

# ONS 29th Annual Congress

## Podium and Poster Abstracts

For your convenience, all Podium and Poster Abstracts have been indexed according to subject (page 461) and first author (page 465).

The abstracts appear exactly as they were submitted and have not undergone editing or the *Oncology Nursing Forum* Editorial Board's review process. We have made every effort to be accurate. If any errors or omissions have been made, please accept our apologies.

Abstracts that are not being presented do not appear.

### 1

**NEURO-ONCOLOGY CAREGIVERS: CORRELATES OF DISTRESS.** Paula Sherwood, RN, PhD(c), CNRN, Barbara Given, RN, PhD, FAAN, and Charles Given, PhD, Michigan State University, East Lansing, MI; Rachel Schiffman, RN, PhD, University of Wisconsin, Madison, WI; and Mary Lovely, RN, PhD, Consultant, San Francisco, CA.

Improving the emotional health of caregivers of persons with a primary malignant brain tumor (PMBT).

Caregivers of cancer and dementia patients are at risk for increased mortality, depression, and anxiety. However, there have been minimal efforts to describe the impact of providing care for persons with both oncological and neurological sequelae. The purpose of this study was to determine the effects of patient functional, cognitive, and neuropsychiatric (NP) status and caregiver mastery and perceived adequacy of information to care (PAIC) on burden and depression of caregivers of persons with a PMBT.

Based on Lazarus' Theory of Stress and Coping, the patient's functional, cognitive, and NP status dictate care demands during the primary appraisal that are met using resources identified during the secondary appraisal (mastery and PAIC). Caregivers' stress response is operationalized as caregiver burden and depression.

The cross-sectional, descriptive study consisted of telephone interviews with 95 adult caregivers of persons with a PMBT recruited from two national brain tumor support groups, two urban cancer centers, and a state-wide cancer registry. The 45-60 minute interview consisted of sociodemographic questions and the following instruments: ADL/IADL scale ( $\alpha=.93$ ); Cognitive Performance Scale ( $\alpha=.71$ ); Neuropsychiatric Inventory ( $\alpha=.78$ ); Patient Satisfaction Questionnaire ( $\alpha=.96$ ); Caregiver Mastery ( $\alpha=.73$ ); Caregiver Reaction Assessment (subscales: self esteem  $\alpha=.79$ , abandonment  $\alpha=.83$ , finances  $\alpha=.87$ , schedule  $\alpha=.75$ , health  $\alpha=.70$ ); and Center for Epidemiologic Studies-Depression ( $\alpha=.89$ ).

Using structural equation modeling, relationships were formulated among variables, model fit was assessed, and respecification was done as necessary to interpret the relationships.

The overall model demonstrated good fit indices (rmsea=.05,  $\chi^2=11.6$  p=.24, gfi=.93). Patients' NP status and caregiver mastery predicted caregiver depression and portions of caregiver burden (self esteem, finances, and schedule). Patients' NP status also predicted other portions of caregiver burden (abandonment and health). Oncology nurses should target interventions for improving caregiver health at assisting caregivers to manage and deal with patients' NP symptoms. Because oncology nurses are largely responsible for teaching and monitoring caregiver skills and knowledge, nurses are in a prime position to assist caregivers to increase mastery, thereby affecting caregiver, and ultimately patient, outcomes.

### 2

**SYMPTOM CLUSTERS OCCURRING WITH LYMPHEDEMA AFTER BREAST CANCER.** Sheila H Ridner, PhD, RN, ACNP, Vanderbilt University School of Nursing, Nashville, TN.

Literature suggests that up to 28% of the 2 million United States breast cancer survivors seen by oncology nurses develop lymphedema in the affected arm.

Despite treatment that reduces limb volume, ongoing lymphedema related problems/symptoms interfere with QOL. The purpose of this study was to assess outcomes associated with lymphedema occurring after breast cancer treatment and determine if it occurs within a symptom cluster.

A revised version of the Lenz Theory of Unpleasant Symptoms served as the theoretical framework. This theory proposes that symptoms do not occur in isolation, they cluster, and all symptoms must be addressed to achieve maximum performance/function.

A convenience sample of 128 breast cancer survivors, 64 with breast cancer related lymphedema and 64 without breast cancer related lymphedema, age matched within three years, participated in this two-group, descriptive, mixed methods, correlational, cross-sectional study. Concurrent data on symptoms, sociodemographic, disease and treatment variables, and QOL were collected from all participants. Narrative comments about problems related to lymphedema were solicited from those with lymphedema.

Descriptive statistics, ANCOVA's, partial correlations, and regression analyses were used. Thematic analysis of narrative commentary was conducted. Cronbach's Alpha and Kuder-Richardson-20 were .78 or higher for all instruments used.

(1) Sociodemographic variables did not correlate with perceived arm size difference or actual limb volume difference; (2) BMI correlated with all outcome variables and mean symptom distress, mean symptom intensity, and lymphedema grade varied as a function of BMI; (3) individuals with lymphedema reported poorer QOL; (4) narrative comments revealed QOL, physical health, and psychological issues indicative of an interrupted life; and (5) participants with lymphedema experienced a cluster of symptoms that included alteration in limb sensation, loss of confidence in body, decreased physical activity, fatigue, and psychological distress. A holistic approach to lymphedema management that addresses not only reduction of limb volume, but also altered sensations in limbs, enhancing body confidence, increasing physical activity, managing fatigue, and relieving psychological distress is needed. Research designed to gather more information about this symptom cluster and the influence of BMI on lymphedema development and symptoms is indicated.

### 3

**INTERVENTIONS CURRENTLY RECOMMENDED TO ALLEVIATE SYMPTOMS CAUSING DISTRESS IN WOMEN WITH BREAST CANCER MAY PROVE INEFFECTIVE BECAUSE OF ADVERSE EFFECTS OF NEW TREATMENT PROTOCOLS.** Marcia Boehmke, RN, ANPc, DNS, University at Buffalo, Buffalo, NY.

The purpose of this pilot study was gain an understanding of current symptoms/symptom clusters women with early breast cancer experienced during adjuvant treatment through interpretation of narrative stories.

(1) What are the common experiences and shared meanings of early-



stage breast cancer women's symptoms during adjuvant chemotherapy? (2) Do these symptom experiences contribute to increased levels of symptom distress? (3) How do women interpret these symptoms? (4) How do they describe the symptom effect on their quality of life?

The study was guided by Hermeneutic Phenomenological methodology that questions the meaning of life experiences and explores how people interpret their lives and make meaning of what they experience.

A potential list of subjects who meet the inclusion criteria for the initial purposive sample was identified by an area breast surgeon. Women had to meet the following criteria: primary breast cancer diagnosis, treatment with adjuvant chemotherapy and have no other co-morbid condition.

Qualitative inquiry using the aforementioned phenomenological approach was used to collect, code, and analyze the data. This methodology utilizes purposive sampling of individuals who have the appropriate relevant experiences. This approach emphasizes the complexity of this human experience and the need to study this lived-experience holistically. In this study, interviews and/or focus groups will consist of women with primary, early-stage breast cancer undergoing adjunct chemotherapy. Variables to be studied include the symptom distress experience, identification of the most distressful symptom clusters, and self-care management strategies employed. Using this phenomenological method of inquiry, data analysis consisted of: bracketing, intuiting, analyzing, and describing the data.

Data analyses determined that women experienced severe bone, pelvic and joint pain and moderate numbness and tingling of their extremities after receiving Taxol, a drug recently added to breast cancer treatment protocols. These symptoms affected their functioning and impaired their ability to exercise, a current intervention used to manage fatigue. Changes in taste affected appetite and nausea experienced. Diminished attention span (less than 10 minutes/task) could adversely affect performance of interventions aimed at directing attention to improve cognition that require a timeframe of over one hour.

## 4

**DETACHING HER FROM HER SOCIAL ROLES: KOREAN IMMIGRANT WOMEN'S PERCEPTIONS OF BREAST CANCER.** Eunice Eunyong Suh, PhD, RN, and Sarah Kagan, PhD, RN, CS, AOCN®, University of Pennsylvania, Philadelphia, PA.

Individual's perceptions about breast cancer are reported affecting attitudes toward the screening modalities. Given the low rates of breast cancer screening among Korean immigrant women (KIW), understanding their perspectives is imperative to decipher their sociocultural barriers to breast cancer screening. Korean immigrants are among the fastest growing Asian populations in the U.S. Women in this population are not exempted from the threat of breast cancer, which is the most common female cancer in the U.S. To date, perceptions about breast cancer have not been investigated from the perspectives of KIW. Thus, this study was aimed to explore and interpret KIW's perceptions of breast cancer using a naturalistic inquiry.

Symbolic interactionism, the meta-concept of cultural competence, and Korean womanhood provided theoretical underpinnings of this study.

The grounded theory methodology was used. Twenty KIW were conveniently selected through a community church in an East coastal city. They participated a set of two consecutive interviews conducted in Korean. The participants consisted of various age groups from 20 to 81, the years of residency in the U.S. from two to 36, and diverse levels of education, marital status, as well as, immigration status.

Constant comparison technique was used in qualitative data analysis. Open-coding, axial coding, and the selective coding were conducted. The trustworthiness of the findings was examined via Lincoln and Guba's evaluation criteria.

The core concept of breast cancer is  $\dot{\iota}$  detaching her from her social roles.  $\dot{\iota}$  The participants perceived breast cancer as both relational and social detachment through an image of cutting off a breast. Predetermination, forbearance of Han (heartburning), and resistance to Sun-Li (universal principles) were identified as the predominant causal factors of breast cancer, which were influenced by Confucian thoughts and traditional Korean health beliefs. The strategies addressed for preventing breast cancer provided a consistent feature with other Asian ways of maintaining

health such as, balancing in mind and body, or not talking and thinking about breast cancer. The findings illustrated that KIW's perceptions of breast cancer are profoundly influenced by their traditional and sociocultural contexts. Researchers and clinicians would benefit from the findings to expand their understandings of KIW and guide KIW to the screening practices.

## 5

**IMPROVING CHEMOTHERAPY ADMINISTRATION TURN AROUND TIME IN THE INPATIENT SETTING.** Joanne Dobry, RN, BSN, OCN®, Patti Wilcox, APN, MSN, AOCN®, and Anna Gray, RN, BSN, CBON, Sinai Hospital of Baltimore, Baltimore, MD.

As part of a performance improvement initiative, the staff completed audits of inpatient chemotherapy administration turn-around time (TAT). TAT was defined as time of admission to initiation of chemotherapy. A three-hour TAT was the goal.

Due to staff nurse observations and patient complaints, as well as physician dissatisfaction of increasing delays of chemotherapy administration, a performance improvement initiative was developed. This initiative studied the turn-around time of inpatient chemotherapy administration. It was anticipated that the oncology population would increase with the addition of two medical oncologists.

An audit tool, completed by staff, was developed to track TAT of chemotherapy administration. Quantitative data was collected. Following two months of data collection, a multidisciplinary team consisting of an advanced practice nurse, nurse practitioner, clinical leader, pharmacist, unit manager, and medical oncologist was created. This team met to discuss and implement changes based on the data. Subsequent audit revisions incorporated qualitative data from staff. Staff education occurred, and process changes were implemented at intervals. Staffing assignments were modified to accommodate chemotherapy admissions. Data collection continues.

The audit began in December 2002. Initial data was as follows: (December 2002) N = 5, TAT = 5.13 hours. The revised audit tool included anecdotal evidence of time delay. This information permitted the inpatient unit to make process changes recommended by the multidisciplinary team. In July 2003, N = 17, TAT = 7.02. Results demonstrated a 200% increase in volume, with a 29% increase in TAT.

Through qualitative and quantitative evidence, the process of chemotherapy administration was adjusted. The TAT target is now set at four hours, with data collection continuing. Collaboration between all disciplines continues, with additional anecdotal evidence supporting increased satisfaction from patients, staff, and physicians.

## 6

**MEASURING THE SUCCESS OF CHEMOTHERAPY SAFETY INTERVENTIONS: A QUALITY IMPROVEMENT INITIATIVE.** Mikaela Olsen RN, MS, OCN®, Sidney Kimmel Comprehensive Cancer Center, Baltimore, MD.

The ultimate goal of oncology providers is to ensure an environment free of chemotherapy errors. This designated comprehensive cancer center was faced with serious chemotherapy errors related to inconsistent practices within the system and among providers. Using the Plan, Do, Study, Act Process, numerous safety changes related to the chemotherapy processes of prescribing, dispensing, and administering were implemented. This process resulted in a revised chemotherapy policy, which included many new safety requirements, the addition of a chemotherapy treatment note, the creation of a pre-chemotherapy administration checklist, the development of standard pre-printed chemotherapy orders, and monthly multidisciplinary updates and discussions regarding errors. These safety changes proved to be highly successful in decreasing the number of chemotherapy errors that reach our cancer patients.

While chemotherapy errors reaching the patient have decreased in this institution, new practice challenges have emerged, such as ongoing education of new and existing staff, maintenance of staff compliance and diligence with the completion of required chemotherapy safety checks, and unanticipated chemotherapy errors.

Outcome measures were put into place to monitor the existing process. Using a novel web-based intranet data collection tool, charts are retrospectively audited by trained oncology staff within 72 hours of chemotherapy



administration. The ease of use of this audit tool and the ability to instantly analyze and generate reports ensures that sufficient numbers of charts can be audited and problems in the chemotherapy process identified and trended in a timely manner.

Specific measures yield data regarding staff compliance and knowledge related to chemotherapy safety requirements and actual and near-miss errors.

This presentation will highlight and review specific outcome measures utilized to monitor the success of chemotherapy safety interventions implemented. It will also describe how the results of this on-line audit can lead to further changes in chemotherapy procedures, education of staff, and provide data for a more analytical review of potential errors using Failure Modes Effect Analysis (FMEA), and actual errors using Root Cause Analysis (RCA).

## 7

**ASSESSING THE IMPACT OF TELEPHONE TRIAGE ON THE MANAGEMENT OF CHEMOTHERAPY-INDUCED NEUTROPENIA (CIN) IN PATIENTS WITH CANCER.** Irene Rosenberg, RN, OCN®, and Donna Milam RN, OCN®, BSN, Lake County Oncology and Hematology, Tavares, FL.

Telephone triage can enable oncology nurses to recognize the symptoms of potential emergencies and provide appropriate support to the patient while reducing the number of unnecessary clinic visits for patients, thus improving their quality of life. At the Lake County Oncology and Hematology Clinic, we have implemented a telephone triage protocol for the management of chemotherapy-related side effects. Here, we describe our protocol for patients at risk for neutropenia.

Patients treated with chemotherapy regimens associated with a high risk of neutropenia are provided with instructions indicating signs and symptoms for which to monitor (e.g., temperature) and a list of reasons to call the clinic (fever, chills, cough, sore throat, etc.). When patients call, we use established telephone triage flow sheets to assist in identifying problems and to guide us in the decision-making process. During the call, patients are asked to provide details on the onset, duration, and characteristics of the symptoms, any comfort measures (e.g., rest, cool compress) or interventions (e.g., acetaminophen) used, exposure to sick family members, as well as the date of the last chemotherapy session and growth factor administration. Our records provide us with the medical history of patients and risk factors present, and confirm treatment details. We complete an assessment based on the reported symptoms and decide if the patient needs to visit the clinic for further monitoring or hospitalization. For all patients who report symptoms of neutropenia, we recommend the prophylactic use of growth factors in the next cycle of chemotherapy. We record all calls made to the telephone triage center and document all advice given to patients.

To quantify the impact of telephone triage on our neutropenic patients, we plan to analyze medical records over a six-month period and compare the number of non-scheduled clinic visits made by patients before and after the implementation of our telephone triage protocols.

This data will show the extent to which the implementation of telephone triage has had a positive affect on standards of care at our clinic.

## 8

**DOCUMENTATION TOOLS: STAFF INVOLVEMENT + EVIDENCE BASED PRACTICE = SUCCESS.** Pat Berning, RN, OCN®, Good Samaritan Hospital, Cincinnati, OH.

Documentation in the outpatient oncology setting is mandated, necessary, time consuming, and often not a priority. Gleaning meaningful information about an individual patient and/or trending outcomes across a department becomes a challenge. The additional demands by regulator agencies such as JCAHO, Medicare, insurance agencies, institutions, and other disciplines are overwhelming to a nurse who "just wants to take care of my patient." Thus documentation becomes routine, mundane, and frustrating. Utilizing nursing staff's experience and expertise is essential in order to produce a tool that promotes, prompts, and streamlines this process.

Nurses at a large multihospital community setting were interested in revising the outpatient documentation forms utilized at the two centers. A task force comprised of staff nurses, an oncology educator, and a qual-

ity coordinator was commissioned to review and revise the current tools.

The task force gathered input from staff, physicians, and pharmacists, literature reviews, ONS guidelines, and samples of forms from various settings. The end result was the development of a "six-cycle" pathway versus a one-visit pathway. This eliminated the documentation of repetitive outcomes and illustrates ongoing progression to measurable goals. Quality indicators were chosen and included for easier documentation and data retrieval. A consent form was developed to comply with ONS and ASCO recommendations. The team's goal was to reduce duplicate charting where possible. Forms were combined and revised, patient education was added to the pathway, and the ambulatory summary was added to the medication record.

Periodic audits are done to demonstrate compliance. The pathway outcomes continue to be monitored and trended to develop best practice. Quality indicator data is collected and analyzed, and improvement strategies implemented. Staff evaluations have been positive—less repetition, less documentation time.

Staff involvement was essential to this project to highlight the redundancy of the forms and the components that were most beneficial to patient care. They also became aware of the rationale for some of the required components, which lead to better tools that will be utilized, accepted, and satisfying.

## 9

**INCORPORATING THE SPECIAL ATTRIBUTES OF AN ONCOLOGY NURSE INTO A NEW OUTREACH HOSPITAL SETTING.** Gail Jens, MSN, RN, Paul Davis, MSN, RN, CNS, OCN®, Gail Boyd, BSN, RN, Jennifer Guttman, BSN, RN, and Kelly Frazier, AND, RN, Raleigh Community Hospital, Raleigh, NC.

Duke University Hospital Cancer Center draws many oncology clients from the Raleigh area. Raleigh Community Hospital (RCH), as a part of the Duke Health Care System, was designated as the oncology outreach. The inpatient nurses verbalized little interest in oncology nursing. The physicians sensed this reluctance and were hesitant to admit their patients for treatment. However, many oncology patients were admitted to this unit for symptom management. An oncology clinical nurse specialist (CNS) was hired as a consultant to study the situation.

The purpose of this study was to identify the needs of the nursing staff, address the physicians' concerns, and develop a plan that would promote quality care for the oncology inpatient.

A three-month retrospective review of inpatient charts looked at the number of oncology admissions, the top five DRGs, and length of stay (LOS). A one-month current review monitored patient discharge instructions, home pain control, adverse drug events, nosocomial infections, patient injury, patient satisfaction, and readmission within seven days for the same DRG. A learning needs survey was given to the unit staff. Physicians were also surveyed.

Retrospective data showed 72 oncology-related admissions, average LOS 8.5 days, and the top four diagnoses were lung, colon, breast, and prostate cancers. Current monitoring results include 35 admissions, LOS 5.7 days, chemotherapy for six patients, symptom management for 29 patients, same top cancer diagnoses, and two with unrelieved pain. The learning needs survey identified the same four top diagnoses, and the need for more information on chemotherapy administration, radiation therapy, physical assessment, quality of life, and ethical issues. The physician survey is pending. During this time, a full-time oncology CNS was hired!

Our plan includes a three-day oncology curriculum with the full-time staff completing it by February 2004. OCN® certification is recognized in the clinical ladder and present staff are to take it within two years. Additional resources for staff and patients will be provided. Ongoing monitoring of patient satisfaction, number of admissions, and staff retention will be conducted. Oncology patients deserve quality care from nurses with knowledge of their special needs. Our goal is to give this quality care.

## 10

**CARE OF THE ONCOLOGY PATIENT: A PROGRAM FOR NURSING ASSISTANTS.** Rhonjean Gordon, RN, MSN, OCN®, and JoAnn Mick, RN, MSN, MBA, AOCN®, University of Texas M.D. Anderson Cancer Center, Houston, TX; Elizabeth Ann G. Nutt, RN, MSN, CNOR, CS, Clear Lake Regional Hos-





pital, Webster, TX; and Mark F. Munsell, MS, and Marlene Z. Cohen, RN, PhD, FAAN, University of Texas M.D. Anderson Cancer Center, Houston, TX.

Nursing assistants provide routine care for patients under the direction of registered nurses or licensed vocational nurses and, so, augment the care provided by nurses. Because of the shortage of nurses, the aging of the general population, and the changing paradigms of hospital care delivery, the need for nursing assistants with acute-care experience is expected to increase. General accounting office workforce studies have shown that employee retention is increased when nursing assistants perceive the importance of their role in patient care. However, nursing assistants are seldom included in oncology education programs.

We designed the course, Care of the Oncology Patient, for nursing assistants to increase their knowledge of basic oncology practice so that they can best augment the care provided by registered nurses, work as an integral part of the healthcare team, and so improve the quality of care given to our patients. The Oncology Nursing Society standards of practice and core curriculum were our conceptual model.

To present very technical content in an understandable manner, we wrote the course material at a sixth-grade reading level. A total of 124 nursing assistants (in six groups) attended this 1.5-hour interactive course, which was taught by an oncology-certified nursing instructor. The goal was to teach nursing assistants to be able to define cancer, review oncology terminology, identify cancer treatments, discuss cell changes, review skin care for patients receiving radiation therapy, and identify the nursing assistants' role in cancer care, pain management, and neutropenic precautions, discussing important information to report to nurses.

We evaluated this knowledge before and after the course. Among the 114 usable responses, there was a statistically significant increase in knowledge after the program.

Based on the responses, we expanded the course to an eight-hour monthly course. New topics include critical thinking for nursing assistants, nursing assistants rendering spiritual care, communication in the workforce, life gift, talking to the patient with cancer, and meeting the nurse counselors (who focus on self-care). This program may be a useful addition to other oncology units.

## 11

**CLINICAL TRIAL NURSING: STRATEGIES FOR DEVELOPING ROLE COMPETENCIES AND ROLE RECOGNITION IN ITALY.** Jane Bryce, RN, MSN, OCN®, Istituto di Tumore, Naples, Italy, Carol Bell, RN, BSN, Istituto Nazionale per la Ricerca Sul Cancro, Genova, Italy, Anna Maria Colussi, RN, Centro Riferimento Oncologico, Aviano, Italy, Gail Di Maio, RN, Istituto Nazionale Tumori, Naples, Italy, and Serenella Gini, RN, Azienda Ospedaliera-Pisa, Pisa, Italy.

The specialized role of the nurse in clinical trials has evolved as the demand for new and more effective cancer therapies has resulted in extensive biomedical research. The complex and diverse responsibilities of the clinical trial nurse (CTN) have been described in the literature.

Educational and competency requirements have not been established in Italy where this role is relatively new. Because the role is not recognized by many institutes, CTNs frequently do not have official positions within the Italian National Health System.

A group of clinical trial nurses from Italian Cancer Institutes collaborated to define the responsibilities of the CTN and develop strategies for the preparation, implementation, and evaluation of CTNs. Through networking, discussion, and review of the literature we identified the following objectives.

- Defining the responsibilities of the CTN,
- Developing an educational program for CTNs,
- Obtaining institutional recognition of the CTN role, and
- Establishing a network of Italian oncology CTNs.

CTN responsibilities were categorized as patient education and advocacy, patient care and coordination of care, consultation and staff education, management of patient records and data, and evaluation of clinical trial performance. Competency-based job descriptions were written based on these categories with specific responsibilities detailed across the continuum of clinical trial activity. The job description will be proposed as a model for National Cancer Institutes to recruit and evaluate CTNs, with the additional aim of validating the CTN role within the national health

system. A post-graduate CTN course has been developed based on the core curriculum of the EORTC oncology nurse group. Continuing education credits from the Italian Ministry of Health and the European Oncology Nursing Society will be obtained. A CTN special interest group has been formed within the Italian Oncology Nursing Association and is charged with further developing strategies for professional development and national recognition of the CTN role.

Establishing minimal education and competency requirements is critical in providing a basis for undertaking the role of CTN, and is the appropriate means for gaining formal recognition of this role in Italy.

## 12

**DEVELOPING AN INTERACTIVE WEB SITE FOR CHEMOTHERAPY, INSTRUCTION, TRAINING, AND EVALUATION (CITE).** Ellyn E. Matthews, PhD, RN, AOCN®, University of Colorado Health Sciences Center, Aurora, CO, and Leah Mraz, MSN, RN, C, OCN®, The Cancer Institute of New Jersey, New Brunswick, NJ.

Nurses from partner and affiliate institutions who pass the Oncology Nursing Society's Chemotherapy and Biotherapy Course can attend a three-day Chemotherapy Clinical Practicum and receive individualized instruction on chemotherapy administration. However, learning to use new equipment in a new environment can be stressful, hindering the process of learning to administer chemotherapy correctly. Two nurse clinicians recently developed an interactive Web site for nurses attending practicum.

The purpose of this site is to enhance chemotherapy education through efficient and cost effective instruction, promote technology-centered education and creative delivery of information; strengthen collaboration with a network of NJ hospitals; and to provide opportunity for education-centered research. Reasons for developing the site include providing updated and consistent content in a cost effective, efficient manner; offering convenient, self-paced, immediately validated learning opportunities to multiple learners; decreasing participant anxiety and improve clinical performance; and increasing faculty knowledge and skill related to the use of technology in education.

This interactive Web site provides advanced practice with calculating body surface area, absolute neutrophil count, and chemotherapy doses, as well as streaming video demonstrating the procedures for inserting intravenous access. Also included are institution specific policies and procedures, samples of documentation tools, links to helpful Web sites, a quiz, and evaluation. Completion of the site course prior to practicum enables students to focus attention on chemotherapy administration.

Anticipated outcomes included reduced time in preparing practicum information; reduced time lag inherent in revising written materials; improved preparation for the practicum; better allocation of faculty/participant time; oncology education distribution to a broader audience; and reduced participant anxiety and increased patient comfort. The Web site has been up and running for almost a year and all anticipated outcomes have been met.

Oncology nurse educators should consider using the Web site as a method of education for orienting new nurses to chemotherapy administration because it results in numerous positive learner and educator benefits.

## 13

**DECREASING SYMPTOM LIMITATIONS: EFFECTS OF A COGNITIVE BEHAVIORAL INTERVENTION.** Ardith Doorenbos, PhD, RN, Barbara Given, PhD, RN, FAAN, and Charles Given, PhD, Michigan State University, East Lansing, MI; Ruth McCorkle, PhD, RN, FAAN, Yale University, New Haven, CT; and Bernadine Cimprich, PhD, RN, FAAN, University of Michigan, Ann Arbor, MI.

Symptom limitations have a significant negative influence on quality of life among patients with cancer. It is important for oncology nurses to gain an understanding of interventions that ameliorate the impact of symptom limitations.

This study seeks to determine if a cognitive behavioral intervention decreases the impact of symptom limitations among newly diagnosed cancer patients who are receiving chemotherapy.

The intervention was based on cognitive behavioral theory and focused on four problem-solving intervention strategies: Self-care management,



providing information and decision-making, counseling and support, and communication with providers.

This randomized control trial of ten contacts over 20 weeks among 237 (118 experimental and 119 control group) patients with solid tumor cancers used an iterative, cognitive behavioral intervention by the nurse and patient working collaboratively to identify needs and adapting the intervention to the patients' needs based on 15 common cancer symptoms in the experimental group. The control group continued to receive conventional care. Interviews occurred at baseline, 10 weeks, 20 weeks, and 32 weeks.

A two-level hierarchical linear modeling (HLM) was used. Level 1 is the equation for the trajectory of each individual, representing change over time within person or the repeated measures (i.e., the four interviews of a patient with cancer). Level 2 explains that trajectory via person-specific characteristics.

Findings include higher scores of symptom limitation in the control group compared to patients receiving the intervention at 10 weeks ( $p = .001$ ), 20 weeks ( $p = .004$ ), and 32 weeks ( $p = .055$ ). At the onset of the study, younger patients reported more symptom limitations than their older counterparts, however, this trend was reversed by the end of the study. The results corroborate previous studies that report positive effects of cognitive behavioral interventions among patients with cancer. Findings also suggest that cognitive behavioral interventions focused on symptoms may help younger patients with cancer decrease symptom limitations, which may help to improve their quality of life.

## 14

**COMPARISON OF HEALTH STATUS AND QUALITY OF LIFE OF WOMEN WITH LUNG CANCER AND THEIR FAMILY MEMBERS.** Linda Sarna, University of California Los Angeles School of Nursing, Los Angeles, CA, Jean K. Brown, RN, PhD, School of Nursing, University at Buffalo, Buffalo, NY, Mary E. Cooley PhD, RN, Dana-Farber Cancer Institute, Boston, MA, Geraldine Padilla, PhD, University of California San Francisco School of Nursing, San Francisco, CA, Cynthia Chernecky, PhD, RN, School of Nursing, Medical College of Georgia, Augusta, GA, and Leda Danao, PhD, University of California Los Angeles School of Nursing, Los Angeles, CA.

In 2003, over 80,000 American families will experience lung cancer in a female family member; yet, no studies have described the health status and quality of life (QOL) of family members, information important for supportive nursing care.

The purposes of this descriptive study were to describe and compare the health status and QOL of women with non-small cell lung cancer (NSCLC) and their family members and to examine demographic and clinical characteristics associated with poorer QOL among family members.

A QOL framework was used to explore the relationships of health status and QOL of these dyads.

The study sample included 51 dyads. The women with NSCLC (18% with metastasis, 22 months average time since diagnosis), who were participants in a larger prospective study, identified family members for participation (92% spouses and mean age of 59 years). Telephone interviews were used to measure demographic variables. Well established, reliable, and valid measures of health status [Index of Chronic Conditions, depressed mood as measured by the Center for Epidemiologic Studies-Depression Scale (CES-D), and tobacco use], and QOL (Short Form-36) were used.

Data were analyzed with frequency distributions, Chi Square, paired  $t$ -tests, and correlations.

Forty-one percent of family members had chronic conditions; 16% had greater than two conditions (22% had a previous heart attack). The number of comorbid conditions was not significantly related to QOL; those who had a heart attack had significantly lower QOL. QOL scores varied widely. Scores of family members were significantly better than the women with lung cancer, and they were less likely to have depressed mood (CES-D  $> 16$ ) (14% versus 41%). Family members were less likely to be former smokers (49% versus 78%) and more likely to smoke (18% versus 4%) than women with lung cancer. Poorer physical QOL was associated with being older, greater number of comorbid conditions, and less education. Non-spouses, younger family members, and those with depressed mood had poorer emotional QOL. Findings support the importance of nursing assessment of health status and tobacco use of family

members. Further prospective studies are needed to test strategies that support QOL of family members of women with lung cancer.

## 15

**A RANDOMIZED CONTROLLED TRIAL OF AN EDUCATIONAL INTERVENTION FOR MANAGING FATIGUE IN WOMEN RECEIVING ADJUVANT CHEMOTHERAPY FOR EARLY STAGE BREAST CANCER.** Patsy Yates, PhD, RN, Queensland University of Technology, Kelvin Grove, Australia; Sanchia Aranda, PhD, RN, and Peter MacCallum, [Need credentials], Cancer Institute, Melbourne VIC, Australia; Maryanne Hargraves, MHLthSc, Hematology and Oncology Clinics of Australasia, Brisbane QLD, Australia; SueAnne McLaughlan, MBBS, MSc, St. Vincents Hospital, Melbourne, Australia; Beverley Mirolo, [Need credentials], Hematology and Oncology Clinics of Australasia, Brisbane QLD, Australia; and Donna Milne, MN, Peter MacCallum Cancer Institute, Melbourne VIC, Australia.

Effective patient education is integral to cancer symptom management, yet there is limited evidence to guide design of specific educational strategies.

This study aimed to evaluate the impact of a nurse-administered educational intervention for women with breast cancer in improving confidence with managing fatigue, fatigue intensity, and quality of life.

Piper's integrated fatigue model and Greene's PRECEDE Model of Health Promotion were used to develop specific educational content and strategies.

A randomized, controlled trial with a consecutively recruited sample of 108 women commencing adjuvant chemotherapy for stage I or II breast cancer was conducted. Women completed a self-report survey at first treatment visit, prior to randomization. The intervention group received a one-to-one fatigue education program delivered over three 10-20-minute sessions one week apart. The first session (delivered at the second treatment visit) involved face-to-face instruction, while two follow-up sessions were delivered by phone. Participants completed follow-up surveys at three subsequent treatment visits. Measures included two 11-point numeric rating scales assessing confidence with managing fatigue; 11-point numeric rating scales measuring fatigue at worst, average, and best; FACT-F and Piper Fatigue Scales, EORTC QLQ-C30, and Hospital Anxiety and Depression Scale. All scales had alpha reliabilities greater than 0.7.

Separate analyses of covariance of change scores for each outcome variable between baseline and three follow-up time points were conducted, controlling for the variable's corresponding baseline value.

Mean fatigue scores for both groups increased over time. However, the mean baseline immediate post-intervention increase was significantly greater for the control group for worst ( $p < .01$ ) and average fatigue ( $p < .02$ ), and FACT ( $p < .04$ ) and Piper Fatigue scores ( $p < .01$ ). Mean impact of fatigue on social activities, sexual activities, and enjoyable activities was greater for the control group ( $p < .03$ ,  $p < .01$ ,  $p < .02$  respectively for baseline immediate post-intervention change scores). These differences were not significant for follow-up assessments. No significant differences in pre-post-intervention change scores were identified for confidence with managing fatigue, anxiety, depression, or quality of life ( $p > .05$ ). Findings suggest educational interventions have potential for assisting women in coping with cancer-related fatigue and its effects; however, further research is needed to identify ways to improve the extent and sustainability of such effects.

## 16

**SUPPORTING CHILDREN WITH A PARENT WITH CANCER.** Elizabeth Abernathy, RN, MSN, AOCN®, CHPN, Karen Hansen, MSW, and Terri Kuczynski, [Need credentials], Rex Healthcare, Raleigh, NC.

Oncology nurses care for hundreds of thousands of adults diagnosed with cancer every year who have a child living in the home. The physical and psychosocial consequences of a cancer diagnosis and treatment can greatly influence the cancer parent's ability to care for, or parent the child. Consequently, children may be negatively affected by their parent's diagnosis and the impact of the parent's physical and psychosocial health. Despite this recognition that parental cancer creates significant stress on the patient as well as the family, few strategies have been implemented to assist these families.



In the fall of 2002, a program called KidsCan was developed for school-age children that have a parent with cancer. The purpose of this program is to provide support and education for the children as well as their parents. Perceived benefits to the children include clarification about illness, treatments, and outcomes; peer support and emotional support; and improved coping skills for dealing with illness, separation, and loss.

A curriculum was developed that explored the children's questions and their feelings about cancer. The format for this program consists of an evening program twice a month where the children have activities designed for them to explore their questions, feelings, and emotions about cancer. Most of these children's activities are based in creative arts. During the time the children meet, the parents attend a parent's group where issues and challenges of parenting are explored.

The growth and success of this program in the first year has been astounding. Over fifty children and their parents have participated in this program. Literature supports that children with an ill parent experience elevated concerns, worries, and confusion. This program supports those findings as well as identifying potential safety issues.

From participant-identified needs, an adolescent group and a bereavement program has been developed for this year. Clinical oncology nurses are in the position to help identify these families and offer support and resources.

## 17

**DEVELOPING A HEREDITARY CANCER GENETICS CONSULTATION SERVICE UTILIZING ADVANCED PRACTICE NURSES.** Karen Roesser, RN, MS, AOCN®, and Tracey Tatum, RN, MS, ANP, CJW Medical Center, Richmond, VA.

As increased knowledge has emerged in the field of cancer genetics, so has awareness among healthcare professionals, as well as the public. Advanced practice nurses (APNs) are in a prime position of providing cancer predisposition genetic testing and risk assessment counseling. In 2002, the ONS position statement on "Cancer Predisposition Genetic Testing and Risk Assessment Counseling" stated that APNs with specialized training in cancer genetics might provide comprehensive cancer genetic counseling.

In striving to meet the needs of our patients with possible hereditary cancer (based on family history), we began a nurse managed hereditary cancer genetics consultation service. Patients, as well as physicians, had articulated that they wished to have this service available at our institution rather than undergo referrals to an outside hospital. In addition, physicians recognized that as patients were beginning to inquire more about their risks, they did not have the time or expertise to answer these questions or counsel patients adequately regarding hereditary cancers.

In order to be able to provide this service, the oncology clinical nurse specialist attended genetic training through Fox Chase Cancer Center and also with Myriad Genetic Labs. Referrals for genetic consultation were received through physicians. If a patient called independently, they were asked to obtain a referral by their physician before they would be assessed. As there were no physicians on site who were able to provide expertise in this area, the oncology clinical nurse specialist utilized counselors at Myriad Genetic Labs to discuss complex family histories or results needing further clarification. On the initial visit, the APN met with patients to discuss their history and to develop pedigrees. Education was provided regarding hereditary cancer risk. If the patient wished to pursue genetic counseling, they would return for a second visit. Insurance reimbursement was always pursued prior to the second visit. Informed consent was obtained prior to testing. A third visit was arranged after test results became available. In addition, scheduling a fourth visit was an option to meet with additional family members per patient request.

To date, no patient has requested to receive this service outside of our hospital. In addition, as interest has increased in this area, so have referrals. Since 2000, there has been a ten-fold increase in referrals for genetic consultation at our institution. Because of this increase in referrals, a second APN has been educated in cancer genetics to assume some of this caseload. Because this APN held the role of breast cancer coordinator, she, therefore, assesses those patients at risk for breast/ovarian cancers. The second APN assesses those patients at risk for colon/endometrial cancers.

With the identification of cancer susceptibility genes, a new field of oncology has opened up with APNs in a role to become leaders. Because

APNs are already clinical experts in oncology, additional education in this field of hereditary cancer genetics can prepare them to take on this additional role. This could become a service provided by all comprehensive community cancer centers that utilize APNs.

## 18

**DEVisING AND IMpLEMENTING A THERAPEUTIC MASSAGE pROGRAM FOR HOSPITALIZED ONCOLOGY PATIENTS.** Sally Welsh, MSN, RN, CNAA, Michele Stephens, RN, MSN, APRN, AOCN®, Jennifer Currin, MSW, Katy Keyes, LMT, and Norma Sheridan Leos, RN, MSN, AOCN®, CPHQ, Curtis and Elizabeth Anderson Cancer Institute, Savannah, GA.

The diagnosis and treatment of cancer can overwhelm many patients. Patients treated in the hospital setting face the additional pressure of being away from loved ones and their daily routine. Recent and past literature supports the use of massage to enhance comfort and diminish distress. The poster will describe how a massage program was devised, implemented, and evaluated in the inpatient setting. Detail will be provided so other organizations can replicate this ongoing project.

1. To devise and implement a therapeutic massage program for hospitalized patients with cancer
2. To measure the effects of therapeutic massage on the perception of pain, physical distress, emotional distress, and fatigue in patients hospitalized during the treatment of cancer

To date, 50 hospitalized oncology patients have enrolled in the program. Oncology nurses introduce the program to hospitalized patients who meet the criteria for participation based upon their health status and risk of infection. An oncology social worker meets with participants prior to their massage to educate them about the massage process. Each participant receives a 20-minute therapeutic massage from a licensed massage therapist affiliated with the hospital-based center for mind-body medicine. Following the massage, the patients rank their distress pre- and post-massage using a Likert scale. The four factors measured are pain, physical distress, emotional distress, and fatigue.

To date, the mean scores for pain, physical and emotional distress, and fatigue have each improved following a 20-minute massage. The level of pain showed the most improvement with a 24% decrease in subjective description of pain.

In this population, therapeutic massage has been beneficial for a number of the patients. This project indicates the need for continued research in the study of therapeutic massage as a nursing technique for hospitalized patients with cancer.

## 19

**BREAST AND CERVICAL CANCER SCREENING PROGRAM: PARTNERING WITH COMMUNITY AGENCIES TO PROVIDE CULTURALLY SENSITIVE CARE TO VIETNAMESE WOMEN IN GREATER BOSTON.** Marybeth Singer, MS, APRN, BC, AOCN®, Barbara Bond, LICSW, EdD, Leah Moynihan, MSN, RNC, and Cate Mullen, MSN, RN, Tufts-New England Medical Center, Boston, MA; Lan Ngheim, [Need credentials], Vietnamese American Civic Center, Dorchester, MA, and Rachel Buchsbaum, MD, Tufts-New England Medical Center, Boston, MA.

Breast and cervical cancer pose significant health risks to women in the United States. For women from underserved populations, numerous barriers exist that prevent women from active participation in cancer screening programs. We partnered with community organizations to develop an outreach program to provide screening to Vietnamese women in the Greater Boston area.

In collaboration with the Vietnamese American Community Association (VACA) and YWCA Encore Plus screening program, the cancer center at Tufts-New England Medical Center (T-NEMC) developed a culturally sensitive program to provide clinical exams, screening mammography, and PAP smears for breast and cervical cancer screening in this vulnerable population.

APNs, with extensive experience in women's health and oncology, provide a comprehensive screening history and physical exam with the assistance of the health educator from VACA who serves as interpreter. Transportation to and from the visit is provided through the YWCA Encore Plus program and grants from State Street Foundation and American Cancer





Society provide funding to underwrite the costs of mammogram and PAP smears. The health educator is a valued and trusted woman from the Vietnamese community and she accompanies all of the women with follow-up needs for any subsequent appointments for abnormalities. She is a critical link to the success of the program. Mammograms are reviewed on the same day with the mammographer, and the women leave with results of the exam the same day. PAP smear follow-up is accomplished through translated follow-up letter.

In the first year of the grant, 75 women were screened for both breast and cervical cancer. (During the first two years, the screening program provided only breast cancer screening.) Review of data and results will be presented with respect to the number of women participating in first screening exams and the number of abnormalities and cancers. Cultural insights gleaned from regular meetings with health educators and VACA members will be shared.

During the grant period, we were able to provide free screening for breast and cervical cancer to 75 women, who otherwise would not have received this service, in an environment that was culturally sensitive and respectful. It is clear from our interactions, that providing care that preserves the respect and dignity of individual women, with attention to cultural norms and customs, assists us in providing culturally sensitive care.

## 20

**FACTORS RELATED TO THE STAGE OF MAMMOGRAPHY SCREENING BASED ON A TRANSTHEORETICAL MODEL IN KOREAN WOMEN.** Hea Kung Hur, PhD, RN, So Mi Park, [Need credentials], and Gi Yon Kim, [Need credentials], Yonsei University Wonju College of Medicine, Wonju, Korea.

The incidence of breast cancer in Korean women has increased to the second highest for cancers in 2002. Survival is closely related to stage at detection, and mammography screening is the most effective technique for early detection of breast cancer. While much research has focused on understanding breast self examination behavior in Korea, recent research has been done on mammography screening behavior.

The purpose of this cross sectional descriptive study was to examine factors related to different stages of mammography screening based on the Transtheoretical Model (TTM) and Health Belief Model (HBM).

TTM presumes that all persons are not at the same point of adopting a specified health activity, for example, mammography. Health belief has a focus on behavior related to the prevention of disease.

Participants were 143 women recruited from community centers in Wonju. The mean age was 44.08 (SD = 7.78) and 74 (51.7%) had experienced education on preventive behavior related to breast cancer. The Decisional Balance Scale (pros and cons of mammography) and Stages of Adoption of Mammography Scale by Rakowski et al. (1992) and the revised Health Belief Model Scale (Perceived Seriousness, Perceived Susceptibility and Health Motivation) by Champion (1993) were used.

Data were analyzed using frequencies, one-way ANOVA, and stepwise multiple regression.

The results show that according to the stage of adoption of mammography, 17.4% of the women were in pre-contemplation, 45.5% in contemplation, 24.5% in action, and 12.6% in maintenance. The mean differences for pros, decisional balances, and health motivation between the stages of mammography adoption were significant ( $F = 8.84, p = .000$ ;  $F = 7.21, p = .000$ ;  $F = 4.63, p = .081$ ). Education related to prevention of breast cancer (the most important variable), history of breast disease, and pros of mammography explained the stages of mammography adoption ( $R^2 = 26\%$ ). Findings support TTM as useful for improving mammography adherence, but variables related to health belief were not supported. Behavioral interventions that target decisional balance and health belief can effectively promote adherence to mammography.

## 21

**COPING STRATEGIES AND PERCEIVED STRESSORS IN CHINESE AMERICANS WITH CANCER.** Virginia Sun, MSN, RN, City of Hope National Medical Center, Duarte, CA, Mary Tish Knobf, RN, PhD, FAAN, AOCN®, Yale University School of Nursing, New Haven, CT.

The burden of cancer on minority populations has led to continued health disparities in the United States. A complex relationship exists between race, ethnicity, and socioeconomic status in relation to the cancer

experience. The purpose of this descriptive study was to identify coping strategies and perceived stressors in Chinese Americans with cancer.

The theoretical framework used is Lazarus and Folkman's theory of stress and coping. Coping is used as a primary mechanism to adapt to a stressful situation such as illness. Lazarus proposed two types of coping mechanisms: problem-focused coping and emotion-focused coping.

This descriptive study recruited a sample size of 12 Chinese Americans with cancer residing in the Greater San Francisco Bay Area. Data was collected from June–August 2001 using the Revised Jalowiec Coping Scale and face-to-face interviews. The Revised Jalowiec Coping Scale was designed to measure coping behaviors. Cronbach's alpha reliability was .86. Qualitative data was collected using open-ended questions that elicited participants' perceived stressors since diagnoses. The data collection procedure began with the completion of the Revised Jalowiec Coping Scale followed by interview using open-ended questions.

Data were entered and analyzed using the Statistical Analysis System (SAS) program. Descriptive statistics was used to analyze for all coping behaviors in the Revised Jalowiec Coping Scale to determine frequency and effectiveness of each item. Qualitative data was analyzed using content analysis techniques, and themes from the data were identified.

Participants were primarily female (58.3%), with breast cancer (33.3%), and college educated (75%). Age ranged from 44–82, with a mean of 61. Styles of coping most frequently used by participants were the confrontive and self-reliant styles. Perceived stressors included fear of recurrence, uncertainty, loss of control, treatment disabilities, financial burdens, language barriers, and fear of abandonment. Findings indicate that Chinese Americans with cancer used self-reliance as a coping strategy and found issues such as language barriers stressful. Further research is warranted to advance knowledge of the specific coping strategies utilized among culturally diverse populations.

## 22

**TREATMENT DECISION-MAKING FOR THE PRIMARY TREATMENT AMONG CHINESE AMERICAN WOMEN WITH EARLY-STAGE BREAST CANCER.** Shiyu Katie Lee, RN, MSN, DNSc, National Taipei College of Nursing, Taipei, and Tish Knobf, PhD, FAAN, Yale University School of Nursing, New Haven, CT.

Promoting women as fully informed decision makers for their breast cancer is important to oncology nurses.

Women reported difficulty making the treatment decision for their breast cancer. Breast cancer is the most common cancer among Chinese American women in United States; but there is limited knowledge about how they make and evaluate the treatment decision. The purpose was to describe the primary treatment decision, decisional conflict, expectation, and values as the decision was made, and decisional satisfaction and regret in a sample of Chinese American women with early-stage breast cancer.

Ottawa Decisional Support Framework served as the framework to identify variables in treatment decision making and the evaluation of the decision.

This was a cross-sectional, descriptive study. A convenience sample of 123 Chinese American women with early-stage breast cancer was recruited in the larger New York area. Data were collected on a demographic clinic profile and four standardized instruments in Traditional Chinese with equivalence from back-translation. All four standardized instruments had appropriate reliability and validity.

Data were analyzed with univariate and bivariate statistic strategies by using SAS V8.0 program.

The results indicated that 38% of the women had breast-conserving surgery and the remaining 11.4% had mastectomy plus reconstruction. The women highly valued and expected physician and family support in treatment decision making for their breast cancer, while femininity, sexuality, appearance, and attraction to the partner were less valued. The majority agreed that they were satisfied without regret. Treatment decision was related to age, options offered, surgeon and family recommendation, expectation, and value. The women who had health insurance at the time of diagnosis were more likely to have breast-conserving surgery. Decision satisfaction and regret were related to decisional conflict in treatment decision making. The women who had received a greater amount of information, who felt more comfortable in using English, and who had



utilized other resources in treatment decision making reported lower decisional conflict, greater satisfaction, and less regret. Strategies are needed to improve communication and provide culturally relevant patient education to promote Chinese American women as fully informed decision makers for their breast cancer.

## 23

**UNDERSTANDING THE CANCER PAIN EXPERIENCE IN THE PLAINS NATIVE AMERICAN POPULATION.** Emily Haozous, RN, MSN, The Connecticut Hospice, Branford, CT.

It has been well documented that cancer pain is under treated in minority populations. Nurses are frequently the primary individuals responsible for pain assessment. Understanding the cultural context in which a population operates will assist nurses in identifying and managing cancer pain in that group of people.

This descriptive study of 10 subjects with cancer from the Crow, Northern Cheyenne, and Sioux tribes explored how they talked about their pain, what they expected to be done for their pain, and methods of coping they used to control their cancer symptoms. This knowledge will assist nurses in developing better interventions to identify and manage cancer pain in Native American patients from the northern plains region of the United States.

This study was conducted under the theoretical base of Madeline Leininger's Theory of Culture Care Diversity and Universality. According to this theory, culturally congruent care is facilitated by the nurse's understanding of the cultural context of an experience. Examining the meaning, vocabulary, and traditional remedies for cancer pain, and understanding their interplay as described in Leininger's Sunrise Model for Culture Congruent Care allows nursing care, decisions, and actions to be positively influenced in a manner that preserves the cultural integrity of the patient while delivering effective care.

The purpose of this study is to explore Plains Indian experiences of cancer pain in order to develop culturally appropriate means of measuring cancer pain within the Plains Indian population. The study will also investigate the attitudes this population has about pain control and their expectations for pharmacologic intervention with cancer pain. The sample is a convenience sample of a group of self-selected adult Plains Native American individuals who were either currently experiencing cancer pain or had experienced cancer pain in the past. The sample was recruited through referral from their oncology care providers. Each study participant was asked to fill out a simple demographic questionnaire for the purpose of obtaining information on gender, age, cancer diagnosis, tribal affiliation, level of education, analgesic medications being used, and economic status. Every subject was asked to complete the Brief Pain Inventory (BPI). Interviews were semi-structured and had a total of nine questions concerning cancer pain, description of pain, and expectations regarding pain.

Analysis of the data was quantitative and qualitative. The BPI data were analyzed using basic descriptive statistical analysis. Field notes were taken during the interviews. The researcher transcribed the audio recordings made of the interviews. The transcribed interviews were systematically analyzed one by one. In addition, M. Tish Knobf, PhD, independently reviewed three interviews as well as the coded and analyzed content of all the interviews. Repeated themes, ideas, or phenomenon were labeled and coded according to frequency. Additionally, transcribed interviews were arranged using a "cut and paste" method in which comments were organized and arranged in tables according to thematic material.

On the BPI, subjects reported mild to moderate pain on a daily basis. The results of the BPI analysis also showed that the sample did experience mild to moderate interference with their quality of life as a direct result of their pain. When interviewed, the subjects discussed the way they described their pain, what their pain meant, and other bothersome symptoms. They also described the ways in which they experienced social isolation as a consequence of their cancer pain. The subjects selected certain people with whom they disclosed their pain. They relied on prescription and non-prescription medication for pain relief.

Implications for practice include the need for discussion of quality-of-life indicators when conducting a thorough pain assessment, once a trusting relationship is established. Suggestions for future research include further investigation into the meaning and experience of social isolation as a consequence of cancer pain.

## 24

**THE NURSE MANAGER CHALLENGE: HOW TO EFFECTIVELY PROMOTE PROFESSIONAL DEVELOPMENT AND CLINICAL SCHOLARSHIP AT THE UNIT LEVEL.** Ann Colleen Jernigan, RN, MSN, AOCN®, and JoAnn Mick, RN, MSN, MBA, AOCN®, University of Texas M.D. Anderson Cancer Center, Houston, TX.

Clinical scholarship and professional development are the results of engaging in a life-long commitment to thinking, questioning, and pursuing answers which have the potential to improve practice and evolve theory.

The clinical nurse at the bedside, supported by the nurse manager, has the potential to implement these processes using critical thinking skills, the problem solving process, and clinically grounded analysis. The nurse manager is positioned pivotally within the organization to support this growth. However, the challenge in today's complex healthcare environment is how to actualize this philosophical orientation.

The purpose of this project was to develop strategies which could be effectively implemented by nurse managers to promote opportunities for clinical scholarship and professional development at the unit level. Two inpatient oncology units, one medical and one surgical, volunteered to work on this project.

Several key strategies were implemented that were the drivers for the outcomes measurements and included (a) the development of a professional portfolio for each nurse to assist with recording and developing a plan for scholarly endeavors, (b) the promotion of specialty certification, (c) participation in the development of unit-based performance improvement projects, and (d) the promotion of educational advancement.

Outcomes were measured at the end of a three-year period. Among 53 nurses, 19 had become OCN®/AOCN® certified during the project period. Over 30 abstracts had been submitted for presentation at national seminars, with an acceptance rate of approximately 50%. Staff nurses had received mentoring assistance to create individual professional portfolios. Annually, approximately 26 performance improvement projects were completed. Finally, ten nurses had returned to school and both nurse managers had subsequently completed two years of doctoral studies.

Clinical scholarship involves personal challenge, risk taking, and a continual pursuit of excellence. By supporting the scholarly efforts of each nurse, the nurse manager has the potential to create a work setting that supports learning, growth, and research-based practice. This poster will display the specific strategies we developed to promote nurses' development that can be used in other oncology settings.

## 25

**IMPLEMENTING A MENTORING WORKSHOP: A STRATEGY TO PROMOTE PROFESSIONAL DEVELOPMENT.** Christine Liebertz, RN, CS, MSN, AOCN®, Nancy Houlihan, RN, MA, AOCN®, Barbara Hennessey, RN, MSN, AOCN®, Dana Inzeo, RN, MA, AOCN®, Patricia Schaindlin, RN, MA, AOCN®, and Christine Liebertz, RN, CS, MSN, AOCN®, Memorial Sloan-Kettering Cancer Center, New York, NY.

Advanced practice nurses (APNs) are faced with the unique challenge of achieving excellence in their own practice while guiding others to optimize their clinical and professional activities such as writing for publication or presenting at national conferences. Barriers to mentoring include a lack of confidence, emotional demand, lack of resources, and fear of an overwhelming time commitment. The ambulatory advanced practice nursing council at this NCI-designated cancer center developed a mentorship workshop to encourage APNs and appropriate staff to participate in professional development activities and mentor other staff.

The Division of Nursing at this center is committed to supporting nurses in their performance of professional activities. The APN council supports this initiative by providing staff with workshops on abstract writing, poster and podium presentation, and writing for publication. The council members recognized the need to increase the pool of mentors to assist staff in these endeavors. The workshop was designed to educate, inform, and explore opportunities for "mentorship" in order to break barriers and increase involvement.

The four-hour program is currently offered to all APNs, nurse leaders, and educators with the goal of expanding it to interested nursing staff. The program provides an overview of mentorship role components, defines as-





assessment criteria for making a mentorship commitment, and reviews conceptual framework of a mentorship agreement. Interactive exercises with video vignettes stimulate discussion highlighting effective communication and conflict resolution strategies.

Participants provided feedback at the conclusion of the program via discussion and written summary evaluation. Measurement of outcomes related to changes in behavior and increased availability of skilled mentors will be accomplished via interval follow-up focus sessions with workshop participants. This presentation will share these results and program developments.

Mentoring relationships can provide the rewards associated with increased role satisfaction and enhanced recruitment and retention of staff. Providing the resources and support of a workshop to increase skill and comfort can improve the overall experience for both the mentor and the mentored.

## 26

**CLINICAL SCHOLAR AWARD: A MENTORED RESEARCH PROGRAM.** Martha Healey, FNP, Margaret Vettese, PhD, RN, Mary Cooley, PhD, RN, Angela Epshtein, MA, and Susan Bauer Wu, DNSc, RN, Dana-Farber Cancer Institute, Boston, MA.

Clinical oncology nurses are well positioned to identify research questions to improve practice. Clinical nurses, however, generally lack advanced research training and knowledge to independently conduct nursing studies. Mentored research experiences provide opportunities to enhance scholarship and evidence-based practice.

Recognizing the value of oncology nursing research and the clinician's ability to identify important questions, a mentored program, Clinical Scholar Award (CSA), was established at a major cancer center, which was without a nursing school. Barriers considered were lack of time, money, and knowledge. Linking a clinician with a nurse scientist and providing a mechanism for release time and money to carry out a small study are the essence of the CSA.

Members of the nursing research department developed guidelines for application, review, and implementation of the CSA. Input was solicited on site and from outside institutions. The CSA consists of a two-year commitment for a nurse scientist to mentor a clinician, four hours/week salary support, and \$7,500 to carry out the project. In Spring 2003, the first call for applications was emailed to staff/managers. Award description and the application were added to the department's website. Application process included submission of a problem statement, a personal statement, an identified research team of 2–4 members to assist with project, a letter of reference, and a letter of support from the supervisor. Each application had one primary and two secondary reviewers. A 12-person multidisciplinary review team convened to discuss and score applications.

Development, application, and review processes have proved successful for the first CSA. Four applications were received. The first recipient was announced at the annual dinner during Nurses Week and has started the program. All applicants received written review summaries. Individual meetings held with applicants and review team members allowed for feedback on the application/review processes. Overall feedback from applicants and reviewers was positive. Minor suggestions will be incorporated next year.

A mentored research program allows clinical oncology nurses to formulate questions based on practice, conduct research in familiar clinical settings, and influence practice. This process extends research from academic to clinical environment and promotes evidenced-based practice.

## 27

**DEVELOPING NURSE RESEARCH LEADERS: A RESEARCH TRAINING EXPERIENCE.** Judith Payne, PhD, RN, AOCN®, Duke University School of Nursing, Durham, NC.

Schools of nursing can benefit from using general clinical research centers (GCRCs) as a source of pilot research funding for faculty and as a strategy in recruitment of faculty and post-doctoral students. GCRCs are a National Institutes of Health (NIH)-supported network of approximately 75 centers that provide an optimal setting for investigators to conduct safe, controlled patient-oriented research studies.

General clinical research centers are important environments for nursing research. As nurse researchers increasingly become more involved in physical measurements and developing translational research studies investigating biochemical measures, it is imperative that nurse leaders and researchers consider the use of GCRCs to conduct research. The research and leadership skills gained through time spent in the rigorous multidisciplinary environment supported by GCRCs are invaluable.

The purpose of this study was to describe the knowledge level of senior nursing faculty regarding their awareness of the purpose of GCRCs, to determine the frequency of use by nursing faculty, and whether the presence of GCRCs in their institution has ever been used as a recruitment item for faculty and post-doctoral students. Also described was whether schools of nursing inform potential new faculty and post-doctoral students of opportunities offered by GCRCs.

A mailed survey questionnaire was directed to the offices of research at schools of nursing and to GCRCs. Descriptive statistics were used to analyze data.

Findings show that the majority of senior nurse researchers are not aware of the purpose and location of GCRCs and, therefore, generally do not discuss with potential faculty or post-doctoral students. Few nurse researchers have used GCRCs in their own research studies.

GCRCs are unique research environments that provide potential sources of funding for nursing research. GCRCs provide pilot funding to investigators for patient-oriented research involving translational research studies as well as studies determining physiological responses to human conditions. Research studies of this nature are needed to provide evidence for nursing practice.

## 28

**WHAT DOES IT MEAN TO BE "IN CHARGE"? AN ORIENTATION PROCESS AND COMPETENCY SKILLS CHECKLIST FOR SUCCESSFUL TRANSITION INTO THE ONCOLOGY CHARGE NURSE ROLE.** Patricia Matthews, RN, BSN, OCN®, Salvacion Ramirez, RN, BSN, OCN®, Rosanne Arlington, RN, MSN, ONC®, CNS, and JoAnn Mick, RN, MSN, MBA, AOCN®, University of Texas M.D. Anderson Cancer Center, Houston, TX.

Care of oncology patients in an inpatient setting requires accountability and oversight by designated charge nurses. Many nurses new to oncology need to learn additional skills to provide care for patients with unique needs. Although the charge nurse is an established position in many hospitals, there is little information about the structure or definition of the role, how it should be initiated, or available methods to evaluate how adequately nurses are prepared, or how well they function while in charge.

Charge nurses assume active leadership roles in resolving incidents and events that can affect patient outcomes and have key responsibilities to assess patient acuity, order supplemental staffing, assure bed control functions, and manage the census.

Charge nurses ensure patient safety and efficient unit functioning and, therefore, it is essential for them to maintain a high degree of clinical proficiency. Charge nurses are responsible for promoting safe and effective patient care and maintaining high clinical standards. Kouzes and Posner's Leadership Model's five domains represent outstanding leadership behaviors that were our conceptual model. These behaviors are Challenging the Process, Inspiring Shared Vision, Enabling Others to Act, Modeling the Way, and Encouraging the Heart.

With reference to these domains, the essential functions were defined and an orientation plan and competency checklist were created to support nurses with successful transitions and the ability to function in the charge nurse role on our unit. Experienced oncology charge nurses serve as resources to nurses new to oncology nursing. Charge nurses ensure daily unit management, continuity of care, quality patient standards, and ongoing professional development for the oncology nurses in our unit.

Ten clinical nurses have completed the charge nurse orientation and competency checklists. We established a monthly charge nurse council to continue to evaluate issues specific to the charge nurse role and to ensure that the orientation includes all elements that can support nurses for success in this role.

Our poster will share our process and the tools we have developed to ensure successful transition for serving in a charge nurse role in an oncology setting.

**HEALING RETREATS AS A METHOD OF INCREASING NURSING STAFF SATISFACTION AND RETENTION.** Marguerite Cyr, MSN, RN, and Linda Miller, MSN, RN, Washington Hospital Center, Washington, DC; Michelle Manning, MPH, BS, Washington Cancer Institute, Washington, DC; and Ann Marie Pessagno, MSA, RN, Washington Hospital Center, Washington, DC.

Oncology nursing leadership at Washington Hospital Center (WHC) recognizes the need to support and retain its staff in these times of nursing shortages within an inherently stressful clinical field. Leaders within the education field, also fraught with high burnout rates and shortages, have created similar opportunities to support, encourage, educate, and retain its staff. This opportunity was created by leaders with the staff's input to show appreciation, create a relaxed environment, build team work and camaraderie, teach through doing relaxation techniques, and create an environment where the staff feels appreciated and not only stay in their jobs, but recruit others.

There is a chronic nursing shortage resulting in fewer nurses working longer hours with more patient responsibility. Nursing management must realize the affect of these changes on staff and provide outlets for stress reduction, relaxation, and team building. In response to the stress of working with cancer patients under these difficult circumstances, the Washington Cancer Institute nurse management created a healing retreat for nurses. The purpose of this retreat was to provide a full day of relaxation, healing, and companionship in a natural environment away from the Washington Cancer Institute. In addition, this retreat served to provide a means of supporting and retaining current nursing staff and an opportunity to educate them on the uses of complementary and alternative therapy models.

The purpose was accomplished by nurse management providing a healing retreat including a day full of yoga, massage, Reiki, movement, Guided Imagery, paddle boating, singing, visual arts, and poetry. Participants were given an option of activities so they could choose either an exercise or a seated activity at each session. This retreat was held at a campsite providing space for both free time and nature walks in addition to structured activities.

Thirty-eight participants attended the retreat day located one hour from the medical institution. A survey of nursing staff took place three months prior to the retreat to identify retreat activities that most interested them. Participants completed a final evaluation at the end of the retreat where they ranked the various activities of the day as well as the location, food, and what they liked most and least about the retreat. All but one of the activities was ranked either "good" or "excellent." All 38 participants requested the retreat again and were grateful to have the administration provide the retreat opportunity. The executive director of the Washington Cancer Institute is committed to providing this retreat as a semi-annual event.

The implications for nursing practice are both clinical and practical. Providing a healing retreat for nursing staff serves to improve employee satisfaction and retention, increase pride in the workplace and job responsibilities, and foster relationships between both inpatient and outpatient units. Medical centers across the United States, regardless of their size, can use this retreat model to provide healing days for nursing staff.

### 30

**A NEW GRADUATE NURSE DEVELOPMENT PROGRAM: EXPANDING, INTEGRATING, AND SUPPORTING THE PROFESSIONAL DEVELOPMENT OF NEW AND EXPERIENCED ONCOLOGY NURSING STAFF.** Lisa Sohl, RN, MS, OCN®, Elizabeth Johnson, MSN, AOCN®, RN, Carol Ghiloni, RN, MSN, OCN®, Roni Woods, RN, BSN, OCN®, and Anne Marie Barron, PhD, RN, CS, Massachusetts General Hospital, Boston, MA.

Facilitating the orientation and integration of new graduate nurses into the workforce while retaining experienced clinicians at the bedside is a daunting challenge in our healthcare system. Oncology nursing in the acute care setting bestows unique opportunities for new graduate nurses to launch their careers, develop knowledge and skills, acquire professional identity, and achieve job fulfillment. Oncology nursing integrates a unique body of knowledge, skills, and self-care strategies that not only encompass physical care needs but also address the psychosocial and spiritual needs of the patient and family. Conversely, those aspects which

make oncology nursing such an exciting and attractive specialty also put clinicians at increased risk for overwhelming stress, disillusionment, burn out, and career reassessment.

Given the complexity of current healthcare delivery and the profound differences between educational experiences within the student practicum as contrasted with the reality of the actual work environment, as well as the challenge of retaining experienced oncology clinicians at the bedside, it was paramount to create strategies to address these complex issues. These innovative strategies were developed through collaboration of unit-based nursing leadership and staff to address the orientation and ongoing professional development needs of staff on an acute care inpatient oncology/bone marrow transplant unit in a major teaching hospital. The objectives focused on (1) creating an innovative process to support the new graduate nurse's transition from novice clinician to competent practitioner, (2) providing a process for continuation of structured orientation for the novice clinician beyond the time frame of the formalized preceptorship program, and (3) providing a forum for experienced nurses to share and role model their clinical expertise in a more structured learning environment.

A combination of innovative strategies was implemented to achieve our goals. These strategies included (1) development of a learning lab focusing on basic nursing skills; facilitated by experienced staff nurses, (2) development of a monthly "New Graduate Development Day" focusing on the fundamentals of oncology nursing practice and critical thinking necessary to meet the rigorous demands of caring for oncology patients, (3) creation of a senior staff nurse resource role supporting and educating staff "in the moment" as real patient-care situations occurred, and (4) development of a part-time, unit-based psychiatric clinical nurse specialist role aiding in the development of effective stress management and self-care strategies for staff.

Written evaluations are completed for the learning lab sessions as well as the monthly new graduate development days. Self-report feedback is obtained from the new graduate nurses throughout the course of the expanded orientation process, as well as from preceptors and experienced staff. These initiatives facilitated integration/transition of new graduate nursing staff into the work environment of an inpatient oncology/bone marrow transplant unit and provided opportunities/structure for experienced staff to focus on their own professional development.

The combination of these initiatives has provided an approach to support, guide, and enhance the integration and orientation of the new graduate nurse from the academic setting to the workplace environment. These strategies promote the transition of novice to competent clinicians in the challenging world of oncology nursing. These strategies also provide a forum for experienced staff to engage in their professional development by sharing and role modeling their clinical expertise. The implications for oncology nursing focus on improved staff morale, increased staff retention, and enrichment of the practice environment.

### 31

**SHARED GOVERNANCE: IMPROVING CLINICAL AND OPERATIONAL OUTCOMES.** Patricia Johnston, RN, MHA, OCN®, Roxy Blackburn, RN, MA, Carol Causton, RN, OCN®, Lourine Davis, RN, Buenagracia Dela Cruz, RN, BSN, and Jaine Jewell, RN, OCN®, University of Texas M.D. Anderson Cancer Center, Houston, TX.

Nursing in today's ever-changing, complex healthcare environment encounters multiple challenges including role expansion, cost-containment efforts, and the healthcare system's redesign to prepare for forecasted issues facing the profession. While these challenges can be overwhelming, nurses no longer accept the assignment of tasks as their practice goal outcomes. Today's nurses seek opportunities to provide comprehensive professional care through a system that supports autonomy and staff input regarding decision making.

Traditional models of administrative structures are presently in a state of flux as organizational structures flatten and team structures increase. Creating environments of teamwork and creativity are essential for achieving desired improvements in clinical and operational outcomes.

This presentation will discuss the shared governance council structure, activities, and accomplishments on an inpatient bone marrow transplant (BMT) unit.



Building on the nursing division's shared governance practice council structure, the inpatient BMT unit replicated the majority of practice councils at the unit level. These included a Clinical Practice Council, Research Council, Education Council, Quality Improvement Council, and Coordinating Council. Each council is responsible for establishing annual goals. Active participation is expected by the nursing staff in achievement of a component of their professional development model evaluation.

Improved outcomes that were achieved this past year included development of BMT nursing standards of care and a BMT patient education binder, preparation for the Foundation for the Accreditation of Cellular Therapy (FACT), monitoring nursing documentation audits, redesigning the measurement of patient satisfaction with nursing care, developing and instituting this year's unit-based competencies, and a staff recognition program.

The outcomes of shared decision making have promoted effective quality patient care, accountability, staff and leadership satisfaction, and professional role development demonstrating the mission, vision, and core values of our organization, which are viewed as a positive force on the unit.

## 32

**IT'S TIME TO STOP IGNORING DELIRIUM: AN INNOVATIVE SCREENING INITIATIVE FOR THE EARLY DETECTION AND TREATMENT OF DELIRIUM IN ONCOLOGY PATIENTS.** Gina Szymanski, RN, MS, Mikaela Olsen, RN, MS, OCN®, Sharon Krumm RN, PhD, Laura Hoofring, RN, MS, and Karin Taylor, RN, MS, Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins Hospital, Baltimore, MD; and Lori Paine, RN, MS, Johns Hopkins Hospital, Baltimore, MD.

Delirium is an "acute global alteration in mental state with an unidentifiable or presumed physical cause" (Moore, 1998). Delirium commonly occurs in medically ill, elderly persons with cancer, patients receiving palliative care, and the critically ill. Cancer patients are at high risk for developing delirium at various points along their treatment continuum. The high incidence of patient falls, increased rates of morbidity and mortality, as well as longer and costlier hospitalizations demonstrates the importance of early detection and treatment of delirium in the oncology population.

Despite the high documented incidence of delirium, it is frequently missed or misdiagnosed. Results from a retrospective patient review in this comprehensive cancer center show similar findings. Lack of knowledge related to delirium, its fluctuating course, and mislabeling of the problem contributes to undiagnosed delirium in the oncology population.

The aim of this quality improvement initiative is to implement a delirium screening project that enhances the current standard of care in neurologic assessment and increases the detection of this important problem in our patient population. Specific management interventions are implemented on those patients who screen positive, thus protecting patients with delirium while in the hospital environment.

Oncology nurses will conduct baseline and daily assessments to screen for delirium. Two screening tools will be utilized, the Mini-Mental Status Exam (MMSE) and the Intensive Care Delirium Screening Checklist (ICDSC). Screening results are communicated to interdisciplinary team members so that potential causes of delirium can be reviewed, and strategies for treating delirium can be initiated. The data collected by nurses in the care process, as well as administrative data, will be used to evaluate the impact of this screening initiative. Specific outcomes measures include actual incidence of delirium, patient falls, length of stay, and the average cost of a hospital stay for a delirious patient.

This initiative will demonstrate the results of intense delirium screening in an oncology population. In addition, this project will contribute to the nursing literature related to delirium in cancer patients and enhance our knowledge of this often overlooked and challenging diagnosis.

