into our survivorship program as well.

## #155

**BUILDING INFRASTRUCTURE FOR PRIMARY NURSING AND THE 23-HOUR STAY BREAST CANCER SURGERY PATIENT.** Krista Moore, BSN, RN, Sara Caiazza, BSN, RN, Michelle Yanni, BSN, RN, Jennifer McKenna, BSN, RN, Kris Seigneur, BSN, RN, and Amy Rettig, BSN, RN, all at the Ohio State University Wexner Medical Center–The James, Columbus, OH

**Objective:** Participants will discover the importance of infrastructure to establish the primary care nursing model in the continuum of care for the 23-hour stay breast cancer surgery patient.

**Topic Significance and Study Purpose, Background, and Rationale:** Care navigation through a large system can be fragmented and communication is often non-existent from ambulatory to inpatient Oncology Nursing presenting specific challenges for 23-hour stay breast cancer patients. A primary

practice model, designed for the ambulatory oncology nurse and patient to establish the nursing plan of care, can facilitate the continuum of care. The purpose of this project was to create the infrastructure needed to implement a continuum of care for the 23-hour stay breast cancer surgical patient.

**Methods, Intervention, and Analysis:** Six Sigma process improvement was integrated with I2E2 (Inspiration, Infrastructure, Education, and Evidence) serving as the method to create the infrastructure for the pilot project. Biweekly, one-hour meetings were scheduled for a six-month period. Key stakeholders were identified and formally invited to the team. A shared vision was created followed by the project inspiration, the infrastructure needed, education needed for success, and the evidence that defined success. Outcome measures were documented focusing on: What to collect, Source of data, who will collect, How to evaluate, trend/track and Celebration. Timelines for establishing the infrastructure were based on past project timelines.

**Findings and Interpretation:** The timeline for the overall process was six months but was completed in 12 weeks. The development of the team was estimated at six weeks yet was established in four weeks with no invitations declined. Education from the clinical informatics team on how to communicate through the electronic medical record from ambulatory to inpatient was estimated at three weeks. The education was provided at one meeting and was then disseminated by the nursing staff and managers to the rest of the staff in two weeks. Establishing the outcome measures for the project was estimated to take seven weeks and was accomplished in four weeks. The pilot project was implemented 12 weeks from inception of the idea.

**Discussion and Implications:** Success in project planning is dependent on the tools used to build the infrastructure for the project. Using a tool embedded in a professional practice model maintains a framework that builds upon the mission, vision and values of the organization. Oncology nurses can successfully create the infrastructure needed to support projects that improve patient outcomes.

## #156

**A COMMUNITY PROJECT EDUCATING PARENTS ON THE BENEFITS OF HUMAN PAPILLOMAVIRUS (HPV) VACCINATION AS A CANCER PREVENTION STRATEGY.**

Rhonda Hjelm, BSN, RN, OCN®, Hoag Memorial Hospital Presbyterian, Newport Beach, California

**Objective:** Participants will identify the target population for HPV vaccination; cancers related to HPV and recognize the value of community education regarding HPV vaccination as a cancer prevention strategy.

**Topic Significance and Study Purpose, Background, and Rationale:** HPV is a sexually transmitted virus that is linked to genital warts and several cancers arising from mucous membrane tissue in the oral cavity and ano-genital area. HPV vaccination has the potential to significantly reduce the incidence of cancer in the next generation. Although National figures suggest that only one-third of teens report having completed the HPV vaccine series and public confidence about vaccine programs is waning. Literature suggests education pertinent to the benefits and risks of HPV vaccination may demonstrate transparency and inspire public trust. Nurses who work along the front line of cancer treatment are uniquely aligned as experts to provide community education about cancer prevention and HPV vaccination.

**Methods, Intervention, and Analysis:** This community education project sought to provide education to parents of preteen and teen children. Beckers Health Belief model served as the theoretical foundation to support the authors purpose to modify parents perceptions of the potential threat of HPV disease. This education may act as a cue for parents to seek vaccination of



their children. A convenience sample of 15 community volunteers completed a demographic survey and pre and post-tests. This data was analyzed using descriptive statistics.

**Findings and Interpretation:** The author's goal to provide education that may influence a change in parents attitude toward HPV vaccination and increase the likelihood to seek vaccination for their adolescent children was evaluated using, paired a sample t-test. Participants knowledge about HPV prevalence and related cancers demonstrated significance,  $p = 0.0001$  and  $p = 0.009$ , respectively. Participants post-survey responses demonstrated a significant increase in their Likert score for both perceived vaccine importance and their likelihood to recommend vaccination,  $p = 0.028$  and  $p = 0.041$ , respectively.

**Discussion and Implications:** Healthy People 2020 objectives, the Affordable Care Acts aim for population health and low uptake of a cancer prevention vaccine makes this a clear priority for oncology nurses to provide education to their patients and the community. Nursing researchers have an opportunity to identify factors that influence the low level of adherence to HPV vaccination. Descriptive or qualitative studies are also needed to address the social barriers toward this vaccine.

### #157

#### A BETTER APPROACH TO ONCOLOGY PAIN PRACTICE THROUGH THE CREATION OF A MULTIDISCIPLINARY PAIN COMMITTEE: ONE INSTITUTION'S JOURNEY.

Tahitia Timmons, MSN, RN-BC, OCN®, VA-BC, Leslye Wood, BSN, RN, Nicole Worthington, BSN, RN, Deborah Baldassarre, MSN, RN, OCN®, Julie McCormick, BS, CNMT, RT(N), and Jen Arroyo, BS, CNMT, RT(N), all at Cancer Treatment Centers of America at Eastern Regional, Philadelphia, PA

**Objective:** The purpose of this poster is to share our institution's journey creating a multi-disciplinary committee focused on the needs of both patients and staff regarding the topic of pain.

**Topic Significance and Study Purpose, Background, and Rationale:** Pain, as a result of cancer treatment or disease process, is one of the most feared symptoms associated with cancer. Depending on stage and patient characteristics the prevalence of pain in cancer patients may be as high as 86%. Late stage cancers tend to correlate with a greater prevalence of pain. The majority of the patients we treat have late stage cancers. We utilize the HCAHPs to survey for patient satisfaction. In quarter one of 2013 the domain related to pain management was 65.3. This was an area we hoped to improve.

**Methods, Intervention, and Analysis:** A task force was established to focus on scripting and review existing tools. It was composed of nursing however if they wanted to address the issue comprehensively, more than nursing had to be involved. The decision to create a multi-disciplinary team was suggested. The task force grew to involve rehabilitation services, physicians, case management, informatics, quality, inpatient, and outpatient services. They met several times, developed scripting, decided to review the existing tools, and plan an event to raise pain awareness.

**Findings and Interpretation:** The assessment revealed that the tools were evidence based but we needed more education offerings and events. Education was offered online through a summer program that the Informatics nurse located. The key was to raise general awareness that we offered a multitude of services and it was ok to talk about pain. The decision was made to hold an event during the month of September since its National Pain Awareness Month.

**Discussion and Implications:** By the second quarter the HCAHPs score had improved to 70.5, it was 76.0 by the 3rd quarter. The thought is that the added education and raised awareness of services offered, have helped staff know how best to help patients with pain needs. The decision to make the pain

task force into a permanent multi-disciplinary committee was requested and approved of our Nurse Executive Council. The plan is to continue to offer oncology pain focused events as the task force appears to have had success. Pain committees or task forces that are multi-disciplinary presence the concept of pain in oncology and may lead to improved patient satisfaction.

### #158

#### MORAL DISTRESS IN NURSES PROVIDING DIRECT PATIENT CARE ON INPATIENT ONCOLOGY UNITS.

Janet Sirilla, DNP, RN, OCN®, Janine Overcash, PhD, RN, and Barbara Warren, PhD, RN, all at the Ohio State University Arthur G. James Cancer Hospital and Richard J. Solove Research Institute, Columbus, OH

**Objective:** Describe demographic characteristics that may correlate with the development of moral distress.

**Topic Significance and Study Purpose, Background, and Rationale:** Moral distress describes the struggle between a nurse's moral compass and institutional constraints. This may lead to physical, psychological, social, and professional problems. The aims of this project were: to examine the level of moral distress in nurses who work on inpatient oncology units; to compare moral distress by the demographic characteristics of nurses and work experience variables; and to identify demographic characteristics and type of clinical setting that may predict which nurses are at risk for moral distress.

**Methods, Intervention, and Analysis:** This project was a cross sectional survey design with inpatient staff nurses. The Moral Distress Scale Revised (MDS-R) was used to assess the intensity and frequency of moral distress. The MDS-R was administered electronically using an Outlook group for inpatient nurses. A consent statement was included. One-way ANOVA models were used to assess the statistical significance of relationships between demographic characteristics and moral distress. Linear regression models of MDS-R were fit using each ordinal variable (age, education, and the experience variables). Pearson's and Spearman's correlations among age, years of experience in oncology nursing, and the continuous measure of moral distress were estimated. ANOVA was used to examine the differences between the mean scores of the units with the highest mean scores and the mean scores of the other units.

**Findings and Interpretation:** The majority of the respondents were <40 years of age (67.1%) and had a BSN (72.6%). 42.5% had less than five years experience and 46.5% had less than five years oncology experience. The mean MDS-R score in this project was 81.3 and the range was 4.0–266. Only the "Unit" variable showed a statistically significant difference ( $p = 0.029$ ). There was also a statistically significant inverse relationship between education and MDS-R ( $p = 0.02$ ). The nurses who work on surgical units had the highest mean scores (124.2) with the nurses on the BMTU having the next highest (108.3).

**Discussion and Implications:** Nurses who work on inpatient oncology units at this institution report low to moderate moral distress. The level of education and the type of unit where the nurse works may be useful predictors of the level of moral distress.

### #159

#### DECREASING CENTRAL LINE INFECTIONS IN NEUTROPENIC PATIENTS ON AN ONCOLOGY INPATIENT UNIT.

Lauri Brunton, RN, ADN, OCN®, Jan Shepard, RN, BSN, CCRN, Megan Kuehner, RN, BSN, CCRN, Ayako Suwyn, RN, BSN, and Wilson Yen, RN, MSN, all at the University of California, Davis, Sacramento

**Objective:** The participant will be able to name one intervention to decrease common skin commensals infections in the central lines of oncology patients.

**Topic Significance and Study Purpose, Background, and Rationale:** The Central Line Blood Stream Infections (CLABSI) National Patient Safety Goal is a top priority on our Medical Oncology/Stem Cell Transplant Unit. From January 2012 through May 2013, there were 21 documented CLABSI, half of which were from common skin commensals(CSC). A committee of the Quality and Safety Nurse Champion, Clinical Resource Nurses and Infection Prevention was formed. The literature search revealed interventions that included Chlorhexadine (CHG) bathing, central line bundle (CLB) compliance, and limiting line access. Staff education included evidence-based practices of CHG bathing for the patient, and a thorough wipe down of all key equipment in the patients environment. Electronic Medical Record (EMR) changes included a CLB compliance checklist consisting of hand hygiene, CHG skin antisepsis, and daily review of necessity, plus an elimination of a default selection of has needed electrolyte replacement lab draws to decrease line access. Line infection categories were changed to preventable and non-preventable.

**Methods, Intervention, and Analysis:** A Rapid Cycle of Improvement Plan (RCIP) was used to decrease CLABSI rate, involving making these changes and measuring outcomes over a three month period, a staff survey identified confusion and questions regarding the implementation of CHG bathing. Compliance was 47% for CHG bathing and 11% for room bathing. Issues included finding the time, equipment, complaints of the smell of CHG from patients and making the bathing part of the shift routine. Staff was reeducated by teaching, posters and emails. A bathing station with necessary supplies was created in our equipment room. Patients affected by the smell were offered masks.

**Findings and Interpretation:** In three months, compliance improved to 89% for CHG bathing and 80% for room bathing. Compliance for the CLB checklist climbed from 45% to over 90%. The EMR order set for post draws for electrolyte replacement was changed to minimize central line access. There were no reported CSC from our blood culture results from July to November 2013.

**Discussion and Implications:** Our RCIP led to increase staff compliance with the CLB and CHG bathing which resulted in a decrease of CLABSI on our unit. This decrease in preventable blood stream infections will prevent life threatening central line infections in our neutropenic patient population.

## #160

**DEFINING THE UNIQUE AND PERSISTENT NEEDS OF YOUNG WOMEN IN LIVING WITH METASTATIC BREAST CANCER THROUGH A MULTI-PHASED NEEDS ASSESSMENT.** Arin Hanson, MPH, CHES, Janine Guglielmino, MA, and Kimlin Ashing, MA, all at Living Beyond Breast Cancer, Duarte, CA; and Kathleen Meyers, PhD, independent researcher, Schwenksville, PA

**Objective:** To identify the unique education and support needs of young women living with metastatic breast cancer as compared to young women diagnosed with early stage breast cancer.

**Topic Significance and Study Purpose, Background, and Rationale:** A recent research study shows an increase in the diagnosis of metastatic breast cancer (MBC) in women between 25-39 years old. The experiences and psychosocial needs of young women with MBC can differ from those of both older women and younger women diagnosed with early-stage breast cancer. There are limited programs and resources that address the unique needs of young women living with MBC. Living Beyond Breast Cancer conducted a comprehensive assessment to identify the needs of women diagnosed with early-stage and MBC younger than age 45 and to determine how each group prefers to receive emotional support and breast cancer information.

**Methods, Intervention, and Analysis:** LBBC conducted a focus group of young women living with MBC (n = 14) and compared the findings with a focus groups of young women diagnosed with early-stage breast cancer (n = 20). An 85-question survey was completed by 1,474 women who had been diagnosed with breast cancer younger than age 45. Of this sample, 171 women were living with MBC. Sixty were initially diagnosed with MBC and 111 progressed to MBC after initial diagnosis. For this analysis, the responses of women living with MBC were compared to women diagnosed with early-stage disease.

**Findings and Interpretation:** Key differences in needs were found among focus group and survey respondents living with MBC and those diagnosed with early-stage disease. Key findings were greater negative financial impact; current symptoms and side effects for women living with MBC compared to women with early stage breast cancer. Young women with MBC were more likely than women with early-stage disease to report using social media to access breast cancer information and emotional support. When asked about educational topics of greatest interest, young women with MBC were more interested than women with early-stage disease in learning about current treatment options, clinical trials and anxiety and depression. Young women with MBC were more likely to frequently seek information about breast cancer compared to women with early-stage disease.

**Discussion and Implications:** More programs and resources should be developed to fill the gaps and address the unique needs of young women living with MBC. These assessment results will help oncology nurses guide program and resource development.

## #161

**ENHANCING EFFECTIVENESS AND MAINTAINING QUALITY OF LIFE IN SUPPORTIVE CARE: A FIXED-DOSE COMBINATION OF NETUPITANT AND PALONOSETRON FOR PATIENTS RECEIVING ANTHRACYCLINE AND CYCLOPHOSPHAMIDE CHEMOTHERAPY.** Rebecca Clark-Snow, RN, BSN, OCN®, Maria Elisa Borroni, MChemPharm, Giorgia Rossi, MChemPharm, and Giada Rizzi, MSc, all at Helsinn Healthcare SA, Lugano, Switzerland; and Matti Aapro, MD, Institut Multidisciplinaire d'Oncologie, Genolier, Switzerland

**Objective:** To report efficacy and safety of a fixed-dose combination of netupitant and palonosetron versus palonosetron in preventing chemotherapy-induced nausea and vomiting, and assess quality of life during anthracycline-cyclophosphamide chemotherapy.

**Topic Significance and Study Purpose, Background, and Rationale:** Chemotherapy-induced nausea and vomiting (CINV) occurs frequently in breast cancer (BC) patients receiving anthracycline-cyclophosphamide (AC) chemotherapy (CT), resulting in a negative impact on quality of life (QOL). NEPA is a fixed-dose combination of netupitant (NETU), a new, highly selective NK1 receptor antagonist (RA), and palonosetron (PALO), a pharmacologically distinct 5-HT<sub>3</sub> RA, that targets dual antiemetic pathways with a convenient, guideline-based, single oral dose.

**Methods, Intervention, and Analysis:** In this multinational, randomized, double-blind, phase 3 trial (NCT01339260), CT-naïve patients were randomized to receive either a single oral dose of NEPA (NETU 300 mg + PALO 0.50 mg) or oral PALO 0.50 mg. All patients received oral dexamethasone on day 1 (12 mg NEPA arm; 20 mg PALO arm). The primary efficacy endpoint was complete response (CR; no emesis, no rescue medication) in the delayed phase (25-120h after CT). The impact of CINV on patients' QOL was assessed using the Functional Living Index-Emesis question-

naire, comprised of nine vomiting- and nine nausea-specific items. Adverse events (AEs) were monitored throughout the trial.

**Findings and Interpretation:** Overall, 1,455 patients (mean age, 54 years; female, 98%; BC, 97%) were enrolled. NEPA-treated patients had superior CR rates versus PALO for acute (0-24h; 88% vs 85%;  $p = 0.047$ ), delayed (77% vs 70%;  $p = 0.001$ ), and overall (0-120h; 74% vs 67%;  $p = 0.001$ ) phases. Significantly more NEPA-treated patients reported no impact on QOL compared with PALO-treated patients during the overall phase for nausea (72% vs 66%;  $p = 0.015$ ), vomiting (90% vs 84%;  $p = 0.001$ ), and combined (79% vs 72%;  $p = 0.005$ ) domains. The AE profile was similar between treatment arms; neither group reported any serious treatment-related AEs (TRAEs). The most frequent TRAEs for NEPA and PALO were headache (3.3% vs 3.0%, respectively) and constipation (2.1% for both).

**Discussion and Implications:** In this trial of patients receiving AC CT, NEPA demonstrated superior prevention of CINV in the acute, delayed, and overall phases, with significantly more patients able to maintain their QOL during this difficult treatment period. NEPA is well tolerated, with convenient single oral dosing, offering improved efficacy and reduced interference with QOL compared with PALO alone. The ease of administration of this antiemetic combination allows for increased nurse/patient interaction to improve patient outcomes.

## #162

**SAFETY CONCERNS AND FALLS PREVENTION IN CANCER PATIENTS REPORTING CHEMOTHERAPY-INDUCED PERIPHERAL NEUROPATHY.** Megann Mussatti, Bachelor of Science in Nursing Candidate, Catherine Cherwin, MS, RN, and Kristine Kwekkeboom, MS, RN, all at the University of Wisconsin-Madison

**Objective:** Participants will be able to identify incidence and perceived risk for falls and injury related to chemotherapy-induced peripheral neuropathy, as well as the need for risk reduction patient education.

**Topic Significance and Study Purpose, Background, and Rationale:** Chemotherapy-induced peripheral neuropathy (CIPN) presents a risk factor for falls or injury due to decreased peripheral sensation. Falls and injury are especially dangerous in the cancer population because chemotherapy causes a reduction in platelets and an increased risk for bleeding. Oncology nurses play an important role in assessing side effects of chemotherapy and assuring patient safety, but there is insufficient literature that discusses risk for falls and other injury in patients with CIPN, and no literature that describes education for risk reduction. The purpose of this study is to describe: 1) self-reported incidence of falls and injury related to CIPN, 2) patients' perceived risk for falls and injury related to CIPN, 3) the percentage of patients who reported receiving education on specific recommendations for fall risk reduction related to CIPN, 4) the extent to which patients report following risk reduction recommendations.

