This teaching lecture will focus on the process of developing clinical guidelines in IV access including step-by-step instructions. Examples will be given of how to:
1. Develop clinical guidelines in IV access.
2. Produce short film cuts on management of venous access devices in order to illustrate the text in the step-by-step instructions.
3. Evaluate compliance with clinical guidelines in IV access.

Proffered papers (Wed, 26 Sep, 13.45–15.45)
Symptom and rehabilitation

8064 ORAL

Symptom care for cancer patients at home: using technology to improve outcomes

K. Mooney[1], S. Beck[1], R. Freidman[2], R. Farzanfar[2]. *[1]University of Utah, College of Nursing, Salt Lake City, USA; [2]Boston Medical Center and Boston University, Department of General Internal Medicine, Boston, USA*

Effective management of symptoms resulting from cancer treatment is challenging because symptoms manifest at different time periods, in varying severity and are experienced by patients at home away from immediate attention by cancer care providers. Oncology nurses give patients instructions and written materials about potential side effects but they are given during treatment when the patient is not experiencing problems and they are not tailored to the patient's individual experience. There is no effective symptom monitoring system once patients go home and when symptom control is inadequate patients must call the clinic to gain further assistance. Many patients are reluctant to bother their providers or experience delay in providers returning their calls. Therefore the development of a systematic method for monitoring symptoms at home, providing suggestions for self-care based on the individual's specific symptom pattern and automatically notifying care providers when symptoms are unrelieved would offer an important adjunct to traditional cancer symptom management. The purpose of this presentation is to describe the development and experience to date of such a program of care called Telephone Linked Care (TLC).
TLC is a telephone-based, automatic, information-technology-enabled symptom assessment and management system with integrated patient education that was developed by an oncology nursing research team. Patients call into the system from home and report symptom patterns for the previous 24 hours. Utilizing a digitized human voice, TLC responds with evidence-based, self care strategies or other instructions based on the specific symptom pattern. TLC for example, can look back over the previous week and notice a pattern of increasing fatigue or late onset nausea and then make specific recommendations for action. In addition, symptoms not responding to treatment can trigger an automated faxed or email alert to the patient's care provider notifying them of unrelieved symptoms including a report of the daily symptom patterns since receiving treatment.
To date TLC has been tested with over 150 patients receiving cancer chemotherapy and found to be reliable and readily acceptable to patients. If used correctly, technology can provide an important assist to oncology nurses so that care can be individualized and targeted to cancer patients when they need it, allowing nursing care to be extended beyond the normal reach of ambulatory services.

8065 ORAL

Survey of joint aches, pains and stiffness in women with primary breast cancer

D. Fenlon. *University of Southampton, School of Nursing and Midwifery, Southampton, United Kingdom*

Background: As the detection and treatment of breast cancer is improving, more women are living with the long-term sequelae of breast cancer treatment. Joint aches, pains and stiffness are some of the most commonly described problems amongst these women, and the limited research evidence suggests these may be experienced by three quarters of women following primary breast cancer treatment (Carpenter and Andrykowski 1999). While these symptoms can be caused by ageing and/or the menopause (Franco et al 2005), there is some evidence to suggest that they are specific to or exacerbated by primary breast cancer treatment (Felson and Cummings 2005). Although they are reported as common problems, very little research has focused specifically on them and detailed information about their prevalence, causes and impact on women is not available.
Aims: To determine the prevalence of joint aches, pains and stiffness in women after treatment for primary breast cancer and to explore possible causes in this population, with particular emphasis on the role of different anti-cancer therapies.
Methods: This is a cross-sectional survey comparing 260 women who have completed treatment for primary breast cancer with an age-matched group of 260 women without breast cancer attending for mammographic screening. Measures used are the Nordic questionnaire for analysis of musculoskeletal pain [16], the Brief Pain Inventory [17] and the SF-36 general health questionnaire. A further short questionnaire collects information on conditions which could cause joint pain and stiffness, such as rheumatoid arthritis, fibromyalgia etc. and other factors which may have a bearing on these pains such as: menopausal status, lymphoedema and weight.
Results: The survey is in progress at the time of writing the abstract and results will be presented at the conference.
Conclusions: This research will for the first time provide robust evidence of the prevalence of joint aches, pains and stiffness in women after breast cancer treatment. It will establish whether they are a significant problem requiring further research and intervention. If so, hypotheses will be generated about the aetiology of these symptoms, which will provide a basis for the development of interventions for their management as well as informing further research. Future research will focus on uncovering the impact of these symptoms on women's lives, and identify and test potential interventions.