## 33

**COMMENCING ADJUVANT CHEMOTHERAPY FOR EARLY BREAST CANCER: WHAT SHOULD NURSING ASSESSMENT INVOLVE?** Maryanne Hargraves, BHLthSc, Hematology and Oncology Clinics of Australia, Brisbane; Patsy Yates, PhD, RN, Queensland University of Technology, Kelvin Grove QLD; Sanchia Aranda, PhD, RN, Peter MacCallum Cancer In-

stitute, Melbourne VIC; and Beverley Mirolo, [Need credentials] Hematology and Oncology Clinics of Australia, Milton QLD.

Adjuvant chemotherapy for early breast cancer is today routinely provided in ambulatory care settings. The development of models of care appropriate for addressing the broad range of support needs for women undergoing treatment in this context is an important priority.

This paper reports findings from a secondary analysis of baseline data collected for a RCT of a nurse-administered intervention for managing cancer-related fatigue. The purpose of the analysis was to identify key areas of concern for women at their first treatment visit in order to develop evidence-based health promotion strategies for implementation in ambulatory cancer centers.

The areas of concern investigated reflected key social and personal factors identified in the PRECEDE model of health behavior as being important to effective disease self-management.

A total of 108 women were surveyed at their first visit for adjuvant chemotherapy. The survey comprised measures of physical and psychological symptoms (EORTC QLQ-30 and Hospital Anxiety and Depression Scale) as well as a 22-item investigator-developed scale assessing confidence with managing cancer and its treatment.

Descriptive analyses were conducted to identify mean confidence scores and quality-of-life ratings.

Women reported moderate to high levels of confidence with coping with many aspects of cancer. On a 10-point scale (ranging from 1 = not at all, to 10 = very confident), areas of lowest confidence included ability to avoid negative thoughts (Mean = 6.8, SD = 2.4) and control feelings (Mean = 6.9, SD = 2.2). Mean quality-of-life scores were high (Mean 71.5, SD = 20.0 on a scale ranging from 25 = low QOL to 100 = high QOL). However, more than 28% of the sample had anxiety at levels that may be suggestive of an anxiety disorder, with a further 20% reporting anxiety levels categorized as marginal. Additionally, 6% of the sample had depression at levels that may be suggestive of clinical depression, with a further 7% reporting depression levels categorized as marginal. The study findings highlight key concerns of women attending their first treatment visit. The nature and scope of these concerns emphasizes the importance of nursing assessment that sensitively and accurately identifies emotional needs so that supportive interventions in the context of ambulatory care can be implemented.

## 34

**ADDRESSING NURSES' PAIN MANAGEMENT COMPETENCY.** June Eilers, [Need credentials] and Ann Berger, PhD, RN, OCN®, University of Nebraska College of Nursing, Omaha, NE.

Staff competency is an essential component of optimum pain management in cancer care. Nurses' potential to influence patient outcomes is restricted if they do not possess the necessary knowledge, skills, and abilities to intervene in a timely manner. As professionals, nurses have the responsibility to assure consumers that the nursing staff is competent to provide the care required by patients in the clinical setting.

Fulfilling this professional commitment and meeting the JCAHO requirement to "determine and ensure staff competency in pain assessment and management" are a challenge for healthcare institutions. Various approaches have been recommended for confirming competency, yet few have been implemented in this area of clinical practice. This presentation will review the process adapted to address competency and will report on two years of experience.

The pain management committee provided guidance for the process based on knowledge of patients' rights, regulatory requirements, and common misconceptions and barriers to optimum pain management. The competency testing was implemented as part of annual competency testing. Educational packets to guide the nurses in their preparation for competency testing were made available to all nurses. They completed a monitored written test that examined multiple areas of competency. Individuals scoring below a predetermined cutoff were required to review content materials and retest. Nurses not passing the second time were expected to review additional educational content to expand their knowledge. Testing results from the first year guided the process for the second year.

Although no method of competency testing avoids all of the potential limitations, the process adopted has served to increase awareness of the





importance of pain management, facilitated increased knowledge of misconceptions and barriers, and established competency in pain management as an expectation for nurses at our institution.

Oncology nurses frequently have experience caring for patients with varying types of pain and, thus, have the potential to advocate for improved pain management at their institutions. Through the promotion of competency testing, nurses can contribute to improved quality of care for individuals experiencing pain. Nurses in other centers can build on the two years of competency testing experience discussed in this presentation.

## 35

**ALIGNING PAIN REASSESSMENT PRACTICES WITH EVIDENCE-BASED PRACTICE GUIDELINES THROUGH USE OF A RESEARCH UTILIZATION APPROACH.** Cynthia Smith Idell, BA, RN, MSN, AOCN®, Marcia Grant, RN, DNSc, FAAN, OCN®, Michelle Rhiner, RN, MSN, NP, Neal Slatkin, MD, Robin Gemmill, RN, MSN, CS, and Ellen Siegmund, OTR, City of Hope National Medical Center, Duarte, CA.

Failure to assess and document pain is cited as a common etiology of pain under-treatment. Barriers to reliable and valid pain assessment include variations in assessment, nurses' attitudes, and documentation. NCCN practice guidelines cite reassessment as a critical component of pain management, yet implementation of this standard of care challenges nursing staff. Effective programs enhancing pain assessment and documentation advocate professional education and research utilization partnerships between clinicians and nurse researchers.

The purpose of this project is to improve inpatient nursing pain reassessment practices at an NCI-designated cancer center adopting Level IIA evidence-based practice guidelines through an interdisciplinary research utilization approach. Historic staff competency data demonstrated sub-optimal levels of pain reassessment and documentation, occurring less than 50% of the time. Aggregated competency trends validated the need for change in staff practice. Desired practice change aligned nursing pain reassessment with NCCN pain guidelines through adaptation of literature-based strategies promoting reassessment. Project design employed a conceptual framework for organizational change, the CURN research utilization model.

Interventions included baseline practice evaluation, interdisciplinary team formation, literature review and best practice critique, force-field analysis, piloting strategies designed to improve reassessment (e.g., unit-based pain rounds, one-on-one performance feedback, red-flagging patients for proactive management), and extension of innovations house wide.

Clinical, staff, and organizational outcomes were measured by retrospective chart audits of staff documentation (assessment/reassessment) in pilot units receiving interventions and comparing them to control units (N = 250), administration of staff Pain and Knowledge Attitudes Surveys pre- and post-interventions, referrals to pain service, and patient satisfaction score trending. Statistical analysis was conducted using relational database, descriptive statistics, and matched t-tests.

A well-designed research utilization approach enhances pain management through careful selection of strategies to improve pain reassessment. Other healthcare providers may adopt this research utilization approach to create superior patient care outcomes, to improve nursing pain practice, and to increase compliance with NCCN pain guidelines.

## 36

**FACTORS INFLUENCING FOLLOW-UP CERVICAL CANCER SCREENING AMONG LOW-INCOME MINORITY WOMEN.** Miok Lee, EdD, RN, CS, ANP, School of Nursing, Hunter-Bellevue School of Nursing, Hunter College, CUNY, New York, NY, and Shuquan Chen, PhD, Institute for Cancer Prevention, New York, NY.

Advance practice nurses have important roles in preventing and reducing health risks associated with cervical cancer by identifying major barriers and motivators in cervical cancer screening and by implementing ethno-culturally appropriate interventions in the community.

Cervical cancer is preventable and curable with the five-year relative survival rate of nearly 100% if diagnosed in pre-cancer stage with a Pap test. Korean American women showed low rates of initial screenings using Pap test and a substantial number not returning for annual follow up.

The purpose of the study is to explore influencing factors in these women's decision process of not returning for follow-up as well as returning for follow-up.

The conceptual framework is derived from the Health Belief Model (HBM). The HBM hypothesizes that health-related actions depend on the simultaneous occurrence of a few factors including the existence of sufficient motivation. It emphasizes that one needs to believe the benefits of the preventive action to be greater than overcoming important barriers.

The qualitative design using focus group approach with purposeful sampling method was used. The sample was drawn from the Korean women who participated in either the annual Korean Health Fair or the Cervical Cancer Early Detection Program during 2000. Seven focus groups—four non-follow-ups (n = 20) and three follow-ups (n = 9) were conducted by a Korean facilitator using 12 guiding questions based on HBM. All sessions were taped after obtaining the consents.

The seven taped sessions were transcribed, translated, and analyzed thematically using Nudist Vivo software, and triangulated by another consultant making conceptual maps.

All participants were immigrants, age 40 or older, have low income, and no health insurance. The findings revealed that the major barriers were service quality at clinics—long waits and crowds, humility, embarrassment, no time and money, lack of knowledge, and low concern for preventive health. Motivators were free cost, reminder card, illness experiences of self or others, peer involvements, and high concern for health. The findings will help advance practice nurses to design and implement appropriate interventions for these women to participate in annual cervical cancer screening, thus leading to maintaining good health and better quality of life.

## 37

**WIVES OF MEN WITH PROSTATE CANCER: EXAMINING INFORMATION NEEDS.** Tina Mason, RN, MSN, AOCN®, H. Lee Moffitt Cancer Center and Research Institute, Tampa, FL.

Nurses play a key role in patient/family education. To afford the best possible care, nurses need to accurately assess and meet information needs.

The literature supports that the information needs of family members of patients with cancer are frequently overlooked by healthcare providers. Family members also report consistently about difficulty obtaining information. Shortened hospitalizations and clinic appointments evolved with managed care. The purpose of this abstract is to report findings of a study aimed to identify and measure perceived information needs of wives of men diagnosed with prostate cancer who have undergone brachytherapy. Ultimately, this information will lead to improved education.

Family systems theory provides the conceptual framework. Dynamics of family development affects clinical decision-making and adjustment to illness. Each family member's response can affect responses of the other members. Understanding information needs of family members can assist nurses in healthcare teaching and diagnosing.

Convenient sample of wives were obtained on the day of brachytherapy. Consent and demographic data was collected. The 30-item Family Inventory of Needs-Wives (modified version of Family Inventory of Needs-Husbands) instrument was utilized.

Sixty-five wives (mean age of 60.8 years) participated. Mean age of patients was 64.8 years and stage II prostate cancer was most commonly reported (96.9%). Subjects ranked needs on Likert-type scale (1 = not important to 5 = extremely important). All needs were rated important (range 2.85–4.95). The degree of being met, being partly met, or unmet varied. Only "be assured that best possible care is being given" was never ranked as unmet. The highest rated unmet needs were "know what to expect of husband's energies" (33.9%), "know how to touch husband" (32.2%), "have someone be concerned about my health" (33.3%), and "be told about people who could help with problems (i.e., financial, household)" (35.7%). Education and age of wife did not influence percentage of unmet needs (P = 0.18 and 0.47, respectively).

With less opportunity to educate, a challenge exists for nurses to appropriately tailor effective and desired family education. Therefore, an adequate description of family needs is required to contribute to improved care. Data from this study will be used to help nurses prioritize care and guide the development and revision of educational material.



## 38

**EXAMINING THE EFFECTIVENESS OF OPIATE USE IN CANCER PAIN MANAGEMENT: VARIATION ACROSS OUTPATIENT ONCOLOGY CLINIC SETTINGS.** Mary Thomas, RN, MS, AOCN®, VA Palo Alto Health Care System, Palo Alto, CA; Shirley Hwang, RN, MS, AOCN®, VA Health Care System of New Jersey, East Orange, NJ; Doretta Annis, RN, BSN, OCN®, VA Central California Health Care System, Fresno, CA; and Kathleen Fahey, RN, MS, Jan Elliott, RN, MS, AOCN®, and Marty Douglas, RN, DNSc, FAAN, VA Palo Alto Health Care System, Palo Alto, CA.

Despite continued emphasis, effective pain management (PM) remains difficult to achieve. One potential barrier may be inadequate individualization of PM (i.e., approaches to PM may be setting-specific, rather than patient-specific).

The purpose of this pilot study was to compare the amount of pain medication prescribed at three VA oncology clinics and to assess its impact on patients' pain intensity ratings, satisfaction with PM, and specific quality-of-life parameters.

Ahles' multidimensional nature of cancer pain served as the conceptual framework for this study.

The Brief Pain Inventory was used to measure the dependent variables of pain severity, pain relief, and impact of pain on various dimensions of quality of life (e.g., general activity, sleep, enjoyment of life). This instrument has established reliability and validity. Medications prescribed and taken were recorded and converted into morphine equivalents (MEQ) using AHCPR guidelines.

The dependent variables were examined using a one-way ANOVA. For those variables demonstrating a statistically significant difference in mean scores, a pair-wise contrast analysis was performed using the Bonferroni or Dunnett T3 method as appropriate.

141 adults (96% male) with a variety of cancer types who reported having cancer pain participated in this study. The mean amount of medication prescribed for patients at Clinic A (188 mg, MEQ, SD = 187 mg) was significantly greater ( $p < .001$ ) than that at Clinics B or C (80 mg MEQ, SD = 102 mg; 58 mg MEQ, SD = 78 mg, respectively). Similar findings were realized when comparing the amount of opiates reported as actually taken by the patients, albeit less than was prescribed. Despite the great difference in amount of opiates used by those at Clinic A, there was no significant difference in patients' pain intensity ratings, amount of pain relief achieved, or in ratings of impact of pain on specific quality-of-life parameters across the three clinic settings. While liberal use of opiates is often considered an integral component of effective PM, data from this study suggest that cancer pain can persist despite liberal opiate use. Additional approaches may be necessary in conjunction with opiate use if PM is to be truly effective.

## 39

**PARTNERING WITH THE GIRL SCOUTS TO PROMOTE CAREER CHOICES IN ONCOLOGY NURSING.** Maureen Mullin, RN, BSN, OCN®, Fox Chase Cancer Center, Philadelphia, PA.

Oncology nursing is a specialty often described as a "calling." Lack of exposure to oncology nursing may be one of many impediments in selecting this field as a career choice. Oncology nurses at an NCI-designated comprehensive cancer center took a step in promoting not only oncology nursing, but also the entire profession of nursing.

The nurses planned, implemented, and evaluated an all-day program to promote oncology nursing. This initiative required teamwork and is an excellent project for the developing leader.

Oncology nurses and the Girl Scouts of Southeastern Pennsylvania joined forces to facilitate a group of Junior Girl Scouts (4<sup>th</sup>–6<sup>th</sup> grades) in earning the new nursing exploration patch. By sharing their clinical expertise and their love of nursing with children from the community, the nurses hoped to spark a fire in the hearts of some future nurses. Since students at this young age are open-minded about their future, the nurses selected this potentially impressionable age group.

The purpose of the nursing exploration patch is to increase awareness of nursing and its career opportunities for Girl Scouts. The patch explores the need for nurses, the many roles of nurses, education requirements, and information about basic health and wellness. The scouts must complete an activity from each of five categories to earn the patch: Career Explora-

tion, Educational Lessons, Skill Builders, Service Projects, and Technology.

A graduate student developed pre- and post-tests to evaluate the effectiveness of this project. The results of the post-tests revealed a clarified perception of nursing, and discussions with the children at the end of the day demonstrated an increased likelihood of considering nursing as a career choice.

Selected topics were carefully reviewed for content in an effort to avoid the "squeamish" factor with the children. Two clinical nurse specialists demonstrated disease-prevention teaching by giving a presentation on sun safety. The scouts also enjoyed observational experiences in the perioperative areas including emergency care on a resuscitation manikin. Staff nurses interacted with the girls during a question/answer period and pizza lunch.

## 40

**DEVELOPMENT AND IMPLEMENTATION OF COMMUNITY-BASED CANCER RESOURCES IN A RURAL SETTING.** Cynthia Cantril, RN, MPH, Big Sky Cancer Recovery and Resource Center, Inc., Belgrade, MT, and Pamela Haylock, RN, MA, self-employed, Medina, TX.

Oncology nurse leaders, based on public health principles of equity, participation, and involvement of communities in decision making about health services, identified key members of the community and initiated development of a community-based resource center.

We have discovered not only many rewards but also political nuances to be negotiated in the delicate processes of relationship building to establish a valuable and viable community resource to serve cancer survivors.

Cancer diagnoses in rural settings present unique access challenges that are documented in the literature such as expert cancer care providers, current treatment information, clinical trials, rehabilitation, and patient/family psychosocial support. The difficulties that rural dwellers encounter as they attempt to piece together cancer treatment and supportive care plans from the meager resources in their settings is rarely noted. The Cancer Recovery and Resource Center (the Center) represents one rural community's response to unmet informational and supportive care needs.

Oncology nurse leaders, based on public health principles of equity, participation, and involvement of communities in decision-making about health services, identified key members of the community and initiated development of a community-based resource center. Center leaders used data generated in community focus groups to identify four programming priorities: (1) a navigator who would guide information-seeking, decision-making, and problem-solving processes, (2) well-run support groups, (3) immersion retreats for survivors and caregivers, and (4) equine-facilitated therapy adapted to the needs of survivors.

Since its incorporation in 2001, The Center's novice board of directors crafted by-laws, position descriptions, and policies and procedures, along with hiring staff and coordinating volunteer efforts. The Center has also been the beneficiary of numerous community-based fund-raising events. Seed financing for the navigator role has been contributed by the community's sole hospital. Support for The Center's programs in general and the Navigator role in particular by local physicians has been mixed but is increasing over time. During its first full year of operation, The Center has served 53 navigational clients, completed seven referrals to regional and national centers of excellence and clinical trials, and served over 500 participants through ongoing support groups.

While the processes of development and implementation have met with many successes, there have also been both anticipated and unanticipated complexities. We believe our experience is useful to nurse leaders pursuing establishment of community-based cancer recovery and resource programs.

## 41

**EFFECT OF A COUNSELING-EDUCATION INTERVENTION ON PSYCHOLOGICAL AND IMMUNE MEASURES IN WOMEN AT HIGH RISK FOR BREAST CANCER.** Janet Bagley, RN, MS, OCN®, University of Washington School of Nursing, Seattle, WA; and Betty Gallucci, PhD, University of Washington, Seattle, WA.

The nurse's role here is developing an understanding of relationships between physiological and psychological variables in a high-risk population.



Approximately 1,975,000 women are living with breast cancer in the United States. First-degree relatives of these women have a 2–3 fold increased risk of breast cancer. This exploratory study examined the relationship between psychological and immune measures in high-risk women and evaluated the effect of a counseling-education intervention.

The stress response model was used in this pre-post within subject comparative experimental design.

**Methods:** 19 women at high risk for breast cancer were randomly assigned to an immediate ( $n = 10$ ) or a delayed intervention group ( $n = 9$ ). Psychological self-report, hormonal, and immune measures were obtained at baseline and after the immediate group completed four two-hour monthly sessions (time 2). Psychological measures included Cancer Worry Scale, Impact of Events Scale (IES), Brief Symptom Inventory (BSI) anxiety subscale, and Profile of Mood States. Biologic measures were urinary catecholamine and cortisol, NK cell cytotoxicity, and lymphocyte CD69 and HLA-DR activation antigens after IL-2 incubation.

Nonparametric tests were used to assess correlations, differences between groups, and differences within the immediate intervention group.

In the immediate intervention group, all four self-report measures were lower at time 2, with anxiety-BSI ( $z = -2$ ,  $p = 0.045$ ) significantly decreased. There were no significant differences in hormonal or immune measures. The between group comparison at time 2 showed significant differences in the total IES ( $u = 20.5$ ,  $p = .043$ ) and anxiety-BSI ( $u = 17$ ,  $p = .022$ ). With regard to the relationship between psychological and immune variables, cancer worry was highly correlated with CD69 ( $r_s = .61$ ,  $p = .014$ ), total IES was moderately correlated with CD69 ( $r_s = .48$ ,  $p = .048$ ) but marginally significant with HLA-DR ( $r_s = .44$ ,  $p = .069$ ). Urinary cortisol was significantly and highly correlated with NK HLA-DR ( $r_s = .61$ ,  $p = .023$ ) and marginally significant with NK CD69 ( $r_s = -.50$ ,  $p = .085$ ). A counseling-education intervention benefited high-risk women in terms of self-reported measures. Some psychological measures correlated strongly with the lymphocyte activation antigens. Larger studies are needed to determine if an education counseling intervention will change hormonal and immune responses in women at high risk for breast cancer.

## 42

**EXPLORATION INTO THE NATURE OF COLLABORATIVE PRACTICE: BUILDING RELATIONSHIPS WITH OUR PHYSICIAN COLLEAGUES.** Beth Knox, RN, NP-C, AOCN®, Margaret Joyce, RN, MSN, AOCN®, Loleta Samuel O'Garro, RN, MSN, AOCN®, Susan Pillet, RN, MSN, Rita Musanti, RN, MSN, AOCN®, Judith Much, RN, MSN, AOCN®, and Beth Savage, RN, MSN, The Cancer Institute of New Jersey, New Brunswick, NJ.

The role of the advanced practice nurse (APN) has now become "specialized." As a result, some have chosen to engage in collaborative practice with medical oncologists. At the Cancer Institute of New Jersey (CINJ), the APN plays a key role in providing care to clients participating in clinical trials.

Building successful collaborative relationships is important to achieving an outcome of providing quality patient care. APNs demonstrate leadership by sharing their knowledge with their colleagues.

In early 2002, the APNs at CINJ held a retreat focused on team building. One of the role dis-satisfiers identified was related to the nature of collaborative practice. A working group of APNs was formed with the stated purpose of solidifying collaborative relationships and developing an exemplary model of collaboration and teamwork.

A literature review revealed a paucity on the subject in oncology; however, it was clear from existing literature that the decision to enter into a collaborative practice must be intentional and not one of administrative convenience. A survey was developed that included demographic information and questions probing into both the task and process of collaborative practice. The survey was piloted to a small sample of APNs and physicians on staff establishing validity and internal consistency. Surveys were distributed to 28 APN/MD collaborative practices. Survey response was 100% and 77% for the APNs and MDs respectively.

Data results were presented at the first APN/MD collaborative practice forum. Both APNs and MDs recognized the need for ongoing communication regarding the nature of collaborative practice. A subgroup of APNs and MDs was formed to address issues identified in both the survey and

the open forum. Ongoing subgroup and other "open" forum meetings with the entire APN/MD staff are in progress. Repeat surveys will collect data to measure change over time.

The process of moving a large APN/MD group toward improved collaboration is a challenge. The goal of the APN/MD practitioners at CINJ is to develop enriched, satisfying collaborative practices that produce evidence-based collaborative practice guidelines to share with others.

## 43

**FATIGUE, PHYSICAL ACTIVITY, HEALTH STATUS, AND QUALITY OF LIFE IN STEM CELL TRANSPLANT PATIENTS.** Eileen Hacker PhD, RN, AOCN®, Carol Ferrans, PhD, RN, FAAN, and Farhad Ravandi, MD, University of Illinois at Chicago, Chicago, IL; and Koen van Besien, MD, University of Chicago, Chicago, IL.

Stem cell transplantation (SCT) potentially affects all aspects of a patient's life, particularly during the acute post-transplant period. Problems such as fatigue and decreased physical activity may result in long-term consequences and diminished quality of life (QOL).

Very little is known about the patterns of fatigue, physical activity, health status, and QOL during this period. Obtaining subjective data is difficult as patients are frequently too ill to complete long questionnaires or participate in lengthy interviews. It is equally difficult to obtain objective physical activity data.

This study examined fatigue, physical activity, health status, and QOL immediately following SCT. The feasibility of using wrist actigraphy with a subjective event marker as a patient tolerable means for obtaining fatigue and physical activity data was also examined.

Wilson and Cleary's Conceptual Model of Patient Outcomes guided the study.

This feasibility study used a prospective, repeated measures design. The convenience sample ( $n = 20$ ) was drawn from two academic medical centers. Subjects were assessed over a five-day period pretransplant and immediately post-transplant (days 4–8). Subjects wore a wrist actigraph to measure physical activity. Subjects rated their fatigue intensity three times daily, entering this information directly into the subjective event marker of the wrist actigraph. At the end of both five-day periods, subjects completed the EORTC QLQ C-30 and the QLI.

Descriptive statistics, paired t-tests, and one-way repeated measures ANOVA were used to analyze the data.

Study results indicate that physical activity significantly declined following SCT ( $p < 0.001$ ). This decline coincided with diminished physical ( $p < 0.05$ ), emotional ( $p < 0.01$ ), role ( $p < 0.01$ ), and cognitive ( $p < 0.05$ ) functioning. Symptoms experienced increased during the acute post-transplant period (fatigue,  $p < 0.001$ ; pain,  $p < 0.001$ ; nausea/vomiting,  $p < 0.001$ ; sleep disturbances,  $p < 0.01$ ; appetite loss,  $p < 0.001$ ; and diarrhea,  $p < 0.001$ ). Quality of life was significantly worse ( $p < 0.005$ ). Findings suggest that SCT patients experience reduced physical activity, diminished functioning, increased symptoms, and poorer QOL during the acute post-transplant period. Findings demonstrate that it is feasible to obtain fatigue, physical activity, health status, and QOL information if the patient burden is reasonable. This information can be used to develop interventions that alleviate symptoms, increase physical activity, and improve health status and QOL.

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**DEPRESSION AND FATIGUE IN LYMPHOMA STEM CELL TRANSPLANT PATIENTS.** Majeda El Banna, MSN, Ann Berger, PhD, RN, AOCN®, Lynne Farr, PhD, Barbara Friesth, DNS, RN, and Elizabeth Schreiner, BSN, RN, University of Nebraska Medical Center, Omaha, NE.

Oncology nurses are working with an increasing number of stem cell transplant (SCT) patients, yet research regarding symptoms during and after SCT is scarce. Nurses need information regarding symptoms experienced by lymphoma patients who undergo SCT in order to provide quality care.

Therefore, the purpose of this longitudinal study was to describe patterns of and relationships between depression and fatigue before treatment, during chemotherapy, and in the recovery period in SCT patients. A secondary purpose was to describe the patterns of the dimensions of





fatigue (behavioral/severity, sensory, cognitive/mode, and affective/emotional meaning) and their relationships to depression.

The Piper Integrated Fatigue Model guided this investigation.

A repeated measures descriptive design was used to collect data from 27 Hodgkin's and non-Hodgkin's lymphoma patients undergoing SCT at a midwestern university. Patients mean age was 49 years (SD = 13.71). Patients completed the Piper Fatigue Scale (PFS) and the Center of Epidemiologic Studies-Depression Scale (CES-D) at baseline, two days before transplantation (day -2), and during the immediate recovery period (day +2, day +7, and day +14). Days are numbered with respect to the transplant day (day zero). The tool's validity and reliability had been documented in patients with cancer.

Descriptive statistics were obtained and data analyzed using RM-ANOVA and correlations.

Results showed the highest depression and fatigue (total and all dimensions) were reported at day +7. RM-ANOVA results confirmed that all depression and fatigue scores (total and all dimensions) changed significantly from baseline to day +7. Correlations between depression and fatigue scores (total and all dimensions) varied at different points in time. The highest relationships were reported at day +2 and ranged ( $r = 0.622-0.952$ ,  $p < 0.05-0.001$ ). These findings indicate that day +7 is the time when these symptoms were most intense and that they were correlated at all times. Clinical implications are that depression and fatigue peak approximately seven days after SCT and that assessment of these symptoms are important before, during, and after transplant.

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**INCREASING EXERCISE ADHERENCE IN A CLINICAL TRIAL EVALUATING THE EFFECTIVENESS OF EXERCISE ON CANCER TREATMENT-RELATED FATIGUE.** Amy Bositis, BSN, RN, Theresa Swift Scanlon, MS, RN, Pamela Sue Hall, MS, CRNP, and Victoria Mock, DNSc, RN, AOCN®, FAAN, Johns Hopkins University School of Nursing, Baltimore, MD.

Assisting people in maintaining an exercise program is a challenge for healthcare providers. This challenge is enhanced when working with a group of patients newly diagnosed with cancer who are undergoing therapy. Nurses play a significant role in this process because of their knowledge in patient education and adherence theories, and because of their sustained relationship with patients throughout treatment. In this ongoing, randomized, clinical trial, a home-based walking program is evaluated as a mitigator of cancer treatment-related fatigue. The research nurses have employed a variety of motivational techniques to improve patient adherence.

Research shows that adherence rates are low for individuals beginning an exercise program. Therefore, to implement a research study that uses exercise as its intervention, it is necessary to use theory-based and research-based interventions. The Social Support and Social Network concept guides this intervention because it proposes that behavior is the product of supportive social networks, which can include relationships, supportive aids, praise, and information. The exercise intervention uses prescribed goal setting, accountability, social support, and mechanical feedback to improve adherence.

Patients assigned to the exercise group receive a variety of research-based interventions to improve adherence such as an exercise booklet and video to reinforce the teaching of the exercise program and emphasize the potential benefits of exercise. The patients are "coached" during the intervention by the research nurse who gives the exercise prescription, monitors the patient's progress and symptoms, and revises the walking prescription every two weeks. Patients are asked to walk with a supportive friend or family member. Daily logs and recording of steps from a pedometer also serve to monitor and motivate.

Exercise adherence is measured by self-report on the weekly logs and is correlated with the pedometers. These are inexpensive and convenient tools for the patient and offer the nurse insight on the patient's experience and adherence. The study is ongoing but our methods show preliminary effectiveness.

Oncology nurses, because of their ongoing relationship with patients, have the opportunity to implement interventions that promote exercise during therapy. Furthermore, nurses can assess motivational triggers in patients and choose appropriate methods to help them maintain their exercise goals.

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**USING CLINICAL PRACTICE GUIDELINES TO MANAGE CANCER-RELATED FATIGUE: WHERE ARE WE?** Victoria Mock, DNSc, AOCN®, Johns Hopkins University School of Nursing, Baltimore, MD.

Fatigue affects 70%-100% of patients with cancer and is the most prevalent symptom reported. Patients perceive fatigue to be the most distressing symptom associated with cancer and its treatment and a significant source of decreased in quality of life. Although practice guidelines for managing cancer-related fatigue (CRF) have been published, fatigue remains under-reported, under-diagnosed, and under-treated. Oncology nurses can improve the care of patients with CRF by implementing evidence-based practice guidelines.

The purpose of this presentation is to describe the 2003 National Comprehensive Cancer Network (NCCN) Clinical Practice Guidelines for Cancer-Related Fatigue from screening to intervention and evaluation, including the evidence base upon which the guidelines are based.

The NCCN Clinical Practice Guidelines for CRF were developed by an interdisciplinary panel of experts on fatigue, including oncology nurse researchers and clinicians. The guidelines present a definition of CRF, standards of care for management, and specific clinical approaches to screening, evaluation, and management. Interventions for management are specific to three categories of patient clinical status: Patients on active treatment, disease-free patients on long-term follow-up, and patients at the end of life. Case studies will be used to illustrate management of CRF in the three clinical status categories. Research, including the contribution of nursing research, to support the guidelines will be reviewed.

The presentation will give specific criteria for evaluation of the effectiveness of interventions for CRF and discuss appropriate next steps for oncology nurses when CRF is not resolved. An evaluation of the state of the science that supports the guidelines and the status of evaluation of the guidelines' effectiveness will be discussed.

Clinical practice guidelines represent the strongest evidence available to guide clinical care of patients. The NCCN Clinical Practice Guidelines for management of CRF are a powerful tool that oncology nurses can use to manage this distressing symptom and improve the quality of life of patients with cancer.

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**IMPLEMENTATION OF A PEDIATRIC PALLIATIVE CARE TRAINING PROGRAM.** Rose Virani, RN, RNC, MHA, OCN®, Betty Ferrell, PhD, FAAN, and Marcia Grant, DNSc, FAAN, City of Hope National Medical Center, Duarte, CA.

Despite major advances in pediatric palliative care, an estimated 2200 children will die of cancer in 2003. These children and all those diagnosed with pediatric cancer and their families could benefit greatly from key principles on palliative care such as pain and symptom management and improved communication. In 2002, the Institute of Medicine released a report titled "When Children Die: Improving Palliative and End-of-Life Care for Children and their Families."

In response to this major national report, the End-of-Life Nursing Education Consortium (ELNEC), a Robert Wood Johnson funded project, developed and implemented a national educational curriculum for nurses in pediatric palliative care. The curriculum was developed and tested over 2001-2003. The curriculum focuses on 10 end-of-life content areas including an introduction to pediatric palliative care, special pediatric considerations, communication, ethical/legal issues, culture, pain, symptom management, care at the time of death, grief, and models of excellence.

The first national training program was hosted in 2003 and was attended by 100 nurse educators from 100 different pediatric settings representing 37 states. Participants included schools of nursing (33%), clinical educators (25%), specialty nursing organizations (8%), and CE providers (7%). Participants rated their current effectiveness in pediatric palliative care at 5.2 on a scale with 0 = not effective, to 10 = very effective. Participants also identified key barriers in teaching pediatric palliative care to staff including fears associated with dying, cultural beliefs, lack of educational resources, lack of staff time, and difficulties in determining prognosis of children. The ELNEC Pediatric Palliative Care Program will



be implemented in the settings of the participants with follow-up goal evaluation at 6 and 12 months.

Improved pediatric palliative care can enhance the quality of life of children and their families as they face childhood cancer. Oncology nurses are key to ensuring improved quality care for this population.

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**END OF LIFE (EOL) EDUCATION FOR GRADUATE NURSE EDUCATORS.** Judith Paice, PhD, RN, FAAN, Northwestern University, Feinberg School of Medicine, Chicago, IL; Rose Virani, RN, MHA, Betty R. Ferrell, PhD, FAAN, and Marcia Grant, DNSc, FAAN, City of Hope National Medical Center, Duarte, CA; Pam Malloy, RN, MN, OCN®, AACN, George Washington University Hospital, Washington, DC; and Anne Rhome MPH, RN, AACN, [Need affiliation; not in iMIS; probably works with Pam Malloy], Washington, DC.

Despite the release of several prominent reports emphasizing the need for excellent palliative care, the majority of those dying from cancer encounter under treatment of physical and emotional symptoms. Advanced practice nurses (APNs) who are well prepared to treat these symptoms can be highly influential in providing excellent clinical care; educating professionals, patients, families, and the public; conducting quality improvement efforts to improve practice; and researching pertinent questions to advance the science of palliative care.

The Graduate End of Life Nursing Education Consortium (ELNEC) addresses the preparation of APNs by providing graduate nursing faculty with the knowledge and tools to enhance end-of-life (EOL) information in their curricula.

The National Cancer Institute (2002–2007) funds this collaborative effort between the American Association of Colleges of Nursing (AACN) and the City of Hope Cancer Center (COH). The Graduate ELNEC curriculum, based on the AACN "Peaceful Death" document, includes nine EOL core areas with detailed teaching materials to integrate this content into graduate nursing curricula and clinical practice. The first national training course, held in June 2003, was attended by 60 graduate nursing faculty members from 35 states and the District of Columbia.

The participants rated the overall course highly ( $x = 4.8$ ; scale of 1 = lowest rating, to 5 = highest rating). In pre-course surveys, the participants perceived that EOL care is very important to graduate nursing education ( $x = 9$ ; scale of 1 = not important, to 10 = very important) and that their own faculty is very receptive to increasing EOL content in the curriculum ( $x = 8.5$ ). However, efforts at including EOL care in the graduate curricula were only moderately effective ( $x = 4.4$ ). This presentation will describe the development of Graduate ELNEC and will provide additional evaluation data derived from the course evaluations, pre-assessment surveys compared with follow-up after the course, and participant goals conducted pre-course, immediate post-course, and at various intervals post course.

This national effort is a significant measure toward increasing EOL care in graduate nursing curricula, thereby preparing APNs to improve care of the dying.

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**CONDUCTING SEXUALITY ASSESSMENTS OF ONCOLOGY PATIENTS: A SEXUALITY AND CANCER WORKSHOP FOR NURSES.** Coni Ellis, RN, MS, C, OCN®, CWOON, JoAnn Mick, RN, MSN, MBA, AOCN®, and Marlene Z. Cohen, RN, PhD, FAAN, University of Texas M.D. Anderson Cancer Center, Houston, TX.

The Oncology Nursing Society and American Nurses' Association Statement on the Scope and Standards of Oncology Nursing Practice (2001) includes assessment of sexuality to improve the quality of life for patients with cancer. Standards of care and standards of professional performance include assessment of sexuality to identify the effects of cancer and cancer treatment on body image, sexual function, psychosocial responses, and past and present sexual patterns and function. Nursing diagnoses and outcomes measurements include nurses' responsibility to identify actual or potential changes in sexuality or sexual function related to cancer and cancer treatment.

Gamel (1993) identified that nurses often do not offer specific teaching, supporting, and counseling interventions to manage the effects of cancer and cancer treatments on sexuality. Wilson and Williams' (1988) study discussion identified that the integration of nursing interventions concerning an oncology patient's alterations in sexuality into a plan of care was affected by nurses' attitudes toward sexuality. An identified serious consequence of the absence of sexuality in nursing care was the resulting neglect of sexual concerns of patients that were caused by their cancer treatment and associated toxicities.

A workgroup was formed to develop and implement a sexuality and cancer workshop for nurses at our organization. Course objectives included discussion of purposes of sexuality assessments, how to banish barriers of sexuality assessment, and identification of tools available to conduct a sexuality assessment, develop interventions, and increase the use of sexuality assessment tools. Topics included the concept of sexuality, barriers of sexuality, sexuality assessment models, diversity, psychosocial and spiritual components of sexuality, effects of cancer treatments on quality of life, cancer, sexuality, and quality of life. Classes are limited to 10 attendees to provide the opportunity to comfortably discuss individual attitudes and behaviors related to sexuality assessment and to explore the identified barriers in group discussions.

The course will be offered quarterly and research is in progress to evaluate the courses' impact on nursing practice.

Our poster will share course content so that other organizations may use the program to improve nursing assessment of sexuality concerns of oncology patients.

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**PAIN RESOURCE NURSES, MORE THAN JUST A TITLE: ADVOCATES FOR CHANGE.** Kathleen MacDonald, RN, BSN, OCN®, Marilyn Sweeney, RN, BSN, OCN®, and Linda Regul, RN, MSN, OCN®, Fox Chase Cancer Center, Philadelphia, PA.

Pain continues to be a significant problem for patients with cancer. It disrupts physical and emotional well-being, affecting not only patients but also entire family units. The pain resource nurse (PRN) at this NCI-designated comprehensive cancer center, due to expert knowledge and experience in relation to pain and symptom management, is regarded as a patient advocate and educator to patients, caregivers, nurses, and physicians.

The role of the PRN is to provide a unit-based resource for effective pain and symptom management information. The PRN role is ongoing. It begins upon completion of the pain management instructional program and continues through quarterly meetings, providing PRNs with the latest pain-related information and the opportunity to discuss complex cases.

The role of PRNs as educators is accomplished through educational programs conducted throughout the year. Fall projects focus on patient and caregiver education, utilizing posters and information cards placed weekly on patients' breakfast trays, covering diverse pain-related topics. Spring projects focus on staff education through the use of word games, awarding prizes to those units correctly answering the most questions. PRNs serve on various nursing and hospital committees, enlisting their pain management knowledge to influence policy revisions. PRNs were instrumental in recent medication kardex revisions promoting documentation of effectiveness of administered pain and symptom management medications per JCAHO standards. PRNs on the Quality Council established criteria for documentation of pain as the 5th vital sign in the medical record. Currently, PRNs are developing a pain competency checklist for registered nurses.

The success of the program can be measured not only by the requests for specific onsite clinical pain and symptom management consultation by the PRN, but also by the requests from network hospitals for assistance in the development of PRN programs. Press Ganey Patient Satisfaction data also indicate patient satisfaction with pain relief in the 99th percentile at our cancer center.

Across the continuum of care, PRNs accepting their role as advocates for change can improve the oncology patient's quality of life by providing consultation and education to patients, families, and healthcare professionals, resulting in more effective pain and symptom management.

**A TRACH IS NOT A TRACH ANYMORE! MANAGEMENT OF TRACHEOSTOMIES IN THE ONCOLOGY PATIENT POPULATION.** Alice Pons, RN, BSN, and Mikaela Olsen, RN, MS, OCN®, Sidney Kimmel Comprehensive Cancer Center, Baltimore, MD.

Tracheostomies can be placed in oncology patients for a variety of reasons. Prolonged mechanical ventilation, airway compromise, and airway protection from aspiration, edema, coma, paralysis, and tumors are some examples. Life-threatening complications related to tracheostomies include cannula obstruction and accidental decannulation. Other potential complications include infections, bleeding, pneumothorax, tracheal stenosis, and granulations. Maintaining knowledge and competencies related to tracheostomies in the inpatient and outpatient oncology settings is critical to ensuring that patients with these devices are safe.

The types of tracheostomies encountered from patient to patient can vary greatly. Without a strong knowledge base regarding types, functions, tracheostomy enhancements, care and maintenance, troubleshooting, and emergency management, serious adverse events can occur. Two sentinel events occurred at this institution related to tracheostomies. Root cause analysis of the events was completed showing a deficiency in knowledge related to tracheostomy management, recent advancements, and emergency management.

Using the Plan, Do, Study, Act process, a safety program was developed. The goal was to increase staff knowledge and increase safety regarding tracheostomies. This rapid cycle review process promoted a planned practice change within two months of the event. Staff received education via a 45-minute presentation, a video, and a competency-based skills checklist. Each staff member was observed demonstrating predefined skills necessary for tracheostomy management.

Pre- and post-test measures of staff knowledge were obtained. Annual competency based training is now a standard for all oncology nurses who encounter tracheostomies. This presentation will highlight the necessary components of a comprehensive program for oncology nurses caring for tracheostomies. It will include a thorough review of the different tracheostomies, their management, and recent advances to include percutaneous tracheostomies and speaking valves. The unique aspects of tracheostomy management in the oncology patient will be a focus. Event case studies will be used to demonstrate problems encountered in oncology patients and specific interventions employed to ensure patient safety. Oncology nurses who work with tracheostomies can benefit from thorough education, annual updates, and competency training to ensure safety with these devices.

**IMPLEMENTING TELEMETRY: GETTING INTO THE RHYTHM.** Sharon Siegelski, RN, MS, and Agnes Manka, RN, MSN, H. Lee Moffitt Cancer Center and Research Institute, Tampa, FL.

Many oncology patients have, at some point during their treatment, a rhythm disturbance that requires cardiac monitoring. These cardiac disturbances often require the patient to spend time in a critical care setting. At our cancer center, this caused anxiety for the patients and families, and resulted in census overload of the critical care unit.

Lack of availability of critical care beds caused a back up of patients in the operating room and occasionally resulted in cancellation of surgery. Patients assigned to critical care solely for the purpose of cardiac monitoring reported feelings of isolation due to the restrictive visiting hours dictated by critical care. Patients who were hemodynamically stable, requiring cardiac monitoring, posed a dilemma for the hospital and prompted the question, Are we maximizing use of our resources?

The purpose of this presentation is to describe the implementation of telemetry on an inpatient oncology unit for the purpose of offering routine cardiac monitoring to cancer patients requiring that service. At our NCI comprehensive cancer center, eight telemetry beds were designated on the neuro-oncology/blood and marrow transplant unit. The new service prompted anxiety about learning a new skill and created an expectation of greater patient acuity amongst the nursing staff members.

The change was implemented over two years. This time frame allowed for all staff to complete an ECG program and become advanced cardiac life-support credentialed. The nursing staff, along with nursing manage-

ment, decided to bring up the telemetry service slowly, beginning with two patients. At first, admissions to telemetry beds were limited to two patients, admitted Monday through Friday, with careful screening by the nurse manager. Staff members are now responsible for screening patients and the number of telemetry beds has increased to five (with an ultimate goal of eight).

The cost of a telemetry bed is considerably less than the cost of a critical care bed, resulting in a cost reduction for patients and critical care beds for more appropriate utilization.

The implications for oncology nursing and nursing administration demonstrated that a team effort toward expansion of services resulted in more effective use of resources and satisfaction for all involved.

**STEADY STATE CD34+ CELL ENUMERATION: IMPLEMENTING A PRACTICAL APPROACH TO OPTIMIZING PERIPHERAL BLOOD STEM CELL COLLECTION.** Donna Kane, RN, OCN®, University Hospitals of Cleveland Ireland Cancer Center, Cleveland, OH; and Omer Koc, MD, and Pingfu Fu, PhD, Case Western Reserve University, Cleveland, OH.

Seeking a practical and direct approach to completing a task is essential in the nurse coordinator role. We have attempted to define and develop a practical guide for patients, donors, and staff when preparing for stem cell mobilization and collection.

There is a wide variability in progenitor cell yield between patients/donors undergoing stem cell mobilization. The sources of this variability include type of mobilization regimen, number of previous cycles of chemotherapy and radiation, disease type, age, gender, and biological differences in donors. Few studies have examined the role of steady state (SS) CD34+ cell enumeration as a factor for predicting progenitor cell yield. The purpose of this retrospective review was to analyze pre-mobilization SS CD34+ cell numbers in blood as a predictive factor of successful stem cell collection.

Between October 2000 and October 2002 the stem cell nurse coordinator at University Hospitals of Cleveland's Ireland Cancer Center initiated a project examining SS CD34+ levels of 143 patients and normal donors. Demographic data was gathered including gender, age, mobilization regimen, and diagnosis.

The classification and regression tree analysis was used to come up with a predictive algorithm for successful stem cell collection. This method can generate a clinical decision-making algorithm and can often uncover complex interactions between predictors that exist in the data. Data that currently exists on the review of SS CD34+ for predicting collection was based on heterogeneous populations. Our method of analysis homogenizes the population with the algorithm. Significant associations were found between SS CD34+ cell numbers and stem cell collection yields. A SS CD34+ > 2.65/ml is associated with a high probability of a good collection. Gender, age, diagnosis, and type of mobilization therapy also influenced the collection success.

We determined that patients/donors at risk of not achieving sufficient CD34+ cell numbers for transplant can be prospectively identified. This information can be used for proper planning and counseling of patients and physicians and, if needed, alternative mobilization and stem cell collection plans can be made. The information obtained from this aggregate data review can also be used as a QM project for validation of our collection process.

**REDUCING TIME TO ANTIBIOTICS IN CHILDREN WITH FEVER AND NEUTROPENIA PRESENTING TO THE EMERGENCY DEPARTMENT.** Anne Senner, RN, MS, Kylie Stark, [Need credentials], Tori Pennington, BMed, Lucy Maurice, RN, MN, Matthew O. Meara, MBBS, FRACP, and Richard J. Cohn, MBBCh, FCP(SA), FRACP, Sydney Children's Hospital, Randwick, NSW.

The role of the clinical initiative nurse in the emergency department significantly reduced the time to first dose antibiotic in this pediatric oncology population.

For children with cancer, treatment-related neutropenia with associated fever is a potentially life threatening condition. Optimal management of





these children requires prompt assessment and rapid initiation of the appropriate antibiotic therapy. Delay in commencing therapy may lead to an increase in morbidity and mortality. Consensus opinion advocates the commencement of antibiotic therapy within 60 minutes of presentation. The practice at Sydney Children's Hospital is that all children who present with fever and possible neutropenia are triaged and clinically managed in the emergency department (ED). The ED investigated time to antibiotic in this patient population and the baseline data confirmed a potentially detrimental delay in administration of intravenous antibiotics. We will review ED practice and describe the subsequent use of the clinical practice improvement model to develop and evaluate a sustained improvement in patient care. The aim of this collaborative project between the ED and the Centre for Children's Cancer and Blood Disorders (CCC&BD) was to have all children who present with fever and suspected neutropenia receive their first dose of intravenous antibiotics within 60 minutes of presentation to the ED.

The role of the clinical initiatives nurse was the key component of the new practice that led to the rapid assessment and management of these patients. The clinical initiatives nurse after triage identified the patient as requiring rapid nursing assessment and intervention. The nurse then initiated the ED's treatment algorithm for children who present with fever with suspected neutropenia to allow for more rapid initiation of intravenous antibiotics after medical. [AHS from NSAT: Seems like they need another word here.]

To study the effect of the practice change, a medical records audit of all children who presented to the ED with fever and neutropenia for the three-month period (2003) after implementation of the new practice was compared to the corresponding period in 2002. The average time taken from presentation to the ED to the administration of intravenous antibiotics was 76 minutes in 2003, compared to 177 minutes in 2002. There was an average improvement of 80 minutes to time to first dose of antibiotics. In the post-implementation treatment group, 16 out of the 20 children received antibiotics within 90 minutes of presentation.

This quality improvement project has resulted in a dramatic reduction in time from presentation to first dose of intravenous antibiotics in patients with fever and neutropenia and enhanced the collaborative practice between the ED and CCC & BD teams. The role of the clinical initiatives nurse was vital to the improvement in time to first dose of antibiotics.

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**EXECUTING SUPPORTIVE CARE RESEARCH IN COMMUNITY ONCOLOGY: THE NEW FRONTIER.** Nancy Bailey BSN, RN, APRN, BA, MSN, BC, FNP, West Clinic, Memphis, TN; Mark Nelson, RPh, Northwest Medical Specialties, Tacoma, WA; Cathy Maxwell, RN, OCN®, CCRC, Oncology Hematology Group of South Florida, Miami, FL; Gina Johnson, MSN, APRN, and Marnie Brotherton, RN, West Clinic, Memphis, TN; and Jeri Ashley, RN, MSN, AOCN®, CCRC, Supportive Oncology Services, Memphis, TN.

Over the past two decades, oncology research has moved from the domain of academic institutions to community oncology where approximately 80% of patients with cancer are currently treated. Simultaneously, there has been an increased volume of supportive care studies examining the management of issues including anemia, neutropenia, nausea, vomiting, diarrhea, constipation, and pain.

Executing supportive care research in the community setting can be a challenge as the processes in these practices are typically designed for clinical practice rather than for research. Research processes may contrast dramatically with those seen of academic institutions and may need to be adapted to accommodate the demands of heavy patient flow and economic pressures.

In this paper, we review the characteristics of an effective research program in relation to supportive care studies and make suggestions regarding how community oncology sites may improve their ability to execute these types of studies.

The full gamut of research domains are examined including securing relevant protocols, contracting, regulatory, project management, clinical execution, screening, data management, monitoring, quality assurance, pharmacy, billing, and administration. Issues that are particularly relevant to community oncology such as the nursing shortage, financial concerns, and special processes, such as collection of quality-of-life data, will be highlighted.

There is tremendous potential for conducting supportive care research in the community setting. Community oncology offers access to vast populations of patients and access to research drugs may provide significant benefits to patients who otherwise might not be able to obtain the latest care. Finding ways to conduct financially and clinically efficient supportive care research is desirable.

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**A COLLABORATIVE PRACTICE MODEL FOR HEMATOLOGY/ONCOLOGY AND TRANSPLANT CARE.** Georgie Cusack, RN, MS, Margaret Bevans, RN, MS, AOCN®, Helen Mayberry, RN, MS, and Kim Scott, RN, BSN, OCN®, National Institutes of Health, Bethesda, MD.

The Clinical Center (CC) of the National Institutes of Health (NIH) is a hospital solely dedicated to conducting biomedical research. In preparing for the opening of a new clinical research center (CRC) and the merging of currently separate units, it was identified that practice standards varied among hematology/oncology and transplant (HOT) programs. Merging practices can be a challenging task, but the literature documents positive outcomes for patients and staff with standardized approaches to care.

This abstract describes the process utilized by the HOT team to develop a new paradigm of practice. The goal is to optimize patient and family care during participation in biomedical research by standardizing clinical care not directed by research objectives.

The process started with the identification of stakeholders to serve on the task force. Individuals from various disciplines with HOT expertise, representing in-patient and outpatient areas, were recruited. This included physicians, nurses, clinical nurse specialists, nurse managers, nutritionists, pharmacists, social workers, and specialty consultants from various disciplines. The next steps were 1) identification of similarities and differences in clinical practice; 2) topic prioritization; 3) delegation of shared responsibilities; and 4) timeline development. Subgroups were organized based on five topic areas that were consented upon to guide the work. These were 1) unit infrastructure (clinical practice and administrative), 2) infectious disease guidelines, 3) psychosocial support and resource management, 4) complication management, and 5) consultative services. Each group considered current practice, evidence-based practice, pre-existing guidelines, and community standards as the foundation for their work.

Program improvements as a result of the HOT team include the standardization of protocol management, infectious disease guidelines, formal mechanisms of communication, consolidation of resources, and improved patient and family supports (social, financial, and psychological).

This collaborative practice model was not without obstacles, but with the dedication by the stakeholders and the assessment of clinical applicability prior to implementation, the adoption of this work has improved clinical, research, and staff outcomes.

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**CAPTURING RESEARCH DATA AT POINT OF CARE: ELECTRONIC RESEARCH.** Pamela Roberts, RN, MSN, Vanderbilt-Ingram Cancer Center, Nashville, TN.

Capturing accurate toxicity data in a timely manner is an ongoing challenge in the clinical trials arena. A group of research nurses at a large clinical trials office attempted to solve this dilemma by creating a standardized paper toxicity assessment form. This development was further improved by the creation of an electronic version of this form, The Universal Toxicity Database (UTdb). The UTdb allows collection of research data at point of care.

The process begins when a research nurse initiates a patient visit electronically by entering all toxicities and medications for a particular visit. Toxicity information is standardized in drop-down choice sets from the NCI Common Toxicity Criteria. Toxicities and medications without stop dates are rolled forward for subsequent visits. Each entry is stored in a relational database and then printed as a visit summary in text format to the patient's electronic medical record within one hour.

The outcomes were observed as follows: The UTdb promotes better assessment and collection of toxicities in the research setting for several reasons. The roll-forward feature saves time and prevents error in transcription, ensures follow-up of all previously reported toxicities, and promotes



continuity of care for cross-coverage. Point-of-care data collection, standardization, and relational storage allow immediate data extracts. These extracts are beneficial for safety concerns, recognition of toxicity trends across studies utilizing the same drug, dose changes for phase I studies, and abstract information for papers. Printing this information to the electronic medical record allows faster access to clinical data for all concerned in patient care and a more timely completion of study case report forms.

Because the system has been so successful, future plans are to implement Web- and palm-based versions to further support the effort toward a paperless system and for greater portability.

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**WHAT ABOUT HIPAA: INTEGRATING THE FEDERAL PRIVACY REGULATIONS INTO A RESEARCH STUDY.** Camille Wicher, RN, MSN, JD, Dana Jenkins, [Need credentials], and Ellen Zupa, RN, MS, Chief Nursing Officer, Roswell Park Cancer Institute, Buffalo, NY.

What the research nurse needs to know about integrating the federal privacy regulations, more affectionately known as HIPAA, into the research process and the informed consent.

The federal privacy regulations set the requirements, but do not mandate a process for implementing the HIPAA regulations into medical research. The requirements call for either a patient authorization, or a waiver of that authorization, to allow research staff to use protected health information (PHI). Research nurses must understand the requirements and how to obtain either the authorization or the waiver, as well as what PHI can be used and/or disclosed.

At Roswell Park Cancer Institute, a team including research nurses was assembled. The HIPAA research subcommittee studied the requirements as they pertain to research and developed authorization and waiver forms and a process for obtaining these. The entire research team was then educated on the requirements and the implementation process.

The current climate of protecting patient information requires a standard and consistent method that allows all nurses involved in cancer research to obtain, utilize, and share PHI within the legal parameters defined in the HIPAA regulations. This cannot be done without understanding, interpreting, and setting forth a plan to implement the regulations—and this plan must fit the organizational culture. The Roswell Park culture supports the oncology nurse determining what information is needed, who should have access to it, and at what point in the continuum. The team developed a policy and associated forms that ensured consistency and accuracy. The result of the learning, shared education, and attention to detail was a successful integration of the HIPAA regulations into the research effort at Roswell Park. Since April 14, 2003, every research study has included an authorization or waiver that allows the research team to use and/or disclose the PHI appropriately and productively.

The Roswell Park experience and templates can be of value to others with a similar focus on research and a shared interest in protecting the rights of those patients who agree to participate in clinical trials. With the oncology nurse at the center of the process, the result is empowering to the professional and the patient.

## 59

**MONITORING PATIENT SAFETY WITH ORAL CHEMOTHERAPEUTICS: A NURSE MANAGED PROJECT.** Paula Caron, MS, ARNP, AOCN®, Dartmouth Hitchcock Medical Center, Lebanon, NH; and Rita Vied, RN, OCN®, and Kerry Rosenthal, RN, OCN®, Frisbie Memorial Hospital Center for Cancer Care, Rochester, NH.

The purpose of the Oral Chemotherapy Treatment Program developed by the oncology nursing team at Frisbie Memorial Hospital Center for Cancer Care is to promote safe administration, patient compliance, and toxicity monitoring of prescribed oral chemotherapeutics. A continuous challenge facing caregivers in hematology and oncology is promoting safety for patients receiving cytotoxic drugs. This responsibility is entrusted to oncology nurses because of their expertise in side effect and toxicity management, as well as patient education. The growing number of drugs available for oral delivery is presenting caregivers with new challenges, namely, drug procurement, accurate delivery, and patient compliance.

A tracking system has been put into place and is monitored on a dedicated oral chemotherapy flow sheet. Every patient for whom oral chemotherapy is prescribed is monitored via a master list, and a member of the oncology nursing team is responsible for overseeing the oral chemotherapy program. The date of initial administration is entered into the clinic's computerized reappointment system and on the dedicated flow sheet. Oral chemotherapy follow-ups by telephone appear on the nursing schedule, which is printed daily. The nursing staff also monitor laboratory appointments and call patients with the results of their blood work and any modifications in their prescribed plan.

Initiation of this program has resulted in no errors on the part of the patients in self-administration of their chemotherapy. Side effects and toxicities are discovered early and intervention is prompt. Follow-up visits, while on treatment, reflect accurate documentation regarding dates of cycles, corresponding hematologic values, and associated side effects and toxicities. In the current calendar year, 196 nursing calls have been made to a total of 52 monitored patients.

This model, which goes a long way toward promoting patient safety, can be easily adapted by other nurses working toward monitoring safety for their patients taking oral chemotherapeutics.

## 60

**FOOD-DRUG INTERACTIONS MATTER.** Karen Brantley, RN, BSN, Hyacinth Gordon, RN, BSN, CRRN, Linda Jones, [need credentials.], JoAnn Mick, RN, MSN, MBA, AOCN®, and Marlene Z. Cohen, RN, PhD, FAAN, University of Texas M.D. Anderson Cancer Center, Houston, TX.

Food-drug interactions (FDIs) occur when foods interact with prescribed or over-the-counter medications to alter their effectiveness. In some cases, an increase in drug availability may be desirable, however, in others, increases or decreases in effectiveness may have extremely serious effects. It is imperative that all patients be educated about potential FDIs.

A quality improvement project was implemented on our oncology unit using the Plan-Do-Check-Act process to increase team members' awareness of FDIs and improve documentation of FDI patient education. The education strategy used FDIs MATTER as a systematic approach to ensure patient teaching is completed and documented. Medical records were monitored to evaluate compliance.

An acronym was created to increase knowledge that Food-Drug Interactions MATTER. MATTER stands for: M—mandatory standards established by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) stipulate that agencies must develop methods to identify and prevent adverse FDIs and educate patients about them; A—agencies are required to establish specific policies and guidelines about patient education regarding FDIs; T—teaching is important to provide FDI information to patients and caregivers; T—taking time to review patients' medications for potential FDIs prior to administering medications is a nursing responsibility; E—establishing consistent methods for FDI documentation improves compliance with required standards; and R—recognize there are tremendous risks for treatment failure if potential FDIs are not addressed.

A consistent review process was implemented to ensure patient education and its documentation. Medication records are reviewed daily and identified potential FDIs are highlighted with a blue marker. When teaching is completed and is documented in medical records, nurses place their initials next to the highlighted medication. Nurses on each shift ensure that highlighted medications have a nurse's initials next to them indicating compliance with FDI documentation requirements. Unit compliance scores have increased to range from 60%–100%, and ongoing monitoring will continue until a 95% compliance rate is reached and maintained.

FDIs MATTER is a simple method that other organizations can use to quickly review information with team members to reinforce the importance of recognition and documentation of medications with potential FDIs.

## 61

**A PSYCHOEDUCATIONAL SUPPORT MODEL BASED ON THE CONCEPT ANALYSIS OF SUFFERING.** Lynn Hryniuk, RN, MSN, ANP, Cancer Advocacy Coalition of Canada, Dundas, ON, and William Hryniuk, MD, Barbara Ann Karmanos Cancer Institute, Detroit, MI.

Psychoeducational interventions (PEIs) for patients with cancer can have a major impact on quality of life (QOL) and affect treatment out-



comes. The oncology nurse is uniquely positioned to determine the need for, and appropriateness of, various PEIs for her clients.

A wide variety of PEIs, each with a different objective, is available to improve QOL. A coherent and consistent framework for applying them in concert would be useful. A model has been developed that provides such a framework. It is based on a concept analysis of suffering. The model describes the natural history of S, and indicates how each PEI operates separately to facilitate its resolution, thus expediting a positive outcome. Suffering occurs when an individual perceives a threat of disintegration of "self" from a global trigger factor (natural causes, third party, or unknowingly maladaptive thoughts) and, lacking control, feels helpless to defend. Fear and other unpleasant emotions result. Consequences can be negative (maladaptive behaviors, depression, and turmoil without resolution) or positive (meaning-making, healing, and transformation—H&T).

Nurses can (1) directly interdict the natural cause (cancer) as part of the treatment team, (2) refer to other multidisciplinary services to deal with third party or maladaptive thoughts, (3) explain the natural history of suffering, encouraging client to understand its personal meaning, and help them understand positive and negative consequences, (4) provide knowledge about treatment and disease enabling client regain of control, (5) facilitate access to anxiolytic maneuvers (meditation, music therapy, imagery, etc.), and (6) indicate sources of spiritual support.

The model was applied to 50 patients with newly diagnosed breast cancer who were undergoing adjuvant chemotherapy. Of those randomized to intervention (model-based personalized prescription of PEIs most likely to relieve suffering and expedite healing and transformation in the individual case), the pre-stratified obese patients had reduced chemotherapy toxicity and improved QOL compared to the usual-care obese controls. (ASCO 2003 abstract #171).

The model provides a useful framework for assessing and educating patients, educating professionals, and may be applicable to other life situations attended by suffering.

## 62

**THE NURSE'S ROLE AS EDUCATOR IN THE SAFE AND EFFECTIVE MANAGEMENT OF PATIENTS DIAGNOSED WITH DEEP VEIN THROMBOSIS.** Maria G. Pacis, APRN, BC, MS, Memorial Sloan Kettering Cancer Center, New York, NY.

Deep vein thrombosis (DVT) is characterized by inflammation and thrombus formation that blocks blood flow into veins. Approximately 600,000 hospitalizations yearly are attributed to DVT, some of which result in pulmonary embolism (PE), a potentially life-threatening complication. Common presenting symptoms of DVT are unilateral lower extremity edema, tenderness, intermittent pain, and a warm-to-touch extremity. In our institution, the diagnostic procedure performed to diagnose DVT is compression Doppler flow studies.

At this inpatient gastrointestinal and hepatobiliary unit, we encounter patients admitted for the management of DVT, PE, and patients who develop DVTs while hospitalized. The treatment of DVT presents as a medical problem and also a quality-of-life and economic issue. At this NCI-designated cancer center, a multidisciplinary team is employed to facilitate these goals.

Treatments for DVT include the administration of low molecular weight heparin (LMWH) with the oral administration of warfarin and placement of an inferior vena cava filter when indicated. LMWH prevents the further extension of the clot and formation of new thrombi. For nursing, the management focuses on understanding the disease process, treatment, and its complications in facilitating optimal outcomes. The nurse can then impart this knowledge through patient/caregiver teaching.

Astute nursing assessment skills are essential in identifying patients who develop DVT so that interventions are implemented early. Nurse's collaboration with the medical staff and support disciplines ensures optimal patient care for those diagnosed and treated for DVT. Nurses play a pivotal role in educating patients about safe administration of anticoagulant therapy, monitoring for DVT complications, and possible recurrence.

This presentation will explore (1) the multidisciplinary approach in managing patients diagnosed with DVT, (2) the economic implication of prolonged hospitalization as a result of being diagnosed and treated for DVT, (3) the nurse's role in the safe and effective teaching plan in the

management of patients with DVT who are discharged on anticoagulant therapy, (4) complications associated with treatment, and (5) the impact of DVT and its treatment on patient's quality of life.

## 63

**RESPONDING TO YOUR PATIENT'S FINANCIAL CONCERNS.** Jocelyn D'Antonio, MS, RN, The Leukemia & Lymphoma Society, White Plains, NY.

Financial concerns can adversely affect cancer patients by increasing stress and causing non-compliance and avoidance or refusal of therapy. Because almost all cancer patients face financial concerns to varying degrees, oncology nurses have a pivotal role to play in responding to the financial concerns of their patients.

The front-line quality of the nurse-patient relationship in cancer nursing makes it vital that oncology nurses take a leadership role in identifying the existence of financial concerns in their patients and in providing appropriate psychosocial responses and referrals.

Therefore, the purpose of this poster presentation is to assist oncology nurses in identifying and responding to the financial concerns of cancer patients. A person who learns that they are diagnosed with a serious illness, such as cancer, will respond emotionally to that diagnosis in a manner that is personal and individual. The uncertainty about the future that can accompany a cancer diagnosis occurs simultaneously against a background of also having to cope with the physical effects of the illness and, perhaps, the treatment as well. And then woven throughout all of this, for most patients to varying degrees, are also painfully real financial concerns and the ensuing emotional impact of these concerns.

This poster presentation will describe common financial concerns expressed by patients who call the Information Resource Center of the Leukemia & Lymphoma Society, and it will also discuss the ensuing psychosocial responses typical of patients experiencing these financial concerns. This presentation will enumerate appropriate interventions for oncology nurses including concrete resources and referrals that the oncology nurse can offer to patients experiencing all degrees of financial distress.

The presentation will enable the oncology nurse to verbalize specific financial concerns common to patients with cancer, describe typical psychosocial responses to these concerns, and name appropriate resources and referrals to help address these concerns.

In order for the oncology nurse to truly approach patients holistically, it is important to be aware of the existence of a patient's financial concerns, to acknowledge the impact of these concerns on patient's well-being, and to provide responses appropriate to nursing practice.

## 64

**IMPLEMENTATION OF CLINICAL PRACTICE GUIDELINES: A CRITICAL COMPONENT OF EVIDENCE-BASED PRACTICE.** Caryl Fulcher, MSN, RN, CS, and Kerry Harwood, MSN, RN, Duke University Health Systems, Durham, NC.

Implementing evidence-based practice is a charge to all professionals. Introducing published practice guidelines into practice is one way to meet this objective, and the advanced practice nurse (APN) is well qualified to lead such initiatives.

Guideline implementation is increasingly being recognized as a critical step to practice change. Barriers to implementation may include disagreement between experts, vested interests, inadequate resources, ineffective education, or simply institutional inertia. The purpose of this project is to describe the process used by a university medical center to implement the National Comprehensive Cancer Network Practice Guidelines for the Management of Distress, beginning with a feasibility pilot.

An APN-led interdisciplinary task force was created to lead the process of implementing these guidelines. This process included assessment of existing institutional practice as compared with the guidelines benchmarking other institutions' successes, involving stakeholders to elicit support, providing educational programs, evaluating distress management tools, planning for barriers, and designing a feasibility pilot for guideline use.

Comprehensive practice assessment identified gaps in consistent psychosocial assessment and access to psychiatric services as well as strengths in existing resources to support distressed patients. Assessed barriers in-





cluded skepticism regarding the efficacy of distress management and concerns about additional time required and potential overload of resources. Actual barriers to pilot implementation included funding and time constraints, the challenge of educating a diverse group of stakeholders, and the need to ensure compliance with HIPAA regulations.

Experiences with this project have demonstrated the APN to be an appropriate project leader for guideline implementation, using her multiple competencies as clinical expert, educator, researcher, and consultant. Lessons learned have wide applicability for nurses interested in implementing both nursing and interdisciplinary clinical practice guidelines.

## 65

**INCIDENT REPORTING BY REGISTERED NURSES: THE INFLUENCE OF PERCEPTIONS OF THE ENVIRONMENT, INSTITUTIONAL COMMITMENT, AND DEMOGRAPHICS ON INTENT TO REPORT.** Terry Throckmorton, PhD, RN, Jason Etchegaray, PhD, and Debora Simmons Bennett, RN, MSN, CCRN, CCNS, The University of Texas M.D. Anderson Cancer Center, Houston, TX.

Creating a safe environment for the patient has become an area of concern on an international level. Researchers from European countries and the United States have begun to investigate the causes for errors, estimated incidence of non-reporting of errors, and barriers to reporting. In addition, approaches to preventing errors by healthcare providers are increasingly emphasized in evaluations of healthcare institutions. Because of the complexity of care for oncology patients, the potential for error can be even greater than with general medical patients. The environment for reporting errors in the majority of healthcare institutions is often perceived as punitive. The 1999 IOM report and research with healthcare professionals support a shift in focus from blame of caregivers for errors to system improvements. The State of Texas has a mandatory peer review and reporting for three minor incidents by nurses within one year. This legal action, and other environmental factors, may affect willingness to report incidents. Determination of reporting barriers allows for system redesign to facilitate minor incident reporting and prevent more serious events.

A focus on system redesign allows nurses to take a leading role in identifying and correcting system problems that lead to clinical errors. It can facilitate collaborative efforts to identify and correct multidisciplinary issues leading to clinical errors, creating a safer environment for everyone.

The purpose of this study is to determine the willingness of registered nurses in Texas to report incidents and factors affecting their intent to report.

Questionnaires, including a demographic form, an institutional commitment scale, and an intent-to-report scale have been mailed to 4,250 RNs randomly selected from the BNE roster. Follow-up packets will be sent to non-respondents.

Descriptive statistics and discriminate analysis will be used to describe the sample and analyze the characteristics of the intent- and no-intent-to-report groups.

Results from this study, and other projects in this program of study, will be used to support a less punitive legal and institutional environment for healthcare professionals. Although the current planned program includes anonymous reporting, the ultimate goal is a nonpunitive open-reporting system.

## 66

**INTEGRATING FLEXTIME WITH PRIMARY NURSING IN THE ONCOLOGY AMBULATORY SETTING: A NEW MODEL FOR PRACTICE.** Elizabeth Schmidt, RN, BSN, OCN®, Patricia Schaindlin, RN, MA, AOCN®, Susan Dosil Loiacono, RN, MSN, OCN®, and Barbara MacGregor Cortelli, RN, BSN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY.

A collaborative practice model has been in place in our ambulatory department in this NCI-designated comprehensive cancer center for over a decade. Twenty physician/nurse practices share a patient case load that supported 15,770 patient visits in 2002, providing care to patients with hematologic malignancies receiving standard multimodality therapies, investigational drugs on clinical trials, and palliative/supportive care. This model promotes physician/nurse collaboration while optimizing continuity of care.

Limited space prompted the need to add hours to the usual office practice day to accommodate more patient visits. Personal responsibilities, educational commitments, and commuting times conflicted with the longer workdays, leading to nurse attrition. In response to the increased hours and the subsequent need to boost recruitment and job satisfaction, the five-day workweek was replaced by a flexible four-day work schedule (FFDWS). This shift led to a modification in the collaborative practice model.

To facilitate the change, nurses work in teams caring for the patients in their primary practice and the team member's patients on the scheduled day off. Teams are determined by clinic schedules, practice volume, and equity of the workload. During office practice hours, nurses circulate through the clinical area to assess the flow of the patients and identify needs for additional nursing care. Electronic mail, telephone, and text paging are utilized to share, distribute, and delegate tasks and responsibilities. All team nurses sign out to each other before and after the scheduled day off. Communication and teamwork are essential for the success of the FFDWS.

Team nursing meets the increasing specialized needs of oncology patients while optimizing continuity of care. Nursing satisfaction, with the change in practice model, is evident in the commitment to the team approach, cooperative efforts in the clinic area, and shared responsibility for patient care.

Recruitment efforts have extended in scope to include novice nurses. Collaborating with experienced nurses provides the novice nurse with opportunities for interdependence while supporting continued professional development. The FFDWS supports nurses in this competitive job market, encouraging more nurses to consider office practice nursing as a career choice.