**Methods, Intervention, and Analysis:** This descriptive quality improvement study will recruit a convenience sample of 100 patients (January 2014) with various cancer diagnoses receiving outpatient chemotherapy at the University of Wisconsin Carbone Cancer Center who report CIPN. A self-report survey will assess CIPN using the reliable and valid Functional Assessment of Cancer Therapy for patients with neurotoxicity, as well as incidence of falls and injury, perceived risk for falls or injury, falls prevention education, and whether patients followed recommendations for reduction of fall and injury risk. Statistics including frequencies, percentages, means, and standard deviations will be used to describe the survey responses. Participants will be described in terms of demographics including age, gender, diagnosis, race, level of education, relationship status, and living environment.

**Findings and Interpretation:** Findings will be discussed with regard to the incidence and perceived risk of falls and injuries in persons with CIPN, the types of risk reduction recommendations and education that patients recall receiving from oncology nurses, and the extent to which they followed those risk reduction activities.

**Discussion and Implications:** Findings of this quality improvement study will inform the development of patient education materials and guidelines for oncology nursing practice (assessment and intervention) related to reduction of fall and injury risk in patients with CIPN.

## #163

**STAFF EDUCATION AND PRESSURE ULCER PREVENTION.** Christina Lane, RN, BSN, OCN®, Samantha Thomas, RN, BSN, Maria Ortega de Vargas, RN, BSN, and Sandy Portillo, RN, OCN®, all at Santa Monica UCLA Center and Orthopaedic Hospital, California

**Objective:** The reader will understand the impact of HAPUs for patients and hospitals, and will verbalize educational steps that a unit may implement to reduce HAPUs from occurring.

**Topic Significance and Study Purpose, Background, and Rationale:** Pressure ulcers remain a serious and often life threatening problem in all healthcare settings, with annual numbers in the millions nation wide. (Bergstrom et al. 1992). This comes at great physical cost to the patient and financial cost to the hospital, as the average cost is \$500-\$40,000 per ulcer. The reason for this study is the high incidence of pressure ulcer rates on 4SW, a 26-bed oncology unit at Santa Monica UCLA Hospital. The rates from December 2012-February 2013 averaged 7.1%, which is over the national benchmark of < 2.3%, indicating that interventions were needed. The goal of this study was to decrease our units number of hospital acquired pressure ulcers (HAPUs) through increased staff education. Evidence supports that increased knowledge can change the way nurses care for their patients the hospital must "provide education and introduce new processes for pressure ulcer prevention techniques, in order to help reduce the number of pressure ulcers.

**Methods, Intervention, and Analysis:** A staff educational handbook detailing pressure ulcer prevention, staging and treatment, available at nurse's station at all times, and with pertinent, updated information. Also, a one-page staff handout regarding pressure ulcer prevention and treatment strategies, as well as who the skin champions are and when to call for their assistance. Additionally, a two-RN verification approach to all new pressure ulcer findings was implemented. With each new finding of a suspected pressure ulcer, the RN must verify with one member of skin team. This is done as a means to transfer knowledge from the skin champions to the staff on a case-by-case basis, and to have dual verification of acquired ulcers. Lastly, UCLA recently implemented a hospital wide change in electronic documentation (March 2013) to EPIC, including more detailed skin risk assessment on admission and on a shift-by-shift basis. This system also requires documentation of turning, support surface, nutrition, mobility and patient and family education. The outcomes measured were based on monthly pressure ulcer surveillance, done the second Thursday of each month and scored on a ratio of acquired pressure ulcers to the total number of patients on the unit at that time. Outcomes were scored only from the population on 4SW, the only patients excluded from the survey were those off unit for procedures, and those who were clinically unstable to turn in order to assess for pressure ulcers.

**Findings and Interpretation:** Though there were a few months with a unit acquired pressure ulcer rate above benchmark, our pressure ulcer rates have fallen to 0% the past three months (September-November 2013), a trend we hope to continue. Also, seven out of the last nine months (from March 2013



through November 2013), our pressure ulcer rate on prevalence day has been zero.

**Discussion and Implications:** In conclusion, we found that proper staff education through our listed interventions helped to reduce our unit acquired pressure ulcer prevalence rate to zero for seven out of the past nine months. Our goal is a rate of 0%. We hope to continue this rate of zero for the future, and we will continue with our ongoing staff education and prevalence days to assess ongoing efficacy. These findings can be used for future studies in HAPU prevention.

## #164

**ADVANCED PRACTICE PROFESSIONAL PRACTICE MODELS: WHERE DO YOU FIT?** Amanda Wagner, MS, RN, CNP, AOCNP®, Kristina Mathey, MS, RN, CNP, AOCNP®, David Efries, MS, RN, CNP, AOCNP®, Yahna Smith, MSN, RN, CNP, and D. Kristine Harvey, MS, RN, CNP, all at the Ohio State University Wexner Medical Center–James Cancer Hospital and Solove Research Institute, Columbus

**Objective:** To describe the practice models of advanced practice professionals in outpatient oncology practices.

**Topic Significance and Study Purpose, Background, and Rationale:** Significance: More people are being diagnosed with cancer every year. Therefore, the demands on oncologists continue to increase. With new treatments and research advances, advanced practice professionals are being utilized more frequently. There is great variability in the functioning of the Advanced Practice Professional (APP) and there is not one standard practice model for their utilization. Purpose: To describe the models of APP practice in outpatient oncology settings

**Methods, Intervention, and Analysis:** Reviewed the literature on practice models in online databases.

**Findings and Interpretation:** Findings: Four articles were found and reviewed. Three dominant models of care were found. The first model is the Shared Care Model where the physician and APP see patients together. The second model is the Independent Model. This can be broken down into two sub-models; including Incident-to-Practice Model where the APP and physician see patients independently and the Independent Model when the APP sees patients independently when the physician is not in clinic. Finally, the third model is the Mixed Model where the APP works in both the shared care model and independent model at different times.

**Discussion and Implications:** Discussion: As oncology care is becoming more complex and there is increased pressure to decrease cost while improving quality in health care, APPs must be used in a collaborative model. While models vary from practice to practice, each provider and practice can look at these models and determine what fits and evolves best with their practice based on their experience and needs. Further research can be derived from these models to evaluate APP satisfaction, productivity, cost, and patient satisfaction.

## #165

**REDESIGNING ONCOLOGY ORIENTATION: DEVELOPMENT AND IMPLEMENTATION OF A CASE STUDY APPROACH.** Deborah Allen, PhD(c), CNS, FNP-BC, AOCNP®, Elizabeth Abernathy, APRN, MSN, AOCNS®, Kerri Dalton, APRN, MSN, AOCNS®, ZaNeta Heartwell, MSN, CNE, RN, OCN®, and Laura Houchin, MSN, RN, AOCNS®, all at Duke Cancer Institute, Durham, NC; and Martha Lassiter, MSN, RN, AOCNS®, Duke ABMT, Division of Cellular Therapy, Durham

**Objective:** Describe implementation outcomes of a case study oncology orientation program at a large cancer center.

**Topic Significance and Study Purpose, Background, and Rationale:** Didactic methods have been the standard for delivering nursing education. However, some recipients have difficulty applying the information in direct patient care. Case study (CS) methods present the opportunity to demonstrate application while prompting participant interaction within the context of evidence-based practices and facility policy. Therefore, a patient CS from diagnosis through treatment, inclusive of ambulatory and inpatient programs, was developed and implemented for an adult cancer center orientation program.

**Methods, Intervention, and Analysis:** The oncology clinical nurse educator and clinical nurse specialists (CNS) identified core components and critical concepts presented in the traditional didactic orientation program based on ONS Scope and Standards of Oncology Nursing Practice. These included: Assessment general, pain, symptom-specific; Principles falls prevention, infection control, medication safety, patient education, documentation standards; Interpretation laboratory, diagnostics; Treatment safe handling, chemotherapy administration, radiation therapy, central venous catheter care. To focus discussions, generic descriptions were used (diagnosis of cancer, no gender, age, or specific orders). The patient moves from being newly diagnosed, through surgical/medical/radiation oncology programs, with symptom management via telephone triage and clinic presentation. The program was designed to be offered monthly in the cancer center by a CNS for both ambulatory and inpatient hires as opposed to a centralized program offered by hospital education. A tour of inpatient and outpatient programs concludes the morning and represents the patient perspective of “walking in my shoes.”

**Findings and Interpretation:** 54 new hires have participated since initiation January 2013. Evaluations have been outstanding. Participants report more familiarity with oncology principles, policy, and the patient-care continuum. This has facilitated their ability to prepare the patient for various phases of care, particularly outside their work unit. An additional positive outcome has been the interaction between new hires and CNS team. New practitioners now have a formally introduced expert to use as an additional resource in their practice.

**Discussion and Implications:** The transition from a traditional didactic oncology orientation to a CS approach has been successful. This program has been meaningful and has facilitated introducing new nursing hires to the complexities of care for the patient in a large cancer center. Next steps involve extending this program across the health system.

## #166

**UTILIZATION OF A DEDICATED NURSING MODEL OF CARE TO IMPROVE RESEARCH COMPLIANCE.** Julia Samsa, MBA, BSN, RN, Carol McDonald, RN, MaryKay Moore, RN, Susan Roman, RN, Meredith Shelley, RN, and Allison Tyler, RN, all at the Cleveland Clinic, Ohio

**Objective:** The participant will be able to recognize the significance of specialization within clinical research and identify tools used to problem solve workflow and standardization issues.

**Topic Significance and Study Purpose, Background, and Rationale:** Several different nursing models exist across the Cancer Institute with limited standardized work process for clinical research and standard of care nursing coordinators. The variability in work description and processes has been noted to cause increased research deviations, reduced documentation compliance, and reduced incentive to accrue subjects in the current state. The need was identified to create a standardized model for nursing, with dedicated research nurses working to their highest level of licensure, and create well-developed standard operating procedures and processes. The current state of a blended

role between clinical research and standard of care has made it a challenge to hold personnel accountable due to the significant variation in workflows.

**Methods, Intervention, and Analysis:** A team was developed to define current state workflows and ideal state workflows. The team used problem solving A3 tool as part of their work. The A3 is used to establish root cause analysis that leads to the solution of unstructured problems and is used to build deeper understanding of targeted metrics for improvement. The team documented all research tasks and mapped these tasks to a model that represents patient flow. Meetings are held with key stakeholders and progress is shared with an advisory team and executive team for feedback. The overall goal is that in the ideal state, research nursing is a dedicated role with very specific responsibilities and tasks affording the opportunity to focus on documentation, reduction in deviations, increased accrual to trials and decreased time to open trials.

**Findings and Interpretation:** The project has been underway for 1 year and four RN's have been hired within the dedicated research nursing model. Within this time frame, it has been noted that there is a decrease in deviations, increase in compliance with documentation, and an increase in the accrual of subjects to clinical trials.

**Discussion and Implications:** The implication for nursing is that by appropriate identification of key responsibilities, defining and standardizing the role of the research nurse we can make targeted improvement in quality metrics significant to research accrual and compliance. The team continues to recruit and hire dedicated personnel for research positions and finalize clear standard operating procedures and workflows.

## #167

**MENTORSHIP: GROWING THE LEADERS OF TOMORROW.** Carol Blecher, RN, MS, AOCN®, APNC, CBPN-C, CBCN, Trinitas Comprehensive Cancer Center, Elizabeth, NJ

**Objective:** To identify the importance of mentorship in the development of new leaders and to explore the role of the experienced mentor in a community hospital setting.

**Topic Significance and Study Purpose, Background, and Rationale:** Nursing is an aging profession. According to a federal survey in 2008 the average age of nurses was 47 years with 55 % of nurses reporting that they intended to retire by 2020. If we don't begin to mentor nurses to assume leadership roles we risk leaving the profession floundering. Mentorship involves sharing ideas and experiences in a comfortable trusting relationship. The mentor acts as an experienced guide and role model. Mentorship is a dynamic process with no defined end. In this role the relationship begins with the mentees being led, but as they grow the mentor will follow their lead and then will move out of the way allowing these fledgling leaders to fly on their own. In nursing the unique role of the mentor is one of sharing, being open minded and assisting the mentees in their development. Many of us, who are now mentors recall our those who mentored us and helped us grow. Rather than eating our young, as we in nursing are reputed to do, we should grow our young thereby giving ourselves a sense of personal achievement and pride, knowing that we have helped build the future of our profession.

**Methods, Intervention, and Analysis:** In a community hospital setting senior staff is often called upon to mentor students working toward their Masters degree. We have many projects and mentorship opportunities can move these projects forward. A triad of three Masters students looking for an education project decided to standardize the oncology patient education program and develop materials in English and Spanish designed to meet the unique needs of the low income urban population that we serve. The goal of this program was to improve patient satisfaction and develop an education project that would meet the objectives of their individual programs.

**Findings and Interpretation:** Outcomes were beneficial for all, as the education project was moved forward, patient satisfaction improved and the students received good grades.

**Discussion and Implications:** Mentorship projects offer benefits for all involved, growth and role development for the mentees, feelings of personal achievement for the mentor along with the successful completion of unfinished projects.

## #168

**NURSING CONSIDERATIONS FOR SARCOMA PATIENTS ON PAZOPANIB THERAPY.** Catherine Flaherty, BSN, RN, OCN®, and Jessie Holland, BSN, RN, OCN®, both at Memorial Sloan-Kettering Cancer Center, New York

**Objective:** The objective of this project was to address the educational needs of nurses caring for patients taking pazopanib for soft tissue sarcoma.

**Topic Significance and Study Purpose, Background, and Rationale:** Pazopanib was FDA approved for use in soft tissue sarcomas (STS) in 2012. Due to the scarcity of effective treatments for advanced STS, pazopanib has become a commonly prescribed therapy in this population. More than 11,100 people will be diagnosed with STS in 2013. Once STS have spread distantly the 5-year survival rate is 16%. In clinical trials, pazopanib showed an improvement in progression free interval (4.6 months) when compared to placebo (1.6 months). As pazopanib became more common, nurses working in the sarcoma department of a comprehensive cancer center recognized an educational need among the staff regarding incidence and management of pazopanib side effects.

**Methods, Intervention, and Analysis:** A survey was conducted to assess the knowledge level of the sarcoma nurses in relation to safe administration of pazopanib, when to hold the medication, the risk of drug interactions, and the need to monitor for dangerous side effects such as hepatotoxicity and hypertension. This in turn will affect patient teaching.

**Findings and Interpretation:** The survey showed that patient teaching on bioavailability of pazopanib with food was conducted 67% of the time, and drug interaction teaching was also completed only 67 % of the time. All nurses were aware that patients needed to monitor for hypertension, however 83% asked patients to monitor blood pressures daily and 17% asked patients to monitor blood pressures "multiple times a week. 100% of nurses in the service taught patients to call the office if they are going to undergo invasive procedures including dental work. 100% of RNs responded "yes", when asked if they include teaching about hepatotoxicity.

**Discussion and Implications:** We found it is imperative to assess the knowledge level of nursing staff when new drugs are approved for disease management. Conducting this survey demonstrated that sarcoma nurses had a lack of knowledge about pazopanib. Educational in-services will be conducted to address the knowledge gap and ensure patients are educated appropriately. A post-in-service survey will also be performed to assess the efficacy of the education provided to the nurses.

## #169

**ANALYSIS OF SYMPTOM CLUSTERS FOR ADULT PATIENTS WITH HEMATOLOGIC MALIGNANCIES SUFFERING FROM INTRACRANIAL HEMORRHAGE.** Frances Leah Chandler, RN, MS, OCN®, Melanie Cohen, RN, BSN, Colleen Apostol, RN, BSN, Ivana Gojo, MD, and Hetty Carraway, MD, Johns Hopkins Hospital, Baltimore, MD

**Objective:** To identify signs and symptom clusters of intracranial hemorrhage in adult hematologic malignancy inpatients and develop a protocol to accelerate care of these patients.

**Topic Significance and Study Purpose, Background, and Rationale:** In the adult hematologic malignancy patient population, intracranial hemorrhage (ICH) is the second most common complication behind infection. It is associated with high morbidity and mortality. The literature identifies risk factors for ICH in cancer patients; however, limited research exists on the clinical manifestations of ICH in patients suffering from hematologic malignancies. Thrombocytopenia makes communicating signs and symptoms for early diagnosis of ICH crucial. Often the initial signs and symptoms of acute and subacute ICH are subtle and frequently missed. A case was identified on an inpatient unit where a head computed tomography (CT) scan was not urgently obtained and diagnosis was delayed. This case served as the impetus to form the interprofessional team to review patients diagnosed with ICH on our unit. The purpose of this study is to identify early symptoms commonly suffered by the adult hematologic malignancy patients on an inpatient service who manifested an ICH.

**Methods, Intervention, and Analysis:** A comprehensive literature review of ICH in adult hematologic malignancy patients was completed. A retrospective chart review of inpatient hematologic malignancy patients with ICH was then done and an analysis of signs and symptoms was compiled. An interprofessional team, consisting of nurses, nurse manager, physicians and a statistician was convened and the findings reviewed.

**Findings and Interpretation:** Thirty-seven patients with hematologic malignancies and radiographically confirmed ICH diagnosed between 2011-2013 were reviewed. Diagnoses included acute myeloid leukemia (54%), acute lymphoblastic leukemia (16%), chronic myeloid leukemia (14%), acute promyelocytic leukemia (8%), lymphoma (5%), and myeloma (3%). Most common symptoms/signs included new onset headache (57%), systolic blood pressure > 150 mmHg (54%), neurologic changes (43%), and sudden onset nausea/vomiting (27%). The most prevalent laboratory findings included albumin < 3.5 (65%), platelets > 20K (65%), and fibrinogen > 450 (49%).

**Discussion and Implications:** The identified signs and symptom clusters will be used to develop a protocol for identifying, communicating and acting upon patients suspected of ICH. The tool will be reviewed by the interprofessional team. By using a protocol, we anticipate reducing time from onset of symptoms/signs to instituting appropriate evaluation and management. A future study is planned to compare this patient population to a control group without ICH but with similar diagnosis.

## #170

**WHO'S CALLING? UTILIZATION OF A NURSE-LED SUPPORTIVE CARE CENTER TELEPHONE PROGRAM FOR PATIENTS WITH ADVANCED CANCER.** Lindsey Erickson Pimentel, RN, BSN, CHPN, Tonya Edwards, BSN, RN, MS, CCRP, and Maria Guerra-Sanchez, BSN, RN, MS, CCRP, all at MD Anderson Cancer Center, Houston, TX

**Objective:** Participants will be able to identify common reasons for advanced cancer patients to contact the dedicated phone program, outcomes of those calls and future goals to improve patient care.

**Topic Significance and Study Purpose, Background, and Rationale:** Due to high symptom burden in advanced cancer patients, ongoing symptom management for outpatient palliative care patients is vital. Nurse telephone care has the potential to improve quality of life in these patients. Our aim with this pilot study was to determine frequency and reasons for calls made to the outpatient Supportive Care Center Telephone Program (SCCTP) by patients with advanced cancer with a goal of improving symptom control.

**Methods, Intervention, and Analysis:** Four hundred consecutive patients who utilized palliative care service, 200 from

outpatient Supportive Care Center (SCC) and 200 from inpatient Palliative Care (IPC), were followed for 6 months starting March 2012 to examine call frequency, type, reason, and nurse recommendations associated with utilization of SCCTP.