8066 ORAL

Development of an integrated psychosexual clinical assessment strategy for women receiving pelvic radiotherapy

I. White, S. Faithfull, H. Allan. *University of Surrey, European Institute of Health & Medical Sciences, Guildford, United Kingdom*

Background: Pelvic radiotherapy creates a number of physical effects and psychological responses that impact negatively on the sexual well-being of women and their partners. The aim of this study was to develop an assessment methodology to improve the clinical evaluation of sexual morbidity following radiotherapy in women with pelvic malignancy.
Methodology: This focused ethnography used participant observation of gynaecological and colorectal oncology follow-up clinics (50 gynaecological, 19 colorectal consultations) plus in-depth interviews with women (n = 24), partners (n = 5) and health professionals (n = 20) to explore the context and content of sexual morbidity assessment after treatment completion. Women with gynaecological (cervical, endometrial) and non-gynaecological (rectal, anal, bladder) cancer who had completed pelvic radiotherapy 3, 6, 12 and 24 months previously were included. Doctors, nurses and therapy radiographers were interviewed for professional perspectives on assessment.
This paper presents analysis (using SPSS v.14 and NVivo v.2) of observation and interview data.
Findings: Consultations focused on disease surveillance, specific aspects of toxicity monitoring and managing active symptoms. Psychosocial issues were raised in only 42% (n = 29) of consultations. Sexual concerns were not routinely assessed in gynaecological clinics (11/50) while in colorectal clinics sexual morbidity was predominantly assessed via standardised clinical trial toxicity monitoring (6/19).
Thematic analysis of patient and partner interviews revealed substantial unmet need in relation to the assessment and management of women and couple's sexual recovery. This included failure to manage radiotherapy induced menopause, inadequate knowledge of advice sources regarding sexual difficulties and distress caused by unresolved difficulties including loss of sexual desire, dyspareunia and reduced sexual satisfaction.
Health professionals felt inhibited discussing sexual concerns with older women and those with later stage disease and were unlikely to do so unless they had defined referral pathways.
Conclusions: The current model of medical follow-up may not be an appropriate clinical context for the optimal assessment and management of sexual concerns associated with pelvic radiotherapy. These findings are important for the development of supportive care services and the training of health professionals engaged in post-treatment toxicity assessment, patient information and support.

8067 ORAL

Sleep-wake disturbances: preliminary results from a study among cancer patients during active-phase chemotherapy

G. Kotronoulas[1], C. Papadopoulou[2], A. Papapetrou[3], E. Patiraki-Kourbani[3]. *[1]Metropolitan Hospital, Oncology Department One Day Clinic, Athens, Greece; [2]Attikon University Hospital, Pathology Oncology Heamatology Department, Athens, Greece; [3]University of Athens, Nursing Faculty, Athens, Greece*

Background: Sleep-wake disturbances have been recently recognized as a first priority symptom for nursing assessment and intervention in oncology patients. Although they may have an impact on functioning, mood, symptom