## 67

**END-OF-LIFE NURSING CARE ON AN INPATIENT ONCOLOGY UNIT: A TOOL TO FACILITATE THE TRANSITION FROM CURE TO COMFORT CARE.** Shirley Edwards, MSN, AOCN®, RN, CNS, and Christina Maupin, MN, CCRN, RN, CNS, Saint John's Health Center, Santa Monica, CA.

Oncology nurses are challenged to coordinate care for patients receiving aggressive curative measures while also providing care for dying patients and their families. As the balance of care needs transition from curative to comfort care, the nurse is expected to shift paradigms. Assessments and interventions move to aggressive symptom management to promote comfort and facilitate a peaceful and dignified death. This process was facilitated by the Comfort Care of the Dying Patient Task Force chartered by the health center's bioethics committee.

The purpose of this project was to improve the care of the dying patient through provision of comfort care focused on pain and symptom management, staff education, and patient/family advocacy. The pilot project was conducted jointly in the critical care and oncology units through the collaboration of the critical care and oncology clinical nurse specialists. The interdisciplinary task force established clinical practice guidelines for the management of dyspnea, agitation, and pain. Additional tools to facilitate comfort care of the dying patient included physician orders, an interdisciplinary teaching record, nursing management protocol, and a family support and resource folder. Prior to implementation of the pilot project, extensive staff education was provided.

Data regarding oncology staff knowledge and perceptions was collected prior to and after project implementation. During the pilot, the oncology staff identified a need to have a documentation tool that clearly addressed symptom assessment and management of the dying patient. A focused symptom assessment and management documentation form, based on staff and oncology physician input, was drafted. The form was utilized by the staff and improved as nurses and physicians provided feedback as to its effectiveness.

Outcomes of the project include improved staff perceptions of end-of-life care effectiveness, support, and facilitation of communication with the interdisciplinary team and families.

Additionally, the identification and development of the focused documentation tool provided the oncology nurses with a framework of practice guidelines for the transition from cure to comfort care. This concept has now been implemented "housewife" as a component of the Comfort Care of the Dying Project.

**METASTATIC BREAST CANCER IN A CURATIVE CANCER SETTING: USING EVIDENCE-BASED PRACTICE TO IDENTIFY PALLIATIVE CARE NEEDS.** Margaret Rosenzweig, PhD, CRNP-C, AOCN®, University of Pittsburgh School of Nursing, Pittsburgh, PA; Rachel Rosenfield, RN, BSN, University of Pittsburgh Cancer Institute, Pittsburgh, PA; Laura Bower RN, BSN, and Heather Alt, [Need credentials], University of Pittsburgh School of Nursing, Pittsburgh, PA; and Adam Brufsky, MD, PhD, University of Pittsburgh School of Medicine/University of Pittsburgh Cancer Institute, Pittsburgh, PA.

**Background/Purpose:** Increased metastatic breast cancer (MBC) treatment options have changed the definition of MBC care to encompass not only symptom management, but also therapies aimed at tumor control. Consequently, women with MBC may receive sequential chemotherapy regimens in a traditional chemotherapy setting until close to death. Oncology nurses at the Magee Women's Cancer Center at the University of Pittsburgh Cancer Institute (UPCI) were concerned that the palliative care needs of MBC women were overlooked because of the curative cancer setting's chemotherapy focus.

**Intervention:** Treatment practices and potential palliative care needs were analyzed through a retrospective cohort analysis (January 1999–April 2003) of women with MBC receiving third-line chemotherapy. A database of 310 patients with MBC (147 living patients, 152 deceased, and 11 lost to follow-up) was created with monthly assessments. Third-line chemotherapy experience was analyzed via chart review for treatment duration, survival, Eastern Co-Operative Oncology Group (ECOG) performance status, and mention of prognosis or end-of-life care. Fifty (16%) (26 deceased, 24 alive) of the women with MBC had received more than two chemotherapy regimens with fourteen separate treatment regimens. Mean time-to-treatment discontinuation (disease progression or poor tolerance) for all treatments was 2.3 months (range 0–18 months). ECOG performance status was “3” for two months of a total of 116 treatment months (25%) and “2” or less for all other months of treatment. Nineteen of the 50 subjects (38%) received forth-line chemotherapy. Mean survival from third line chemotherapy treatment discontinuation until death (n = 26) was 4.1 months. Prognosis or end-of-life discussions were not well documented by clinic physicians, nurse practitioners, or nurses.

**Interpretation:** These results indicate that progressive courses of MBC chemotherapy are relatively common and well tolerated but that response time and survival following disease progression after third-line chemotherapy is short. Clinical attention was focused on chemotherapy, with little attention to palliative care.

**Discussion:** A prospective investigation of symptom distress, informational, and end-of-life needs in these women is underway. Ultimately, the evidence gained in these two studies will define nursing interventions for better integration of palliative care into the curative cancer setting.

## 69

**MOMENTS OF MEDITATION: NURSES ADDRESS OWN SPIRITUAL NEEDS AS PART OF AWARENESS IN PROVIDING SPIRITUAL CARE FOR PATIENTS.** Elizabeth Lada Morse, RN, MPA, MSN, Hartford Hospital, Hartford, CT.

Oncology nurses are generally very aware of the unique spiritual challenges of living with cancer. Recent literature demonstrates numerous empirical studies regarding the notion of spiritual care. The Joint Commission on Accreditation of Healthcare Organizations (2000) now requires that a spiritual assessment be completed for every admission and that spiritual support be provided for any patient who requests it. When staff awareness regarding spiritual awareness increases, it directly affects patient care. Further, creating a reflective environment for staff enhances the workplace and fosters positive work-life balance by decreasing work related stress.

A collaborative effort [AHS from NSAT: Do you think they need something like “was needed”?] between nursing and pastoral services to create a time of reflection for staff and to develop staff awareness and assessment skills related to spiritual needs of patients.

Weekly, regularly scheduled “Moments of Meditation” are offered for staff. Moments of Meditation are facilitated by chaplain or staff. Each Thursday, 15 minutes are set aside for staff reflection. Staff members cover

for each other so they can attend the session. Various reflective modalities are used including prayer, guided imagery, poetry, music, and quiet reflection. A prayer jar is available on each unit and prayers are submitted from one week to the next.

Outcome for the Moments of Meditation are qualitatively measured through comments from staff. Staff report feeling refreshed, diminished stress, believe they work in a caring work environment, and acknowledge feeling valued by administration and hospital.

Providing a supportive work environment where staff are supported and encouraged to take time to meet their needs may contribute to staff satisfaction and staff retention. Staff awareness of their own spirituality will foster their ability to care for the spiritual needs of their patients.

## 70

**THE ROLE OF INTRATHECAL ANALGESIA IN PALLIATIVE CARE.** Karen Overmeyer, MSN, APRN, BC, and Jill Laird, MSN, APRN, Virginia Commonwealth University Health Systems, Richmond, VA.

Today, even in the hands of expert pain practitioners, approximately 14% of patients with cancer suffer from intractable cancer pain. While increased opioids and adjunct medications often help, side effects from these interventions may become intolerable. Oncology nurses are in a unique position to evaluate and identify patients who require special intervention.

Recently in multicenter randomized clinical trials, we studied the use of intrathecal drug delivery systems and found this option to offer significant benefits to this population of patients. The results of this clinical trial will be reviewed discussing its implication, as well as other potential invasive techniques. The unique benefits, including statistically significant cost effectiveness, and potential complications of this analgesic technique will be explored.

A total of 202 patients with intractable pain were randomized to receive implantable drug delivery systems.

A review of selected candidates for this invasive procedure will be described to include screening tools and techniques used to ensure appropriate candidates are benefited and ongoing post-placement evaluation discussed. The main outcome measure was pain control combined with change of toxicity as measured by NCI's common toxicity criteria.

Long-term management techniques and potential complications will be described, including problem-solving techniques. Systems issues to ensure appropriate management of patients will be reviewed. Case studies and other treatment options will be explored for candidates requiring other interventions.

## 71

**THE NURSING ROLE IN THE SUCCESSFUL IMPLEMENTATION OF A CLINICAL TREATMENT TEAM FOR RADIOIMMUNOTHERAPY WITH ZEVALIN (90Y IBRITUMOMAB TIUXETAN).** Christine Pellegrini, RN, MSN, Shashi Khandekar, CNMT, Meredith Shelley, RN, and Barbara Tripp, RN, MSN, AOCN®, Cleveland Clinic Foundation, Cleveland, OH.

Zevalin was the first radioimmunotherapy (RIT) agent approved by the FDA. RIT is an emerging therapeutic option for certain patients with non-Hodgkin's lymphoma. From our experience at the Cleveland Clinic, we offer guidelines for oncology nurses in establishing and implementing a multidisciplinary treatment team for Zevalin RIT involving healthcare professionals in oncology, radiation oncology, nuclear medicine, radiation safety, scheduling, and finance.

The oncology nurse must educate patients, families, and caregivers; monitor and manage side effects; follow up after treatment; and manage logistics and supportive care.

The Zevalin regimen is administered as an outpatient procedure over 7–9 days. On day 1, the patient is given an infusion of rituzimab (administered by the oncology nurse), followed within four hours by a slow intravenous injection of 111In Zevalin over 10 minutes (administered in nuclear medicine). Whole-body gamma scans are performed to confirm the expected biodistribution of the antibody at 2–24 hours and at 48–72 hours after the 111In Zevalin injection. The radiation oncologist or nuclear medicine physician reviews the scans with the patient and their family and answers their questions. If the biodistribution is as expected,



on day 7, 8, or 9, the patient returns to the radiation oncology or nuclear medicine department and is given an injection of 90Y Zevalin. The 90Y Zevalin is preceded within four hours by an infusion of rituximab, administered by the oncology nurse. At the Cleveland Clinic, 90Y Zevalin is administered by the radiation oncologist with the support of the radiation oncology nurse; other institutions may administer 90Y Zevalin in nuclear medicine.

The radiation oncology nurse monitors the treatment room for contamination after treatment and prepares the room for future administration. Nurses in hematology/oncology and/or in radiation oncology provide discharge instructions and coordinate and administer weekly follow-up for approximately three months to monitor status and blood counts.

The treatment team must establish a clear treatment algorithm and train all team members in the sequence of the regimen and their roles at each step. Communication, education, and coordination are essential in establishing and implementing a treatment for RIT with Zevalin.

## 72

**THE AMBULATORY ONCOLOGY NURSE'S ROLE IN THE USE OF CONJUGATE VACCINES FOR PROSTATE CANCER.** Gabrielle Arauz, RN, BSN, Memorial Sloan Kettering Cancer Center, New York, NY.

At this NCI-designated cancer center, we are exploring the use of conjugate vaccine therapy as an alternative approach for the treatment of biochemically relapsing prostate cancer. These patients have a rising prostatic specific antigen (PSA) without radiographic evidence of disease. The oncology nurse plays a vital role by providing information about vaccine therapy, monitoring side effects, and providing expert nursing intervention in the management of symptoms related to disease and/or its therapy.

Despite earlier diagnoses, many men will progress after radiation and/or prostatectomy (primary treatment). These men are now faced with a diversity of issues including no curative therapy, fear of mortality, and the adverse side effects associated with hormonal therapy, which is the mainstay of treatment. Vaccine therapy offers this population a viable alternative.

The objective of these vaccines is to develop an immunologic response by generating titer antibodies targeted toward specific prostatic antigens on the cell surface. To date, 200 men with rising PSA have been on different phase I and II conjugate vaccine trials at our center, with minimal toxicities such as swelling, itching, and redness at the injection site and flu-like symptoms. Conjugate vaccines generate immunologic responses to promote cancer cell death and are made up of various synthetic molecules which mimic naturally occurring sugars found on prostate cancer cells.

The nurse monitoring patients on trial is responsible for evaluating patients for eligibility, maintaining adherence to protocol standards, and monitoring toxicities. Depending on the trial, vaccines are given monthly for 4–6 months. Response is monitored at 3–4 month intervals with PSA monitoring, immunologic titers, comprehensive blood work, and radiographic imaging. The oncology nurse acts as coordinator and liaison between all participating disciplines and is integral in optimizing outcomes of the treatment by providing education about the rationale of vaccine therapy, intervening as necessary for symptom management, monitoring and evaluating side effects, along with assessing overall response to treatment.

This presentation will give an overview of vaccine trials used in prostate cancer, the mechanisms of action, and the expert nursing knowledge necessary to provide care to this specific population of oncology patients.

## 73

**LOGIC MODEL USE FOR BREAST HEALTH IN RURAL COMMUNITIES.** Adrienne Lane, BSN, MSN, EdD, University of Cincinnati, Cincinnati, OH, and Madeleine Martin, BSN, MSN, EdD, University of Cincinnati College of Nursing, Cincinnati, OH.

Breast cancer is the second leading cause of cancer death in the United States. Over 204,000 women are expected to be diagnosed with this disease in 2003. Rural and uninsured women are particularly at risk because they do not take advantage of screening procedures that have been shown

to decrease breast cancer morbidity and mortality. Oncology nurses are in a key position to create educational and screening programs to meet the special needs of this population.

The purpose of this project was to create a model-based program to meet the breast screening needs of women in a rural community. A logic model methodology was used to create the program. This model addressed the factors of accessibility, affordability, and trust. The logic model specifically provided a framework for the development of a comprehensive program integrating research, service, and practice.

Using the logic model, program objectives were identified as (1) develop the necessary infrastructure for the Breast Health Network, (2) provide annual screening opportunities including education and referral information, and (3) identify and secure ongoing funding for sustaining annual screening activities. Overall project outcomes were identified, and process and outcome evaluation plans were developed. Through the use of the logic model, key elements of a community program were clearly outlined, and strategies for attainment planned.

The outcomes of this project include (1) schemata and description of the Breast Health Program using the logic model, (2) demographic data specific to educational and screening programs provided in 2003 ( $n > 250$ ), (3) creation of a not-for-profit organization for the provision of breast cancer education and screening, and (4) perception data regarding factors that affect breast cancer screening practices of rural women ( $n > 250$ ).

In conclusion, the logic model was key to the development and ongoing implementation of a comprehensive program for breast cancer screening and breast health education for this population. The program developed provides a framework and trajectory for continuing research and service activities for promotion of breast health of women in rural communities. The project can serve as a model strategy in underserved populations as well as in other types of cancer education and screening activities.

## 74

**THE ROLE OF THE NURSE PRACTITIONER IN SYMPTOM MANAGEMENT OF COMMON PROBLEMS IN THE AFTER HOURS CLINIC.** Veronica Smith, RN, MS, APRN-BC, and Rosalie Valdres, RN, MSN, University of Texas M.D. Anderson Cancer Center, Houston, TX.

Caring for patients in an oncology setting is very challenging. The patients are usually very sick, with multiple complaints that require frequent and timely interventions. Over the years, the treatment of cancer has changed. The infusion of chemotherapy has gone from being a hospital procedure, to what is now a common outpatient clinic procedure. As a direct result of this change in practice, there has been a dramatic influx in the number of patients being treated in the clinic setting. This has created a need to extend the clinic hours to accommodate the growing patient population.

For the past year, the number of calls to the emergency center from the after hours clinics began to increase steadily. The advanced practice nurses who were moonlighting in the emergency center began to keep a record of the calls and the types of problems and interventions required. After a three-month pilot period, the results were evaluated. The medical needs were classified as emergent, urgent, or routine. The most frequent calls were for chemotherapy reactions such as nausea and vomiting, fever, blood transfusion reactions, and pain medications. Hypersensitivity/anaphylactic reactions to chemotherapy or blood products happen quickly and require immediate interventions to prevent further decompensation or injury to the patient. The nurse practitioner (NP) is readily available to intervene in these situations. The skill and knowledge of the NP, as well as the quick response time, help to decrease anxiety of the patient and family members in this setting.

As a result of this study, a position was created for a NP who would see and evaluate the patients in the after-hours clinic, thus, freeing the emergency physician to see the patients in the emergency center. Guidelines and protocols were developed to guide the NP's practice. The NP works closely with the emergency room physician and the primary oncologist. Patients requiring care that is outside the scope of practice of the NP are stabilized and transferred to the emergency center for further treatment.

The nursing staff in the after-hours clinics verbalized relief at having the nurse practitioner available to them. In the past, they complained of feel-





ing nervous about giving complex chemotherapy regimens in the ambulatory setting when there was not a physician readily available to them. The emergency center physician was usually very busy and not able to come immediately to see the patient. They would usually give orders over the phone and come to see the patient as time allowed.

As cancer care has shifted from in-hospital to outpatient, patients often receive complex chemotherapy regimens in the ambulatory setting. This has created a need among caregivers that we have addressed at our institution with the implementation of NPs in the after-hours clinic setting. NPs are a valuable asset to the healthcare system. We are constantly developing ways to provide high-quality care to our patients. Since the utilization of NPs in our after-hours oncology clinic is a success, we would recommend that NPs would be instrumental in other after-hours settings.

## 75

**REACHING AND TEACHING TEENS CANCER AWARENESS AND PREVENTION OF BREAST CANCER.** Linda Horn Thompson, RNC, BSN, and Donna Hebert, RN, BA, Woman's Hospital, Baton Rouge, LA.

The National Cancer Institute reports that breast cancer is the most common form of cancer among women in the United States. Louisiana statute RS 17:275 states, "All public junior and senior high schools shall provide instruction to all female students in the proper procedure for breast self-examination and the need for annual Pap tests for cervical cancer." This report presents data on benefits of teaching 583 teenage girls in four Louisiana parishes about breast self-examination (BSE).

The purpose of this presentation is to make oncology nurses aware of a teaching model effective in reaching under-served populated areas and schools without school nurses. Knowledge of breast cancer and health issues may influence teenage girls' attitudes and behavior, thereby influencing the mothers/guardians, grandmothers, and aunts.

Teenage girls were provided class sessions on awareness and early detection of breast cancer, theoretically promoting the sharing of knowledge with other females in the family on the subject of breast examination and mammography.

Data were collected to evaluate effectiveness of BSE lecture, video, and hands-on demonstrations with mannequins, based on students' questionnaires. Collected data indicated that after the session, 99% of the teenage girls strongly agreed/agreed that they understood the risk factors associated with breast cancer; 91% strongly agreed/agreed they can perform breast self-exams; 78% strongly agreed/agreed, and 16% somewhat agree that they can discuss with mother or female relative after attending class.

Through effective teaching models, we support community outreach of nurses in underserved populated areas. By improving awareness and promoting early detection, we improve the quality of care in female patients. This model could be used by oncology nurses to provide education on breast cancer and early detection and prevention of other cancers.

## 76

**A COLLABORATIVE PROGRAM FOR BREAST EDUCATION AND FOLLOW-UP.** Sue Kruse, RN, BSN, OCN®, and Margaret Rummel, RN, BSN, MHA, OCN®, Pennsylvania Hospital, Philadelphia, PA; Lisa Aiello, RN, MSN, OCN®, Pennsylvania Hematology Oncology Associates, Philadelphia, PA; and Cathy Fortenbaugh, RN, MSN, AOCN®, Capital Health System, Trenton, NJ.

The Oncology Nursing Leadership Group of our institution identified a need for patient education on breast cancer surgery. Most patients are discharged the day of surgery and have to deal not only with post-op pain, but also the fear and uncertainty of a new diagnosis of cancer. Nurses are in the unique position of assisting patients through this process.

We sought a way to address these needs and the time constraints of same-day surgery. Our goals were (1) to provide all patients with a Breast Surgery Education Kit, (2) to maintain phone contact with these patients at regular intervals to discuss problems and concerns and reinforce teaching, (3) to make referrals and provide financial support as needed, and (4) to find funding to support this program.

The group received a grant to fund the program. Funding was used to purchase materials for the kit to be given to all patients undergoing breast surgery, including a variety of resources to help the patient in understand-

ing and coping with the surgical procedure and diagnosis. In addition, patients were contacted at home by one of the outpatient nurses at several intervals throughout the next year. Patients were asked specific questions about their recovery, from surgery, symptom management, continued treatment and follow-up care, and coping strategies. Any problems were communicated to the patient's physician.

Follow-up data has been completed on 152 patients since the beginning of the program. Our data shows the optimal time for intervention was at the two-month time frame postoperatively as patients were most receptive to the calls at that time and had the most identifiable needs with possible interventions.

This project showed the importance of postoperative follow-up and at what point in time it would be most beneficial to the patient. In addition, it improved patient care and patient satisfaction for patients having breast surgery.

## 77

**A UNIQUE APPROACH TO OSTOMY TEACHING.** Dona Isaac, BSN, Susannah Rose, MSW, CSW, Christina Corban, RN, ANP, and Debra Rodrigue, RN, MA, Memorial Sloan-Kettering Cancer Center, New York, NY.

An innovative collaborative approach for ostomy teaching and counseling has been implemented at this NCI-designated cancer center. This approach uses a group format and capitalizes on the unique expertise of the oncology nurse (RN) and clinical social worker (MSW).

Patients who undergo surgery for colorectal and other cancers resulting in ostomies need extensive teaching and support to adequately adjust to their new lifestyle. Studies on the adjustment of patients with ostomies illuminate the relationship between ostomy self care and psychosocial coping, and these investigations indicate that patients with ostomies are at increased risk of depression and social isolation (Oades-Souther & Olbrisch, 1984). Prior to group formation, inpatient teaching and support for new ostomates involved multiple interventions on separate occasions by RNs and MSWs to address their psychosocial and self-care concerns.

This program was developed by an inpatient, RN, and MSW to (1) reinforce bedside ostomy self-care teaching, (2) discuss dietary changes and offer suggestions for appropriate food choices, (3) provide emotional support and psychoeducation with the intention of reducing psychosocial distress, depression, and isolation after discharge, and (4) normalize patients' experiences by facilitating discussion among patients and family members. The session begins with the RN reviewing and demonstrating ostomy self-care techniques and incorporating hands-on experience while encouraging questions. The MSW then leads open discussion regarding coping and lifestyle changes and provides community support resources. These 45-minute voluntary classes are held twice weekly and are open to all ostomy patients within the center.

This unique teaching strategy has had a positive affect on this patient population as evidenced by feedback from patients, family members, and staff.

This program empowers the patients as they strive to adjust with their new ostomies while encouraging family support. This group may serve as a model for ostomy patients as well as other patients undergoing body-altering procedures. An unforeseen benefit has been the decreased amount of individual time needed by professional staff to prepare the ostomate for discharge. Time studies may also prove the efficacy of ostomy group classes versus individual teaching sessions. A formal evaluation using standardized tools that measure quality of life and psychosocial outcomes would be beneficial in validating positive program results and directing future improvements.

## 78

**PROVIDING INFORMATION FOR PATIENT RECOVERY: CREATION OF AN EDUCATION BOOKLET FOR BREAST CANCER PATIENTS FOLLOWING RADIATION TREATMENT VIA MAMMOSITE RADIATION SYSTEM.** Sandy Wiles, RN, OCN®, Wake Forest University Baptist Medical Center, Winston Salem, NC.

Oncology nurses play an important role in educating the patient in achieving a complication free and complete recovery, especially with shorter hospital stays and outpatient surgery.



Patients with early-stage breast cancer are usually candidates for conservative treatment, thereby avoiding mastectomy. The Mammosite radiation system is an innovative breast cancer treatment modality that delivers radiation directly to the tumor bed. In order to deliver the radiation to the tumor site, a balloon catheter is placed directly into the tumor bed. Since margins around the tumor are unknown until the pathology report is available, the catheter placement usually takes place 3–4 days postoperatively. The balloon catheter has an external line that attaches to a high dose radiation (HDR) machine. The balloon catheter usually stays in place for 7–10 days while patients receive their treatment, and can easily be worn under clothes.

The literature and product information were reviewed, and with the collaboration of the radiation oncology nurse, a radiation oncologist, and patient education specialist, a new booklet has been developed for the Mammosite procedure.

A patient evaluation tool will be used to assess the usefulness of the new booklet and, if appropriate, patient comments will be used to revise the booklet.

Often new and specialized treatment modalities do not have specific educational materials because of the small number of patients being treated. The format of this booklet will serve as a tool to develop other booklets for specialized radiation treatments. This poster presentation will describe the Mammosite procedure and present the new education booklet developed.

## 79

**COMPLEMENTARY THERAPIES: KNOWLEDGE, ATTITUDES, AND USE AMONG CANCER CENTER HEALTH PROFESSIONALS.** Joan Gallagher, EdD, RN-BC, AOCN®, Jennifer Tenhover, MSN, RN, BC, AOCN®, Eileen Joyce, MSW, LICSW, and Katie Binda, MSW, LICSW, Massachusetts General Hospital, Boston, MA.

Medical literature documents the utilization of complementary therapies as high as 45% in the general population. More than \$10 billion, out-of-pocket, in 2001 has been spent on complementary and alternative medicine (CAM) practitioners (Penson et al., 2001). We expected that complementary therapies were being used by a similar percentage of patients in our cancer community. The role of nursing in eliciting patient use of CAM is critical to patient safety.

A patient survey conducted in 2002 received 428 responses. Thirty-four percent of respondents reported using CAMs, and of those, 44% were not telling their healthcare providers. This prompted us to consider the knowledge, attitudes, and use of CAM among oncology healthcare professionals as a factor in these results.

Limited research was found in the literature. With permission, we adapted a tool developed for nurse practitioners by King (2000). Content validity was established using experts within the disciplines. The survey investigated knowledge, attitudes toward and use of complementary therapies among cancer center healthcare professionals in our academic medical center. An Institutional Review Board (IRB)-approved tool was mailed directly to each cancer center physician, nurse, social worker, and other healthcare professionals. Of 587 surveys, 218 completed responses were received (37% response rate).

Survey results will be reported for the combined oncology healthcare professionals, as well by discipline. Specifically, we will outline our findings concerning

- Providers' knowledge of specific therapies and perceived benefit,
- Types of therapies providers currently use and recommend,
- Providers' perceptions about their patients' utilization of CAM, and
- Providers' interest in additional information about specific CAM.

Nurse respondents represent various roles, levels of education, specialty practices, and inpatient/outpatient settings. Findings and implications of CAM, particularly ingestibles, will be addressed.

## 80

**ADVERSE REACTIONS IN CAM CANCER CARE: SUPPORT FOR WIDESPREAD EVIDENCE-BASED PRACTICE (EBP) INTERVENTIONS.** Colleen Lee, RN, MS, AOCN®, National Cancer Institute Office of Cancer Complementary and Alternative Medicine, Rockville, MD.

Adverse reactions are unexpected events occurring after drug administration. The events may be an exaggeration of a predicted action or a reaction ensuing from toxic effects. Most adverse drug reactions are preventable and caused mostly by failure to disseminate knowledge about the drugs to individuals giving or receiving them. Prior consideration of the mechanisms of action, expected reactions, and modifying factors help to prevent reactions. Registered nurses (RNs) play a key role in drug administration and monitoring.

CAM is increasingly popular among patients with cancer for improved symptom management and complementary disease treatment. Quality control of many CAM modalities simply does not exist. Regulations that govern the pharmaceutical industry, such as controlled drug acquisition and preparation, elimination of contaminants, in vitro and in vivo testing, and post-market surveillance do not govern the CAM industry. Anticancer therapies undergo strict pre-clinical toxicology testing, which is absent in the CAM arena. The purpose program is to highlight research findings regarding adverse reactions to educate RNs and support the development of widespread evidence-based practice interventions in CAM cancer care.

Acupuncture, herbal medicine, and dietary supplements are several extremely popular CAM modalities. The seven top selling herbal medicine products in the United States are ginkgo biloba, St. John's Wort, ginseng, garlic, echinacea, saw palmetto, and kava. Recent research has identified adverse reactions for each of these areas. Select examples are (1) acupuncture may cause infection, tissue trauma, bleeding, and pain; (2) herbal medicine may cause dermatitis, anaphylactic shock, and renal failure; (3) dietary supplements such as ginseng, ephedra, St. John's Wort, and kava may interact with prescription medications; (4) herbal tea concoctions cause adverse reactions either through constituent herbs or via interaction with prescription medications (kombucha, chaparral, and green teas); and (5) vitamin therapy, although generally well tolerated, may interact with prescription drug regimens. Patients with cancer use many of these modalities and are not aware of their safety and effectiveness profiles.

Anticipated outcomes of widespread evidence-based practice in CAM cancer care would involve oversight of regulation of CAM modalities and the interpretation of RCT data. RNs are key in disseminating accurate information to assist patients in selecting safe and effective modalities.

Recommendations include RN involvement in designing preclinical studies, reporting mechanisms for adverse reactions, post-market surveillance, development and monitoring of extensive CAM databases for patients, and a comprehensive CAM cancer RCT database.

## 81

**THE ALPHABET SOUP OF COLORECTAL CANCER TREATMENT REGIMENS.** Deborah Semple, RN, MSN, OCN®, and Ellen Hollywood, RN, BS, OCN®, Memorial Sloan-Kettering Cancer Center, New York, NY.

Colorectal cancer remains the second leading cause of cancer death in the United States. Currently, there is no one agreed-upon standard first-line regimen. The following regimens are in widespread use: IFL (weekly bolus 5-FU/LV/irinotecan), FOLFOX (biweekly infusion 5-FU/LV/oxaliplatin), FOLFIRI (biweekly infusion 5-FU/LV/irinotecan), CAPE/OX (capecitabine/oxaliplatin), CAPE/IRI (capecitabine/irinotecan), FLOX (weekly bolus 5-FU/LV/oxaliplatin), IROX (every three weeks Irinotecan/oxaliplatin).

A review of the literature fails to demonstrate any one regimen to have clear superiority over the others. This creates not only the option, but also the obligation for clinicians to make choices.

Combination chemotherapy known as IFL with irinotecan, bolus 5-fluorouracil (5-FU), and leucovorin (LV) had been the standard of care for first-line therapy for metastatic disease, with a median survival of 14.8 months as shown by Saltz et al. (2000). Oxaliplatin, a third-generation platinum analogue, was approved by the U.S. FDA in August 2002 as second-line therapy in combination with infusional 5-FU and LV. Recently, this combination known as FOLFOX was shown in the N9741 trial by Goldberg et al. to have a superior outcome when used in first-line therapy. Another recent, although somewhat underpowered study by Tournegand et al. compared FOLFOX with irinotecan given with infusional 5-FU, known as FOLFIRI, with cross over to the opposite regimen after progression. In this study, the median survival was comparable in each arm with



21.5 months in patients receiving FOLFOX initially, and 20.4 months with FOLFIRI as the initial therapy. Capecitabine, a 5-FU prodrug, is also being used in combination, most commonly with oxaliplatin, and is known as CAPE/OX. These capecitabine combinations have encouraging phase II data, but at present there are no randomized studies to permit definitive comparison with infusional 5FU regimens.

It is important that oncology nurses become familiar with these regimens and their potential side effects. Different side-effect profiles may be more or less acceptable for different patients, and an awareness of the side effect profiles may facilitate helping patients in making their decisions regarding therapy.

This presentation will provide an overview for the oncology nurse of the current treatment regimens and their associated efficacy and toxicity profiles. **Laura: reference citations?**

## 82

**ASSESSING AND MANAGING POSSIBLE SIDE EFFECTS OF AVASTIN®: A NURSE'S EXPERIENCE DURING THE PHASE II AND III CLINICAL TRIALS FOR COLORECTAL CANCER.** Wanda Honeycutt, RN, BSN, Sherri Haley, RN, Roxanne Truax, RN, BSN, OCN®, and Shawna Savage, RN, BSN, Duke Comprehensive Cancer Center, Durham, NC.

Avastin® (RhuMAB VEGF) is a novel monoclonal antibody that is an anti-angiogenic agent.

Avastin® has been tested in clinical trials for several tumor types. At Duke University Medical Center, an NCI-designated comprehensive cancer center, we participated in phase II and phase III clinical trials studying the combination of standard chemotherapy with and without Avastin® for the treatment of metastatic colorectal cancer. Information was recently released from a 900-patient phase III randomized double-blind placebo-controlled study that demonstrated the addition of Avastin® to standard chemotherapy significantly improved the overall survival, time to progression, and tumor response rate for newly diagnosed metastatic colorectal cancer patients. In this study, the only adverse event noted more frequently in the patients receiving Avastin® was hypertension.

In the phase I and phase II clinical trials, several signal adverse events were identified that were possibly related to Avastin®: hypertension, proteinuria, thrombosis, bleeding, and infusion reactions. Throughout these clinical trials, clinical research nurses assessed and managed the possible side effects of this new treatment. Education materials were developed for both nurses and patients. Nursing documentation tools and patient diaries promoted the accurate assessment of side effects. Protocol specific guidelines were implemented to assess and treat side effects.

Helping nurses to understand how to properly assess and manage side effects of Avastin® will help to ensure quality care for this patient population.

The purpose of this presentation is to describe the nursing role in identification and management of Avastin®-related side effects. Education materials, side effect monitoring tools, and patient outcomes will be presented.

## 83

**THE NURSING ROLE IN THE MANAGEMENT OF THE NOVEL PROTEASOME INHIBITOR BORTEZOMIB (VELCADE [™] FOR INJECTION, FORMERLY PS-341) RELATED GASTROINTESTINAL (GI) ADVERSE EVENTS (AES) IN PATIENTS WITH MULTIPLE MYELOMA (MM).** Kathryn Lilleby, RN, Fred Hutchinson Cancer Research Center, Seattle, WA.

The nursing role in bortezomib-related gastrointestinal AE management in patients with MM is critical.

Bortezomib was recently approved for the treatment of MM patients who have received  $\geq 2$  therapies and have demonstrated disease progression on last therapy. GI events were generally manageable with standard antiemetics/antidiarrheals, but led to 5% discontinuations. Nausea, vomiting, and diarrhea (N/V/D) are dehydration risk factors, with potentially harmful sequelae in MM. This case study illustrates effective assessment and risk management. BC, a 77-year old female with advanced MM and a history of paroxysmal hypertension for which she received atenolol at study entry, received bortezomib 1.3 mg/m<sup>2</sup> 2x/wk x2 q3wk. She experienced diarrhea, nausea, and anorexia starting at cycle 1. Food/fluid intake

was low, and during cycle 2, she exhibited poor skin turgor and BP decreased to 124/86, which later increased. Transient G3 neutropenia was observed. No peripheral neuropathy was observed.

N/V/D was assessed by patient reporting, with follow-up questioning prn. Hypertension was monitored by routine BP measurements including orthostatic and patient self-measurement. Symptom management included loperamide (diarrhea, resolved after approximately 8 hours) and use of 250 CC saline flush with drug administration and encouragement to drink more fluids. Nausea was mild and not treated. Neutropenia was determined by blood counts and appeared to resolve by dose withholding. Atenolol was not held/decreased due to the hypertension's paroxysmal nature.

Three cycles have been administered, with 3 doses withheld (neutropenia). GI symptoms resolved during rest periods without continuation of antiemetics/antidiarrheals.

Fluid loss/diminished intake due to GI distress, the most likely basis for the dehydration, should be corrected through increased fluid intake. The change from baseline BP, while potentially related to the GI effects and dehydration, could result from other causes, including concomitant medications or comorbidities. Nurses should assess the patient's pretreatment-hydration status and need for supplemental fluids and prophylactic antiemetics. They should be aware of the degree, frequency, and duration of symptoms, the response to symptom-management medication, and concomitant medications, and be prepared to instruct patients on anti-diarrheal agents, encourage patients to proactively increase fluid intake, and review prior therapies and previously experienced toxicities.

## 84

**SECOND-LINE THERAPY WITH ZEVALIN® PRODUCES HIGHER RESPONSE RATES AND MORE DURABLE RESPONSES IN PATIENTS WITH B-CELL NHL: IMPLICATIONS FOR NURSING PRACTICE.** Kathy Byar, RN, BSN, University of Nebraska, Omaha, NE, and Donna Fernando, RN, RT, MAOM, University of California Los Angeles Lymphoma Program, Los Angeles, CA.

Zevalin®, a second-generation radioimmunoconjugate, was the first radiolabeled monoclonal antibody approved by the FDA for the treatment of patients with cancer.

Zevalin is indicated for the treatment of patients with relapsed or refractory low-grade, follicular, or transformed B-cell non-Hodgkin's lymphoma (NHL), including patients with rituximab-refractory NHL. This analysis was conducted to determine whether the number of prior therapies affects the response to Zevalin in the indicated population.

An integrated analysis of 211 patients in four clinical trials of Zevalin was performed. Results for patients who had received one therapy prior to Zevalin (second-line) were compared to those for patients who had received Y2 therapies (range: 2–9) prior to Zevalin (third-line+).

Sixty-three patients in the four trials received second-line Zevalin, and 148 received third-line+ Zevalin. Patient groups were similar, except for greater bone marrow involvement in second-line patients (57% versus 39%;  $P = .023$ ) and a trend toward bulkier disease in third-line+ patients. The overall response rate (ORR) was higher in second-line patients than in third-line+ patients (86% versus 72%;  $P = .051$ ), as was the complete response/complete response, unconfirmed rate (CR/CRu) (49% versus 28%;  $P = .004$ ). Median time to progression (TTP) (12.6 versus 7.9 months;  $P = .038$ ) and duration of response (DR) (13.7 versus 8.2 months;  $P = .163$ ) were significantly longer in second-line patients. In the follicular NHL subgroup ( $n = 169$ ), ORR was higher in second-line patients (90.6% versus 79.3%;  $P = .0815$ ); CR/CRu was significantly higher in second-line patients (54.7% versus 30.2%;  $P = .0035$ ); and median TTP (14.9 versus 9.2 months;  $P = .038$ ) and DR (14.2 versus 8.2 months;  $P = .093$ ) were longer in second-line patients. Adverse events in second-line and third-line+ patients were primarily hematologic. Rates of grade 3/4 neutropenia (21.6% versus 19%;  $P = .54$ ), thrombocytopenia (68.3% versus 65.5%;  $P = .75$ ), and anemia (12.7% versus 20.9%;  $P = .18$ ) were similar in both subgroups. Nonhematologic adverse events were primarily grade 1 or 2. Zevalin is more effective when used earlier in the course.

Oncology nurses will be seeing more patients treated with Zevalin after the failure of first-line therapy, and should be familiar with the administration and tolerability profile to educate patients.



**NURSING MANAGEMENT OF THE THYROID CANCER PATIENT RECEIVING RADIOACTIVE IODINE THERAPY.** Rebecca Qualey, RN, BSN, and Michael Tuttle, MD, Memorial Sloan Kettering Cancer Center, New York, NY.

Early detection and improved therapy are responsible for decreasing the risk of death from thyroid cancer despite an increased incidence of 28% (70% of which are women). Optimal care of these patients involves a multidisciplinary team from surgery, nuclear medicine, endocrinology, radiation safety, and nursing. The oncology nurse (ON) is essential for coordinating patient care by collaborating with the team to assess, plan, implement, and evaluate treatment.

At diagnosis, patients undergo partial or total thyroidectomy depending on extent of disease at time of surgery. Following total thyroidectomy, remnant ablation with radioactive iodine (RAI) is frequently used to detect and treat residual disease. Preparation for RAI at this NCI-designated cancer center is either withdrawal from thyroid hormone or injections of recombinant human TSH (rhTSH). Patient compliance is crucial in preparing for effective treatment.

The ON assesses for factors affecting treatment such as medication and diet, and instructs patients regarding preparation, administration, and side effects. The ON meets with the patient and reviews the treatment schedule, low iodine diet, isolation precautions, post-treatment interventions, reproductive restrictions, and potential side effects of therapy. Written materials are reviewed and provided, as are information fact cards about rhTSH when applicable. Treatment coordination including schedule verification, insurance pre-certification, bed reservation, admission orders, attendance at weekly tumor review meetings, and continuous collaboration with nurses from surgery, nuclear medicine, and the bedside is performed by the ON. Patients are seen during admission to reinforce teaching and provide support as necessary. Telephone calls frequently occur following discharge for management of short-term side effects such as xerostomia, sialadenitis, and dysgeusia. Ongoing assessment is necessary for xerostomia, xeroma, and excessive tearing, which may infrequently be permanent.

Successful outcomes are ongoing throughout treatment and include the patient's ability to describe preparation for treatment; self-care measures for prevention and management of side effects; cope with the disease and treatment; and receive safe and effective care during all stages.

This presentation will provide an overview of thyroid cancer, treatment options, and discuss the role and responsibilities of the oncology nurse.

**HIGH DOSE IL-2 IN THE TREATMENT OF METASTATIC MELANOMA AND METASTATIC RENAL CELL CARCINOMA.** Theresa Woodrum, RN, Nebraska Medical Center, Omaha, NE.

High-dose IL-2 holds promise for a subset of individuals with poor-prognosis metastatic melanoma and renal cell carcinoma, but patient outcome requires astute nursing management of side effects to prevent life-threatening complications and to provide for strict compliance with the treatment protocol.

The treatment schedule involves IL-2 600,000 iu/kg every 8 hours X 14 doses, 10 days of no IL-2, and another series of 600,000 iu/kg every 8 hours X 14 doses. IL-2 restores T cell mediated immune responses, enhances natural killer cell activity, and generates lymphokine-activated killer cell activity. This presentation will use case examples to illustrate nursing care required, application of the toxicity criteria for dosing decisions, and evaluation of response. The response is determined 4–6 weeks after the first course, and a second course may then be administered. Each dose of IL-2 must be administered on schedule without time delay. If symptoms warrant concern, a dose may be omitted based on a strict scoring system, but never delayed or reduced. Toxicities which are mediated through lymphoid infiltration secondary to capillary leak syndrome and the local effects of cytokines potentially involve all body systems and include problems such as sinus tach, diarrhea, bleeding, rigors, electrolyte imbalance, confusion, shortness of breath, and weight gain. Toxicities are generally reversible 2–3 days after therapy is discontinued if additional complications are avoided.

Examples of potential problems nursing must address include hypotension and cardiac arrhythmias that require monitoring and pressors;

and capillary leak syndrome that can result in pleural effusions, and hypoxemia severe enough to require ventilatory assistance. Patients must be monitored closely for infections due to IL-2-induced defects in neutrophil chemotaxis. In addition to the monitoring required, nurses must orchestrate the administration of multiple medications for the prevention and treatment of side effects. Steroids are avoided because they inhibit release of tumor necrosis factor into the circulation.

Quality nursing care is imperative for the patient's well-being and directly influences the doses of IL-2 that can be administered. Nurses need to be able to recognize problems early; interpret cardiac monitoring, lab, and vital signs; initiate interventions; and facilitate the accurate recording of data.

The information presented in this poster will foster increased understanding of the actions of IL-2, the potential cascade of events secondary to capillary leak syndrome, and the critical role of nursing in the care of patients receiving this protocol.

**TUMOR-SPECIFIC DENDRITIC CELL VACCINES: INNOVATIVE THERAPY FOR PRIMARY AND METASTATIC BRAIN TUMORS.** Kara Penne, RN, BSN, OCN®, and Cindy Bohlin, RN, MSN, Duke University Medical Center, Durham, NC; Alison Paolino, RN, MSN, Emory University, Atlanta, GA; and John Sampson, MD, and Gary Archer, PhD, Duke University Medical Center, Durham, NC.

Historically, malignant brain tumors are resistant to many conventional therapies including chemotherapy and radiation, thus contributing to the poor prognosis for these patients. Median survival for newly diagnosed WHO Grade IV glioblastoma multiforme (GBM) after radiation therapy alone is 40 weeks (Medical Research Council Brain Tumor Working Party, 2001). Dendritic cell vaccines can play a significant role in the treatment of these types of tumors. Dendritic cell vaccine therapy is a new and innovative method of fighting cancer by strengthening the immune system.

Dendritic cell vaccines mobilize and strengthen the patient's own immune system against their tumor cells. Most malignant gliomas express EGFRvIII, a mutated protein sequence that is not found in any normal adult tissues, which makes it an ideal target for tumor-specific vaccines. The purpose of this poster is to describe the mechanism of action of dendritic cell vaccine therapy, provide preliminary results, and discuss nursing implications of a phase I clinical trial that is evaluating the effectiveness and associated toxicities of a tumor specific dendritic cell vaccine for the treatment of primary brain tumors.

In this clinical trial, 14 patients newly diagnosed with high-grade gliomas (glioblastoma multiforme (GBM), n = 12; anaplastic astrocytoma (AA), n = 1; anaplastic oligodendroglioma (AO), n = 1) were treated with dendritic cell vaccine therapy. The vaccines were administered every 2 weeks for 6 weeks (total of 3 vaccines). Following the vaccine, patients undergo dermatologic testing and biopsies at least every 3 months to evaluate immune response to the vaccine.

Potential side effects include fever, chills, headache, allergic reaction, and autoimmunity. Results to date show no clinical progression in 5 patients and disease progression in 9 patients. Median survival since diagnosis is 45 weeks for GBM, 63 weeks for AA, and 317 weeks for AO.

Oncology nurses must be aware of the action mechanism and possible toxicities associated with vaccine therapy in order to provide patients with appropriate care and education. Updated results of this ongoing clinical trial will be presented. Nursing implications for the assessment and management of patients receiving dendritic cell vaccine therapy will be discussed.

**TREATING THE DYNAMICS OF HIV-ASSOCIATED NON-HODGKIN'S LYMPHOMA: A MULTIFACTORIAL NURSING APPROACH.** Keli Elizabeth Gaines, RN, BSN, and Mikaela Olsen, RN, MS, OCN®, Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins Hospital, Baltimore, MD.

As the life expectancy of patients with HIV is prolonged, the incidence of noninfectious diseases such as B-cell lymphoma has risen dramatically. AIDS-related lymphomas are currently the cause of death for up to 20%



of patients with HIV. Although the prognosis is generally poorer than for those patients with similar cancers who have not been diagnosed with HIV, survival has improved significantly with the introduction of highly active antiretroviral therapy (HAART).

In HIV patients in which the CD4 cell count declines to less than 200/mm, a noninfectious complication, such as non-Hodgkin's lymphoma, becomes more prevalent. Specific factors have been determined to be associated with shorter survival rates specific to HIV-associated B-cell non-Hodgkin's lymphoma. Clinical factors such as CD4 cell count, disease staging, Karnofsky scores < [WHAT is missing here?] patient this in present often are involvement CNS and syndrome, [AHS from NSAT: What?] lysis tumor interactions, drug administration, HAART infections, opportunistic myelosuppression, severe as such challenges clinical LDH. elevated scores, Karnofsky staging, disease progression, to relation direct counts cell CD4 of correlation the understand must nurses Oncology unique. patients these care nursing management, toxicity treatment, The population. for prescribed agents chemotherapy or biotherapy specific which determine (LDH), dehydrogenase lactic 70%,> [??]

The clinical presentation of HIV-associated non-Hodgkin's lymphoma, current treatment regimens, HAART, and associated toxicities will be reviewed in this presentation. In addition, specific nursing assessment criteria and related interventions will be detailed in order to prepare a nursing plan of care for the management of this emerging subset of non-Hodgkin's lymphoma patients.

An increased understanding of this patient population and their specific care needs will enhance symptom management goals, assist with early identification and intervention of patient symptoms, and thus improve quality of life.

To ensure excellence in patient care and symptom management, providers caring for this specific population of non-Hodgkin's lymphoma patients must be knowledgeable and receive frequent updates regarding changes in this field. This presentation will be published in order to update oncology nurses in this field.

## 89

**NURSING MANAGEMENT OF PATIENTS WITH CARCINOID SYNDROME.** Michelle Grover, BSN, RN, OCN®, Sidney Kimmel Comprehensive Cancer at Johns Hopkins Hospital, Baltimore, MD.

In order to effectively manage patients with carcinoid syndrome, oncology nurses need to understand the precipitating factors and clinical manifestations of this syndrome and emergency management of patients in carcinoid crisis.

Carcinoid tumors are a type of neuroendocrine tumor that produces bioactive amines and peptides such as serotonin, growth hormone, insulin, adrenocorticotrophic hormone (ACTH), gastrin, pancreatic peptide, and calcitonin. Secretions of these hormones causes carcinoid syndrome, which occurs in less than 10% of patients with carcinoid tumors. Carcinoid syndrome occurs when high levels of hormones are released into the systemic circulation. The most common manifestations of carcinoid syndrome include flushing, diarrhea, cardiac disease, wheezing, arthralgia, changes in mental status, and skin changes. Carcinoid syndrome is most likely to develop in patients with liver metastases and is due to a high level of serotonin production, which is rapidly secreted into the circulation. Carcinoid crisis is a rare but potentially fatal manifestation of carcinoid syndrome. It has been associated with stress, chemotherapy, anesthesia, and hepatic mass biopsies. Flushing, diarrhea, abdominal pain, hypertension, change in mental status, and severe hypotension can result.

A case scenario approach will be utilized to provide a review of the disease process and pertinent nursing care issues of patients experiencing carcinoid syndrome and crisis.

A multiple-choice post-test will be utilized to assess participants' ability to identify important aspects of patient care.

As members of the multidisciplinary team, oncology nurses are in the unique position to facilitate early identification of the symptoms of impending crisis. This timely assessment leads to rapid implementation of crucial, life-saving interventions. For this reason, oncology nurses need a working knowledge of carcinoid tumors, syndrome, and crisis. Improved knowledge will lead to enhanced patient education and patient outcomes, and could potentially impact morbidity and mortality.

## 90

**EDUCATING PATIENTS ON THE COMPLEXITIES OF FIBROLAMELLAR CANCER: NURSING IMPLICATIONS.** Natasha Ramrup, RN, MSN, and Maria Pacis, RN, MS, ANP, Memorial Sloan Kettering Cancer Center, NY, NY.

Fibrolamellar cancer (FLC), a variant of hepatocellular cancer (HCC) manifests in adolescence and young adulthood. This rare disease has a clinical course that is distinct from typical HCC and accounts for less than 3% of hepatomas. Unresectable metastatic FLC has a median survival of 14 months. Patients diagnosed with FLC do not have underlying parenchymal liver disease or elevated tumor markers. The median age of diagnosis is approximately 24 years with no sex predilection and is predominantly found in Caucasians. Initial symptoms at presentation include vague abdominal pain, nausea, weight loss, fatigue, malaise, fever, and chills. An understanding of this complicated disease can lead to improved patient education about the treatment, recovery, and what to expect in the future.

At our NCI-designated comprehensive cancer center, a multidisciplinary team including oncologists specializing in managing patients diagnosed with FLC, pediatric oncologists, oncology nurses, social workers, and case managers are committed and dedicated to managing this population through a myriad of treatments to prolong survival and improve quality of life.

Surgical resection is the only curative treatment modality for this malignancy. Oncology nurses are in a pivotal position to teach patient/caregivers about this disease and treatment options that are available in the event that the disease recurs.

Clinical management and treatment of this patient population is complex and best accomplished by a multidisciplinary healthcare team. Ongoing psychosocial support is of utmost importance in helping patients navigate throughout the cancer experience. Nurses need to understand the complexities of this disease including its indolent course and the use of various treatment modalities such as surgery, chemotherapy, and hepatic embolization.

This presentation will (1) provide an overview of FLC, including associated symptoms and multimodality treatment, (2) describe the inpatient nurse's role in educating patients about their disease and managing complications from treatment, (3) highlight the impact of FLC on quality of life, (4) discuss the multidisciplinary approach in assisting patients/families navigating the cancer experience, and (5) define the role of orthotopic liver transplantation. Since minimal research is available regarding this disease, more education and research is essential in understanding this patient population.

## 91

**A MULTIDISCIPLINARY TEAM APPROACH TO ADDRESS A CLINICAL NEED: CARE AND SYMPTOM MANAGEMENT OF PATIENTS WITH CANCER OF THE ESOPHAGUS.** Pamela Ginex, RN, MPH, OCN®, Jacqueline Hanson, RN, BSN, and Manjit Bains, MD, Memorial Sloan Kettering Cancer Center, New York, NY.

A multidisciplinary approach to developing a descriptive study of the clinical symptoms, quality-of-life issues, and educational needs of patients with esophageal cancer.

This year, over 13,000 people in the United States will be diagnosed with esophageal cancer, and the incidence rates are increasing 5%–10% per year, virtually more than any other cancer (Pera & Pera, 2001). Treatment for esophageal cancer has changed dramatically over the past several years and patients are confronted with potentially debilitating symptoms. A group of thoracic surgery oncology nurses at an NCI-designated comprehensive cancer center worked collaboratively with a thoracic surgeon to investigate evidence-based methods to improve symptom control and identify quality-of-life (QOL) issues before and after treatment. A review of the literature revealed that this disease has not been well researched and there is an absence of clear descriptions of the common symptoms, concerns, and clinical variables for patients undergoing treatment for esophageal cancer.

As a result, the group developed a descriptive study of the most significant patient needs based on experience from a patient support group as well as input from an esophageal cancer survivor. This unique project



demonstrates true collaboration among clinicians and patients to address a clinical need and improve patient care. The study is designed to assess overall QOL, symptoms, physical activity, and social support for patients on treatment as well as long-term survivors. A measure of response shift was included to account for changing perspectives as patients undergo treatment.

The study objective is to develop specific educational and symptom management interventions in partnership with other clinicians and patients. The presentation will describe the methods and process of multidisciplinary teamwork that developed the study as well as include preliminary results.

The team approach to addressing this clinical need will provide evidence-based information to improve our management of patients with esophageal cancer. Other patient populations may benefit from a similar investigational framework. We anticipate that nurses working in a clinical setting could adapt this strategy in managing a broad spectrum of patient symptoms and educational needs.

## 92

**THE IMPACT OF DEPRESSION ON SURVIVAL OF ESOPHAGEAL CANCER PATIENTS.** Mei Ling Chen, RN, PhD, Graduate Institute of Nursing, Chang Gung University, Tao Yuan; Hsin Yi Young, RN, MS, Chang Gung Memorial Hospital, Tao Yuan; and Chang Hsien Kun, MD, Chang Gung Memorial Hospital, Lin Kou.

The prevalence of depression among cancer patients has been reported to be 20%–25%. Although the associations between depression and pain as well as low quality-of-life are well known, research regarding the long-term effect of depression on survival rate for patients with cancer has not been conclusive. The purpose of this prospective longitudinal study was to examine the effect of depression on survival in esophageal cancer patients.

Lazarus's cognitive model of emotion was used as the conceptual framework for this study.

The sample consisted of 119 patients with newly diagnosed stage II–stage IV esophageal cancer treated in a medical center of Northern Taiwan. Hospital Anxiety and Depression Scale (HADS) and Geriatric Depression Scale (GDS) were used to measure depression. The cut-off points for determining the depression status (depressed versus non-depressed) were established by previous study with Taiwanese population with cancer. Each patient was followed for two years. Depression status was measured at entry, 2, 4, 6, 12, 18, and 24 months after enrollment.

Data were analyzed using Kaplan-Meier survival analysis and Cox regression.

Results showed that 90 of 119 patients died within the two-year period with a median survival time of 12 months. One-year and two-year cumulative survival rates were 63.4% and 51.6% respectively. After controlling for other survival predicting factors (such as degree of body weight loss and functional status), the depression status measured by either HADS or GDS at month four significantly predicted patients' survival. Compared to non-depressed patients, the relative hazard ratios for death in depressed patients were 1.75 (HADS) and 3.31 (GDS). The depression status measured by HADS at month six was also a significant predicting factor for survival; compared to non-depressed patients, depressed patients had a relative hazard ratio for death of 2.71. This study supports the negative effect of depression on the survival of patients with cancer. Oncology nurses should treat depression as an important psychological symptom that warrants early detection, continuous assessment, and appropriate interventions.

## 93

**THE ROLE OF THE NURSE IN IMPROVING ASSESSMENT AND DOCUMENTATION OF TOBACCO USE IN PATIENTS WITH LUNG CANCER.** Dana Inzeo, RN, MA, AOCN®, and Pamela Ginex, RN, MPH, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY.

Over 90% of lung cancers are attributed to smoking and/or tobacco use. Many patients diagnosed with lung cancer are actively using tobacco. Research has shown that patients with lung cancer who quit smoking can increase their life expectancy and decrease both treatment complications

and risks for a secondary malignancy (Cooley, 2002). Results of a meta-analysis by the Agency for Health Care Policy and Research (AHCPR) (1995) showed that having a system for assessing and documenting tobacco use both doubled the rate in which clinicians were advising patients about cessation, and the rate of actual patient cessation.

The purpose of this project is to improve assessment and documentation of tobacco use with a projected affect on improving and maintaining the smoking cessation rate among patients with lung cancer. According to the AHCPR guidelines, there are five A's essential for an effective smoking cessation plan: Asking about smoking, advising to quit, assisting to stop, assessing readiness for change, and arranging for follow-up. In a retrospective three-month review at an NCI-designated comprehensive cancer center, 575 patients with newly-diagnosed thoracic cancer were seen. Of the 157 medical patients treated, 35% were active smokers. Of the 137 surgical patients who had surgery, 33% were active smokers. These statistics reflect an opportunity for nurses to provide consistent assessments at every clinic visit in order to encourage smoking cessation.

The nurses from the ambulatory thoracic oncology practice at this cancer center have incorporated a tobacco-use section into their routine patient assessment tool. This addition serves as a prompt to the nurse to actively ask and document tobacco use.

By standardizing assessment and documentation of tobacco use according to the AHCPR outcome recommendations, the authors hope to reduce tobacco use in ambulatory patients with lung cancer. This presentation will include the documentation tool and an evaluation of the rate of compliance in using the tool.

Use of this assessment tool will prompt these oncology nurses to ask about and become more comfortable with dialoging with patients about tobacco use. Increased attention to tobacco use will decrease patients' tobacco use.

## 94

**RADIATION THERAPY ADVANCES FOR TREATING PATIENTS WITH LUNG CANCER: IMPLICATIONS FOR NURSES.** Elizabeth Tateo, [Need credentials], Memorial Sloan-Kettering Cancer Center, New York, NY.

Advances have been made in radiation planning and treatment for patients with lung cancer to improve outcomes and minimize toxicities. Nurses play a vital role in educating patients about treatment and side effects, and it is critical for nurses to have an understanding of these new treatment modalities.

Lung cancer is the leading cause of cancer death in men and women in the United States. It is estimated that there will be 157,200 deaths in 2003, accounting for 28% of all cancer deaths. Approximately 60% of patients with lung cancer will undergo radiation therapy (RT). Side effects include dysphagia, odynophagia, cough, shortness of breath, fatigue, and skin reaction.

Four RT advances are being used: Three-dimensional conformal RT (3D-CRT), intensity modulated RT (IMRT), techniques to control tumor motion, and combined modality therapy (CMT).

3D-CRT delivers radiation using multiple fields that configure precisely to the shape of the target volume. This enables larger doses to be delivered to the tumor increasing cell kill, while minimizing radiation to surrounding normal tissues and decreasing side effects. IMRT involves inverse treatment planning, in which desired doses of radiation to the target and normal tissue are predetermined, and treatment is delivered using dynamic multi-leaf collimation, which modulates the intensity of the radiation beam while it is being delivered. Techniques to control tumor motion are used because patients breathe during treatment, causing their tumors to move. With deep inspiration breath hold (DIBH) the patient takes a deep breath and holds it while the radiation beam is delivered; with gated RT, radiation is delivered only during a specific phase of the breathing cycle. These techniques control tumor motion and allow the radiation portal size to be reduced, reducing toxicity. (4) CMT uses chemotherapy with RT to improve local control and overall survival. Recent studies suggest that concurrent chemotherapy is more effective than sequential, however, toxicity is higher.

This presentation will explain these advances and describe the nurse's role in educating patients about these treatments, managing side effects, selecting appropriate patients for DIBH and gating, and coordinating care with CMT.





## 95

**PET-CT: A BENEFICIAL TOOL IN RADIATION THERAPY TREATMENT PLANNING.** Annette Quinn, RN, MSN, University of Pittsburgh Cancer Centers, Pittsburgh, PA, and Dwight Heron, MD, Shalom Kalnicki, MD, Norbert Averil, MD, Michelle Markovitz, RN, OCN®, and Regiane Andrade, MD, University of Pittsburgh, Pittsburgh, PA.

Soon, many radiation oncology centers will add a PET component to their CT simulators, and oncology nurses need to familiarize themselves with the education and care required for patients undergoing this imaging procedure.

The integration of spiral computed tomography and positron emission tomography (PET/CT) into radiation treatment planning might assist in the greater differentiation of normal tissues from tumor-bearing tissues and areas at high risk of recurrence. This could potentially improve the therapeutic window for patients treated with IMRT, especially for head and neck cancers. Because the use of PET/CT is becoming more and more common in radiation therapy, we, at the University of Pittsburgh Cancer Institute, developed an educational program for radiation oncology nurses to develop the tools and skills they need for administering fluorine-18 fluorodeoxyglucose (F-18 FDG), and caring for patients in this setting.

An educational program was developed together with the nurses in radiology for training radiation oncology nurses on care of patients undergoing PET/CT imaging. The nurse spent two 8-hour days shadowing the radiology nurses in the PET center, and together as a team developed educational tools for the patients. The radiology nurses continue to serve as mentors for the radiation team, and this multidisciplinary approach has proven beneficial in our practice.

A cognitive test was given to the nurses in radiation oncology following their two days in radiology. They also had to perform administration of the FDG on at least six patients before being able to administer on their own.

The use of PET/CT in radiation therapy treatment planning will become more prominent in centers in the near future. Nurses working in these areas need to become experts in caring for patients undergoing this procedure.

## 96

**INTERPRETATION OF PSA LAB VALUES IN SEXUALLY ACTIVE MEN WITH PROSTATE CANCER: THE ROLE OF NURSING ASSESSMENT.** Janet Cogswell, RN, CNS, AOCN®, Erma Morales, RN, MSN, Lourdes Duque RN, MSN, and Casaundra Davis, RN, MSN, Veterans Administration New Jersey Healthcare System, East Orange, NJ.

The purpose of this analysis is to identify the unique role of nursing assessment in interpreting prostate surface antigen (PSA) values in men with prostate cancer (PC).

Changes in PSA values in men diagnosed with PC are important in disease assessment. Much is known about PSA changes in disease detection and progression. Other variables effecting PSA that would permit a holistic interpretation are less known. Utilizing holistic theory the effect of activities such as ejaculation, bicycle riding, marathon running, and clinical prostate manipulation via digital rectal exam, colonoscopy, biopsy, and Foley catheter placement on PSA was reviewed. Observations on patients at a VA medical center linked sexual activity and PSA increases. The following representative case study illustrates the role of nursing assessment.

A 53-year-old male with a PSA value of 5.3 ng/ml found during a routine physical exam was diagnosed with adenocarcinoma of the prostate Gleason 3 + 4 = 7. He elected to explore treatment options of radical prostatectomy and external beam radiation therapy while obtaining a second opinion. In six weeks his PSA was 20.6 ng/ml. The initial clinical interpretation based on disease theory alone was the need for urgent intervention based on accelerating PSA reducing his window of opportunity to learn about PC treatment options. The patient was contacted for a detailed nursing assessment regarding exercise, prostate manipulation, and sexual activity. The night prior to his PSA draw, he confirmed sexual activity leading to orgasm. Utilizing holistic theory, a nursing intervention of sexual abstinence was prescribed. The patient was to avoid ejaculation for 7 days.

The repeat PSA was 8.4 ng/ml. The importance of holistic assessment was in giving the patient adequate time to learn about PC and allowing him to make an informed decision about his treatment.

Clinical decisions made on the basis of PSA changes are based on the assumption that the values reflect the disease status. Good nursing assessment of a patient's sexual history permits the use of a nursing intervention resulting in accurate PSA values. Based on this observation a prospective trial was designed.

## 97

**DUCTAL LAVAGE AND THE ADVANCE PRACTICE NURSE.** Meghan Brennan, RN, MSN, ONP, and Anne Easthope, RN, MSN, NP, Cytoc Health Corporation, Boxborough, MA.

Advanced practice nurses (APNs) utilizing ductal lavage (DL) to facilitate risk assessment (RA) and risk reduction (RR) counseling.

Studies demonstrated a 5-fold increase in breast cancer when nuclear atypia is identified in breast duct cells. Additionally, risk increases 10-fold when family history is present with atypia. Previous cellular collection methods (aspiration and needle aspiration) were complicated by low cell yields or invasive approaches. DL, recommended for high-risk women, is a minimally invasive, well-tolerated technique with superior cellular yields. DL is performed in an office setting by trained clinicians, including physicians, physician assistants, and NPs. Because counseling high-risk women regarding risk reduction therapy is a challenge to many APNs, a method providing more insight to a patient's current breast health can aid in risk reduction discussion. In addition DL offers a myriad of research opportunities related to breast cancer and prevention.

Prior to DL, topical anesthesia is applied to the nipple, the nipple is de-keratinized, and breast compression performed to maximize fluid toward the nipple. Subsequently, aspiration is performed to elicit nipple aspirate fluid identifying ducts for lavage. DL is done on nipple aspirate fluid-producing ducts based on a higher risk of breast cancer development in women with nipple aspirate fluid. A microcatheter is inserted into the duct, 10–20 cc of saline infused in 2–3 cc increments and removed by suction and breast compression. Samples are prepared in a cellular preservative and sent to a cytology lab for analysis. Results from DL are available usually within one week. Patients are explained the results and impact on their health.

Based upon a published study of 507 women at high risk who underwent DL, the majority will have benign (54%) results while a small percentage (24%) will have atypical results. Although the benign results may not lower a woman's risk for developing breast cancer, based upon historic data, atypical results do increase her risk.

Since many APNs provide risk assessment and counseling to women, DL is a helpful adjunct to understanding a patient's risk and helping her make important decisions regarding risk reduction strategies.

## 98

**MANAGING DISTRESS RELATED TO BREAST BIOPSY: COUNSELING, INTERVENTION, AND THE ONCOLOGY NURSE.** Cheryl Butch, RN, BA, University of Pittsburgh, Pittsburgh, PA, and Deborah Davison, MSN, CRNP, National Surgical Adjuvant Breast and Bowel Project, Pittsburgh, PA.

Counseling women at high risk for frequent breast biopsies is a vital role for the oncology nurse. Including relevant data from a study by the National Surgical Adjuvant Breast and Bowel Project (NSABP) enables the nurse to discuss a possible intervention that may decrease the necessity of breast biopsy and the associated psychological trauma.

The psychological impact of breast biopsy is an underestimated and often neglected factor in women's health. Angst is significant when learning of an abnormal mammogram. This trauma is further compounded by the physical and emotional stress of undergoing the biopsy and awaiting the pathology. Women completing the Profile of Mood States and the Impact of Events Scale immediately after biopsy had a mean total mood disturbance score of 16; higher, in fact, than norms for psychiatric outpatients.

In 1998, a cooperative study conducted by the NSABP demonstrated that tamoxifen reduced the incidence of both invasive and non-invasive breast cancer in women at high risk. The effect of tamoxifen on the incidence of benign breast disease and the number of breast biopsies in the same group of women were also examined.

The relative risk for benign histologic diagnoses was estimated for women receiving tamoxifen versus those randomized to placebo. Overall, tamoxifen reduced the risk of benign breast disease by 28% (RR = 0.72, 95%



CI = 0.65–0.79). Tamoxifen therapy also resulted in statistically significant reductions in the risk of all subtypes of benign breast disease, with the corresponding decrease in the number of breast biopsies ( $P = < .001$ ). Comparison with the placebo group demonstrated that women in the tamoxifen group required 29% fewer biopsies (RR = 0.71, 95% CI = 0.66–0.77).

Although the incidence of clinically detected benign breast disease was decreased and the resultant anxiety and potential morbidity of repeated biopsies eliminated, tamoxifen treatment is not without risk. Indiscriminate use of tamoxifen is not advocated. Therefore, the role of the oncology nurse is critical in counseling the appropriate patient population and creating a risk-benefit profile to assist each woman in her decision-making process.

## 99

**PREMENOPAUSAL BREAST CANCER PATIENTS' PERCEPTION OF THE QUALITY OF INFORMATION THEY RECEIVED CONCERNING THE SEXUAL SIDE EFFECTS OF CHEMOTHERAPY.** Elizabeth Galante, RN, OCN®, Regional Hematology Oncology Associates, Wilmington, DE.

The premenopausal breast cancer survivor's perception of the quality and quantity of education they received from their healthcare provider concerning the possible sexual side effects of chemotherapy. The oncology nurse is in a unique position to affect a client's adaptation to the sexual side effects they may experience due to chemotherapy.

Sexuality and sexual expression are an important aspect of a person's mental and physical well-being. The standard of care for many premenopausal patients with breast cancer includes the administration of adjuvant chemotherapy. Many of these women will experience either temporary or permanent ovarian failure due to that chemotherapy. Sexual side effects and the impact on the quality of life for breast cancer survivors have been well studied and reported in the literature. The client's perception of the availability of healthcare providers in discussing sexual issues has been less studied. The purpose of this study is to answer two research questions: (1) Do patients feel they received adequate information from healthcare providers concerning the possible sexual side effects of chemotherapy? (2) From whom, and at what point in the cancer care continuum was this information obtained?

The Roy Adaptation Model was used as the study's conceptual framework. A diagnosis of cancer often brings with it a period of constant adaptation for the patient and family. The Roy Model has been shown to be effective in many areas of oncology nursing. A basic premise of the framework is that the individual is a biopsychosocial being in constant interaction with a changing environment. At issue are the individual's adaptation to both internal and external stimuli and the nurse's role in helping the patient and family attain a level of adaptation that is satisfactory to them.

This study is a retrospective, quantitative study. A 25-item, five-point Likert scale questionnaire was developed. The questionnaire was then reviewed by an expert panel of five oncology nurses of varying backgrounds for readability, ease of administration, and sensitivity. Eligibility for the study include diagnosis and treatment with chemotherapy before the age of 50, being at least 18 years of age and able to give informed consent, and having completed chemotherapy in the last 1–5 years. A pilot study is currently being conducted with a sample of eight breast cancer survivors to determine reliability and validity of the questionnaire. The questionnaire will then be mailed to 175 members of the local Young Breast Cancer Survivors, members of the Wellness Community Breast Cancer Support Group and individuals identified by oncologists and oncology nurses. It is anticipated that 40–50 questionnaires will be returned.

Subjects will be group based on whether or not they felt they had received adequate information regarding the possible sexual side effects of chemotherapy. The groups will be compared using two-way analysis of variance (ANOVA).

Findings from this study will benefit the young survivors of breast cancer. The limited research done thus far supports clients' claims that they are not receiving this vital information from their healthcare providers. I am looking forward to submitting my study results to *Oncology Nursing Forum* and other professional journals for possible publication.

## 100

**MENOPAUSAL ASSESSMENT IN THE BREAST CANCER PATIENT.** Lisa Aiello, RN, MSN, Bernard A. Mason, MD, Susan Kruse, BSN, Holly

Kilpatrick, RN, BSN, and Gloria Pitts, CRNP, Joan Karnell Cancer Center at Pennsylvania Hospital, Philadelphia, PA.

Menopause is a common side effect of breast cancer treatment. It may be due to chemotherapy, tamoxifen, surgery, or the inability to provide hormone replacement therapy to women with breast cancer. Gantz (2003) described a comprehensive menopause assessment program, which involved four office visits, physical examinations, symptom assessments, completion of questionnaires, education and counseling, and evaluation of treatments.

A team of oncology nurses at our institution decided to assess the ability of our providers to evaluate patients' menopausal symptoms. A retrospective chart review was performed, identifying 208 women who were pre-menopausal prior to breast cancer treatment. We examined the documentation of symptoms in these records. Results were compared to published data on the prevalence of menopausal symptoms. We focused on hot flashes, vaginal dryness, and urinary incontinence. We found that our practice documented a lower occurrence of these symptoms than is reported in the literature.

The practice intends to develop a comprehensive menopause assessment questionnaire and treatment algorithms based on Gantz's work, modifying it to include questions about physical symptoms, quality of life, and modifiable behavior. We plan to assess for the following: irritability, headaches, diarrhea, constipation, bladder control, vaginal discharge, joint pain, weight gain/loss, night sweats, medication use, herbal use, drug and alcohol use, smoking, caffeine, exercise, weight, and diet.

Once this tool is developed and put into practice, we can then assess whether we are properly evaluating our patients. We can also begin to research the effectiveness of the treatments and develop the algorithms appropriately.