**Findings and Interpretation:** Three hundred seventy-five patients were evaluable. One hundred and ten (110) of the 375 patients (29%) utilized SCCTP. Of the 110 utilizers, 93/110 (85%) were outpatients and 17/110 (15%) were inpatients. Calls were categorized into interventional and logistical needs. Common interventional reasons for calls were pain (80/341 calls; 24%) and counseling (46/341 calls; 13%). Common logistical reasons for calls were pain medication refills (81/341 calls; 24%) and non-pain medication refills (35/341 calls; 10%). For 341 phone calls, 349 recommendations were made; recommendations in 145/349 calls (42%) enabled patients to continue their care at home. Other outcomes included patient being seen as a same-day clinic walk-in (4%), encouraging patient to contact their oncologist (3%) and providing counseling over the phone to patients (4%). More frequent utilization was seen in patients with thoracic, gastrointestinal and head and neck cancers, a high school diploma or Bachelor's degree, married, female, white, CAGE negative. Patients who utilized SCCTP were more likely to make >1 call. Patients who utilized SCCTP reported higher ESAS (Edmonton Symptom Assessment Scale) scores and had lower MDAS (Memorial Delirium Assessment Scale) scores compared to non-utilizers.

**Discussion and Implications:** Common reasons for contacting SCCTP were pain and counseling. Care over the phone most often enabled the patient to continue their care at home. This emphasizes the importance of a dedicated, nurse-led phone program to promote patient-centered care. Frequent utilizers were more symptomatic and were more likely to make >1 call. With this information, we aim to proactively identify patients that would likely benefit from frequent phone follow-up to provide the utmost care.

## #171

**A STANDARDIZED APPROACH TO MANAGING PERIPHERAL INTRAVENOUS CATHETERS: IMPLICATIONS FOR NURSING.** Kathleen Choo, RN, MS, OCN®, Natasha Ramrup, RN, MSN, OCN®, and Jane Sallustro, RN, MSN, OCN®, all at Memorial Sloan-Kettering Cancer Center, New York

**Objective:** The development of an evidenced based standard of care in the management of a peripheral intravenous catheter to improve patient safety.

**Topic Significance and Study Purpose, Background, and Rationale:** Blood stream infection and phlebitis are treatment related complications for Oncology patients with a peripheral intravenous catheter. These complications can be deadly and costly. Although peripheral blood stream infection is uncommon, it poses its own tribulations. Phlebitis is very common with peripheral intravenous access. Peripheral intravenous catheters are routinely placed in hospital settings to deliver hydration, chemotherapy, blood products and medications. These devices are extremely useful but nevertheless are associated with complications such as phlebitis, extravasations, ecchymosis and infection.

**Methods, Intervention, and Analysis:** Traditionally, evidence supported limiting dwell time and changing catheters at a specific time interval to prevent complications. Current evidence supports site rotation based on clinical indications. At this NCI designated cancer institution a group of advanced practice and senior staff nurses representing the various divisions within the department developed critical notes based on evidence and added to our preexisting organizational policies. Critical notes included the Infusion Nurses Society's recommendation that Peripheral Intravenous Catheter site rotation is based on clinical



cal indications, not routine replacement. Clinical Indications include site assessment to identify signs of complications that will lead to prompt intervention.

**Findings and Interpretation:** Additional critical notes were executed and include site assessment to be performed every shift and as clinically indicated by visual inspection, palpation and subjective information provided by the patient. Transparent semipermeable dressings are to be changed at least every seven days or when wet, soiled, presence of drainage or when the tape is no longer secure. Additional critical notes were also executed.

**Discussion and Implications:** This standardized approach in the management of peripheral intravenous access is essential to ensure and maintain patient safety. It is imperative that clinicians implement these critical notes in daily practice to prevent complications. Critical notes will be presented to all Divisions and staff educated. Future direction for this project is electronic documentation of site assessment to reflect the condition of peripheral intravenous access. The optimal goal is to achieve improvements in patient safety and quality patient care.

## #172

**AMBULATORY CHEMOTHERAPY EDUCATION: IMPLEMENTATION AND EVALUATION TO MINIMIZE SIDE EFFECTS.** Kendra Maayah, BSN, RN, Patricia Clifford, MS, RN-BC, Mercy Roy, MS, RN-BC, Asif Siddiqui, PharmD, BCOP, and Katherine Tipton Patel, PharmD, BCOP, all at MD Anderson Cancer Center, Houston, Texas

**Objective:** Identify patient education knowledge deficits in patients receiving chemotherapy in the ambulatory care setting to prevent serious treatment side effects.

**Topic Significance and Study Purpose, Background, and Rationale:** Emergency room visits by patients undergoing chemotherapy for the first time could be minimized by thorough pre-administration patient education on chemotherapy side effects and self-management of toxicity by the healthcare team. Follow-up telephone calls could maintain continuity of care in the outpatient setting, providing the healthcare provider the ability to evaluate early side effects, and possibly prevent them with additional education. The purpose of this project was to assess feasibility of follow-up phone calls in the ambulatory setting to assess, follow up on, and offer helpful strategies to patients regarding their chemotherapy related side effects.

**Methods, Intervention, and Analysis:** Chemotherapy naive lung cancer patients were included in the project. A nurse or clinical pharmacist provided standardized pre-administration chemotherapy teaching. After chemotherapy, follow-up telephone calls at three and seven days post-treatment were made to ask five questions assessing the patient and their understanding of chemotherapy education, reinforcing education using a script based upon reported side effects, and making appropriate necessary interventions. Patients were triaged according to the severity of the reported problem and referred to the physician as appropriate. Upon return to clinic, patients were asked to complete an evaluation of the education and follow-up received. This information is maintained on an electronic data collection sheet.

**Findings and Interpretation:** Of the patients who have been a part of this project, the most prevalent patient assessment findings include constipation, nausea and vomiting, and fatigue. Constipation resolution has significantly decreased the amount of patients returning to the emergency center for this side effect. Studies on telephone-based interviews have shown patient benefit through improved patient education and health care quality if appropriate interventions are made for reported issues. This practice and data collection will continue for 12 months and the practice will be evaluated for utilization and spread to other patient populations.

**Discussion and Implications:** This project indicates that patients value follow-up phone calls and reinforced chemotherapy education that is provided. Early identification and resolution of problems may decrease severe toxicities or hospital admissions. Project results will be used to inform a larger education program to evaluate the value of these interventions in a larger oncology patient population.

## #173

**CELEBRATION OF LIFE CANCER SURVIVORSHIP PROGRAM.** Shirley Kern, RN, MSN, ACNS-BC, AOCN®, and Jean Pupkes, RN, MSN, ACNS-BC, AOCN®, both with North Memorial Medical Center, Minneapolis, MN

**Objective:** Participants will be able to describe the components of developing a Celebration of Life event for cancer patients which focuses on the importance of cancer survivorship.

**Topic Significance and Study Purpose, Background, and Rationale:** Survivorship has become the trendy word in the treatment of cancer patients. McCreery (2012) asserts that today more cancer survivors than ever before are living in the United States, and they are living longer. The numbers have grown from 3 million survivors in 1971 to almost 12 million in 2008 according to the National Cancer Institute. Ivwin, Klemp, Glennon and Frazier (2011) comment that oncology nurses play a vital role in patient education, assessment of patients' current status and facilitating the continuity of care needed to manage late and long-term effects of cancer. With this in mind, three oncology nurses at a community cancer center in Minneapolis, Minnesota, developed a Celebration of Life Cancer Survivorship Evening Program to contribute to the goal of educating cancer patients about survivorship topics.

**Methods, Intervention, and Analysis:** The Celebration of Life event started in 2004 and has been held annually in the spring. Approximately 150 patients and family members each year dine on snacks and modest meals as they enjoy the various speakers who have entertained and educated the attendees. Speakers have included oncologists and nationally known motivational speakers. Some of the topics have included: "Cancer Therapy in the 21st Century: The Top Ten," "Empowering Cancer Survivors through Exercise," "The Right to Hope," "A Funny Thing Happened on the Way to My Crisis," "Hope and Humor in the Face of Illness," and "Support and Quality of Life for the Cancer Patient." The goals of the speakers are to educate, entertain, empower and offer hope to the cancer survivors and their loved ones.

**Findings and Interpretation:** There were 111 attendees at the Celebration of Life Cancer Survivorship Program in April 2013. Over 90% of the program participants were "very satisfied" or "satisfied" with the program. There consistently were positive comments.

**Discussion and Implications:** The goal of this program was to educate cancer patients about survivorship topics. The event also provides a venue for cancer patients to network with other oncology patients and to learn about various local resources. Continued improvements will be made to this annual event based on the feedback from the participants.

## #174

**BLADDER CANCER SUPPORT GROUPS: AN UNMET NEED.** Theda Shaw, RNC, MSN, Penn State Hershey Cancer Institute

**Objective:** Identify the structural and process components to develop a bladder cancer support group

**Topic Significance and Study Purpose, Background, and Rationale:** Over 70,000 new cases of bladder cancer are diagnosed

yearly. Bladder cancer is associated with a significant financial, social and healthcare burden for individual patients and society. Many of these patients are from medically underserved communities that do not have direct access to support groups. Oncology nurses play a unique role in the development and facilitation of support groups. A bladder cancer support group was established to meet this unmet need. In addition, innovative strategies that support bladder cancer research through awareness functions, seminars and fund raising activities are incorporated.

**Methods, Intervention, and Analysis:** The bladder cancer support group structure was established and defined by an advisory board and executive committee. A letter of invitation was sent to patients with the diagnosis of bladder cancer seen in the clinic over a twelve month period. Select patients were chosen to assist in leading this group. Meeting topics were defined through a patient survey. The intended outcome is to improve bladder cancer survivor's quality of life. Strategies that include formal meetings and newsletter communication are used to provide an outreach to survivors, their families, and other supports in order to provide comfort and education through this journey. Early validation of the success of this program is evidenced by the first meetings attendance being one third of the patients invited. Subsequent meetings have seen equal success.

**Findings and Interpretation:** The program's effectiveness is evaluated quarterly. The managerial advisory group assesses cultural issues, language barriers, and fundraising options. The attendees receive a survey to assess the needs of the group, as well as a five question Likert survey intended to evaluate their perception of the group's effectiveness. An interdisciplinary team of nurses, physicians, and nurse practitioners provide input through ongoing assessment of clinical, emotional, psychosocial, and financial issues identified in the clinical setting.

**Discussion and Implications:** Bladder cancer support groups are important in addressing this unmet need in many communities. The success of this program is already providing a model for other underserved patient groups within our Cancer Institute. Future plans include outreach to additional hospitals in the surrounding area, identification of avenues to raise money for research and development of social media.

## #175

**PREDICTING LENGTH OF STAY IN PATIENTS WITH FEBRILE NEUTROPENIA.** Brenda Shelton, MS, RN, CCRN, AOCN®, Mallory Reimers, BSN, RN, Joyce Kane, BSN, RN, and Barbara Kasecamp, MS, all at the Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins, Baltimore, MD

**Objective:** Identify variables that predict longer hospital stays in patients with hematologic malignancy admitted for febrile neutropenia.

**Topic Significance and Study Purpose, Background, and Rationale:** The Centers for Medicare and Medicaid Services recently ruled that beginning 10/1/13 physicians must certify that patients will stay two midnights or they must be billed as outpatients (observation or extended recovery). This National Cancer Institute designated Comprehensive Cancer Center noted that 22% of patients staying less than two midnights were admitted with the diagnosis of febrile neutropenia. This performance improvement project was undertaken to identify predictive factors for longer hospital stays in febrile neutropenic patients.

**Methods, Intervention, and Analysis:** A literature search of MEDLINE, EMBASE, and Cochrane Libraries since January 2000 revealing 278 articles related to febrile neutropenia prognosis, was narrowed to 169 articles for review. Simultaneously, electronic record reviews of 40 randomly sampled hematologic malignancy patients from a database of 116 patients admitted for febrile neutropenia between July 2012 and March 2013 were analyzed for demographic characteristics and clinical variables influencing longer hospital stays.

**Findings and Interpretation:** The evidence-based literature demonstrates that older age, presence of bacteremia, significant comorbidities, mucositis, and central venous access predict more serious infection among oncology patients. The Multinational Supportive Care in Cancer (MASCC) score is predictive of low and high risk febrile neutropenia in solid tumor and hematologic malignancy patients receiving chemotherapy. No articles specifically defined the use of this tool in Hematopoietic Stem Cell Transplant (HSCT) patients. Sixty-eight percent of the audit sample included patients undergoing HSCT, but included no patients with septic shock, representing the most severe outcomes of febrile neutropenia. No demographic or clinical variable in this sample was associated with longer than two midnight stays, but a poor MASCC score showed statistical significance ( $p=.049$ ).

**Discussion and Implications:** Financial incentives are pressing organizations to quickly identify patients best suited as certified inpatient admissions. This review of the literature and preliminary baseline data analysis provide support for use of MASCC scores for identifying febrile neutropenia patients requiring hospital admission. More intensive analysis of variables across a broader population and larger sample size are needed to develop definitive criteria for coding these admissions.

## #176

**DESCRIPTION OF AN AUTONOMOUS NURSE PRACTITIONER PRACTICE AT AN NCI-DESIGNATED COMPREHENSIVE CANCER CENTER (CCC).** Kristina Mathey, MS, RN, CNP, AOCNP®, David Efries, MSN, RN, CNP, Amanda Wagner, MSN, RN, CNP, Yahna Smith, MSN, RN, CNP, and D. Kristine Harvey, MS, RN, CNP, all at the Ohio State University James Cancer Hospital, Columbus

**Objective:** Describe the utilization and growth of an autonomous gastroenterology nurse practitioner clinic at The Ohio State University James Comprehensive Cancer Center (The James).

**Topic Significance and Study Purpose, Background, and Rationale:** Significance: Gastrointestinal (GI) cancers are cancers of the organs of the digestive system. The estimated number of new gastrointestinal cancer cases totals more than 250,000 annually. Due to improvements in prevention, early detection, and treatment, more Americans count themselves as survivors. The population of survivors on active treatment and surveillance in oncology clinics is increasing and therefore, the need for follow-up and surveillance care is also increasing. Because of this, the utilization of the Advanced Practice Provider is invaluable in this setting. Purpose: Detail how the utilization of the GI Nurse Practitioner (NP), ensuring safe and high quality care, is provided to a variety of gastrointestinal medical oncology patients.

**Methods, Intervention, and Analysis:** Methods: Utilized internal databases to query nurse practitioner measures of independence. Collaborate with a multi-disciplinary team, including oncologists and specialized registered nurses functioning as disease management coordinators to formulate and manage a comprehensive plan of care. The GI Nurse Practitioner independently runs a patient clinic with multidisciplinary care coordination at the provider level. Employ evidence-based practice guidelines and assessment tools for evaluating and treating patients including episodic, acute, and chronic health problems.

**Findings and Interpretation:** Findings: The James GI Medical Oncology program saw > 10,400 patients in FY 2012/2013. 5 NPs independently saw > 4,100 patients (FY12) and > 4,700 (FY13) generating 15,027 RVUs and charges estimated at \$905,166. NPs in our practice deal with high acuity. Over 7,970 independent NP visits were billed at CPT 99214 or 99215 which involve moderate-high level of medical decision making.

**Discussion and Implications:** Discussion: Nurse Practitioners are in a unique position to positively impact the care of the

oncology patient. By utilizing the nurse practitioner at the highest level of functioning with independent run clinics, the physician clinics are able to be utilized for new patients and treatment plan decisions. They also provide a significant practice revenue stream. Having the nurse practitioner functioning at their highest level of autonomy within the team approach, we are able to maximize care throughout the continuum of the GI medical oncology patient.

#### #177

**PERCEIVED FACTORS INFLUENCING NURSES USE OF EVIDENCE-INFORMED PROTOCOLS FOR REMOTE CANCER TREATMENT-RELATED SYMPTOM MANAGEMENT: A MIXED METHODS STUDY.** Dawn Stacey, RN, PhD, CON(C), Meg Carley, BSc, and Barbara Ballantyne, BSc, all at Ottawa Hospital Research Institute, Sudbury, Ontario, Canada; Myriam Skrutkowski, RN, MSc, CON(C), McGill University Health Centre, Montreal, Quebec, Canada; and Angela Whynot, RN, BScN, CON(C), Capital Health, Halifax, Nova Scotia, Canada

**Objective:** To assess barriers and facilitators perceived to influence nurses use of evidence-informed protocols when providing remote symptom management for oncology patients.

**Topic Significance and Study Purpose, Background, and Rationale:** Nurses require use of evidence-informed protocols to guide remote symptom assessment, triage, and management. Although symptom protocols are available, passive dissemination is inadequate for increasing their use in clinical practice.

**Methods, Intervention, and Analysis:** A mixed methods descriptive study was guided by the Knowledge-to-Action Framework. Five focus groups and 6 key informant interviews (n=34), and survey (n=78) were conducted with nurses working in three ambulatory oncology programs within different provincial healthcare systems. Role play with a protocol was used during focus groups and interviews. Data was triangulated using content analysis guided by the Ottawa Model of Research Use.

**Findings and Interpretation:** Over 90% nurses provide telephone support during regular hours only and 88% use paper-based documentation. Symptom protocols are used by 50%, 39% and 3% nurses at each site. Over 85% nurses rated the protocols positively for content and format but 20% indicated too complex to use. Qualitative facilitators at protocol level were standardized approach, consistent with distress screening, comprehensive, and evidence-based. Protocol level barriers were too long, not for symptom clusters, inadequate space for documenting, and flow of questions. Nurses indicated the need to enhance their knowledge (73%) and skills (58%) in using the protocols but felt confident in their ability (82%). Nurses identified that access to resources and performance feedback would enhance protocol use but expressed concern about the learning curve, being unaware of protocols, and feeling tied to a script. Half of nurses rated them as easy to use in the program (57%), clear direction to use them (54%), easy to try before adopting into the program (47%), and likely to be used by colleagues (46%). Other environmental barriers were communication challenges with patients, lack of electronic charting, and lack of clear direction to use them. Nurses' suggestions to increase use were providing easy access, integration into health record, and having similar resource for patients. Some nurses stated there were no barriers.

**Discussion and Implications:** Several barriers and facilitators were perceived to influence the use of COSTaRS protocols in nursing practice. Interventions are needed to overcome these identified barriers such as education on how to use them, clear organizational mandate, and integration with nursing documentation.

**Underwriting or funding source name:** The study was funded by a grant from the Canadian Institutes of Health Research.

#### #178

**WHAT DOES MY PATIENT NEED? OVERCOMING PSYCHIATRIC BARRIERS TO DELIVER BEST PRACTICE NURSING CARE.** Erin Fusco, RN, FNP, DNP, Memorial Sloan-Kettering Cancer Center, New York, New York

**Objective:** Through review of three cases of patients with cancer identified as having psychiatric illness, participants will gain knowledge of interventions that were successful in overcoming psychiatric barriers.

**Topic Significance and Study Purpose, Background, and Rationale:** Life expectancy of patients with Psychiatric Illness, PI, is shorter than average. Studies indicate that patients with PI and cancer experience longer time to diagnosis, poor screening, advanced stages at diagnosis, and higher fatality rates. This is a case review of three patients diagnosed with PI and testicular cancer, focusing on the important role of nursing staff in the care.

