Conclusion: It is expected that the BTCP Nursing Guidelines and complementary pocket-guide will increase nurses' knowledge of BTCP and encourage successful management of these episodes thereby improving the safety and quality of care as well as the quality of life for cancer patients suffering from BTCP.

4176 ORAL

A European Survey of Oncology Nurse Breakthrough Cancer Pain Practices

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Background: Pain management plays an important role in oncology nursing. A survey amongst oncology nurses from 12 European countries was conducted to investigate their views on managing breakthrough cancer pain (BTCP). A more specific aim of the survey was to gain insight into oncology nurse BTCP practice patterns while focusing on their assessment and treatment approaches, level of confidence in managing BTCP episodes, as well as to gain insight into how oncology nurses see BTCP impacting cancer patients' daily life.

Material and Methods: In total 1618 nurses working with cancer patients were recruited, and 1164 completed the questionnaire − a completion rate of 72%.

Results: The most common (71%) understanding of BTCP was 'episodic pain that breaks through the stable background pain'. Almost all (98%) nurses discuss pain management with their patients, with pain relief (85%) and side effects (70%) being the most commonly addressed topics. Nearly half of the nurses (46%) reported not using any form of pain assessment tool and more than half (53%) reported that they have not received any training on BTCP management. The survey revealed that nurses who did not have an assessment tool and/or were not trained in BTCP management found it more difficult to distinguish BTCP from background pain. In terms of medications used to treat BTCP, the majority (57%) of nurses indicated that oral opioids were used to treat BTCP in their clinic, and nearly 40% of nurses responded they were not aware that there is specifically designed medication for BTCP. Most nurses (78%) report that BTCP significantly impacts a patient's life, including daily enjoyment of life, mood, functioning, and sleep. Almost all (81%) have found it difficult to control their patients' pain the last month, which is further reflected in 40% of nurses describing that they do not feel confident in advising patients about BTCP management and in 77% reporting a need for more information about BTCP.

Conclusion: This survey reveals that BTCP represents an area of additional need for education in order to improve patient pain outcomes. The impact of nurse specific BTCP education have been documented as evidenced by the association of pain assessment tools and specific training in BTCP management and the confidence in advising patients about management of their BTCP episodes.

4177 ORAL

Handedness and Pain Experience Four Years After Treatment for a Primary Breast Cancer Among Young Women (ELLIPSE 40 Cohort)

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Background: Pain is one of the most important effects of cancer treatment that dramatically affects Quality of Life and professional re-integration of survivors. However, during cancer survivors follow-up physicians tended to underestimate the somatic morbidity factors generating and maintaining pain, but often overestimated the degree of psychological distress. Women with Breast Cancer (WBC) seem to be more vulnerable to pain because of the global under-treatment and under-management of pain. We assume that factors involving physical characteristics or activity such as handedness, breast plastic surgery, sport activity and hand labor could be associated with long term risk of pain experience among cancer survivors.

Methods: We performed statistical analyses to compare medical, social, physical and psychological factors on pain experience four years after diagnosis among a sample of young biopsy-proven primary WBC survivors enrolled in the ongoing cohort ELLIPSE 40. ELLIPSE 40 is a prospective cohort implemented in 2005 in the South Eastern France district. Data were collected from periodic patient's telephone interviews including, medical physician's mailed questionnaires and National Health Insurance Found (NHFF) databases.

Results: From July 2005 to Mars 2007, 217 agreed to participate to the survey (response rate: 73%), 11 died and 173 women were followed (4-years attrition rate: 17%). We studied pain experience of the 160 survivors (excluding 13 women with cancer recurrence or second cancer). Sixty-one women survivors (39%) felt pain in affected breast area in the two past weeks. When comparing women as regard as pain experience, psychological factors are significantly linked to recent pain experience (Quality of life measured by the Who_QoL Scale, Depression measured by the CESD Scale and religious belief). Concerning physical factors, our data shows after adjustment that breast cancer side associated to handedness remain significantly linked too women with breast tumour side of handedness (right-handed woman with right breast tumour or left-handed with left breast tumour) are more prone to declare a recent pain experience (AOR[CI95%]: 2.2[1.14.6]).

Conclusions: Our results suggest that medical follow-up of Breast Cancer Survivors must take into account chronic pain as a common long term effect of treatment. Furthermore specific attention must be given to physical characteristics of women especially to handedness and initial tumour localization.

4178 ORAL

Effectiveness of Nurse-led Telephone Follow-up (NLTFU) in Symptom Management of Patients With Colorectal Cancer Receiving Oral Chemotherapy

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Background: Oral chemotherapy is increasingly utilized due to its tolerability, convenience and cost-effectiveness. However there are legitimate concerns about the burden placed on patients in managing their treatment and its possible side effects at home. A recent RCT demonstrated that a structured Home Care Program (HCP), including home visits and weekly phone symptom assessment over 6 cycles, assisted colorectal and breast cancer patients in managing therapy side effects more effectively than standard care and reduced unplanned service utilisation. We used key elements from the RCT to develop a clinically feasible and cost effective NLTFU service, over 2 cycles, for colorectal cancer patients on Capecitabine to assess toxicity and to aid early identification of problems. The aim of this study was to assess the impact of NLTFU on symptom control.