The goal is to modify current practice and improve care and quality of life of women experiencing menopausal symptoms related to cancer or cancer treatment.

## 101

**HORMONAL THERAPY FOR BREAST CANCER: ADMINISTRATION, PATIENT EDUCATION, AND MANAGEMENT OF ADVERSE EVENTS WITH FULVESTRANT (FASLODEX®).** Linda Versea, APRN, MSN, Norwalk Hospital, Norwalk, CT, and Margaret Rosenzweig, PhD, CRNP-C, AOCN®, University of Pittsburgh, Pittsburgh, PA.

Most breast cancers are sensitive to growth-promoting effects of estrogens, and these tumors can be effectively treated with endocrine therapy.

Aromatase inhibitors, such as anastrozole and letrozole, have changed endocrine therapy of breast cancer dramatically in the last five years. One of the most recent agents, introduced in 2002, is fulvestrant, a new type of estrogen receptor antagonist that down regulates both estrogen and progesterone receptors and has no known agonist effects. It is a well-tolerated and effective option for postmenopausal patients with breast cancer whose disease has progressed on tamoxifen.

Oncology nurses can assist patients who are prescribed fulvestrant by understanding the mechanism of action, administration issues, and by having a repertoire of interventions for known side effects.

Fulvestrant is administered every 28 days via an intramuscular injection in the gluteus maximus muscle with a Z-track injection technique. Depending upon the woman's stature and muscle mass, fulvestrant can be administered as one 5 mL injection or as two 2.5 mL injections. Fulvestrant should be refrigerated, however, it should be allowed to warm to room temperature prior to administration. Most adverse effects of fulvestrant are attributable to the blockade of estrogen. In clinical studies, these adverse events were mild to moderate and similar to those seen with anastrozole. Discussion of adverse events that may occur while receiving treatment for breast cancer is necessary to ensure proper management of these symptoms and support the patient's quality of life. Vasomotor symptoms such as hot flashes and night sweats may be managed through the use of folic acid, vitamin E, exercise, stress-management techniques, and avoidance of caffeine, hot weather, alcohol, and spicy foods. When no specific etiology of fatigue can be identified, generic interventions such as exercise, energy conservation, and focused activities may prove clinically beneficial.

The benefits of using fulvestrant in patients with breast cancer include monthly interaction and monitoring of the patient by a nurse and accu-



rate assessment of compliance relative to oral drugs. Educating nurses regarding administration techniques and strategies to manage adverse events of endocrine therapy ensures proper use and maximizes the tolerability and potential clinical benefit of a treatment.

## 102

**ACCELERATED LOSS IN FUNCTIONAL TESTING IN WOMEN WHO ARE SURVIVORS OF BREAST CANCER.** Suzanne Mahon, RN, DNSc, AOCN®, APGN, Saint Louis University, Saint Louis, MO, and Marietta Caiarelli, RN, NP-C, Saint Louis Veterans Administration Medical Center, Saint Louis, MO.

Of the 210,000 women diagnosed with invasive breast cancer annually, more than 80% are expected to survive at least five years after treatment. Most will have a normal lifespan. Discovery of breast cancer represents an immediate threat to these women. In addition, aggressive therapies have great potential for both immediate and long-term side effects.

**Purpose:** To determine if women who have undergone cytotoxic chemotherapy for breast cancer function less well on normative tests than women who have not undergone treatment with these agents.

Roy's Adaptation Model of Nursing. [Does this belong here?]

This ongoing pilot study examined the potential long-term effects in functional testing in fifteen women who had been treated for breast cancer at an urban university hospital. Their ages were greater than 45 years, with a mean age of 57, plus or minus two years, two or more years after their last chemotherapy, and without signs and symptoms of recurrent breast cancer.

We compared results of their functional testing to results of the same testing obtained at baseline in an observational study of women without a diagnosis of breast cancer ( $n = 91$ ), age 53.6 years plus or minus six years. We examined the relationship of age to functional tests results for each test. Tests included time to (a) walk 6 meters, (b) rise from a chair and walk 3 meters, (c) open and close a panel of doors, (d) complete a simulated eating test, and (e) complete Trials A & B, as well as scores on the Benton Facial Recognition test. Data were analyzed using descriptive statistics in Statistica.

In each circumstance, the relationship between age and tests results favored the control group ( $p < 0.01$ ).

**Conclusions:** Survivors of breast cancer may be expected to have normal life spans. However, the normal physiologic changes that occur with aging may be accelerated by the long-term effects of chemotherapy, resulting in decreased functioning, a loss of independence, and a decreased quality of life.

**Implications:** Nurses can use this information to develop interventions that will mitigate or prevent loss of function and ultimately improve quality of life in this population.

## 103

**OPTIMIZING NURSING RESOURCES THROUGH THE USE OF A MULTIMEDIA PRESENTATION TO EDUCATE PATIENTS AND CAREGIVERS ABOUT BLOOD AND MARROW STEM CELL TRANSPLANTATION (BMSCT).** Susan Kruse, RN, OCN®, University of Nebraska Medical Center, Omaha, NE.

**Purpose:** Providing consistent and detailed education, while efficiently utilizing nursing resources.

**Background of problem:** For many years, the initial educational session was 1:1 with the patient and family. The sessions provided information on the basics of BMSCT and lasted 2–3 hours. Due to duplication of nursing effort and lack of consistent information, a class for BMSCT was developed in 1995. The nurse case managers would rotate teaching the class that consisted of a slide show presentation and an outline. There were variations and inconsistencies in the information given depending on the nurses' areas of expertise and their teaching abilities.

**Intervention:** In 2003, a 40-minute multimedia presentation consisting of scripted audio and corresponding visual media was developed. This presentation is available to patients and family on a "video on-demand service" available in all transplant patient suites, cancer treatment rooms, and other patient care areas. The patient or caregiver can view the presentation 24 hours a day, at their convenience.

Over a period of five months, March–July 2003, patients and their

caregiver were asked to complete surveys to evaluate the video. Likert scales were used to evaluate the usefulness of the presentation, transplant information required by the patient to make a decision, appropriateness of the information, the length of the presentation, and the usefulness of the corresponding handout. Fifty-one patient and 75 caregiver surveys were returned. Overall, patients rated the usefulness of the presentation from useful to very useful. Our detailed findings will be reported. Utilization of nursing time has become more efficient and education for the patient and family has become more consistent and detailed. The video on-demand service can be easily updated based on future developments in BMSCT.

## 104

**NURSING CHALLENGES FOR PATIENTS UNDERGOING AUTOLOGOUS STEM CELL TRANSPLANTATION FOR PRIMARY SYSTEMIC AMYLOIDOSIS.** Suzanne Costello, RN, MSN, Clinical Nurse Specialist, Memorial Sloan Kettering Cancer Center, New York, NY.

Amyloidosis (AL) is an uncommon plasma cell disorder in which depositions of amyloid light-chain protein cause progressive organ failure. The median survival rate is 13 months from diagnosis. Single or multiple organs can be involved which include the heart, peripheral nerves, GI tract, kidneys, liver, and soft tissues. Because this uncommon, aggressive disease is characterized by the deposition of immunoglobulin light chains produced by clonal plasma cells, therapy has been based on the use of chemotherapeutic agents used effectively against multiple myeloma. Autologous stem cell transplantation has shown great promise in controlling this disease. At this NCI-designated comprehensive cancer center, our risk adapted protocol has presented new challenges to all nurses caring for these patients in both inpatient and outpatient settings.

Unit-based nurse practitioners, in collaboration with the service attending fellow and bedside nurses manage routine treatment-related sequelae of transplantation and those specific to amyloidosis. These include nephrotic syndrome, related to renal involvement, which causes salt-avidity, and hypoalbuminemia, which leads to significant edema and problems related to intravascular fluid shifts. Diligent assessment, evaluation, and fluid management are essential. Macroglossial involvement causes airway compromise, sleep apnea, and dysphagia, particularly when mucositis and oropharynx bleeding occur.

Focal or diffuse gastrointestinal involvement cause symptoms usually linked to the location and extent of amyloid deposits. Major GI bleeds are possible. Frequent patient monitoring and appropriate interventions are critical. Mobilization and leukapheresis present added challenges. The complication rate is approximately 15%, sometimes requiring interruption of collections because of edema and hypoxia. The outpatient CNS is responsible for coordinating this process as well as monitoring for toxicities.

AL patients have an orphan disease that is as fatal as the worst of cancers. Many healthcare providers express ignorance of AL, a fact that causes patients great anxiety. Insurance companies constantly question rationale for treatment.

Patients with amyloidosis are far less medically experienced than the average transplant patient. This presentation will provide an overview of amyloidosis and highlight the unique challenges nurses face during each facet of transplant care.

## 105

**THE ENGRAFTMENT SYNDROME IN AUTOLOGOUS STEM CELL TRANSPLANTATION (ASCT).** Robert Rice, RN, NP-C, OCN®, and Craig Moskowitz, [Need credentials], Memorial Sloan-Kettering Cancer Center, New York, NY.

Engraftment Syndrome (ES) is a clinical diagnosis. However, diagnostic criteria are indistinct. The cluster of symptoms includes two or more of the following: non-infectious neutropenic fever (NINF), diffuse erythematous skin rash, capillary leak, fluid retention, weight gain, diarrhea, renal or hepatic dysfunction, and encephalopathy. Symptoms occur at the time of engraftment. ES portends a worse outcome and higher treatment-related mortality. Oncology nurses who work in ASCT settings must recognize the variations of the constellations of symptoms which can





present during engraftment and act quickly to identify and manage the patient's symptoms.

Treatment with high-dose therapy (HDT) supported by autologous peripheral blood stem cells (PBSC) is the standard of care for a number of myeloproliferative disorders, most notably relapsed or refractory Non-Hodgkin's lymphoma, Hodgkin's disease, multiple myeloma, and certain solid tumors such as germ cell tumors.

Diagnostic models have emerged that comprise a wide variability in criteria, and the application of these models has led to a vast range of reported incidences of ES. Nurses caring for transplant patients must be especially cognizant of these factors and synthesize their observations of symptoms and timing with their knowledge of the ES: Temporality—symptoms occur within 24–96 hours of recover of ANC > 500 mg/mcL; sensitivity to any pulmonary symptoms and signs (e.g., patient's subjective complaint of dyspnea, new dyspnea on exertion, or orthopnea); pulse oximetry SaO<sub>2</sub> < 90% (or distinctly different from patient's baseline); any sign of fluid overload (weight gain, positive fluid balance); laboratory values suggesting renal insufficiency or hepatic dysfunction; mental status changes; or skin rash or diarrhea.

At this NCI-designated comprehensive cancer care center, we are working to discern non-infectious fevers and post-engraftment fevers from infectious ones and to develop treatment algorithms to best manage patients with ES. Future studies can help to elucidate the patient's experience with ES and the impact on quality of life for patients who have ES.

This presentation will further define ES and provide an essential overview, including pathophysiology and review of the literature for oncology nurse generalists and advanced practice nurses who care for ASCT patients.

## 106

**GRAFT FAILURE FOLLOWING ALLOGENEIC BMT TRANSPLANT: INCIDENCE AND OPTIONS.** Terry Sylvanus, MSN, APRN, BC, AOCN®, Moffitt Cancer Center, Tampa, FL.

Graft failure following allogeneic blood and marrow transplant is not the pervasive problem that complicated the survival of recipients prior to the advent of powerful antimicrobials and cytokines, but it still occurs.

Blood and marrow transplant is now available to patients who may be heavily pretreated, or have more varied disease, more virulent malignancies, and more comorbidities.

This abstract will describe three cases of graft failure following allogeneic stem cell or bone marrow transplant with subsequent treatment and sequelae.

A literature search will provide a summary of the current knowledge and data about the incidence and circumstances of graft failure and the treatment options that may be offered afterward.

Nursing care for these patients will be described as well as the psychosocial issues faced by patients, families, and nursing staff in these situations.

## 107

**FUTURE FUNGAL FIGHTERS.** Zandra Rivera, RN, BSN, University of Texas M.D. Anderson Cancer Center, Houston, TX.

Patients with hematological malignancies are very susceptible to infections, particularly of a fungal source due to their disease process as well as certain treatment modalities. Invasive fungal infections carry a high morbidity and mortality rate. Clinicians are now taking a new approach to treat fungal infections due to occurrence of resistant organisms and recurrence. Patients with hematological diseases, on immunosuppressive therapy, or with neutropenia are more susceptible to opportunistic fungal infections.

Most common fungal pathogens are of the *Candida* species and *Aspergillus* species. Antifungal treatment is given prior to and postchemotherapy regimens. Traditional treatments of choice to prevent fungal infection in hematology patients include Fluconazole or Itraconazole. In the treatment of fungal infection, the chosen therapeutic option is Amphotericin B or its lipid formulation. The response to the current antifungal medications varies in patients. Monitoring of adverse reactions such as chills, fever, and anaphylaxis is also a priority, therefore, premedications are necessary prior to the administration of Amphotericin

B. Due to the effects these agents have on kidney and liver function, dosing of the medications is critical.

Despite the current treatments, resistant infections are becoming a serious problem. In response to the problem of resistant fungal infections, combination therapy and/or newer agents like Voriconazole and Caspofungin are being used. Voriconazole and Caspofungin are less toxic on the kidneys and liver, premedications are not required, and, thus, are better tolerated by hematology patients.

A case study will be presented including prophylactic management as well as treatment of a BMT patient with a fungal infection.

Continued research is being done to determine the best uses of these agents alone or in combination therapy in order to better treat fungal infections in our hematology patients and decrease toxicities.

## 108

**PHYSICAL THERAPY IN THE ALLOGENEIC STEM CELL TRANSPLANT POPULATION.** Jill Burleson, RN, ANP, and Margaret Eren, APRN, BC, MSN, FNP, Adult Bone Marrow Transplant Program; and Alison Hays Valdepenas, DPT, Department of Physical Therapy, Duke University Medical Center, Durham, NC.

Allogeneic stem cell transplant is a treatment modality that is intensive and difficult for patients to endure. Stem cell transplant treatment has multiple effects on patients' bodies including fatigue and deconditioning. One way to manage these side effects is through the use of exercise. Studies report positive effects of aerobic and resistance exercise on regaining lean tissue (Hayes, Davies, Parker, & Bashford, 2003). One study showed a positive effect of exercise on pain, duration of neutropenia and thrombocytopenia, and overall hospital stay (Dimeo, Fetscher, Lange, Mertlesmann, & Keul, 1997).

Exercise has demonstrated no adverse effects on immune system recovery (Hayes, Davies, Parker, & Bashford, 2003). To date, there has been no research which determined the platelet parameters needed for safe physical therapy. Most institutions invoke a platelet count of 10,000 as an absolute for physical therapy. However, in the transplant population, it is common for patients to consistently have a platelet count below 10,000 during the first 60 days after transplant. It is during this time that they are most debilitated physically and stand to lose the most endurance and muscle strength. It is also during the first 60 days that they are most susceptible to infections and require intensive amounts of care, reducing their overall quality of life. A few studies have been conducted with a focus on quality of life and showed a positive impact of exercise on overall quality of life (Dimeo, Steiglitz, Novelli-Fetscher, & Keul, 1999; Courneya, Keats, & Turner, 2000).

The purpose of this presentation is to outline the Duke University Adult Bone Marrow Transplant Program's approach to physical therapy in the allogeneic population. A pilot project, which uses the safe platelet parameter of 5,000 for exercise is currently being conducted on 25 patients. Outcome measures have thus far demonstrated no adverse events based on using this platelet parameter. A physical therapist evaluates each patient at the beginning of transplant and develops a physical exercise regimen for the patient. Throughout the patient's course within the first 60 days, measures of progress are obtained such as muscle strength and physical endurance. A quality-of-life survey is also administered to assess if therapy improves quality of life as compared with other allogeneic transplant patients who did not wish to participate in therapy. We believe designing safe, effective exercise interventions can enhance physical functioning and promote quality of life in this vulnerable population.

More information is needed about exercise in the allogeneic BMT population to help the healthcare team make appropriate recommendations for interventions that will safely improve both physical health and quality of life.

## 109

**SURVEY RESULTS ON THE DIETARY PRACTICES OF ALLOGENEIC HEMATOPOIETIC STEM CELL TRANSPLANT FACILITIES IN THE UNITED STATES.** Rachelle Senzon, RN, BSN, OCN®, and Amanda Jenkinson, RN, MS, AOCN®, The Cancer Institute of New Jersey, New Brunswick, NJ.

Dietary practices vary among allogeneic blood and marrow transplant centers. Unlike any published work, this study will describe the dietary



practices among blood and marrow transplant centers in the United States. This baseline survey will evoke evidenced-based research standards.

This survey will obtain information on the dietary practice of bone marrow transplant facilities, and describe how transplant facilities determine dietary restrictions. We will also measure the frequency of glutamine use in transplants. 146 centers in the United States perform 15,000 allogeneic blood and marrow transplants yearly. As we understand transplants better, we have lifted some traditional dietary restrictions. As scientific evidence replaces tradition as the basis for decisions, our patients' diets have expanded. Some transplant centers prescribe glutamine, a non-essential amino acid that depletes during catabolic conditions, such as cancer. Little research explains the role of glutamine in reducing side effects and hospital stay.

The investigators will survey the top 100 transplant facilities and compile their nutritional practices in 2002–2003. Because no standard questionnaire adequately assesses the role of diet in allogeneic transplant, the investigators compiled a list of dietary restrictions placed on patients from a sample of patient education material and neutropenic diets. The blood and marrow transplant team at the Cancer Institute of New Jersey validated the survey.

We will use the BMT Infonet to select the top 100 bone marrow transplant facilities that perform at least 10 transplants yearly. Due to the non-random nature of the sample, we will only describe the specific data for these facilities. Descriptive statistics will include frequencies, percentage distributions, ranges, and measures of variability and central tendency. We will summarize the data for all respondents, as well as for specified subgroups of respondents, based on transplant volume and geographic region.

Evidenced-based research will improve the standards of patient care. Specifically, this in-progress survey will capture conglomerate data on how transplant facilities determine patient diets, including the frequency of glutamine use. The survey results will serve as a foundation for future study of the type, length, and rationale of dietary restrictions on patients undergoing allogeneic bone marrow transplants.

## 110

**INITIATING WEEKLY REFLECTIVE PRACTICE ROUNDS ON AN INPATIENT ONCOLOGY/BONE MARROW TRANSPLANT UNIT.** Anne Marie Barron, PhD, RN, CS, Lisa Sohl, RN, MS, OCN®, Elizabeth Johnson, MSN, AOCN®, RN, and Carol Ghiloni, RN, MSN, OCN®, Massachusetts General Hospital, Boston, MA.

Nursing staff on an acute care inpatient oncology/bone marrow transplant unit requested that a forum be created for collective focus on complex patient and family situations. This presentation will describe the practical and substantive aspects of developing reflective practice rounds.

In June 2002, a psychiatric clinical nurse specialist (CNS) was hired part-time on the inpatient oncology unit to focus on staff retention, with an emphasis on new graduate nurse orientation and support. The CNS met regularly with new graduate nurses and consulted with nursing staff. Toward the end of the first year, the experienced staff requested that a forum be created for them focusing on concerns in nursing practice. They noted a wish to reflect together on complex/distressing patient and family situations. In May 2003, weekly reflective practice rounds were initiated. The rounds were inspired by the work of Benner (1984), Newman (1994), Johns and Freshwater (1998), and Noveletsky-Rosenthal and Solomon (2001).

During the first week of reflective practice rounds, staff presented a poignant and difficult death for reflection. There were powerful feelings related to the death and the connections between the staff and family had been profound. The sense of loss was accentuated by the patient's transfer to the intensive care unit; relationships had shifted at an incredibly important time for the family. Communication about the patient had not been ideal. The patient's primary nurse had been a nurse for less than a year. The sharing of feelings, recognition of the exquisite nursing care provided, problem solving in relation to communication concerns, and explicit support for the primary nurse all helped to mitigate the sorrow. The suffering of colleagues had been addressed with the caring characteristically offered to patients and families.

Each week since, the staff has gathered. Difficult situations are presented. Profound and moving moments of practice are shared. Each week,

as in the first rounds, the caring for and knowing of one another is deepened. Staff members are expressing their appreciation for the time together and the opportunity to share and develop deeper understandings. At twelve months, the staff will be asked formally to evaluate reflective practice rounds.

The implications for nursing practice are significant and the development of regularly scheduled opportunities for oncology nurses to share and reflect upon their nursing practice is priceless. Creating and embracing this type of safe and caring structure/environment that promotes the sharing of powerful and personal feelings can only enrich our oncology practice and commitment to one another.

## 111

**SYMPTOM MANAGEMENT IN OUTPATIENT SURGERIES.** Gloria Juarez, RN, PhD, Betty Ferrell, RN, PhD, Carey Cullinane, MD, Michael Lew, MD, Andres Falabella, MD, and Lawrence Wagman, MD, City of Hope National Medical Center, Duarte, CA.

The pre- and postoperative time provides nursing the opportunity to intervene and initiate pain education early in the course of the illness and treatment.

Procedures performed on an ambulatory basis have improved patient outcomes and decreased associated cost. Pain and nausea are symptoms that may occur after a surgical procedure. Clinical consequences of postoperative nausea and vomiting (PONV) include increased pain, electrolyte losses, and increased recovery time. Consequences of unrelieved pain include immobility and increased severity of other symptoms. The purpose of this quality improvement project was to describe the incidence of these symptoms and their management in patients undergoing outpatient surgical procedures at the City of Hope National Medical Center.

The sample included 39 patients who had breast cancer procedures or placement of venous access lines including Port-a-Cath and Hickman. Subjects were accrued for a three-month period of time. Data was collected preoperatively, and at 24 hours and seven days postoperatively.

Data were analyzed using descriptive statistics and frequencies. Only a small number of patients experienced nausea at 24 hours and at one week post-op, and moderate levels of distress were associated with nausea. Pain relief in this sample was consistent with the literature in which patients report moderate pain relief, belief in giving only the lowest dose possible, and fear of respiratory depression.

Postoperative pain and PONV were generally well managed, but areas of improvement were identified. The pre- and postoperative time provides nursing the opportunity to intervene and initiate pain education early in the course of the illness and treatment. The methods used for this project have potential application to other clinical outcomes following surgery.

## 112

**POSTOPERATIVE FREE FLAP MANAGEMENT IN HEAD AND NECK PATIENTS: THE ROLE OF THE INPATIENT NURSE.** Colette Mooney, RN, OCN®, Kathleen Schardien, RN, MSN, AOCN®, and Laryn Schimpf, RN, BSN, Memorial Sloan Kettering Cancer Center, New York, NY.

Following a mandibulectomy, primary reconstruction with a fibular free flap or radial forearm free flap offers patients a functional, structural, and cosmetic reconstruction. This surgery involves a collaborative effort between head and neck surgeons, plastic reconstructive surgeons, and inpatient nurses. This presentation will outline the nursing care of patients following free flap surgeries for mandibular cancers, review postoperative changes in anatomical structure and function, and discuss potential postoperative complications.

At this NCI-designated comprehensive cancer care center, approximately 75 mandibulectomies with primary radial and fibular free flap reconstruction are performed annually. This surgery involves removal of all or part of the mandible, which is then reconstructed using bone from either the fibula or radius along with artery, vein, and the surrounding soft tissue. The health of the flap is essential in helping to restore a patient's ability to speak and eat. Flap failure requires immediate return to the operating room for salvage attempts and further reconstruction. This second surgery increases morbidity and severely decreases functionality and cosmetic appearance of the flap.



Astute flap monitoring is necessary to detect subtle changes in flap color and circulation and recognize early signs of flap failure. Circulation is assessed by Doppler to detect the pulse at the site of anastomosis. Temperature probes are utilized to compare that of the flap to a control site. Administration of appropriate anticoagulation medication improves blood flow to the flap. Flap precautions implemented include: no tracheostomy ties around the neck, maintenance of the head in a neutral position, and no pillows for the immediate post-operative period. Nursing care must also focus on the care of the flap donor site.

At our center, the viability of the flap during the postoperative period relies heavily on the immediate postoperative care provided by the expert inpatient nurse.

Nurses caring for this patient population should be able to identify changes in anatomy of the mandibular free flap patient, discuss postoperative flap care, and recognize potential complications related to the flap.

## 113

**THE ROLE OF THE CLINICAL NURSE SPECIALIST IN COORDINATING MULTIDISCIPLINARY POSTOPERATIVE CARE FOR PATIENTS UNDERGOING A TOTAL LARYNGECTOMY.** Kathleen Schardien, [Need credentials], Memorial Sloan Kettering Cancer Center, New York, NY.

A total laryngectomy involves the removal of the entire larynx leaving patients with significant alterations in function and appearance including a permanent inability to speak and a tracheostoma. Total laryngectomies are performed as the standard treatment for patients with T3 and T4 laryngeal cancer and as a salvage treatment for patients with early stage disease. The postoperative care for this patient population involves collaboration between physicians, nurses, dietitians, social workers, speech and swallowing therapists, and discharge planners. At this NCI-designated comprehensive cancer center, the unit-based clinical nurse specialist (CNS) is not only the clinical expert but also the pivotal coordinator of postoperative care for this patient population.

This presentation will describe the multidisciplinary needs of patients following a total laryngectomy and highlight the role of the advanced practice nurse in coordinating optimal patient care.

The CNS develops and implements a patient-specific treatment plan to manage postoperative complications, provide psychosocial support, and address barriers to discharge. During the initial postoperative period, the CNS assists the primary nurse in providing acute nursing care that focuses on airway management, pain control, and stoma care. Throughout the postoperative period, the CNS consults other disciplines to address nutritional issues, wound healing, discharge planning, and teaching alaryngeal speech to patients.

A multidisciplinary approach to caring for patients following a laryngectomy is essential in providing care that addresses the unique physical and psychosocial needs of this patient population. The CNS possesses both the clinical expertise and leadership abilities to facilitate all patients in receiving the necessary components of care prior to discharge.

As outlined in the *ONS Standards of Advanced Practice in Oncology Nursing*, the advanced practice nurse works as the coordinator of the plan of care to ensure treatment goals are achieved and provide continuity in care.

## 114

**PATIENT EDUCATION FOR MEN UNDERGOING A SALVAGE RADICAL RETROPUbic PROSTATECTOMY: A NURSING CHALLENGE.** Mary Schoen, RN, MSN, MPH, Memorial Sloan Kettering Cancer Center, New York, NY.

For most men diagnosed with organ confined prostate cancer, the choices in treatment include surgery, radiation, and radioactive seed implantation. Due to advances in radiation techniques and surgical interventions, patients who have failed radiation treatment now have the option of undergoing a salvage radical retropubic prostatectomy. Nurses are integral in educating patients regarding the rationale of salvage therapies, statistical outcomes regarding treatment, potential side effects, and alternative therapies.

Despite treatment for localized disease, 8%–35% of patients will fail radiotherapy biochemically in five years. Biochemical failure is defined as three consecutive increases in PSA level. If a biopsy confirms recurrence, the urologist may offer a salvage prostatectomy. This surgery is offered to

patients who are well motivated, are in good health, and have a life expectancy of at least 10 years. Fear and anxiety are common in men with prostate cancer, and are further compounded when the cancer has returned after initial treatment. Nurses play a pivotal role in reducing apprehension by providing information about the surgical procedure, post operative recovery, side effects, and supporting the patient and family.

Nursing education before and after surgery is crucial. Well-informed patients are better able to make treatment decisions. Therefore, information regarding treatment complications including erectile dysfunction and urinary incontinence with their overall incidence need to be discussed.

Salvage prostatectomy provides excellent local control of radio recurrent cancer, eradicating the disease in a high proportion of patients with organ-confined disease. In studies of patients who have undergone a salvage prostatectomy over the past eight years, the short- and long-term complication rates exceed those of the standard prostatectomy. Rectal injuries are rare, but anastomotic strictures and long-term, moderate-to-severe urinary incontinence are more common, as well as high rates of impotence. The nursing education offered to these patients helps them to more effectively manage symptoms and side effects as they arise, leading to an increase in patient satisfaction.

This abstract is an overview of the salvage radical prostatectomy and the patient care plan developed by oncology nurses to guide the patient and his family through this surgical intervention.

## 115

**IMPROVING THE QUALITY OF CONTINENCE FOR BLADDER CANCER PATIENTS RECOVERING AFTER A CYSTECTOMY WITH NEOBLADDER RECONSTRUCTION.** Mary Ellen Haisfield-Wolfe, RN, MS, OCN®, CWS, Mark Schoenberg, MD, Jacqueline Welch, MPT, and Yi Huang, MS, Johns Hopkins Medical Institutions, Baltimore, MD.

Guidance through the uncertainties of cancer recovery is crucial for a patient's long-term quality of life. Dorsey (1991) suggests that intervention strategies guide the therapeutic effectiveness of the recovery process and states that before intervention can be designed, the normative process of recovery must be described.

Recovery of urinary continence is one issue faced by bladder cancer patients undergoing cystectomy with neobladder reconstruction. A neobladder is a urinary diversion constructed by using a piece of intestine anastomosed to the urethra. An oncology nurse in a urological-oncology practice noticed that neobladder patients were frequently asking questions regarding the recovery of their continence even though patients received education from a care provider throughout the post-operative period.

Subsequently, a performance improvement project led by the oncology nurse was developed to improve the patient's knowledge regarding neobladder continence. Strategies were to interface with a physical therapist expert in pelvic floor rehabilitation and to follow neobladder patients for one year to determine normal continence trends for these patients. Literature reviewed did not specifically state the course of continence recovery after surgery. Thirteen patients, mostly men (n = 12) with an age range from 46–73 years were followed. Each patient met with the physical therapist and completed a urinary domain questionnaire at 3-month intervals. Questionnaires revealed gradual urinary recovery, which was 49% at baseline and 76% by one year. Interestingly, two of the patients with a poorer recovery received chemotherapy. Younger patients tended to recover better and more physical therapy did not improve continence scores. Patients liked their physical therapy consultation for the education it provided.

The importance of this project is demonstrated in the patients' urinary domain scores, which establish trends for continence after neobladder, and evaluation of the educational component of this project. Oncology nurses can utilize this information to guide and educate bladder cancer patients' recovering after cystectomy. Future plans are to expand this multi-disciplinary project to perform research, which will further establish continence recovery trends, educational resources for patients, and the usefulness of physical therapy for these patients.

## 116

**"U CARE": THE FAMILY SUPPORT GROUP COMPONENT OF A CAREGIVER PATHWAY IMPLEMENTED IN A SURGICAL ONCOLOGY UROLOGY INPA-**





TIENT SETTING. Vlasta Aubrecht, RN, BSN, Rosanne Arlington, MSN, RN, ONC, CNS, JoAnn Mick, RN, MSN, MBA, AOCN®, and Marlene Z. Cohen, RN, PhD, FAAN, University of Texas M.D. Anderson Cancer Center, Houston, TX.

The family and caregivers of patients with cancer can significantly improve the patient's well-being and quality of life but are often stressed and anxious about their role. By observing and informally interviewing 24 family members and caregivers during the first few days of hospitalization after the patients' urologic oncology surgery, we determined that the family members were often anxious, lacked knowledge, were insecure about what to expect with the disease process, and were concerned about their role and their ability to offer support while the patients were hospitalized and when they returned home.

We therefore developed and implemented a pathway for caregivers that includes orientation to the unit, education about the specific illness and required care, review of the care calendar so they can actively participate in the patient's plan of care, hands-on educational sessions, and the U Care support group. We explain what concerns need to be reported to the nurses, and all team members encourage the family and caregivers to become actively involved in the patients' care during the hospital stay.

U Care was designed to provide family members the opportunity to express their concerns and questions and to share their thoughts, experiences, and suggestions with other family members in a group setting. Oncology nurses, a social worker, a case manager, and a clinical nurse specialist facilitate the support group. The volunteer department in our organization provides funding for snacks during the weekly group meetings.

Through an evaluation process conducted after each meeting, we identified common concerns and frequently asked questions to continually modify and strengthen the pathway. The initial feedback regarding the U Care support group has been very positive. The family and caregivers better understand the required care, have increased their direct hands-on involvement in care, and express more confidence in their ability to provide care when the patients are discharged.

U Care has helped us provide better educational and emotional support for family and caregivers and, therefore, may be useful in other oncology settings.

## 117

COMBINING THE INSIGHTS OF ORTHOPEDIC ONCOLOGY PATIENTS AND THEIR NURSES TO DEVELOP AN EFFECTIVE EDUCATIONAL PROGRAM FOR PATIENTS WITH TOTAL HIP AND KNEE ARTHROPLASTY. Rosanne Arlington, RN, MSN, ONC, CNS, Fely Pinyopusarerk, RN, BSN, OCN®, Elizabeth Kirkman, RN, BSN, Lindsey Frantz, RN, BSN, JoAnn Mick, RN, MSN, MBA, AOCN®, and Marlene Z. Cohen, RN, PhD, FAAN, University of Texas M.D. Anderson Cancer Center, Houston, TX.

Patients and their caregivers frequently tell oncology nurses that they did not receive or could not recall the information they need to help them function maximally when discharged. The problems patients have with recall and retention of information during times of stress have been well documented.

To alleviate this problem, we developed a structured educational program for the oncology patients who have total hip or knee replacement surgery.

This program follows patients from preadmission through hospitalization, discharge, return to their community, and post-discharge follow-up. For improvement, we used a questionnaire to assess patient/caregiver and nurse perceptions of the program. Thirteen oncology nurses from the orthopedic and orthopedic sarcoma clinic and the inpatient urology nursing unit completed questionnaires. The results were consistent among the nurses in each practice setting and indicated the importance of activity, exercise, medications, use of devices, fall precautions, coping with the situation, and safety measures. The clinic nurses stressed available resources and self-care. Patients completed questionnaires when they returned to the orthopedic and orthopedic sarcoma clinics for follow-up visits. They indicated that some of the most important information was to be proactive, positive, willing to ask for assistance, practice self-care.

Patients and caregivers need to be taught how to apply specialized knowledge so they can independently respond to their symptoms and problems. Nurses often participate in education as advisors or consultants,

coaching patients and families as they learn to make sound decisions and use problem-solving skills to learn self-care. This information will give oncology nurses a greater understanding of what patients and caregivers want to know to make appropriate care decisions and allow maximal independence in their daily lives.

## 118

USING GUIDELINES TO MANAGE ANEMIA IN GYNECOLOGIC ONCOLOGY PATIENTS. Lisa Tangeman, RN, OCN®, Gynecology/Oncology and Pelvis Surgery Associates, Columbus, OH.

Anemia is a commonly seen problem of gynecologic oncology patients. It has been reported that as many as 43.9% of advanced ovarian cancer patients have a grade 1–2 anemia and 14.1% have a grade 3–4 anemia (Groupman, 1999). Unfortunately, it is also under-recognized as a significant problem and often under treated.

Prior to instituting anemia treatment guidelines in the private gynecologic oncology practice I work in, it was common to see patients with hemoglobin levels typically in the 9–10 g/dL range. Data show patients with a hemoglobin equal to or greater than 12g/dL have a better quality of life (Cleeland et al., 1999). Other data shows a low hemoglobin level may adversely affect cancer therapy outcomes, especially when radiotherapy is involved. (Tchekmedyan, 2001.)

In 2002, Gynecology Oncology and Pelvic Surgery Associates developed anemia guidelines for the treatment of patients with chemotherapy-induced anemia. The physicians recognized the importance of developing a tool to delegate anemia management to nurses using standing orders.

The anemia guidelines use the complete blood count and iron labs. Nurses are responsible for assessing patients with hemoglobin levels below 12g/dL for signs and symptoms anemia. If the patient has symptoms of anemia, darbepoetin alfa 200mcq SQ every 2 weeks or 300mcq SQ every 3 weeks is started based on the patient's current chemotherapy schedule. Counts are monitored using a chemotherapy flow sheet to allow for assessment of response and modification at 4–6 weeks.

Developing and using anemia treatment guidelines tailored to a specific office can allow nurses to enhance quality cancer care of gynecologic oncology patients and may improve their cancer therapy outcomes.

## 119

RESULTS OF A 12-MONTH RANDOMIZED EXERCISE TRIAL FOR NEWLY DIAGNOSED CANCER PATIENTS. Anna Schwartz, FNP, PhD, FAAN, Janet Bagley, RN MS OCN®, Jennifer Holub, [Need credentials], Kathryn Cunningham, BA, and Betty Gallucci, PhD, University of Washington, Seattle, WA.

Cancer treatment causes many well-documented negative effects on physical and emotional function. While much of the previous research has focused on the effects of aerobic exercise during treatment, limited research has examined the effects of exercise during treatment and the recovery time following treatment.

**Purpose:** The purpose of this 12-month study was to compare the effect of aerobic exercise (AE) to resistance exercise (RE) and usual care (CG) on physical and emotional function, and side effect incidence and severity.

**Methods:** The design was a randomized trial of 101 patients newly diagnosed with cancer receiving chemotherapy and steroids for a variety of different cancers. Subjects were randomly assigned to AE, RE, or CG, and were followed from the start of chemotherapy for 12-months. The exercise intervention for both groups included four days of exercise for 15–30 minutes of moderate intensity.

**Measures:** Measures included aerobic capacity (12-minute walk), muscle strength (1-RM), body composition (DXA), side effects (SCFS-6, Side Effect Symptom Checklist), and affect (PANAS-S/T).

**Data Analysis:** Descriptive and repeated measures analyses were used to examine differences among groups over time.

**Results:** The sample consisted primarily of women (80%) with stage II or III disease (73%) at a mean age of 48 years. Most (51%) were regular exercisers at baseline. The most common cancers were breast and lymphoma. Significant differences were observed between both exercise groups and CG in percent of body fat (%BF) ( $p < .05$ ) bone mineral den-



sity (BMD) ( $P < .01$ ) and aerobic capacity. The effect of exercise on percent BF and BMD was strongest among female subjects. Significant differences were observed between the exercisers and CG on level of fatigue and affect.

**Implications:** This study provides insight into the effects of exercise during and following treatment. The benefits of exercise appears to be preserving body composition and reducing side effect intensity during and following treatment and may be important in discovering ways to promote recovery and healing.

## 120

**PRINCIPLES FOR THE SUCCESSFUL MANAGEMENT OF CHEMOTHERAPY-INDUCED ANEMIA (CIA) WHEN IMPLEMENTING CLINICAL PATHWAYS IN STANDARDIZED PRACTICE.** Karen Miles, RN, West Clinic, Memphis, TN.

Despite the availability of numerous guidelines and clinical pathways, chemotherapy-induced anemia (CIA) remains under treated in patients with cancer. Standardized clinical pathways can improve outcomes, but such pathways are frequently not implemented or are inadequately followed.

The purpose of this paper is to identify barriers to CIA clinical pathway implementation and utilization.

We reviewed published and other available clinical pathways for the management of CIA, and examined the implementation and utilization of CIA pathways at a large, regional, oncology/hematology practice.

Several barriers to CIA pathway implementation and use were identified. In many cases, the clinical pathway design may be unclear or fails to account for reasonable clinical situations or frequently used doses and schedules of treatment drugs. Training of nurses regarding the pathway may be insufficient leading to inconsistencies in interpretation. Failure to document key pathway information can result in inefficient use of time while searching for missing documentation and, more importantly, may result in incorrect decision making based on faulty or missing information. Deviations from the pathway create special challenges to subsequent pathway use and cause general confusion about consistent pathway adherence. Availability of the pathway and convenient documentation tools, along with other practical issues at the point of care may significantly impede pathway acceptance. Finally, familiarization with a previous pathway and comfort with the status quo may create a formidable reluctance to accept a new anemia pathway. This may compromise the implementation of a potentially more effective approach, particularly when a new CIA treatment is introduced.

CIA clinical pathways need to be well constructed, clear, precise, and readily available. It is important to include all members of the healthcare team, emphasizing specific roles and responsibilities when implementing and utilizing the pathway. Education in the use of a pathway should be ongoing and utilization regularly assessed. Changes to the pathway need to be promptly communicated to all involved staff. Documentation requirements must be applied consistently to ensure clarity and efficiency. Standardizing CIA pathways establishes a consistent approach to treatment, thereby capturing more patients and allowing for flexible regimens tailored to the needs of individual patients.

## 121

**DEVELOPMENT OF A NEUTROPENIA ASSESSMENT TOOL.** Rebecca Donohue, MSN, RN, CS, FNP, AOCN®, Acadiana Medical Oncology, Lafayette, LA.

The purpose of this project is to develop a neutropenia risk assessment tool appropriate for use in a small oncology practice whose patient population consists of adults with various cancer types and staging. Neutropenia in patients receiving myelosuppressive chemotherapy (CT) can result in life-threatening infection, prolonged hospitalization, and delivery of substandard CT dose intensity. Identifying patient variables making cancer patients at increased risk of developing chemotherapy induced neutropenia (CIN) would help practitioners provide proactive management of neutropenia, thus decreasing complications. The framework used was the Evidence-Based Utilization Framework.

A literature search was performed and 10 studies from medical and

nursing journals, as well as neutropenia management guidelines from the American Society of Clinical Oncology (ASCO) and National Comprehensive Cancer Network (NCCN) were found. Pertinent patient variables were extracted from the literature search and included chemotherapy regimen with greater than or equal to 40% risk of development of febrile neutropenia, advanced age, advanced disease stage, bone marrow involvement and/or compromise, serum albumin less than or equal to 3.5 g/dL, and first cycle ANC less than or equal to 500. Using the identified variables, a single page assessment tool was developed. Each patient scheduled for a new course of chemotherapy was assessed using this tool. With the presence of one or more of these risk factors, the patient is considered at high risk for development of neutropenic complications, and proactive management guidelines were to be followed.

Expected results are a decrease in neutropenic complications such as a febrile neutropenia, antibiotic use, hospitalization, and chemotherapy dose delays and reductions. A retrospective chart review is currently being performed and results will be presented during the poster presentation at ONS Congress in 2004.

Use of this neutropenia risk assessment tool may benefit the nursing staff and practitioners by taking the guess work out of determining which patients would benefit from the pro-active neutropenia management tool, and may benefit patients by decreasing the occurrence of life-threatening infection, prolonged hospitalization, and delivery of substandard CT dose intensity. Nurses can use this tool to identify patients at increased risk of developing chemotherapy-induced neutropenia (CIN) and, along with the entire healthcare team, provide proactive management of neutropenia, thus decreasing resulting complications.

## 122

**THE TREATMENT AND PREVENTION OF RESPIRATORY SYNCYTIAL VIRUS IN IMMUNOCOMPROMISED PATIENTS.** Amy Meyers, RN, BSN, OCN®, and Joyce Neumann, RN, MS, AOCN®, University of Texas M.D. Anderson Cancer Center, Houston, TX.

The greatest risk for immunocompromised oncology patients is infection. Respiratory viral infections, like respiratory syncytial virus (RSV), frequently cause acute respiratory illness and are associated with high morbidity and mortality rates if there is progression to the lower respiratory tract.

RSV is a single stranded RNA virus that causes yearly and seasonal epidemics of upper and lower respiratory infections. The occurrence can run throughout the year but there are typically widespread outbreaks during the winter months, peaking in January and February. On our 52-bed inpatient unit, patients are screened upon admission for respiratory symptoms (cough, wheezing, fever, runny nose, sore throat) by nurses and then screened daily by the healthcare team. A nasal wash using rapid direct antigen is performed on any patient who experiences symptoms. Contact isolation is established before results are available to decrease the possibility of transmission to other patients.

RSV can be easily transmitted via large respiratory particles or through contact with respiratory secretions (coughing, sneezing) or indirectly from contact with contaminated objects (clothing, bathroom fixtures, telephones). The virus can remain alive on surfaces for six hours. The most common inoculation sites are the eyes and nose. Hand washing is the single most effective measure of preventing the spread. Measures to prevent the transmission before symptoms may occur include mask for employees entering patient room or when patients leave their room; enforcing strict hand washing; gloves worn by employees having patient contact; prohibiting children under twelve; and continuous screening of all visitors and staff. The treatment of choice for RSV is aerosolized ribavirin. This antiviral agent is administered high-dose every six hours three times a day or continuous for 18 hours a day. A portable hepa-filter tent is used to lessen exposure of ribavirin to others. IV Synagis or IVIG are used in conjunction with ribavirin.

Cancer treatment itself can leave the patient feeling isolated and stressed. An added diagnosis of RSV and its treatment can increase these feelings.

Oncology nurses caring for these patients need to address both physical and emotional needs. Pictures of ribavirin set-up, isolation measures, treatment outcomes, and staff and patient/family educational material will be presented.



## 123

**THE DEVELOPMENT OF AN ALGORITHM MANAGING MALIGNANT PLEURAL EFFUSION (MPE): THE ROLE OF THE AMBULATORY THORACIC NURSE.** German Rodriguez, RN, BSN, and Robert Downey, MD, Memorial Sloan Kettering Cancer Center, New York, NY.

At this NCI-designated cancer center, the ambulatory thoracic nurses in conjunction with the thoracic surgeons, developed an algorithm that outlines specific courses of action based on patient's performance status, expected length of survival, and other related goals of treatment. This algorithm provides a guide for treatment choices most likely to relieve symptoms and reduce the need for repeated procedures, clinic visits, or hospitalizations.

Malignant pleural effusion (MPE), an abnormal collection of fluid in the pleural space, is a common complication of many types of malignant disease. The frequency of MPE is gender-dependent, with the most common causes for men being lung, lymphoma, and GI cancers; and for women, breast, gynecologic, and lung cancers. Survival of patients with MPE is poor: 65% die within three months and 80% within six months. MPE produces symptoms of cough, shortness of breath, and pleuritic pain, which significantly affect patient's quality of life. These symptoms can be reduced or relieved by mechanical evacuation of fluid from the pleural space and re-expanding the underlying lung. Mechanical evacuation options include multiple thoracenteses (insertion and aspiration through a needle), bedside tube thoracostomy, video-assisted thoracic surgery "VATS," or insertion of a permanent indwelling pleural catheter that allows continuous drainage. For patients who are either unwilling or unable to tolerate drainage procedures, palliation of symptoms may also be possible with medications such as corticosteroids and opioids. Choosing the appropriate intervention is difficult and frequently based on physicians and patient preference.

The ambulatory thoracic nurse educates the patient, family members, and caregivers about treatment options, collaborates with the physician in choosing and performing the appropriate intervention, assesses patient response to interventions, and coordinates referrals for community services and hospice care.

This presentation features the algorithm, provides a description of interventions (including an overview of the various types of indwelling pleural catheters), and describes the role of the nurse in delivering these palliative care measures.

With increased awareness, nurses will play a vital role in managing the functional and comfort needs of patients with MPE by developing individualized treatment plans during the end-of-life period.

## 124

**PRISM: A DIFFERENT DIMENSION, COLLABORATING TOGETHER ON SYMPTOM MANAGEMENT PROTOCOLS.** Marilyn Haas, PhD, RN, CNS, ANP-C, Mountain Radiation Oncology, Asheville, NC.

Attending a one-day workshop, offered by ONS's PRISM team of experts in October 2001, inspired two nurse practitioners to collaborate on developing evidence-based symptom management protocols. When oncology patients receive chemotherapy and radiation concurrently, patients often get confused about who is directing their care and managing their symptoms, and sometimes receive conflicting information. The purpose of this PRISM project was to offer patients consistent interventions between two oncology practices that would be evidenced based. Ultimately having accepted protocols between two oncology sub-specialties would improve patient care. Secondly, having written protocols could guide novice oncology nurses in their planning of care.

The purpose was to develop written evidenced protocols for patients undergoing chemoradiation. The process began by reviewing the established protocols. However, like many ambulatory practices, nurse practitioners' protocols are developed from physician preferences and practice patterns. There were many different, undeveloped, and some unwritten protocols. Ten protocols were selected: nausea/vomiting, diarrhea/constipation, pain, anorexia, cystitis, prostatitis, vaginitis, cerebral edema, esophagitis, and hot flashes. Assessment criteria were developed. NCI common toxicity scales were added, along with more evidence-based interventions.

The template development included the following headings: Assessment, NCI toxicity criteria for documentation of outcomes, evidence-based primary and secondary interventions, and follow-up care (samples will be shared at poster session). While formalized follow-up patient satisfaction surveys were not conducted, the nurse practitioners felt symptom management is more standardized now between the medical and radiation oncology offices with patients getting consistent information, directions, and care. Second, the staff nurses felt these were helpful tools to direct their patient care. Today, even physicians are utilizing these protocols.

In addition to having well-developed protocols, one of the nurse practitioners went one step further and has entered the protocols into her pocket PDA. This is an easy pocket reference that is being updated as new evidence is presented and stored in Microsoft Word.

The implications are having a collaborative practice that jointly developed protocols for patients receiving two treatment modalities (chemotherapy and radiation therapy), patients building trusting relationships on consistent information rather than conflicting information, having evidence-based interventions, and having something for the staff nurses to follow along.

## 125

**DYSPNEA MANAGEMENT: USE OF EVIDENCE-BASED PRACTICE GUIDELINES IN THE DEVELOPMENT OF A PATIENT EDUCATION TOOL.** Iim Plastini, RN, BSN, OCN®, Diane Paolilli, RN, MSN, AOCN®, Leslie Tyson, MSN, APN-BC, OCN®, Dana Inzeo, RN, MA, AOCN®, and Nancy Houlihan, RN, MA, AOCN®, Memorial Sloan Kettering Cancer Center, New York, NY.

An estimated 80% of patients with lung cancer experience dyspnea (Cooley, 2000). In addition, dyspnea is one of the most common symptoms in patients with advanced cancer, with or without direct lung involvement by cancer (American Thoracic Society, 1998). Dyspnea is defined as an uncomfortable sensation of breathing; it causes distress and negatively affects quality of life (Gallo-Silver, 2000). Common causes of dyspnea include, but are not limited to, primary lung cancer or lung metastasis, pulmonary embolus, pleural or pericardial effusions, pneumonia, asthma, anemia, or lung damage related to treatments such as chemotherapy, radiation, or surgery. Despite the prevalence or cause, dyspnea is generally poorly understood and managed. The current standard of care includes treating the underlying cause and reducing patient distress through interventions that minimize symptoms. These interventions may include pharmacological treatments such as opioids, steroids, antibiotics, or anxiolytics. Nonpharmacological interventions may include breathing exercises, acupuncture, and acupressure. Interventions that enhance symptom management are essential to nursing care.

A dyspnea task force at this NCI-designated comprehensive cancer center identified the need to develop standardized nursing interventions for dyspnea management based on clinical evidence.

A tool for educating patients and caregivers was developed to incorporate behavioral interventions. The interventions in our tool include the use of a series of diaphragmatic breathing exercises. Diaphragmatic breathing techniques are considered to be effective to help lungs function optimally (Gallo-Silver, 2000).

In the future, a clinical trial is planned to determine the effectiveness of behavioral interventions in reducing dyspnea.

The formulation of this tool represents an example of how nurses can apply evidence-based practice guidelines to assisting patients to better manage symptoms and improve their quality of life. This presentation will present an overview of dyspnea, evidence-based interventions, and the tool that was developed.

## 126

**ESTABLISHMENT OF A BOWEL MANAGEMENT PROGRAM FOR ONCOLOGY PATIENTS AFTER UROLOGIC AND ORTHOPEDIC SURGERY.** Saramma Alexandar, RN, Rosanne Arlington, RN, MSN, ONC, CNS, Annette Bisanz, RN, MPH, JoAnn Mick, RN, MSN, MBA, AOCN®, and Marlene Z. Cohen, RN, PhD, FAAN, University of Texas M.D. Anderson Cancer Center, Houston, TX.

Constipation is one of the most reported problems associated with cancer care. The importance of prevention of constipation and bowel





management for patients taking opioid medications is well documented.

On our surgical oncology orthopedic and urologic unit, many patients receive pain medication after their surgery. We noted that they frequently complain about being constipated. The oncology nurses caring for these patients on our unit were aware of the effects of opioids and negative effects on bowel function and felt that they were addressing the issue of bowel management effectively. However, a series of four 15-minute inservices presented by a clinical nurse specialist in bowel and symptom management led our nurses to think otherwise.

The presentations were aimed at helping the bedside clinician understand the function of the bowel and the impact of cancer and its treatment on it, and defining a practical, effective approach to bowel management for our patients. Clinical examples and practical implications were included, and the nurses became aware of the need for a consistent, evidence-based practice. One nurse on the unit was given the responsibility of leading her colleagues as a bowel "champion" on the unit. Supported by her clinical nurse specialist, she became a unit-based resource on bowel management for the patients and staff and a catalyst for change. Her goal was to lead her colleagues in establishing a standard practice to prevent constipation in their patients. To establish a baseline and identify the problem, data was collected from patients and staff.

Data collection and analysis confirmed the need for a more focused, consistent approach to bowel assessment and for a unit-based bowel management program that made bowel management a priority to caregivers.

The nurse "champion" continues to serve as an expert resource to support the patients and staff for issues about bowel management. This poster will provide information to assist other oncology nurses in implementing an effective bowel management program to address a common problem experienced by cancer patients, namely, constipation.

## 127

**PROACTIVE BOWEL MANAGEMENT-PUTTING THE PRISM CONCEPT INTO PRACTICE.** Annette Bisanz, RN, BSN, MPH, University of Texas M.D. Anderson Cancer Center, Houston, TX.

Bowel elimination problems are indications of a symptom that is easily overlooked in the oncology population and needs to be prioritized as a symptom warranting meticulous attention by the oncology nurse. This project aims at making bowel symptom management a priority by increasing institutional awareness and educating and mentoring a resource nurse in all the inpatient and outpatient areas of a major cancer hospital.

The problem was identified by determining the prevalence of bowel problems through ICD 9 billing codes. A price tag was placed on six patients who were admitted for an impaction. Administrative directors, nurse managers and advanced practice nurses were informed of the problem. A two-hour CE credit class was offered for nurses, physician assistants and also dietitians and pharmacists. Monthly bowel management rounds were initiated and a mentoring program was developed to assist resource nurses on each unit/clinic develop their skills in managing this symptom. The measures to evaluate the outcome of this program are the number of practice changes being addressed, the number of attendees at educational sessions, the establishment of a nurse mentoring program, the attendance at monthly bowel management rounds, and the successful role of a clinical nurse specialist in bowel management to provide consultation to physicians, staff, patients, and community in the management of constipation and diarrhea.

Through proper assessment, documentation, patient education, ongoing guidance based on outcomes, and incorporating the interdisciplinary team in the care of patients, nurses can be proactive in the prevention of constipation and diarrhea.

## 128

**WOUND CARE CHALLENGES IN ONCOLOGY PATIENTS: USING THE PRINCIPLES OF WOUND MANAGEMENT FOR LEUKEMIA AND LYMPHOMA PATIENTS.** Linda Woodward, RN, BSN, OCN®, CWOCN, University of Texas M.D. Anderson Cancer Center, Houston, TX.

Wound care in an oncology setting can be a challenge. The wound care modalities used in a general medical-surgical setting may not be appropriate for immunosuppressed patients with leukemia and lymphoma. These

patients are often compromised by immobility, malnutrition, infection, edema, and incontinence. Many of them also experience toxicities related to chemotherapy, further complicating the wound healing process. Nurses caring for these patients have a unique role in the treatment of these unusual wounds. Knowledge of basic wound management principles will enable oncology nurses to better assess and care for these patients.

The purpose of this presentation will be to describe different types of wounds seen in leukemia and lymphoma patients. Photographs of wounds and descriptions of wound treatments will be included.

Using the principles of wound management (the reduction of causative factors, the provision of systemic support, and the implementation of appropriate topical therapy), nursing interventions will be described and evaluated by assessing their outcomes.

Because frequent observation and assessment of these patients can reduce the incidence of wound complications, this poster will tell staff nurses what to observe and report. A case study of a leukemia patient with a large abdominal surgical wound will be included to show how multidisciplinary management can be used to deal with challenging and difficult-to-heal wounds.

Giving oncology nurses the information and tools they need to provide basic wound and skin care can improve outcomes including patient satisfaction and quality of life.

## 129

**THE MANAGEMENT OF PERIPHERAL NEUROPATHY (PN) ASSOCIATED WITH THERAPY FOR MULTIPLE MYELOMA (MM).** Kathy Kelly, RN, BSN, BS, Dana Farber Cancer Institute, Boston, MA.

Nurses play an essential role in peripheral neuropathy (PN) management in patients with multiple myeloma (MM) by monitoring and educating the patient regarding treatment-related side effects (SE) and the role of supportive therapies.

The proteasome inhibitor, bortezomib, was recently approved for the treatment of MM in patients who have received Y2 prior therapies and progressed on last therapy. In a phase II trial, bortezomib demonstrated efficacy (35% response rate) with acceptable toxicities. The most common drug-related SEs (> 30%) were nausea, diarrhea, fatigue, thrombocytopenia, and PN. Since PN can result from the disease and be a SE of therapy with anti-MM agents such as thalidomide and bortezomib, its detection and management are important to patient care. Our institution has developed a management program to attempt to minimize the development and progression of PN.

Patients are evaluated by neurologic examinations, including electromyography for patients exhibiting more severe symptoms and a questionnaire that focuses on neuropathic symptoms such as pain, weakness, or numbness. PN management relies on the patient's participation in his/her own health care by carefully monitoring for symptoms. Treatment may involve bortezomib dose reduction or omission, or extension of the dose interval, as well as the use of prescription medications anecdotally reported to show benefit (e.g., Neurontin or Zolof), over-the-counter (OTC) treatments including vitamins or amino acids, or other treatments including tonic water or cocoa butter. Administration of OTCs at the initiation of bortezomib or thalidomide treatment may prevent development or progression of PN, but this hypothesis needs further testing.

Although a study of correlation was not conducted, reduction in the occurrence and progression of PN in this patient population through this program of assessment and management has been favorably received by patients, some of whom have reported benefit.

PN is an important toxicity of bortezomib therapy, but through the use of these recommendations, caregivers can potentially prevent the progression of PN in patients. Nurses should be aware of PN symptoms in their patients early after development so that the proper dose or schedule modifications may be made, which remain the cornerstones of management. Studies to better characterize PN and assess other specific interventions are needed.

## 130

**NURSING MANAGEMENT OF DEEP VEIN THROMBOSIS FOR THE ONCOLOGY PATIENT IN THE AMBULATORY SETTING.** Sarah Jones, RN, BSN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY.



Thrombosis related to poor blood circulation, trauma, and increased blood clotting is a leading cause of morbidity and mortality each year in the United States. In oncology patients, the incidence of deep vein thrombosis (DVT) can be as high as 15%. The outpatient nurse has a vital role in the assessment, treatment, and management of this potentially deadly condition as well as the success of the patient outcome.

A DVT is a formation of a thrombus within a deep vein, most commonly in the thigh or calf. Blood is moving so slowly that it forms a solid clot that becomes wedged in the vein. In the oncology setting, venous stasis is common due to vascular compression or invasion by tumor. Other carcinogenic causes for DVTs include liver metastases that disrupt clotting factors, episodes of sepsis, and typically advanced age of patients with cancer. The signs and symptoms of DVTs are unilateral tenderness and redness in affected area, pain and swelling of affected leg, temperature elevation in affected area, and tachycardia and pain in flexing the foot forward (Homan's sign). The diagnosis is confirmed by radiologic study.

Most patients are diagnosed, treated, and managed as outpatients. After diagnosis, anticoagulant therapy is initiated to prevent clot expansion. The nurse teaches the patient about anticoagulant medication, their side effects, administration, and dose monitoring. In this NCI-designated comprehensive cancer center, the standard of care is to start the patient on Innohep (Tinzaparin Sodium) 175units/kg, subcutaneously, once a day along with Warfarin 5mg, orally, at bedtime.

Patients have an international normalized ratio (INR) drawn on day 4 and Warfarin is adjusted until the INR reaches a ratio between 2–3. At this time, Innohep is discontinued and the patient continues chronic Warfarin therapy.

The outpatient nurse monitors laboratory values, alerts the physician if changes are needed, and ensures patient compliance with therapy. The nurse's responsibilities also include alerting patients of drug and food interactions with therapy and explaining self-care measures needed to prevent further clots. This presentation will explore the causes, preventive strategies, treatment, and the outpatient nurse's role in the management of DVTs.

## 131

**NURSING MANAGEMENT OF PATIENTS WITH AIRWAY STENTS.** Brenda Shelton, MS, RN, CCRN, AOCN®, Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins, Baltimore, MD.

Patients with tumors partially occluding their major airways have previously been viewed as palliative care candidates even in the face of newly-diagnosed cancer. The advent of cardiovascular stenting procedures has provided an innovative avenue to develop a similar therapeutic option for patients with upper airway obstruction. Specialized clinicians at tertiary referral cancer centers are consulted for placement and immediate care of patients with airway stents; however, patients are referred back to their community physicians for ongoing management.

This presentation gives an overview of patient education and management of patients with airway stents from the identification of candidates to the care involved in the pre-stent, perioperative, and post-operative periods.

Patients are potential candidates for placement of an airway stent if infectious or malignant disease is compressing the trachea or mainstem bronchus.

A better understanding of these patients and their care needs will enhance achievement of therapeutic goals and improve quality of life.

Patients often present with emergent and life-threatening respiratory distress requiring rapid referral and bronchoscopy for assessment of treatment options. The actual stenting procedure is time-consuming and may require coordination of several clinical services. These patients may remain intubated and mechanically ventilated until the inflammation has resolved. In cases where stent placement is unsuccessful, nurses are involved in helping patients and families make difficult treatment decisions while still receiving life-support. After placement of an airway stent, patients often receive definitive antineoplastic therapy. This therapy should cause shrinkage of the tumor, potentially increasing the risk of stent displacement. Serial bronchoscopic procedures to assess the stent are often performed, however, patients, families, and caregivers need to be aware of symptoms of stent displacement and have an emergency plan for management of this infrequent but life-threatening complication.

## 132

**AN OPPORTUNITY TO REDUCE TELEPHONE FOLLOW-UP TIME BY NURSES ASSESSING THE STATUS OF PATIENTS.** Judi Johnson, PhD, RN, FAAN, Health Quest, Minneapolis, MN, and Cynthia Rittenberg, RN, MN, AOCN®, Rittenberg Oncology Consulting, Metairie, LA.

Reducing telephone follow-up time by nurses assessing patients' nausea and vomiting postchemotherapy. Oncology nurses administering chemotherapy have responsibilities that encompass not only giving the drug but also assessing and dealing with drug-related side effects. CINV is reported as being one of the most common and time-consuming side effects to manage. Since the introduction of 5-HT<sub>3</sub> receptor antagonists in the early 1990s, the options for treatment of chemotherapy-induced nausea and vomiting (CINV) have significantly improved. Yet, patients continue to report CINV as two of the most distressing side effects of chemotherapy.

In a research study conducted at the 2003 Oncology Nursing Society annual meeting, 108 nurses were asked to assess the amount of time they spend on the telephone speaking with patients and their caregivers about breakthrough or delayed CINV. The majority of nurses (68.5%) reported spending more than one hour per week on the telephone with patients. The average time was 1.5 hours, with the greatest amount of time being spent by nurses working in private physician offices (2.3 hours) compared with those in outpatient hospital clinics (1.3 hours) or hospitals (1.1 hours). From this study, it is apparent that there is still a need for more effective prophylactic antiemetic therapies to prevent CINV. Recent drug development now offers a novel 5-HT<sub>3</sub> receptor agent, Aloxi™ (palonosetron HCl) injection that has been approved for the prevention of acute CINV in patients receiving moderately and highly emetogenic chemotherapy. Additionally, palonosetron is the first agent of this class indicated for the prevention of delayed CINV in patients receiving moderately emetogenic chemotherapy. A single IV dose may prevent nausea and vomiting over multiple days.

Having this new option for providing more effective control of CINV should result in minimizing the time nurses spend in follow-up telephone calls required for managing these distressing symptoms in the days following administration of chemotherapy.

As advances in cancer occur, advances in supportive care occur as well, and it is of benefit to nurses to be as up to date as possible. This presentation will include an overview of current CINV management techniques as well as a discussion of this new agent that targets prevention of delayed CINV. This abstract was underwritten by MGI Pharma, Inc.

## 133

**PATIENTS' PERCEPTIONS OF CHEMOTHERAPY SIDE EFFECTS BURDEN.** Anita Nirenberg, RN, MS, CNP, AOCN®, Columbia University School of Nursing, New York City, NY, and Pattie Jakel, CNS, MS, University of California Los Angeles Medical Center, Los Angeles, CA.

This study was designed to increase understanding of patients' perception of the burden of chemotherapy side effects (SE).

The objective of this exploratory cross-sectional study is to evaluate patients' perception compared to providers' assessment of burden of chemotherapy-induced side effects.

Previous literature indicates that patients are affected by both disease and treatment.

Thirty-five chemotherapy patients were recruited from six centers. Selection was based on presence of two grade III/IV SEs such as anemia, constipation, diarrhea, febrile neutropenia (FN), mucositis, and/or vomiting within the previous nine weeks. Patients identified and ranked their three most burdensome SEs, indicated extent to which SEs interfered with home, work, school, social relationships (lower scores indicate more interference; 1–6). Patients were female (57%), white (80%), and mean age of 52 years. Primary sites were breast and lung.

Data analysis is exploratory in nature.

Forty percent of patients had anemia. Fatigue was ranked the most burdensome SE by 40% of patients and was listed in the top three most burdensome SE for 66%. Nausea or vomiting was mentioned as burdensome SEs by 40% of patients. A range of upper and lower GI symptoms were mentioned, with constipation, diarrhea, and/or irregular bowel movements ranked as top three burdensome SE (51%). Burdensome SEs included mouth sores, pain, SOB, appetite loss, and low blood cell counts.



The most burdensome SE produced a mean score of 3.4 for interference at home, 3.6 for work, 3.2 for school, and 3.8 for social activities. Concordance between selection criteria SEs and patient-rated burdensome SEs was moderate: 15 (43%) of the patients had constipation, only one patient rated this as the most burdensome symptom, and only seven (20%) mentioned constipation in the top three. Mucositis was reported in 17 (49%) of patients and was rated as most burdensome by 11%. Eight (23%) patients had FN, and low blood count was listed by two patients as one of the most burdensome SEs. Results suggest that NCI toxicity criteria do not correlate with patients' perceptions of SEs.

## 134

**CAREGIVER UNMET NEEDS, BURDEN, AND SATISFACTION IN SYMPTOMATIC ADVANCED CANCER PATIENTS AT A VETERANS ADMINISTRATION MEDICAL CENTER.** Casaundra Davis RN, MA, CS-ANP, AOCN®, Veterans Administration New Jersey Health Care System, East Orange, NJ; and Shirley Hwang, RN, MS, Yvette Alejandro, RN, BSN, Pamela Osenenko, RN, Victor Chang, MD, and Quanwu Zhang, PhD, Disabled Veterans Administration New Jersey Health Care System, East Orange, NJ.

Patients with advanced cancer usually experience a significant symptom burden that can lead to multiple needs for both patients and their caregivers. A significant role of the oncology nurse is to address both caregiver and patient needs in order to optimize healthcare outcomes.

Caregiver outcomes among those caring for symptomatic patients with advanced cancer at VA Medical Centers have not been reported. The purposes of this study were (1) to identify caregiver characteristics and their unmet needs, (2) to examine the association between caregiver unmet needs, caregiver burden, and caregiver satisfaction, and (3) to identify the independent predictors of different caregiver outcomes.

Caregiver burden and satisfaction assessment were guided by the stressor and the fulfillment theories, respectively.

One hundred caregivers completed three outcomes instruments: Family Inventory of Needs (FIN), Care Strain Index (CSI), and Family Satisfaction with Advanced Cancer Care (FAMCARE). The caregivers' demographics and their function, depression, health status, and social support status, and the caregivers' perception of the patients' unmet needs (PPUN) were obtained.

Principal component analysis was performed to examine the underlying dimensions of caregiver outcomes measures. Pearson correlation and stepwise multivariate regression analyses were performed.

The validity and reliability of caregiver outcomes measurements were confirmed. The median age was 62 (range = 27–85); 97% were female; 60% were spouses; and most were Caucasian (56%) or African American (32%). Spouse caregivers had significantly higher unemployment rates, higher depression scores, and lower social support scores than non-spouse caregivers. The median number of unmet needs was two and the median CSI score was four. Most unmet needs were related to information and symptom management. The majority of caregivers were satisfied or very satisfied by the care patients received. The PPUN ( $\hat{a} = 0.45$ ,  $p < 0.0001$ ) and the caregiver's depression score ( $\hat{a} = 0.21$ ,  $p = 0.03$ ) independently predicted caregiver burden ( $R^2 = 0.29$ ,  $p < 0.00001$ ). The PPUN ( $\hat{a} = -0.47$ ,  $p < 0.0001$ ) also predicted caregiver unmet needs ( $R^2 = 0.25$ ,  $p < 0.00001$ ). The presence of caregiver unmet needs ( $\hat{a} = 0.25$ ,  $p < 0.01$ ) was the only independent predictor of caregiver satisfaction ( $R^2 = 0.12$ ,  $p < 0.008$ ).

**Conclusion:** From this analysis, the Caregiver Outcome Model was proposed, which needs to be further validated in a broader cohort of caregivers.

## 135

**CONCERNS ABOUT PAIN MANAGEMENT OF YOUNG ADULTS WITH CANCER AND PARENTS.** Suzanne Ameringer, MS, RN, and Sandra Ward, PhD, University of Wisconsin-Madison, Madison, WI; Sharon Friedrich, RN, MS, CPNP, University of Wisconsin Hospital and Clinics, Madison, WI; and Klaren Pe Romashko, MS, and Beverly Buhr, MS, RN, University of Wisconsin-Madison School of Nursing, Madison, WI.

Identifying concerns that young adults with cancer and their parents may have about pain and pain management has been under addressed in research.

Young adults with cancer have similar and yet quite different concerns and beliefs than do parents. Because parents are actively involved in their young adult's treatment decisions, it is important to understand the perspectives of both groups. Researchers have identified some concerns of young adults such as a fear of the consequences of reporting pain (unwanted tests), being self-conscious about taking pain medications around friends, and the fear of the loss of independence. Parental beliefs have been reported to be similar to attitudinal barriers to pain management of adults with cancer such as fear of addiction and tolerance, but they also have an intensified concern about respiratory depression. The purpose of this work in progress is to uncover concerns and beliefs that young adults with cancer and their parents may have regarding pain and pain management.

Leventhal's Common-Sense Models of Illness Representation is being used as a framework for assessing young adults' and parents' concerns regarding pain and how these representations may influence the young adult's coping behaviors.

Young adults (ages 13–19 years) receiving treatment from a Midwest pediatric oncology clinic and parents are being asked to participate. Two focus group sessions will be conducted with one consisting of 6–7 young adults, and the other consisting of 6–7 parents. A representational assessment that focuses on ideas about the causes and consequences of pain, and the ability to cure or control pain will be used to guide the discussions in each session.

Based on Klaus Krippendorff's method, content analysis of the data will be performed within the groups to identify recurring themes related to concerns and beliefs about pain and pain management. Results of the above analyses will be presented.

An understanding of the concerns of both the young adults with cancer and their parents will help nurses to develop educational interventions to improve pain management.

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**DEVELOPING PRACTICAL, CLINICALLY USEFUL, AND VISIBLE PAIN MANAGEMENT DOCUMENTATION: GOING BEYOND THE JCAHO STANDARDS.** Rita Wickham, PhD, RN, AOCN®, CHPN, Fran Jacobs, MSN, RN, and Kristine Rossof, RN, Rush Presbyterian St. Luke's Medical Center, Chicago, IL.

Optimizing pain management and documentation. The new JCAHO pain standards have wide-reaching implications for clinical management and institutional accreditation. Although documentation of pain as the fifth vital sign has been reported in the literature to be one way to improve pain management, there are no studies to substantiate that this as a reliable and valid way to improve pain control. As the global pain initiative in our institution, we implemented the fifth vital sign and monitored outcomes. Nursing documentation was not uniform, and physicians often did not review and use this data, and there was no change in their pain management orders. We also developed a patient-focused, laminated poster that is in all inpatient and outpatient exam rooms.