**Methods, Intervention, and Analysis:** After an initial evaluation by the Psychiatry team, staff was educated on each patient's psychiatric and medical history, baseline behaviors, and non-communicative cues. Nurses used this information during their shift assessment to assess for symptoms of concern. Nurses took responsibility for educating multidisciplinary staff through regular review of each patient. Providing for the patient's safety and comfort was vital. Nursing interventions that were utilized in these three adults were individually adjusted, although many of the interventions utilized were repeated across all the three cases. Nursing, Medicine, Psychiatry, Social Work, Nutrition, and, Ethics were involved in the care of all three patients, crafting a multidisciplinary approach to the patient needs and barriers. Therapeutic support and alternative therapies were implemented to reduce distress.

**Findings and Interpretation:** All three patients were cared for without the use of restraints, chemical or physical. Two patients are currently in remission for over two years and back to their baseline. The third patient was placed on hospice and is deceased. Lessons learned in all three cases have created strong interventions which should be disseminated. These results are similar to studies that show an adjustment in medical care is recommended when caring for a patient with PI.

**Discussion and Implications:** Rising numbers of patients with PI are being diagnosed with cancer. Overcoming the barriers to care of these patients is a precedent for quality cancer care in this underserved population. Oncology nurses will inevitably adjust their practice to care for these patients, helping the collaborative team to achieve improved outcomes. This case review will provide documentation of the level of care needed in PI patients diagnosed with cancer and describe further research areas which should be explored.

#### #179

**CREATING A CANCER SURVIVORSHIP CENTER: THE FIRST STAND ALONE HOSPITAL AFFILIATED CENTER IN ILLINOIS.** Mary Hurd, MHA, BSN, RN, and Linda Burgard, BGS, both at Advocate Lutheran General Hospital, Park Ridge, IL

**Objective:** Advocate Lutheran General Hospitals Cancer Survivorship Center exists to provide care for patients in the survivorship phase of treatment, addressing physical, psychological, spiritual, and social needs of survivors and caregivers.

**Topic Significance and Study Purpose, Background, and Rationale:** Today, there are more than 13 million cancer survivors in the U.S. This number continues to rise. By 2022, there will be over 18 million survivors. Along with this, the U.S. healthcare system consistently fails to deliver comprehensive, coordi-



nated follow-up care. In 2006, and in 2010, the LIVESTRONG Foundation surveyed survivors to assess their post-treatment physical, emotional, and practical needs. Survivors were asked if their concerns were met, and who provided the care. Survey respondents in survivorship reported that 83% of their physical concerns, 80% of emotional concerns, and 70% of practical concerns were not being met by the healthcare system. In 2010, the American College of Surgeons' Commission on Cancer (CoC) announced a new standard to address survivorship care, to be phased in by 2015. With this standard in mind, Advocate Lutheran General Hospital developed a cancer survivorship program to address gaps in services experienced by survivors, and opened the CSC on May 20, 2013.

**Methods, Intervention, and Analysis:** The CSC is the first stand alone, hospital affiliated cancer survivorship center in Illinois that offers comprehensive, holistic support programs to address the physical, psychological, spiritual, and social needs of cancer patients, survivors, and caregivers. The center's programs are free of charge and available to those persons treated at Lutheran General Hospital, and also to the community at large.

**Findings and Interpretation:** The CSC opened offering five classes. Nine new classes were added in September, including support groups, wig fittings, Yoga, Pilates, education programs, and prosthesis fittings. Fifteen programs were added in the fourth quarter, including Tai Chi, a men's group, all-cancer support group, art class, and nutrition groups, bringing the total to 28 multidisciplinary class offerings by December 2013. Participation more than tripled from May-October and the CSC will serve more than 1500 survivors and caregivers by the close of 2013.

**Discussion and Implications:** The CSC is integral to accomplishing the new CoC standard. Additionally, a care plan is required, summarizing the person's diagnosis and treatment, and recommending follow-up care, addressing concerns as the person enters survivorship. The CSC is poised to house even more classes and programs, meeting the changing needs of all survivors.

## #180

**ORAL ONCOLYTICS: THE FUTURE IS NOW.** Carol Blecher, RN, MS, AOCN®, APNC, CBPN-C, CBCN, Michelle Cholaneril, MD, Roxanne Ruiz-Adams, MD, and John Mikros, RPh, all at Trinitas Comprehensive Cancer Center, Elizabeth, NJ

**Objective:** To identify and evaluate the care of patients receiving oral oncolytics through the implementation of the ASCO/ONS Guidelines to reduce barriers and promote safety as well as quality.

**Topic Significance and Study Purpose, Background, and Rationale:** Since 1999 at least 14 new oral agents have been approved and about 25 to 30% of all oncology drugs in the pipeline are oral agents. Issues surrounding adherence include education, obtaining the drugs, copays side effect management and continuity of care. In 2013 ASCO and ONS published guidelines for the care of patients receiving oral oncolytics. We opted to implement these guidelines to improve the care we provide to patients receiving oral oncolytics. We have had a program in place for approximately five years in our community cancer center medical oncology practice which consists of five hematologist/oncologists. Once the guidelines were published in March and May of this year a decision was reached to further formalize the program utilizing the ASCO/ONS Guidelines. Our purpose was to track patients more effectively so that we could demonstrate quality care in this population.

**Methods, Intervention, and Analysis:** With the assistance of a physician champion our first goal was to develop and implement the use of an oral chemotherapy order sheet within our EMR. At the same time policies and procedures were updated to

incorporate all of the steps outlined in the guidelines. Once the order set was completed in the EMR the program was presented to the physicians as a quality initiative. Once the program was approved the entire staff of the Cancer Center was educated regarding this quality initiative. The role and importance of each staff member in tracking these patients was emphasized along with the importance of each member of the team. In early 2014 in services on all commonly used oral oncolytics were scheduled identifying the agent, its purpose and approved uses, dosage and administration, drug/drug and drug/food interactions, side effect and symptom management.

**Findings and Interpretation:** The use of guidelines in practice is imperative for the delivery of quality cancer care. In this interdisciplinary effort we used the ASCO/ONS guidelines to improve our oral chemotherapy program.

**Discussion and Implications:** Oral chemotherapy adherence programs require a team effort. Through the use of a team approach with physician support and the implementation of guidelines we will improve the quality of care delivered to the patients receiving oral chemotherapy.

## #181

**IMPLEMENTING A SURVIVORSHIP CARE PLAN AT THE CALAWAY YOUNG CANCER CENTER.** Mary Crann, RN, MSN, OCN®, Diane Carnoali, LSW, Ann Wilcox, LSW, Bruce Greene, MD, Douglas Rovira, MD, and Armando Armas, MD, all at Calaway Young Cancer Center at Valley View, Glenwood Springs, CO

**Objective:** Patients and healthcare providers will receive a survivorship care plan that includes the IOM recommendations with clear evidence-based surveillance guidelines to help survivors make a smooth transition.

**Topic Significance and Study Purpose, Background, and Rationale:** As a Planetree designated facility patient centered care is a priority and embedded in the mission and vision of the Calaway Young Cancer Center (CYCC). In an effort to enhance our patient centered care one of the goals of CYCC is to achieve American College of Surgeons Commission on Cancer (CoC) accreditation. An assessment of the current practice revealed a paucity of help for patients and the referring healthcare providers transitioning from active treatment. In accordance with the CoC accreditation standard 3.3, Survivorship Care Plans (SCP) will be implemented in January 2014 under the leadership of the Oncology Nurse Navigator (ONN) and Licensed Social Worker (LSW).

**Methods, Intervention, and Analysis:** A multidisciplinary subcommittee was formed to develop a policy and procedure for the SCP led by the ONN and LSW. Elements of a SCP include a treatment summary and a follow-up plan that includes ASCO Surveillance guidelines for referring physicians. Many plans were reviewed before selecting and incorporating a SCP into the electronic medical record (EMR). All oncology patients will receive and review the SCP with a healthcare professional on the last day of active treatment. In-services and training will be offered to the multidisciplinary team to create buy-in from all stakeholders.

**Findings and Interpretation:** The plan is for a task force of survivors who did not receive a SCP to review and give feedback. Patient and physician satisfaction surveys before and after utilization of the SCP will be sent. The ONN and LSW are responsible for preparing an annual report to the Cancer Care Committee generated from the EMR, responses from the task force, and physician and patient satisfaction surveys. The policy and procedures will be modified if necessary.

**Discussion and Implications:** The Institutes of Medicine (IOM) recognizes that the growing numbers of cancer survivors can get lost in the transition from active treatment. Providing a

SCP will help meet the IOM recommendations and comply with CoC accreditation standard 3.3. Patients and healthcare providers will receive a SCP that includes the IOM recommendations with clear evidence-based surveillance guidelines to help survivors the transition.

## #182

**A SOLID ONCOLOGY UNITS ROAD TO SUCCESS IN INCREASING CERTIFICATION RATES.** Deborah Lorick, RN, MSN/MHA CMSRN, OCN®, UCLA Santa Monica Medical Center, Santa Monica, California

**Objective:** To increase the oncology certification rate by demonstrating the intrinsic and extrinsic rewards to the nurses on a solid oncology unit.

**Topic Significance and Study Purpose, Background, and Rationale:** Certification is a credential that is earned by nurses who demonstrate specialized knowledge, who have advanced skills and experience (ABS N 2013). Nursing certification is a natural progression as a nurse grows in his/her professional career. Receiving this designation acknowledges a registered nurse as an expert in their specialty. Solid Oncology is a 26 bed unit at UCLA Santa Monica Medical Center with approximately 45 nurses. This unit had low certification rates and specialty certification was not a priority.

**Methods, Intervention, and Analysis:** 9 out of 37 eligible nurses held their certification. The remaining 28 were questioned during their yearly evaluation as to the reason for not having their certification. Identified, nursing's perceived barriers to certification included fear of failure, lack of resources, no encouragement to obtain and lack of organizational recognition. The opportunity to engage the staff and elevate the standard of care which ultimately leads to optimal patient outcomes was recognized. Over the next 1.5 years several steps were initiated to encourage nurses to obtain their certification. OCN-preferred was added to all job postings on the oncology unit. The expectation of all newly hired nurses to become OCN-certified upon eligibility requirements being met was discussed during the interview process. At yearly performance reviews the same discussion was held with all staff previously hired. Awareness was heightened to already available resources.

**Findings and Interpretation:** The certification rate on the Solid Oncology Unit for OCN/AOCN in March 2012 was 24%. As of December 2013 the certification rate has increased to 59%. Certified nurses will be much more in demand as the population ages. By 2030, 1 in 5 individuals will be older than 55—the group most at risk for emerging cancer diagnosis (U.S. Census Bureau, 2009).

**Discussion and Implications:** Certification in oncology nursing impacts practice by providing personal satisfaction, enhancing confidence in clinical abilities, validating specialized knowledge, providing professional credibility, and provides a level of clinical competence (Certification Makes a Difference, 2012). Employers who support certification get a higher return of investment with certified nurses. The nurses on the Solid Oncology Unit now have a sense of fulfillment and satisfaction that they did not previously have.

## #183

**KEEPING THE EDUCATION WHEEL TURNING WHEN THE BUDGET BRAKES ARE APPLIED.** Ann Proctor, MSN, RN, OCN®, and Linda Farjo, BA, MSN, CRNP, FNP-C, OCN®, all at York Hospital, Pennsylvania

**Objective:** Establish an education program for nurses that focuses on incorporating new advancements of cancer care into practice, maintaining basic core oncology competencies, and

providing quality care within budget constraints.

**Topic Significance and Study Purpose, Background, and Rationale:** The IOM has presented six components of high-quality patient care that need addressed. Providing clinicians with the tools and knowledge to provide high-quality care addresses one of these components. Oncology nurses are an integral part of the cancer care team and must be prepared to meet the challenges of ongoing advancements in cancer care, changing regulatory requirements and measurement and evaluation of nursing indicators and patient outcomes for best practices. In our current health care environment, keeping up with these changes while maintaining basic knowledge in oncology poses significant challenges when education dollars are shrinking in hospital budgets.

**Methods, Intervention, and Analysis:** Our comprehensive cancer center comprises an inpatient medical unit, three infusion rooms, and three radiation oncology departments. The inpatient and outpatient oncology nurse educators are responsible for coordination of education requirements. Incorporating ONS standards, ASCO guidelines, and IOM recommendations, the Oncology Nurse Education Series (ONES) was designed to be presented in January, May, and September of each year. The three hour education sessions are offered in the morning and repeated in the afternoon. Content is drawn from staff suggestions, advances in current treatment, trends in the literature, and patient outcome measurements. By utilizing our large interdisciplinary team as speakers which includes physicians, nurse practitioners, pharmacists, nurse navigators, dietitians, rehab medicine therapists, and staff nurses, we are able to provide the expertise and stay within budget constraints.

**Findings and Interpretation:** ONES topics include Chemotherapy Administration, Spirituality, Case Studies, Survivorship, Ovarian Cancer, Lung Cancer, Head and Neck Cancer, Compassion Fatigue, Complications of Treatment, Ethics, and Sepsis. ONS credits are obtained for each program to support ONS certification. Greater than 95% of evaluations are positive and are utilized as a needs assessment survey to plan future programs.

**Discussion and Implications:** The ONES programs have had a widespread impact on our current practice. Not only have they provided cost effective education for nurses to expand current practice and maintain certification, but they have also provided the interdisciplinary team an opportunity to cohesively work together to provide high quality seamless care from an inpatient to an outpatient setting.

## #184

**THE SPIRITUAL ASPECT OF COPING WITH BREAST CANCER FOR OMANI WOMEN.** Huda Al-Awaisi, oncology specialist nurse, Mohammed Al-Azri, senior consultant, Samira Al-Rasbi, senior consultant, and Mansour Al-Moundhri, professor and oncology consultant, all at Sultan Qaboos University Hospital, Muscat, Oman

**Objective:** Participants would be able to recognize the importance of faith with God in helping Omani women diagnosed with breast cancer cope with the disruption cancer brings to their lives.

**Topic Significance and Study Purpose, Background, and Rationale:** Empirical knowledge illustrates that spirituality is seen to be important in the lives of patients with cancer and their caregivers as it assists and guides them to adapt to disruption cancer brings to their lives. Among cancer patients, the terminally ill in particular struggle with questions about their mortality, the meaning and purpose of life. Health care professionals including nurses are expected to care for spiritual aspects of cancer patients as they are required to care for the whole person. Yet, nurses face many challenges in providing such care mainly due to the lack

of clear and consistence definition of spirituality. Most studies in the literature examining the spiritual aspect in the lives of cancer patients were conducted in the Western countries, mainly with Caucasian white patients whose spiritual beliefs and practices are different from Omani patients. The main aim of this study is to explore coping mechanisms Omani women diagnosed with breast cancer adopt throughout their cancer journey.

**Methods, Intervention, and Analysis:** Qualitative study in the form of semi-structured individual interviews was conducted with 19 Omani women diagnosed with breast cancer. A purposive sample of Omani women diagnosed with breast cancer at different stages of cancer treatment modalities was included. The framework approach was used to analyze the data.

**Findings and Interpretation:** The study has identified one main theme related to spirituality called The power of faith. For the majority of participants, faith with God (the will of God) was most important in coping with all stages of their breast cancer experience. Some participants thought that the breast cancer is a test from God which they have to accept. Participants also expressed acceptance of the idea of death as the eventual end. This belief gives them the strength to cope with cancer and seek medical treatment.

**Discussion and Implications:** Faith with God has imposed a spiritual power for Omani women diagnosed with breast cancer to cope with cancer diagnosis. Nurses working with cancer patients need to understand the uniqueness of the spiritual dimension for individual patients. They should take into account individual patient's religious beliefs to be able to guide them through their cancer journey.

## #185

**PORTABLE CHEMOTHERAPY: ENSURING SAFE AND STANDARD PRACTICE.** Regina White, RN, MS, OCN®, Sarah Thirlwell, RN, MS, MS(A), CHPN, AOCNS®, and Gail Moore, RN, MS, MS(A), CHPN, AOCNS®, all at Moffitt Cancer Center, Tampa, FL

**Objective:** To describe the quality improvement processes taken to identify gaps in care of patients with portable chemotherapy and to implement best practices for patient safety, staff education and accountability.

**Topic Significance and Study Purpose, Background, and Rationale:** Continuous intravenous administration of chemotherapy via portable infusion pumps offers patients the benefit of treatment at home and is a therapeutic option for patients receiving agents such as 5-fluorouracil for colorectal cancer. Portable chemotherapy is accompanied by risk. Oncology nurses have essential roles in prevention of risk as they prepare the patient and initiate, monitor and disconnect the infusion pump. In June 2012, the Medication Safety Committee at our NCI-designated cancer center requested a review of portable chemotherapy to ensure patient safety and treatment adherence. The clinical nurse specialist initiated an interdisciplinary task force to review safety reports and processes, identify sources of risk, and implement improvements. The collaborative team included nurses, pharmacists, managers, safety officer, patient education specialist, clinic education specialist, and most importantly, a patient advisor.

**Methods, Intervention, and Analysis:** The task force defined the current state of our center's process and patient's experience of portable chemotherapy, reviewed literature, and analyzed safety reports. Best practices included use of elastometric infusion pumps, verbal education to the patient, and certain aspects of nursing practice. Opportunities for improving standardization of practice included written patient education material, revising the chemotherapy administration policy, and formal nursing education and competency.

**Findings and Interpretation:** The newly created patient education tool included a visual guide and addressed patient con-

cerns regarding safety and activities of daily living. A competency tool was created that reflected the role of the patient and nurse partnering for the safe administration of home chemotherapy. The steps for safe administration of portable chemotherapy were included in the chemotherapy administration policy. The education specialist planned educational sessions at various times over a two week period. Each Infusion Center nurse was required to review the policy addition, and demonstrate competency by simulating safe initiation of the chemotherapy infusion pump.

**Discussion and Implications:** In the setting of a fast paced Infusion Center, the standardization of a policy, creation of a patient education tool, and staff competency for home chemotherapy by the collaborative team provided the tools to increase patient safety and treatment adherence and decrease staff and patient concerns. Successful implementation of this improved process will be evaluated by safety reports and patient and nurse satisfaction

## #186

**HOW TO MEND THE BROKEN HEART SYNDROME: TAKOTSUBO CARDIOMYOPATHY AND IMPLICATIONS FOR ONCOLOGY NURSING.** Karshook Wu, BSN, Julio Gonzalez-Diaz, BSN, Natasha Ramrup, BSN, and Douglas Koo, MD, Memorial Sloan-Kettering Cancer Center, New York

**Objective:** Takotsubo cardiomyopathy has important implications in oncology nursing since its clinical presentation mimics A.C.S. Education about the syndrome, its reversibility and rate of recurrence is imperative for optimal patient outcome.

**Topic Significance and Study Purpose, Background, and Rationale:** Takotsubo cardiomyopathy is a transient contractile abnormality of the left ventricle causing a balloon-like morphology in the absence of angiographically significant coronary artery stenosis. This stress-induced cardiomyopathy is often triggered by acute medical, physical or emotional stress. A transient crisis is typically precipitated by an acute surge of catecholamines under emotional stress, coronary artery vasospasm, and transient occlusion by atherosclerotic plaque. Takotsubo cardiomyopathy is more common in postmenopausal women. Oncology patients are under tremendous stress due to the illness and treatment. It is important for oncology nurses to have thorough understanding of this syndrome and to distinguish it from classic myocardial infarction.