distress, quality of life, even survival, since nowadays limited systematic research has been conducted. The purpose of this descriptive, cross-sectional and correlational study was the identification of the occurrence of specific parameters of sleep-wake disturbances in a sample of Greek cancer patients.
Material and Methods: Researchers visited two oncology units of "St. Savvas" Oncology Hospital in Athens during a five-month period time. All patients who met inclusion criteria completed a set of sleep and symptom questionnaires; participants' medical records were reviewed for demographic and clinical data. Comparative and correlational analyses were used.
Results: Between April and September 2006, 103 consecutive cancer patients with multiple primary diagnoses during active-phase cytotoxic chemotherapy entered the study. The mean age was 53.3±13.3 years and 60% were women. Women had significantly more sleep problems ($p < 0.001$), while tended to use sleep medication more frequently than men. 60% of participants were recognized as having poor sleep quality, even if only 38% used sleep medication to help them sleep. Mean sleep latency reached 35.6±42.9 minutes, where mean real-time sleep was only 5.9±1.7 hours. The average sleep efficiency hardly exceeded 70% (71%±20.7%). Daytime sleepiness reported as a significant problem by 40% of the respondents, with 50% having at least some problem in keeping up enough enthusiasm to get things done. The majority (70%) of patients in pain indicated that pain interfered with sleep at least twice a week. Significant correlations were found between anxiety ($p < 0.001$) and time since initiation of current chemotherapy regimens ($p = 0.046$) and time to fall asleep; poorer performance status and poorer sleep quality ($p = 0.015$) and depression ($p < 0.001$); increased distress from physical symptoms with direct effect on sleep and use of sleep medication ($p = 0.046$) and sleep inefficiency ($p = 0.010$); and use of opioids and occurrence of bad dreams ($p = 0.021$).
Conclusions: These preliminary results confirm already published data, revealing that Greek cancer patients also experience severe problems with sleep during chemotherapy. Further research is necessary to meet the needs of oncology patients with sleep-wake disturbances.

8068 ORAL

Health behaviour after cervical cancer – a phenomenological inspired study

C. Andersen[1], L. Adamsen[2]. *[1]Copenhagen University Hospital, Department of Oncology, Copenhagen, Denmark; [2]Copenhagen University Hospital, University Hospitals Centre for Nursing and Care Research, Copenhagen, Denmark*

Background: Despite national screening efforts 400 women in Denmark are diagnosed with cervical cancer each year. Known causes include transmission of the HPV virus, smoking, multiple sexual partners and early sexual debut. Surgery, chemotherapy and radiation therapy are highly effective treatment options. However, adverse physical and psychosocial effects may be serious and persistent, and treatment may disrupt existing health behaviours or exacerbate unhealthy behaviours. How survivors of cervical cancer regard behavioural changes remains unexplored. With a growing number of survivors of cervical cancer, the overall health and well-being of these individuals will require attention.
Purpose: To explore health behaviour experiences in survivors of cervical cancer three to eight years post-treatment. Data were analysed using a phenomenologically inspired method.
Methods: The study had an explorative and descriptive design and used semi-structured in-depth interviews. Five (n = 5) women (31−70 years old) were interviewed. Themes included (1) current health behaviour, (2) negative and positive influence of cancer on feelings of vulnerability, (3) planned health behaviour changes.
Results: The analysis yielded four themes: Increased Health Consciousness, Unique Strategies for Health Behaviour, Praise and Comfort and Vulnerability and Triumph. The women were conscious about the importance of healthy lifestyles and tried to correct previous health risk behaviours. Irrespective of the fact that cancer can be both a mentally and physically disabling illness, the period of cancer diagnosis and treatment can be seen as a resourceful time where individuals can decide to make permanent and health promoting changes in their lives.
Conclusion: The women did not make considerable changes in their health behaviour during the treatment or rehabilitation process. The women felt healthy before their cancer diagnosis and continued to be conscious in regard to health promoting behaviour/life style (physical activity, low fat diet, limited alcohol use, smoking cessation). Symptoms and side-effects influenced the women's choice of life-style and health behaviour – the women found themselves in a quandary between wanting to live healthy in accordance with the public recommendations and coping with late side-effects of diagnosis and the treatment – a balance between vulnerability and triumph.