The nurse members of the global pain initiative, including oncology and non-oncology nurses, developed a new doarside documentation tool that resembled our diabetes/insulin administration form that was piloted on two oncology units, a general medical unit, and a surgical unit. Chart audits and feedback from the nurses on these units revealed that this was not ideal. We thus sought out other resources regarding documentation and developed two subsequent forms, each of which was piloted on two units. Feedback from the staff nurses clearly identified the superiority and utility of one version. Nurses can chart two days' data on one page, including the patient's sequential pain ratings in a graphic form, when analgesics are administered (but not the specific drug), the patient's respiratory rate, sedation level, and untoward effects.

This new documentation form will be evaluated in terms of enhanced pain documentation by nurses and subsequent affect on physicians' ordering of analgesics. In addition, other quality data and patient interviews will be used to evaluate the tool.

Oncology and other nurses, we well, are often frustrated when they are unable to obtain orders for adequate analgesics for their patients. The implications of using this form is that both nurses and physicians will be able to "see" on one page if the patient is or is not achieving pain control,





and if they are or are not experiencing respiratory depression and sedation (common concerns of healthcare providers), or other adverse effects—such as confusion and hallucinations.

### 137

**OBTAINING PATIENT CENTERED COLLABORATION WITH PRO-ACTIVE VERSUS REACTIVE PAIN MANAGEMENT.** Marjie Schoolfield, RN, BSN, OCN®, ONC, and Laurel Krueger, RN, BSN, OCN®, Delnor Community Hospital, Geneva, IL.

Oncology nurses initiated a pain study to determine areas for improvement. All work was studied, initiated, and completed by the nurses on the orthopedic/oncology unit to work toward effective pain management through education of patients and commitment of nurses to achieve collaboration.

The purpose was the need patient-centered collaborative plan of care for pain management which was evident through patient satisfaction scores as well as gaps of medication **Administration:** Background numbers are presented to show where satisfaction scores on pain control were prior to doing any research as well as where they are today. The conceptual model shows education of patients by nurses on how round-the-clock dosing may effectively control pain, it shows how collaboration is used to determine whether patients want to be awakened for pain medication administration, and how a pain contract was developed by the two nurses doing research and signed by each nurse, promising proactive nursing collaboration with all patients on this unit.

A pain contract was developed and signed by each nurse, promising proactive nursing collaboration with all patients on this unit. Pain was assessed every four hours, patients were educated on how round-the-clock dosing may effectively control pain, and for the need to inform nurses when their pain began to increase greater than four. Scripts were developed for patient collaboration to determine whether patients wanted to be awakened during the night for pain medications. A copy of this contract was posted in the public hallway for patients and visitors to view.

Pain ratings greater than four were considered to be out-of-control pain that needed to be addressed. This allowed for specific measurements to be used. Pain is universal, yet individual, and the orthopedic total joint arthroplasty population was chosen as the control group due to the need for very tight control for study. The information forthcoming has been so promising that the nurses are now looking to expand it to the unique and variable pain issues facing oncology patients from surgery through palliative care. We believe that proactive, round-the-clock pain management will effectively control most pain, and having collaboration from the patient and family further increases this effectiveness.

Pain for an oncology patient can be variable and ongoing; therefore, assessment and collaboration must be present in order for effective pain control. The suggestion that the same principles used in controlling elective surgical pain can be used to assess whether these same interventions are effective or if new interventions may be required in the oncology population.

### 138

**QUALITY IMPROVEMENT: AROUND-THE-CLOCK VERSUS PRN OPIOID DOSING FOR CANCER PAIN RELIEF.** Sue Marcotte RN, and Deborah Mast, BSN, RN, OCN®, Northwestern Memorial Hospital, Chicago, IL; Judith Paice, PhD, RN, FAAN, Northwestern University Feinberg School of Medicine, Chicago, IL; and Marisa Streelman, BSN, RN, Beverley Caraher, MSN, RN, AOCN®, CHPN, and Colleen O. Leary BSN, RN, OCN®, Northwestern Memorial Hospital, Chicago, IL.

As needed, or PRN, opioid dosing is believed to result in inadequate pain relief. The patient must use sophisticated clinical judgment to request the next dose of pain medication when opioids are ordered on a PRN basis. Stoicism and fears of addiction are barriers to patients' requests for pain medication. Additionally, PRN opioid dosing results in erratic plasma levels of drug. To address these issues, a nursing-initiated quality improvement project was implemented on a 29-bed inpatient hematology-oncology unit.

The goal of the project was to identify the effect of ordering around-the-

clock (ATC) versus PRN opioid orders on pain intensity, opioid dose, and patient satisfaction.

Using a pre- post-test design, data were collected to evaluate the outcomes associated with standard (PRN) opioid orders for one month. After one month, all opioids were ordered on an ATC schedule, followed by the phrase "patient may refuse." Data were collected using chart review including patient demographics, pain intensity scores, and the amount of opioids ordered, as well as the amount administered. In addition, patient interviews were conducted to verify pain intensity scores and obtain qualitative information regarding their pain management.

The pre (N = 26) and post (N = 12) groups were comparable in age and gender. The average pain score (using a 0–10 intensity scale) in the PRN group was 3.6 +/- 2.6 compared with 1.8 +/- 1.3 in the ATC group. These differences in pain scores were statistically significant ( $p < 0.05$ ). Furthermore, although there were no differences in the total opioid dose given, the ratio of opioid dose given compared to the amount ordered was highly significant (43% for PRN dosing versus 83% with ATC dosing;  $p < 0.0005$ ).

The use of ATC opioid dosing results in improved cancer pain control, and oncology nurses can advocate for patients by encouraging the use of the scheduled dosing.

### 139

**EFFECTIVE CANCER PAIN MANAGEMENT AND THE MISSED USE OF METHADONE.** Renee Chandler, RN, BSN, OCN®, and Fedricker Diane Barber, RN, ANP, BC, AOCN®, University of Texas M.D. Anderson Cancer Center, Houston, TX.

To review the efficacy and safety of methadone as a clinical tool in cancer pain management. One in five patients with cancer have uncontrolled pain. Cancer pain can result as the nature of the disease itself and/or its treatment. Traditionally, the gold standard for managing cancer pain is morphine. However, morphine is associated with numerous side effects such as sedation and respiratory depression. Recently, clinicians have started to use methadone as an alternative in treating cancer pain. Methadone is an attractive alternative because it is well absorbed both orally and rectally. Unlike other opiates, methadone does not produce active metabolites. Additionally, methadone has a long half-life and is inexpensive when compared to other available analgesics. Methadone is less constipating and has low emetogenic tendencies than other opiates. Methadone acts as an antagonist to N-methyl-D-aspartate (NMDA) an activity that results in action against neuropathic pain and the reduction of opioid tolerance. Methadone meets the criteria as an alternative to morphine for patients who have developed a tolerance to opiates and who have not achieved acceptable levels of pain relief. Methadone is not without disadvantages. It has a long unpredictable half-life, variations in pharmacokinetics, and delayed toxicity.

Methadone, unlike other more commonly used opiates, does not affect activities of daily living such as driving a car or operating machinery. Methadone, as a clinical tool in cancer pain management, has been limited by poor understanding of its pharmacokinetics in the medical community and its poor public image.

Nursing management includes ongoing assessment and monitoring of patients receiving methadone. Patient education includes instructing the patient and family in methadone administration and effectiveness as an analgesic. Nurses must educate the patient on effective bowel management and management of nausea. The screening of patients likely suited for methadone use includes those difficult to monitor or non-compliant and predisposed to opioid side effects. The relief of pain or its pursuit requires the use and consideration of methadone as a weapon in arsenal against cancer pain.

### 140

**TELEPHONE COACHING TO ADDRESS ATTITUDINAL BARRIERS THAT INTERFERE WITH OPTIMAL CANCER PAIN MANAGEMENT: AN EFFECTIVE NURSING INTERVENTION.** Kathleen Fahey, RN, MSN, and Mary Thomas, RN, MS, AOCN®, Veterans Administration Palo Alto Health Care System, Palo Alto, CA.

The provision of telephone coaching via telephone calls to patients with cancer is a novel and effective pain management (PM) tool and is ap-



appropriate for advanced practice nurses. Patients can be assisted to identify attitudinal barriers interfering with their pain management and guided to develop strategies to overcome them.

Despite the availability of various PM options, pain remains a significant problem for many with cancer. Research has documented that patients with high cancer pain have more attitudinal barriers (Ward et al., 1998). The purpose of this presentation is to describe a telephone coaching intervention focused on addressing patient-related attitudinal barriers that may interfere with attaining optimal pain relief. The framework for the coaching intervention is based on self-regulation theory (Kanfer, 1987; Miller & Brown, 1991). Specific strategies of motivational interviewing (Miller & Rollnick, 1991) directed the structure of the calls, and PM methods were based on AHCPR cancer pain guidelines.

Ninety-eight patients with pain related to cancer or its treatment and a life expectancy of six months were randomized to receive four semi-structured coaching calls over a six-week period. The four topics addressed during the calls were pain beliefs, communication, medication utilization, and non-medical treatment options. These calls also permitted addressing additional topics important to the patient at the time (e.g., side effect management, end-of-life concerns). Each call included problem identification, its impact on PM, short-term goal(s) to address the problem, and strategies to meet the goal. Calls were taped and reviewed as a quality assurance/protocol compliance measure.

Patient examples will be presented to demonstrate the relevant concepts of the intervention. While issues were numerous and varied, problem solving measures included recognizing the impact of patients' pain beliefs on their PM through self exploration and sharing, keeping a journal to aid in self-assessment and communication, practicing scripts to caregivers, and learning about current and potential PM strategies.

Attitudinal barriers must be addressed if patients with cancer are to effectively utilize PM options available to them. Telephone coaching is a valuable intervention for the advanced practice nurse to assist patients in addressing barriers that interfere with better pain relief.

## 141

**PERCEPTIONS OF ANXIETY AND PAIN IN CANCER PATIENTS UNDERGOING BONE MARROW BIOPSY.** Maria Grabowski, RN, MSN, Josephine Hawkins, RN, MSN, AOCN®, Joanne Mortimer, MD, Faraz Ahmad, [Need credentials], and Michael Naughton, MD, Siteman Cancer Center at Washington University School of Medicine, Saint Louis, MO.

Patients with cancer commonly undergo bone marrow aspiration and biopsy. Pain and anxiety are known complications of this procedure, but methods for improving the biopsy experience in adults have not been well studied. Nurses can have a positive impact because they frequently perform or assist this procedure.

We performed a pilot study to systematically assess incidence and severity of anxiety and pain for patients undergoing diagnostic marrow aspirate and biopsy. Additionally, we wanted to identify concerns patients have associated with the experience of the bone marrow biopsy procedure.

We used as conceptual framework the Lazarus Theory of Stress and Coping. Stress is examined on multiple levels such as cognitive, physical, environmental, and social (Lazarus & Launier, 1978).

Patients provided informed consent. Patients were asked to score pain and anxiety before and 15 minutes after the procedure using a 0–10 verbal scale. Patients were again surveyed by telephone 24–32 hours after the procedure.

Descriptive and correlational statistics were used. Fifty patients completed the initial study and 45 were contacted for follow-up one day later. Most procedures (37–50) were performed by nurse coordinators. Mean pain scores at 15 minutes and 24 hours after the procedure were not statistically different from scores reported before the procedure. Subjective assessment of patient responses during the procedure suggested that many experienced significant pain; however, intra-procedure pain scores were not specifically recorded in this study. Patients reported significantly higher anxiety scores before the procedure than immediately after or 24 hours later.

Only a minority of patients reported substantial pain after the procedure or one day later, but patients reported significant anxiety before the procedure. These pilot results will be used to base research interventions targeted at anxiety before and pain during the procedure in patients.

## 142

**A PICTURE IS WORTH A THOUSAND WORDS: USING PICTOGRAMS TO ASSIST ONCOLOGY PATIENTS WITH PAIN ASSESSMENT.** Marie Swisher BSN, RN, Suzanne Nesbit, PharmD, BCPS, and Kathryn Smolinski, LCSW-C, The Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins, Baltimore, MD.

It is estimated that 30%–50% of patients undergoing oncologic treatment and 70%–90% of patients with advanced cancer experience significant pain. Barriers to effective pain management include lack of knowledge and various attitudes of patients regarding pain management. Pain is a subjective experience for patients, therefore, they are the most reliable source to describe and rate their pain.

In order to assist patients in effectively communicating their pain to the multidisciplinary team, increased efforts by nursing and other disciplines are needed to increase patient knowledge about cancer pain assessment. At this NCI-designated comprehensive cancer center, a 0–10 scale is used to measure a "daily 24-hour average pain rating" (APR24). This was initiated as a pain-screening tool in an effort to capture the patient's global pain experience on a given day and facilitate pain management. However, patients have reported difficulties with providing an APR24.

Based on Paivio's "Dual Coding Theory," pictograms are being used to reinforce imagery, which plays an important role in cognitive operations.

A study was designed to determine if focused pain-rating education would improve the patient's understanding and ability to answer the 24-hour pain question. The study uses an experimental design with convenience sampling and is ongoing to examine the effect of a one-time structured patient education session focusing on the APR24. Oncology inpatients (n = 100) with a current complaint of cancer pain are identified, consented, enrolled, and randomized to a treatment or control group. The treatment group receives a one-time pain rating education session and the control group receives standard inpatient pain education. The intervention includes discussion of three pictograms focusing on the idea of averaging their pain over 24 hours. A multidisciplinary team from the oncology pain team developed the pictograms and pre/post questionnaire to measure the patient's comfort and skill in rating their pain. The questionnaire has content validity and will be evaluated for reliability in this study.

Upon completion of the data collection, groups will be compared using repeated measures analysis of variance.

Study results will be evaluated for implications and integration into patient care and education.

## 143

**THE DEVELOPMENT OF A MULTIDISCIPLINARY PATIENT EDUCATION PROGRAM.** Vermell M. Sanford, RN, BSN, MSN, CS, and Brenda Fort, MSN, BA, RN, FNP-C, Atlanta Veterans Affairs Medical Center, Decatur, GA.

Oncology nurse practitioners provide reliable science-based information that facilitates the patient becoming an active participant in the healthcare team.

To present the curriculum and findings of the patient education program, entitled "Living With Cancer," developed for patients with cancer at the Atlanta VA healthcare system. Patients with newly diagnosed cancer have a limited understanding of their disease process and treatment modalities. Patients who lack understanding of their diagnosis and its implications experience a higher number of preventable complications of treatment. According to Dorothea Orem, the nursing process involves the development of a plan of care that relates the individual's self-care capabilities and meets therapeutic self-care requirements. Education is a key component of this process.

All consults to the hematology/oncology clinic are reviewed monthly, and patients with newly diagnosed cancer are scheduled for the program. The educational topics are presented by a multi-disciplinary team. Topics include "Understanding Cancer," "Symptom Management," "Nutritional Issues," "Community Resources," "Psychosocial Factors," and "Spirituality."

The "Living With Cancer" education program was initiated in February 2001. Over the past 32 months, 171 patients attended, which represents 22% of patients invited. Overall, participants found the content to be very beneficial. A survey was conducted to identify barriers to pa-



tient participation, which included conflicting schedules, lack of interest, fatigue, poor health status, travel-related issues, and insufficient appointment notice.

Patients clearly benefit from education provided during diagnosis and treatment. Patients demonstrate improvement in satisfaction, health outcomes, compliance, and empowered decision making. The development of a computer-based education program, improved scheduling, and travel accommodations could improve compliance. This program addresses the complexity of educating oncology patients and their families. It can be easily adapted to any cancer treatment program within or outside of the VA system.

## 144

**CANCER PATIENT/FAMILY RESOURCE CENTERS: USING PATIENT AND FAMILY INPUT TO GUIDE SERVICES.** Kerry Harwood, MSN, RN, Duke University Health System, Durham, NC, and Harriet Whitehead, PhD, Duke Comprehensive Cancer Center, Durham, NC.

Oncology nurses serve as primary educators for patients with cancer and families. Essential patient/family education needs around diagnosis and treatment are predictable and best delivered through provider-initiated education. Cancer patients/families have other education needs that may be considered elective, in that the specific need and timing will vary by individual. These may be better met through patient-initiated education using avenues such as patient/family resource centers (PFRCs). When relying on patient-initiated education, it is essential to ensure that appropriate resources are available to patients and families.

A survey was conducted to guide ongoing development of the cancer PFRC in a comprehensive cancer center. The goals of the survey were (1) determine high interest topics for patients and families, (2) determine patient and family preferences for methods of receiving information (lending materials, free materials, Internet), and (3) assess awareness of the PFRC. The survey was offered to patients and families in the waiting rooms of the treatment center, in radiation oncology, and in hematology/oncology clinics daily for one week. Four hundred seventy seven completed surveys were obtained.

Participants were asked to respond regarding their interest in 13 topics, as very, somewhat, or not interested. Results indicated that a majority of responders were very interested in visiting the PFRC for information on a wide variety of topics. Then, participants were asked to indicate, using the same scale, their preferences for mode of accessing information. A greater number were interested in materials that did not need to be returned than were interested in checking out materials. A significant number expressed interest in receiving a monthly email newsletter, as well as browsing our lending library collection on the web. Fifty-eight percent indicated they were not familiar with the PFRC.

Survey responses have guided the following enhancements: (1) monthly email newsletter for PFRC patrons, (2) increased information available on PFRC webpage, (3) increased purchasing/development of pamphlets, and (4) strategies to promote effective use of Internet and telephone resources. Patient/family preferences for information will be driven by many factors. Assessment of preferences can help ensure the optimal use of resources and ability of patients/families to meet elective education needs.

## 145

**DEVELOPMENT OF THE "CARE COMPANION AND TREATMENT ORGANIZER."** Kelly Sakalian, RN, MSN, CS, AOCN®, Providence Hospital, Southfield, MI.

In an effort to assist the patient and their family through the maze of cancer care, the "Care Companion and Treatment Organizer" was developed. The nurse will utilize the Care Companion as a tool to not only educate, but also empower the patient to become an active partner in their care.

The purpose for developing the Care Companion was to provide an organized approach to patient education thereby increasing understanding while reducing confusion, fear, myths, and misinformation about cancer and its treatment. Fragmentation of patient information and a lack of continuity of care provided throughout the service line were identified as concerns.

The project goal was to provide a tangible solution for providing information for patients and families throughout the course of treatment.

A multidisciplinary committee developed the Care Companion. The book was designed with the intention that it will be given at the first point of entry into the oncology service line and then brought by the patient to each subsequent visit. The first component of the Care Companion is an introductory letter welcoming the patient and informing them about how and when to use the Care Companion. The content is divided into six sections: General information, treatment information, nutrition, support services, my treatment, and resources. In addition, forms are in place for the patient to record questions for physicians, lab values, weight, and medications. A host of diversionary activities are included for use while waiting for appointments. Labeled pocket folders for insurance papers, lab results, brochures and maps, and a business card holder are added features. The book also has plenty of space for additional information to be added through the course of treatment.

Patient satisfaction scores from hospital surveys and a tear-off evaluation card, which accompanies each document, will measure success of the Care Companion and Treatment Organizer.

The Care Companion serves to empower patients to take an active role in their cancer treatment by encouraging them to be educated, informed, and engaged partners in their care.

## 146

**IMPLEMENTATION OF A PATIENT-EDUCATION PROGRAM FOR CHEMOTHERAPY: A MULTIDISCIPLINARY GROUP PROCESS MODEL.** Louise Archambault RN, BSN, OCN®, Mary Week, RN, MSN, AOCN®, Allata Asacria, RN, BSN, OCN®, Regina Miller, RN, ADN, and Kelly Waters, MSW, LCSW, Moses Cone Regional Cancer Center, Greensboro, NC.

Patient and family education is an integral part of oncology nursing. Coming to a cancer center and receiving chemotherapy often overwhelm patients. To reduce anxiety and increase patient's knowledge about receiving chemotherapy and symptom management, nurses in the medical oncology division of a community cancer center developed an educational program to facilitate patients' transition into cancer treatment.

As patients entered the cancer center system, nurses provided one-to-one patient teaching about support services available for patients and families, chemotherapy, and side-effect management. Nurses providing the education were concerned about the increased demand on nursing time, consistency of information, and patient's retention of the information. In addition, members of the support services disciplines identified that patients

were often unaware of the services available for patients receiving treatment at the cancer center

Patients and family or caregivers are scheduled to attend a 90-minute education class prior to beginning chemotherapy. Classes, lead by nurses from the regional cancer center, are offered 6 times each week and are scheduled during day and evening hours. Participants receive written information about support services available for patients and families and have the opportunity to meet a social worker or chaplain. A registered nurse then presents written and verbal information about chemotherapy and symptom management. Discussion about the process of chemotherapy administration and symptom management allows patients and family members to ask questions Class concludes with a tour of the infusion room.

Since February 2003, 282 patients have participated in the group education class. Each patient completes an evaluation form after the first class. Patients have expressed positive comments about their preparation for treatment both in the evaluations and when they are receiving chemotherapy. Nurses report patients are more prepared for treatment and demonstrate increased knowledge about side effect management after treatment.

From the evaluations and verbal reports, the group education process has successfully prepared patients to receive chemotherapy. Further evaluation will address patient management of specific side effects. Nurses should easily be able to adapt the information from this poster to their own clinical setting if they are considering changes in their patient education programs.



**DESCRIPTIVE STUDY OF BREAST CANCER PATIENTS' PATTERNS OF USE AND SATISFACTION WITH THE INTERNET-BASED INFORMATION AND SUPPORT PROGRAM CHESS (COMPREHENSIVE HEALTH ENHANCEMENT SUPPORT SYSTEM).** Diane Ward, RN, BSN, OCN®, and Ilene Staff, PhD, Hartford Hospital, Hartford, CT; Jay Ford, MS, University of Wisconsin, Madison, WI; and Andrew Salner, MD, Hartford Hospital Cancer Program, Hartford, CT.

To explore patients' with breast cancer use of and satisfaction with the Comprehensive Health Enhancement Support System (CHESS), an e-health system providing information, decision-making tools, and support, and how that use is affected by demographic and disease characteristics.

To increase oncology nurses' understanding of an on-line resource for patients with breast cancer and to identify ways that nurses can guide patients throughout their disease continuum.

A growing body of research indicates that information combined with emotional and social support plays a key role in helping patients cope and can lead to more accurate expectations, improved physical health, and even survival rates.

One hundred twenty nine patients with newly diagnosed breast cancer were enrolled for nine months. Verbal consent, demographic, and disease/treatment data were collected at enrollment. Initial usage date, login, and page totals were collected from CHESS web site as outcome measures. Satisfaction was collected monthly. Age, experience with computers, education, stage of disease, time since diagnosis, and treatment modality defined subgroups for analysis.

Page preferences (information, support, analysis) were calculated from usage statistics. Analysis of variance and chi-square statistics were used to explore group differences. Satisfaction was correlated with usage measures.

There were clear individual differences: 34% began CHESS immediately, but 7% waited months; 44% used for only one month, 32% for more than three months; monthly logins ranged up to 120 per month; total pages ranged from 2–15,000; intensity increased through six months. Support pages were most frequently requested. Page preference, established during the first month, remained constant. Women who preferred support features had significantly greater logins and longer duration. Those with greater computer familiarity or enrollment soon after diagnosis requested more information pages. Mastectomy or chemotherapy patients were more likely to prefer support pages. Greater satisfaction was correlated with higher usage. Satisfaction with support and decision making correlated with participant use of these types of pages.

**Implications:** Patients can benefit from e-health resources like CHESS for both information and support. Patients may derive greater benefit from "coaching" in use and comfort with the technology. Nurses can direct patients to specific areas, meeting individual needs. Nurses can also monitor usage to keep recommendations relevant and to suggest additional resources.

**THE HELPING HANDS FOR BREAST HEALTH PROGRAM AS A MEANS TO NAVIGATE WOMEN TO MAMMOGRAPHY SCREENING.** Nora C. Katurakes, RN, MSN, OCN®, Lauren J. Brall, BS, and Sandra J. Donnelly, RN, OCN®, Christiana Care Health System Cancer Outreach Program, Wilmington, DE.

Delaware ranks third highest nationally in breast cancer mortality. Screening mammography can save lives. Oncology nurses can play a key role in program development for cancer control activities to impact the cancer burden. Health beliefs, cultural differences, literacy appropriateness, knowledge, and attitudes are issues to consider.

Fear, lack of insurance, lack of knowledge, access to imaging centers, time availability, and scheduling are some of the known barriers women say prevent them from receiving an annual screening mammogram. The Helping Hands for Breast Health (HHBH) program, funded by the Avon Foundation Breast Care Fund in 2002, was designed to provide breast health education (culturally and literacy appropriate) and screening mammography to high-risk women. Personal navigators and community partners are part of this program. Breast cancer data (regional and late-stage) from the state cancer tumor registry and outreach activities (education and mobile screenings) identified target areas for program implementation.

Oncology nurses from the cancer outreach staff at Christiana Care Health

System hired a breast screening coordinator (BSC) to educate and navigate women to breast health services and eliminate barriers (language, scheduling, insurance, and transportation). Other program services included a direct phone line and low-literacy promotional materials (in English and Spanish), incentives for enrollment, and an annual reminder card. Collaborative partnership meetings with Women's Health Screening program (mobile breast screening), the Breast and Cervical state program, health plans, and other community groups (local Avon representatives and oncology nurses) promoted the program and planned the outreach. A display and flyers were distributed at churches, health fairs, community forum meetings, newsletters, men's groups, and on the mobile van.

Over 1,500 women entered the program in 2002. The role of the navigator has been positive through testimonies by those who received personal services. For 2003, specific measures are the number of members rescreened and the affect of the reminder calls on the rescreening rate. Over 500 new members were reached (an increase in minority women).

Oncology nurses can use their knowledge, leadership, and skills for program development. Partnerships and navigators are essential in this program and may be helpful in others.

**CREATING A WEBLIOGRAPHY TO ASSIST PATIENTS TO ACCESS ACCURATE HEALTHCARE INFORMATION ON THE INTERNET.** JoAnn Mick, RN, MSN, MBA, AOCN®, Marlene Z. Cohen, RN, PhD, FAAN, and Karen A. Stepan, MPH, CHES, University of Texas M.D. Anderson Cancer Center, Houston, TX.

The Internet is a powerful tool for access to healthcare information. Barriers are rapidly disappearing as patients have access and express interest in using the Internet for health-related information. Well-informed and educated patients are better prepared to participate in decision making. Maintaining awareness of available Internet patient resources supports the nurses' role in ensuring patients make decisions based on accurate information.

A webliography is a web-based bibliography that brings together as many on-line resources pertaining to a particular topic as possible and attempts to organize, classify, and create links to available Internet resources.

A webliography provides a substantive listing of online resources with references to web sites, organizations, bibliographies, and full text articles for the topics. Nurses can have a role in reviewing the quality of information on Internet websites and organizing them as a webliography, thereby developing quality resources for patients. A webliography on sexuality and cancer was created after evaluation of Internet information to assist with management of sexuality concerns associated with cancer treatment. The webliography provides access to general information about cancer and sexuality, answers to common patient questions, information to address some of the specific sexuality concerns of women and men with cancer, and recommends references and resources. Each topic entry includes a short description and a handy clickable link.

Several areas are important to consider when evaluating credibility of information on the Internet, including: Current date, the target audience, and information about the author by listing qualifications, credentials, occupation, education, and experience. A comparison of other sources confirms information accuracy and biases or particular points of view are not evident. These evaluation criteria were used to determine that the sites included in our webliography are accurate sources of information. Patients inquiring about the affect of cancer on sexuality are directed to this patient education online source of information that can effectively assist with this important aspect of quality of life.

Our poster will display the webliography to share how nurses can create a webliography useful for patient education on specific healthcare topics that were evaluated for accurate information and organized for easy Internet access.

**INTERDISCIPLINARY CHEMOTHERAPY/BIOOTHERAPY EDUCATION: RAISING THE BAR FOR ALL TEAM MEMBERS TO ENSURE THE SAFETY OF PATIENTS UNDERGOING TREATMENT.** Beverley Caraher, MSN, RN,



APRN-BC, AOCN®, CHPN, Northwestern Memorial Hospital, Chicago, IL; Lisa Stucky Marshall, MS, RN, APRN-BC, AOCN®, Hematology/Oncology Specialists, Elmhurst, IL; Josie Howard Ruben, MS, RN, AOCN®, and Desi Kotis, PharmD, Northwestern Memorial Hospital, Chicago, IL; Stephanie Williams, MD, Hematology/Oncology Associates of Illinois, Chicago, IL; Leo Gordon, MD, Northwestern University Feinberg School of Medicine, Chicago, IL; and Jacqueline Medland, MS, RN, Northwestern Memorial Hospital, Chicago, IL.

Incorrect usage of antineoplastic agents can produce serious adverse effects. In response to an unacceptably high rate of near misses and chemotherapy errors in an urban academic medical center, a revision of the chemotherapy policy to include increased education and training requirements for those involved in prescribing, dispensing, and administering chemotherapeutic agents was undertaken.

Antineoplastics are high-risk drug products that produce serious toxicities even at approved dosages and administration schedules. In a teaching institution, the potential for errors is increased as inexperienced physicians write orders, inexperienced pharmacists dispense antineoplastics, and inexperienced nurses administer chemotherapy. Evidence of serious chemotherapy errors, an unacceptably high rate of near misses, and an increase in the number of patients receiving chemotherapy required intervention to ensure safety of patients and employees.

Five existing chemotherapy policies were revised and merged by an interdisciplinary team into one policy that was easy for all to navigate. The revised policy includes increased chemotherapy-related training requirements for physicians, nurses, and pharmacists. Nurses administering parenteral chemotherapy are now required to take the ONS Chemotherapy/Biotherapy Course and complete a unit-based practicum, and all new pharmacists, fellows, and advanced practice nurses involved in dispensing and prescribing chemotherapy/biotherapy agents are also required to attend the course.

Seventeen hematology/oncology fellows and one pharmacist attended our most recent chemotherapy/biotherapy course along with staff nurses from inpatient, outpatient, and homecare settings. Evaluation of this joint educational offering is currently in process. We are interested in measuring the affect of combined education on the rate of errors and near misses in our institution as reflected in departmental audits of system performance. Physicians, pharmacists, and nurses compared their roles, issues, and problems related to safe chemotherapy administration. We are currently exploring appropriate content evaluation tools and optimal breakout sessions for physicians and pharmacists (e.g., case studies relating specifically to issues surrounding prescribing and dispensing).

Including physicians and pharmacists in the chemotherapy education process can lead to greater understanding of the roles, strengths, and challenges facing each member of the interdisciplinary treatment team. We hope to demonstrate that interdisciplinary chemotherapy education will provide safer treatment for our hematology/oncology patients.

## 151

**TOOLS FOR INCREASING EASE AND COMPLIANCE IN PATIENT EDUCATION AND TEACHING (DOCUMENTATION MADE EASY FOR NURSES).** Buenagracia Delacruz, RN, BSN, University of Texas M.D. Anderson Cancer Center, Houston, TX.

Nurses face the same challenges related to time, staffing, and money, regardless of the size or location of the healthcare facility. On the hematology service areas at the University of Texas M.D. Anderson Cancer Center (UTMDACC), we are continually seeking to overcome some of the barriers to documentation of patient teachings in order to communicate patient's knowledge and meet JCAHO standards.

With the development of internal monthly chart audits in each department, assessment and evaluation of nursing/allied health teaching compliance is accomplished in real time. Within the unit council structure, quality improvement (QI) members are responsible for identifying deficits in practice on the specific unit. Chart audits by members initially revealed that there was less than 60% compliance with documentation in areas of pain, food, and drug interactions, and discharge teaching. The institutional goal for this was set at greater than 90%. To achieve this goal, council members decided to develop new tools that were brief, user friendly, and accessible to the staff. Ready-to-use preprinted teaching labels that the nurses could attach to the IPTR (interdisciplinary teaching

record) were created. The labels included a checklist of all possible interventions applicable to the educational need and allowed nurses to individualize the plan by checking only those interventions appropriate to the patient. In collaboration with the unit-based educational council, individual nursing teaching packets and a storyboard with example of appropriate and inappropriate documentation were presented to the nursing staff.

Recent audits have indicated a current compliance rate of over 90% that was achieved over a period of only eight months.

The quality council members are also responsible to ensure that tools are being kept up to date and supplies are available for nurses to use. Recent audits have indicated a current compliance rate of over 90% that was achieved over a period of only eight months. As our institution is moving toward a computerized medical record, these tools/labels will become the template for teaching documentation.

## 152

**TUMOR MARKERS: ARE YOU CONFIDENT ENOUGH TO DISCUSS THEM WITH YOUR PATIENTS.** Deanna Yamamoto, RN, MS, CS, ANP, and Pamela Viale, RN, MS, CS, ANP, OCN®, Santa Clara Valley Medical Center, San Jose, CA.

Oncology nurse/patient encounters may include discussion of pertinent tumor markers. Often patients ask nurses about markers and what they mean regarding specific prognosis and treatment.

Oncology nurses are the harbingers of knowledge and information for patients with cancer as well as the general public. Every practicing oncology nurse, whether they are in academia or at the bedside, should be knowledgeable about the use of tumor markers. The purpose of this paper is to review the most common tumor markers used in oncology today and identify the less common tumor markers and what roles they may play in the future.

Tumor marker development is in its infancy compared to other diagnostic and prognostic tools, and we are at the threshold of witnessing a revolution in clinical practice. Tumor markers are important tools in the management of cancer, helping to screen and diagnose cancer, monitor treatment, and assist in determining recurrence. The first modern tumor marker used to detect cancer was human chorionic gonadotropin (HCG), followed in 1965 by the development of carcinoembryonic antigen (CEA). Currently there are almost a dozen tumor markers being used in the oncology arena with a dozen more tumor markers in development for clinical use. The relevancy of tumor marker use will be reviewed along with their use in various cancers including colon, breast, and ovarian cancer. Oncology nurses should be made aware that only one tumor marker, prostate-specific antigen (PSA), has been approved as a screening tool, although lay literature may propose otherwise.

Over the last several decades, the number of tumor markers has grown tremendously, and oncology nurses must now be as informed about tumor markers as they are with chemotherapy.

With these tools, nurses can more confidently answer the patient's question, "What does my tumor marker number mean?"

## 153

**THE NURSE'S ROLE IN ENSURING CORRECT PATIENT EDUCATION FOR PATIENTS BEING DISCHARGED WITH A PLEUREX CATHETER.** Maureen Jingeleski, RN, BSN, and Keri Wagner, RN, OCN®, Memorial Sloan-Kettering Cancer Center, New York, NY.

Patient education has become an essential part of shifting the responsibility of the management of the catheter from the inpatient healthcare provider to the patient at home. Patients are being instructed by the nursing staff at a comprehensive cancer center to use a clean technique to change the bottle and the dressing. However, the patient instruction booklet and video supplied by the company demonstrates sterile technique. As a result, once at home, patients found that the information they had concerning the care of the catheter was conflicting with what they were taught causing confusion and anxiety.

Providing the patient with understandable teaching and educational material facilitates proper care and use of the pleurex catheter. This, in turn, can decrease length of stay, readmissions, and complications as well



as increase patient's feeling of independence and overall quality of life.

The authors contacted the institution's patient education department and Denver Biomedical regarding the patient teaching material and developed institution specific patient education material, which has since been submitted to the institution's patient education department. In addition, revisions have been sent to Denver Biomedical regarding the patient teaching material.

Denver Biomedical has agreed that revisions are necessary and are changing both the printed material and video. The institution continues to use the pleurex catheter and the nurses teach according to the revised patient education material.

Pleural effusions are a common late-stage complication of lung cancer that now can be managed at home. Traditionally, pleural effusions meant an inpatient admission with a chest tube placed and a procedure such as pleurodesis done. This is a long, painful process with a high incidence of recurrence. Currently, patients at a NCI designated comprehensive cancer center are sent home with a Denver Pleurex catheter, a closed drainage system, consisting of a soft fenestrated catheter with a one-way valve, in place. This system allows for intermittent self-drainage of the effusion. This eliminates the need for admission, reduces incidence of recurrence, and is easily cared for at home by the patient.

## 154

**A QUALITY IMPROVEMENT PROJECT TO ENHANCE UNDERSTANDING AND COMPLIANCE WITH HEMATOLOGY/ONCOLOGY DISCHARGE INSTRUCTIONS.** Joni Chilson, RN, BSN, OCN®, Vivian Grubbs, RN, BSN, OCN®, and Karen Thongsavath, RN, OCN®, Wake Forest University Baptist Medical Center, Winston Salem, NC.

Oncology nurses wrote detailed instructions. Our multidisciplinary team identified that our patients did not always understand or comply with their discharge instructions. Our outpatient clinic staff had noticed an increase in the volume of phone calls from recently discharged patients with questions pertaining to their medication regimen or discharge instructions. The concern was brought to the attention of our multidisciplinary team and an action plan was formulated.

We did a quality improvement monitor to determine if there was a problem. A survey was conducted on patients and revealed that patients could not remember what instructions they had received. They had several questions and concerns about their medications. The hematology/oncology multidisciplinary team, consisting of inpatient and outpatient nurses, pharmacy, physician, case management, and clinical nurse specialists, met with our oncology unit based shared governance to determine how we could improve compliance with discharge instructions.

The unit based shared governance team incorporated the concerns of the multidisciplinary team and patient survey to develop specific patient instructions for hematology/oncology. The new instructions were detailed and provided specific information on infection and bleeding precautions, mouth care, symptom management, lifestyle considerations, and medications. These written instructions are followed up with a phone call within one week of discharge to ensure understanding of instructions.

The results of our follow-up phone calls indicate that patients often refer to the discharge instructions as a reference when they have questions or concerns. The number of unnecessary phone calls to the clinic has decreased. This project has also demonstrated the benefit of a follow-up phone call for our oncology patients to ensure understanding with their discharge instructions.

## 155

**MY STORY: A DIARY FOR PEOPLE WITH CANCER.** Leah Mraz, MSN, RN, C, OCN®, The Cancer Institute of New Jersey, New Brunswick, NJ, and Ellyn Matthews, RN, PhD, AOCN®, University of Colorado Health Science Center, Aurora, CO.

*My Story: A Diary for People With Cancer*, was developed by two nurse clinicians as a way to positively affect peoples health, leading to acceptance, positive interpretation, and growth.

The purpose of the diary was to assist patients/families in tracking information about their care and communicating their needs to healthcare providers. Once diagnosed with cancer, an overwhelming volume of di-

agnostic information accumulates. Evidence suggests that organizing information, particularly when first diagnosed, promotes a sense of order and control at a very vulnerable period. The diary may be especially beneficial for anxious, control-seeking patients.

Development of the diary began with the formation of a committee. A literature review identified the need for a cancer patient diary. Industry benchmarking revealed that diaries on the market were not conducive to journaling and had little room to track care. In addition, many included vast amounts of education material, making it confusing if the book was to be read and written in. The diary provides an outline of important healthcare information with six main sections: (1) Personal, (2) Insurance, (3) Treatment, (4) Progress, (5) Personal Notes and Thoughts, and (6) Evaluation. The section topics were based on clinical observations. Patient/family input was sought throughout development. The loose-leaf binder format is easy to use, allowing customization to meet the needs of individual patients. Section contents may be added or deleted as needed. Funding was secured, a marketing plan was developed, and a process for distribution was implemented.

After two months, patients are asked to complete a written evaluation of the diary. Results have been favorable and modifications are being considered based on comments and suggestions of patients/families. Expected outcomes of using the diary include improved communication with the healthcare team, enhanced organization of healthcare materials, and superior efficiency in the teaching process.

Oncology nurses should consider developing such a diary, which assists with satisfaction of care and a better quality of life for individuals with cancer.

## 156

**CULTURAL DIVERSITY AND COPING WITH CANCER EDUCATION.** Robin Herman, RN, MN, OCN®, LAC/USC Medical Center, Los Angeles, CA.

Nursing organized and implemented a vital educational program together with a multidisciplinary team comprised of dietary, social service, and spiritual leaders to meet the educational needs of our patients with cancer.

The Los Angeles USC Medical Center is one of the largest cancer centers in the world and possesses one of the most culturally diverse populations. In 2002, there were 1,262 patients with newly diagnosed cancer at this facility and approximately 56 languages spoken among this population with an average reading level of sixth grade. These patients with cancer must learn to navigate this huge healthcare system while facing uncomfortable treatments, pain, side effects, and psychosocial issues. In response to these concerns, a multi-disciplinary healthcare team convened to address specific educational needs. Our purpose was to implement a program that would provide education and psychosocial support for our patients with cancer and family members utilizing the "I Can Cope" program model.

Our team chose the topics of symptom management, nutrition, pain, psychosocial issues, and spiritual issues to be presented. Each topic was developed into a one-hour program presented at a sixth grade reading level in English and Spanish in a format of lecture followed by open-forum discussion. Initially each topic was provided once per month at a central location. Specific educational materials were provided to each patient's specific topic.

The program started in June 2001 with topics being presented in a single location. Within 12 months, patient demand was so high that two additional locations within the medical center were added and topic frequency was increased to two times per month for the nutrition, pain, and symptom management presentations. Since January 2003, these topics have been presented three times per month at three patient care locations. Symptom management is the most popular and well-attended program with the patients' main concerns focusing around neutropenia, anemia, and fatigue. English and Spanish booklets entitled "Neutrophil: Your One-In-A-Million Bodyguard," sponsored by Amgen were useful in enforcing course content. Because the program content targets critical patient care needs at a level the patient can understand, the program continues to expand.

We are now looking at expanding the program into other languages, specifically Korean, Chinese, Armenian, and Russian. The use of this modified program has created an excellent educational outlet for our culturally diverse patient population.





## 157

**MEETING THE "AFTER HOURS" ACUTE CARE NEEDS OF AMBULATORY CARE ONCOLOGY PATIENTS.** Leslie Smith, RN, BSN, Nebraska Medical Center, Omaha, NE.

Providing optimum after-hours services to patients with cancer with urgent problems requiring prompt attention challenges healthcare centers to address the unique needs of these individuals. Specialized oncology nurses have the critical skills necessary for triaging and providing the interventions required.

The trend of delivering oncology services outside the traditional hospital setting has resulted in increasing numbers of individuals with acute care needs during non-traditional outpatient hours of care. Consequently, many of these immune compromised patients have to seek care in emergency rooms that are overcrowded with sick and potentially contagious people. Our medical center has developed an approach to meet the unique needs of this population by providing 24-hour access to the outpatient center.

After regular clinic hours, patients are instructed to call their physician with problems that need immediate attention such as fever, pain, problems controlling nausea, and management of other symptoms. The physician informs the nurse that the patient is coming to the treatment room and provides the appropriate orders. Oncology nurses use finely tuned expert assessment skills and triage the patients. This includes determining the need to be seen by the physician, providing direct interventions, and preparing the patient for dismissal. Often, the treatment needed is administered and the patient returns home. However, if the patient requires admission, treatments can be started and the patient transferred to the hospital in a seamless manner.

Patients are taken care of in a timely and competent manner when they are treated in a specialized area such as the oncology treatment room, and often avoid hospitalization. Patients indicate they like this system because they are familiar with the nurses and surroundings. They are confident the nurses know them and work as a team with the doctors to treat their problems.

Patients get competent, specialized care at one place day or night in an ambulatory setting using the skills of oncology nurses and an organized team approach with the physicians. This model could be used by oncology nurses in other centers desiring to better meet the needs of their acutely ill oncology population.

## 158

**NURSE NAVIGATOR: A NEW ROLE FOR THE ADVANCED PRACTICE NURSE.** Brandy Payne, RN, MSN, Michele Stephens, RN, MSN, APRN, BC, AOCN®, and Norma Sheridan Leos, RN, MSN, AOCN®, CPHQ, Curtis and Elizabeth Anderson Cancer Institute, Savannah, GA.

Multi-modality treatment for cancer has now become the standard of care for many cancer types. Although multi-modality treatment has improved survival for many diseases, it can result in more side effects. Multi-modality treatment calls for coordination of complex treatment schedules.

A seamless approach to educating the patient and communication between the multidisciplinary treatment team is essential for patients undergoing multi-modality treatment. Because of the complexity of this type of care, the nurse navigator role was devised. The nurse navigator functions as a clinician, educator, researcher, counselor, healthcare liaison, consultant, and patient advocate.

This poster will describe the creative approach used by two advanced practice nurses (APNs) to devise, implement, and evaluate the role of nurse navigator. Detail will be provided so that other organizations may implement similar roles at their institutions.

The APNs were able to erase traditional boundaries that can occur. They were able to: (1) devise a process for comprehensive education to meet the unique learning needs of patients with newly-diagnosed cancer, (2) promote a better understanding of the patient care experience, and (3) reinforce communication between the subspecialties that care for the patient undergoing multi-modality treatment.

When patients receive accurate information, they can make healthcare decisions in a more effective manner. Coordination of care by the nurse navigator leads to a shorter length of hospital stay, and the patient can become an active participant in the care planning process.

## 159

**THE CREATION OF A NURSE PRACTITIONER ROLE AS A MEDICAL CONSULTANT IN AN ONCOLOGY SETTING.** Sally Pham, MSN, RN, FNP(c), University of Texas M.D. Anderson Cancer Center, Houston, TX.

Patients who are hospitalized in an oncology setting have multiple needs and require timely medical management. At the University of Texas M.D. Anderson Cancer Center, the oncologists focus on treating the patients' cancer and consult with internal medicine specialists to manage other medical problems such as diabetes and hypertension. As the number of consultations increased, nurse practitioners were assigned to cover inpatient to assist the oncologists in managing non-cancer-related medical issues, including uncontrolled diabetes, hypertension, and preoperative evaluation.

To study the process of consultation and identify the type of medical problems requiring primary care specialists, nurse practitioners maintained a log of consults from oncologists.

After the six-month pilot period, the internal medicine nurse practitioners and doctors evaluated the results. The three most common reasons for consultation were hypertension requiring multiple medications to control, diabetes needing insulin, and new-onset hyponatremia. Literature review revealed effective strategies in performing medical consultation. These findings were incorporated in developing the role of the nurse practitioner. In conjunction with internal medicine specialists directly involved in the consultation process, guidelines and protocols were created for nurse practitioners. Through these guidelines, nurse practitioners perform the initial patient history and physical examination, formulate the rationale for the differential diagnosis, order appropriate tests, and recommend medical plans to oncologists. Oncologists then review nurse practitioners' recommendations and issue appropriate orders for patients. Patients requiring care outside the scope of the nurse practitioner's practice are triaged to internal medicine specialists.

Nurse practitioners, as consultants, are considered to be a valuable asset to the healthcare team, as verbalized by physicians and patients.

The role of nurse practitioners is constantly changing to meet healthcare needs. Initially, the field of nurse practitioners was created in response to the pressing need for health care in medically underserved areas. Roles of nurse practitioners have evolved to become more specialized. At the University of Texas M.D. Anderson Cancer Center, nurse practitioners have developed into successful consultants. Consequently, we recommend the implementation of nurse practitioners as medical consultants to similar settings.

## 160

**THE ROLE OF THE CANCER SUPPORT NURSE IN AN AUSTRALIAN HOSPITAL.** Tracey Mander, BN, ONC, MHA, and Elizabeth Stickland, BN, ONC, MHA, Austin Health, Melbourne.

The purpose of this paper is to describe the model of the cancer support nurse (CSN) role implemented at Austin Health, Melbourne, Victoria. There is increasing recognition by healthcare professionals of the supportive and complex needs of individuals with cancer. Nursing's contribution in addressing these needs has been acknowledged as critical. Studies of the breast care nurse (BCN), in particular, have provided level one and two evidence that the BCN can contribute to improved patient outcomes (1, 2). Psychosocial clinical practice guidelines recommend the presence of the specialist BCN as they reduce psychological morbidity and improve wellbeing (3). Using the principles of these guidelines, this role was established to address needs of patients with newly diagnosed cancer of any type.

Prior to the CSN role, patients undergoing surgery for cancer were not able to have their support and information needs met. Staff lacked specific oncology knowledge and were unable to reassure them, or provide them with information regarding cancer support resources.

As a result of the CSN role, there have been a number of positive interventions which include the facilitating multidisciplinary communication, identifying the information and support needs of patients and their families/caretakers, breaking bad news, and educating patients, families, and nursing and medical staff.

Referrals to the CSN service are collected and reported upon yearly. There has been a steady increase in the number of referrals to the CSN



service since its inception. A survey of the CSN service is in progress at present to evaluate consumer views and to provide information for future service planning.

The CSN provides a vital service in nononcology units. The role enables provision expert resources, support, and development opportunities to staff involved in the care of patients with cancer. Specific needs of patients with newly diagnosed cancer, their families, and caregivers are identified and addressed.

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## 161

**COLLABORATION BETWEEN HEAD AND NECK MULTI-CLINIC AND RADIATION-BASED NURSING PRACTICE.** Robin Delaney, RN, BS, OCN®, and Patricia Powell, AS, RN, Massachusetts General Hospital, Boston, MA.

Treatment for patients with head and neck cancers include the combined modalities of surgery, chemotherapy, and radiation. The radiation and hematology oncology nurses at the MGH cancer center have newly joined together in collaboration to provide a consistent plan of care.

The purpose was to improve communication among the nursing staff for head and neck patients. The continuity of care between surgery, chemotherapy, and radiation for these complex patients was often inadequate or inconsistent.

Nursing developed an intake assessment with further assessment by chemotherapy and radiation nursing. Working collaboratively with interventional radiology nursing and a task force, a G-tube pathway was developed. Patient education materials on the side effects and medication were developed. A weekly head and neck clinical discussion conference where all patients are presented and staff are updated on their care was ongoing. Disciplines that attend are homecare liaison, dietary, social service, speech pathology, research, and nursing staff involved in all aspects of the patient's care along with residents and physicians. Telephone and e-mails between nursing helped resolve patient problems as they arose.

The overall care was less fragmented as the nursing staff came together in this collaborative environment. Discussions led to targeting patients most at risk for significant weight loss and resulted in an improved pathway for G-tube placement. Side effects from treatment are also managed in a timely and more efficient manner improving the quality of patient care.

Head and neck patients require extensive and early symptom management throughout the course of their disease. This requires care that encompasses the specialty of oncology nursing.

## 162

**BIOPSYCHOSOCIAL IMPACT OF PARENTAL CANCER ON SCHOOLAGERS.** Fei Jiun Su, PhD(c), MS, RN, and Nancy Ryan Wenger, PhD, RN, CPNP, Ohio State University, Columbus, OH.

Cancer is the second leading cause of death in the United States. In 1998, approximately 128,089 children had a parent diagnosed with cancer. Parental cancer may be a pervasive stressful event for children, but the impact on children is largely unrecognized. Most research on children's adjustment to parental cancer lacks a theoretical basis and appropriate comparison groups. How children cope with parental cancer and the effectiveness of their coping strategies is unknown. Other variables that may mediate or moderate children's responses are rarely analyzed. Differences between children's and parents' perceptions of this phenomenon need to be examined as well.

The purpose is to characterize the stress-coping process of children ages 7–12 who have a parent with cancer. Findings will be compared to similar measures from previous research on children who have encountered stressful events other than parental cancer.

This study is based on an integration of Lazarus's cognitive appraisal theory of stress and coping, cognitive developmental theory, social/emotional developmental theory, and physiologic stress response theory.

Power analysis indicates that a sample of 37 children is needed for this descriptive, cross-sectional design. Children will be recruited from a university support group, an oncology clinic, and the general clinical research center. Instruments completed by parents include a demographic data form, the Child Behavior Checklist/4–18, and the Family Peer Relationship Questionnaire. Children will complete the Family Peer Relationship Questionnaire, Feel Bad Scale (concurrent stressors), Schoolagers' Coping Strategies Inventory, Children's Stress Symptom Scale, and a human figure drawing. Also, a morning salivary sample will be analyzed for cortisol levels. The reliability and validity of all instruments used in this study are well established.

Analysis will include descriptive statistics, Pearson's Meta and canonical correlations to examine relationships, MANOVA for mediator and moderator analysis, and t-tests to compare groups.

Findings will increase our understanding of this pervasive stressor in some children's lives and will help to identify healthcare outcomes that are amenable to nursing interventions.

## 163

**THE PROMOTION OF PSYCHOSOCIAL WELL-BEING IN ONCOLOGY PATIENTS THROUGH AN INTERDISCIPLINARY APPROACH.** Jackie Medland, RN MS, Jane Hawksley, RN, MS, Ralph Schwab, LCSW, Elaine Miller, LCSW, Nancy Nainis, MA, LCPC, and Mara Levine, MOTR, Northwestern Memorial Hospital, Chicago, IL.

Our hematology-oncology unit needed to improve performance in the management of psychosocial and spiritual issues. Based on the findings of patient satisfaction surveys, patients felt that staff's attention to psychosocial and spiritual issues was lacking (70th percentile, Press Ganey).

An interdisciplinary team (IDT) conducted a psychosocial environmental assessment revealing that, while staffing was adequate and psychosocial services were in place, the emotional toll on the nursing staff was high and interdisciplinary team function was suboptimal. The IDT hypothesized that providers lacked the necessary skills and resources to address the complex psychosocial and spiritual issues presented on the unit. Anecdotally, patients told us that they believed that these issues were "not the care team's job," given the other demands of patient care.

We planned to measure the level of distress in our population of patients with cancer using the distress thermometer, however, patients did not relate to the word "distress" without significant interpretation by the healthcare provider and responded better to inquiries about levels of "stress" (on a 1–10 scale). A treatment algorithm was designed, featuring a range of interventions such as education regarding available resources, incorporation of volunteers into the healthcare plan, professional referrals or comprehensive assessment, and care planning by a licensed clinical counselor. Scores of = 4 set the algorithm in motion. The IDT also developed a comprehensive assessment tool that evaluates the patient's, the family's, and the IDT's goals for care. To improve the staff's comfort and competency in dealing with the psychosocial aspects of care, we initiated brief lunchtime case conferences to discuss current patients with a focus on improving listening skills and increasing utilization of existing resources. At weekly interdisciplinary treatment rounds, nurses included information on patient and family levels of stress.

The staff now focuses more effectively on the psychosocial dimensions of patient care as evidenced by improvement in the patient satisfaction index related to psychosocial issues (84th percentile) and a decrease in the number of psychiatric consults.

The IDT improved the staff's acumen at providing psychosocial care on our hematology-oncology unit through focused strategies that enhanced their ability to address these complex issues.

## 164

**UNDERSTANDING THE FAMILY EXPERIENCE OF NEUTROPENIA: ARTISTIC EXPRESSION OF RESEARCH FINDINGS.** Patricia Earle, PhD, RN, Norma Krumwiede, EdD, Sonja Meiers, PhD, Mary Bliesmer, DNSc, Sandra



Eggenberger, PhD(c), and Shirley Murray, MS, LISW, Minnesota State University, Mankato, Mankato, MN.

**Topic:** "Hope" by Esmail Mostaghimi is a representation of the research study entitled "Understanding the Family Experience of Neutropenia." The role of symptom management is central to oncology nursing. This artistic expression addresses the impact of chemotherapy-induced neutropenia on the family.

The purpose of the painting was to showcase the research in an innovative and meaningful way to assist with the dissemination of the study's findings. Utilization of research findings is often minimal. The conceptualization of this project was to disseminate research findings in the form of a painting.

"Hope," an original piece of art, is a 30" x 40" acrylic painting and is an aesthetic interpretation of data obtained from rural families experiencing neutropenia as a result of cancer therapy. The painting expresses the whole of this challenging situation and is informed by the artist and researchers who conducted a qualitative inquiry entitled "Understanding the Family Experience of Neutropenia."

The family is together on one long couch. The storm portrayed outside represents the turbulent times caused by neutropenia. However, slivers of light continue to stream in and the storm does not destroy the family's hope. The shattered glass in the window represents treatment interruption and the grandfather clock depicts time standing still while waiting for neutropenia to resolve. In the center of the painting, the family member with cancer is confined to a separate square on the couch, and is dressed in white symbolizing innocence and neediness. Nonspecific faces represent differing family experiences, diverse family types, and changing family roles and relationships. Various out-of-perspective features such as the twisted legs and thin, elongated arms represent pain and yearning throughout the cancer experience.

The use of an artistic display to bring the research alive is the goal of the researchers. The painting is extremely moving to nurses who have seen the image. This scholarly work is significant because it enriches the nurses' understanding of the neutropenic experience of the family unit. Nursing approaches created from this perspective will embrace the humanity of health care, support the building of diverse relationships, and honor the family as a significant partner in care.

## 165

**ARTS IN MEDICINE: PROVIDING AN EXPRESSIVE OUTLET FOR STRESS REDUCTION.** Linda Rice, RN OCN®, and Frances Falk, MFA, Med, H. Lee Moffitt Cancer Center and Research Institute, Tampa, FL.

In our world of oncology nursing, everybody appears busy. Patients are busy getting treated, families are busy with patients, and staff members are busy meeting their needs on the journey through each cancer experience. Some stress is managed while other stress is not.

Familiar stress management might include counseling or medication. Less familiar management for stress includes art, music, storytelling, and poetry. The focus of offering art experiences in medicine is based on the concept of process, not product. For this reason, an Arts in Medicine Program was developed at our NCI-comprehensive cancer center. Art experience in is not necessary for participation.

The focus of this abstract is to explain how introducing art into the medical surrounding can offer patients, visitors, and staff a creative outlet for expression and a channel for stress reduction.

Staff artists and volunteers coordinate the creative selections available. An art cart stocked with drawing, painting, and sculpting supplies offers art experiences to patients and visitors. The art cart is taken to different waiting areas or patient rooms when a private referral is made. An open studio is held in patient lounges or larger waiting areas where people can create together on large-scale projects such as our 22' x 24' labyrinth or on individual artwork. A poets' circle, playback theatre, and storytelling is also available. Musician staff and volunteers also use their talents to ease the hospital atmosphere with music in lobbies, waiting areas, busy inpatient units, or even at the bedside. Scheduled sessions are posted in the main lobbies. Nursing activities are accompanied by stress reducing art projects designed upon request for meetings or mandatory programs such as origami and watercolor projects.

As each individual makes "art," time stands still allowing for reduction of anxiety and worry. Meetings become less stressful and more relaxed. Commu-

nication is often enhanced. Individual responses vary but are consistently positive.

Patients, visitors, and staff have channeled stress with arts in medicine. The "art" workshops developed are not only pleasant distractions, they are creative outlets brought right to us on our busy healing journey.

## 166

**NURSES' PERCEIVED BARRIERS TO THE PROVISION OF SPIRITUAL CARE AND THEIR COPING MECHANISM.** Tan Hwee Hoon, Advanced Diploma in Oncology Nursing, Lang Siew Ping, BSN, Advanced Diploma in Oncology Nursing, and Ang Emily, MN, The Cancer Institute at National University Hospital, Singapore.

Studies have shown that more than one third (40%) of nurses expressed that providing spiritual needs to the patients and their family as being the least effective in the hematology/oncology wards (Lee, 2003). It was suggested the provision of such care was hindered by wide and different definitions of spirituality, and lack of staff, time, and resources. In achieving holistic nursing care, nurses need to overcome all the possible obstacles and have excellent knowledge and skills to provide not only physical, mental, and social care, but also spiritual care, as well, in order to improve patient quality of life.

The purposes of this study were to identify nurses' perceived barriers in the provision of spiritual care and explore their coping mechanisms.

This qualitative, phenomenology study sample consisted of 11 registered nurses who had been working in a hematology-oncology setting for one month to 10 years. Written questionnaires were used to assess nurses' perceived barriers in the provision of spiritual care and their coping mechanism when they faced difficulties of providing spiritual care. Verbal consent was obtained from the nurses prior to the study, and confidentiality and anonymity was assured.

The data were transcribed and subjected to content analysis, and categories were developed and described. The final themes that emerged from the study were subjected to peer reviews to ensure reliability and validity of findings.

The results suggested that the majority of the nurses listed lack of rapport with patients and not knowing how to approach patients as the most difficult reason they faced in recognizing and meeting patients' spiritual needs, followed by differences in religious and cultural background. In coping with the difficulties experienced, the majority of the nurses coped by finding time to interact with patients in the midst of heavy workload to established rapport, and seeking help from fellow colleagues and other resources. The study concluded that there is a great need to empower nurses with adequate knowledge and skills in meeting patients' spiritual needs despite religious and cultural differences. This will then release the nurses from the fear of offending patients as they provide spiritual care to patients in the pursuit of holistic nursing.

## 167

**RESPECTING SPIRITUAL BELIEFS: MANAGING A JEHOVAH'S WITNESS PATIENT WITHOUT BLOOD PRODUCT SUPPORT.** Suzanne Carroll, RN, MS, OCN®, AOCN®, Wake Forest University Baptist Medical Center Comprehensive Cancer Center, Winston Salem, NC.

Research suggests there is an increased sense of spirituality among patients with cancer. Spirituality refers to the dimension of being human that motivates self-transcendence. Spirituality assists patients to make sense of their universe. Religiosity is an extension of spirituality. Religion, through rituals, observances, and sacred practices serves to represent and express ones spirituality. Oncology nurses facilitate patient spirituality.

A religious practice followed by Jehovah's Witnesses includes the refusal of blood products. Jehovah's Witnesses believe that all hope of eternal life will be forfeited if transfusion is accepted. Instead of transfusions, Jehovah's Witnesses promote blood conservation and transfusion alternatives. Recently, many medicolegal and ethical issues arose when we treated a Jehovah's Witness patient with induction chemotherapy for acute lymphocytic leukemia (ALL). The purpose of this poster is to describe this patient care experience with an emphasis on the spiritual issues encountered.

As blood counts fell to dangerously low levels, oncology nurses needed to utilize clinical interventions that were respectful and sensitive to the re-





ligious beliefs of the patient. Nursing interventions were aimed at minimizing blood loss by consolidating blood draws and using the least amount of blood; administering long acting agents such as Neulasta, Aranesp, and Neumega instead of shorter acting agents; controlling symptoms to prevent nausea/vomiting/constipation, all of which could initiate a bleeding episode and loss of blood; providing nutritional support and administering vitamin supplements; and optimizing oxygen delivery and reducing oxygen consumption. An advanced directive was reviewed and communicated among nursing and medical staff to ensure that blood products would not be administered in the event of a bleeding episode, adverse reaction, or medical emergency.

Treating this patient without the use of blood products was a departure from the norm and created some tense and anxious moments among the nursing staff. This departure, however, also allowed for some creative nursing interventions and demonstrated that patients can be treated successfully without the use of supportive blood products.

This patient care scenario exemplified the importance of recognizing and respecting patients' spiritual beliefs and will serve as an example for other patients with unique spiritual needs.

## 168

**MULTIDISCIPLINARY CLINICAL INITIATIVES TO DECREASE THE RISK OF ETHICAL DILEMMAS.** Joyce L. Neumann, RN, MS, AOCN®, University of Texas M.D. Anderson Cancer Center, Houston, TX.

Oncology healthcare providers are confronted by a number of clinical situations that may challenge their technical skills and intellect as well as their beliefs, values, and principles. Having a professional responsibility to advocate for patients, practitioners may have to come to terms with competing ethical principles presented by differences in resources allocation, religious beliefs, and societal mores. Oncology care is unique in that patients present with a life-threatening illness if untreated. In addition, many of the interventions for control or cure tend to be very aggressive and can greatly affect the individual's quality of life. The uncertainty related to the treatment options and outcomes may also lead to difficulty in decision making and potential ethical dilemmas.

The purpose of this poster or presentation will be to identify clinical initiatives, which have been successful in preventing or resolving ethical dilemmas challenging the patient/family and the healthcare team. These ethical issues include level of appropriate care, informed consent, do not resuscitate orders, and discontinuation of medically inappropriate care.

Clinical initiatives that are currently being utilized include ethics rounds, informal ethics consult, advanced directives taskforce, care conferences, self-care and caregiver agreements, and creation of a compliance algorithm/pathway.

Results of a nurse survey examining the impact of ethics rounds will be presented, as well as information about institutional ethics consults. Copies of self-care and caregiver agreements and educational material about advanced directives for high-risk patients will be provided.

Incorporating relevant clinical initiatives will assist in preventing or resolving potential ethical issues.

## 169

**CREATION, IMPLEMENTATION, AND EVALUATION OF AN ESOPHAGECTOMY SUPPORT GROUP: PROVIDING CONTINUITY OF CARE IN THE OUTPATIENT SETTING.** Donna Edmondson, RN, C, BSN, OCN®, Diane Tunney RN, OCN®, and Linda Schiech, RN, MSN, AOCN®, Fox Chase Cancer Center, Philadelphia, PA.

Patients with a diagnosis of esophageal cancer are faced with many life-altering adjustments. Oncology nursing research supports a positive correlation between participation in cancer support groups and patient outcomes. Support groups help to alleviate feelings of isolation, fear, and depression as members of the group share common problems and learn to overcome them together.

An assessment determined that only one support group existed in the tri-state area of the northeast for this patient population. With an average of thirty esophagectomies performed annually at this comprehensive cancer center, the interdisciplinary team felt it was imperative to design a support group model for these vulnerable patients. Oncology nurses were in a pivotal role to promote holistic care by advocating for the develop-

ment of this program. Collaboration with a case manager, social worker, clinical nurse specialist, thoracic surgeon, and patients was critical to successful implementation.

The surgeons encourage support group participation during initial patient encounters pre-surgery. Early group involvement has the potential to decrease pre-treatment anxiety by offering support and an enhanced knowledge base of disease and treatment. Patients often feel at ease when they meet someone who has a similar experience. The objective of the group is to offer patient and family support throughout the treatment continuum. Informational discussions on disease process and treatment regimens promote coping strategies for commonly shared symptoms (swallowing difficulty, reflux, weight loss/gain, depression) and provide an open forum for exchange of feelings and concerns. A convenient meeting place and time was located and occasional speakers are coordinated. A social worker and registered nurse facilitate the group.

An individual patient questionnaire is being developed and will be sent to the members biannually to evaluate the effectiveness of the program. To date, patient feedback has been overwhelmingly positive.

A support group offers, to many, the courage to continue their treatment. Patients learn not only to survive, but also to live each day to the fullest as they travel the road to recovery in unity.

## 170

**NATIONAL CONSENSUS PROJECT FOR QUALITY PALLIATIVE CARE—PALLIATIVE CARE STANDARDS.** Constance Dahlin, APRN, BC, PCM, Massachusetts General Hospital, Boston, MA.

Each year 555,500 people die of cancer.

1. According to the Institute of Medicine (IOM) Improving Palliative Care for Cancer, most patients with cancer will die from the disease and will have poor quality of life.
2. Nurses can affect the dying process with good standards of palliative care. In 1975, only about 1,000 Americans received hospice care, but in 2001, this increased to 775,000 people. Only 20% of all terminally ill patients die with hospice. The report, Means to a Better End: A Report on Dying in America Today, revealed that many Americans don't have access to good end-of-life care, let alone, hospice care.
3. Research conducted during the past decade has shown that Americans with serious advanced illnesses want to be free from pain and other burdensome symptoms, maintain a sense of control, have their dignity respected, avoid being a burden to their families, and not experience futile care.

The Institute of Medicine called for "best practices to dictate the standard of care." To remedy this situation and improve delivery of palliative care in the United States, Voluntary Consensus Standards for Palliative Care were developed by the National Consensus Project for Quality Palliative Care (NCP) and will be released in January 2004. The NCP was formed in December 2001 by a group of peer-nominated leaders in end-of-life care who met in New York in response to a call to develop nationally accepted definitions of the essential elements and best practices of palliative care.

These standards describe the scope and characteristics of both specialist and primary palliative practice settings, with the hoped outcome of formal recognition, stable reimbursement structure, and accreditation initiatives by JCAHO. This poster will review the seven domains of care and their application to oncology nurses in any setting.

The guiding principles of the standards are access to care and quality improvement, relief of suffering, comprehensive assessment, patient- and family-centered care, comprehensive interdisciplinary holistic care, and strong communication skills. As many patients will need such care, the oncology nurse plays a critical role in identifying appropriate patients for palliative care and participating in the provision of care. These standards will help oncology nurses deliver care across the cancer continuum.

## 171

**USE OF ALGORITHMS IN PALLIATIVE CARE.** Karen Overmeyer, MS, APRN, BC, Jill Laird, MN, APRN, and Patrick Coyne, MSN, APRN, BC, Virginia Commonwealth University Health System, Richmond, VA.

The Thomas Palliative Care Unit is an 11-bed inpatient unit dedicated to the management of patients with symptomatology related to disease



progression and end-of-life care. The unit opened in May 2000 with a nursing staff from a wide variety of specialized backgrounds. Algorithms for symptom management were developed to meet the following goals: (1) To provide the grounds for consistency in clinical assessment and treatment for a diverse staff from very different backgrounds, (2) To increase the autonomy of the palliative care nurses to initiate appropriate intervention any time during a 24-hour period, (3) To decrease the amount of time between symptom development and the start of active treatment, and (4) To utilize the most effective treatments based on research and/or review of the current literature.

The physicians and nursing staff chose symptom management algorithms versus standing orders because algorithms visually depict systematic evaluations aimed at identifying patients who stand to benefit (or not benefit) from a particular range of management strategies. Algorithms are "decision trees" consisting of boxes containing questions, counseling, testing and treatment suggestions, and decision options. Validity for the counseling and decision boxes is based on data from systematic literature reviews. Annotated text with literature citations accompanies the symptom management recommendations where feasible. The algorithms were developed by interdisciplinary team collaboration. This process involved identifying the most common symptoms of advancing disease and end of life according to palliative care literature. Twenty-two symptoms became algorithm constructs. Each provides for clinical flexibility allowing for evaluation of effectiveness at different levels.

Using evidence-based clinical algorithms in palliative care has proven to be a valuable method for initiating proactive interventions to alleviate and control symptoms that adversely affect patient quality of life. These decision trees have led to improved consistency in treatment of symptoms and the opportunity for continuing outcomes evaluation and research. Additionally, algorithms also appear to offer cost savings.

Future studies include a cost-benefit analysis and further clinical research to address the dearth of literature for selected symptom algorithms and the problems of incomplete databases.

## 172

**THE KEYS TO CREATIVE CARING.** Melissa Lehan Mackin, RN, BSN, OCN®, Sharon Baumler, RN, MSN, CORLN, Barb Bezoni, RN, BSN, and Dawn Keiffer, RN, BSN, University of Iowa Hospitals and Clinics, Iowa City, IA.

Nursing in the inpatient acute care setting is plagued by staffing shortages and the race to match increasing physiological needs with technical skills. Despite these challenges, the nurses on an inpatient cancer unit in the Holden Comprehensive Cancer Center at the University of Iowa have infused creativity in their approach to continue and preserve holistic care.

The first key in promoting this creative care is to identify the need to connect with the patients and their families. This connection is crucial to becoming aware of needs beyond the physical realm. Reducing fear and anxiety and advocating quality to life needs to be an important part of the care plan. Another key is knowledge of the pool of resources and how to draw upon this wealth.

One example of creative caring involved taking a patient, who had been hospitalized for several months, to a football game to see his daughter in the marching band. This effort required the support of multiple disciplines to provide the care he needed during this outing. Another example included the planning and support of a birthday party for a patient with her twin brother at the end of life. For another, it was as simple as one staff member bringing in an actual mini-snowman for a patient who was restricted indoors for months due to his prolonged illness.

The results of these efforts have increased overall patient satisfaction and largely affected staff satisfaction. Utilizing special talents and skills allow staff to find internal rewards for the work they do.

Creating a work environment that encourages and supports creative caring allows staff to contribute holistically to patient care, allows the use of talents not otherwise employed in the physiological need driven model of care delivery, and has the ultimate outcome of increased satisfaction for all involved.

## 173

**STAFF SATISFACTION AND RETENTION IN THE PALLIATIVE CARE SETTING.** Jill Laird, MN, APRN, Patrick Coyne, MSN, APRN, BC, and Karen

Overmeyer, MS, APRN, BC, Virginia Commonwealth University Health System, Richmond, VA.