**Methods, Intervention, and Analysis:** Initial signs and symptoms resemble those of acute coronary syndrome (A.C.S.) with chest pain, dyspnea, EKG changes, and elevated levels of cardiac biomarkers. Most complications of Takotsubo cardiomyopathy occur during the acute phase of the illness. This syndrome leads to a contractile defect which causes pulmonary edema or cardiogenic shock. In differentiating it from A.C.S.,

**Findings and Interpretation:** Takotsubo cardiomyopathy involves a larger portion of myocardium than a normal distribution of a single coronary artery. Additionally, ST-segment elevation on EKG is typically seen in the precordial leads and cardiac biomarkers, though elevated, are usually lower than those seen in myocardial infarction. Echocardiogram can be helpful for diagnosis with pathognomonic wall motion abnormalities and accurate diagnosis is made by cardiac catheterization by ruling out obstructive coronary disease. Echocardiogram must be obtained after the acute phase to confirm recovery.

**Discussion and Implications:** Immediate nursing treatment involves treating heart failure which may include telemetry monitoring, administration of aspirin, anticoagulants, nitrates, beta blockers, or diuretics. After diagnosis, education to patients/caregivers that complete reversal of contractile abnormalities with supportive treatment is the expected outcome and that late complications are rare play an important role in care.



Nurses play a vital role in supportive treatment since emotional stressors are known to precipitate the broken heart syndrome.

## #187

### PRACTICAL NURSING STRATEGIES FOR THE MANAGEMENT OF REGORAFENIB (STIVARGA)-TREATED PATIENTS.

Robin Wachsmann, RN, BSN, CCRN, OCN®, BCRN, West Cancer Center, Memphis, Tennessee; and Cathy Maxwell, RN, OCN®, Advanced Medical Specialties, Miami, FL

**Objective:** Providing an overview of practical nursing strategies and best practices for the management of adverse events associated with regorafenib treatment among patients with metastatic colorectal cancer or gastrointestinal stromal tumors.

**Topic Significance and Study Purpose, Background, and Rationale:** Regorafenib is an oral multikinase inhibitor approved by the US Food and Drug Administration in September 2012 for the treatment of metastatic colorectal cancer in patients previously treated with fluoropyrimidine-, oxaliplatin- and irinotecan-based chemotherapy, an anti-VEGF therapy, and an anti-EGFR therapy, if KRAS wild-type. In February 2013, regorafenib was approved for the treatment of patients with locally advanced, unresectable or metastatic gastrointestinal stromal tumors previously treated with imatinib and sunitinib. Appropriate monitoring and proactive management of common adverse events (AEs), such as hand-foot skin reaction (HFSR) and hypertension, are important to help patients remain on therapy. As regorafenib is an oral agent, AE management strategies may be different than those for intravenous cancer therapy, and additional attention would be needed to ensure patient adherence.

**Methods, Intervention, and Analysis:** Reviewing AE management best practices, dose modification procedures, and adherence strategies, with the goal of helping patients maintain therapy, thus receiving optimal therapeutic drug benefit. Strategies for AE management include patient education, diligent monitoring, and proactive nursing measures. Consent forms, directed patient education, and established office visits ensure that patients initiating therapy are knowledgeable of potential AEs. Appropriate monitoring, based on typical time to onset of AEs observed with regorafenib, allows AEs to be addressed quickly. Common AEs, including HFSR and hypertension, are manageable with supportive measures and dose adjustments, often allowing patients to maintain therapy.

**Findings and Interpretation:** Patient education at treatment initiation sets expectations and provides guidelines for reporting AEs. Nurses should be aware of the typical time to onset of AEs, which are often observed in the first treatment cycle with regorafenib, often subsiding later. Therefore, it is advisable to see patients weekly during the first cycle, or as clinically indicated. HFSR is manageable with supportive measures, including applying moisturizers and avoiding unusual friction, trauma, or heat to the hands and feet. Hypertension, which may occur early in treatment, is manageable if monitored regularly. Dose adjustments may resolve AEs, allowing treatment continuation.

**Discussion and Implications:** Proper AE management may improve treatment experience and allow patients to maintain regorafenib therapy. Nurses should be updated and educated on the regorafenib AE profile, enabling clinicians to maintain and implement proactive AE management.

## #188

### NEOADJUVANT CHEMOTHERAPY IN BREAST CANCER—EVOLVING NURSING IMPLICATIONS FOR PATIENT NAVIGATION AND EDUCATION.

Hemanshu Patel, MSN, RN, APN-C, OCN®, and Jacquelyn Lauria, MSN, RN, APN-C, AOCNP®, both at Rutgers Cancer Institute of New Jersey, New Brunswick

**Objective:** Describe the development and implementation of a nursing led educational initiative for patients undergoing neoadjuvant chemotherapy in Breast Cancer.

**Topic Significance and Study Purpose, Background, and Rationale:** Significance and Background: Changes in clinical management of early stage breast cancer have resulted in more patients receiving neoadjuvant chemotherapy, followed by surgery/radiation. The benefits of neoadjuvant therapy include shrinking tumors to improve the chances of breast conservation and rendering locally advanced breast cancers operable. Nurses at an NCI-designated Comprehensive Cancer Center identified the need for additional educational support for these patients who were often anxious and overwhelmed by the complexity of information as well as their ability to retain information essential to self-care management. Purpose: To improve our 'new patient' orientation program to include additional neoadjuvant therapy content to improve quality and coordination of care in this population; improve patients' understanding of treatment goals, explain rationale for treatment plan adjustments based on tumor response; support patients who may have a poor clinical response to treatment; and reinforce the rationale for surgery even if the tumor is not clinically or radiographically evident following treatment. Educational programs used adult teaching-learning principles. Evidence demonstrates that knowledge decreases distress and facilitates coping.

**Methods, Intervention, and Analysis:** Intervention: Program content was developed through literature reviews, benchmarking, and sessions with interdisciplinary experts. Patients/families are now offered an additional 20-minute class to learn about neoadjuvant therapy, evidence-based self care strategies and support resources. It is integrated with our current orientation program that concludes with a tour of the treatment facility and networking opportunities with others newly facing treatment. A patient education sheet and treatment calendar was developed, incorporating periodic reevaluation by the multidisciplinary team.

**Findings and Interpretation:** Evaluation: Anecdotal feedback from patients and staff has been overwhelmingly positive. Formal written evaluations are planned. To improve continuity of care, our partner hospital's oncology outpatient area will implement the patient education tool as well.

**Discussion and Implications:** Discussion: Oncology nurses are in a key position to develop and implement this type of educational program to help navigate patients through complex therapy. The patient teaching tool and calendar may be adapted for use by all nurses to ensure streamlined, evidence-based education with the goal of improving patient outcomes. Various multi-media alternatives are being explored.

## #189

### HIGH-DOSE INTERLEUKIN-2 ADMINISTRATION IN THE ONCOLOGY MEDICAL-SURGICAL SETTING—AN INNOVATION TO IMPACT COST EFFICIENCIES, CLINICAL OUTCOMES AND THE IDEAL PATIENT EXPERIENCE.

Deidre Kutzler, BSN, RN, OCN®, and Megan Derr, BSN, RN, both at Lehigh Valley Health Network, Allentown, PA

**Objective:** Discuss components of a program for successful administration of high-dose IL-2 outside of the traditional step-down or critical care setting

**Topic Significance and Study Purpose, Background, and Rationale:** High-dose Interleukin-2 (IL-2) has produced durable and complete responses in metastatic melanoma and renal cell carcinoma patients. Routine administration is normally completed in a step-down or critical care setting; no published reports exist of administration in the medical-surgical setting. This presentation detail successful administration of high-dose IL-2 on a 20-bed medical-surgical hematology-oncology unit

(7C) in an NCI Community Cancer Centers Program Magnet® hospital.

**Methods, Intervention, and Analysis:** IL-2 administration was initiated in 2004. From the onset, administration occurred on 7C. Rationale for the medical-surgical setting included established collaborative partnerships and trusting relationships between the IL-2 primary oncologist and chemotherapy certified 7C nurses. Also, this staff had long demonstrated a patient-centered care delivery model emphasizing family presence. Key factors for success include: private rooms; flexible staffing patterns to allow 2 patients to 1 nurse; clinical practice guidelines with nurse driven protocols; and, commitment between 7C nurses, providers and ancillary personnel to prioritize communication for the IL-2 patient. Upon admission, family presence is discussed; family members (any individual with whom the patient shares an established relationship) are encouraged to remain at the patient's bedside 24/7 and participate as partners in care.

**Findings and Interpretation:** Since inception, 43 stage 4 melanoma and 23 stage 4 renal cancer patients have been treated. Mortality during treatment has been 0%, with four patient transfers to a higher level of care. Currently eight patients are disease-free, equal to the NCI national experience. Of 300 peripherally inserted catheters placed, there have been zero line infections. Average length of stay has been four days, comparable to the national average. The overall patient satisfaction score is consistently in the mid-90s, exceeding the peer group and Magnet® hospital scores.

**Discussion and Implications:** This innovative work has implications regarding the traditional administration of IL-2 in a step-down or critical care setting. Outcomes demonstrate safe and effective administration can be achieved within an oncology medical-surgical unit, resulting in reduced expenses. The medical-surgical setting is also more conducive to collaborate with families as partners in care, with potential to positively impact clinical quality and questions in the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS), in turn, prompting higher reimbursements.

## #190

**FROM NATIONAL RECOMMENDATIONS TO AMBULATORY NURSING PRACTICE: STRATEGIES TO IMPLEMENT PROFESSIONAL EVIDENCE-BASED CENTRAL LINE GUIDELINES AT THE POINT OF CARE.** Susanne Conley, RN, MSN, CPON, AOCNS®, Mary Lou Siefert, DNSc, RN, AOCN®, Anne Elperin, DNSc, RN, AOCN®, Kerry Hennessy, RN, MSN, AOCN®, and Mary Ann Case, RN, MSN, OCN®, Dana-Farber Cancer Institute, Boston, MA

**Objective:** Identify strategies implemented at a comprehensive cancer center to integrate guidelines recommended by professional and national associations for central line care by nurses at the point of care.

**Topic Significance and Study Purpose, Background, and Rationale:** The introduction of central venous access devices (CVADs) is an important advancement in the treatment and provision of supportive care for cancer patients. The risk of infection associated with CVADs has resulted in professional and regulatory organizations developing evidence and consensus based guidelines to improve patient outcomes by reducing infections. Between 2011 and 2013 new guidelines were published by the ONS, INS, ASCO and the CDC. In order to improved patient outcomes related to CVADs, oncology nursing practice must be grounded in knowledge and guided by nationally endorsed evidence based guidelines. Challenges Implementation of a practice change requires education, policy changes, acceptance and adherence to the new practice recommendations. Acceptance and adherence to change require agree-

ment that the change is valid, safe and efficient. The purpose of this project was to implement current guidelines for CVAD care.

**Methods, Intervention, and Analysis:** In 2011 the institute opened a new ambulatory facility requiring a shift in roles and responsibilities including a centralized team of IV nurses. Practice reviews conducted by the clinical nurse specialists (CNSs) revealed wide variances that were not aligned with the current CVAD guidelines. The CNS team convened committees of nursing leadership and staff to evaluate CVAD products, review practice guidelines and develop new CVAD policies and product recommendations. Implementation of policy changes included a pre test and education sessions for all staff nurses followed by a post test and continual audits. Results were shared with all nurses.

**Findings and Interpretation:** A total of 155 nurses attended the education skill sessions. The same 22-item test was administered pre and post attendance demonstrating overall improvement. Monthly audits were piloted on the IV team unit demonstrating increasing rates of compliance. Final audit results are in process and will be implemented on all units in 2014.

**Discussion and Implications:** The CNSs and oncology nurses participation in evidence based policy changes can promote acceptance and implementation of national guidelines at the point of care. A multifaceted approach and sharing audit results reinforced the practice change.

## #191

**IMPROVING PATIENT SATISFACTION AND QUALITY OF LIFE (QOL) THROUGH EFFECTIVE ASSESSMENT, MONITORING AND MANAGEMENT OF DISTRESS IN THE CANCER PATIENT: A PILOT STUDY.** Belvin Reed-Stanislaus, RN, BSN, OCN®, CBPN-C, Carol Blecher, RN, MS, AOCN®, APNC, CBPN-C, CBCN, and Roxanne Ruiz-Adams, RN, MS, AOCN®, APNC, CBPN-C, CBCN, all at Trinitas Comprehensive Cancer Center, Elizabeth, NJ

**Objective:** To demonstrate a method for the identification and management of stress in the cancer patient undergoing treatment with radiation therapy, and to evaluate its impact on satisfaction and QOL.

**Topic Significance and Study Purpose, Background, and Rationale:** Distress, according to the National Comprehensive Cancer Network (NCCN) definition, is a multi-factorial unpleasant experience that can interfere with the individuals ability to cope effectively with cancer and treatment. Studies have shown that distress negatively impacts quality of life in the cancer patient and that it must be recognized, monitored, documented and treated promptly. Distress in the cancer patient causes poor decision making, non-compliance with treatment regimens and ultimately unfavorable outcomes. Significant distress frequently accompanies the diagnosis and treatment of cancer, but this is often overlooked and is rarely screened for, according to Jimmie C. Holland, M.D. of Memorial Sloan-Kettering Cancer Center. Patients require early assessment and intervention to manage their distress effectively. The NCCN developed the Distress Thermometer, whereby patients can rate their distress on a scale of 0 to 10. The Distress Thermometer is an assessment tool used to ascertain specific information regarding distress. It was originally developed as a quick tool to assess a patients level of distress, but was later updated to include a checklist. The problem list includes thirty six items that address concrete, family, social, emotional, spiritual and physical problems. Several studies have indicated that the distress thermometer has good validity and reliability in cancer patients.

**Methods, Intervention, and Analysis:** For the pilot study we are using a convenience sample of radiation oncology patients. We administer the distress thermometer on the first day of treatment, midway through and at treatment completion. We

will also administer the scale on patient follow up visits. As per NCCN guidelines for distress management anyone scoring a 4 or more on the distress thermometer is evaluated further.

**Findings and Interpretation:** With our current sampling of patients it is very evident that our patients are stressed and in need of support. We are making referrals to the APN and Social Worker and will be following up on the effectiveness of this strategy.

**Discussion and Implications:** Areas of future inquiry include the patients who report problems, but little distress. Will effective coping persist throughout the cancer trajectory or will they ultimately have issues. If there is a group of patients who never report distress, can we evaluate the ameliorating factors.

## #192

**KNOWLEDGE AND ATTITUDES REGARDING PAIN AND PAIN MANAGEMENT AMONG REGISTERED NURSES ATTENDING THE 38TH ONS ANNUAL CONGRESS PAIN MANAGEMENT SPECIAL INTEREST GROUP.** Frances Cartwright, PhD, RN-BC, AOCN®, NYU Langone Medical Center, New York, and Marsha Farrell, BSN, RN-BC, CHPN, Hospice Family Care, Huntsville, AL

**Objective:** Among ONS Annual Pain SIG congress attendees, what are the knowledge and attitudes regarding pain and pain management?

**Topic Significance and Study Purpose, Background, and Rationale:** Decades of research document inadequate pain management. Regulatory and quality agencies include improving pain as a national priority. Oncology nurses require knowledge regarding the basic principles of pain management. Education needs to be focused on nursing practice education needs.

**Methods, Intervention, and Analysis:** Data were collected from participants who attended the ONS Pain SIG at the 38th ONS congress (2012) to examine their knowledge and attitudes regarding pain management so that education can be better planned. A secondary aim was to explore if there is a need to develop an oncology pain management certification course, in addition to the ASPMN certification. Confidentiality and voluntary participation were discussed; completion of the survey implied consent. Twenty five attendees (90%) completed the Knowledge and Attitudes Survey Regarding Pain (KASRP) (Ferrell and McCaffery, 2012), a 37-item questionnaire derived from standards of pain management. Test-retest reliability was ( $r > .80$ ) with internal consistency reliability of ( $\alpha > .70$ ).

**Findings and Interpretation:** Total pain scores and ratings of individual items were calculated. Data analysis revealed that the respondents have misconceptions related to basic principles of pain management including multi-modal approach, dosing, duration of analgesic, addiction, dependence and tolerance. For example, 19 (76%) of the respondents over-estimated the likelihood of a patient developing respiratory depression. More than 17 (68%) responded incorrectly to questions about physical dependence and 11 (44%) selected a response to under treat pain. Between 14 (56%) and 18 (72%) answered questions regarding equianalgesic dosing incorrectly. Between 9 (36%) and 13 (52%) responded incorrectly to questions regarding agents that target specific types of pain. All 25 respondents answered questions regarding ageism, cultural and spiritual aspects of care correctly. Knowledge of pharmacology items were lower than that of non-pharmacology items. Among the 25 participants responses, 3 were pain certified; 22 were not. The average and range for certified and not certified was 95% (87% to 95%) and 78% (64% to 94%) respectively.

**Discussion and Implications:** This suggests that oncology nurses should be encouraged to become ASPMN pain certified. The sample size is small but is a snapshot representing oncology

nurses nationally and is consistent with the current literature. The information provides guidance as we continue to develop educational materials in the newsletter and events.

## #193

**SUCCESSFUL CENTRAL LINE-ASSOCIATED BLOOD STREAM INFECTION RATE REDUCTION BY USING PREVENTATIVE STRATEGIES.** Theresa A. Moran, RN, MS, FNP-C, AOCNP®, Jennifer Burns, RN, MS, and Rei Sakai, RN, MS, all at the University of California, San Francisco

**Objective:** To reduce central line associated blood stream infection (CLABSI) rates through the use of education, just-in-time coaching, and auditing

**Topic Significance and Study Purpose, Background, and Rationale:** Central line associated blood stream infections (CLABSI) are a significant source of morbidity and mortality for hospitalized patients. According to the Centers for Disease Control (CDC) an estimated 41,000 CLABSIs occur annually in US hospitals resulting in prolongation of stay, increased health care costs and mortality risk. Proper insertion technique and line management can minimize the possibility of developing a CLABSI. At the University of California, San Francisco Medical Center (UCSFMC), the hematology/stem cell and bone marrow transplant unit is 44 beds caring for patients undergoing autologous, allogeneic, syngeneic, matched and mismatched unrelated donor, and cord transplants. A central line is a requirement to be treated and neutropenia is a consequence of that treatment. The National Hospital Safety Network (NHSN) guidelines provide definitions of various site infections including CLABSI. UCSFMC participates in the reporting of our CLABSI rates. Because line maintenance is almost solely within the purview of Nursing, the transplant unit at UCSFMC set a goal of reducing the CLABSI rate by 10% over fiscal year (FY) 2012-2013.

**Methods, Intervention, and Analysis:** Two unit champions and the Clinical Nurse Specialist worked closely to devise a strategic plan that included a presurvey to determine the level of understanding of the all RN staff. The plan also included an educational component including one on one teach back of a central line dressing change and the drawing of blood cultures, an drill down on all identified CLABSIs, a review of all CLABSIs at staff meetings, auditing of all central lines twice a week and a post survey to assess how well the staff retained the information/education provided.