8069 ORAL

A randomised controlled trial of a remote monitoring, mobile phone based, advanced symptom management system in patients with colorectal, lung and breast cancer receiving chemotherapy

R. Maguire[1], N. Kearney[1], L. McCann[1], M. Miller[1], L. Taylor[1], J. Norrie[2], P. Gray[3], M. McGee-Lennon[3], M. Sage[4]. *[1]Cancer Care Research Centre, Nursing and Midwifery, Stirling, United Kingdom; [2]University of Aberdeen, Health Services Research Unit, Aberdeen, United Kingdom; [3]University of Glasgow, Department of Computing Science, Glasgow, United Kingdom; [4]Kelvin Connect, Hillington Innovation Centre, Glasgow, United Kingdom*

Background: The majority of patients with cancer are likely to receive chemotherapy at some stage of their illness. The toxic effects of chemotherapy can be serious/life threatening if not detected early (Kuderer et al, 2006). Furthermore, with the shift of care to the community, patients have to manage side effects without direct supervision from clinicians. The effective monitoring of symptoms in this group is therefore vital. The use of information technology may be used to remotely monitor symptoms in the community setting. The results of a UK wide RCT which evaluated the impact of remote monitoring, mobile phone based advanced symptom management system (ASyMS©) on chemotherapy related toxicity in patients with colorectal, breast and lung cancer will be reported in this paper.
Materials and Methods: Randomised controlled trial of 112 patients from six UK sites using a mobile phone based intervention (ASyMS©). Intervention: Patients completed a symptom questionnaire on the mobile phone for 14 days for 4 cycles of chemotherapy. They received self care advice on the mobile phone on the symptoms that they had just reported. Symptom data was sent to the server where an integrated risk model alerted clinicians in acute care via a 24 hour pager system of symptoms that were of concern/life threatening; they then accessed a secure web page with information on the patient's symptoms and intervened, triaging care to relevant services. Outcome measures: The primary endpoint was chemotherapy related toxicity, measured by patients in both groups completing a paper copy of the symptom questionnaire at baseline and prior to cycles 2−5.
Results: Symptoms that are more amenable to self care, such as fatigue, were significantly improved in the ASyMS© group ($P = 0.04$); with symptoms where there is poor clinical assessment, such as hand-foot syndrome, the ASyMS© group reported higher levels and were more bothered by the symptom ($P = 0.03$). For acute symptoms such as vomiting, there was limited affect.
Conclusions: The monitoring of symptoms using the ASyMS© system is feasible and resulted in significant improvements in patients' symptom experiences. It has the potential to promote a preventative model of care, facilitating early identification of symptoms and initiation of timely interventions.

8070 ORAL

Multiple cancer symptom patient subgroups: impact on quality of life and performance status

K.A.S.L. Ferreira[1], M. Kimura[2], M.J. Teixeira[3], J.C.M. da Nóbrega[4], S.R. Graziani[5]. *[1]School of Nursing and Hospital das Clínicas – University of São Paulo., Medical-Surgery Nursing and Multidisciplinary Pain Center, São Paulo, Brazil; [2]School of Nursing – University of São Paulo, Medical-Surgery Nursing, São Paulo, Brazil; [3]School of Medicine-Multidisciplinary Pain Center, University of São Paulo, Neurosurgery, São Paulo, Brazil; [4]School of Medicine, Multidisciplinary Pain Center, University of São Paulo, Neurosurgery, São Paulo, Brazil; [5]Hospital das Clínicas, School of Medicine, University of São Paulo, Ginecology, São Paulo, Brazil*

Background: Cancer patients present different symptoms simultaneously. The increase in the severity in some of these symptoms has been associated with reduction in general health-related quality of life (HRQOL) and decline in performance status (PS). Unlike previous researches, this study examines not only global HRQOL, but also specific HRQOL domains. The aims of this cross-sectional study were to identify clinically distinguishable groups of patients based on their symptoms severity and to examine their relation to poor HRQOL and PS.
Methods: Data was from a sample of 115 cancer outpatients, who were not receiving active cancer treatment and were recruited in a university hospital in Sao Paulo, Brazil. The EORTC-QLQ-C30 was used to assess HRQOL and symptoms, Beck Depression Inventory to measure depression and Brief Pain Inventory to evaluate pain severity. TwoStep cluster analysis was used to identify patient groups. After patients were categorized into groups based on symptom severity, their risks for poor HRQOL and PS were estimated with logistic regression models. The symptoms considered in the analyses were pain, depression, fatigue, insomnia, constipation, lack of appetite, dyspnea, nausea, vomiting, and diarrhea.