In the current healthcare environment, the retention of RN staff is paramount to the fiscal survival of a unit, department, or institution. Job dissatisfaction leads to turnover, which is expensive. Staff satisfaction and retention is critical.

The literature reports that RNs leave nursing because of staffing issues, patient acuity, physical and emotional stress, perceptions of little respect, lack of autonomy, and lack of support. In contrast, RNs report increased job satisfaction when they are able to make a difference, have professional autonomy, feel a sense of community, and receive recognition for their work. Creative scheduling, part-time options, continuing education, and providing continuity of care are also valued.

At the Thomas Palliative Care Unit, we support nursing with (1) close-knit, supportive staff, (2) autonomy in practice with algorithms for symptoms management, (3) collaborative relationship with attending physicians, (4) annual retreats for planning, review, and team-building, (5) self-scheduling with four-, eight-, and 12-hour shift options, (6) hourly, part-time, and full-time employment opportunities, (7) continuity of care, (8) a unit manager who shares in direct patient care activities, (9) interdisciplinary support staff, (10) career advancement, (11) national certification, and (12) continuing education.

The Thomas Palliative Care Unit is an 11-bed inpatient unit at Virginia Commonwealth University Health System, which opened in May 2000. The unit is dedicated to the management of patients with symptomatology related to disease progression and end of life care. There are currently 12 RNs filling 9.8 FTEs. The last RN hired began 18 months ago. Ten RNs from VCUHS are on a waiting list to work on the palliative care unit.

Providing palliative care for symptom management related to disease progression at the end of life is the right thing to do. We have demonstrated that a palliative care unit can offer high staff satisfaction and low turnover. The unit, department, and institution benefit from a reduction in costs for training, education, and recruitment of RN staff.

## 174

**CUMULATIVE GRIEF: A PROGRAM TO RECOGNIZE AND SUPPORT STAFF RESPONSES TO PATIENTS' DEATHS.** Elizabeth Johnson, MSN, AOCN®, RN, Esther O. Dette, AD, RN, Carol Ghiloni, MSN, RN, Michael McElhinny, MD, and Lisa Sohl, MSN, OCN®, RN, Massachusetts General Hospital, Boston, MA.

A significant part of the oncology nursing experience is the close relationship that develops between staff and patients. When a patient dies, loss of that relationship can be as poignant for the staff as it is for family. A bereavement program dedicated to staff promotes healthy resolutions to their grieving for patients.

To promote healthy grieving among nurses and professional care providers, a program for staff bereavement was implemented on the acute care inpatient oncology/bone marrow transplant unit of a major teaching hospital.

The major components of the program are

- Annual service for multidisciplinary staff from the inpatient oncology unit to celebrate the memory of deceased patients for whom they cared during the previous year. A highlight of the service is a time for spontaneous sharing by staff from all levels and all disciplines.
- Monthly bereavement rounds led by the oncology chaplain to discuss anticipated as well as actual deaths.
- Enrollment of selected staff in the hospital's clinical pastoral education program, an intensive 170-hour interdisciplinary course conducted over five months focused on spirituality in patient care delivery.
- Spontaneous group debriefings led by senior staff, the oncology chaplain, and a representative from the employee assistance program when a death provokes particularly intense feelings.
- Opportunities for staff to consult one-on-one with the oncology chaplain or the unit-based psychiatric clinical nurse specialist regarding a patient death.

The program grew out of spontaneous responses to patient deaths and has evolved in a structured way over five years. While inclusion of significant others was considered, it was decided to implement the program exclusively for staff in order to provide the strongest possible ministry to meet their needs. Results of the program have included recognition of



feelings growing out of caring relationships with oncology patients, increased interpersonal support among staff relating to patients' deaths, resolution of painful feelings, continued spiritual connections with patients for whom the staff has provided care, and enhanced morale.

## 175

**TEACHING END-OF-LIFE NURSING CARE TO UNDERGRADUATE STUDENTS.** Patricia Rushton, RN, BSN, MSN, PhD, AOCN®, ANP, Brigham Young University College of Nursing, Provo, UT.

Nurses care for individuals and families from birth until death. Birth is a joyous time. Nurses are glad to care for the newborn and its family. When it's time to leave life, nurses can be uncomfortable providing appropriate care for the dying patient and their family. The discomfort is due to poor knowledge about the death process and methods of care to alleviate suffering during the dying period. This knowledge has expanded recently. Because nurses are frequently the healthcare providers present with spouses, parents, friends, neighbors, and church members dealing with those who are dying, learning to do it well is important.

The purpose of an end-of-life course is to educate nursing students in principles and practice of providing care to the terminally ill, the involved family, and significant others. The course is based on Ferrell's theoretical framework, which discusses the physical, psychological, social, and spiritual dimensions of quality of life. The framework includes patients, family caregivers, and nurses and spans the continuum of life.

The course's goals are to help students understand and apply principles of end-of-life care and demonstrate the ability to teach individuals, families, and significant others to assist them in successfully coping with end-of-life experiences. The interventions used include weekly lectures from the End-Of-Life Nursing Education Consortium Training Program. Nursing, popular literature, and movies are used to help students see the application of principles of end-of-life care. Students spend time each week in inpatient and outpatient clinical situations working with nurses who provide end-of-life care.

Achievement of course goals are evaluated on written student work completed on home visits to dying patients or their families, class presentations on movies demonstrating end-of-life situations, and on case studies requiring that the student apply principles of end-of-life care. Student course evaluations demonstrate students felt they learned the principles of end-of-life care and are able and desire to apply them in their clinical practice.

Preparing students to provide better care to the terminally ill will produce graduate nurses better prepared to render care to the terminally ill.

## 176

**END-OF-LIFE CARE PROGRAM: SUPPORT FOR PATIENTS, FAMILIES, AND CAREGIVERS.** Frank Brown, RN, BSN, OCN®, and Beth Lenegan, PhD, Roswell Park Cancer Institute, Buffalo, NY.

Providing end-of-life care presents a great challenge to many oncology nurses. Health-care professionals must cope with, and help the patient/family unit cope with many complex situations when dealing with serious illness, dying, loss, and bereavement. Caregivers may feel overwhelmed or inadequate to provide the supportive measures, counseling, or to anticipate other less obvious needs.

During the past few years, a great emphasis and accompanying training has been placed on physical pain and symptom management. While psychological and spiritual care needs are often noted, the practitioner is rarely provided with adequate skills to address these needs; and even if the skills are inherent, time to employ them is still an issue.

At Roswell Park Cancer Institute, a multidisciplinary team was assembled to review current practice and the needs of patients and their families. Families who had experienced loss of loved ones at the institute were surveyed following the semi-annual remembrance service to identify what could have been done better during their experience.

The poster will demonstrate the End-of-Life Taskforce's approach to a process that is begun at the time of terminal diagnosis, accelerates as death becomes imminent, and continues for families after the patient dies. Included in the process are scheduled guest lectures, prepared educational materials, staff debriefings, bereavement support groups, and community

education for volunteers. The process seeks to aid staff by supplying resources for patient/family interaction, supporting the staff during particularly emotional periods, and providing other professionals to complement the nursing staff.

This new program has successfully increased satisfaction scores and, again this year, is nominated for the Circle of Life award. The institute provides patients, families, staff, and the community with a model program that is comprehensive and progressive as it meets the many needs experienced during the end of life.

## 177

**END-OF-LIFE PREPARATION: EDUCATION OF PATIENTS AND FAMILIES.** Jane Caplinger, RN, BSN, MSA, OCN®, William Beaumont Hospital, Royal Oak, MI.

Nurses play a significant role in providing support and education to dying oncology patients and their families.

Death still occurs mostly in hospitals. According to the National Center for Health Statistics, there were 2,417,798 deaths in the United States in 2001. Of those deaths, 553,251 were from cancer. According to hospitals statistics, 31% of all deaths in our institution occur on the oncology unit. Oncology nursing staff identified that patients and their families had a knowledge deficit regarding end-of-life care. They usually had similar questions and concerns about death, families wanted to participate in their loved one's care, but didn't know how, and they had difficulty remembering what they were told verbally. The purpose of this pamphlet was to reinforce verbal education, provide support, and educate the patient and families about the signs and symptoms of approaching death, offer suggestions on what families can do to help the patients, give guidance on what to say, and answer commonly asked questions.

There was no comprehensive, readable patient/family education material available at our institution to meet this need. A pamphlet on end-of-life care was created by an interdisciplinary team comprised of physicians, nurses, social workers, and pastoral care staff.

This pamphlet will be used by nurses to teach oncology patients and their families following the discussion of a patient's terminal diagnosis. A comparison study will be done to evaluate the effectiveness of the teaching tool. A test will be administered to the experimental group before and after verbal instruction and the pamphlet use. The control group will be tested before and after verbal instruction only.

When patient care focus changes from cure to comfort, the patients and their families need education on end-of-life care. This pamphlet will be used by nurses to teach end-of-life care to oncology patients and their families following the discussion of a patient's terminal diagnosis.

## 178

**BEREAVED FAMILY CAREGIVERS' DESCRIPTIONS OF SLEEP CHANGES DURING AND AFTER CARE GIVING.** Corinne Grimes, PhD, RN, Patricia Carter, PhD, RN, CNS, and Martita Lopez, PhD, The University of Texas at Austin, Austin, TX.

The findings from this project will support a funding application to be submitted to the National Institutes of Health to conduct a longitudinal study of sleep pattern changes in bereaved family caregivers and to explore the impact these sleep patterns have on caregiver emotional and physiological health over time. Family caregivers rely on their oncology nurses even after the death of their family member. This study may provide insight into the affect sleep has on the caregiver's bereavement process that oncology nurses can use in their practice.

Family caregivers of persons with terminal illnesses experience severe levels of stress while providing care and after the death of the patient. Research has shown caregivers' sleep quality diminishes greatly as a result of providing care to a terminally ill family member. Additionally, research with bereaved caregivers has shown that caregivers continue to experience varying levels of stress that can affect their lives for up to two years after the death of the patient. What is not known is how bereaved caregivers' sleep is affected and how changes in sleep quality affect the caregiver's experiences during the first year after the death of the patient. This project proposed to explore sleep changes in bereaved caregivers from the caregiver's point of view.





A phenomenological frame of reference was used for this study.

This project proposed to explore sleep changes in bereaved caregivers from the caregiver's point-of-view. Caregiver's sleep is measured objectively with the Pittsburgh Sleep Quality Index. Additionally, caregivers were asked to provide narrative descriptions of how their sleep patterns changed during and after care giving, and how these changes may have affected their quality of life, daily functioning, physiological health, and bereavement process.

Content analysis will be used to explore caregiver narratives for themes that describe their experiences during and after care giving. Descriptive statistics will be used to explore quantitative sleep (PSQI) and depression (CESD) measures. A comparison of quantitative and qualitative self-reports will be conducted for sleep and depression measures.

This project is in process. Anticipated findings will support further research to describe bereaved caregiver sleep and depression patterns over time and how the caregiver sleep quality may affect physical and emotional health as well as movement through the bereavement process.

## 179

**UNLICENSED ASSISTIVE PERSONNEL: MEETING PATIENT CARE NEEDS AND INCREASING PATIENT SATISFACTION IN AN ERA OF BUDGET CUTS.** Tricia Cox, MS, RN, ANP-BC, OCN®, and Patrice Steininger, RN, OCN®, John Randolph Medical Center, Hopewell, VA.

Delivering quality health care to oncology patients in an environment of budget cuts and increased patient loads can be daunting. Reductions in staffing can negatively affect patient satisfaction and decrease employee morale.

To describe a creative approach for meeting patient care needs, improving staff productivity, and increasing patient satisfaction on an inpatient oncology unit using unlicensed assistive personnel (UAP).

A task force, consisting of the nurse manager, director of nursing, RNs, and UAPs, was formed to review staffing needs, assess patient care issues, and plan ways to promote patient and staff satisfaction. The task force reviewed nursing and non-nursing tasks, modified training methods, created competency validation tools, and developed a tiered system for UAPs with pay increases for increased responsibilities. Next, a staff retreat was held to introduce the program and foster the team building necessary to implement the changes. New roles and tasks were introduced and RNs and UAPs provided input with regard to the program and competency requirements. Retreat participants decided to introduce one task at a time (e.g., indwelling urinary catheter removal) to UAPs. An RN would supervise and evaluate each competency before moving to the next. Educational materials were developed using the Oncology Nursing Society position paper for the use of assistive personnel. Classes were held and skills stations provided hands-on training. Daily appraisals by staff helped monitor the progress of the initiative and allowed prompt adjustments.

UAPs reported increased job satisfaction, RNs reported increased satisfaction with UAP performance, and patient satisfaction improved as measured by the Gallup survey. RNs and UAPs working together to implement the new program fostered teamwork. RN supervision of UAP training helped build trust and foster positive working relationships. Discussions between RNs and UAPs promoted communication and facilitated successful program changes. As a result, UAPs reported increased job satisfaction, RNs reported increased satisfaction with UAP performance, and patient satisfaction improved as measured by the Gallup survey. This program suggests that UAPs can positively affect patient satisfaction, enjoy increased job satisfaction, and improve job performance if provided with proper training, supervision, and evaluation.

## 180

**DEVELOPMENT AND IMPLEMENTATION OF AN ONCOLOGY NURSE RECOGNITION DAY AT A LARGE COMPREHENSIVE CANCER CENTER.** Sherry Emigh, RN, BSN, OCN®, Amy Barnett, RN, BSN, Mary Scherbring, MS, RN, OCN®, Donna Schumacher, MS, RN, Shelley Reidt, RN, BSN, and Kari Anderson, RN, BSN, OCN®, Mayo Clinic, Rochester, MN.

Recent focus on recruitment and retention of qualified nurses and the intense demands placed on oncology nurses highlight the need to provide recognition for their efforts. Additionally, providing patient care at a large comprehensive cancer center requires a multitude of integrated departments connected in purpose, but commonly separated by distance.

The nursing education committee of the hospital hematology, oncology, and blood and marrow transplant units consists of four representative inpatient nurses from the various specialties, two nurse educators, and one nurse manager. The committee oversees education to orientees and experienced nurses.

Recognizing the effort required to prepare oncology nurses and the importance of retaining them, in 2001, the committee initiated an annual recognition event coinciding with national Oncology Nursing Day. This one-day celebration was initiated to demonstrate appreciation for the physical and emotional challenges involved in caring for this population and to promote collegiality among staff. The event was replicated in 2002 and 2003 as it aligned with institutional initiatives related to staff satisfaction and retention.

Over the past three years the day's events have included refreshments, door prizes, and awards in an environment conducive to professional interaction. Poster displays highlight the accomplishments of OCN® and AOCN® certifications, educational presentation, publication, and years of oncology experience of each individual nurse. In 2001 and 2002, a certificate of appreciation was developed and awarded to nurses working within the specialty. In 2003, the annual Oncology Nursing Society's logo was developed into a magnet and provided to each attendee. This event was made possible through a modest budget and the support of nurse managers and leadership.

While this event began as a recognition day for nurses, it has evolved to include other members of the healthcare team throughout the cancer care continuum. In addition, professionals from outpatient oncology, radiation oncology, and the cancer center administrative offices were able to network with inpatient nurses. The committee took great satisfaction in observing the increasing participation in this recognition event.

Positive feedback, a high attendance rate, and minimal resource utilization have combined to establish this as an annual event.

## 181

**CANCER CARE CUE CARDS: AN EDUCATIONAL TOOL IN ONCOLOGY FOR NEW NURSING STAFF AND NURSING GRADUATES.** Diana Hinton, RN, BSN, OCN®, Boulder Community Hospital, Boulder, CO.

Oncology is a challenging and rewarding field of nursing. It requires excellent critical thinking skills, care, compassion, and specialized knowledge in oncology. Nurses entering this field often feel overwhelmed with the amount of information they need to give safe, skillful, and competent patient care. In a time when there is a critical nursing shortage, it is imperative that the older generation of nurses assist new graduates in making the transition from school to practice as comfortable and pleasant as possible. It is also desirable that nurses entering the field of oncology nursing will wish to continue in the care of oncology patients.

As a group, the nursing staff on the cancer care center has contributed their knowledge, expertise, and research in developing cancer care cards (also known as CCCues). Their willingness to participate in this project demonstrated their leadership.

The purpose of these cards is to provide a "quick look" at the major areas of oncology nursing so that new staff can have a brief, but comprehensive overview of their patients' needs. Five main areas were identified and each card is color coded according to topic. Blue cards identify a type of cancer with signs and symptoms, sites of metastasis, complications, and nursing and medical interventions; red cards discuss oncologic emergencies; yellow cards address symptom management; and purple cards address the post-op care of oncological surgeries. Miscellaneous topics such as the administration of certain medications (amphotericin) and blood transfusions are on orange cards. Each card has the information in a short precise manner that is easy to read and understand.

In order to obtain the information in a consistent manner, data collection forms were available to the staff. However, each card is unique to the nurse who developed it. The LPNs and patient care associates have also developed cards pertinent to their practice.

Verbal feedback regarding CCCues has been very positive—that they are indeed helpful, educational tools not only for new staff, but also for existing staff who use them for a quick review. Occasionally, when our unit is full and our patients are admitted to other units, we send a CCCue card to the other unit to assist them in caring for the patient.

The implications for oncology nursing are identified. The suggestions for using this information are included.

**INCORPORATION OF CLINICAL TRIALS INTO NURSING ORIENTATION AND CONTINUING EDUCATION.** Tracy Douglas, RN, BSN, OCN®, Kathy Elza Brown, [Need credentials], Amy Goodrich, CRNP, and JoAnn Finley, RN, MS, The Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins, Baltimore, MD.

Clinical trials education is imperative to our goal of better cancer treatment for patients at this NCI-designated comprehensive cancer center. The mission of our cancer center is, "to decrease the mortality and morbidity from cancer; to excel in cutting edge basic, clinical, and translational research; to provide the full range of highest quality, affordable, preventative, diagnostic, and therapeutic services; to be a leader in education; and to demonstrate respect and to provide support for faculty and staff while fulfilling the center's mission."

In order to excel at our mission of doing cutting edge basic, clinical, and translational research, staff nurses must be proficient in the administration of therapies for clinical trials, education of patients about clinical trials, and participation in patient recruitment.

During orientation lectures for new staff, we discuss our mission and what the nurse's role is in contributing to the goals of the mission. Terms such as clinical trials and translational research are defined, as well as how the clinical areas are connected with the cancer research areas. Clinical trials that are being done at our institution are included in each class about specific diseases. As well as having clinical trial content in each class, a research nurse presents information specific to clinical trials. At this institution, every clinical trial has assigned to it a specific research nurse. One of the duties of this nurse is to educate the nursing staff directly caring for the patients on the clinical trial. Clinical trials are so integral to the mission of our center that we will be launching a clinical trials week. The agenda for this week will include "Ask the Expert Sessions," presentations on different clinical trials, instruction on methods to increase recruitment, and content on the protection of the rights of human subjects.

This educational program is evaluated by assessing changes in the total number of patients on clinical trials each year, and by class evaluations. Staff nurses are essential members of the clinical research team. Their education and support enhances patient outcomes, research outcomes, and this cancer center's mission.

**HIGH DOSE RATE BREAST BRACHYTHERAPY: BRIDGING GAPS IN STAFF DEVELOPMENT AND PATIENT EDUCATION.** Stephanie Gilbertson White, MS, RN, School of Nursing, University of Wisconsin, Madison, WI, and Julie Griffie, RN, MSN, CS, AOCN®, and Dawn Radsek, MA, Froedtert Hospital, Milwaukee, WI.

High dose rate (HDR) breast brachytherapy is becoming an increasingly common way for women with breast cancer who are undergoing breast conservation surgery to receive radiation therapy. However, the treatment protocol is quite different than traditional external beam radiation. For nurses working in oncology clinics and on surgical units that treat these women, it is important to have a strong knowledge base about HDR breast brachytherapy, including both the theory and the physical care appropriate for these patients.

The purpose of this poster is to present a staff education project that was implemented at a major mid-western hospital developed to meet the staff's learning needs.

Materials were prepared consisting of current educational information about HDR breast brachytherapy, including information about the theory of the treatment, patient eligibility criteria, a protocol for postoperative nursing care, and standardized patient education materials. This poster was presented to all nursing staff during a two-week staff education fair. Nursing staff from the oncology clinic and the inpatient surgical units will be alerted that this poster is particularly relevant for their practice setting. Following the fair, the poster was displayed on two of the surgical units for two weeks. At the end of two weeks, staff (N = 90) from those units were asked to complete surveys assessing their knowledge and satisfaction.

Survey results will be analyzed to show if knowledge was increased by the content and if the poster and patient education materials were considered useful in their practice.

Research was demonstrated that HDR breast brachytherapy is a highly

effective form of radiation for the treatment of breast cancer for certain women. Nurses in practice settings that care for women with breast cancer need to keep up to date on the latest standards in order to provide optimal care. Continuous staff development efforts, including follow-up evaluations, are needed to ensure that practicing nurses are indeed delivering optimal patient care.

**ASSESSMENT OF THE ELDERLY CANCER PATIENT: OPTIMIZING TREATMENT OPTIONS.** Anne Anselmo Murphy, MSN, RN, APRN, BC, The Cancer Institute of New Jersey, New Brunswick, NJ.

Nurses are in the unique position of being in the forefront in providing direct care to patients. And, advanced practice nurses (APNs) develop the medical plan of care with their collaborators. With the recent development of the NCCN guidelines in the assessment of older patients with cancer, nurses can incorporate these guidelines into their practice and greatly effect cancer care for the elderly. At the Cancer Institute of New Jersey, an NCI-designated cancer center, a multidisciplinary group developed a plan to disseminate this information. We were awarded the grant we wrote for a professional education outreach program.

The purpose of the educational program is to make nurses aware of the NCCN guidelines and assist them in adopting these guidelines into their practice. The literature reveals that a great number of elderly patients with cancer are under treated or are not referred to oncology specialists because of age bias. The health status of elderly patients can be highly variable. The key to identifying age appropriate treatment is performing a comprehensive geriatric assessment. The NCCN recently suggested guidelines in the assessment of the older patient with cancer and includes a management decision algorithm.

The Cancer Institute of New Jersey is planning a full-day educational program to address the training of oncology nurses and social workers in assessing the elderly patient with cancer. Content will include the NCCN guidelines, including the management treatment algorithm with emphasis on special considerations in treating the elderly patient with cancer and will incorporate multicultural sensitivity into the geriatric assessment. A model of effective organizational change is part of the training.

We will evaluate knowledge of the program content through pre- post-testing. The post-test will be incorporated into the program through a progressive case review with a multidisciplinary panel. Contact with participants will be maintained via a listserv to support their implementation of change. In addition, six-month follow-up of the program participants will identify institutional barriers to adoption of the training material.

The issue of managing cancer treatment in the elderly is a progressive common problem. There is little evidence-based or clinically-based consensus on the treatment of the older person with cancer. Adopting the NCCN guidelines into nursing practice will provide a basis for the integration of geriatric tools in the multidimensional evaluation and treatment of older patients with cancer. Research questions will undoubtedly arise as these guidelines are consistently used for initial and follow-up patient assessments.

**IMPROVING ONCOLOGY NURSES' KNOWLEDGE OF PATIENTS UNDERGOING THORACIC SURGERY FOR LUNG CANCER: DEVELOPING A SELF-LEARNING MANUAL FOR INPATIENT ONCOLOGY NURSING STAFF.** Nancy Steward, MSN, RN, CRNI, and Darcy Burbage, RN, MSN, AOCN®, Christiana Care Health System, Newark, DE.

Currently, a shift in the paradigm of cancer care at Christiana Care Health System will require that lung cancer patients who need further surgery will be cared for on a traditionally all-medical oncology unit. In an effort to maintain quality care to these patients, the lung cancer care coordinator identified a need to educate inpatient oncology nursing staff on the care of patients undergoing thoracic surgery.

In collaboration with members of the thoracic multidisciplinary team and the inpatient oncology unit, a self-learning manual was developed to prepare the nursing staff to properly care for these patients. The components of the manual include an anatomy review, indications for thoracic surgery, a brief review of lung cancer diagnostic and staging, nursing as-



assessment, documentation standards, and clinical practice guidelines for chest tubes and post-op thoracotomy care.

A pilot study was conducted to evaluate the content, readability, and the average time taken to complete the study. Based on pilot study results, the manual was updated to include discharge instructions and thoracic guidelines. Staff inservices will be conducted to review the material and provide an opportunity for the inpatient staff to get to know the members of the thoracic team.

Continuing education units were applied for, and each staff member will receive their own copy of the manual that can serve as a resource guide. A post-test will be given with a score of 100% prior to awarding contact hours. As the program continues to evolve, staff will be surveyed and educational programs will be developed and implemented.

An estimated 171,900 people in the United States will be diagnosed with lung cancer in 2003. The thoracic multidisciplinary team, consisting of medical oncology, surgeons, pulmonologists, physical therapists, nurses, and researchers has seen an upward trend in the number of persons with abnormal chest masses and symptoms suspicious for a malignancy. Most of these patients will be subsequently diagnosed with lung cancer and will need further surgery. Information acquired from the self-learning manual will be applied to thoracic surgery patients throughout the continuum.

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**AMBULATORY PUMP PROBLEMS—METHODOLOGY TO ADDRESS EDUCATIONAL ISSUES.** Kathleen Shuey, MS, RN, AOCN®, APRN, BC, U.S. Oncology, Houston, TX; Dori Greene, MS, RN, AOCN®, U.S. Oncology, Raleigh, NC; Dianne Richardson, RN, OCN®, U.S. Oncology, Houston, TX; and Mary Goggin, RN, OCN®, Texas Oncology Cancer and Research Center—Waco, Waco, TX.

In the outpatient clinic setting, a wide variety of ambulatory pumps may be employed to administer therapy. Nursing staff must be experienced in the management of all equipment utilized in the setting.

Due to the uniqueness of the treatment setting, resources common in the hospital (advanced practice nurses, educators) are available in many clinics on a more limited basis. All sites within our network have experienced clinical leadership and staff who manage a multitude of clinical, equipment-, and administrative-related issues. Companies that manufacture ambulatory pumps provide educational materials related to their products. These tools are comprehensive and cover all actual and potential problems that can occur. The tools can also provide the basis for procedures specific to individual products. In addition to tools provided by the company, a reference sheet and competency checklist would provide additional resources to clinical staff.

Each ambulatory pump utilized by clinic staff will have a one-page quick reference sheet, which will contain key information for use of the pump. Additionally, a competency check off list will be available on the individual pumps. To facilitate documentation in the medical record, a verification order sheet will be developed. Information to be included on the sheet includes specifics of programming and information on the chemotherapy agents being infused.

To evaluate implementation of clinical tools related to ambulatory pumps, the quality of care subcommittee will review affect on variance reporting.

Upon hire, nursing staff within our network must demonstrate competency in chemotherapy administration and management of central lines. This is managed through the use of self-study and competency tools. Additionally, annual competency in chemotherapy is documented. Because of the wide variety of ambulatory pumps available, an additional competency related to ambulatory pumps will be provided for clinical staff.

## 187

**INCREASING STAFF AWARENESS OF ADVANCE DIRECTIVES ON AN INPATIENT ONCOLOGY UNIT.** Deborah Mast, RN, BSN, OCN®, Northwestern Memorial Hospital, Chicago, IL.

Medical, legal, bioethical, and consumer advocacy communities agree that supporting patients in the preparation of written advance directives

for health care serves the best interests of the patient and can prevent needless patient and family suffering. Ideally, the discernment of patients' and families' goals and preferences regarding treatment is a continuous process involving the patient and the patient's family, as well as the physicians and nurses engaged in their care.

Although providers may follow patients in the inpatient, outpatient, and home settings, and come to know them well, discussions about advance directives do not necessarily occur because discomfort with the subject of advance directives often precludes these important conversations. Patients may incorrectly assume that the oncology team "knows what I want done," while providers may lack the confidence and knowledge necessary to facilitate these discussions. But with honest communication and shared decision making, where the clinical judgment of care providers is married with the wisdom and values of the patient and family, advance directives can assure that the individual's goals for treatment and palliative care will be met.

In order to improve staff performance in this area, we conducted a survey of staff nurses on our inpatient oncology unit to assess their knowledge of advance directives. In addition, 30 inpatient charts were checked for the presence of an advance directive form and any notes from the healthcare team referencing an advance directive discussion.

Fifty percent of staff nurses completed the survey (N = 30), 75% of respondents indicated that they did not have the information they needed to discuss advance directives with patients, and 45% of respondents reported that they did not feel comfortable talking about advance directives. Fifteen of the charts reviewed (50%) did not have an advance directive, three charts contained notes alluding to a discussion of advance directives by attendings, three charts included a similar note by house staff, and one chart contained a nursing note regarding advance directives.

In an effort to address identified learning needs, strategies to increase the level of awareness and knowledge of advance directives among staff nurses included education and poster presentations.

## 188

**DEVELOPING THE ROLE OF THE ONCOLOGY CERTIFIED NURSING ASSISTANT THROUGH A FOCUSED STRUCTURE ADDRESSING PROFESSIONAL IMAGE, EDUCATION, AND PRACTICE.** Bernadette Ciukurescu, BSN, RN, Margaret Kearns, RN, BSN, MS, and Anne Jadwin, RN, MSN, AOCN®, Fox Chase Cancer Center, Philadelphia, PA.

The nursing shortage has necessitated a change in the nursing practice model at a comprehensive cancer center in the northeast. Incorporating certified nursing assistants (CNAs) into the skill mix has created interesting challenges to the management group, including responding to the CNAs' requests to assist them in enhancing their professional image within the department.

Using the acronym PEP for professional image, education and practice, two nursing supervisors at Fox Chase Cancer Center developed and implemented a monthly program for CNAs, which focuses on those issues. A grant was obtained through a local nursing leadership organization to support activities for CNAs such as recognition for National Certified Nursing Assistant Week, a journal subscription, and snacks at meetings.

Two meeting times were determined to include all three shifts. Agenda items follow the subheadings of professional image, education, and practice, and address issues such as CNA clinical ladder advancement, scholarship opportunities, effective communication, hand washing, and absenteeism. A short educational inservice is included to increase CNAs' knowledge of oncology issues.

The nursing supervisor facilitates an interactive exchange in a supportive environment, and is able to clarify departmental expectations and policies, while supporting professional development.

A survey was completed at the first meeting addressing CNA role perception and degree of unit inclusiveness. Results of the survey were shared with the management team and strategies were developed to promote role clarity and CNA retention. Six months following implementation of the PEP Rallies, 13 CNAs applied for promotion to Level II of the clinical ladder, CNAs from every nursing unit created posters focusing on the importance of their role, one CNA offered to share their expertise with the nurse extern and graduate nurse programs during orientation, and five CNAs are continuing their professional education in nursing or Allied Health careers.





The PEP Rallies reinforce the importance of the CNA role in promoting patient safety and comfort and enhancing overall patient satisfaction. Nursing administration's vision to supplement patient care hours and improve patient outcomes has been positively influenced since the introduction of this program.

## 189

**DESIGNING AND UTILIZING A NURSING WEB SITE FOR EDUCATION AND PROFESSIONAL DEVELOPMENT.** Brian Millan, RN, BA, AAS, and Dennis Graham, RN, MSN, ANP, OCN®, Memorial Sloan-Kettering Cancer Center, New York, NY.

Web-based communication and information retrieval have become increasingly commonplace for oncology nurses (Cobb, 2003). At this NCI-designated comprehensive cancer center, a need was identified for an informational nursing web site designed by and for nurses.

A survey was conducted among staff nurses, advanced practice nurses, nurse managers, and nursing administrators as to what components should comprise a hospital-based nursing web site. Utilizing a grass-roots approach, a staff nurse with web editing skills worked in conjunction with the Nursing Division Professional Development Committee to develop the site. No outside contractors were used and no funding for the project was required.

A multi-section web site was designed. The user first encounters a "Home" page that provides links to "Nursing Education," "Nursing Practice," "Multimedia," "What's New," and other pages. Hit counters were added to each page so that each time any page was opened, a hit was recorded.

For two months, total hits and average page views per day (APV/D) were recorded. Total Hits APV/D Home 2298 35.8, Nursing Education 889 10.3, Calendar 396 6.3, What's New? 106 1.0, Links 105 0.7, Advanced Practice 52 1.0, Contact Us 49 0.0, Multimedia 45 0.3, Journal Club 22 0.2.

The "Home," "Nursing Education," and "Calendar" pages were the most frequently accessed. Relatively fewer users accessed the "Multimedia" page, which contains recorded in-service videos, nursing grand rounds, and CE presentations. This presents the question as to whether multimedia presentations are best offered to the nurse in an online format, or if a more traditional classroom-viewing situation would be more effective. Revisions are planned to move this material to the "Nursing Education" page. This preliminary study supports that using a nursing-designed web site improves opportunities for nurses to find and utilize areas for educational support and professional development. Reference: Cobb, S.C., (2003). Comparison of oncology nurse and physician use of the Internet for continuing education. *Journal of Continuing Education in Nursing*, 34, 184-188.

## 190

**WORKING WITH CLINICAL EDUCATION TO DEVISE, IMPLEMENT, AND REFINE AN ONCOLOGY NURSE RESIDENCY PROGRAM.** Norma Sheridan Leos, RN, MSN, AOCN®, CPHQ, Curtis and Elizabeth Anderson Cancer Institute, Savannah, GA, and Patti MacDonald, RN, Memorial Health University Medical Center, Savannah, GA.

This abstract will describe how the oncology clinical nurse specialist (OCNS) and clinical education specialist collaborated to devise, implement, and refine an oncology nurse residency program. This program provided the new graduate nurse with a supportive, educational program to ensure their success as an oncology nurse. Details will be provided so that other organizations can implement a similar program.

Hospitals and community cancer centers struggle with the serious and recurring issue of the lack of oncology nurses. This shortage will become more acute as the population ages and the incidence of cancer increases. Compounding the problem is that many nursing schools do not have educators who are comfortable teaching students about this specialty.

In March 2002, an OCNS worked with the clinical education specialist to devise and implement an oncology nurse residency for the May 2002 graduating class. Working closely with the clinical education specialist, the OCNS built upon an existing generic nurse residency program to devise and implement an oncology nurse residency.

Clinical objectives were defined for the nurse residents. Additionally, weekly evaluations during the residency by the nurse resident, unit preceptor, and the clinical education specialist served as formative evaluation. Two nurse residents have completed the 2002 residency program, and they have been employed at the cancer institute for over a year. Based on feedback from the residents and the pressing need to rapidly educate nurses, the residency for 2003 has been refined. Three students have enrolled in the 2003 program.

Oncology nursing is a specialty. In-depth education needs to be provided to new graduates. Having specialized education and support assists the new oncology nurse's transition into the specialty.

## 191

**THE CANCER NURSE INTERNSHIP: A MODEL FOR PROFESSIONAL DEVELOPMENT.** Maria deCarvalho, RN, MSN, AOCN®, and Cynthia Herringa, RN, National Institutes of Health, Clinical Center, Bethesda, MD.

Most nursing programs build a foundation for the acquisition of specialized nursing knowledge and skills but do not include theoretical or clinical courses in the many dimensions of oncology nursing care.

Given the nursing shortage and lack of specialized nurses, new graduates feel overwhelmed entering oncology practice, emphasizing the importance of a detailed, supportive clinical program to ensure a smooth transition and long-term retention. Thus, the Cancer Nurse Internship Program (CNIP) has become one of our institutions primary strategies for recruiting new graduates.

The goals of the CNIP are to (1) provide nurses with the knowledge and clinical experience for those desiring to specialize in oncology nursing, (2) provide the support to promote the transition of new graduate nurses to professional nurses who function as members of the biomedical research team, and (3) retain competent oncology nurses at the expert level with the knowledge to provide optimal care to individuals and families dealing with the cancer experience in the unique research setting.

Nurse educators and mentors guide, counsel, and facilitate opportunities to develop professional nursing skills and deliver holistic, individualized, care in a setting that supports primary nursing. They foster an environment encouraging trust, respect, openness, values, and diversity. The intern is empowered to actively direct the learning experience and utilize educators and clinical specialists as resources for consultation for development, nursing research, and clinical problem solving. Leadership qualities are developed through communication and collaboration with the interdisciplinary team, presentations to colleagues using varied teaching strategies, and encouragement to act as change agents to improve nursing practice.

This presentation will focus on presenting details on tools and learning activities designed specifically for transition into the oncology nursing specialty as well as the positive implications of this program to certification and specialty recruitment and retention.

## 192

**A STEP AHEAD: JOINING THE ONCOLOGY NURSING SOCIETY.** Mary Scherbring, MS, RN, OCN®, Julie Earle, RN, BSN, RT(T), OCN®, and Sherry Looker, RN, BSN, Mayo Clinic, Rochester, MN.

Membership in a professional organization is recognized as a means to enhance nursing practice for both the individual and the discipline. The Oncology Nursing Society (ONS) is a professional, international organization with approximately 30,000 members worldwide who are committed to promoting excellence in the care of individuals with cancer. Activities of ONS encompass the domains of practice, education, and research.

Nurses who make the decision to join the ONS are provided many opportunities to expand and advance their careers, as well as create friendships and professional bonds. This poster provides an introduction and invitation to participate in this organization.

Well-designed posters can serve as an effective method of soliciting attention and disseminating information. This poster was developed as an educational and marketing strategy to promote and make explicit the benefits of membership in the ONS. Intended audiences include nurses in the oncology specialty, nursing students, associate professionals, and the public, along with current ONS members.



Target audiences are informed of the multiple benefits of membership in ONS, including access to:

- Scholarly literature
- ONS website
- Networking opportunities
- Special Interest Groups
- High quality education
- Information about legislative initiatives
- Research funding
- Mentorship
- Awards and recognition for individuals and groups
- Opportunities for community and public service
- The most current information about standards and certification

In addition, poster viewers have the option to acquire membership materials that are displayed within the poster. This poster has been displayed at an institutional nursing poster fair. Future display opportunities include public cancer events, local chapter meetings, and regional nursing conferences.

Outcomes of this effort identified thus far include networking with members of other professional organizations, marketing to nurses and associates within the oncology specialty, and recognition of individual and chapter accomplishments.

In today's fast-paced world, information needs to be presented in a method that is both attractive and readily understood. This poster meets these criteria in a professional manner. Further display opportunities are under consideration.

## 193

**SUPPORTING CERTIFICATION OF ONCOLOGY NURSES ON AN INPATIENT HEMATOLOGY/ONCOLOGY UNIT.** Colleen O'Leary, RN, BSN, OCN®, Maribeth Mielnicki, RN, BSN, OCN®, Julie Mills, RN, BSN, Jane Hawksley, RN, MS, APRN-BC, and Beverley Caraher, RN, MS, APRN-BC, AOCN®, CHPN, Northwestern Memorial Hospital, Chicago, IL.

As cancer treatments become more complex, safe delivery of care requires specialized knowledge and significant clinical nursing expertise. Patients have become savvy consumers of health care who demand the best. Oncology certification offers significant benefits for patients, employers, and nurses.

In institutions with a high percentage of oncology certified nurses (OCNs), patient confidence in caregivers is strengthened. Employers differentiate themselves from their competitors by providing the highest level of care from a knowledgeable, skilled nursing staff. Nurses increase their knowledge of current nursing practice, thereby increasing their confidence, competence, and job satisfaction. Despite its benefits, many oncology nurses fail to pursue certification. Barriers include cost of testing, lack of preparation time, inadequate recognition of certification's value, and lack of acknowledgement from employers.

Northwestern Memorial Hospital has made a concerted effort to support certification of oncology nurses. A mentoring program for nurses working toward certification is in place with an individualized education program based on learning preference and experience designed for each participant. Each participant is paired with an oncology certified nurse as their mentor. The mentor assists with the application process, acts as a liaison between the applicant and educational team, and provides support and encouragement through the entire process. Time away from patient care is afforded the nurse to facilitate individual study as well as group study sessions. Computer-based practice tests are offered on unit and home use, and published study guides and reference books are made available to each applicant. Required fees for the exam are subsidized by the institution. Public recognition and acknowledgement of certification includes awarding each newly certified nurse with a gold OCN® pin, a plaque with their name engraved hung on the nursing unit, and special recognition during Oncology Nurse Week.

These efforts have shown a 300% increase in the number of nurses taking the OCN® exam. An attendant rise in overall patient satisfaction has been noted, and staff turnover has decreased.

Earning certification shows excellence in nursing practice to patients, colleagues, and employers. Instilling a sense of pride and accomplishment through certification is truly a mark of excellence that deserves respect.

## 194

**MANAGING CHANGE: AN EMPOWERING EXPERIENCE FOR ONCOLOGY NURSES.** Josephine Visser, RN, BSN, OCN®, and Angela Hattton, RN, BSN, H. Lee Moffitt Cancer Center, Tampa, FL; Vicki Dugger, RN, OCN®, H. Lee Moffitt Cancer Center, Odessa, FL; and Kathy Kopec, RN, CRNI, OCN®, H. Lee Moffitt Cancer Center, Tampa, FL.

We believe nurses who have the authority and accountability to make significant decisions about their work are more satisfied with the outcome.

The purpose of this presentation is to describe one infusion center's experience in empowering nurses to implement a significant change. The infusion center at H. Lee Moffitt Cancer Center and Research Institute was moving into a new building. Issues needed to be resolved in order to complete the transition. The new center had a different physical layout and required additional staff to maximize workflow.

Several goals existed for the implementation of this change. We needed to minimize disruption to patient care. We wanted our patients to view this as a change to a new building without interruption in the quality of care to which they were accustomed. We wanted this opportunity to solve existing workflow problems. Finally, we wanted the RNs who provide patient care to orchestrate the move. The manager identified issues and assigned corresponding committees. The issues included aesthetics, facilities, policy/procedures, patient education, scheduling, staffing, orientation/competencies, and workflow. RN level IIs and IIIs were assigned a committee and the RN IV was designated project manager. Committees met regularly to develop plans and address issues for the move. Staff had the autonomy and authority to contact department heads to facilitate the process. Problems were solved creatively and conflict resolution skills were utilized within each group.

Involving patient care providers in decision making contributed to a smooth transition. Infusion services were provided to patients at our original location on one Friday, and on Monday our new center was open to treat 170 patients. Both patients and nurses expressed a high degree of satisfaction with the process.

Adjustments to this significant change will take months to evaluate, however, as a result of our experience, we feel prepared to readily identify and address future issues. Change need not always be painful. Empowering nurses who provide patient care to engineer a significant change such as the one described allows them to embrace and grow with the process.

## 195

**THE LABYRINTH OF NURSING RESEARCH: A STRATEGY OF BRINGING THE RESEARCH PROCESS TO THE BEDSIDE NURSE.** Fedricker Diane Barber, RN, MSN, ANP, AOCN®, Cynthia Segal, RN, MSN, Fely Pinyopusarerk, RN, OCN®, Valerie Rioux, RN, Marily Elopore, RN, and Terry Throckmorton RN, PhD, University of Texas M.D. Anderson Cancer Center, Houston, TX.

Many nurses at the bedside express an interest in becoming more involved in nursing research or in using evidence-based practice. However, several barriers identified by our nurses and in the literature discourage bedside nurses from conducting research. Some of those barriers are lack of time, limited nursing knowledge of research, resistance to change, nursing culture, a lack of support, and a perception that research is an intimidating process.

In an effort to increase knowledge of research and stimulate evidence-based bedside care, our nursing research council developed a program titled "The Labyrinth of Nursing Research," which included seven posters.

Each poster served as an interconnecting passage through the nursing research process. The opening of the Labyrinth began with the poster titled "Stating the Problem," followed by "Searching the Literature," "Designing the Research/Methods & Statistics," "Approval IRB/PDOL," "Conceptual Framework," "Funding & Grant Writing," and ending with "Publication/Meet the Author." A member of the nursing research council was stationed at each poster to answer questions and provide information to visitors of the Labyrinth. The "Publication/Meet the Author" poster area included nurses from our institution who had published their research and who signed and distributed copies of their articles. Experts from the departments of biostatistics, scientific publications, and the library were available to answer questions and offer advice.

The Labyrinth was placed in the main lobby of the hospital for easy ac-



cess and visibility. Nurses who visited the Labyrinth provided positive feedback to the research council members and were entered into an hourly gift basket drawing. The Labyrinth of Nursing Research is a simple, non-threatening strategy to expose the bedside nurse to the research process and to stimulate evidence-based nursing practice to improve patient care.

## 196

**FIRST YEAR EVALUATION OF THE RESEARCH NURSE DEVELOPMENT MODEL (RNDM): A COMPETENCY-BASED PROFESSIONAL MODEL FOR RESEARCH NURSES.** Laura Esparza Guerra, RN, CCRC, Yvonne Lassere, RN, OCN®, CCRP, CCRC, Deborah Francis, RN, BSN, Harriett Chaney, RN, PhD, CNS, Jan Jenkins, RN, and Debbie Frye, RN, BSN, University of Texas M.D. Anderson Cancer Center, Houston, TX.

For more than 25 years, research nurses have been an integral part of oncology research. One year ago, we implemented a professional development model for research nurses, the Research Nurse Development Model (RNDM). A working group of clinical research nurses in the medical, surgical, and radiotherapy oncology fields developed this model.

The basic design of the RNDM reflect Benner's model, Novice to Expert for development progression and incorporates Dreyfuss' work related to skills acquisition. Goals of the RNDM are: (1) Recognize and elevate the practice standards for research nurses, (2) Ensure that clinical research meets or exceeds all industry, federal regulatory, and good clinical practice requirements in the conduct of clinical trials, (3) create a performance based tool to evaluate performance and promote professional development, (4) facilitate salary equity, and (5) promote recruitment and retention of research nurses.

The RNDM was designed as an applicable tool for evaluation of research nurses involved in prospective clinical trials using five performance categories: protocol management, data management, clinical practice, education/team orientation, and communication/respect. Within each category, professional behavioral criteria are defined for three achievement levels with mandatory completion timelines of six months, three years, and five years for Levels 1, 2, and 3, respectively. Our standard of research nursing practice is Level 3, with designation of Senior Research Nurse upon achievement.

The RNDM was implemented in September 2002. Selected RNDMs were reviewed for accuracy and quality-of-form completion. A user survey to evaluate the RNDM process was conducted in July 2003. The survey went out to 179 research nurses (RsN) and 19 research nurse supervisors/evaluators (RsNS).

62 RsNs and 12 RsNSs responded to the survey. 65% of the RsNs and 83% of the RsNSs rated the RNMD to be mostly or completely successful at addressing the skills category. 72.5% of the RsNs and 75% of the RsNSs felt that they had appropriate time to complete the RNDM.

These results indicate that there is positive regard toward the RNDM. Our analysis of completed evaluations documented compliance with the RNDM. We recommend this competency-based program to ensure adequate practice standards, professional development, and equitable compensation.

## 197

**BLENDING NURSING ROLES: AN INNOVATE STRATEGY IN ONCOLOGY AND IMAGING NURSING.** Theresa Hoelz, RN, BSN, OCN®, Ridgeview Medical Center, Waconia, MN.

Breast cancer is the leading cancer diagnosis at our institution. Women with breast cancer are seen in outpatient settings for testing, short-stay surgery, and additional treatment. These patients identified testing as the most stressful part of their cancer journey. This stage involved the least amount of nursing contact at our institution. Ridgeview's imaging services averages 150 examinations per day. With increased interventional procedures (CT-guided biopsies, abscess drainages, thoracenteses, paracenteses, VCUGs), integrating nursing care was identified.

Our Quality Improvement Team recognized an opportunity to improve patient care. Due to Ridgeview's size and budget constraints, the team's outcome resulted in the blending of the breast care coordinator and imaging nurse.

The QA team used an Aim, Plan, Do, Check, Act (AIM-PDCA) model to develop this role.

The breast care coordinator assists the radiologist during breast biopsies, as well as offers emotional support and educational materials pre- and post-procedure. Patients are contacted post-biopsy for evaluation of their biopsy site and questions are elicited. As appropriate, the patient is followed through surgery, chemotherapy, and recovery. As imaging nurses, we respond to SOS calls from all departments (CT, MR, nuclear medicine, general radiology, ultrasound, and mammography). Emergent needs (chest pain, panic attacks, contrast reactions) are assessed and routine nursing activities like IV starts, port-a-cath access, and catheterizations are performed. CT-guided biopsies, abscess drainages, and pediatric procedures require moderate sedation. Pre- and post-procedure teaching are integral components of practice.

Surveys show that patients have benefited from early nursing involvement and appreciate the nurses' care across the continuum. Two years later, this role has grown to include additional cancer care services—not only for breast but other types of cancers. Cancer clinical trials, education classes, and resource notebooks are offered. Cancer program participation includes screenings, inservices, and community presentations.

This hybrid of care has expanded our practice from the hospital into our affiliated oncology clinics. Having seasoned RNs with extensive oncology experience was advantageous, and training provided the additional skills required for imaging and pediatrics. Patient diversity promotes our high interest level and advances our knowledge. Similar-sized hospitals can feel confident implementing this effective dual nursing role.

## 198

**ASSUMING THE LEADERSHIP ROLE IN THE ABSENCE OF THE NURSE LEADER: A RESOURCE FOR NURSES.** Erin Punturieri, RN, MA, AOCN®, Memorial Sloan-Kettering Cancer Center, New York, NY.

Advanced practice nurses frequently need to adapt themselves to meet the needs of patients, nurses, and healthcare organizations. One role that they may be asked to assume is nurse leader.

In a healthcare environment where change is the norm rather than the exception, qualified nurse leaders are in a pivotal position to influence outcomes. How do you know if you are qualified to be an acting nurse leader (NL)? And, what qualities are necessary to possess to be successful in this role?

The advanced practice nurse (APN) may be asked to take over the responsibility of NL with minimal orientation to the role, and also be expected to maintain the cohesiveness of the unit until the return of the NL. An APN at this NCI-designated cancer center recognized the need to develop a resource for nurses who are asked to become the acting nurse leader. Goleman's model, Emotional Intelligence Framework, was adapted to identify competencies that are needed in the path toward outstanding performance. These competencies are grouped into the following four categories: self-awareness, social awareness, self-management, and social skills.

A literature search identified research articles related to common attributes associated with nurse leaders, but little on how to develop oneself in the role of effective NL. A survey was presented to all staff on an inpatient medical/surgical oncology unit to help identify common mutual objectives, as well as personal goals, during this time of transition.

The survey was a necessary component to the development of this project because staff plays an integral part in the personal development of an acting NL. The literature search was able to identify traits commonly found in nurse leaders, which were then translated into Goleman's model. A personal development strategy was created for nurses new to the role of NL.

The information obtained is important for all new nurse leaders, as well as nurses who have an interest in developing skills to become a nurse leader. This presentation will discuss the competencies one needs to possess/acquire when asked to fill the role of nurse leader, and how to do so while maintaining a sense of unity among the staff.

## 199

**CHARGE IN CHARGE: EMPOWERING NURSES IN SUPPLY COST CAPTURE.** Aiko Kodaira, RN, MS, OCN®, The Johns Hopkins Hospital, Baltimore, MD.





In today's healthcare climate, hospitals are struggling to maintain financial stability. One way to increase revenue is by ensuring all supplies charges are captured. Various methods and devices for capturing supply costs have been developed and examined. What can be done to change the culture of the unit in order to optimize available technology? This is a report on an attempt to improve charge capturing by enhancing the nurses' self-governance.

The purpose of this project was to create a system that can bridge the gap between the culture of the unit and technology in order to maximize the cost charge capture. The charge capture on our hematology oncology unit was never optimal. The Par Excellence System (Par Excellence System, Inc.), a point-of-use supply chain management system, is a quick and easy system. It was well adapted by nurses when it was implemented three years ago. However, as with many other systems, we soon came to realize that the crucial aspect of charge capturing relied on nurses remembering to use the system.

To improve this situation, the clinical nurse specialist (CNS) decided to remind nurses to charge at the end of each shift. This approach significantly increased the charge capture, however, the charge capture fluctuated with the availability of CNSs. In order to address this, the CNS started the "charge in charge" project. Each shift the charge nurse identifies a nurse who is responsible for reminding staff to charge supplies, and it was marked on the assignment sheet.

This simple but effective approach increased the staff's awareness of the need to charge for supplies and significantly improved the supply charge capture on our unit. Pre- and post-intervention monthly supply cost and supply revenue are compared to evaluate the outcome of this project.

In order to increase revenue, it is important to utilize available technology. It is necessary to analyze staff interaction with that technology and adjust the gap between the two. This abstract describes how to achieve this by creating a system to help nurses remember to make appropriate charges.

## 200

**UTILIZATION OF A NURSING ROLE ACQUISITION FRAMEWORK IN A NON-TRADITIONAL NURSING ROLE.** Lisa Sweeney, RN, MSN, AOCN®, Barbara Poniatowski, RN, MSN, AOCN®, Susan Temple, RN, MSN, AOCN®, and Cynthia Umstead, RN, MSN, AOCN®, GlaxoSmithKline, Philadelphia, PA.

The diversity of oncology nursing roles in non-traditional settings is not yet well defined or well described in the oncology nursing literature. Increasing numbers of oncology nurses are seeking employment as educators, researchers, consultants, administrators, and sales representatives. Many of these roles are found within the pharmaceutical industry. Expectations of role performance in these non-traditional settings are often defined by the paradigm of the corporate goals and initiatives. The clinical nurse educators of GlaxoSmithKline Oncology recently developed a conceptual framework, presented at the Oncology Nursing Society Congress in 2003, which forms an organizational structure for the clinical educator job description, orientation manual, and performance evaluation measurement.

This structure is unique in its ability to connect nursing role expectations to the corporate initiatives. This linkage enhances the educator's ability to apply nursing responsibilities in a nontraditional setting.

The performance evaluation tool was created using Patricia Benner's model of nursing role acquisition. The application of this fluid model of role development allows for the individual behaviors and activities to be assigned to the novice, proficient, or expert level of practice.

Specific expectations and behaviors were matched with the corporate dogma of a Management by Objective role performance evaluation system. These nursing behaviors were stratified to reflect the novice educator through to the expert level of practice. Once the behaviors were delineated, they were, in turn, applied to the five areas of objectives set forth by the corporation. Within the areas of business analysis, professionalism, resource optimization, customer focus, and product knowledge, specific expectations are outlined that typify behavior based on the skill set and level of practice of the educator.

The revised performance evaluation tool was put into practice in the fall of 2002, and remains the primary tool for performance evaluation for the clinical educators at GlaxoSmithKline Oncology.

The benefits of linking a nursing model to the corporate process for

evaluation are multifaceted. First, it allows for clear delineation of expectations at all levels of development while taking into consideration the individual's experience and expertise. The creation of this type of evaluation criteria also enables the continued articulation of the unique and valuable contribution that oncology nurses bring to nontraditional roles. As more oncology nurses move into these nontraditional roles, the incorporation of nursing frameworks will result in the expansion of oncology nursing knowledge.

## 201

**DEVELOPMENT AND IMPLEMENTATION OF A NURSE PRACTITIONER MENTORSHIP PROGRAM.** Marianne Davies, RN, MSN, ACNP, OCN®, Yale University School of Medicine, New Haven, CT.

The presence of nurse practitioners in the oncology setting has been growing tremendously over the past several years. Many practitioners are being hired into practices in which there were no other nurse practitioners. Role development was difficult.

During the 2000 ONS Congress Nurse Practitioner (NP) Special Interest Group (SIG) meeting, an overwhelming number of "novice" practitioners identified the need for mentoring in their new role. In addition, one member (Marianne Davies), was selected as a fellow in the Leadership Development Institute (LDI), and selected mentorship as a project. I have co-chaired this work group during the past three years. Due to the success of this program, the work group has presented to other SIG's to assist them in the development of a similar program.

The NP SIG developed a work group to pursue the recommendations of a "Mentorship Program." The purpose of the program is to provide mentoring of new SIG members in a variety of areas.

The mentorship program was designed to be offered to any NP SIG member to participate as either a mentee or mentor, and was designed to last one year. Experienced nurse practitioners were recruited to serve as mentors by placing articles in the NP SIG newsletter and by direct e-mail. Interested practitioners submitted biosketches. Mentors were stratified by geographic location, practice type, years of experience, and areas of expertise. A project-funding request was accepted by ONS to fund mailings and contact costs. ONS notified the work group of new members to the SIG monthly. Each was contacted to introduce the "Mentorship Program." New members interested in having a mentor completed a needs assessment. The mentee was matched to an experienced mentor with similar strengths. Each participant was sent a letter outlining the program. The amount of contact for each pair was self directed.

Evaluations, obtained every six months, revealed that phone contact was often difficult due to practitioners' demanding schedules. The work group redesigned confirmation letters to include various contact mechanisms and suggestions. Prevalent themes of mentoring included development of collaborative practice agreements, reimbursement issues, licensing, career advancement, publishing, presentations, and position description writing.

The mentorship program has been quite successful. Currently thirty (30) members serve as mentors. There have been over 28 mentoring pairs established. Evaluation of the program is ongoing. The work group is currently developing "packets" to assist each mentoring group. They hope to encourage increased regional networking of its members as well as an increase in mentoring in the areas of protocol development and research.

## 202

**PATIENT SELF-REGISTRATION IN THE AMBULATORY CARE SETTING: INVOLVING PATIENTS IN THE MANAGEMENT OF THEIR OWN RECORDS.** Patti Hankins, BSN, RN, Valerie English, BSN, RN, and Terry Throckmorton, PhD, RN, The University of Texas M.D. Anderson Cancer Center, Houston, TX.

Enhancing clinic efficiency and patient and staff satisfaction by remodeling the patient registration process.

This project was designed to incorporate clinic staff in the redesign of a portion of their work to improve clinic efficiency and patient and staff satisfaction.

The purpose of this project was to redesign the registration process for the clinic to better utilize the staff and to increase overall satisfaction. Staffing in the clinic allows for one person to register and place the patient's chart in line for processing. The wait time for patients is often prolonged



because multiple patients are scheduled at the same appointment time to see different physicians. In addition, there is potential for errors in transcription of new information because of the pressure to shorten the waiting time and for errors by the person transcribing the information into the computer. In order to improve this process, shorten waiting time, and increase patient and staff satisfaction, a system was designed to allow patients to self-register.

Time and motion studies were implemented to evaluate time spent on each step of the registration process and to validate underlying assumptions. This data was presented to the consultants to support revisions in the process. The consultants developed a computerized self-registration system incorporating the specified design elements identified by staff. The system included screens that were accessed by patient ID and cued the patients to update their personal data for the medical record. Volunteers were available in the waiting area to orient the patients to the system and help them enter their data.

The new system allowed a redistribution of the workload for the staff and, ultimately, a shortening of the wait time for the patients. It supported greater accuracy in the patient's record because the patients entered their own information. Because the new system shortened the registration process, it also affected utilization of physician time.

Designing this system involved coordination with multiple departments and consultants. These groups often had different goals and timelines. It was up to our team to provide evidence of a positive cost/benefit ratio to obtain their support for the project.

## 203

**PREPRINTED ADULT CHEMOTHERAPY ADMINISTRATION ORDER FORM.** Jean Al Ahmar, RN, BSN, OCN®, and Julie Stomp, RN, OCN®, William Beaumont Hospital, Royal Oak, MI.

Nurses play a significant role in reviewing chemotherapy orders to assure safe administration of chemotherapy.

The American Society of Clinical Oncology (ASCO) recommends using preprinted chemotherapy forms for the writing of chemotherapy to decrease errors and therefore increase safety. This practice was implemented in 1997. Preprinted forms did help reduce errors. However, after a few years of use there were noted areas where improvements could be made. The problems identified were illegibility with cross-outs and adjustments made on original orders, clarifications written on separate order forms were missed, original order not referenced in clarification, and patients' chemotherapy delayed waiting for physician signature. It was determined that a clarification box was needed on the preprinted chemotherapy forms.

An interdisciplinary team comprised of oncology nurses, oncologists, and pharmacists reviewed the current forms, and identified problems and the goal of the form. As a result, a new form was developed with a clarification section at the bottom of each form. The clarification section allows for verbal changes to be made to the original chemotherapy order by an oncology nurse clinician or oncology pharmacist with a witness, eliminating the need for a second signature by the attending physician. The verbal changes that may take place include, but are not limited to, a decrease in medication dosage, discontinuance of a medication, change of administration rate or route, and to proceed or hold chemotherapy due to current lab values or patient condition. If the changes are such that they do not fit in the clarification box or that an increase in dose is needed, then the entire chemotherapy order is to be rewritten so that it is legible and requires an attending physicians' signature.

The forms have gone through final sign off, and implementation has begun. A follow-up review will be done to evaluate the effectiveness of the form.

Nurses are the final check in verifying chemotherapy orders. Often an error in body surface area (BSA) is found changing chemotherapy doses, or current lab values affect the amount of chemotherapy that should be given. The clarification box allows the nurse to make the adjustments as needed with a witnessed verbal order from the physician.

## 204

**IMPLEMENTATION OF CHEMOTHERAPY GUIDELINES IN AN AMBULATORY SETTING.** Abel Montalvo, MS, RPh, Kathy Shuey, MS, RN, AOCN®,

APRN, BC, and Tommie Cook, MS, RPh, U.S. Oncology, Houston, TX; Dori Greene, MS, RN, AORN, U.S. Oncology, Raleigh, NC; Jan Merriman, RPh, Minnesota Oncology Hematology, St Paul, MN; and Peter Tortorice, RPh, BCOP, U.S. Oncology, Illinois, Schaumburg, IL.

Nurses, pharmacists, and a mixture personnel who prepare parenteral chemotherapy in a community practice setting routinely assign extended stability dates to help reduce drug waste and to facilitate delivery of multiple-day treatment regimens. Assigned expiration dates must be accurate and represent the actual utility time of the medication under the intended preparation, dispensing, storage, and administration conditions.

Data from the scientific literature relative to injectable chemotherapy drug stability was reviewed and summarized in a concise, standardized format. A reference text (chemotherapy stability and administration guidelines) with individual drug monographs and tables was created. The reference text is updated quarterly and brings together an array of oncology-related material for healthcare professionals in a concise and easy-to-use format. Over 70 individual drug monographs are provided with extended stability data (maximum utility times) at various concentrations in commonly used infusion fluids. In addition to stability information, drug names (proprietary/generic), AWP data, vial/amp size and strength, dilution and reconstitution information, administration data, classification as a vesicant/irritant, filtration requirements, standard IVPB fluid(s), and dosing range(s) are also reported.

Implementation of the guideline is currently underway.

The monographs are developed from data derived from the medical and scientific literature. Many of the monograph references and sources include previously unpublished data and direct communications obtained from the various drug manufacturers.

## 205

**STANDARDIZING THERAPY: NURSING MANAGEMENT AND CONTINUITY OF CARE FOR THE INTERLEUKIN-2 CLIENT.** Andrea Smoots, RN, Laura Dykstra, RN, BSN, and Lynette Guziatek Trojniak, RN, MSN, CNP, Karmanos Cancer Institute, Detroit, MI.

The number of clients being treated with IL-2 at our center has consistently increased from an average of 1–2 clients per month to 4–5 clients per month over the past two years. While IV drug therapy administers the drug, it is the responsibility of the staff nurse to educate the client pre- and post treatment, monitor the client for side effects and signs of pre-toxicity and, therefore, allow for maximal dosing.

The increase of IL-2 clients admitted for treatment of advanced and metastatic cancer, along with the addition of recently oriented nurses, identified a need to reintroduce specialized nursing care as well as develop a consistent plan of care for this client population. The group recognized that the ONS standards should be the benchmark for practice.

A committee of oncology staff nurses and advance practice nurses was formed to develop Standards of Oncology Nursing Practice. The unit-based practice committee along with the clinical nurse specialist utilized the work of that committee to develop standards of care for the IL-2 client that would ensure standardized monitoring and continuity of care. A flow sheet specific to monitoring pre-toxicity of treatment, along with education materials for both the client/family and staff, were designed, tested, and implemented on the unit. Continuous review takes place during clinical nursing rounds.

Evaluation of the practice tools has been ongoing. Recently, evaluation has been incorporated into the practice of clinical nursing rounds; the CNS includes discussion of evaluation of care of IL-2 clients and review of increased knowledge of RNs. Inclusion into unit audits has not begun.

Working with a specialized population in a comprehensive cancer center demands increased knowledge, skills, and comprehension of data required for positive client outcomes. Development of standards of care assists attainment of this goal.

## 206

**DEVELOPING AND IMPLEMENTING COMMUNITY-WIDE PROCEDURES FOR VASCULAR ACCESS DEVICE CARE.** Ruth Van Gerpen, RN, MS, OCN®, Byran LGH Medical Center, Lincoln, NE.

Vascular access devices (VADs) are a lifeline for many cancer patients—



preserving peripheral veins and providing reliable IV and venous access.

However, despite the benefits of VADs, numerous complications can occur. The two most serious are infection and loss of patency of the catheter or vein, most often related to thrombus. Greater than 90% of reported ICU bloodstream infections in the National Nosocomial Infection Surveillance System are intravascular device associated, 80%–90% of which originate from VADs of various types. Several investigators have estimated that approximately 25%–40% of nosocomial infections related to devices and procedures are potentially preventable. National guidelines from the Oncology Nursing Society, Centers for Disease Control, and Prevention and the Intravenous Nurses Society have published guidelines for standardizing clinical practice across care settings and preventing catheter-related infections. Because these guidelines do not specify exact practice, procedures for VAD care frequently differ in each care setting—hospital, physician office, outpatient clinic, home health—increasing the risk of complications and contributing to patient noncompliance or lack of understanding. These inconsistencies provided the impetus for the formation of a community-wide quality improvement task force to develop evidence-based, standardized procedures for the care of VADs for adults and pediatrics in all care settings within the community.

Task force members included nurses and pharmacists from the hospitals, home health workers, long-term care workers, and physician offices. Pediatric and geriatric specialists were also represented. Using a quality improvement model, community-wide procedures, based on national guidelines and best practice, were developed for tunneled catheters, peripherally inserted central catheters, and implanted ports. The procedures outlined nursing care steps for dressing changes, flushing, and accessing. In addition, patient education content and responsibilities were determined, and a staff education videotape was developed to minimize inconsistencies.

This presentation will describe the quality improvement process utilized and the challenges with implementation.

Community, nursing, and patient outcomes and satisfaction related to standardization of VAD care will also be discussed.

## 207

**USE OF A LOW-TECH, LOW-COST ERGONOMIC INTERVENTION.** Anna Webb, RN, MSN, Elena Martin, RN, CNIV, Dorcas Butler, RN, and Jennifer Lawson, MS, OTR, L, Duke University Health System, Durham, NC.

Nursing is among the top ten occupations with the highest number of injuries. Workers compensation claims reveal that the nursing profession ranks fifth in workforce-related back problems. Together with the nursing shortage and aging nurse force, this presents a hazardous situation for health care.

Our pilot study tested the premise that using a trash bag as an ergonomic intervention would reduce the pull forces associated with patient transfers. The setting was an inpatient oncology unit. The 42 nurses and 8 nursing assistants who practice in this setting received instructions on ergonomic strategies to improve patient safety and to minimize the potential injury to nursing staff. Because lifting equipment is costly, a simple trash bag was used as a friction-reducing device to provide low-cost technology as a solution for both lateral and horizontal movement of patients.

Measurements were obtained to determine the force required to pull patients of varied weights from bed to stretcher with and without the use of the trash bag between the sheets. A hand-held dynamometer and a fish scale were placed at the participants' shoulders and hips to measure pull forces. Two different patients (5'5", 118.6 lbs. and 5'2", 207.9 lbs.) were moved by different nurses, and pull forces were recorded for each transfer.

Average pull forces associated with the use of the draw sheet alone versus the use of the draw sheet with the trash bag differed significantly (110.6 lbs. versus 74.4 lbs. for patient 1, and 154.2 lbs. versus 116.4 lbs. for patient 2). The staff and patients expressed more confidence regarding safety and comfort with use of the trash bag.

The findings support the idea that physical demand on healthcare workers declines with the use of this low cost, low-tech device—the common .89 trash bag. By decreasing the pull force, use of the trash bag has the potential to reduce the number of injuries associated with the transfer of patients. This intervention may improve employee morale and retention and help address today's nursing shortage.

## 208

**COLLABORATIVE DEVELOPMENT OF AN OUTPATIENT INFUSION NURSING DOCUMENTATION TOOL WITHIN A SHARED ELECTRONIC MEDICAL RECORD (EMR) APPLICATION.** Lori Buswell, RN, MS, OCN®, Dana-Farber Cancer Institute, Boston, MA, and Joanne LaFrancesca, RN, MN, AOCN®, Massachusetts General Hospital, Boston, MA.

The development and implementation of an electronic medical record (EMR). Nurse leaders strive to improve care efficiency and safety, which is central to EMR implementation.

Documentation that is thorough yet efficient in an outpatient oncology infusion setting has always been a challenge. Nurses in two large academic outpatient settings worked collaboratively to create and implement an electronic nursing documentation tool located within an existing electronic medical record application. The tool reflects nurses' need to perform comprehensive assessment, document efficiently, and retrieve data for research and quality improvement. It now serves as the exclusive documentation tool in the ambulatory setting in both organizations.

Prior to implementing the existing EMR, oncology nurses worked with analysts, administrators, and programmers from Information Services to develop nursing documentation tools. ONS guidelines and existing paper documentation tools were used as a foundation to conceptualize the electronic version. It was conceived in two parts: The flow sheet that captures elements of drug administration and the patient assessment. A decision was made to organize patient assessments using the functional health pattern (FHP) model and common toxicity criteria for each functional area. Several staff nurses were trained and designated as "super users," and were used exclusively for four weeks to help support the implementation of the new program. Training was reinforced by staff nurse participation in data conversion of existing patient data.

The documentation tools have been used successfully for 9 and 14 months at the two organizations. The development team continues to meet to recommend and develop enhancements based on nurses' feedback and documentation audits. Enhancements include expansion of the pain assessment from a 1–10 scale to adding location, quality, and duration of pain as well as interventions from a list (i.e., analgesics, opioids, non-pharmaceuticals, mind-body therapies). A time-motion study is underway to quantitatively describe the affect on unit operations.

Several factors allowed for successful implementation: Total commitment from leadership, staff nurse involvement at every step of the project, use of volunteer "super-users," and time sensitive response from the development team. Nursing involvement in the conversion from paper to electronic documentation is critical to creation and transition to an effective usable EMR.

## 209

**PROCESS AND OUTCOME: UTILIZATION OF STATEMENT ON THE SCOPE AND STANDARDS OF ADVANCED PRACTICE NURSING IN ONCOLOGY (3RD EDITION) FOR COMPETENCY BASED JOB DESCRIPTIONS, ORIENTATION, AND EVALUATION OF ADVANCED PRACTICE NURSES (APNS).** Judith Much, RN, MSN, APRN, BC, AOCN®, and Regina Cunningham, RN, PhD, AOCN®, The Cancer Institute of New Jersey, New Brunswick, NJ.

The ONS Statement on the Scope and Standards of Advanced Practice Nursing in Oncology (3rd Edition) should be utilized for competency-based job descriptions, orientation, and evaluation of oncology APNs.

ONS Standards of Practice should be a living document to be utilized by oncology APNs in self-evaluation and administrators to help define and measure the work of oncology APNs.

The Cancer Institute of New Jersey (CINJ) is a Center of Excellence within the University of Medicine and Dentistry of New Jersey. As such, all job descriptions and evaluations are university-based and historically have been restricted by union contracts. APNs and nursing administration felt the current job description, orientation, and evaluation lacked specificity in oncology, which could be helpful in earlier identification of those APNs who might either benefit from shorter orientation time, prolongation of probationary period, and meaningful performance evaluation. The "standard" nature of the job description has limited the ability of administrators to reward oncology APNs for the unique nature of their work. The ONS Statement on the Scope and Standards of Advanced Practice Nursing in Oncology (3rd Edition) defines the "level of care and performance





essential to the clinical role of the oncology APN. These standards provide a framework by which quality of practice and performance can be measured and quantified" (pvii).