**Findings and Interpretation:** There were some surprises noted on the presurvey. Several of the respondents related that they either didn't agree with the current central line policy or had never read it. Several weren't aware of the unit's CLABSI rate, or did not know that it was a problem. The two unit champions then started educating the staff, doing one on one education, central line dressing change demonstrations with teach back, as well as instructing the staff on how to properly draw a blood culture. Once the presurvey and education was complete, the auditing of the central line bundle consistently showed a compliance rated of  $> 90\%$ . In addition over the 12 months from July 2012 to June 2013 the units CLABSI rate dropped from 3.2 infections/1,000 line days to 2.5 infections/1,000 line days. This represents a 21% reduction in the rate and nine fewer infections during the fiscal year. Of note, there were no other central line interventions done during this time, the treatment regimens remained the same as did the mix of patients treated.

**Discussion and Implications:** The findings have demonstrated that with a concerted focus on central lines, optimizing the central line maintenance bundle and empowering every staff member to take responsibility for their patients' lines a significant decrease in the CLABSI rate is possible and sustainable.



## #194

**CARE FOR CAREGIVERS: A DISCUSSION OF THE NEED FOR PROGRAMS TO EDUCATE ONCOLOGY NURSES TO CARE FOR THEMSELVES TO PREVENT AND TREAT COMPASSION FATIGUE.** Cindy Hallman, RN, BSN, CMSRN, Jeannie Wirth, RN, MSN, AOCN®, CNS, and Rhonda Maneval, RN, MSN, AOCN®, CNS, all at Pinnacle Health System, Harrisburg, PA

**Objective:** Describe compassion fatigue's (CF) deleterious effects on oncology nurses and the necessity of evidence based educational programs, developed by oncology nurses, to promote symptom identification, self care, and prevention

**Topic Significance and Study Purpose, Background, and Rationale:** Oncology nurses (ON) are eyewitnesses to patients experience of physical, and psychological distress and are intimately involved with the patient's dying process. Often ON develop long-term close relationships with patients and may not anticipate the negative consequences to self that emerge from repeated exposure to patients distress and death (Aycock 2009; Walton 2010). The close relationship between ON and their patients increases their risk for compassion fatigue (CF). CF was first identified by Joinson (1992) and further described by Figley (1995) as a form of post traumatic stress disorder where nurses develop a secondary trauma due to repeated exposure to patients experiencing traumatic events. Left untreated, the effects of CF may result in personal and professional consequences that impact social and work-related performance (Boyle 2008). CF impaired nurses may depersonalize care and avoid stressful patient situations which can lead to a decline in patient satisfaction (Lieter, 1998). CF may lead ON to change jobs or leave nursing altogether.

**Methods, Intervention, and Analysis:** An extensive review of literature (ROL) using CINAHL, MEDLINE and PubMed was conducted resulting in more than 50 research and scholarly articles. Each article was reviewed and the information synthesized.

**Findings and Interpretation:** The ROL revealed strong evidence that ON experience CF as measured by the Professional Quality of Life (Pro Qol) Scale. The ProQOL scale is the most commonly applied measure of the effects of suffering and trauma on ON. Scholarly articles suggest that certain measures, such as; yoga, meditation, and relaxation are effective in relieving stress (Aycock, 2009). There is a lack of experimental studies testing the effectiveness of specific interventions in relieving CF. The literature suggests there is a need to develop programs using researched strategies to prevent and treat CF. It is further suggested that these programs focus on methods that enable nurses to nurture themselves on a regular basis.

**Discussion and Implications:** There is a lack of high quality studies that investigate the effectiveness of specific interventions in preventing and treating CF. Much of the scholarly literature is based on social behavior theory. Research is needed to validate the effectiveness of interventions in preventing and relieving CF in ON.

## #195

**FALLS PREVENTION IN THE ONCOLOGY POPULATION.** Marsha Rehm, MSN, RN-BC, Vickie Downing, BSN, RN, OCN®, Chelsea Passwater, BSN, RN, OCN®, and Rebecca Simmons, BSN, RN, all at Vidant Medical Center, Greenville, NC

**Objective:** Reduce falls with harm on the adult oncology unit.

**Topic Significance and Study Purpose, Background, and Rationale:** Keeping patients safe is important for nurses on any unit, but in the oncology population, the risk of harm from a

fall makes it even more important. As a result of cancer or its treatments, patients who fall are at high risk for severe injury. In January 2012, a patient fell and broke a hip. Because of this serious safety event, a root cause analysis process was begun. As part of the evaluation process, Patient Safety Net™ entries were analyzed to determine trends and assist with action planning.

**Methods, Intervention, and Analysis:** Analysis showed most patients were falling while trying to toilet, whether alone or with family members present. In addition, bed alarms were not reactivated after patient care activity. To address toileting activity related falls, new signage was created to educate patients and their families to not get up alone, but to call the nurse or care partner for help. Using the concepts from Instilling Frontline Accountability, Practice # 2—Discrete Element Education was used to provide education to staff, patients, and families. The Falls Toileting Huddle was developed and presented in April 2012 and implemented in May 2012. Bed alarms were also reviewed with staff in April 2012 and laminated information cards were developed to assist staff to zero out the beds, set, and reset alarms consistently. The Gait Belt Initiative, implemented in July 2012, consisted of placing hooks in patient rooms for gait belts. The Physical Therapy and Occupational Therapy staff educated staff on proper usage of the gait belts.

**Findings and Interpretation:** From October 2011 to April 2012, there were 36 falls, one being the fall with harm/serious safety event. From May 2012, when action plan was fully implemented, until October 2012 there were 6 falls and for the October 2012 through April 2013 time frame there were only 8 falls and no falls with harm. This represents a 78% reduction in falls for the same period of time or a drop from 5.05 per 1,000 patient days to 1.29.

**Discussion and Implications:** 1.29 is well below the Magnet designated median for National Database of Nursing Quality Indicators.

## #196

**ICU PATIENTS ARE "PRONED" TO SUCCESS.** Sonja Schedler, CCRN, Stephanie Chu, RN, BSN, CCRN, Patricia Spellman, RN, BSN, CCRN, Joyce Kane, RN, MSN, CCRN, OCN®, all at Memorial Sloan-Kettering Cancer Center, New York

**Objective:** Our objective is to review the significance of ARDS and encourage critical care nurses to help identify which patients would potentially benefit from the early proning process.

**Topic Significance and Study Purpose, Background, and Rationale:** Acute Respiratory Distress Syndrome (ARDS) continues to be one of the most complex critical care phenomena. ARDS, or the sudden failure of the respiratory system due to severe fluid build up in the lungs, prevents normal gas exchange and causes critically low blood oxygen levels. ARDS carries a high cost and a mortality rate of 26-58%. It has been well established that placing a patient in the prone position improves perfusion and oxygenation in mechanically ventilated patients for management of ARDS. The 2013 New England Journal of Medicine study concludes that early application of prolonged prone positioning significantly decreases mortality rates. Purpose: Educating staff to identify patients that would benefit from proning would help decrease the mortality rate of ARDS patients in our Oncology Intensive Care Unit (ICU). Use of this protocol would be high risk and low volume; however, we felt the benefits outweighed those factors. Therefore, a protocol was implemented, even if only a small percentage would benefit.

**Methods, Intervention, and Analysis:** A user-friendly proning specialty bed was selected and a training program, an evidence-based policy, and an electronic orderset were created. A nursing plan of care was developed and the nursing staff was inserviced on initiating and managing a patient on the proning bed. An educational video was also emailed to the staff with

a mandatory quiz to verify comprehension. Education will be reviewed quarterly and reinforced by hands-on review. The staff was educated on how to use the Berlin Definition of ARDS to identify at risk patients and the importance of early identification and collaboration with ICU physicians was emphasized.

**Findings and Interpretation:** The nursing staff gained astute skills to evaluate patients that would fit the criteria for proning. Understanding the effect early proning has on ARDS, helped staff see the direct impact of their nursing assessments

**Discussion and Implications:** Commitment to ongoing education encourages growth of practice and better patient care. It is vitally important that ICU nurses are comfortable identifying signs of early ARDS and are advocates for early proning of these complex oncology patients.

## #197

**DOSAGE MANAGEMENT SKILLS AS CAREGIVERS OF PATIENTS RECEIVING ORAL CHEMOTHERAPY.** Sena Yamamoto, RN, MSN, Harue Arao, RN, PhD, Akiko Hatakeyama, RN, PhD, Aiko Kitano, and Keiko Tazumi, RN, MSN, Osaka University Hospital, Suita, Japan

**Objective:** This study will inform participants of current dosage management skills as caregivers of patients receiving oral chemotherapy. We'd like to discuss what we should do to enhance the skills.

**Topic Significance and Study Purpose, Background, and Rationale:** The number of patients receiving oral chemotherapy is increasing. Patients receiving oral chemotherapy and their families must take oral anticancer drugs appropriately by themselves. Although families as well as patients have a need for comprehensive education, there are few studies with a focus on family education. This study aimed to assess families' dosage management skills as caregivers.

**Methods, Intervention, and Analysis:** Family members of patients receiving oral chemotherapy were asked to complete self-administered, anonymous questionnaires. Data collection was conducted by mail. Collected items were demographic information, degree of involvement in dosage management, and dosage management skills. These items were analyzed using descriptive statistics. This study was approved by the institutional ethical review board.

**Findings and Interpretation:** A total of 51 subjects responded (51/77; 66.2% response rate). Their mean age was  $61.0 \pm 12.8$  years: 49 (96.1%) lived with patients, and 41 (80.4%) were partners. Family of colorectal cancer patients was the most common, and the most common oral anticancer drugs were capecitabine. At the initial prescribing encounter, 35 (68.6%) subjects received an explanation from physicians, 7 (13.7%) from nurses, and 10 (19.6%) from pharmacists; 16 (31.4%) subjects didn't receive any explanation. Twenty-six (51.0%) subjects were involved in dosage management. Approximately 70 to 80% of them responded that they knew dosage, usage, and side effects of oral anticancer drugs. However, only half of them responded that they knew how to manage side effects and deal with emergency. With respect to exposure prevention, fewer than half of them disposed of empty packaging safely. Furthermore, fewer than 30% washed their hands before and after handling.

**Discussion and Implications:** To enhance dosage management skills of oral anticancer drugs, not only patients but also families should receive comprehensive education. However, families had insufficient opportunities for receiving education. Oncology nurses should provide families with information about management of side effects and ways of dealing with emergency. Additionally, families face a lack of knowledge for safe handling. It means that family education should include safe handling. In this study, almost all of the subjects lived with patients. Regardless of involvement in dosage management,

knowledge for exposure prevention should be provided to families.

**Underwriting or funding source name:** This work was supported by Grant-in-Aid for Challenging Exploratory Research, No. 23660035.

## #198

**USING ASCO/ONS CHEMOTHERAPY STANDARDS AND TECHNOLOGY TO REDUCE CHEMOTHERAPY ADMINISTRATION ERRORS.** Mary Strickland, RN, BS, OCN®, Joy Lombardi, RN, BSN, OCN®, Susan Childress, RN, BSN, OCN®, all at Huntsman Cancer Hospital, Salt Lake City, UT

**Objective:** Implementation of bar coded administration and a standardized double checking process can limit medication errors, reduce risk and improve patient safety.

**Topic Significance and Study Purpose, Background, and Rationale:** Chemotherapy medication errors including wrong patient, wrong drug, wrong dose, wrong time, wrong route, missed pre-medications and medication not properly prepared can be harmful, if not fatal to patients. Reducing variation in practice and making use of available technology is the current best practice for safe delivery of chemotherapy treatment. In 2013, ASCO and ONS revised their Standards for the Administration of Chemotherapy to include oral agents and 36 standards to support safe practices. At an NCCN designated cancer hospital, Infusion Room nursing staff provide care to patients with complex treatment regimens, including phase 1 clinical trials, and in recent years, have been challenged with an increasing acuity in patient population. Staff and management identified the need to develop a process to reduce chemotherapy administration errors and improve patient safety using these resources.

**Methods, Intervention, and Analysis:** In 2013, the implementation of an electronic medical record (eMAR) and bar coded medication administration (BCMA) has helped reduce harmful medication errors. With the support of ASCO/ONS guidelines and organizational policies and procedures, Infusion Room nursing staff instituted a standardized double check system for administration of chemotherapy after discussion, trial, revision and retrieval. Analysis of medication error rates and BCMA compliance has shown improvement in error rates and compliance.

**Findings and Interpretation:** Initially using BCMA took time and nursing compliance varied. A challenge was finding a nurse available to check pump settings at the chair side at the right time. Staff found that having the primary nurse hang the chemotherapy, program the pump, then "pausing" the pump, allowed the second RN to double check when available.

**Discussion and Implications:** Nurses attribute medication errors to under staffing, stress, and unclear orders, rather than the variance of practice from nurse to nurse. Nurses who lack experience in chemotherapy administration may contribute to unsafe practices due to poor orientation and lack of consistency in practice. Experienced nurses are vulnerable to making errors simply due to the complexity of the treatment regimen, distraction, or competing tasks. Insistence on a consistent administration and checking process is imperative to ensure patient safety.

## #199

**A CASE FOR CERTIFICATION: CREATING THE STRUCTURE FOR BETTER PATIENT OUTCOMES.** Paula Goff, BSN, OCN®, Malgorzata Sokolowski, MSN, AOCNS®, and Jennifer Aversano, MSN, AOCNS®, all at Advocate Lutheran General Hospital, Park Ridge, IL

**Objective:** After implementing the expectation of specialty certification, improved patient outcomes have been demonstrated on an inpatient oncology unit.

**Topic Significance and Study Purpose, Background, and Rationale:** Quality outcome measures have become significant in hospital reimbursement and in achieving better patient satisfaction. The purpose of this initiative was to engage professional development in oncology nurses by encouraging specialty certification in oncology. The goal was to demonstrate that nurses have a direct impact into patient health outcomes. Each nurse worked to obtain specialty certification. In-services were done to highlight the value of certification by the manager, student nurses, and nurses who obtained their certification. Over the past a five years nurses have embraced specialty certification and ongoing lifelong learning. Nurses began to own practice and pay attention to practice updates and innovation. On March 3, 2013 the unit obtained their goal of reaching 100% certification. On this journey, we continually promote professional development, involvement in the ONS professional chapters, and collaborating with other team members to drill down hospital acquired events and search for evidence based practices.

**Methods, Intervention, and Analysis:** The unit's expectations are that OCN would be obtained by the end of year two for new graduates and by the end of the first year for experienced nurses. Nurses were engaged in the process, as they helped each other study and the manager of the unit set out to be one of the first to be certified. The hospital reimbursed for the test, review courses and study materials. In addition, evidence-based approaches to achieve quality patient outcomes coupled with encouraging specialty certification. Then a remarkable transformation started to occur on the unit, the nurses became accountable and proactive over their practice.

**Findings and Interpretation:** In hospital acquired outcome measurements the oncology unit has achieved significant improvement in patient care metrics. Improved outcomes included increased patient satisfaction and decreased Falls, Central line and blood stream infections (CLABSI), Clostridium Difficile (C-Diff), and pressure ulcers.

**Discussion and Implications:** Improved patient outcomes were demonstrated with use of evidence-based practice interventions coupled with encouraging specialty certification on an inpatient oncology unit. Our recommendation includes the conduct of a formal systematic research study on the impact of specialty certification.

## #200

**UNDERSTANDING COLORECTAL SCREENING BEHAVIORS AND BARRIERS TO SCREENING IN A COMMUNITY HOSPITAL SETTING.** Holly Weyl, RN, BSN, OCN®, Susan Yackzan, APRN, MSN, AOCN®, Kay Ross, APRN, MSN, AOCN®, Amanda Henson, MSHA, MBA, FACHE, and Krista Moe, PhD, all at Baptist Health Lexington, Kentucky

**Objective:** To evaluate the efficacy of mailing educational material supporting the need for CRC screening post-discharge to individuals over the age of 50 who had not been screened for CRC.

**Topic Significance and Study Purpose, Background, and Rationale:** Colorectal cancer (CRC) is the third most commonly diagnosed cancer and the second leading cause of cancer death in the United States (ACS, 2006). Considerable evidence suggests that screening for CRC increases early diagnosis of the disease, leading to a more effective treatment (USPSTF, 2008). The purpose of the study was to evaluate the efficacy of mailing educational material supporting the need for CRC screening post-discharge to individuals over the age of 50 who had not been screened for colorectal cancer on their decision whether or not to be screening. Data on characteristics of individuals screened/not screened were also analyzed.

**Methods, Intervention, and Analysis:** A quasi-experiment was conducted. Patients discharged from a 383 bed Magnet re-designated community hospital who reported not having

been screened for colorectal cancer were mailed educational material (N = 2,886). Six to 12 months post mailings, follow up phone calls were made. Given resource restraints, 1,890 of the 2,886 patients who received educational materials were called. An investigator designed semi-structured telephone interview was conducted. Of those phone calls, 499 were reached and 167 agreed to participate. Information was gathered regarding: (a) demographics, (b) whether or not screening had occurred, and (c) possible barriers to screening. Descriptive and inferential statistics were used to identify screening behaviors and patterns.

**Findings and Interpretation:** Of the 167 patients, 31.7% (n = 53) got screened. Of those screened: 78% (n = 41) had a health care provider who discussed with them their medical needs, 35% (n = 15) recalled receiving the educational materials in the mail and had a provider who discussed colorectal cancer screening with them, and 96% (n = 51) had insurance to cover colorectal cancer screening.

**Discussion and Implications:** Findings that appear to have an influence on screening were the availability of insurance coverage for CRC and having a caregiver who emphasizes the importance of CRC screening. Results suggest that: (a) education regarding the importance of screening for the general public may encourage individuals to purchase insurance that covers CRC screening and (b) encouraging caregivers throughout their formal or continuing education to discuss with the patients the importance of CRC screening.

## #201

**PROMOTING NEW GRADUATE NURSES ACCOUNTABILITY FOR EVIDENCE-BASED PRACTICE: AN INTERDISCIPLINARY APPROACH TO EVIDENCE-BASED PRACTICE EDUCATION.** Altagracia Mota, MSN, RN, OCN®, and Mari-sol Hernandez, MLS, MA, both at Memorial Sloan-Kettering Cancer Center, New York

**Objective:** Upon completion of this presentation the participant will be able to discuss the impact of an innovative interdisciplinary approach to evidence-based practice education for new graduate nurses

**Topic Significance and Study Purpose, Background, and Rationale:** Quality and safe delivery of care is the primary goal of schools of nursing and healthcare facilities. Increases in patient acuity has made it challenging for new graduates to transition to the staff nurse role in acute-care hospitals; thus impacting quality of patient care. To facilitate with transition, the University Heath System Consortium (UHC) and the American Association of Colleges of Nursing (AACN) Nurse Residency Program (NRP) was introduced at this Comprehensive Cancer Center. The curriculum requires Nurse Residents to present an evidenced-based practice project (EBPP). These projects exemplify the nurse's accountability for delivering quality patient care, improving interprofessional skills, and committing to nursing as a profession. A recent UHC/AACN outcomes report showed that 88% of staff valued the EBPP.

**Methods, Intervention, and Analysis:** These nurses need guidance in understanding their role in promoting evidence based practice. A collaborative partnership between our department of nursing and the medical library was formed to facilitate this endeavor. The NRP Coordinator educates staff on the IOWA model of evidence based practice, topic selection, searching for evidence, review of the literature, and presentation preparation. A dedicated Clinical Librarian provides training to support the clinical, research and educational endeavors of the nursing staff.