Materials and Methods: This was a large clinical audit. Over 2 years we recruited 298 patients with colorectal cancer to a NLTFU program. This consisted of 2 phone calls during the first cycle of chemotherapy and 1 during cycle 2. A computerized proforma was completed after each call to ensure consistency of assessment and to aid data analysis. A total of 685 proforma were completed. A pooled analysis comparing NLTFU data with RCT Home Care and standard care was performed.

Results: Patients who had NLTFU experienced significantly fewer symptoms than patients who had standard care. They had less nausea ($P = 0.0124$), vomiting ($P = 0.0032$), oral mucositis ($P = 0.0039$), chest pain ($P = 0.00005$) and insomnia ($P = 0.0008$) and this improvement was maintained over both treatment cycles for most symptoms. NLTFU was as beneficial as the HCP in regard to mucositis, vomiting and pain ($P > 0.05$). There was a trend towards reduced fatigue, constipation and hand/foot syndrome (but not diarrhoea) in the NLTFU cohort. The HCP was superior to NLTFU and standard care in most symptom domains.

Conclusions: NLTFU enables patients to better manage chemotherapy toxicity than standard care. While the HCP is an excellent care model for patients on oral chemotherapy, there are extra costs and service implications. NLTFU is a viable alternative and is responsive to patient need and clinical resources. It is essential to provide effective support for patients who take on the onerous task of managing chemotherapy treatments at home. Further research should address NLTFU for those on combination chemotherapy.

4179 ORAL

Chemotherapy and Subjective Cognitive Functioning in Breast Cancer Patients

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Background: Although chemotherapy improves the clinical outcome of patients with early-stage breast cancer (BC), it is also known to have severe side-effects. Cognitive impairment after chemotherapy is a reported concern of BC patients, but evidence remains inconclusive. The present aim was to examine the effect of chemotherapy on subjective cognitive dysfunctioning in BC patients (1), and to find psychosocial predictors of subjective cognitive dysfunctioning (2).

Material and Methods: Sixty-five women with BC who receive chemotherapy and 41women with a benign breast problem (BBP) participated in the study. Before chemotherapy started (T1) and three months after ending chemotherapy (and at equal moments for the BBP group) (T2) women completed questionnaires concerning frequency of cognitive complaints, satisfaction with cognitive functioning, fatigue, stress, anxiety, and depression.

Results: No differences in the total score of the frequency of cognitive complaints ($p = 0.753$) and the facets Forgetfulness ($p = 0.963$), Absent-mindedness ($p = 0.832$), and Social recklessness ($p = 0.763$) were found between BC patients and BBP patients. In both groups, a significant increase in the frequency of cognitive complaints and the facets Forgetfulness and Absent-mindedness between T1 and T2 was found ($p < 0.004$). However, social recklessness did not increase significantly ($p = 0.089$). No interaction effect was found ($p > 0.165$). An interaction effect was found in the satisfaction with cognitive functioning ($p = 0.001$). BC patients were less satisfied with their cognitive functioning at T2 compared to their satisfaction at T1. BBP Patients were stable in their satisfaction with cognitive functioning. A higher score on depressive symptoms at T1 was predictive for higher scores on the frequency of cognitive complaints at T2 ($p = 0.003$), and of the satisfaction with subjective cognitive functioning at T2 ($p = 0.018$). Diagnosis did not predict subjective cognitive functioning.

Conclusions: BC Patients do not report more cognitive complaints compared to BBP patients before or after treatment. Both BC and BBP patients experience an increase in cognitive complaints over time. Satisfaction with subjective cognitive functioning decreases over time in BC patients. Depressive symptoms predict the frequency of cognitive complaints and the satisfaction with subjective cognitive functioning. This information can facilitate health care professionals to identify and support women who are at risk for developing cognitive complaints.

4180 ORAL

Using Mobile Phone Technology to Assess Symptoms in Patients Receiving Palliative Care − The Advanced Symptom Management System (ASyMS©-P)

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Background: The use of Telehealth can help to empower individuals experiencing life-limiting illnesses, and their carers, by facilitating the provision of real time communication between patients and health care providers. The ASyMS© system has been developed by the authors as an innovative, nurse-led initiative to improve patient outcomes and enable nurses to deliver a high quality, evidence based, multi-professional model of care to people with advanced disease. This study aimed to test the ASyMS system for the management of symptoms in patients receiving palliative treatment at home and assess the feasibility and acceptability of the system within palliative care practice.