Based on the standards and their measurement criteria, and working with the university human relations department, we have drafted a new job description, orientation checklist, and criteria-based evaluation. A day-long retreat enlisting the help of a consultant is scheduled for the fall in which four members of the APN group (representing medical and surgical oncology, gynecologic, and pediatric specialties) will meet to discuss the standards and their use, as well as the methods by which the objective criteria will be measured (i.e., peer evaluation, portfolio, observation, or a combination). The group will also look critically at the measurement criteria and determine if they can be divided into expectations from novice to expert.

In order to determine if the criteria taken from the ONS Standards are reflective of performance in the revised job description, an orientation checklist and evaluation will be sent to a panel of experts to measure face validity. A pilot study will then be conducted within CINJ, in which the largest APN group resides within the university structure. The oncology APN group (n = 22) will be surveyed pre- and post-implementation of the new evaluation system, job description, and orientation to determine satisfaction with the changes.

Oncology APNs have a unique set of skills that are rarely reflected in generic job descriptions and evaluation tools. Administrators in a variety of oncology settings struggle to adequately define and measure the role of the APN. The new ONS Standards can be utilized for this purpose. Development of job descriptions, orientation checklists, and evaluation tools specific to the oncology APN, which are reflective of the ONS Standards, would help not only in role expectations, but also in justification of higher level of competencies for which higher financial reward can be supported.

## 210

**PAST, PRESENT, AND FUTURE DIRECTIONS OF ONCOLOGY NURSING SENSITIVE OUTCOMES: WHAT IS IT AND WHY IS IT SO IMPORTANT IN TODAY'S HEALTHCARE SETTING?** Vicki Marsee, RN, MBA, CNA, H. Lee Moffitt Cancer Center and Research Institute, Tampa, FL; Susan Beck, PhD, APRN, FAAN, University of Utah College of Nursing, Salt Lake City, UT; Caroline Etland, MSN, AOCN®, Sharp Healthcare, Grossmont Hospital, La Mesa, CA; Barbara Given, PhD, RN, FAAN, Michigan State University, Lansing, MI; Barbara Gobel, RN, MS, AOCN®, Gottlieb Memorial Hospital, Melrose Park, IL; Luana Lamkin, RN, MPH, Grant and Riverside Methodist Hospitals, Columbus, OH; and Gail Mallory, PhD, RN, CNA, Oncology Nursing Society, Pittsburgh, PA.

Nursing plays a unique role in influencing patient outcomes. Nursing must choose interventions that yield optimal patient outcomes as well as respond effectively to external demands to quantify the value of nursing to patient outcomes.

Because of the complexity of this topic, little has been done to define or study the impact of oncology nursing care on patient outcomes. ONS recognized the need for a project team to focus effort on this important topic and develop an outcomes plan to address nursing sensitive outcomes (NSO). The project team developed the following definition: "Outcomes that focus on how patients and their healthcare problems are affected by nursing intervention have been identified, and are described as nursing sensitive outcomes. Nursing sensitive outcomes are those outcomes arrived at, or significantly affected, by nursing interventions. The interventions must be within the scope of nursing practice and integral to the processes of nursing care; an empirical link must exist. These outcomes should represent the consequences or effect of nursing interventions, and result in changes in patients' health status, patient behavior, and problem resolution."

The project team's five-year plan includes the following goals. (1) Increase activity in defining and understanding definition of Oncology Nursing Sensitive Outcomes (NSO) as related to nursing practice. (2) Raise awareness among ONS members through activities for research, practice, and education. (3) Develop funding base for outcomes studies for oncology NSO. (4) Identify instruments that can be recommended for practice to measure oncology NSO, initially pain, depression, fatigue, nausea, infections, and ability to carry out usual activities. (5) Develop partnerships with other groups and agencies to support the oncology NSO

goals. (6) Create an online NSO research/evidence-based center.

The outcomes of this project are key to future directions for oncology nursing in the areas of practice, research, education, and administration. Through this work, ONS will become the first specialty nursing organization to address this topic in a focused, systematic fashion by identifying opportunities for research- and evidence-based practice, incorporating oncology outcomes data into education and practice guidelines, and by creating a repository of outcomes knowledge specific to oncology nursing.

Patient care can be improved by identifying nursing interventions that produce desired outcomes based on research. Basic and continuing education will ultimately include identified outcomes with which oncology nurses can focus interventions for best results. Administrators will be able to utilize oncology NSOs to demonstrate nursing's affect on patient care. Documentation of the added value added of nursing intervention to positively affect patient outcomes can be used for policy decisions. Finally, a repository of oncology outcomes knowledge can help focus research efforts and funding in areas of need.

## 211

**A MAGNET MODEL FOR SHARED GOVERNANCE ON AN INPATIENT ONCOLOGY UNIT.** Maryann Rosenthal, MSN, RN, OCN®, and Rochelle Schell, RN, CHPN, Lehigh Valley Hospital and Health Network, Allentown, PA.

The literature abounds with justification for shared governance by nurses in all practice settings and clinical specialties.

Tim Porter-O'Grady's model for shared governance is the conceptual framework for a professional practice model (PPM) at Lehigh Valley Hospital (LVH), a 765-bed Magnet Hospital. This model has existed for more than 20 years and has been an evolutionary process; the components have been achieved over time, with continual refinements.

This poster will focus on 4 topics:

- (1) The LVH PPM Conceptual Framework, including five components;
  - I. Clinical Practice
    - A. Evidenced Based Practice
    - B. Collaborative Practice
    - C. Coordination of Care
    - D. Quality
  - II. Professional Development
    - A. Professional Involvement
    - B. Education
    - C. Outcomes Research
  - III. Staffing
    - A. Hiring Process
    - B. Staffing Patterns
  - IV. Fiscal Management
    - A. Budget Management
  - V. Collegial Review and Recognition
    - A. Peer Review
    - B. Reward and Recognition;
- (2) Goals and activities to achieve the goals, associated with each key component;
- (3) The unit-specific PPM for a 26-bed oncology unit, inclusive of charters for four councils: Practice, Staffing, Education and Professional Development, and Reward and Recognition; and,
- (4) A newly designed, validated tool to measure the development of a department's PPM model.

Outcomes of LVH's PPM include attainment of Magnet Hospital designation; over 50 consultations on the subject to healthcare organizations in the United States and Canada; and presentation of the tool to measure a unit's PPM at the Eastern Nursing Research Society 2003 annual meeting and the 2003 National Magnet Conference. Specific outcomes of the oncology unit's PPM include patient satisfaction consistently exceeding a raw score of 90, target goals for employee satisfaction, multiple performance improvement, outcome studies to benefit the oncology population, and 42% of the registered nurses achieving certification in oncology nursing.

This poster will be of interest to anyone who desires to institute a PPM in their institution or refine an existing model. Participants will be given copies of the poster and handouts detailing the four topics the poster addresses.

## 212

**A MAGNET STATUS NURSING INITIATIVE IN AN ACADEMIC CANCER CENTER SETTING: RECOMMENDATIONS FOR ENHANCEMENT OF ONCOLOGY NURSING WORK LIFE.** Kathleen Bohorfoush, MSN, RN, OCN®, University of Virginia Medical Center, Charlottesville, VA, and Regina DeGennaro, MSN, RN, AOCN®, University of Virginia School of Nursing, Charlottesville, VA.

Recruitment and retention of nurses is a national issue addressed most effectively by collaborative efforts.

Oncology nurses provided leadership to improve quality of work life within our cancer center at the University of Virginia.

In 2003, the Nursing Work Index-Revised Survey Tool, a reliable, validated tool reflecting factors that influence nursing satisfaction, was used to measure dimensions of nursing work life satisfaction. Qualitative survey analysis revealed several themes, including opportunity to work in a highly specialized oncology nursing clinical setting and expression of positive feelings regarding quality of care provided, despite difficult professional circumstances. However, high levels of work life dissatisfaction were identified.

A committee of nursing representatives from all clinical settings of the cancer center was convened to identify solutions to distress expressed by nursing staff. Over a period of four weeks, meetings were held to review data, develop a plan to collect follow up input from colleagues, and summarize recommendations to administration. An academic report was submitted citing references including American Nurses' Association; American Academy of Nursing; Robert Wood Johnson Foundation; the Joint Commission on Accreditation of Healthcare Organizations, and additional published papers. One week following submission of this report, a presentation was made focusing on clarification of concerns and input of strategies specifically suggested by our own oncology nurses as being likely to improve their work life.

Global needs identified as necessary in order for any strategies to succeed include more nurses, visionary leadership, and funding for various initiatives, activities, and salary support. Thoughtful and specific objectives and creative strategies within categories of education, resource adequacy, practice and autonomy, RN/MD relationships, recognition, and governance were identified. While initial committee work was largely to identify concerns expressed by oncology nurses and strategies that might effectively bring about improvements, focus has changed to fostering an improved partnership with administration, including strategies for enhanced communication and creating a culture where oncology nursing work life satisfaction is priority.

Administration is in process of reviewing recommendations and providing a formal response. Outcomes of collaborative efforts to improve quality of nursing work life, updated data on work life satisfaction, and Magnet status application will be provided.

## 213

**WORK-PLACE CONFLICT: DEVELOPING AN OMBUDS PROGRAM FOR ONCOLOGY NURSES.** Janice Freeman, BSN, RN, University of Texas M.D. Anderson Cancer Center, Houston, TX.

This presentation will describe the development and implementation of a nurse ombuds program for oncology nurses. Within the nursing workplace, unmanaged disputes, disagreements, and unconstrained emotions can damage important working relationships, reduce productivity, and escalate to undesirable outcomes. These outcomes can be avoided if nurses resolve disputes early. A confidential mechanism for acquiring information, feedback, options, and risk management could help nurses in this process. An ombuds office provides such a mechanism for early dispute resolution.

This project supports collaborative resolution of issues among nurses.

Before September 2002, conflicts among nurses at M.D. Anderson Cancer Center were resolved by a formal grievance process, and it is believed that many conflicts were never reported. Such unresolved disputes may account for most conflict within organizations and for most conflict-related financial losses.

With strong support from M.D. Anderson leadership, an appointed committee created an early dispute resolution mechanism for nurses.

Consistent with our organization's core values of caring, integrity, and discovery, the appointed committee consisted of representation from nursing, quality improvement, and faculty ombuds offices. The committee created a job description, compensation plan, candidate selection criteria, and a plan for recruiting a nurse ombudsperson. A nurse was selected and trained in ombudsmanship and conflict management.

So far, 25 nurses have interacted with the nurse ombudsperson. A variety of subjects have been addressed and resolved. Performance-related issues have been the most common reason for consulting the nurse ombudsperson.

M.D. Anderson has taken the interests of oncology nurses to heart by developing an early dispute resolution program. The institution hopes that nurses will take advantage of this program and that it will improve working relationships, as well as efficiency, productivity, and retention. The findings from this presentation can be applied by those interested in creating a mechanism for early conflict resolution at their organizations.

## 214

**A UNIQUE APPROACH TO PATIENT SCREENING AND ELIGIBILITY FOR PHASE 1 CLINICAL TRIALS.** Roxanne Truax, RN BSN OCN®, Wanda Honeycutt, RN, BSN, Sherri Haley, RN, Martha Bauer, CRA, CCRP, Shawna Savage, RN, BSN, and Adam Shmeltzer, Duke University, Durham, NC.

Phase I trials often have dose-escalating schemas and allow only three patients to enroll at one time. Due to the design of Phase I studies, the number of patients who want to enroll in a study far outnumber the available slots. As a Phase I team, our goal was to develop an efficient and ethical way to screen patients in order to facilitate their entry into Phase I trials.

A Microsoft® Access database was developed that lists patients in the order they are seen in clinic or referred by one of our oncologists. This database has the patient's diagnosis, number and type of prior treatments, pre-existing conditions, as well as the protocols of which they may be interested.

One of the research nurses reviews the database daily and updated it as telephone calls are made or received. When a new slot becomes available in one of our open trials, the list is reviewed to determine if there are eligible patients. Specifically, the person at the top of the wait list considered first and then we work down the list until an adequate match is found. We also maintain a patient contact note to record outside calls and update the status of each patient.

The database has become an organized efficient way to screen for potential clinical trial patients as well as track the status of each individual patient. This system increases the patient participation in clinical trials research at our institution. A description of the program and a sample database will be presented.

## 215

**NURSING CHALLENGES IN DEVELOPING A SATELLITE CANCER CLINICAL AND RESEARCH PROGRAM WITHIN A DIFFERENT HEALTHCARE SYSTEM.** Sharon Krumm, RN, PhD, Johns Hopkins University Schools of Nursing and Medicine, Baltimore, MD; Mag Tan, RN, National University Hospital, Singapore; and Brenda Shelton, RN, MS, Sidney Kimmel Comprehensive Cancer Center, Baltimore, MD.

When an NCI-designated comprehensive cancer center decides to expand its programs outside the boundaries of its own country, there are unique challenges for nursing leaders to accomplish clinical, teaching, and research missions. This comprehensive cancer center developed a clinical and research program in an Asian country, which necessitated a high degree of cultural sensitivity, a thorough knowledge of the differences in practices, and the demands of establishing a merged healthcare delivery model.

In establishing a private clinical program in a foreign country, the nursing leaders must consider the practice standards that are essential, those that are desirable, and those that can be acceptably modified. Local nursing practices and certification criteria must be met in addition to criteria defined by the country of the mother institution.

In establishing a care delivery model within a different healthcare system, nursing roles, nursing education programs, and clinical protocols



must reflect an appropriate merging of acceptable standards from the sponsoring and on-site institutions. Understanding and managing change, cultural diversity, and the principles of adult learning are required.

The nursing workforce is primarily composed of local nurses, and many of the clinical and support services are contracted through local providers. Additionally, local physicians' private practices were integrated, with their private patients receiving nursing care in our outpatient and inpatient units. In this setting, patients are a mixture of local and international clients seeking care delivered under westernized standards.

Effective communication between nursing leadership in both institutions and an intimate understanding of the on-site challenges were necessary to attract and retain skilled oncology nurses. A clear vision of important values to be upheld and the role of the nurse provided the basis to operationally implement an effective practice model.

The presentation describes traditional and non-traditional resources and training that were used to successfully integrate two healthcare delivery sites. As other cancer centers seek to expand their programs, these requirements will be better defined, and the experiences of we pioneers will serve to provide insight into the process.

## 216

**PATIENT SATISFACTION: DECREASING THE PATIENT "WAIT TIMES" IN THE AMBULATORY CARE SETTING.** Susan Stary, RN, BSN, OCN®, Debra Adornetto, RN, MS, AOCN®, Josh Savoie, RN, Kim Evans, Patient Service Coordinator, and Nancy Peck, Accounting Specialist, University of Texas M.D. Anderson Cancer Center, Houston, TX.

The blood and marrow transplantation patient satisfaction tool provides a variety of information regarding the patient's perception of their health care and members of the healthcare team. In an effort to decrease patient wait time, a task force of staff members, in collaboration with clinic administration, was formed to determine reasons for lengthy patient wait times and to develop strategies for improvement. The task force meetings provided the staff with a sense of ownership in addressing an operational issue.

The rationale for the development of this monthly patient satisfaction tool was to provide data concerning the perception of the patient regarding the quality of care, courtesy, efficiency of the staff, and general clinic operations. The patient completes the survey based on a (1-5) Likert scale. The results of this survey have demonstrated patient wait-time scores with an average of 2.7 out of 5 in 2002 as the primary need for improvement.

The task force evaluated and revised the original survey tool, which was a combined tool for the BMT center and apheresis clinic. The tool was revised to reflect one clinical area. Corrective actions developed were the standardization of distribution, revision of physician appointment templates to reflect clinic flow, development of daily comment cards, informing patients of the reason for delay, and providing patients with a pager so they may utilize their time more effectively.

Continued monitoring over the first six months of this year demonstrated little improvement. Therefore, additional efforts were instituted to decrease the patient's perception of their wait time with the implementation of the "15 minute rule" by speaking with patients regarding their delay, constant discussion with the staff, administrative rounds through the reception area speaking with patients, and placards distributed throughout the reception area and front desk informing patients their time is valuable to us.

Recent results have demonstrated an increased satisfaction regarding the patient wait times and their perception of why they are waiting. Continued monitoring of the patient satisfaction surveys on a monthly basis, with a weekly review of comment cards provide direction for additional improvements.

## 217

**A MULTIDISCIPLINARY APPROACH TO IMPROVE CARE AT AN OUTPATIENT ONCOLOGY TREATMENT CENTER.** Mary Blaney, RN, OCN®, and Norma Sheridan Leos, RN, MSN, AOCN®, CPHG, Curtis and Elizabeth Anderson Cancer Institute, Savannah, GA.

Bringing together numerous disciplines, including private practice physicians, can be very difficult. But when the outcome is improved patient care, the rewards are great and worth the effort. This poster will describe

successful techniques used by the nurse manager to (1) streamline patient care, (2) improve nurse satisfaction, and (3) improve physician satisfaction and resident education. Techniques will be discussed in detail and will allow for other organizations to replicate the project.

Multiple factors necessitated operational changes at a hospital-based oncology ambulatory care clinic. Nurses at this regional teaching center were unable to develop a therapeutic relationship with the whole patient due to task-centered care. Lengthy wait times for physician-patient visits, if left unchecked, could lead to patient dissatisfaction.

A multidisciplinary process improvement team lead by the nurse manager completed analysis of scheduling practices, workflow during the clinic hours, and discharge process. Actions taken by the team include: (1) Implementation of the primary nursing model, (2) Preloading patient education prior to attending the clinic, (3) Development of emergency room cards to alert ER staff the patient was undergoing treatment for cancer, and (4) Multidisciplinary rounds after the clinic to discuss patient issues.

Wait times for initial patient visits have been decreased from four hours to two hours. Nurse satisfaction with the primary nursing model is very high. As a by-product of the team's efforts residents state they have a better learning experience and the new processes simplify care delivery for the private practice physicians.

Nurses have the skills and knowledge to lead multidisciplinary team members to improve cancer care.

## 218

**AIM HIGHER INITIATIVE: A NATIONAL INITIATIVE TO IMPROVE THE ASSESSMENT OF CANCER SYMPTOMS, INFORMATION AVAILABLE TO CANCER PATIENTS, AND SYMPTOM MANAGEMENT.** Kelley Moore, RN, Barry Fortner, PhD, and Theodore Okon, MBA, Supportive Oncology Services, Inc., Memphis, TN.

Chemotherapy-induced side effects and cancer symptoms continue to be inadequately treated in patients with cancer. Poor symptom management can result in decreased quality of life, decreased patient satisfaction with medical care, increased direct and indirect costs, and decreased ability to receive optimal treatment for cancer. Large-scale quality improvement programs have typically focused on single symptoms (e.g., pain), targeted hospital or hospice programs, and have, unfortunately, been able to produce only modest, short-term improvements.

This paper describes the design of a quality improvement program being launched in 20 community oncology practices in the continental United States.

The AIM Higher Initiative provides resources to practices that may be used to enhance fundamental infrastructure and change clinical processes surrounding supportive care, starting with the symptom clusters of anemia/fatigue, neutropenia, nausea/vomiting, diarrhea/constipation, and depression/anxiety. The initiative is focused on improving the way practices assess symptoms, provide patient information, and apply appropriate supportive care interventions. The initiative utilizes three champions (i.e., nurse, physician, and administration) within each practice to organize, plan, and implement change. Resources are provided to the practices including training in supportive care, affiliation with other community oncology champions, and access to scientific and clinical information about the target areas. Additionally, practices are given the opportunity to use special, pen-based computer technology designed to facilitate the assessment of patient symptoms and to provide patient information in narrative, video, and audio format. Each practice moves through a systematic series of consecutive tasks consisting of practice analysis, planning, and implementation for the three major initiative components of assessment, information, and management.

The initiative is evaluated through a multiple-baseline design with outcomes measured through patient surveys and chart review before and after the implementation of each major component.

Quality improvement programs are needed that target community oncology where the majority of patients with cancer are treated. The AIM Higher Initiative is designed to improve supportive care in community oncology by facilitating a self-improvement process and providing resources to practices that will help them make lasting changes to how they conduct supportive care.





## 219

**ENHANCING INTERDISCIPLINARY COLLABORATION TO IMPROVE PATIENT CARE.** Kelly LaHuis, RN, BSN, OCN®, Deborah Mast, RN, BSN, OCN®, Ginger Wein, RN, BS, and Marina Doyle, RN, BS, Northwestern Memorial Hospital, Chicago, IL.

Shorter hospitalization, increasing patient acuity, and mounting financial constraints necessitate efficient assessment and coordination of comprehensive inpatient oncology patient care by interdisciplinary teams (IDT). Collaborative communication among IDT members is essential to the achievement of therapeutic goals and to the integration of the unique needs of each patient and family into their plan of care.

Staff nurses are positioned to facilitate improved interdisciplinary communication by virtue of their role at the patient's bedside, but they may lack the tools and expertise to exploit this opportunity. Oncology nursing staff on a hematology-oncology unit at an urban academic medical center recognized the need to enhance communication among patients, families, and IDT members and to improve their own ability to convene IDT.

In order to identify areas for improvement, a nursing task force reviewed satisfaction surveys to determine areas for improvement. The task force then developed a plan to encourage patient and family involvement in formulating daily goals and plans of care with the IDT. One aspect included "plan of care magnets," printed with the phrases "goals of the day," "goals of care," "goals met," and "discharge plan," which were affixed to the dry erase board in each patient's private room. In addition, nurse-led IDT rounds were initiated to facilitate opportunities for IDT members to contribute to and document the plan of care.

Finally, the task force met every two weeks for three months to (1) identify internal benchmarks using psychiatry and palliative care IDT models, (2) explore a schedule for IDT rounds, (3) establish IDT meeting ground rules, (4) identify the essential IDT members to include on rounds, (5) educate nurses about case presentation, and (6) formulate a documentation tool for the plan of care.

Several key leadership factors contributed to the successful implementation of the task force's plan including supportive nursing management that placed a high priority on attending IDT rounds and mentorship of staff to lead IDT effectively. Staff nurses benefited from a tool designed by leadership to help nurses present patient information effectively, with a focus on symptom assessment and intervention, goals of care, and discharge needs.

## 220

**CHANGING ORGANIZATIONAL CULTURE BY CELEBRATING QUALITY IMPROVEMENTS: AN INSTITUTE WIDE APPROACH.** Charles Borden, MBA, Prabhjot Singh, RN, MPH, and Elizabeth Tracey, PhD, RN, Dana-Farber Cancer Institute, Boston, MA.

Recognition and reward through quality improvement enhances professional growth through appreciation. Applying quality improvement methods and principles is essential in shifting organizational culture. Research has shown that this endeavor requires a strong focus on recognition and knowledge management. At our large ambulatory academic medical center, this effort has been supported by the quality improvement department, which serves as internal consultant.

In the last two years, our facility has held an annual quality improvement fair that showcases and celebrates improvement projects from departments across the facility. Awards are given for project of the year, department of the year, and teamwork of year. Throughout the year, directors, supervisors, managers, and staff submit template summaries of improvement activities. Examples of oncology nursing staff submissions include "Implementation of Exam and Infusion Triage Nurse" and "Pediatric Oncology New Patient Education." The quality improvement department catalogs submissions and selects nominees based on set criteria such as multi-disciplinary representation, using quality improvement principles, and pre- and post-measurement. A multi-disciplinary committee selects award winners. At the fair, all summaries are displayed. Award nominees are showcased using a template storyboard format. A tone of celebration and importance is emphasized. All attendees are given door prizes and entered in a raffle.

There were 51 quality improvement project submissions across all departments, compared to 23 the previous year. The oncology nursing de-

partment submitted 11 projects versus four from the previous year. 300 staff attended the event compared to 200 the previous year. The excitement and positive feedback from nursing staff expressed through personal appreciation indicated that the fair was successful in providing much needed information, reward, and recognition.

This project demonstrates how one annual event can contribute to achieving culture change. At the basic level, the fair comprehensively recognized and communicated important improvement work at Dana Farber Cancer Institute. From an organizational view, the fair's open, collaborative, learning environment reflected and promoted our commitment to our core values: Impact, Excellence, Compassion/Respect, and Discovery. Additionally, the event emphasized that change can happen, be effective, and be done efficiently. Creating culture change by celebrating improvements is important to oncology nursing because it offers a venue to reward and recognize staff and increase communication.

## 221

**MANAGING THE ENVIRONMENT OF CARE: OPERATION CLEAN.** Fely Pinyopusarerk, RN, BSN, OCN®, JoAnn Mick, RN, MSN, MBA, AOCN®, and Marlene Z. Cohen, RN, PhD, FAAN, University of Texas M.D. Anderson Cancer Center, Houston, TX.

A safe and clean environment is especially important for patients with cancer whose immune systems are compromised by the disease and its treatment. Environmental cleanliness, a feature of good nursing care, is often associated with "comfort." Cleanliness is the aspect of the environment that patients mention most often when making suggestions for improving their comfort. Preparing and maintaining the patient-care environment is an ongoing process that should include visual inspection for cleanliness by both nursing and environmental services personnel.

Educating personnel and developing safety procedures help support adherence to Centers for Disease Control and Prevention and Occupational Safety and Health Administration standards, which were our rationale for this project.

We developed "Operation CLEAN" as a team approach for maintaining a safe and clean environment. Posters have been displayed and information presented to staff to implement a uniform process for all team members to use when making rounds in patient rooms. The mnemonic CLEAN (C = canisters, L = linens, E = equipment, A = area obstruction, N = neatness) reminds staff members to systematically check five common environment concerns.

Each month, 10 patients complete a questionnaire to evaluate their satisfaction with the environment in our department. The questionnaire asks whether staff keeps the environment/room clean and requests comments regarding how cleanliness of the room affects patient comfort. The 120 respondents have consistently linked a "pleasant" and "clean" environment with "comfort." "Operation CLEAN" created a fun opportunity for team members to remind each other of individual responsibilities and accountability and to highlight the importance of the environment to patients. Staff awareness, discussion, and focus on the patient-care environment have increased since we began to present the survey results at monthly unit staff meetings. Group problem-solving discussions have encouraged development of strategic plans to improve compliance, to address job demands, to have personal protective equipment available, to maintain employee commitment, to enhance patient and team member feedback, and to request education from our Departments of Infection Control and Environmental Health and Safety.

"Operation CLEAN" has contributed to our patients' comfort and satisfaction and has allowed us to better protect patients, healthcare workers, visitors, and others in our oncology unit.

## 222

**IMPROVING HANDWRITING LEGIBILITY ON PATIENT ORDERS.** Evelyn Amboree, RN, BSN, Rosanne Arlington, RN, MSN, ONC, CNS, JoAnn Mick, RN, MSN, MBA, AOCN®, and Marlene Z. Cohen, RN, PhD, FAAN, University of Texas M.D. Anderson Cancer Center, Houston, TX.

The National Coordinating Council for Medication Error Reporting and Prevention reported that 15% of the errors they reviewed had occurred because of illegible handwriting, problems with leading and trail-



ing zeroes, misinterpreted abbreviations, and incomplete medication orders. Illegibility compromises safety and frequently contributes to error, confusion, lack of communication, and poor use of personnel's time as they attempt to decipher the order and the signature of the appropriate person to contact for order clarification.

To quantify and identify specific problem areas, we asked our unit secretaries to identify charts with illegible orders, and charts were also randomly selected for audit. All of the audited charts contained illegible signatures and had no printed name or physician identification code to aid clarification.

We, therefore, discussed illegible orders and signatures and the use of abbreviations with our physicians and implemented a consistent callback process for clarifying orders.

A follow-up audit revealed that no inappropriate abbreviations for morphine sulfate, magnesium sulfate, units, or micrograms had been in orders. We then developed a strategic plan to improve order legibility. The first step was to post notices about the importance of order legibility and printing the prescriber's name, identification code, and pager number on each prescribed order. We also made a list of the signatures, identification codes, and pager numbers of prescribers who write orders on our patient charts. Posters are displayed on the unit to commend individuals whose handwriting is consistently legible. Copies of illegible orders/signatures are used for follow-up with the writers. After five unsuccessful attempts to increase legibility, a prescriber's name is included on the Top 10 Fugitive List and examples of the illegible orders are submitted to the department chair to request assistance to improve legibility. We are now assessing the effect of our program.

This program is cost effective and can be implemented in all oncology nursing practices.

## 223

**UTILIZATION OF A DOWNTIME PROCEDURE DURING FAILURE OF THE CHEMOTHERAPY ORDER ENTRY (COE) SYSTEM.** Karen Lipshires, RN, BSN, CNRN, Massachusetts General Hospital, Boston, MA.

Because of an Internet virus, COE became unavailable for use. Within 15 minutes, it was determined that COE would not be available for an undetermined amount of time. The downtime procedure was implemented successfully. There was no interruption to patient care and no errors or delay related to incomplete or illegible information.

Increasing numbers of healthcare institutions are utilizing computerized ordering systems to enhance safety. At a large academic medical center, COE provides clarification of orders, standardization of treatment based on evidence-based practice, dose calculation, and adherence to maximum dosing recommendations. COE houses template order sets for both standard regimens and clinical trials. Once the appropriate treatment is selected, the system utilizes patient information provided at the time of ordering as well as data from other electronic repositories. This allows for calculation of doses based on body surface area, weight, creatinine clearance, and age. Appropriate side effect management is also included in the template.

Because the system relies on the integrity of various infrastructures, an emergency plan was needed. Guidelines developed for order writing in the event of a system failure will be described. Input from physicians, nursing, pharmacy, and information systems was utilized. The differences between inpatient and outpatient needs were identified and incorporated. A communication tree was established; first between IS and leadership, then between leadership and the cancer center users. Detailed guidelines provide the framework for reverting to paper orders. Because our providers see patients and write orders throughout the institution, an inclusive user list was compiled to swiftly notify, by page, of the decision to use paper orders. Preprinted COE downtime order sheets were designed and printed. Use of this form requires the physician to include the appropriate criteria for the safe ordering that is currently assured by COE. Guidelines were established to transcribe the paper orders into COE once the system was operational.

Providers were grateful for prompt communication and overall preparedness of the team. The process is being reviewed and evaluated for enhancements.

Increasingly health care is relying on computerization. Provisions for backup procedures are paramount.

## 224

**ASK THE EXPERTS: ONCOLOGY NURSES EVALUATE A FALL-PREVENTION PROGRAM TO DETERMINE WHAT WORKS.** Vivian Perkins, RN, BSN, Rosanne Arlington, RN, MSN, ONC, CNS, Judy Gerst, RN, MHA, CPHQ, Susan Hummel, RN, MSN, CNS, and Kimberly Quiett, RN, MSN, CNS, University of Texas M.D. Anderson Cancer Center, Houston, TX.

Nurses on our unit were perplexed about oncology patients' continuing to fall despite the implementation of an evidence-based fall-prevention program. Patients at risk for falls were given written information about fall precautions, "Call-Don't Fall" signs were placed in their rooms, green armbands on their arms, and signs and stickers with colorful fall leaves on their doors and charts. Bed check alarm systems and skid-resistant slipper socks were also used. The potential for falls for each patient was documented, and an order was obtained for a physical therapy consultation for assessment and recommendation of appropriate assistive devices.

To improve this system, nurses met with a performance improvement representative to discuss concerns and develop strategies.

A review of variance reports revealed that the overwhelming majority of our patients' falls were associated with elimination. A review of the literature supported our fall program, but discussion indicated that some program requirements were not helpful. We decided to "ask the experts"—our staff nurses, who administer the fall-precaution program daily and are, therefore, best acquainted with why patients fall. Using a questionnaire, we collected data from three nursing units.

More than 90% of nurses said that use of nonskid footwear, bed brakes, and raised side rails helped prevent falls. Components that were perceived as being least helpful (< 75%) were the chart sticker, armband, activity orders, physical therapy/occupational therapy screening tools, and documenting the patient's fall status. We found that many of the patients had received a laxative or diuretic within four hours before a fall. Most falls occurred when the patient did not call for help. Because falls are an organization-wide problem, and nurses believe that not all components of the fall-prevention program are equally useful, we will survey all our licensed nurses electronically to identify issues, perceptions, and suggestions to create a new program for all our nurses. We expect to hear from more than 500 oncology nurses.

Information from this project may be helpful to other oncology nurses as they endeavor to strengthen their fall prevention program to protect their oncology patients.

## 225

**DISCHARGE PROCESS COLLABORATIVE: IMPROVING THE DISCHARGE PROCESS FOR THE CANCER PATIENT.** Debra Adornetto, RN, MS, AOCN®, Donna Ukanowicz, RN, MS, and Sherry Preston, RN, MS, OCN®, University of Texas M.D. Anderson Cancer Center, Houston, TX.

The discharge process collaborative (DPC) was initiated to improve the overall discharge process for the patient with cancer. The challenge was to implement an efficient multidisciplinary process that is seamless to the patient and family, where planning begins on the first contact with the institution and continues throughout each episode of care.

Data was collected from a variety of sources to provide baseline measures. Length of stay, patient satisfaction scores, discharge disposition coding, referring physician satisfaction survey comments, and chart audits supported the need for the institutional collaborative. Executive leadership approved the proposal for the DPC initiative presented by the quality improvement department. Project leaders were appointed and a multidisciplinary steering committee with representation from every discipline and department was formed. The purpose of the steering committee was to review the current discharge process, previous initiatives, identification of best practices, and current barriers to discharge.

After identification of the current barriers, the steering committee divided into five working teams based on the barrier categories. The categories included room/clinic appointment availability, discharge planning process, financial, patient family communication/teaching, and patient flow/wait times. Identified team co-leaders began their work based on an established timeline with deliverables. Multiple forums and methods of communication were used to communicate the process of the collaborative to the entire institution.



Global metrics were identified by the steering committee as a means to measure the improvements. These metrics will be collected and reported monthly to the DPC oversight committee. An education team was developed to address the educational needs of the discharge process collaborative to assure a smooth rollout of the discharge process. The two-fold education plan included a global education plan and a targeted education plan.

The collaborative efforts began with defining the discharge process. The efforts continue as the institution is educated in the improved process with the initiatives being implemented September 2003. The "metrics oversight committee" will begin in October 2003 to review the global metrics. The ultimate goal of the multidisciplinary DPC team is to efficiently and effectively meet the patient's discharge needs in a seamless process.

## 226

**IMPROVING ONCOLOGY DISCHARGE PROCESS IN A COMPLEX TERTIARY CARE CENTER.** Patricia Reid Ponte, DNSc, RN, and Anne Gross, MS, RN, Dana-Farber Cancer Institute, Boston, MA; Nancy Kruger, DNSC, Brigham and Women's Hospital, Boston, MA; Karen Schulte, BSN, RN, Dana-Farber Cancer Institute, Boston, MA; and Cindy Jodoin, BSN, RN, and Eileen Molina BSN, RN, Brigham and Women's Hospital, Boston, MA.

Improving efficiency of and patient satisfaction with the discharge process from an oncology service in an academic tertiary setting. Nursing leaders are responsible for reducing costs, increasing efficiency, and improving patient satisfaction. This best practice discharge model will assist nurse leaders in making improvements in all of these areas.

Patient discharge is a multi-step process involving several people and departments. Many issues affect the discharge process: Belief that morning discharge leads to patient dissatisfaction, competing priorities, staff disincentive in receiving new patient, and workflow issues. Discharges must be planned in advance, coordinated across departments and disciplines, and timed in conjunction with other care activities.

A multidisciplinary team along with patients and family members designed a collaborative, efficient, patient-centered process to insure coordinated, morning discharges. Goals were to improve patient satisfaction with the discharge process, decrease length of stay, and expedite the admission process for the next group of patients. The intervention included redesign of morning MD rounds to facilitate discharges by noon, morning lab drawing to synchronize the availability of results with the time of morning rounds, follow-up appointment making process to one-stop shopping model with access to appointments on weekends and evenings, RN care coordinator role to facilitate the discharge process during morning rounds, and availability of medications that are difficult to obtain for post-discharge phase.

The program was implemented in July 2003 and will be evaluated according to the goals set forth: Increase the percentage of oncology service patients discharged by noon (8.2% to 25%, a 200% increase); increase Press Ganey Patient Satisfaction scores to the best practice benchmarks (discharge section, 81.9–84.9; speed of discharge process, 76.7–86.0; informed about discharge date/time, 78.7–83.6).

Oncology nurses play a critical role in preparing the patient and family to transition smoothly from the hospital to home or extended-care facility. Developing a best practice model of care along the continuum for this unique population with complex care coordination, education, and follow-up needs will position oncology nurse leaders to deploy and manage clinical RN FTEs judiciously and effectively.

## 227

**EFFECTIVE STRATEGIES TO ENSURE QUALITY CARE FOR SPANISH SPEAKING PATIENTS.** Priscilla Rivera, RN, MS, CAN, and Geri Hawks, RN, BSN, National Institutes of Health, Bethesda, MD.

Hispanics are the largest minority in the United States. Communication with Spanish-speaking patients has been a challenge on the 16-bed hematology/oncology/transplant unit in the clinical center of the National Institutes of Health (NIH).

A review of the accrual in patient population reveals that over 45% are Spanish speaking. The majority of nurses are non-Spanish speaking. Language barriers can negatively affect the delivery of quality health care, and patients who do not speak English are very vulnerable.

Recognizing the needs of this sub-group, different strategies have been implemented for bridging the language barrier such as access to appropriate linguistic services (interpreters, AT&T language line, & CyraPhone access); bilingual healthcare workers able to provide in-depth information and care; translation of information and education materials into Spanish; administrative support for staff interested in taking classes to learn Spanish; and Spanish-speaking staff teaching formal classes to patients and families.

Informally, patients have reported satisfaction with their care. Members of the healthcare team report greater understanding of their patients, prevention of treatment complications, and improvement in effectiveness of patient care. Nurses verbalize that learning the most common foreign language spoken in the United States provides them with a skill that enhances their cultural and clinical competencies.

Bridging the language barrier also improves satisfaction in the nurse-patient relationship, decreases frustration, and promotes self-esteem.

## 228

**LEARNING TO LEAD: DEVELOPING STAFF NURSE LEADERSHIP SKILLS.** Mary Beth Reardon, RN, MS, Sheila Ferrall, RN, MS, AOCN®, and Vicki Marsee, RN, MBA, CNAA, H. Lee Moffitt Cancer Center and Research Institute, Tampa, FL.

The preparation of experienced oncology nurses to assume clinical leadership roles in patient care settings was the focus of a program presented to our nursing staff.

The retention of experienced oncology nurses and the development of future nursing leaders are two areas of utmost concern to the profession. In clinical settings, the most skilled and knowledgeable nurses are often targeted for leadership roles. In order to become an effective leader, the expert nurse must be educated about leadership theory and skills.

The purpose of this presentation is to describe the first step in preparing seasoned oncology nurses for leadership roles at our NCI-designated comprehensive cancer center. We offered a full day leadership development program to experienced nurses. The intent of this program was to help the nurses develop an understanding of their personal leadership style as well as the style of others. The topics of managing change, small group behavior, and creative problem solving were included.

An experienced national speaker was engaged to present. Participation in the program was restricted to those nurses who attained upper levels on our clinical ladder. Each eligible RN received a personal invitation to participate. Making time to attend continuing education is often a challenge, but we were hopeful the program would be of sufficient interest to our experienced nurses.

Measures were used to evaluate the success of the program were percentage of eligible nurses who participated and program evaluations. Our goals were 25% attendance of our RN IIs and IVs, and an overall program evaluation of 4.0 on a 5-point scale. The program was well received with 46% of invited nurses participating. The overall program evaluation was 4.8.

The workshop for experienced oncology nurses was a great success. Nurses appreciated being recognized for their experience and enjoyed gathering with peers to enhance their knowledge. They expressed an interest in participating in more programs of this nature and suggested future topics. Oncology nursing needs strong, well-prepared leaders to face the challenges of the future. Organizations that provide leadership development opportunities to expert clinical nurses will benefit from both their clinical knowledge and their leadership skills.

## 229

**CHEMONOPOLY: A FUN WAY TO ASSESS ANNUAL COMPETENCY.** Debra Stillwell, RN, OCN®, Providence Holy Cross Medical Center, Mission Hills, CA.

Assessing annual chemotherapy/biotherapy competency has become a challenge to keep it interesting and fun, yet able to glean nurses' true knowledge on the topics.

The purpose was to create a fun game that would closely follow the competency assessment criteria for nurses who give chemotherapy and biotherapy at our facility. The game would be played by four participants at a time for a minimum of 60 minutes. The participants would be given a syllabus of the criteria on which they would be tested at least one week in advance.





There is a game called "Make your own -opoly" that you can adapt to whatever you need that closely resembles MONOPOLY. The colored blocks became generic names of drugs, and the community chest became "Good News" and "Bad News" scenarios that the nurses would either need to demonstrate with props, verbally describe, or role plan. These topics included extravasation, evaluating a patient for neuropathies, chemo spills, patient education, etc. It covered all of the required didactic areas, then the nurses needed only monitoring while actually giving the chemotherapy on another occasion.

The measures were matching the scenarios to the mandatory competency assessment criteria and assessing the nurses return demonstration or verbal response.

Nurse managers in other departments heard about the game, and asked if they could modify it for "their" departments.

## 230

**WHEN THINGS GET STUCK: GETTING A RESEARCH STUDY MOVING.** Ellen Carroll, BSN, RN, and Myra Wollery Antill, MN, RN, National Institutes of Health, Bethesda, MD.

Members of the multidisciplinary team identified the recurrent symptom of constipation in pediatric oncology patients receiving Vinca alkaloids, opiates, or a combination of both. A multidisciplinary research group headed by a nurse principle investigator was assembled to focus on constipation in our pediatric oncology patients. The poster discusses the challenges and strategies to overcome challenges when taking on a research protocol.

With the high incidence of constipation among patients receiving Vinca alkaloids, opiates, or a combination of both, a standard algorithm for treatment of this side effect was deemed necessary for our group of pediatric oncology patients. Much has been reported in the literature for treatment of adult patients with constipation; however, little has been published regarding constipation in pediatric patients. Members of the team including nurses, physicians, pharmacists, nutritionists, and methodologists, met on a regular basis to develop a utilization tool to determine stages of constipation with the intent to further develop a protocol to decrease constipation in pediatric patients receiving Vinca alkaloids, opiates, or a combination of both.

A research design framework was divided among the team members with each member focusing on their individual expertise. Time lines were developed to facilitate the process. An initial bowel assessment form and a modified version of the adult Constipation Assessment Survey (CAS) tool was developed using terminology common among pediatric patients and their families. These instruments were developed with extensive feedback from the clinical nursing staff familiar with the feasibility of implementing the assessments.

Challenges in the process that have required flexibility on the part of the entire research team include: (1) lack of resources, (2) balancing time between clinical commitments and the research, (3) meeting Institutional Review Board requirements related to human subjects protections for pediatric patients, and (4) accrual of appropriate subjects. Although there were hurdles to overcome, the stalled process eventually got moving in a positive direction. With the study now actively underway, initial data is pending.

It has been identified through literature review and clinical experience that little is documented related to assessment and management of constipation of the pediatric oncology patient receiving Vinca alkaloids, and/or opiates. With the development of a tool, which can be validated to assess the stages of constipation among pediatric oncology patients, the oncology nurse will be able to intervene early with appropriate interventions. The group met with challenges in the development of the research study and developed strategies to overcome such challenges. It is the goal of the multidisciplinary group to develop further studies as a result of this pilot study and overcome challenges presented when developing a research study.

## 231

**MEETING THE CHALLENGES OF RECRUITMENT IN AN ONCOLOGY CLINICAL TRIAL.** Pamela Sue Hall, MS, CRNP, Phyllis Morgan, PhD, APRN, BC, Victoria Mock, DNSc, RN, AOCN®, FAAN, and Amy Bositis, BSN, RN, Johns

Hopkins University School of Nursing, Baltimore, MD.

Recruiting patients to participate in oncology clinical trials is a significant challenge, especially when the trial focuses on lifestyle modification. It is the role of the research or clinical nurse to develop effective strategies for recruitment.

In an ongoing trial to look at the affect of exercise on cancer treatment-related fatigue, we have implemented multiple strategies to improve enrollment. The conceptual framework that guided this study was the Levine Conservation Model, which proposes a biobehavioral mechanism, which underlies symptoms, such as fatigue, experienced with cancer.

Weekly copies of clinic schedules are viewed. Chart reviews are conducted on patients diagnosed with breast, prostate, or colorectal cancer to determine eligibility. Those that qualify are then contacted, usually by phone, or met at their clinic visit. Interested participants are given more details and mailed a copy of the consent. They are further screened to make sure they qualify. Once informed consent is obtained, an enrollment visit is set up to coincide with a regular clinic visit. Every attempt is made to reduce the number of extra visits the patient would have to make. We are now expanding recruitment to a suburban cancer center to further increase enrollment.

This four-year trial began enrollment October 2002. Since then, 1,012 patients with diagnoses of breast, prostate, or colorectal cancer have been screened. Of the 56 who met entrance criteria, 41 refused, leaving 15 that were consented and randomized (8 prostate; 5 breast; 2 colorectal). Of the 963 that were determined to be ineligible, 484 were at the wrong point in their treatment or the wrong cancer stage, 186 were receiving an ineligible treatment (they had to be receiving chemotherapy for the breast or radiation for the prostate patients), 100 were coming for consultation, 76 already exercised, and 50 had co-morbid conditions that would make it inappropriate to participate, 17 were out of our age window, and 36 were ineligible for miscellaneous reasons. Patients refused for three main reasons: Unwillingness to limit their activity, unwillingness to begin an exercise routine at this time, and feeling overwhelmed and not wanting to have to think about one more thing.

The challenge of screening patients for study eligibility is time and labor intensive. Methods to streamline this process include online review of the medical records and telephone interviews. The research nurse has the primary responsibility of developing effective strategies to improve enrollment.

## 232

**ENHANCING ACCRUAL TO CLINICAL RESEARCH STUDIES: THE ROLE OF THE RESEARCH NURSE.** Joyce Yasko, PhD, FAAN, Roswell Park Cancer Institute, Buffalo, NY.

Accrual to oncology research studies is a national goal subscribed to by many. National data indicate that averages of only 3% of all persons with cancer are enrolled in research studies. Cancer treatment and care of the future are dependent on the results of oncology research. In order to obtain oncology research answers, the target accrual of these studies must be met.

The purpose of this abstract is to describe the plan used by research nurses of an NCI comprehensive cancer center (CCC) to enhance accrual to oncology research studies. In this CCC, clinical research is arranged in clinical program (e.g., breast cancer) and the assigned research nurse is an integral member of the research team. The research nurse for each clinical program, in collaboration with the physician leader, develops an annual plan to enhance accrual to research studies. The plan is followed and revised as the research nurse and investigators learn more about the patient population and the available research studies.

Each accrual plan includes interventions such as being available and reviewing the treatment plans for all new patients and patients who have experienced recurrence for potential participation in a research study. The research studies in each clinical program are prioritized and the research nurse asks if they have considered presenting a research study as a treatment option and if not, why? Often raising awareness is all that is needed for the oncologist to consider a research study. This question also helps to identify gaps in available research studies and concerns related to inclusion and exclusion criteria.

Accrual for each clinical program is assessed quarterly; the accrual is reported and the percent of increase or decrease noted. Each research nurse



presents their plan and outcome to the members of the clinical program and their peers. The plan is then revised as necessary.

The process for enhancing accrual will be shared as well as specific successful accrual strategies for use in other oncology settings.

## 233

**USING COLLABORATION AND INNOVATION TO IMPROVE SUBJECT RECRUITMENT AND RETENTION IN A LONGITUDINAL INTERVENTION RESEARCH STUDY.** Karen Dow, PhD, RN, FAAN, University of Central Florida, Orlando, FL.

The purpose of the paper is to discuss collaborative and innovative recruitment research strategies used to improve recruitment in a six-month longitudinal quality-of-life intervention study. In our NINR-funded intervention research study, our targeted monthly accrual declined. The University of Central Florida (UCF) research team and the M.D. Anderson Cancer Center-Orlando research nurses identified several barriers to recruitment and discussed innovative non-traditional methods to improve accrual of patients to a target of 10 subjects per month.

Nurses from the university and the community cancer center determined the following barriers: Traditional approaches to clinical trial recruitment, timing of presenting the study to eligible patients, patient time constraints, and oncologist involvement. The team worked together to develop innovative recruitment methods including: (1) working directly with individual oncologist/RN teams, (2) providing information to patients at any time point during treatment rather than after treatment ended, (3) providing easy-to-read information packets available for clinical staff to aide in ease of recruitment, (4) increasing the university research team's visibility at the cancer center, and (5) developing and distributing monthly recruitment feedback for the oncologist/RN teams detailing their recruitment activity for the previous month.

Prior to the changes in recruitment methods, we had an average of 7.6 referrals per month and 6 subjects consenting to participate in the study. Since initiating these changes in recruitment, referrals increased to 11.3 per month with an average of 9.6 subjects consenting to participate and have retained this subject accrual rate. We have also successfully retained subjects in this project with less than 2% dropout over time.

While we had strong collaborative ties between the university research team and the community cancer center, we were successful in building on this partnership to develop creative strategies to improve recruitment and retention in our longitudinal research study. Thinking "outside the box" and changing the way clinical staff approached the study was very successful in improving accrual.

## 234

**USING ANALOGY TO FACILITATE PATIENT EDUCATION AND INFORMED CONSENT IN THE ELDERLY PATIENT.** Bonnie Toaso, RN, BSN, OCN®, and Heather Brumbaugh, RN, BSN, ANP, AOCN®, Duke University Medical Center, Durham, NC.

The increasing complexity of diagnostic studies and treatment for cancer presents a challenge to oncology nurses in educating the patient. Therapies such as monoclonal and radiolabeled antibodies, vaccine therapies, immune modulatory agents, and results determined by immunohistochemical findings and chromosomal abnormalities are complex and difficult to explain in the education process. Oncology nurses are integral in assisting the patient and their family in understanding the disease and treatment and can use many strategies for interpreting intricate information. Using analogy is one such strategy.

Adult learners bring a personal "experience bank" with them to any new event. If the new idea or concept can be related to an existing experience, the idea can be more readily understood. By tailoring the learning to the patient's own experience, the idea or concept can be assimilated and understood.

The use of analogy is a good way to utilize the patient's "experience bank" to facilitate learning and improve informed consent. Analogies can be developed to meet each patient's unique experiences. For example, when explaining a complex treatment schema to a homemaker one could describe it as a recipe that will be followed to produce results much the same way the homemaker followed a recipe to make a cake. The recipe

can be modified somewhat but should be followed in order to have a good outcome. The treatment plan is similar in that certain changes can be made but the schema should be followed to get the best response.

This technique allows the nurse to identify the patient's level of understanding of a new concept. It also encourages the patient to ask appropriate questions leading to informed treatment decisions.

This educational methodology promotes the informed consent process and facilitates compliance with instructions. The use of analogy can be applied to any area of patient education and can allow the oncology nurse to improve understanding by the patient of complex issues. This presentation will provide examples using analogy as a method to facilitate the informed consent process.

## 235

**PROACTIVE PROTOCOL MANAGEMENT: APPLYING THE NURSING PROCESS TO CLINICAL TRIALS.** Vilma Lopez, RN, MSN, OCN®, University of Texas M.D. Anderson Cancer Center, Houston, TX.

Clinical trials nursing is a growing area of practice for oncology nurses. Proactive protocol management follows the nursing process to ensure patient safety and collect data as designed in the protocol.

There are multiple manuals on protocol management, however, few of them explain in detail or devise a system to achieve a perfect patient follow-up. In oncology, chronic disease management has replaced short courses of chemotherapy. Availability of new oral drugs has prolonged the duration of protocols. With long-term protocol, treatment subjects are no longer captive patients at one site. They go back home and to their daily routines while continuing participation in a clinical trial. Protocol management needs adjusting to a strict schedule, complying with institutional and federal regulations, and following principles of good clinical practice. Return visits to the clinical trial site are less frequent, making protocol management increasingly complex.

Proactive protocol management as a carefully planned strategy is modeled after the nursing process. The nurse assesses the protocol to identify required tests, data to be collected, and frequency. Early identification of the subject's learning needs is necessary for their successful compliance. In addition to schedule and data collection tools, patient education should be engaging to make subjects active collaborators. Planning includes preparing traditional protocol calendars and orders that provide clear instructions. An open line of communication in both directions is vital in implementing proactive management. Communication reinforces the subjects' commitment to the trial. Information exchange by e-mail or telephone is encouraged with all participants. Results from tests done at our site are sent to subjects and their local physicians. This encourages them to send their own information in return. When data is not received at the specified intervals, alerts are sent to the subjects.

Evaluation of results after two years of implementing the process is evident. Our site receives most data on time; subjects' compliance has not decreased; queries for missing pieces or incomplete reports are very low; and the last two audits produced no recommendations.

The nursing process can be successfully incorporated to improve protocol management, validating the research nurse's role.

## 236

**THE COLLABORATIVE RELATIONSHIP BETWEEN RESEARCH AND AMBULATORY CARE NURSES IN A GI MEDICAL ONCOLOGY PRACTICE.** Ellen Hollywood, RN, BS, OCN®, and Deborah Semple, RN, MSN, OCN®, Memorial Sloan-Kettering Cancer Center, New York, NY.

An increasing number of complex multimodality treatments are being used in the management of gastrointestinal malignancies. These novel and innovated therapies are facilitated by communication and teamwork between the ambulatory care and research nurses. Their communication and teamwork are successfully fostered by a sense of partnership and a thorough, mutual understanding of both patient care and research issues.

The research and the ambulatory care nurse must clearly communicate clinical and scientific knowledge to each other on a daily basis. This is a challenging and evolving process. In our comprehensive cancer center the research and ambulatory nurse work as a team in order to optimize both the quality of the patient's care and the accurate adherence to the research protocol guidelines.



Through this partnership, patient education, protocol-directed administration of treatment, procurement and processing of research bloods and tissue samples, toxicity assessment, and accurate documentation of adverse events takes place in an efficient, quality-focused, timely manner. Each of the nurses advocates for the patient and may become involved in logistic and supportive issues such as third party reimbursement for clinical trials and medical procedures, emotional support, and patient and caregiver education.

This collaborative team approach is responsible for: (1) improved patient care, (2) mentoring of colleagues about standard therapies and clinical research protocols, (3) improved staffing and morale, and (4) promoting professional development including preparation of abstracts, presentations, and publications. The relationship fostered by this collaboration is mutually beneficial for each nurse and such collaborations are clearly the wave of the future.

This presentation will explore the mechanics of the collaborative relationship between research nurses and ambulatory care nurses in a busy ambulatory GI medical oncology practice.

## 237

**CHALLENGES OF PROVIDING AN "ATTENTIONAL CONTROL" IN A RANDOMIZED CLINICAL TRIAL.** Mary Patricia Roh, BSN, RN, and Ann Berger, PhD, RN, AOCN®, University of Nebraska Medical Center College of Nursing, Omaha, NE.

In research studies, all arms of the studies are of significance and importance. They are dependent on each other for the success of the study. When an intervention is proven effective, the validity of the findings is dependent on how the control group was managed. In randomized control trials (RCT) testing behavioral intervention, an "attentional control" arm is commonly used. As more oncology nurses become involved in RCT testing behavioral interventions in the 21st century, the management of the control arm has become of increased importance.

In an attentional control arm, participants receive equal "time and attention." How the research nurse delivers this "time and attention" provides challenges and is crucial to the integrity of the study. This presentation will discuss challenges of providing an attentional control arm in a RCT. Challenges include designing content of the "time and attention" arm, method of presentation, problem solving with participants, knowing when to report assessments to the participant's physician, and retention of subjects in the control arm.

To address these challenges, first, design content to contain basic information involving a health practice at a basic level and one adaptable to most lifestyles using caution to avoid alluding to the content of the intervention arm. Presentation of content can be divided over the length of the study, bolstering adherence and compliance. To encourage retention of subjects, allow participants time to share their concerns but monitor time involvement. Assist the participant with problem solving, referring them to their physician for needs involving an intervention or any problem that could contaminate the study. Observational assessment of participants may alert the nurse of possible complications requiring physician notification.

To check for contamination of behavioral intervention arm, it is necessary at the conclusion of each subject's participation to use a tool such as a survey to inquire what behaviors both arms adopted to achieve a result.

The implication for practicing research nurses in RTC is that success of studies hinges on a nurse's adaptability in providing specific care to all participants while remaining focused on which arm of the study the participant is randomized to avoid contamination.

## 238

**ENSURING THE SUCCESS OF SYMPTOM MANAGEMENT TRIALS IN THE COMMUNITY SETTING: THE CRITICAL ROLES THAT ONCOLOGY NURSES PLAY.** Ann O'Mara, PhD, RN, AOCN®, and Rose Mary Padberg, MA, RN, National Cancer Institute, Bethesda, MD, and Joan Westendorp, BS, RN, Kalamazoo Community Clinical Oncology Program (CCOP), Kalamazoo, MI.

Since 1987, the National Cancer Institute has supported the Community Clinical Oncology Program (CCOP) to bring the benefits of cancer prevention and symptom management clinical research to patients with

cancer in their own communities. Currently, there are 57 open trials aimed at ameliorating cancer-related toxicities such as nausea and vomiting, pain, fatigue, and anorexia and cachexia. Agents such as gabapentin for the relief of neuropathic pain, as well as behavioral interventions for managing psychosocial distress have been and are currently being tested. Input from oncology nurses, from initial design of the trial to feasibility and successful accrual of all participants, has been critical to the overall success of these trials.

Oncology nurses' unique understanding of symptom management practices, as well as clinical trial design and implementation positions them to assume a prominent role in this area of clinical research. For example, many of the protocols include both symptom and quality-of-life endpoints, requiring the patient and/or caregiver to complete a number of questionnaires. Consequently, these trials can be potentially labor intensive. The multiple roles and responsibilities that oncology nurses assume are pivotal in maintaining a balance between collecting essential patient data, implementing the particular treatment, and not burdening either the patient or staff.

This presentation will describe the array of symptom management trials that have been implemented through the CCOP network. The unique contributions of nurse scientists, advanced practice nurses, research nurses, data managers, and protocol treatment nurses to the development and implementation of symptom management protocols will be explored.

Both active and closed CCOP protocols, as well as published articles, will be reviewed to identify the various roles of oncology nurses and their specific contributions to the design and implementation of symptom management trials.

Common themes related to the science of symptom management, feasibility of conducting these types of trials in the community setting, and recruitment and retention issues will be highlighted.

Patient and family burden, feasibility of completing the questionnaires, and practicality of the intervention are among the challenges that oncology nurses must understand and address in this area of clinical research.

## 239

**WILL NOT PRESENT**

## 240

**ON THE FRONT LINE, BEHIND THE SCENE: MONITORING A CLINICAL TRIAL.** Mary Myers, RN, MSN, AOCN®, PharmaResearch, a member of the Inveresk Group, Morrisville, NC.

The field of oncology continues to promote clinical trials for a variety of malignancies. Pharmaceutical companies lead the way sponsoring many of these oncology studies. A "sponsor" is usually needed to assume responsibility for the initiation, management, and/or financing of a clinical trial. A pharmaceutical company may hire a contract research organization (CRO) to perform one or more of a sponsor's trial-related functions. Oncology nurses, working for a CRO, have a unique opportunity to continue applying their skills and knowledge in this area.

As a member of a study project team, the oncology nurse may function as a project manager, assistant project manager, or clinical research associate (CRA). The CRA has the primary responsibility of monitoring the trial at the clinical site. The monitor's responsibility is to oversee the progress of the clinical trial and ensure that it is conducted, reported, and documented in accordance with the protocol, good clinical practice (GCP) and ICH guideline requirements. The GCP and ICH guidelines are found in the federal code of regulations and are the rules that govern the conduct of clinical trial practice.

The oncology nurse brings clinical expertise, scientific knowledge, and a practical perspective about the oncology clinical practice setting to the monitoring experience. The nurse's knowledge of pathophysiology, tumor biology, laboratory tests, and radiology studies are important aspects to understanding the details of the protocol. This understanding and knowledge is the foundation for thoughtful discussion with the site staff regarding patient eligibility, adverse events, serious adverse events, and toxicity management. These strengths should be applied to every aspect of monitoring a clinical trial.





The framework for monitoring a clinical trial includes pre-study site selection, study initiation, interim-monitoring visits, and study closeout. Applying the nursing process to these components of monitoring assists with organization, maintenance, and evaluation of a vast amount of information as it relates to the study, clinical site, and their patients.

Monitoring is an integral component of the clinical trial process. Oncology nurses functioning in this role can contribute to the progress made bringing novel cancer treatments from bench to bedside.

## 241

**AN ONCOLOGY NURSING COMMUNITY RELATIONSHIP COMMITTEE: IMPROVING HEALTH AND ENHANCING IMAGE.** Paula Absolon, RN-C, MA, ANP, OCN®, Alice Gianella, RN, MA, OCN®, and Roxanne O'Brien, RN, BSN, OCN®, Memorial Sloan-Kettering Cancer Center, New York, NY.

The Oncology Nursing Community Relationship Committee (ONCRC) is a subcommittee of the nursing professional development committee at this NCI-designated comprehensive cancer center. Comprised of eleven nurses, it is responsible for providing cancer prevention education to the public, enhancing the image of nursing through these professional activities, and encouraging those considering career options to view nursing as a possible choice during this nursing shortage. At its inception, the ONCRC assessed the current institutional groups that provide community outreach such as Public Affairs, Cancer Information Service, Community Affairs, "Cancer Smart," a community lecture series, smoking cessation program, and the psychiatry and social work departments. Community organizations, schools, and religious groups were also assessed as possible partners in future activities.

A plan was developed for the ONCRC's first involvement in a community activity: Coordination of the hospital's booth at the annual "Revlon Walk/Run" to raise funds for women's cancers. More than 2,000 runners visited the booth and received cancer prevention and health maintenance brochures, observed breast self-exams performed on models and had numerous questions answered related to cancer prevention and health maintenance. An hourly raffle was held to attract runners and walkers to the booth.

The ONCRC is making this an annual event to participate in and did so for the second time this past spring. The ONCRC is working in collaboration with one of this hospital's offsite satellite centers for training nurses to educate the public in their communities on breast and cervical cancer prevention. Twelve nurses have been trained on breast and cervical cancer prevention, and two of these nurses have already given three presentations in their respective communities.

Other ongoing activities include coordination of expert nurse speakers who want to participate in the "Cancer Smart" program and a program for the hospital's high school volunteers related to prevention activities and nursing as a career choice. Future plans include expanding the group size, continued participation in cancer related fund-raising activities, and participation in community-based programs that allow nurses to educate the public while exposing them to the broad capabilities of professional nurses. This presentation will provide nurses with a model plan they can emulate to establish similar groups to provide cancer prevention education activities in their own communities while enhancing the image of nursing during this time of the nursing shortage.

## 242

**PATIENTS TO PARTNERS.** Janet Germano Medina, [Need credentials; Roberta Harris first on the list.], University of Maryland, College Park, MD, and Roberta Harris, RN, MSN, OCN®, and Michael Franklin, MBA, Shady Grove Adventist Hospital, Rockville, MD.

Patients to Partners: Oncology nurses developing a unique model of entrepreneurship and cooperation between patients, families, former patients and families, hospital administration, and oncology nurses to create and implement a venue that supports and enhances communication and information exchange between the patient and oncology nurses to meet specific patient and family needs as follows.

- Develops nursing leadership through direct access to the patient and family perspective.
- Improves communication and team building skills.

- Furthers the management competencies related to collaboration, inter-departmental negotiations, and development of innovative services and products that support patient and family care.

To develop a joint oncology unit and community-based initiative that brings oncology nurses, case managers, patients, former patients, and immediate family members of former patients together to assess current issues and develop solutions and action plans related to the cancer experience to support the continuous improvement of oncology nursing and care for patients and families through services, resources, and cost savings, a patient advisory group (PAG) was formed and has been officially recognized as an initiative approved by the Shady Grove Adventist Hospital (SGAH) Cancer Committee, Medical Executive Committee, and Board of Governance. The PAG charter and bylaws were approved by the Cancer Committee and the Board of Governance 2002. PAG assembled a group of oncology nurses and community liaisons who established goals to: (1) enhance direct patient care through recommendations and participation in program development and education, (2) help conceptualize, develop, and maintain an infrastructure for SGAH, specifically pertaining to the needs of the oncology unit, and (3) to serve as advisors as it relates to the oncology unit's capacity to serve patient needs through the inpatient and outpatient service areas.

Patient and family goals met through oncology nurses and PAG membership interventions as measured by the Grant development-identification of funding sources and research and proposal writing, reports, project evaluation; Patient relations and advocacy through patient satisfaction surveys evaluated after interventions are complete; number of hours volunteered by community members; amount of grant monies and in-kind contributions obtained; PAG annual goal accomplishments; new projects in development; NIH-awarded grant for patient education at patient bedside using wireless technology; increased nurses' knowledge regarding leadership in program development, partnership formations, and resource availability for patients and families; increased nurses' knowledge regarding wireless technology and electronic health information; facilitate patients' communicating with the healthcare team through greater knowledge gained from having access to the World Wide Web at their bedside.

## 243

**"RUNWAY TO RECOVERY": A CHAPTER/COMMUNITY CELEBRATES SURVIVORSHIP.** Kitty O'Neil, RN, BSN, OCN®, and Lee Norton, LPN, Curtis and Elizabeth Anderson Cancer Institute, Savannah, GA; Nancy Youmans, RN, OCN®, and Pat Williams, LPN, Summit Cancer Care, Savannah, GA; and Norma Sheridan Leos, RN, MSN, AOCN®, CPHQ, Curtis and Elizabeth Anderson Cancer Institute, Savannah, GA.

This poster will describe how a local chapter of the Oncology Nursing Society planned, implemented, and evaluated an event to honor cancer survivors in the region of southeast Georgia. Detail will be provided so that other chapters can replicate the project.

Advances in early cancer diagnosis and treatment, according to the NCI, resulted in approximately 8.4 million people in the United States living with a history of cancer. Because of the affect physical, emotional, and financial affects of a cancer diagnosis on ones quality of life, the disease continues to be associated with negative outcomes.

The Southeast Georgia Chapter of the Oncology Nursing Society (SEG-ONS) membership is representative of the community demographics of multiple cancer treatment facilities and physician practices. In 1999, as part of the activities, the SEG-ONS decided to sponsor a fashion show. The program featured two survivor speakers and 25 models selected from the various treatment facilities. Models that were selected were in various types/stages of treatment and length of survival. The first show was a huge success and a marvelous display of cancer survivorship. The chapter decided to make the fashion show an annual event, held on the first Saturday in June in conjunction with National Survivor Day.

The event has been sponsored for five years. Over 135 survivor models have participated in the event. The average attendance has been 300/show. Local media have covered the event and highlighted the survivors for many years. The event has resulted in the chapter-building networks of support from various community sponsors. Each year the event has earned money, which has been donated to the American Cancer Society.

The fashion show has met goals such as honoring cancer survivors in



the community and raising public awareness of cancer survivorship. Although fund raising is not a goal, the event has made money each year. Oncology nurses can serve a unique role in devising and implementing innovative strategies to affect patients' quality of life.

## 244

**PHYSICAL ACTIVITY AND BREAST CANCER RISK ANALYSIS.** Diane Drake, PhD, RN, University of California San Francisco, San Francisco, CA.

Physical fitness is inversely related to chronic disease morbidity and mortality. Because the cause of breast cancer is unknown, the identification and evaluation of suspected breast cancer risk factors is important to guide risk-reduction behavior and to accurately identify individuals at high risk. Physical activity is a behavior that may affect breast cancer risk directly or by modulating other risk factors such as obesity, hormonal and menstrual patterns, or bio-molecular mechanisms not yet described. The Aerobics Center Longitudinal Study (ACLS) is an ongoing longitudinal dataset with a large number of women with and without breast cancer with quality measures of physical activity and physical fitness.

The purpose of this study is to compare models of breast cancer risk analysis, evaluating current genetic, behavioral, and environmental risk factors and their analysis in mathematical and genetic models. Three research questions for this study are proposed: (1) Do current genetic and mathematical models of breast cancer analysis predict breast cancer in the ACLS? (2) Does physical activity predict breast cancer in the ACLS? (3) Which risk factors best predict breast cancer in the ACLS?

Pender's model of health promotion served as the conceptual framework for the study. The model provides a basis for the evaluation of the health benefits of exercise and fitness.

The study is a secondary analysis of an ongoing longitudinal survey. The design of the study is a non-experimental retrospective analysis. The study cohort are women in the ACLS with and without breast cancer. Tests of the validity of self-reported measurements of health parameters in the ACLS revealed a sensitivity of 98% and a specificity of 99%. All data including breast cancer risk factors are extracted by the ACLS data manager and provided in code. Approval for this study was granted by the University of California San Francisco committee for human research.

Univariate and descriptive statistics comparing women with and without breast cancer will be tested by exact and standard chi-square tests for binary and categorical variables and by the student's T-test for continuous variables. Logistic regression of physical activity and fitness variables and breast cancer risk variables will be conducted. Extensive independent variables of physical activity and fitness will be evaluated for their ability to predict the dependent variable of breast cancer or not.

The current data set is a cohort of 6,794 women with 321 incident cases of breast cancer. Extensive measures of physical fitness and activity and other known risk variables will be evaluated for breast cancer risk. A published report of the findings is planned for December 2003.

## 245

**CHARACTERISTICS, CONCERNS, AND CANCER-REDUCING PRACTICES OF WOMEN PRESENTING TO A COMPREHENSIVE CANCER CENTER FOR GENETIC CANCER RISK ASSESSMENT.** Deborah MacDonald, RN, MS, APNG, City of Hope Cancer Center, Duarte, CA; Linda Sarna, RN, DNSc, FAAN, University of California Los Angeles, Los Angeles, CA; Gwen Uman, RN, PhD, Vital Research, LLC, Los Angeles, CA; and Veronica Lagos, BS, Marcia Grant RN, PhD, FAAN, and Jeffrey Weitzel, MD, City of Hope Cancer Center, Duarte, CA.

Knowledge of the characteristics, concerns, cancer risk-reducing practices, and health history of women with a personal or family history of breast cancer can be important for nurses in planning supportive care for women undergoing genetic cancer risk assessment (GCRA).

Breast cancer before age 50, or a family history of breast cancer, may be associated with a hereditary predisposition to the disease. The study purpose was to describe the characteristics, concerns, cancer risk-reducing behaviors, and health history of women unaffected or affected with breast cancer prior to GCRA and compare affected and unaffected women.

The health belief model was the overarching framework used.

An investigator-developed survey was sent to women with a personal or

family history of breast cancer scheduled for GCRA. Validity was established by expert genetic/oncology nurse researchers and in-depth individual interviews ( $n = 10$ ). Reliability was established through a pilot testing ( $n = 50$ , data published) with similar women. Eighty women with a history of breast cancer and 134 unaffected women responded to the survey.

Frequencies and descriptive statistics (Chi-square, cross-tabulations, ANOVA) were used to describe key characteristics and compare affected and unaffected women.

Unaffected women were younger (Mean age = 45, SD = 10) than women with breast cancer (Mean age = 49, SD = 12). Although unaffected women were more concerned about cancer than affected women ( $p = <.001$ ), these concerns did not interfere with daily activities for most women. The most frequently reported personal cancer risk factors were family history, followed by genetics, environmental exposures, stress, and diet. About 40% used herbs, exercise, or dietary changes to reduce cancer risk. Anxiety or lumpy breasts were the most frequent interfering factors with breast self-exam. The majority had yearly clinical breast exams and mammograms, would pay for mammograms if needed, and did not take a risk-reducing medication. None of the unaffected at-risk women had risk-reducing surgery, although two-thirds would consider doing so. These data contribute to clinical knowledge by identifying subject characteristics, cancer worry, misconceptions, and areas for nursing educational, counseling, and psychosocial interventions, and identify areas for further research.

## 246

**WOMEN'S DECISION-MAKING EXPERIENCE AFTER BRCA GENETIC TESTING.** Cynthia Perry, PhD(c), University of San Diego, San Diego, CA.