**Findings and Interpretation:** The Clinical Librarian provides an orientation to library resources and services, and facilitates training on use of information resources that include PubMed, CINAHL, Cochrane, Embase and Turning Research into Practice (TRIP). Attention is given to formulating a PICOT question and developing



keyword and controlled vocabulary search strategies for optimal results. The Clinical Librarian has developed online guides of nursing resources, EBP, Magnet and nursing journal clubs. These resources are available on the Library website and accessible remotely. The NRP Coordinator and Clinical Librarian are available for individual or group consultation as residents work on their EBPP.

**Discussion and Implications:** A recent partnership with the Department of Nursing Evidence Based Practice and Research, hopes to increase the translation of EBPP into practice, increase participation of new graduates in abstract development and presentation of EBPP at the national level. Data will be gathered on staff perceptions of this interdisciplinary approach to EBP education and its impact on practice.

## #202

**FALL PREVENTION IN MEDICAL ONCOLOGY.** Christine Balch, RN, BSN, OCN®, Myra Johnson, RN, BSN, OCN®, and Kelly Barnett, RN, BSN, OCN®, all at Baylor University Medical Center, Dallas, TX

**Objective:** A fall committee was created to decrease falls and falls with injury. Interventions were developed that focused on staff and patient/family education.

**Topic Significance and Study Purpose, Background, and Rationale:** Preventing falls and falls with injury is a constant struggle due to the complexity of our oncology patient population. Nursing has a very important and pivotal role due to our position as direct caregiver and educator. Prompt identification of at risk patients and early implementation of individualized interventions can have a huge impact. According to the CDC, medical costs related to falls totaled more than \$19 billion in 2007--\$179 million for fatal falls and \$19 billion for non-fatal fall related injuries. By 2020, the annual direct and indirect cost of fall injuries is expected to reach \$54.9 billion. The fall committee took a going back to basic approach. Baseline knowledge of staff was evaluated and they received education on identifying patients at risk. We developed a S.A.F.E. tool to educate patients and family members upon admission. By implementing early education on the risks associated with falls (versus a change in risk level or after an actual fall), fall prevention measures were easier to implement and well received by patients and families.

**Methods, Intervention, and Analysis:** An every two month review of falls with involved staff in attendance was done with the fall committee to discuss opportunities for improvement. Signage reflecting days since last fall, PT participation and adding a patient advisor to our committee has helped to impact our NDNQI scores. Since our moderate fall risk patients are our highest population of falls, we are analyzing subcategories within the fall risk tool to assist in identification of key factors that contribute to the overall fall score.

**Findings and Interpretation:** Falls with injury/1000 patient days on Medical Oncology has decreased from 1 to 0.73 from FY12 to FY13.

**Discussion and Implications:** Implementation of a variety of tools and interventions has had a positive impact on fall events within the medical oncology units. The committee continues to closely follow falls and actively seeks out new or alternative interventions to maintain the safety of our patients.

## #203

**THE STANDARD LEADERSHIP CALENDAR—A PRAGMATIC AND INNOVATIVE STRATEGY TO FOSTER A HEALTHY AND SAFE ONCOLOGY PRACTICE SETTING.** Dawn Pingyar, BSN, RN, CMSRN, Lehigh Valley Health Network, Allentown, PA

**Objective:** Describe the concept of and outcomes that can be achieved through a standard leadership calendar.

**Topic Significance and Study Purpose, Background, and Rationale:** This session details a standard leadership calendar' (SLC) and successful implementation within an NCI Community Cancer Centers Program Magnet hospital. Evidence shows few healthcare organizations have established No Meeting Zones or 'Leader Standard Work. A study within the presenting organization found staff needed time, trust and teamwork' to be at their best.' The SLC addresses these elements to foster a healthy and safe work environment.

**Methods, Intervention, and Analysis:** All unit managers block 8-11 am Monday-Friday as a 'meeting-free zone.' Standard work expectations are to attend their units daily safety huddles and interprofessional collaborative rounds and complete daily patient and staff rounds. Patients are asked standard questions based on prioritized service and quality issues. Staff rounds are not the 'hummingbird' variety, but are formal and require manager and staff to sit in a quiet place. Standard questions relate to those asked in the biannual employee satisfaction survey. A survey tool on an electronic tablet is used by the manager to assure question standardization and recording of answers for data collection and follow-up. It is important for managers to be accountable to close the loop on identified issues, often engaging staff in crafting solutions.

**Findings and Interpretation:** The SLC has been in place for 8 months on 7 inpatient units (including a medical-surgical hematology-oncology unit) and 3 emergency departments. Patient satisfaction scores have reached annual target goals and nurse sensitive indicators have been positively impacted. Qualitatively, staff know they will interact with their manager every day, discussing standard, evidence-based questions and have time for engagement and problem solving. Managers report the dedicated time for the standard work allows them to be proactive, focused and present; realize a sense of accomplishment and energy; move from quick to sustainable fixes; and, make patients and staff their priority.

**Discussion and Implications:** A key lesson learned is that standard leadership rounding expectations must be taught, role modeled and validated. This presentation aligns with the Oncology Nursing Society core value of excellence in administration and in turn, clinical practice. An SLC can be implemented within any oncology setting to improve the work environment and manager work-life satisfaction.

## #204

**THE IMPLEMENTATION OF A STRUCTURED WORKFLOW: IMPLICATIONS FOR NURSING.** Natasha Ramrup, RN, MSN, OCN®, Karshook Wu, RN, BSN, and Eileen Power, RN, BSN, Memorial Sloan-Kettering Cancer Center, New York

**Objective:** A communication workflow was created on our DMT Gastrointestinal Medical Oncology/ Hepatopancreatobiliary Service and our goal was to improve communication among all disciplines to meet patient needs in a timely manner.

**Topic Significance and Study Purpose, Background, and Rationale:** Communication barriers can jeopardize safe care and lead to a fragmented approach to patient care. Some contributing factors of communication failure include: Human attitudes and behaviors, distractions and interruptions, social and cultural differences, time pressures and workload, and an organizational culture that discourages open communication.

**Methods, Intervention, and Analysis:** The Joint Commission has reported that the primary root cause of over 70% of sentinel events is communication failure. Improving the effectiveness of communication among hospital staff is one the Joint Commission's National Patient Safety Goals. Ineffective communication is a contributing factor in medical errors that potentially causes physical and emotional harm. In order to address the invariable lapse in communication, this NCI-designated cancer center im-

plemented an initiative to enhance effective communication in an effort to improve patient safety

**Findings and Interpretation:** At the beginning of each shift, the nurse coordinator creates a buddy list. Each RN and PCT has a buddy RN who they can call on throughout the day to seek assistance when needed. The workflow begins with the unit assistant (UA), who accepts calls from the patient. The UA determines the most appropriate person for each task and propagates the call. The job of that primary person is to accept the task or request whether they can attend to it or not. The primary RN or PCT will then determine if they can fulfill the task or call their buddy for help if they cannot accomplish the task at that moment. This process is greatly supported by our Voceras, which are voice.

**Discussion and Implications:** This structured communication workflow allows colleagues to communicate with each other effectively, thereby improving relationships, employee satisfaction and morale. The workflow also serves as a vehicle for patient safety, satisfaction and better patient outcome. Furthermore, it helps us to resolve issues prior to approaching the nurse leader and embrace opportunities to learn from one another.

## #205

**EFFICACY AND EXPERIENCE IN MANAGING PERIPHERAL NEUROPATHY ASSOCIATED WITH NAB-PACLITAXEL IN A PHASE III TRIAL OF CHEMOTHERAPY-NAIVE PATIENTS WITH METASTATIC MELANOMA.** Heather Nichols, RN, University of Arizona Cancer Center, Scottsdale; Sandra Kurtin, RN, MS, AOCN®, ANP-C, and Mingyu Li, RN, MS, AOCN®, ANP-C, University of Arizona Cancer Center, Tucson; Illeana Ilias, MD, Celgene Corporation, Summit, NJ; and Evan Hersh, MD, University of Arizona Cancer Center, Scottsdale

**Objective:** To describe efficacy, safety, and management of peripheral neuropathy (PN) in a phase III trial of nab-paclitaxel vs dacarbazine (DTIC) in chemotherapy-naive patients with metastatic melanoma.

**Topic Significance and Study Purpose, Background, and Rationale:** PN, a common toxicity of taxane therapy, was observed in chemo-naive metastatic melanoma patients treated with nab-paclitaxel. Oncology nurses play an important role in the assessment of treatment-related adverse events (TRAEs) and communication of these findings to healthcare providers, allowing for appropriate dose modifications so that patients may continue to receive and benefit from therapy.

**Methods, Intervention, and Analysis:** Patients (N = 529) were randomized 1:1 to nab-paclitaxel 150 mg/m<sup>2</sup> on days 1, 8, and 15 of a 28-day cycle (n = 264) or DTIC 1000 mg/m<sup>2</sup> on day 1 of a 21-day cycle (n = 265).

**Findings and Interpretation:** Most patients were men (66%), had an ECOG status of 0 (71%), and M1c stage disease (65%). nab-Paclitaxel vs DTIC resulted in a significantly longer progression-free survival, the primary endpoint of the study (4.8 vs 2.5 months; HR 0.792; 95.1% CI 0.63, 0.992; p = 0.044). The median interim overall survival was 12.8 months with nab-paclitaxel and 10.7 months with DTIC (HR 0.831; 99.9% CI 0.578, 1.196; p = 0.094). The most common grade 3 TRAEs with nab-paclitaxel vs DTIC were PN (25% vs 0%; p < 0.001) and neutropenia (20% vs 10%; p = 0.004). Median time to onset of PN was 100.5 days after starting nab-paclitaxel therapy. Of the 64 patients with grade 3 PN, 64% patients had an improvement of less than 1 grade, with a median time to improvement of 28 days (95% CI 17, 64). Thirty of 64 patients (47%) resumed treatment with nab-paclitaxel. Reasons for not resuming treatment included persistent grade > 1 PN, disease progression, or other TRAEs.

**Discussion and Implications:** Evidence-based tools for evaluation of PN are available that allow nurses to identify patients at risk and should be used consistently to establish preexisting PN as well as any changes in PN during therapy to allow

early intervention. While the effectiveness of pharmacological interventions for PN have not been established, early dose modifications for PN have been effective in clinical trials. These data support nab-paclitaxel as a new treatment option in chemo-naive metastatic melanoma and facilitate early identification of expected side effects of treatment which may allow patients to achieve the best outcomes.

## #206

**MAMMOGRAPHY SURVEILLANCE PRACTICES FOR MEN DIAGNOSED AND TREATED FOR BREAST CANCER.** Patty Kormanik, RN, MSN, AOCNP®, and Ellen Carr, RN, MSN, AOCN®, UCSD Moores Cancer Center, La Jolla, CA

**Objective:** Clarify current mammography ordering and surveillance practices at NCCN designated cancer centers for men with a diagnosis of breast cancer.

**Topic Significance and Study Purpose, Background, and Rationale:** Despite NCCN and ACR breast cancer surveillance guidelines, mammography surveillance for men five years post diagnosis varies in clinical practice. In general, clinical practice guidelines for women with breast cancer recommend diagnostic mammograms for the first five years following diagnosis then a change back to screening mammograms to be done yearly. In clinical practice, diagnostic mammograms are often ordered yearly for men despite distance from diagnosis. Screening mammograms allow for basic views of the breast with less radiation exposure. The purpose of this study is to clarify current male mammography ordering and surveillance practices so that inconsistencies in following surveillance guidelines can be addressed by the patients breast cancer care team.

**Methods, Intervention, and Analysis:** Advanced practice nurses from the Moores UCSD Cancer Center conducted a survey of 23 NCCN accredited centers' breast cancer surveillance policies and practices for men post treatment. The telephone survey, contacting representatives from the centers' Clinical Radiology departments and breast cancer care teams, queried the facilities about their current mammography surveillance ordering practices for men with diagnosed breast cancer. Survey questions elicited current practices and perceived barriers to using screening mammogram techniques with men diagnosed with breast cancer.

**Findings and Interpretation:** Survey results indicate that practice patterns favored the ordering of diagnostic vs screening mammograms in men greater than five years post diagnosis. The facilities cited that their practices were based on limitations dictated by funding sources. Survey results suggest a disconnect between surveillance screening standards and clinical practice.

**Discussion and Implications:** Based on this study's findings, economic factors appear to dictate the ordering of diagnostic vs screening mammograms for men greater than five years post diagnosis. These results contribute to a database about ordering, billing and patient education concerning surveillance mammogram practices for men with breast cancer. These survey results also prompt practitioners to advocate adherence to guidelines when ordering surveillance mammograms for men post treatment.

## #207

**CRITICALLY ILL CANCER PATIENTS: INDICATIONS FOR CONCURRENT PALLIATIVE CARE.** Colleen Apostol, MSN, RN, OCN®, CHPN, Adelaide Sit, RN student, Brenda Shelton, RN student, Joyce Kane, MSN, RN, and Barbara Kasceamp, RN, all at Johns Hopkins Hospital, Baltimore, MD

**Objective:** Define critical care practices in cancer patients after provision of staff education about palliative and pastoral care services.

**Topic Significance and Study Purpose, Background, and Rationale:** Despite advancements in cancer treatments, mortality rates average 50% in critically ill cancer patients. There is growing recognition that supportive services, including palliative and pastoral care concomitant with life-prolonging treatments, can promote quality of life for patients and families during life-threatening illness. This retrospective review was undertaken to evaluate palliative care practice changes after clinicians were provided education and informal encouragement to explore care options with patients prior to critical illness. This educational process was adopted because it was perceived that more directive measures would be less acceptable to clinicians. Evidence-based literature cautions that education and informal processes are less effective in changing behavior than altering systems or the culture of care.

**Methods, Intervention, and Analysis:** This analysis compared outcomes and implementation of supportive services in all critically ill patients at this National Cancer Institute designated Comprehensive Cancer Center in 2010 (n=112) and 2012 (n= 100). After 2010 analysis, Cancer Center medical and nursing staffs were provided education on outcomes of critical illness and advantages of supportive services. Guidance in conducting goals of care discussions was provided through education sessions and prompt cards. The presence of refractory malignancy, cardiac monitoring, or supplemental oxygen were recommended triggers for goals of care discussions. Descriptive statistics were used to analyze demographics and involvement of palliative or pastoral care during critical illness.

**Findings and Interpretation:** Clinical characteristics and survival were comparable between groups. Discussions about goals of care were not measured in 2010, but present in 10% of patients records in 2012. Referral to the palliative care team was unchanged across the two years, as was the incidence of shifting goals of care from life-sustaining to palliation; however, pastoral care consultations increased from 17% to 72%.

**Discussion and Implications:** Evaluation of changes in palliative care during critical illness demonstrated increased recognition of patients with poor survival risk, with greater attention to patients and families spiritual needs. Critical care outcomes and palliative care team involvement did not change despite interventions, representing an opportunity for continued practice improvements.

## #208

**EFFECTIVENESS OF NURSE-LED, PRE-CHEMOTHERAPY EDUCATIONAL SESSIONS.** Jennifer Gideon, MHSA, BSN, RN, and Morris Magnan, PhD, RN, Karmanos Cancer Center, Detroit, MI

**Objective:** After reviewing this poster presentation, nurses will be able to identify one patient benefit that comes from attending nurse-led pre-chemotherapy educational sessions.

**Topic Significance and Study Purpose, Background, and Rationale:** Anxiety, fatigue and mucositis are commonly experienced side effects of chemotherapy treatment. Research suggests that patients who attend pre-chemotherapy classes engage in more self-care behaviors, and experience less severe symptoms compared to those who do not. At the Karmanos Cancer Institute pre-chemotherapy, nurse-led, group education sessions have been available for 10 years. While we believe that these sessions are comprehensive and robust, this assumption has not been tested clinically. The purpose of this process improvement project was to evaluate the effect of nurses-led, pre-chemotherapy education sessions on specific patient reported side effects: anxiety, fatigue and mucositis.

**Methods, Intervention, and Analysis:** A retrospective comparative design was used to determine whether patients who attended pre-chemotherapy class differed significantly on anx-

iety, fatigue and mucositis, from patients who did not attend pre-chemotherapy class. Data was retrieved from charts (N = 119). Levels of self-reported anxiety, fatigue and mucositis were examined at one, three and five weeks during treatment. Data were analyzed using SPSS 17.0.

**Findings and Interpretation:** Analysis using repeated measures ANOVA ( $F_{2, 117} = 126, p < 0.001$ ) showed that patients who attended pre-chemotherapy class reported less fatigue at 1, 3, and 5 weeks into treatment compared to patients who did not. These results suggest that patients who attend class are better equipped to engage in fatigue-related self-care measures compared to those who do not. However, a selection effect cannot be ruled out.

**Discussion and Implications:** Patient participation in pre-chemotherapy educational sessions should be encouraged. Class content should include instruction on symptom recognition and self-management.

## #209

**IMPROVING QUALITY OF CARE AND SYMPTOM MANAGEMENT WITH 1:1 PATIENT EDUCATION.** Amy Malensek, RN, OCN®, CBCN, Niki Varlotta, RN, OCN®, WCC, and Jaclyn Figueres, RN, OCN®, WCC, Cancer Treatment Centers of America at Western Regional Medical Center, Goodyear, AZ

**Objective:** To increase understanding and retention of information presented to patients for disease process, treatment regimen, and symptom management by providing 1:1 patient education sessions.

**Topic Significance and Study Purpose, Background, and Rationale:** Cancer treatment can be challenging for both patients and caregivers, and the education provided is universally judged to be an important adjunct to the management of care (Peppercorn, J., et. al., 2011. Journal of Clinical Oncology.) In addition to improving a patient's understanding of their plan of care, education may also play an important role in reducing hospital admission for treatment-associated complications including; dehydration, chemotherapy-induced nausea and vomiting (CINV), and infection. Currently, education may be delivered by the nurse or physician upon diagnosis, or prior to starting chemotherapy infusion. The information may be brief, and patients are assumed to understand the information irrespective of their education levels. Many patients report feeling inadequately informed, and some note never having received any education. We hypothesize that providing 1:1 education by a licensed oncology nurse over the course of one hour could improve patient understanding, compliance to treatment regimen, and allow for an individualized approach towards assessing and addressing patient-specific needs.

**Methods, Intervention, and Analysis:** Patients are first seen by a multidisciplinary oncology care team for diagnosis and treatment recommendation. A patient education appointment is then scheduled with a licensed nurse educator. The patient and caregiver then attend a one-hour session providing detailed information regarding etiology, diagnosis, treatment, rationale and mechanism for a specific chemotherapy regimen, as well as regimen-specific symptom management. Targeted education materials, based on patient learning assessment, are given to enhance better understanding. A total of 30 patients are to be accrued, and asked to answer a brief questionnaire at the time of the education appointment, and again one month later.

**Findings and Interpretation:** This pilot study is currently ongoing, and the preliminary reports are promising. Patients and caregivers are admitting an increased understanding of their disease and treatment process through patient feedback surveys. Moreover, patients report a sense of empowerment over their treatment.