Materials & Methods: The study followed a prospective design and incorporated a mixed methods approach, advocated for the evaluation of new technologies within healthcare (May et al, 2003). This was a 2 phase study: Phase 1 − the development of intervention incorporated; literature review, focus groups; interviews with patients, carers and clinicians; Phase 2 involved, development of assessment tool, risk alert system and self care advice; software developed and incorporated into mobile phone; testing of system with purposive sample of patients and HCP's in 2 health board areas of Scotland. To assess the suitability of outcome measures for use in a future RCT, 4 standard outcome measures were used; POS; Self care efficacy scale; state trait anxiety and FACIT-Pal. Throughout one month of care (once a day), patients completed the symptom questionnaire using the mobile phone and this 'real time' symptom information sent to the study server. The risk model developed in phase 1 of the study was incorporated into the study server identified symptom reports of concern.

Results indicate that ASyMS©-P is acceptable and useable to patients; All patients found the individualised elf care advice helpful, and patients reporting better communication with their health professional. However professionals perception data revealed that they found the tool less helpful. The assessment tool employed in ASyMS©-P has been shown to be reliable and valid; the alert system allows for early intervention:

Patients and HCP's valued the content and delivery of the self care advice.

Conclusion ASyMS©-P is acceptable and useable with patients and enables accurate patient centred symptom assessment to be undertaken and patients to receive useful individualised self care advice on their symptoms.

Poster Presentations

Nursing Oncology − Advanced Nursing Roles

4181 POSTER

Trends in the English Cancer Nurse Specialist Workforce (2007–2010)

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Background: The English Cancer Clinical Nurse Specialist (CNS) workforce has grown sharply in the last forty years. However, a lack of specialist workforce planning created a vacuum, which hospitals filled by developing and recruiting CNS posts in an enthusiastic, but relatively uncoordinated manner.

Financial cutbacks in the English public sector, including the NHS, have meant that those responsible for funding services have had to examine the value of these roles. The perception that the CNS role is an expensive luxury rather than an essential service provider has dominated the issue. A weakness in the argument for the value of these posts has centred around the lack of robust empirical data on this workforce.

To counter this lack of data, a national census of the CNS workforce was carried out in 2007, 2008 and subsequently in 2010 (the last commissioned by the National Cancer Action team (NCAT) and supported by the Workforce Review Team (WRT).

Objective: To identify any themes highlighted by the data and to determine if the data captured by the censuses has been used proactively to support workforce planning.

Method: A comparable analysis of the CNS data recorded between 2007 and 2010.

Results: The data shows that despite national policy there is a wide variance in CNS provision by both locality and pathology. This implies a lack of equality in access to a CNS for patients The information captured reveals a plethora of different specialist titles. There appears to be an increase in some CNS posts from 2007–2010 in particular the rarer cancers. This intelligence has informed cancer policy and been used by the voluntary sector. Some cancer networks have used the CNS data to support commissioning.

Conclusions: It is clear that carrying out a national census of the specialist cancer workforce has been extremely valuable, as a result other parts of the cancer nursing workforce are being mapped. Management and responsibility of the census has now been taken up centrally and plans are in development to carry it out bi-annually.

4182 POSTER

Nurse-led Clinics Benefit Patients on Adjuvant Herceptin

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Background: The introduction of adjuvant Trastuzumab (Herceptin) in 2006 demonstrated a clear reduction in the recurrence of breast cancer, however this has placed increasing demands on existing clinical services.

Material and Methods: In 2007 nurse-led clinics were set up in one large cancer centre in the UK to streamline the clinical management of patients on adjuvant Trastuzumab, improve continuity and monitor cardiac safety. The nurses were able to prescribe independently and undertake breast/ cardiac examinations, thus providing a fully autonomous nurse-led service. Two separate clinical audits were conducted to evaluate cardiac issues and patient satisfaction.

Results: The nurse-led service has developed over the years in line with clinical evidence/changes to cardiac guidelines and clinical trials. Nurse clinicians extended their scope of practice to prescribe supportive cardiac medication for patients if the Left Ventricular Ejection Fraction fell below 50%, which meant that a greater number of patients were able to complete all 18 cycles of Herceptin.

A combination of clinic and telephone consultations have been designed to improve services for patients, yet maintain safety. Two audits resulted in 225 completed patient questionnaires. Patient satisfaction increased from 88% to 97% and patient concerns about cardiac issues reduced from 26% to 14%. In addition, cardiac safety improved alongside developments in nurse-led cardiac monitoring.

Conclusions: The development of nurse-led clinics has shown consistent improvements over four years in the clinical management of patients on adjuvant Herceptin. This has provided clear benefits for patients by developing fully autonomous nurse-led clinics, including continuity for patients, high levels of patient satisfaction, improved cardiac safety and an increase in the number of patients completing the full course of Herceptin. Having both clinics and telephone consultations provides flexibility and increased choice for patients, whilst maintaining safety and cost-effective services.