Women's Decision Making Experiences Following Positive or Inconclusive Breast Cancer (BRCA) Genetic Testing

Problem: How do women make decisions about risk reduction and disease detection options after testing positive or inconclusive for the BRCA 1 and BRCA 2 genetic mutations?

**Purpose:** The two objectives of this qualitative study are: (1) to explore ways in which women with positive and inconclusive breast cancer (BRCA1 and BRCA2) mutation test results assign meaning, make interpretations, and respond to test results and recommendations for risk reduction and disease detection strategic interventions; and (2) to develop a grounded theory based on the perceptions, beliefs, and actions of these women.

This qualitative study uses a grounded theory approach because grounded theory enables the experience of the participant to be heard in a more natural context. Glaser and Strauss (1967) introduced grounded theory as a methodological approach that provides the discovery of theory from qualitative data. Pragmatism and symbolic interactionism are the ontological bases of grounded theory, and the phenomena of concern are patterns and processes of social units (Parse, 2001). Grounded theory, because it is drawn from data, will provide insight, enhance understanding, and provide a meaningful guide to action for women making risk reduction and disease detection decisions due to positive and inconclusive BRCA1 and BRCA2 mutation test results.

This is a qualitative study using grounded theory methodology. Grounded theory provides the means for elucidating human decision behaviors and meanings in a social interactional context. Data is being collected using open-ended, semi-structured interviews, field notes, and memos.

**Sample:** Theoretical or purposeful sampling will be performed to focus efforts on theoretically useful cases (e.g., those that test and/or extend theory). It is anticipated that a sample of possibly 15 participants in each subgroup will be needed. Final sample size will be determined based on informational redundancy or saturation, the point at which no new information is forthcoming from the data-collection process. When saturation occurs, one additional interview will be conducted for verification purposes (Norwood, 2000; Sandelowski, 1995). Approximately 30 (15 in each group) English-speaking females, age 18 years and older, who test positive or inconclusive for a BRCA1 or BRCA2 mutation will be sought. The population will be drawn from clients the PI has seen and tested in her clinic. Women are considered ineligible for this study if they have a diagnosis of breast or ovarian cancer or a psychiatric or cognitive disorder, which preclude informed consent. Inconclusive test results are those in which the lab identifies a new [What is missing?]



The constant comparative method of grounded theory will be used to simultaneously collect, code, and analyze the transcribed interviews, field notes, and memos (Glaser & Strauss, 1967; Strauss and Corbin, 1990). Three levels of coding will be used. Analysis of data will begin with open coding (Glaser, 1978), generating level I or "in vivo" codes. Level II coding will cluster codes by similarities and differences, compare codes across the data set, and abstract phenomena observed, which will be labeled as categories. Theoretical coding will be used to examine the relationships among the categories, aided by schemes and diagrams to see how the categories fit (Strauss & Corbin, 1990). Selective coding (level III) will focus on the core variable, further establishing the linkages between categories and moving the data to a more abstract level to explain the basic social process inherent in decision making by women with positive and inconclusive BRCA1 and BRCA2 mutations test results (Glaser, 1990). A qualitative computer software program, NVIVO, will be used to help manage and analyze the data. Credibility, transferability, dependability, and confirmability are four factors necessary to establish trustworthiness of the data (Denzin and Lincoln, 2000). These factors will be addressed by the following [Something missing?]

This study is in progress.

## 247

PERCEIVED FAMILY COMMUNICATIONS, INFORMATION-SHARING, AND AWARENESS OF FAMILY HISTORY IN WOMEN AT HEREDITARY RISK FOR BREAST CANCER. Lois Loescher, PhD, RN, University of Arizona College of Nursing, Tucson, AZ.

Intra-family communications of family history of cancer purportedly affect awareness of hereditary cancer risk, yet this process is understudied in oncology nursing research. Little is known about underlying family communications patterns in cancer-prone families.

Family systems theory provided the framework for this cross-sectional descriptive analysis of family communications, information sharing, and cancer awareness in 200 healthy women ( $n = 200$ ) at hereditary risk for breast cancer.

Family systems theory: Women were recruited via a mammography center and network sampling. Participants completed demographic and family history questions, along with the: (1) Family Communications Scale (FCS) (10 items), measuring the degree of open (healthy exchange) or closed (poor exchange) family communication patterns; (2) Perceived Social Support-Family (PSS-FA) (20 items), measuring family support/information-sharing; and (3) Cancer in the Family Scale (CFS) (3 items), measuring perceived cancer proneness. The FCS, PSS-FA, and CFS demonstrated internal consistency reliability with Cronbach alphas of .84, .95, .81, respectively.

Data analysis used descriptive statistics, Pearson correlations, and Chi-square statistics.

FCS scores ranged from 10 (closed communication) to 50 (open communication) ( $M = 35$ ;  $SD = 7.9$ ). PSS-FA scores ranged from 20 (low support) to 100 (high support) ( $M = 70$ ;  $SD = 9.9$ ). CFS scores ranged from 3 (low family cancer proneness) to 15 (high proneness) ( $M = 10$ ,  $SD = 3.04$ ). Most participants agreed that family members had deep sharing relationships (78%), openness about their thoughts (74%), confided among (70%) and sought advice from each other (81%), helped with problem-solving (72%), and were good listeners (58%). Responses were neutral regarding sharing negative feelings with, and receiving the "silent treatment" and negative comments from family members. Although total scores on the FCS and PSS-FA were significantly correlated ( $p = .01$ ), they did not correlate with CFS. None of the measures correlated with cancer history in close relatives. Comparisons of open/closed communications patterns with high/low cancer proneness were statistically nonsignificant. These findings, suggesting that communications may be superficial in the context of breast cancer risk, have implications for genetic risk counseling. Moreover, future longitudinal research needs to address associations of the emotional affect of cancer or complexity of genetic information on intra-family communications and support.

## 248

EXPLORING EARLY DETECTION METHODS: USING THE INTRADUCTAL APPROACH TO PREDICT BREAST CANCER. Kimberly Baltzell, RN, Univer-

sity of California San Francisco, Department of Physiological Nursing, San Francisco, CA.

This proposal explicitly addresses different priority issues specific to breast cancer to (1) find methods to improve earlier detection of breast cancer, (2) develop models that help identify women at highest risk of developing breast cancer, and (3) explore non-invasive methods of breast cancer detection which can be performed by experienced nurses.

Current methods of breast cancer detection are limited, particularly for women under 50. Looking at atypical cellular cytology from breast fluids may provide more accurate biologic markers from which to assess individual risk. The purpose of this study is to replicate the findings of the only other prospective study of breast cancer in women with known cytologic findings from nipple aspiration. This study showed a significant relationship between the presence of atypical hyperplasia and increased risk of breast cancer development.

Current theories of breast carcinogenesis and malignant transformation support the notion of breast cells progressing on a continuum from normal to atypical to malignant.

The study will be a historic prospective cohort study. A 15- to 30-year follow-up study will be conducted to determine incidence among women with known breast fluid cytologic findings. Each subject will be classified into one of five cytological categories. Univariate survival analysis will be used to compare the categoric predictor variables with the breast cancer absence or presence of/death from breast cancer. Proportional hazards regression will be used to complete the analysis. Participants to be included in this follow-up are women who were patients of Otto Sartorius[Who is this? And, do we need his credentials??] in his Santa Barbara clinic from 1970–1990. Dr. Sartorius was a pioneer in breast fluid studies. The total number of patient records available for analysis is 3,413. Follow-up methods will be used which are similar to methods used in the Wrensch et al. (2001) study. These methods include (1) direct contact, (2) linkage with the Surveillance, Epidemiology, and End Results Program (SEER) tumor registry data at the California Cancer Registries (CCR), (3) linkage with the Northern California Cancer Center (NCCC), (4) linkage with a national tumor registry, (5) linkage with the state of California mortality data, and (6) linkage with the National Death Index (NDI).

The study will explore whether or not the presence of DH or ADH are significant in predicting breast cancer development while controlling for age, age at menarche, age at first pregnancy, and family history of breast cancer. Proportional hazards regression will be used to determine if the unique contribution of DH and ADH to the hazard ratio is significant while controlling for the variables defined above.

Study in progress, no conclusions at this time.

## 249

PRESERVING SUBJECTIVE MEANING IN DEVELOPING AN INSTRUMENT TO MEASURE CANCER-RELATED FATIGUE. Horng Shiuann Wu, PhD, RN, St. Louis University Community and Family Medicine, St. Louis, MO, and Maryellen McSweeney, PhD, retired from St. Louis University, St. Louis, MO.

Cancer-related fatigue (CRF) is a pervasive subjective experience that can affect all aspects of a person's life. Assessment of CRF is the key to recognizing and managing this distressing symptom. Fatigue instruments have usually been generated from an investigator's observations rather than from actual experience described by patients. The literature has shown that patients and healthcare providers often perceive CRF symptoms differently.

The present multi-phase study aimed to combine qualitative and quantitative approaches to develop a specific measure of CRF from the patients' perspective, and to preserve subjective meaning in the instrument development process.

The subjective manifestations/dimensions of fatigue in Piper's Integrated Fatigue Model served as the study's conceptual framework. The model's underlying premise that subjective indicators are essential to assessing the fatigue experience was used to guide the study.

The study took place at a freestanding cancer clinic in St. Louis, Missouri. A sample of nine patients with breast cancer and one patient with large cell non-Hodgkin's lymphoma undergoing chemotherapy participated in the qualitative item generation. Twenty patients with cancer who had experienced CRF content validated the draft instrument. Thirty patients with breast cancer who are undergoing chemotherapy pilot tested





the content validated instrument. Forty-two items were generated from 10 semi-structured individual interviews and six daily fatigue diaries. This draft 42-item instrument was revised based on content evaluation by two panels of patient content experts. The 30 content validated items were pilot tested using cognitive interview techniques.

An instrument with 16 items measuring CRF on a 5-point rating scale from 5 (very much), to 1 (not at all) was developed.

This newly developed instrument was specifically designed to measure subjective CRF symptoms as described and validated by patients with cancer. It is unique in reflecting the patients' experience and distinguishing the manifestations of CRF from its causes and consequences. The preliminary psychometric properties of this instrument, tested with a new sample of 82 patients with cancer, are promising. When more comprehensive psychometric testing has been completed, it is likely that this instrument will allow healthcare providers to acknowledge and better understand what their patients with cancer are experiencing.

## 250

THE PREVALENCE OF CANCER-RELATED FATIGUE IN THE ONCOLOGIC EMERGENCY CENTER. Rosalie Valdres, RN, MSN, and Carmen Escalante, MD, University of Texas M.D. Anderson Cancer Center, Houston, TX.

Fatigue is a commonly reported symptom in patients with cancer. Cancer-related fatigue occurs in 60%–90% of patients and affects up to 70% of these patients during chemotherapy and radiotherapy.

1. To identify the prevalence of cancer related fatigue in patients seen in the emergency center.
2. To identify which subsets of patients with cancer in the emergency center are at high risk of severe fatigue.

Cancer-related fatigue becomes a significant issue when it interfere with a person's daily function and overall quality of life.

A retrospective chart review was conducted on 949 EC cancer patients from May 2001–July 2001. Data collection include demographics, cancer diagnosis, fatigue level, zubro performance status and hemoglobin level.

Still incomplete...awaiting for statistical analysis[Is this abstract still incomplete?]

**Preliminary results:** There were 949 patients included in the study. The mean age was 55 years; 52% were male and 47.2% were female; 33.2% were patients less than 50 years old and 66.5% were greater than 50 years old. There were 20.2% with mild fatigue, 25.4% with moderate fatigue, and 54.4% with severe fatigue. The most common cancer diagnoses are leukemia, lymphoma, GI, GU, gyn, sarcoma, myeloma, melanoma, breast, and other.

## 251

THE EFFECT OF A STRUCTURED EXERCISE PROGRAM ON FATIGUE, STRENGTH, ENDURANCE, PHYSICAL SELF-EFFICACY, AND FUNCTIONAL WELLNESS IN WOMEN WITH EARLY STAGE BREAST CANCER. Sheila Crowley, PhD(c), RN, AOCN®, University of Michigan School of Nursing, Ann Arbor, MI.

Cancer treatment-related fatigue is a distressing effect of cancer therapy. Early efforts on describing the fatigue experience have progressed to testing potential interventions. This study will build on the fatigue, functional capacity, and exercise activity of previous studies (MacVicar et al., 1989; Mock et al., 1994, 1997, 2001; & Schwartz, 2000). Strength training and the nature of the relationship of physical self-efficacy and performance to functional wellness will contribute new understanding to this area of fatigue and symptom management.

The purpose of this 13-week study is to test the effectiveness of a structured exercise program in decreasing fatigue, increasing strength and endurance, increasing physical self-efficacy, and enhancing perceptions of functional wellness in women undergoing adjuvant chemotherapy (Adriamycin and Cytoxan) for early-stage breast cancer.

The conceptual model identifies relationships among the focal concepts of cancer treatment-related fatigue, performance, physical self-efficacy, and functional wellness. The structured exercise program is the predictor variable being tested.

A randomized, two-group repeated measures experimental design[AHS from NSAT: "was used"?]. The current sample of 22 women, between ages 36–58 years, is randomized to control (n = 9) and intervention (n =

13) groups. Both groups were tested at weeks 1 and 13 for endurance (VO2max) and strength (1-repetition maximum). Measurement of fatigue (Revised Piper Fatigue Scale, Attentional Functional Index), physical self-efficacy (Physical Self-Efficacy Subscale), and functional wellness (SF-36 and Functional Wellness Questionnaire) occurred at weeks 1, 7, and 13.

Preliminary analysis found significant differences between the groups in VO2max from weeks 1–13. Significant differences in activity also existed between the two groups. No significant differences in the total fatigue or physical self-efficacy scores were found between the two groups. Functional wellness was significant at week 7 between the two groups. Significant correlations were found between fatigue, vitality, attentional fatigue, and physical self-efficacy. The SF-36 physical functioning subscale significantly correlated to physical self-efficacy.

Preliminary findings support the positive role of exercise in increasing endurance during adjuvant chemotherapy for early stage breast cancer.

## 252

EXERCISE: AN INTERVENTION FOR FATIGUE IN CANCER PATIENTS (INTERIM ANALYSIS). Marilyn Dodd, RN, PhD, FAAN, Patricia Painter, PhD, Christine Miskowski, RN, PhD, FAAN, Steven Paul, PhD, and John Duda, RN, School of Nursing, University of California San Francisco, San Francisco, CA.

Fatigue is a common symptom associated with chemotherapy (CTX). Preliminary studies have reported the benefits of exercise on fatigue; none have investigated the timing of the exercise. The purpose of the larger randomized clinical trial (RCT) was to test the effectiveness of the PRO-SELF: FATIGUE CONTROL program, an individually tailored exercise program.

The purpose of this interim analysis is to test the effectiveness of the PRO-SELF intervention according to the timing (i.e., during versus after CTX) on fatigue. The Integrated Fatigue Model provided the framework for the RCT.

**Sample.** The entire sample includes 100 women with breast cancer who are starting their first course of CTX. The interim analysis includes 56 women who have completed the study, and their average age is 49.5 years. Design. The RCT involves three groups who are assessed at baseline (T1), completion of CTX (T2), and at the end of the study (T3). Group 1 (EE) receives the intervention through to the end of the study (T3). Group 2 (CE) receives standard care through to the completion of CTX (T2) and then the intervention through to the end of study (T3). Group 3 (CC) receives standard care through to the end of study (T3).

**Instruments.** The Piper Fatigue Scale (PFS) was administered at T1, T2, & T3. The PFS is a 22-item numeric rating scale (ranging from 0–10, with descriptive anchors) that measures dimensions of subjective fatigue. The PFS has established reliability and validity (Piper et al., 1997).

**Data Analysis.** A repeated measures ANOVA was conducted to determine the differences of the average total PFS scores among the three groups over time.

**Results.** There was a significant change in the average total PFS scores over time,  $F = 4.07$ ,  $p = .02$ , specifically between T2 and T3 ( $F = 6.05$ ,  $p = .017$ ). However, there was no significant main effect by group ( $p = 0.69$ ). The average total PFS scores were low ranging from 2.9 at T1, to 3.4 at T2, to 2.6 at T3. **Conclusion.** This interim analysis does not show a benefit to those participants who received the exercise intervention including implications for the timing of the exercise intervention on fatigue.

## 253

COORDINATING AN ONCOLOGY INTERDISCIPLINARY PATIENT AND PROFESSIONAL EDUCATION PROGRAM. Ayanda Zambodla, BA, RN, MA, Mount Sinai Medical Center, New York, NY, and Frances Cartwright Alcaresse, RN, MS, AOCN®, Mount Sinai Hospital, New York, NY.

The oncology nurse is in a pivotal position to assess the needs of the patients and to apply evidenced-based information to program planning with the oncology team.

The clinical coordinator of oncology program planning must remain up to date with the evolving needs of patients who are cared for in the hospital and ambulatory centers, as well as in the community. Planning must reflect the specific needs of the oncology patient through the disease trajectory that is also consistent with the needs of a socioeconomically and ethnically diverse population.



The role of the clinical coordinator of oncology program planning is to collaborate with the oncology interdisciplinary team to plan and implement education programs/projects that will utilize existing resources and decrease duplication of effort. This poses a challenge in a large, urban, tertiary health science center comprised of a hospital and a school of medicine. Recognizing that there is a wealth of diverse expertise among the interdisciplinary team throughout presents an opportunity for the clinical coordinator to find creative strategies to identify and share resources across the continuum.

To ensure the continuity of education resources in all areas where oncology patients receive care, the clinical coordinator has organized professional education committees and task forces that include members of the interdisciplinary oncology team across the continuum. The aim of these committees is to plan programs and projects that will maintain and improve standards of care by applying evidenced-based information and best practice literature when available. These committees have planned and implemented monthly case studies, onsite oncology certification review courses, expansion of patient education programs, and development and distribution of a quarterly newsletter.

Continuing education credits are offered for all professional education programs. Attendance and program evaluations indicate that the programs are well received and needed. The percentage of oncology nurses certified increased from 60%–95%. The need to initiate a grant writing and research committee was identified to provide additional education and research needs (e.g., CAM).

Making these resources available across the oncology care continuum requires the commitment and collaborative energy of a dedicated, knowledgeable oncology nurse.

## 254

**STUDY OF CANCER PAIN DISTRESS: ASSOCIATION WITH PAIN SEVERITY, FUNCTIONAL INTERFERENCE, SYMPTOM DISTRESS, AND QUALITY OF LIFE.** Lourdes Duque, MSN, NP-C, Erma Morales, MSN, RN, Casaundra Davis, RN, MA, CS-ANP, AOCN®, Janet Cogswell, MSN, RN, Victor Chang, MD, and Shirley Hwang, MS, RN, VA New Jersey Health Care System, East Orange, NJ.

With pain as a fifth vital sign at VA Health Care Systems, clinicians use the 0–10 pain rating scale to assess pain severity. However, the interpretation of responses is limited by the lack of a common understanding of the meaning of pain scores.

We hypothesized that an answer to “how much does your pain distress you?” could complement assessments of pain severity. The purpose of this study was to define the cancer pain distress threshold based on its association with pain severity and multidimensional pain-related quality-of-life (QOL) measures.

The assessment was based on the multidimensional QOL framework.

The dataset was composed of responses from 503 patients who completed the Brief Pain Inventory (BPI), Memorial Symptom Assessment Scale-Short Form (MSAS-SF), and the Functional Assessment Cancer Therapy (FACT-G). The pain distress rating from MSAS-SF has six different levels (no pain; not at all; a little bit; somewhat; quite a bit; and very much distress).

Pearson correlation with pain severity was performed to assess correlation with pain distress, and one-way analysis of variance (ANOVA) was performed to examine the sensitivity of multidimensional QOL variables to different distress levels.

Patient responses to pain distress correlated significantly with BPI pain severity ( $r = .52$ – $0.82$ , all  $p < 0.0001$ ) and BPI total interference scores ( $r = .73$ ,  $p < 0.0001$ ). “Not at all” pain distress corresponded to mean worst pain severity of 3.9, “a little bit” to 5.2, “somewhat” to 7.0, “quite a bit” to 8.1, and “very much” to 9.1. One-way ANOVA showed that pain distress levels discriminated between pain severity, interference scores, MSAS-SF subscales, and FACT-G summary QOL scores (all  $p < 0.0001$ ). Through comparison with the no-pain group, we observed a ladder relationship between pain distress level and multidimensional QOL measures, which enabled us to define the pain distress threshold. Increasing pain distress levels corresponded to increasing symptom distress. In addition, different domains of QOL were affected by different levels of pain distress. The results support the validity of pain distress assessment and suggest cutoff

point of worst pain severity in relation to each distress level. Patients with increased pain severity or pain distress should have multidimensional QOL assessment.

## 255

**EXAMINING PREDICTORS OF THE ASSOCIATION BETWEEN PAIN AND OPIOID USE IN CANCER PATIENTS.** Marie Flannery, RN, PhD, AOCN®, James P. Wilmot Cancer Center and University of Rochester School of Nursing, Rochester, NY.

One factor contributing to unrelieved cancer pain is under-use of opioids by patients with cancer. Patient-related factors contributing to under-use have not been empirically established.

The purpose of this research was to describe the association between pain and opioid use and to test four identified barriers (accurate knowledge, beliefs about pain reporting and analgesics, side effects, and goals for pain relief) as predictors of pain-opioid use.

A theoretical framework of symptom behavior was developed and tested in the research.

Ambulatory patients with cancer with opioids prescribed for pain were asked to record a daily pain journal for two weeks and complete structured interviews and questionnaires during visits to the home. Established scales were used to measure pain, opioid use, and the four predictors variables. Reliability was greater than .85 for all instruments.

The sample included 39 subjects with metastatic disease (56% female,  $M = 60$  years old, range = 31–85). The grand mean for worst pain was 4.3 (range = 0–10). 62% of subjects were prescribed RTC + PRN, 38% PRN only. Daily RTC use  $M = 91\%$ , PRN use  $M = 37\%$ . A regression equation was estimated for each subject with worst pain as the predictor and PRN opioid use as the outcome. Fifty percent of subjects increased their use of PRN when pain increased, 20% percent of subjects took the same amount of PRN regardless of pain severity, and 30% of subjects had an inverse relationship between pain severity and opioid use. None of the predictor variables were significantly correlated with the pain-use regression coefficient. ANOVA revealed that mean PRN use was significantly related to pain category ( $F(2, 31) = 5.74$ ,  $p = .008$ ); mild pain = 16%, moderate pain = 37%, and severe pain = 55%.

This sample reported only mild pain severity. The pattern of high use of RTC and low use of PRN is consistent with past research. Commonly identified barriers did not explain variance in pain-opioid use for individual subjects. This study confirmed the complexity of patients’ decision making related to opioid use in response to cancer pain.

## 256

**AN OUTCOME STUDY ON DECISION SUPPORT COMPUTER PROGRAM FOR CANCER PAIN MANAGEMENT.** Eun Ok Im, PhD, MPH, RN, CNS, University of Texas-Austin, Austin, TX, and Wonshik Chee, PhD, University of Texas-San Antonio, San Antonio, TX.

Considering the increasing number of ethnic minority groups in the United States, it is imperative to develop a knowledge base on ethnic differences in cancer pain experience and to develop a decision support system that can help nurses to make culturally appropriate and adequate decisions on cancer pain management.

An initial version of a standardized decision support computer program (DSCP) was recently developed by Im and Chee. However, the program has rarely been validated through empirical studies. The purpose of this study was to validate the initial version of the standardized DSCP through an Internet intervention study among oncology nurses.

Fuzzy logic by Zadeh was used as a theoretical basis to process vague descriptions on cancer pain and validate the DSCP.

Among 60 oncology nurses recruited through the Internet and e-mail system, an Internet intervention study was conducted using a project website. The participants were self-identified registered nurses with active status, working with patients with cancer in clinical and/or homecare settings related to cancer pain assessment and management who could read and write English. The project website included the DSCP and questions for registration, refinement, and evaluation (validity and reliability of these instruments are being tested). When the participants agreed to participate, they were asked to register by entering their answers for the ques-



tions for registration through the Internet. Then, they were asked to answer the questions for refinement and to generate cancer pain management strategies by using the DSCP. After generating the strategies, the participants were asked to answer the questions for evaluation.

The data entered for refinement were automatically uploaded and used to upgrade the DSCP through the self-adaptation module. The data entered for registration and evaluation of the DSCP were analyzed using descriptive statistics including frequency, percentage, mean, standard deviation, and range.

The participants evaluated the DSCP as appropriate (82%), accurate (84%), and acceptable (92%), and the DSCP was successfully upgraded and refined. The DSCP will provide computerized evidence-based practice guidelines for cancer pain assessment and management and facilitate more accurate cancer pain assessment and more adequate cancer pain management.

## 257

**EXPLORING THE MYSTERY: FORMING A SUBSTANTIVE THEORY FOR PERIPHERAL NEUROPATHIC PAIN IN AIDS PATIENTS.** Kristin Ownby, PhD, RN, ACRN, AOCN®, CHPN, and Linda Dune, PhD, RN, CCRN, CEN, University of Texas, Houston Health Science Center School of Nursing, Houston, TX.

This qualitative study, using grounded theory, sought to explore the everyday life experiences related to peripheral neuropathy in persons with AIDS (PWAs). Current management strategies fail to achieve satisfactory pain relief in this particular patient population. A better understanding of the impact of neuropathic pain from the patient's perspective can guide nurses to develop strategies and interventions to manage the pain and its consequences.

A variety of peripheral neuropathies occur throughout the course of HIV infection, the most common peripheral nerve disorder of late HIV infection being distal sensory neuropathy (DSP). HIV-associated DSP affects up to one-third of patients with AIDS and commonly presents in the soles and dorsum of the feet. DSP causes a burning, tingling type of pain that is difficult to manage. This study was designed to explore the everyday life experiences related to DSP in PWAs and the behaviors they initiate to alleviate the pain. The specific aim of the study was to gather information so that nursing intervention protocols can be designed to reduce neuropathic pain.

A qualitative study using a grounded theory approach was used to better understand the impact chronic neuropathic pain has on PWAs.

Data was generated at a residential facility for PWAs. Tape-recorded, face-to-face, semi-structured interviews were conducted with 19 subjects. Transcriptions were compared to the tapes for their accuracy.

Data analysis began with verbatim transcriptions, followed by open coding, axial coding, and selective coding to identify core categories.

Nineteen subjects were interviewed. The study sample included 12 males and 7 females with an average age of 41.6 years. The ethnicity of the subjects was 6 Caucasian, 11 African American, and 2 Hispanic. The average CD4 lymphocyte count was 294. DSP pain is beyond consistent descriptions. Many interventions are attempted and are ineffective, however, the interventions that work are highly individualized. The emerging categories included working with the pain, explaining the pain, living with the pain, interpreting the pain, and coping with the pain.

## 258

**SYMPTOM EXPERIENCE AMONG BREAST CANCER SURVIVORS.** Frances Cartwright, RN, MS, AOCN®, Mount Sinai Hospital, New York, NY.

Findings of quality-of-life (QOL) studies suggest that physical, emotional, and social dimensions of symptom experience need to be addressed among breast cancer survivors. These women face challenges of ongoing survival related to their symptom experience associated with disease stage (DS) and form of ongoing therapy (FOT) (e.g., hormonal therapy). Yet, they must begin resumption of their previous roles. The NCI (1997) and ONS (2000) recommend that research address survivorship issues that include treatment and symptom-related concerns.

Symptom experience includes number of symptoms (NOS), severity of symptoms (SOS), and amount of distress experienced (ADE). There is a scarcity of studies that examine the symptom experience related to DS and

FOT among breast cancer survivors. The proposed study will establish a baseline of symptom experience related to DS and FOT in breast cancer survivors.

This study uses the Theory of Coping (Lazarus & Folkman, 1984; Lazarus, 1993) to examine the symptom experience of breast cancer survivors. When patients acknowledge the perception of harm/threat (symptom experience), problem-focused and/or emotion-focused coping strategies can be identified.

A descriptive, correlational design will be used to examine the relationship between symptom experience and DS and FOT. A sample of 122 women completed the study. The BCTRI (Hoskins, 1990, 2001) self-report measure lists 23 common side effects experienced by breast cancer survivors as well as DS and FOT. Each symptom is rated for NOS, SOS, and ADE. Content validity for the BCTRI items was supported through literature review and verified by an oncology CNS. Construct validity of the BCTRI was established through factor analysis.

Means, standard deviation, ranges, and skewness will be reported. To determine if the ADE is related to NOS and/or SOS, a Pearson correlation matrix will be examined for relevant zero-order correlations. To determine if DS and/or FOT is related to the NOS, ADE, or SOS, two-way analyses will be performed treating each as the dependent variable.

Data collection is complete. The data are being analyzed. The findings will be used to provide direction for identifying and developing interventions relevant to the symptom experience of breast cancer survivors.

## 259

**UNMET NEEDS IN SYMPTOMATIC PATIENTS WITH ADVANCED CANCER.** Erma Morales, MSN, RN, APN-C, Lourdes Duque, MSN, RN, APN-C, Casaundra Davis, MSN, RN, APN-C, Janet Cogswell, MSN, RN, and Victor Chang, MD, VA New Jersey Health Care System, East Orange, NJ.

Identifying the multidimensional unmet needs in patients with symptomatic advanced cancer is important to oncology nurses. The unmet needs of veteran patients with cancer are unknown.

We hypothesized that different predictors will be identified for different unmet needs domains, and the total unmet needs would predict overall quality of life (QOL) independently.

We adapted the multidimensional QOL framework to assess the prevalence and to identify independent predictors of multidimensional unmet needs, and examined the association between unmet needs and QOL.

We used a 14-item multidimensional unmet needs questionnaire and Functional Assessment of Cancer Therapy (FACT-G) to assess patients' unmet needs and QOL outcomes. The independent variables were categorized into six dimensions: Individual characteristics, social support status, psychological status, physical symptoms, functional status, and health state. The validated instruments were used to measure each dimension.

The multiple linear regression models were used to identify independent predictors of each unmet needs domain and of total unmet needs. The relationships between total unmet needs, QOL, and multidimensional variables were also explored.

There were 296 patients with median age of 68 years (range 29–96), median of 13 (range 2–32) symptoms, and 3 unmet needs (range 0–12). Physical (80%), activities of daily living (53.3%), nutrition (46.1%), and emotional (32.5%) were the most frequently reported areas of unmet needs. There were five unmet needs domains, and the different predictors of each domain were identified, which accounted for 7%–36% of the variance. Psychological symptom distress was predictive in emotional/social, economic, and medical domains. Physical symptom distress, extent of disease, and health measure were only significant to the physical domain. For total needs unmet, the independent predictors included psychological symptom distress ( $p < 0.0001$ ), depression ( $p < 0.0001$ ), physical symptom distress ( $p = 0.001$ ), age ( $p = 0.003$ ), functional status ( $p = 0.003$ ), and extent of disease ( $R^2 = 49\%$ ,  $p < 0.00001$ ). For FACT-G total QOL score, in addition to the known predictors such as depression ( $p < 0.0001$ ), psychological ( $p < 0.0001$ ), and physical symptom distress ( $p = 0.03$ ), confident ( $p = 0.003$ ) and affective social support ( $p = 0.005$ ), the total needs unmet ( $p = 0.04$ ) was also predictive ( $R^2 = 63\%$ ,  $p < 0.00001$ ). The results from this study will assist nurses and administrators of healthcare systems to identify the factors that are amenable for interventions in order to decrease patients' unmet needs, which may subsequently improve patients' QOL (VA-PCC98-068-02 and NJCCR-01-56-CCR-EO).





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**CHEMOTHERAPY-INDUCED ALOPECIA IN MEN: A DESCRIPTIVE STUDY.** Linda Yergey, RN, MSN, AOCN®, Veterans Administration Medical Center, Baltimore, MD, and Sharon Otto, RN, BSN, OCN®, Laura White, RN, OCN®, and Petr Hausner, MD, PhD, University of Maryland Greenebaum Cancer Center, Baltimore, MD.

Chemotherapy causes alopecia in both men and women; however, the literature contains studies and anecdotal reports of chemotherapy-induced alopecia (CIA) in women only. No studies have been done describing either the type of hair loss that occurs in men or men's concerns about alopecia.

No tool was found in the literature to adequately assess alopecia in men, therefore, a descriptive study, a "Hair Loss Questionnaire," was developed to determine how men describe their experiences with CIA.

Men have different patterns of alopecia such as loss of beard and moustache, raising the need to explore how gender influences CIA.

Questions were developed based on women's alopecia concerns described in the literature and the author's discussions with men who had CIA. A Likert scale addresses issues such as how much hair has been lost from different body areas, how important it is for the men to have hair, and whether they think they look less attractive or older without hair. An open-ended question section addresses additional topics. Demographic data is collected with questions having an affect on the study. Validity is tested by having the men rate "hair loss concern" on an analog scale of 0 (not at all) to 100 (extremely). To test reliability, 30 random men take the questionnaire again 1–2 weeks later, for test-retest reliability.

The tool is being administered to a convenience sample of 100 men at a large metropolitan VA medical center and affiliated university cancer center, who currently have CIA. Thus far, 40 men have completed the study.

Data from the initial 40 responses indicate that men are equally divided regarding how important it is for them to have hair, ranging from not at all important to very important. Loss of hair from the head does not rank as important as hair loss from the beard and moustache, eyebrow and eyelashes, or pubic hair. Results of this study will help describe the impact of CIA for men in the study. Hopefully, this information will provide recommendations as to how nurses can help men cope with CIA.

## 261

**TURBULENT WAITING WITH INTENSIFIED CONNECTIONS: THE FAMILY EXPERIENCE OF NEUTROPENIA.** Norma Krumwiede, EdD, RN, Sonja Meiers, PhD, RN, Mary Bliesmer, DNSc, RN, Sandra Eggenberger, PhD(c), and Shirley Murray, MS, LISW, Minnesota State University, Mankato, Mankato, MN.

Symptoms of chemotherapy-induced neutropenia continues to affect oncology nursing practice. Minimal research exists regarding how the family understands and manages chemotherapy-induced neutropenia. Dose intensity chemotherapy protocols for cancer treatment have increased and, as a result, chemotherapy-induced neutropenia is a potentially life-threatening event of treatment. The family's understanding of the treatment protocol, symptom identification, and symptom management can be a major factor in the adherence to treatment. This research explored how families understand and manage the experience of chemotherapy-induced neutropenia.

Research was guided by a framework of family systems theory and symbiotic interactionism.

A qualitative cross-sectional approach with grounded theory methodology analyzed the social process surrounding neutropenia. Theoretic sampling of seven families (21 individuals) with a patient diagnosed with neutropenia (ANC < 500 mm<sup>3</sup>) were interviewed in their homes. The semi-structured interviews resulted in 432 pages of data text.

A constant comparative analysis approach was used by the interdisciplinary research team to identify similarities, differences, and relationships between categories. A core category, the central phenomenon around which all other categories were integrated, was identified. Attention was directed toward establishing rigor in this study through the measures of transferability, credibility, dependability, and confirmability.

Turbulent waiting and intensified connections was identified as the core category. Families responded by protecting the neutropenic member

with family caring strategies: Family inquiry, family vigilance, and family balancing. The process of turbulent waiting with intensified connection led families to new ways of understanding themselves. Families described the experience of neutropenia as a time of heightened awareness with an increased sense of vulnerability. The family's sense of integrity was reframed to include an enhanced capacity for caring and a recognized ability to protect their vulnerable family member. The need for nurses to support family caring strategies during this process was illuminated. Nursing awareness of turbulent waiting and the need for connection promotes excellence in family cancer care. Findings contribute to theory development regarding the family cancer experience and suggest the need for design and testing of an intervention protocol constructed from the perspective of the family-professional partnership.

## 262

**ORAL MUCOSITIS-RELATED SYMPTOM MEASUREMENT: ANALYSIS OF INSTRUMENTS.** Janet Fulton, PhD, RN, Indiana University School of Nursing, Indianapolis, IN.

Persons experiencing cancer frequently develop treatment-related oral mucositis. Oral mucositis is associated with multiple symptoms such as dry mouth, difficulty swallowing, taste alterations, and pain. Because measurement of intervention outcomes is critical, nurses need information about instruments that measure symptoms associated with oral mucositis.

**Problem:** Multiple instruments are available to measure oral mucositis, however, instruments tend to measure the physical elements of mucositis with varying emphasis on associated symptoms.

**Purpose:** This investigation explored the symptoms measured in oral mucositis instruments.

The Theory of Unpleasant Symptoms (Lenz, Pugh, Milligan, Gift, Suppe, 1997) served as the conceptual framework for analysis of published instruments. Symptoms are subjective. Symptoms have characteristics (intensity, duration, distress, quality), influencing factors (physical, psychological, situational), and consequences (functional and cognitive).

The literature review was guided by Cooper (1998) research synthesis guidelines. A comprehensive literature search identified published instruments for measuring oral mucositis. Decision rules were established consistent with the theoretical framework, and data were abstracted to an investigator-designed coding sheet. Instruments that included patient self-reports of symptoms were evaluated and the symptom(s) were coded according to dimensions of symptoms (intensity, timing, distress, and quality), influencing factors, and functional consequences.

Data were synthesized to determine the extent to which each instrument included the dimensions of patient-reported symptoms.

Fifteen published oral mucositis rating scales were reviewed. All scales included observable physical characteristics of mucositis, 11 (73%) scales included related symptoms. The most frequently measured symptom was pain (73%), and the most frequently measured characteristic of pain was intensity. The most frequently measured symptom consequences were swallowing (40%) and eating (40%). Nurses are responsible for interventions that relieve symptoms associated with oral mucositis. Existing instruments focus on measurement of physical characteristics of oral mucositis. Understanding the dimensions of the side effect oral mucositis being measured will inform the selection of instruments for research protocols and outcome evaluation of clinical interventions, and will identify opportunities for developing new instruments that fill gaps in measurement.

## 263

**HOW TRUSTWORTHY ARE DIAGNOSES OF MALNUTRITION IN HOSPITALIZED CANCER PATIENTS? A COMPARISON OF MEDICAL RECORD DIAGNOSES AND THREE NUTRITIONAL ASSESSMENT INDICES.** Johann V. Popp, KPE, Jean K. Brown, PhD, RN, FAAN, University at Buffalo School of Nursing, The State University of New York, Buffalo, NY; Candi Possinger, MS, RD, CDN, Mount St. Mary Hospital, Lewiston, NY; and Mary Platek, MS, RD, CDN, and William Savage, BS, University at Buffalo School of Public Health and Health Professions, Buffalo, NY.



Malnutrition is a complex symptom management problem in cancer care, and its accurate diagnosis is critical to planning nursing interventions.

The purpose of our study was to examine the clinical differences in five accepted methods of diagnosing malnutrition.

Using the First Law of Thermodynamics, physiological mechanisms, and the Quality Health Outcomes Model as a theoretical base,

our correlational study compared the malnutrition diagnoses of physicians and dietitians with diagnoses based on three nutritional assessment indices in a retrospective analysis of medical record data of 288 admissions of lung, gastrointestinal, or head and neck patients with cancer at a comprehensive cancer care center in Buffalo, NY. The medical record data were abstracted by two RNs and one RD with inter-rater agreement of greater than 90%. The nutritional assessment indices were body mass index (BMI); Swails et al. [(year?)] method using weight change, percent of ideal body weight, and albumin; and the method described in the Manual of Clinical Dietetics using Swails' indicators plus transferrin.

The prevalence of malnutrition according to each method was calculated, the diagnoses were compared to each other, and physiological indicators were correlated to physicians' and dietitians' diagnoses.

The sample was 55.6% male with a mean age of 63 years (SD = 13.5). The prevalence of malnutrition ranged from 5.9% according to physician diagnoses to 50.7% according to the Manual of Clinical Dietetics. The BMI index detected nearly twice as many malnourished cases (11.1%) as detected by the physicians, whereas dietitians diagnosed 27.4% cases as malnourished. All methods agreed in diagnosing only one case as malnourished. Comparing the diagnoses of the methods with each other, the ratio of agreement versus disagreement ranged from 1.07–7.73. Dietitians' diagnoses were weakly related ( $r = -.33$  to  $-.42$ ), and physicians' diagnoses had no or very small relationships ( $r = -.07$  to  $-.25$ ) with physiologic indicators of malnutrition. **Conclusions:** There were enormous differences in the outcomes among different methods of diagnosing malnutrition. To base nutritional interventions on creditable diagnoses, consensus is needed on indicators used for nutritional assessment, and then they must be consistently applied in clinical practice. Funded by the ONS Foundation.

## 264

**VALIDATING A SELF-REPORT TOOL FOR ASSESSING CHEMOTHERAPY-INDUCED DIARRHEA SYMPTOMS IN COLON CANCER PATIENTS.** Jean Boucher, PhD, NP, AOCN®, University of Massachusetts Graduate School of Nursing, Worcester, MS.

Chemotherapy-induced diarrhea (CID) is a major symptom management problem faced by nurses caring for patients with advanced stage colon cancer. CID symptoms can lead to severe toxicity resulting in treatment changes, hospitalization, and morbidity risks. Dose reductions, delays, and discontinuation of chemotherapy leave patients at risk for disease recurrence or progression. An appropriate self-reporting tool to properly identify CID symptoms before severe complications occur is lacking for patient use and nursing assessment.

The purpose of the study is to validate a self-reporting tool to assess the intensity, frequency, and amount of CID symptoms in patients with advanced stage colon cancer. The current NCI Common Toxicity Criteria does not provide comprehensive CID symptom assessment and lacks consistent usage. It is limited to assessment based on number of stools, presence of cramping, nocturnal episodes, and bloody stools. Stool consistency changes and diarrhea complications are lacking in the tool as important descriptors to determine symptom occurrence. Furthermore, CID-related symptoms, or diarrhea morbidity assessment of incontinence, tenesmus, abdominal pain, and urgency is needed. Valid stool consistency classification and diarrhea morbidity tools used in other disease populations may have applicability with patients with advanced stage colon cancer for CID symptom assessment.

The Model for Symptom Management developed by the University of California San Francisco School of Nursing provides the framework to study CID symptoms from a subjective symptom experience. Focus on determining the symptom experience based on interrelated variables regarding the intensity, frequency, and amount of diarrhea and cancer-related symptoms will occur.

A self-reporting tool based on valid stool consistency classification and diarrhea-related symptom questions will be tested. The tool will be administered to patients with advanced stage colon cancer who are undergoing chemotherapy treatment.

Analysis will include reliability procedures for stool consistency and diarrhea items. Analysis of instrument validity will include face and content validity ascertained from experts in this topic area. Concurrent validity will be evaluated by an independent investigator interview with patients.

The implications of a self-report CID symptom tool include usage by patients and nurses for earlier symptom recognition, prompt management, and for further research utilization to describe the CID symptom experience in patients with advanced stage colon cancer.

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WILL NOT PRESENT

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**AGREEMENT BETWEEN CHILD SELF REPORT AND PARENT PROXY REPORT TO EVALUATE QUALITY OF LIFE IN CHILDREN WITH CANCER.** Chao Hsing Yeh, [Need credentials....Keisha waiting on response], Chang Gung University, Tao Yuen; and PiChen Chang, [Need credentials], Taipei Medical University, Taipei.

Agreement between child self report and parent proxy report to evaluate quality of life in children with cancer. Assessment of children's quality of life (QOL) is a special challenge for clinicians and researchers because developmentally-influenced cognitive ability and illness levels are so varied. In addition, statistical strategies reported to evaluate proxy agreement have been inconclusive. This study examines agreement between child reports and parental proxy reports to evaluate quality of life in a sample of pediatric patients with cancer using different approaches to evaluate convergence of self-report and proxy report using product-moment correlation coefficient, intraclass correlation, and comparison between group means and individual differences.

Subjects' data were collected from eligible children with cancer and their parents (hereafter, participants) in treatment at outpatient clinics and in a hospital ward of the Chang Gung Children's Hospital, a large medical center in Taiwan. Approval for conducting research with human participants was obtained from the hospital prior to beginning the study. QOL for children with cancer (QOLCC) was developed in our previous studies. QOLCC consisted of a total of 34 items and is designed to measure the affect of disease and treatment on the child's appraisal and satisfaction of functioning in the 5 domains: (1) physical function, defined as functional status in the activities of daily living, (2) psychological function, defined as the degree of emotional distress, (3) social function, defined as interpersonal functioning in peer/school relationships, (4) treatment/disease-related symptoms, defined as anxiety and worry about the illness and treatments, and (5) cognitive function, defined as cognitive performance in problem solving. Two subscales of understanding illness and communication pattern were also included in QOLCC.

In this study, for the purpose of analysis, the data were divided into two main groups: the child group and the adolescent group. The two groups were determined by the age of the patients (i.e., children age 12 and under; adolescents greater than age 12) in order to decrease methodological problems caused by the differences in the amount and quality of parental care giving for younger children and adolescents (Perrin et al., 1991) and potential disagreement between parents and adolescents' self-rating of QOL (Yeh, 2001). In order to compare the differences between parent proxy-report and patient self-report, the mean scores and standard deviations were summarized separately. To evaluate the differences between patients' and proxies' reports, the means of the absolute differences, the means of the differences (mean bias) (patient group versus parent group), and the standard deviation of difference were computed (Bland & Altman, 1986). A mean bias less than zero indicates that the parents tend to overestimate the negative impact of the patients, and a mean bias greater than zero indicates that parents tend to underestimate it. The effect size was used to examine the magnitude of this bias, defined by the ratio of the mean difference by [Some-



thing missing here]

Our findings indicate that neither Pearson product correlation, ICC, nor group difference provided enough information to detect the individual differences of measures of QOL. We found that scatter bias should be supplemented to quantify the degree of individual-level differences. The results suggest that when children who are younger than age 12 are not able to evaluate QOL assessment due to their developmental limitation or severity of illness, parents can provide valid information about their QOL. However, parent-proxy of QOL for adolescents provides significantly different information than self-report, and proxy data of QOL for adolescents should be used with caution.

## 267

PILOT STUDY TO TEST CAREGIVER SLEEP INTERVENTION (CASI). Patricia Carter PhD, RN, CNS, Gayle Acton, PhD, RN, and Martita Lopez, PhD, The University of Texas at Austin, Austin, TX.

Oncology nurses provide support, education, and resource information to patients and families. This research provides information about the feasibility of a sleep intervention that, in the future, may be used by oncology nurses to promote physical and emotional health in their caregiver population.

Caregivers' depression affects daily functioning, quality of life, and ability to continue care giving. Depression is a normal response to a family member's diagnosis of cancer; however, it can be exacerbated. This pilot study explored the feasibility of a behavioral sleep intervention in caregivers of persons with an advanced stage cancer.

This study used the stress and coping framework of Lazarus and Folkman (1984). This framework provides information about how the stress-laden process of care giving influences caregiver physiologic and emotional responses to providing care to a loved one with advanced cancer.

An experimental repeated measures design was used. Recruitment occurred at outpatient oncology centers. Data was collected in caregivers' homes. Inclusion criteria were: > 18 years of age, co-residing with a patient receiving treatment for cancer, fluent in English, and freely consenting. Caregivers were excluded if they were previously diagnosed with sleep and/or psychological disorders. Following consent, caregivers were randomized to waitlist control and intervention groups. Sleep (PSQI & Actigraph) and depression (CESD) measures were taken at weeks 1, 3, and 5. The intervention was given at week 2 and a booster at week 4. Twenty-one caregivers completed the study.

Descriptive statistics were conducted for all variables. The main purpose for this pilot study was to explore feasibility issues. This was done through a qualitative exploration of caregiver responses to the study methods as well as investigator and intervener responses. T-tests were conducted to explore differences between groups on variables of interest.

While sleep and depression improved across groups, the intervention group showed significant improvement over the waitlist controls (PSQI  $p < 0.04$  and CESD  $p < 0.05$ ). Caregivers reported that the intervention procedures were easily followed and helpful. These data suggest the feasibility of the sleep intervention and of the measurement methods chosen.

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A RANDOMIZED CLINICAL TRIAL TO TEST THE COPE INTERVENTION WITH CAREGIVERS OF HOSPICE PATIENTS WITH CANCER. Susan McMillan, PhD, ARNP, FAAN, and William Haley, PhD, University of South Florida, Department of Gerontology, Tampa, FL; Michael Weitzner, MD, Moffitt Cancer Center and Research Institute, University of South Florida, Tampa, FL; Ronald Schonwetter, MD, University of South Florida College of Medicine, Tampa, FL; and Brent Small, PhD, University of South Florida Department of Gerontology, Tampa, FL.

Caregivers of patients with cancer in hospice provide essential support and experience considerable stress that can affect their quality of life.

The primary aim of this experimental study was to decrease stress and improve the quality of life of hospice caregivers by helping them to mas-

ter the skills needed to better assess and manage problems experienced by patients with cancer (pain, dyspnea, constipation), thus enhancing caregiver coping and self-appraisal of stressfulness of patient symptoms and quality of life for caregivers.

The study was based on the stress-process model.

The sample of 239 patient/caregiver dyads was drawn from a large hospice and randomly divided into three groups: A control group receiving standard care (Group I), a group receiving standard care plus support visits (Group II), and a group receiving standard care plus the intervention (Group III). The intervention was based on the COPE method (creativity, optimism, planning, expert information). Groups II and III received visits on the same schedule to control for the effects of researcher time and attention. On visit one, caregivers in Group III were taught to use the COPE method of managing patient problems, received a copy of the Home Care Guide for Advanced Cancer, and were taught how to assess patient symptom intensity. Visits two and three reinforced learning. Caregiver data included coping, self-appraisal of stress, and quality of life. Data were collected from all three groups on admission to the study, immediately post intervention (day 16), and four weeks after admission to the study (day 30).

Repeated measures mixed models was used.

Analysis revealed a significant interaction between treatment group and time of testing for stressfulness of patient symptoms, but not for quality of life. For symptom stressfulness, the ratings from the control did not change over time, whereas the two intervention groups declined over the two follow-up points. Further, the decline was greater for the COPE intervention group. These results suggest that the hospice team might use both the supportive visits and the COPE intervention to help relieve the stress of care giving, however, COPE might produce a greater decrease in the caregiver's perceived stress. Further research into this issue is needed.

## 269

SPIRITUAL CARE NURSING INTERVENTIONS: WHAT CANCER PATIENTS AND THEIR FAMILY CAREGIVERS WANT. Elizabeth Taylor, PhD, RN, and Iris Mamier, RN, MNEd, Loma Linda University, Loma Linda, CA.

Oncology nurses are increasingly expected to assess spiritual needs and provide spiritual care to their clients.

Although mandated to assess and support spiritual health, oncology nurses have scanty and conflicting evidence about what are clients' preferences or expectations with regard to receiving spiritual care from nurses. The purpose of this study was to quantify the preferences for spiritual care that patients with cancer and their families expect from nurses. Specific research questions included: To what extent would patients and family caregivers want to receive spiritual care from nurses? What factors are associated with wanting spiritual care nursing interventions?

Conceptually, this investigation was influenced by several scholars (especially, Reed, Frankl, and Travelbee) who have theorized about how and why spirituality is important when living with a health challenge. Spiritual care was defined as nurses' ways of being and doing that promote spiritual health.

This cross-sectional, descriptive study employed paper and pencil questionnaires (a demographic form and 5 subscales [or 27 items] from the Spiritual Interests Related to Illness Scale [SPiRIT], Patient and Caregiver Versions) to collect data. The sample included 165 oncology patients and 68 caregivers who were mostly white, receiving outpatient care, and expecting a cure.

Measures of central tendency, Pearson correlations, and analysis of variance were used for the statistical analysis.

Responses to items about receiving the spiritual care interventions listed in the SPiRIT consistently averaged between 2 ("disagree") and 3 ("agree"), indicating less than strong enthusiasm. The most preferred interventions for both patients and caregivers included those using humor, helping them to have quiet time or space, and offering to pray privately for them. Being non-white and attending religious services frequently were associated with desiring more spiritual care from nurses. Without exception, no differences were observed between patient and caregiver responses. Understanding what clients want can help oncology nurses to inoffensively and effectively provide spiritual care.





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RECRUITMENT THROUGH ONLINE CANCER SUPPORT GROUPS. LiChen Lin, RN, MSN, Hsiu min Tsai, [Need credentials], Wonshik Chee, [Need credentials], and Eun Ok Im, RN, MPH, PhD, University of Texas at Austin, School of Nursing, Austin, TX.

Recent studies indicated that online cancer support groups provide an excellent setting to recruit research participants for oncology studies. Despite these recent findings, very little is still known about issues in recruitment through the online cancer support groups. Thus, at this beginning stage of Internet research, it is imperative to explore issues in recruitment through the online cancer support groups. The purpose of this presentation is to describe issues in recruitment through the online cancer support groups from a feminist perspective and propose future directions for oncology studies using the online cancer support groups.

A feminist perspective was used as a theoretical perspective.

A total of 803 websites for the online cancer support groups on the Internet were retrieved using yahoo.com, msn.com, accor.org, and google.com. Among them, 162 websites were found to be eligible online cancer support groups. These websites included 100 by yahoo.com, 24 by msn.com, 8 by accor.com, and 30 by google.com. The eligibility of the websites was determined based upon the target population, purpose of the website, and number of members. The web masters and/or list owners of the eligible websites were contacted by email, and their willingness to announce the study was asked. Only 9 of them agreed to announce the study (7 by yahoo.com, one by msn.com, none by accor.org, and one by google.com).

During the recruitment process, issues raised in using the online cancer support groups for recruitment were discussed through weekly research meetings, and memos about the issues were written. The written memos were analyzed using a content analysis, and the criteria for rigor in feminist research by Hall and Stevens were used to theoretically guide the analysis.

The analysis indicated the following four major issues: (1) intersubjectivity issues, (2) relevance issues, (3) authenticity issues, and (4) ethical issues. Eighty one percent of the websites were not user friendly. It was hard to find useful information for patients with cancer in most of the websites (67%). There was a concern about the authenticity of the websites. It was not easy to identify whether the website was really an online cancer support group and/or if the information presented by the websites was accurate. There were virtually no policies or standards regulating the websites of the online cancer support groups. A web owner could design a perfect, good-looking website, but she/he might present incorrect information.

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HEALTH-RELATED QUALITY OF LIFE QUESTIONNAIRES AS PREDICTORS OF UNSCHEDULED HEALTHCARE VISITS IN ADULTS WITH CANCER. Mary Cooley PhD, RN, CS, Dana-Farber Cancer Institute, Boston, MA, and Joan Rimar, DNSc, RN, George Knaf, PhD, and Ruth McCorkle, PhD, RN, FAAN, Yale University, School of Nursing, New Haven, MA.

Few studies have examined unscheduled healthcare visits (emergency room visits or inpatient hospitalizations) in adults with cancer. Unscheduled healthcare visits (USV) are important because they contribute toward increased costs and may indicate unmet needs. Studies have linked HR-QOL with survival in adults with cancer. Symptoms are also related to outcomes. Uncontrolled symptoms are related to a decrease in physical function and an increased utilization of healthcare services. As HR-QOL questionnaires move into the clinical setting, it is important to determine how useful these tools will be in predicting outcomes. It is not clear whether the single measurement of symptom distress or a multidimensional assessment is necessary to identify those at risk for poor clinical outcomes.

The purposes of this descriptive, correlational study were to describe the reasons for USV, identify costs of care associated with USV, examine the relationship between HR-QOL questionnaire scores at entry to the study and USV within the following four months, and identify factors associated with USV.

The Donabedian Quality of Care Model was used as the framework for this study.

Three reliable and valid HR-QOL questionnaires (Symptom Distress Scale, Functional Assessment of Cancer Treatment, Medical Outcomes Study 36 Item Short Form) were tested in 79 outpatients with cancer. USV were measured using a hospital-based data system.

Descriptive statistics, chi-square, and logistic regression were used for analysis.

Thirty percent of participants experienced USV. The most common reasons for these visits were myelosuppression, infection, and brain metastasis. Controlling for spatial autocorrelation in terms of elapsed days from study entry, the average actual variable direct cost of an USV was \$3,261, hospitalizations averaged \$4,175, whereas emergency room visits alone averaged \$145. Although total scores of the HR-QOL questionnaires were not related to USV, single items from the SDS and the FACT were associated with USV. Other factors associated with USV were higher income, advanced stage of cancer, lymphoma, and combined cancer treatment. Results from this study suggest that USV are a significant problem and that use of a few items from the SDS and FACT may be useful in identifying those at high risk for USV.

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CHARACTERISTICS OF FALLS AMONG PERSONS WITH CANCER: RESULTS AT YEAR ONE. Sandra Holley, PhD, ARNP, AOCN®, James A Haley Veterans Administration Medical Center, Tampa, FL.

Of all types of injuries, falls pose the most serious threat to elderly oncology patients and can have serious consequences related to reduced physical functioning and quality of life. There is no current information on falls in persons with cancer.

The objectives of this 2-1/2 year descriptive study are to: (1) describe intrinsic risk factors for falls in hospitalized cancer patients, (2) describe extrinsic factors related to falls, and (3) describe the extent and type of clinical management strategies used for the prevention of subsequent falls in the acute care setting.

The theoretical framework is based on the VA VISN 8 Patient Safety Center of Inquiry Framework. This framework is based on general systems theory that views adverse events (falls) as a result of the interaction among complex systems (individual risk factors and environmental conditions).

When a fall occurs on a nursing unit, the patient is considered for enrollment into this study. Within 72 hours, the research associate approaches the patient who fell, explains the study, invites their participation, and obtains written informed consent. The subject is asked to complete the Cancer Related Fatigue Distress Scale, and the Functional Living Index-Cancer survey data forms. Demographics, veteran status, concomitant illnesses, medications, fatigue distress scale scores and fatigue intensity scores, quality of life scores, mental status scores, and clinical management strategies tried will be summarized for the cases. Descriptive statistics will be calculated to examine the demographic characteristics of the cases.

Demographics, concomitant illnesses, medications, fatigue distress scale scores, quality-of-life scores, and mental status scores will be summarized for the cases. Descriptive statistics will be calculated to describe statistically significant differences between populations. For the analytical part of the study, exposures will be dichotomized to injury or non-injury to determine the crude disease exposure association by examining the odd ratio (OR) via the Chi-square test. This whole procedure will be repeated for any sub-group with a particularly high risk if power is achieved within the sub groups.

The above analyses will be reported on the accumulated data as of pre-Congress 2004. Approximately one year's worth of data.

## 273

FUNCTIONAL STATUS OF CANCER PATIENTS USING HOSPICE. Ying Xue, MSN, RN, Yale University School of Nursing, New Haven, CT.

Patient evaluation is nurses' regular work and is the basis for implementation of effective care. Providing adequate care to patients will improve their quality of life.

The goal of hospice care is to improve the quality of a patient's last days by offering comfort and dignity. Physical functional status is one aspect of quality of life. Patients with cancer are the majority of hospice patients. Study indicated that advanced cancer patients in good physi-



cal condition had a high self-efficacy and therefore had less emotional distress. However, there is lack of overall information of physical functional status among patients with cancer using hospice. The purpose of this study is to investigate the prevalence of physical functional status among patients with cancer using hospice, to determine whether there is difference in functional status across cancer diagnoses, and to further identify the relationship between physical functional status and services provided.

Literature suggests that better services will improve patients' functional status and therefore improve their quality of life.

This is a cross-sectional study design. The sample is from the 2000 National Home and Hospice Care Survey (Revised in 2003), including patients with cancer diagnoses and using hospice. Physical functional status is measured by activities of daily living and instrumental activities of daily living, which are well established and have been widely recognized.

SUDAAN, the software that is specifically designed for analysis of cluster-correlated data from multi-stage sample survey design, will be used to analyze the data for this study. Univariate analysis, one-way ANOVA, post hoc analysis, and multivariate analysis will be conducted to answer questions.

This study is in progress. The expected findings will have great implications for hospice practice for patients with cancer. It would provide information that can be utilized to improve patient function and quality of life. In addition, the findings of relationship between patient physical function status and services provided by healthcare providers will help to discover the deficiencies in current care for patients dying with cancer.

## 274

**AGEIST ATTITUDES AMONG NURSES: IMPLICATIONS FOR LONG-TERM NURSING CARE OF ELDER CLIENTS WITH CANCER.** Karen Ann D. Anderson, PhD, RN, MSN, CDE, and Theresa W. Gillespie, PhD, BA, BSN, MA, RN, Emory University, Atlanta, GA.

**Problem and Purpose:** Nurses bring with them into their profession a lifetime of cultural, familial, and perceptual attitudes regarding elder individuals with cancer. By the year 2012, over 15% of the U.S. population will be over the age of 65. A large percentage of nursing care will be focused on caring for the elderly, and a significant number of those elderly will be patients with cancer living in nursing homes. Generally, cultural perceptions in America have historically viewed aged individuals with a particular set of negative characteristics including frail, feeble-minded, useless, powerless, and even expendable. Data show that elderly patients with cancer are often treated with suboptimal therapy and are infrequently enrolled on clinical trials. Ageist attitudes foster stereotyping of elder clients that may have negative healthcare consequences over time. Thus, long-term nursing care for the elderly client with cancer calls for specialized knowledge, skills, and abilities to deliver care without prejudice. This study presents the following research questions: What are the views of nurses in nursing homes toward their elderly clients with cancer? How do ageist attitudes among nurses affect their care of elder clients with cancer in a long-term care environment?

**Framework:** Using a qualitative study approach and existing theoretical constructs in a phenomenological framework, nursing knowledge for evidenced-based practice would be gained.

**Methods:** A purposive sampling of a minimum of 10 accessible nurses working in long-term care with patients with cancer will be invited to participate. Data collection will consist of in-depth 90-minute interviews using open-ended questions.

**Data Analysis:** Data analysis will be performed until data saturation is gained. Themes derived from the narratives will be extracted and classified.

**Implications and findings:** The aim of this qualitative study is to uncover themes derived from the narratives that will provide insights into the construct of ageist attitudes among nurses through their lived experiences. Accordingly, these themes may provide nurse educators and managers the information needed to design interventions for nursing education and development based on enhanced understanding of the attitudinal dynamics of caring for elderly patients with cancer in a long-term care facility.

## 275

**PATTERNS OF SURVIVORSHIP AMONG AFRICAN AMERICAN WOMEN: A LIFE STORY ANALYSIS.** Katherine Gallia, PhD, RN, AOCN®, and Pines Eula, PhD, RN, University of the Incarnate Word, San Antonio, TX.

To provide culturally-relevant care to cancer survivors, nurses must understand how the culture influences the nature of survivorship for its members. The social context and cultural identity of African Americans are linked to a unique spirituality characterized by a relational worldview that values community, justice, dignity, and self-determination. The African American Christian church has served, historically, as the spiritual and social center of the community; but there has been little exploration of the potential of this rich tradition as a resource for strength and coping for African American women surviving breast cancer.

The purpose of this descriptive study is to contribute to an understanding of the nature of breast cancer survivorship among African American women by investigating the following questions: What are the patterns of survivorship among African American survivors of breast cancer? What cultural and spiritual influences play a significant role in these women's survivorship stories? What are significant turning points in these stories? How do African American women construct the meaning of breast cancer survivorship over time?

Qualitative constructivist theory, in which meaning is created by the interaction of individuals in a social environment, was selected as the framework for this study because it is congruent with the African American worldview.

Fifteen African American women survivors of breast cancer for 1–10 years who are members of African American Christian churches in San Antonio, Texas, have been recruited for the study. All interviews are being conducted and audiotaped by the secondary investigator, a long time, active member of the local African American community. Participants will be asked to describe their experiences from the time shortly before the diagnosis of breast cancer until the present in the form of self-identified chapters in a book and to describe significant events, persons, high and low points, and turning points for each chapter.

The investigators are using the life story analysis method described by McAdams to examine patterns of survivorship, cultural and spiritual influences, and meaning of breast cancer survivorship in these stories.

Preliminary findings confirm the importance of a unique worldview and spirituality in shaping the cancer survivorship experience.

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**SELF-TRANSCENDENCE AND WELL-BEING IN WOMEN WITH NEWLY DIAGNOSED BREAST CANCER FOLLOWING A SUPPORT GROUP INTERVENTION.** Doris Coward, RN, PhD, University of Texas at Austin, Austin, TX.

Many women attend a cancer support group to help reduce the negative affect of breast cancer on their lives. The traditional goals of cancer support groups are to provide basic information about cancer and treatment, offer emotional support, and teach coping mechanisms.

The purpose of this experimental design study was to expand those traditional goals by consciously promoting self-transcendence views and behaviors within support groups for women with newly diagnosed breast cancer.

Experimental group session activities were developed from theory and previous research linking multidimensional expansion of self-concept boundaries (self-transcendence) with finding meaning and maintaining/restoring physical and emotional well-being. Greater change was hypothesized on study variables over an 8–10 month period in women participating in the experimental groups compared with women in traditional cancer support groups.

All participants completed paper and pencil questionnaires three times (at baseline, after the experimental intervention or 2–3 months later, and 8 months later). Study instruments (Self-Transcendence Scale, Purpose-in-Life Test, Symptom Distress Scale, Karnofsky's Performance Status, Profile of Mood States, Cognitive Well-Being Scale, and Dyadic Adjustment Scale) were used previously in women with breast cancer and demonstrated acceptable reliability in this study.

Data were analyzed with correlation, t-test, ANOVA, and effect size.

The intervention had a small effect (Cohen's  $d = .23$ –.29) on self-trans-



scendence, but less effect on perceptions of physical and emotional well-being. Most women returned to previous levels of well-being following initial cancer treatment. Theory-based support groups that facilitate self-transcendence views and behaviors may help survivors more easily find purpose and meaning within the context of their diagnosis and treatment. Findings support the results of earlier pilot studies and provide direction for oncology nurses' encouragement of women with breast cancer to engage in self-transcendence promoting activities.

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AN EXPLORATORY STUDY ON NURSES' PERCEPTION OF SPIRITUALITY AND SPIRITUAL CARE FROM A MULTICULTURAL CONTEXT. Siew Ping Lang, BSN, Adv Dip Nsg, RN, Tan Hwee Hoon, Adv Dip Nsg, and Ang Emily, MN, The Cancer Institute at National University Hospital, Singapore.

In recent years, the propagation of holistic nursing care has been fast moving, and it encompasses bio-psycho-social-spiritual dimension of patient care.

However, the spiritual aspect of care has been given very little attention. This could jeopardize patients' quality of life as the spiritual well-being of an individual can exert a great influence over the other aspects such as patients' physical and mental well-being. Thus, nursing, as a caring profession, should strike a harmony and balance of mind, body, and spirit in maintaining health, especially for patients with cancer.

The purpose of this qualitative, phenomenological study is to describe nurses' multicultural definitions of spirituality, as well as explore how nurses identify and respond to patients' spiritual needs.

The study sample include 11 registered nurses from multicultural backgrounds who had been working in an inpatient hematology-oncology ward for a period ranging from 1 month–10 years. Verbal consent was obtained from the nurses' prior to the study. Confidentiality and anonymity of the nurses were maintained throughout the study.

Critical incidents were used to assess how nurses' identify and respond to patients' spiritual needs. The data were transcribed and subjected to content analysis where categories were then developed and described. The final themes that emerged from the study were subjected to peer reviews.

Findings suggested that nurses' perceptions of spirituality are associated with self-belief and relationships with others and God. In the course of nursing care, nurses recognize patients' spiritual needs when the patients initiate religious conversation, practice and carry religious items, were informed of their cancer diagnosis or were listed on the terminally ill list, or manifest negative behaviors. In meeting patients' spiritual needs, the nurses were personally involved in addressing patients' spiritual needs, and referred patients to others if they could not provide such care. Thus, nursing, as a caring profession, should strike a harmony and balance of mind, body, and spirit in maintaining health, especially for patients with cancer.

## 278

EXPRESSED DESIRE FOR HASTENED DEATH IN SEVEN INDIVIDUALS LIVING WITH ADVANCED CANCER: A PHENOMENOLOGICAL INQUIRY. Nessa Coyle, PhD, NP, FAAN, Memorial Sloan-Kettering Cancer Center, New York, NY.

Patients living with advanced cancer sometimes express a desire for hastened death (DHD). Although there is growing literature on the desire for death in terminally ill patients with cancer, limited in-depth research has been conducted that explores individual meanings and uses of an expressed DHD for the patient.

To explore the meanings and uses of an expressed DHD in patients living with advanced cancer.

Phenomenological Inquiry.

Patients with advanced cancer who were followed by the Pain and Palliative Care Service of an urban cancer center and had expressed at least once

a DHD were recruited. A series of in-depth semi-structured interviews were held with each patient focusing on their experience of living with advanced disease and how it affected their attitudes toward life and death. The interview series stopped when cognitive impairment or death intervened, or when no new information was forthcoming. Twenty-five interviews were held with 7 patients (range 2–6). Patient recruitment continued during the interviewing process until no further themes emerged. Sample characteristics: Males 4, females 3; age range 45–78; ethnicity: white 6, Hispanic 1; occupation: professionals 5, white/blue collar 2; varied cancer diagnoses; religion: Jewish 3, Catholic 2, Protestant 2.

Interviews were audiotaped, transcribed, analyzed, coded, and organized into themes.

Expression of a DHD had many uses and was a tool of communication indicating: (1) a manifestation of the will to live; (2) that the dying process was so difficult, an early death was preferred; (3) the immediate situation was unendurable and required immediate action, (4) as an option to extract oneself from an unendurable situation, (5) a manifestation of the last control the dying can exert, (6) a way of drawing attention to "me as a unique individual," (7) a gesture of altruism to the family, (8) a tool of manipulation of the family in order to avoid abandonment, and (9) a despairing cry depicting the misery of the current situation. Findings support that an expressed DHD and desire for death are not the same.

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TWO-ARMED, RANDOMIZED CONTROLLED STUDY OF DARBEPOETIN ALFA (ARANESP) PLUS OR MINUS EXERCISE FOR THE TREATMENT OF ANEMIA IN SUBJECTS WITH NON-MYELOID MALIGNANCIES. Linda Tkachuk, BScN, CCRP, [Newly added. Info to come from Keisha.]

Anemia is a common problem for patients with cancer and the oncology nurses who counsel and care for them. Anemia can be caused/exacerbated by chemotherapy, radiotherapy, infection, poor nutrition, bleeding, or bone marrow depletion. Fatigue, whether or not associated with anemia, is known to be the most frequent and debilitating symptom experienced by patients with cancer. Exercise improves many of their physical, functional, and emotional sequelae of cancer and its treatments. Documented benefits of exercise include improvement in cardiovascular fitness, muscle strength, body composition, fatigue, nausea, diarrhea, anxiety, depression, and overall quality of life (QOL). No studies to date, however, have determined if these benefits from exercise apply to cancer survivors with anemia being treated with erythropoietic agents. Therefore, we hypothesize that combination of exercise and darbepoetin alfa will have additive benefits on QOL, fatigue, and exercise capacity among patients with cancer and anemia.

In theory, exercise and darbepoetin alfa (Aranesp) should have synergistic effects. Erythropoietin increases hemoglobin levels but it does not increase the body's ability to use hemoglobin. Conversely, while exercise can significantly improve the body's ability to use hemoglobin, its affect on hemoglobin levels is negligible.

In this open-label, randomized controlled study, 100 patients with nonmyeloid cancer are stratified by chemotherapy status (yes/no) and randomized to one of two treatment groups: darbepoietin alfa alone or darbepoietin alfa plus exercise. Participants randomized to darbepoietin alfa plus exercise are prescribed a supervised moderate-intensity aerobic exercise program three times a week for the 12-week study period. All participants receive darbepoietin alfa on weeks 1, 2, 3, 4, 5, 8, and 11. At baseline and at the end of study (week 13), all participants are evaluated with supervised exercise stress testing, the Godin Leisure Time Exercise Survey, and FACT-Anemia Scale Questionnaire.

Data Analysis: To be completed.

Our primary objective is to compare improvement of QOL in mildly anemic patients (Hgb < 100 g/L) treated with darbepoietin alfa alone or darbepoietin alfa plus exercise. We will discuss available preliminary findings, in particular, patient tolerance and adherence to the prescribed exercise program.



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