**Discussion and Implications:** Multiple studies indicate the importance of individualizing education based on assessment of need. Periodic reassessment of the educational objectives and the need for additional intervention will be addressed based on results of the questionnaire. The potential outcome could allow support for informed decision-making and active collaboration with the healthcare team to improve clinical outcomes and quality of life.

## #210

**MINIMIZING THE GRIM, PROTECT THOSE LIMBS! A GUIDE TO EXTRAVASATION PREVENTION AND MANAGEMENT.** Dorothy Mitchell, OCN®, MSN, Carolyn Ruef, OCN®, NP, Sherry Laub, OCN®, NP, and Tahitia Timmons, MSN, RN-BC, OCN®, VA-BC, all at Cancer Treatment Centers of America, Philadelphia, PA

**Objective:** The goal was to create an easy to use extravasation policy with a flow chart and diagram that incorporated the latest guidelines regarding management and prevention.

**Topic Significance and Study Purpose, Background, and Rationale:** Extravasation can be an immediate and frightening complication of cancer therapy. A review of the existing policy showed gaps in practice standards based on INS and ONS latest recommendations. In 2008, ASCO American Society of Clinical Oncology/Oncology Nursing Society Chemotherapy Administration Safety Standards defined standard 22 as: extravasation management procedures be defined and align with current literature and guidelines; antidote order sets and antidotes be accessible. Our institution wanted the policy to reflect the latest evidence and be easy for staff to implement.

**Methods, Intervention, and Analysis:** Surveys were conducted of the staff to determine the extent of their comfort with the existing practice and policy. Based on the feedback it was decided to create a work group and revise the policy. Prior to the existing revised policy there were antidotes that were not consistently available, and the policy was difficult to navigate. The infusion team developed an easy to use diagram, flow chart, and patient education. They reviewed the literature and guidelines to determine best practice and worked with pharmacy. An additional change to the policy was the addition of photographic evidence to capture any incidence if they occurred.

**Findings and Interpretation:** Since the change in practice the additions have been beneficial for patients with the increase in patient education and comfort level with the nursing staff. One extravasation post implementation did occur and the staff stated they felt prepared to manage it. This was evaluated through a post-huddle.

**Discussion and Implications:** The implementation of the policy decreased the need for surgical intervention, of the one extravasation that occurred. With the staff being able to quickly act and promptly intervene preventing further injuries by following the newly established policy and procedures. The patient also was satisfied with the intervention that occurred, this was confirmed through re-assessment. We believe that the establishment of easy to use extravasation guidelines can assist other institutions in facilitating staffs comfort with chemotherapy infusion and increasing patient safety.

## #211

**PILOT STUDY: MUSIC AS A NURSING INTERVENTION FOR ADULT CANCER PAIN.** AnnMarie Keenan, MS, APN, AOCN®, Rush University Medical Center, Chicago, IL

**Objective:** Evaluate the effect of music as an integrative nursing intervention to relieve cancer related pain.

**Topic Significance and Study Purpose, Background, and Rationale:** Unrelieved pain from cancer or treatment is common,

feared, and distressing, creating a significant burden for patients undergoing treatment and survivors. The American Cancer Society estimates 1,660,290 new cancer cases will be diagnosed during 2013. The National Comprehensive Cancer Network indicated pain affects 23% of newly diagnosed patients, 33% of patients receiving treatment, and 75% of those with advanced disease, a significant impact on quality of life. Integrative methods for pain relief were published by oncology nurses however, only a paucity of randomized controlled trials was conducted. The present study was designed to determine feasibility for a larger trial. Nurses will be recruited to collect data.

**Methods, Intervention, and Analysis:** A randomized controlled trial compared the effect of 30 minutes of music listening on cancer pain, to a similar control group who rested for 30 minutes, in a sample of 10 adults. Pandora was chosen to optimize patient-preferred music. Using a purposive sample, participants were recruited from two inpatient cancer units at a Midwestern university medical center. Outcome measures: Pain-Visual Analogue Scale (P-VAS), Profile of Mood States-Short Form (POMS-SF), 24-hour opioid dose calculated in equianalgesic units. The P-VAS is highly correlated with the numeric rating scale. Cronbach's alpha demonstrated internal consistency reliability of the POMS. Demographic and cancer characteristics were collected on all subjects. The Biopsychosocial Model in Cancer Pain provides a framework that potentially may be impacted favorably by the music intervention.

**Findings and Interpretation:** Pretest/Posttest effect sizes—VAS 0.65; POMS-SF subscales—confusion 0.44, fatigue 0.55, vigor 0.62, depression 1.29, tension 1.56 ( $p < 0.05$ ), anger 2.29, total POMS-SF 0.25. Medium to large effect sizes suggest that music was an effective intervention to relieve pain. 24-hour equianalgesic opioid use: Music group Mean 12.06 mg, Control group Mean 92.7 mg, reflecting meaningful decrease in opioids among music listeners. Data analysis: repeated measures ANOVA. One recent study reported positive effect sizes for pain sensation and distress.

**Discussion and Implications:** Research indicates patients will use strategies to manage pain when it disrupts daily life. Strategies increasingly include integrative methods. Music is readily available, nontoxic, and inexpensive. The use of music may reduce cancer pain. Further multi-disciplinary research with large samples is warranted.

## #212

**PROGRAM DEVELOPMENT FOR CANCER SURVIVORS' MULTIDIMENSIONAL NEEDS AND SERVICES.** Guadalupe R Palos, DrPH, RN, LMSW, Fran Zandstra, RN, MBA, OCN®, Ludivine Russell, RN, MBA, OCN®, Katherine Gilmore, MPH, CCRP, Jacklyn Flores, BS, and Maria Alma Rodriguez, BS, all at the University of Texas MD Anderson Cancer Center, Houston

**Objective:** The participant shall be able to identify cancer survivors' multidimensional needs (physical, psychological, and social) to use for future development of survivorship program services and clinical interventions.

**Topic Significance and Study Purpose, Background, and Rationale:** Long-term cancer survivors face numerous complex physical, psychological, and social needs. As the number of cancer survivors continues to increase, the demand for comprehensive clinical care and program services that meet these necessities will also grow. Despite the growing body of evidence on survivors' needs, significant gaps remain in planning clinical and program services for a diverse population. In addition, much of current literature on survivors' needs focuses on those with specific types of cancers or with other special characteristics (i.e. those attending support groups). The lack of knowledge regarding the needs of survivors who live in diverse communi-

ties and often receive follow-up care by primary care providers hinder planning programs tailored for these populations. To address these gaps, we conducted an exploratory survey to identify the perceptions of community-dwelling survivors about their needs over the course of their survivorship experience.

**Methods, Intervention, and Analysis:** A convenience sample of adult survivors attending a community-based cancer survivorship conference was eligible to participate in this quality improvement survey. Survivors voluntarily completed a self-administered survey booklet. Trained staff instructed respondents on how to complete and return the surveys. The booklet focused on 3 domains; 1) survivors' perceptions and preferences for their cancer-related follow-up care, 2) general physical and psychological health status, and 3) impact of cancer on their lives. No identifiers were collected in this survey approved by the Quality Improvement Institutional Board. Simple descriptives (i.e. frequencies, percentages, means, and standard deviations) will be used to summarize the results.

**Findings and Interpretation:** Analysis is currently underway. However 119 of the 312 booklets distributed to survivors were returned resulting in a 38.3% response rate. The primary outcome will be the calculated mean summary score the 3 previously described domains.

**Discussion and Implications:** We sought to describe the multidimensional needs of a diverse community-dwelling population of cancer survivors at various stages of their survivorship experience. Survivors' living in their communities may have unmet needs that warrant specific clinical care, program services, and tailored interventions. Specific research addressing these unmet needs would be helpful in promoting optimal psychosocial and physical outcomes for cancer survivors living in their communities.

## #213

### ACHIEVING MEANINGFUL USE THROUGH ELECTRONIC DOCUMENTATION OF THE NURSING PROCESS.

Jacqueline Patterson, RN, BSN, OCN®, Diane Llerandi, RN, MA, AOCNS®, Linda Ouyang, RN, MA, AOCNS®, Donna Miale Mayer, RN, MSN, CNML, Mary Dowling, RN, MSN, CENP, OCN®, and Marisa Vascotto, RN, MSN, CENP, OCN®, all at Memorial Sloan-Kettering Cancer Center, New York

**Objective:** Implementing electronic documentation of the nursing process to improve nursing workflow and analyze data to improve nursing care and patient outcomes.

**Topic Significance and Study Purpose, Background, and Rationale:** Nursing Leadership and Informatics recognized nursing paper documentation set forth a workflow where each step of the nursing process was carried out, but in isolation, as the plan of care was documented at the end of the shift. Based on clinical expertise, a novice nurse would be more task-oriented instead of problem driven, as they were not guided by the standards embedded in evidenced based plans of care at the beginning of their shift. The new RN workflow when electronically documenting guides the nurse to follow the proper nursing process sequence.

**Methods, Intervention, and Analysis:** In collaboration with Nursing Leadership and Informatics our inpatient hematology unit recently launched a successful pilot of electronic nursing documentation. Clinical Nurses were identified as superusers and collaborated with our Unit Nurse Leader for standards ensuring smooth workflow and timely documentation of care plans, interventions, and patient education documentation flowsheets (PEDFs). At the beginning of the shift RN's review and/or initiate plans of care, appropriate interventions and initiate minimally two separate electronic PEDFs, indicating how education was provided and the effectiveness. Nursing interventions are documented in real time and at the end of the

shift nurses document patient outcomes. Issues that still active are reviewed the following shift until the issue, and subsequently the care plan is resolved.

**Findings and Interpretation:** As this has rolled out to other units it has streamlined nursing workflow and given them the opportunity to base care on evidence based practice approach, with measurable outcomes. The tremendous amount of patient/caregiver education is documented throughout the shift providing data and value to support nursing care hours.

**Discussion and Implications:** Nursing Leadership plans to integrate the Rothman Index which continuously calculates and stratifies patients as low, medium or high risk of mortality and unplanned readmission within 30 days. The Index is based on nursing documentation and specific lab results. This Index provides early warnings to clinicians of subtle changes resulting in escalated risk categories to prompt earlier interventions and improves patient outcomes and costs.

## #214

### CANCER SURVIVORSHIP: AN INSTITUTIONAL ASSESSMENT.

Noel Aaring, DNP, RN, OCN®, and David Etzioni, MD, MSHS, both at Mayo Clinic, Phoenix, AZ

**Objective:** Participants will be able to identify 3 key methodologies used in an organizational assessment.

**Topic Significance and Study Purpose, Background, and Rationale:** Current research on cancer survivorship has identified the need to support patients during their post-treatment phase of cancer care. Feedback from patients and providers has indicated that there is a need to identify a clear post-treatment plan that includes who will address which aspect of care for our patients and providers. Implementation of cancer survivorship care plans has been supported by the oncology community culminating in the adoption of the Commission on Cancer's new standards to have them implemented by 2015. Many organizations have struggled to provide survivorship care that is coordinated, comprehensive and cost-effective. The goals of this project were to identify the needs of providers involved in cancer survivorship care.

**Methods, Intervention, and Analysis:** This work was an organizational assessment rooted in a quality matrix aimed at assessing the state of cancer care at a multi-site institution. The assessment included a multi-pronged approach that included qualitative key informant interviews analyzed utilizing thematic analysis and a structural assessment.

**Findings and Interpretation:** This project identified multiple needs of front line cancer survivorship care providers including medical providers, clinical nurses, nurse coordinators, clinical nurse specialist, and nursing administration. The themes identified by the team included varying survivorship clinic models, the need for clear direction in a multi-site organization, provider buy-in and clear guidelines/protocols, Information Technology Solutions, and barriers.

**Discussion and Implications:** Results from this project will be used to guide and inform our institutional approach to survivorship care, which will include a multidisciplinary approach aimed at increasing communication across the care spectrum.

## #215

### PUZZLE PIECES OF PATIENT CARE: ENHANCING DOCUMENTATION SAFETY IN A CANCER CENTER.

Toby Bressler, MPA, RN, OCN®, and Jesse Bubb, RN, MSN, ONC, both at Maimonides Medical Center, New York

**Objective:** Participants will learn strategies of using multidisciplinary team approach to create an electronic documentation system and standardization within an EMR with simple access and an increase of quality and compliance.

**Topic Significance and Study Purpose, Background, and Rationale:** The angst of searching through paper charts, deciphering hieroglyphics, searching for elements required in comprehensive chart audits. At times is likened to looking for the missing puzzle piece in a hundred-thousand piece puzzle! Utilizing electronic documentation serves to unify care across the continuum, creating accessibility to every member of the health care team while ensuring quality care, meeting regulatory requirements. Every member of the team may be able to see their own piece of the puzzle. However, the challenge remains to ensure synchronization.

**Methods, Intervention, and Analysis:** Creating standardization within electronic charting affords providers the ability to trend a patient's status from one encounter to the next with indicators allowing for access of quality and compliance data. Data obtained, sorted and categorized results in transparent and meaningful use of information. Every nurse completes a specialized ONS course to gain competency and ensure a high level of proficiency in caring for the cancer patient and family. Evidence-based literature indicates that a majority of patient safety errors are caused by mistakes in the documentation process. As a result, it was essential that our team develop a transparent and fluid electronic health record to best care for the complex needs of cancer patients and their families. Our nursing team developed and implemented an electronic nursing assessment tool based on the ONS and ASCO standards. Led by our evidence based practice nursing committee, our interdisciplinary team worked diligently, creating an electronic documentation system that is easy to navigate while meeting the oncology patient's needs.

**Findings and Interpretation:** Over five years our Cancer Center transformed from working in silos with two sets of paper documentation to a fully integrated electronic health record, which currently drives interdisciplinary referrals for patients. Furthermore, patients are encouraged to complete a self-assessment form which is included in the medical record; allowing true patient engagement, one of ONS's recommendations. The enhancement of the electronic documentation is ongoing. We are constantly seeking evidence to advance our practice and quality of care. Ultimately, it is empowering for staff to take ownership and responsibility for innovative processes in which they had significant input.

**Discussion and Implications:** This approach has the potential to improve clinical practice and advance our patient care outcomes. Our new system has enhanced our team based approach to providing excellent cancer care and has helped inform and improve our professional nursing practice.

## #216

**ONCOLOGY NURSE NAVIGATOR COMPETENCIES: PROVIDING DIRECTION TO IMPROVE CARE DELIVERY.** Lori McMullen, RN, MSN, OCN®, University Medical Center of Princeton at Plainsboro, New Jersey; Teri Banman, RN, OCN®, The University of Kansas Cancer Center, Kansas; Judy De Groot, RN, MSN, AOCN®, Penrose Cancer Center, Colorado Springs; Susan Jacobs, RN, BSN, OCN®, Disney Family Cancer Center, Burbank, CA; Dominique Srdanovic RN, MA, OCN®, Stamford Hospital, Bennett Cancer Center, Connecticut; and Heather Mackey, MSN, ANP-BC, AOCN®, Oncology Nursing Society, Pittsburgh, PA

**Objective:** Following review of this poster, Congress participants will be able to describe the development process of the Oncology Nurse Navigator (ONN) Core Competencies and summarize their contribution to ONN practice.

**Topic Significance and Study Purpose, Background, and Rationale:** The American College of Surgeons Commission on

Cancer recognized that patient navigation is an important component in the ability to deliver patient-centered care and has added Standard 3.1 to its Cancer Program Standards. Patient navigation has been identified as a process to address health care disparities and barriers to obtaining optimal care. To fulfill Standard 3.1 cancer programs around the country are instituting navigation programs. Oncology Nurses Navigators (ONNs) are often filling the role secondary to their education and training. The challenges faced by many ONNs include a dearth of evidence-based resources, professional standards or competencies to support them as they are charged with developing programs. ONNs have looked to the Oncology Nursing Society (ONS) to provide leadership as they struggle with role development. ONS identified the need to clearly define the role of an oncology nurse in the role of navigator and support growth of the role by developing core competencies.

**Methods, Intervention, and Analysis:** A project team was assembled and began the process of clearly defining the role of the ONN. The team chose to develop core competencies suitable to a novice ONN. The literature review provided the evidence-based information necessary to develop a navigation framework that supports the ONN in her/his scope of practice. The team divided the knowledge base and function of the ONN into four categories that ultimately developed into a list of 47 ONN core competencies. In order to validate the competencies, a field and expert review was conducted. The project team met after the field and expert reviews to make the necessary edits. The final draft consisted of 40 ONN core competencies and was published in November 2013.

**Findings and Interpretation:** The core competency project has resulted in several essential tools for ONNs and their employers: ONN core competencies, an ONN professional practice framework, and a clear definition of the role. The competencies provide resources for both ONNs and their employers as they develop and grow navigation programs.

**Discussion and Implications:** To build on this momentum, the next step is to develop a nationally recognized education program to ensure that ONNs have the knowledge and skill set needed to function effectively in their role.

**Underwriting or funding source name:** ONS provided funding.

## # 217

**EVALUATING COORDINATION IN CLINICAL RESEARCH NURSING EDUCATION AND PRACTICE.** Izumi Kohara, RN, PhD, Yoshie Watanabe, RN, MSN, Satomi Takenoi, RN, MSN, Mitsuyo Ueno, RN, Hiroyuki Fujiwara, MD, PhD, and Yoshika Honda, MD, PhD, Jichi Medical University, Shimotsuke, Japan

**Objective:** To evaluate and identify issues in coordination in relatively new teams during clinical research nursing education and practice

**Topic Significance and Study Purpose, Background, and Rationale:** Clinical research nursing aims to provide nursing care that ensures participant safety and comfort and quality management that complies with the International Conference on Harmonization-Good Clinical Practice (ICH-GCP). The Jichi Medical University Department of Obstetrics and Gynecology is a leading institute of the Gynecologic Oncology Trial and Investigation Consortium of North Kanto in Japan, which was established in 2009 and is a member of the Gynecologic Cancer Intergroup. We are currently engaged in full-scale recruitment of clinical trial participants, which requires coordination among clinical nurses (CNs) and a nursing science faculty member during clinical research nursing education and practice. Evaluating this coordination is essential in order to provide high-quality clinical research nursing.



**Methods, Intervention, and Analysis:** In accordance with clinical research nursing goals, we have initiated an education program for CNs and participant care based on coordination among CNs and nursing science faculty acting as a research nurse coordinator. To evaluate our activities, we reviewed data of adverse events and compliance of ICH-GCP. We also performed interviews to CNs regarding awareness of clinical trials including participant safety and comfort and data analysis using grounded theory approach.

**Findings and Interpretation:** The number of trial participants doubled in 2013 compared with the previous 3 years. No life-threatening adverse events occurred; however, one participant experienced skin necrosis from extravasation of trial drugs. Results of the interviews regarding CNs awareness of clinical trials revealed that CNs understood trial objectives and positively

contributed to participant care; however, they felt the burden of treatment management and required more information regarding the provision of participant safety and comfort. A 2012 audit by a clinical trial cooperative group in Japan found that our research team adheres well to the ICH-GCP.

**Discussion and Implications:** Those findings indicated good overall coordination between CNs and a research nurse coordinator. However, there are outstanding issues regarding participant safety and comfort. Adverse events such as skin necrosis affect nurses sense of burden and information requirements. Enhanced education and information provision regarding safe drug administration are required. In the present study, coordination was evaluated using data of adverse events, audit results and interviews to CNs; however, standardized methods of evaluation are required.