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

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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

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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

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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.

Results: Cluster analysis resulted in the identification of two groups as the optimal number of groups based on symptom severity, one with high symptom severity and another with low symptom severity. These groups differ in their symptom severities with effect sizes ranging from 0.53 to 1.92 as a function of their corresponding standard deviations. Significant difference was only observed in presence of metastases ($p = 0.046$) but not in demographic characteristics, and prior cancer treatment between the groups. The group of patients who reported high symptom severity had significantly ($p < 0.001$) lower scores in PS, and general, physical, emotional, cognitive and social QOL. This group also had higher chance for poor PS (OR = 4.13, 95% CI = 1.6−10.8) adjusted by presence of metastases, and for lower HRQOL (general, OR = 4.01, 95% CI = 1.8−9.1; physical, OR = 4.43, 95% CI = 2.0−10.9; cognitive, OR = 2.83, 95% CI = 1.8−6.9; emotional, OR = 4.91, 95% CI = 2.0−12.5; social, OR = 3.15, 95% CI = 1.2−8.6) independent of gender, age, and economic condition.

Conclusions: Patients who present multiple symptoms with high severity are more likely to have poor physical, emotional, cognitive, and general HRQOL and impaired PS than those who present multiple symptoms with lower severity.

8071 ORAL

Patients' symptom experience: 'being on a desert island' – anxiety and management options following the acute treatment phase

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Background: Providing clear information to patients with cancer before and during acute treatment and in palliative care is well recognised. However little is known about the information needs of patients who are about to finish their acute treatment phase and receive a further prognosis. This is important because great anxiety is experienced at this stage which migh be easily managed.

Methods: We recrutied 124 cancer patietns who were interviewed at 4 timepoints in their illness trajectory: immediately after diagnosis, at 3, 6 and 12 months. Here we present the qualitative part of the research from the first 2 time-points. We analysed the narrative data using the framework approach faciliating thematic analysis.

Results: Patients enter cancer treatment totally committed to the goal of having their disease cured or of slowing down its progression. At the acute treatment stage patients receive a wealth of information. They are also involved in highly structured, well supported and organised management regimes. At the end of this treatment phase, there is often a substantial delay in receiving feedback on the succes or otherwide of treatment. This period is full of unavoidable existential anxiety deriving from uncertainty regarding treatment outcomes. Compounding such anxiety however, are substantial concerns deriving from uncertainty over follow-up arrangements: the when, where and how of follow-up. Patients report information at this time to be insufficient or indeed contradictory, resulting in concerns over whether they should be adopting a more proactive attitude in organisaing treatment follow-up. In comparision with their previous experience of a highly structured and organised treatment period, patients feel like they have been left 'on a desert island'.

Conclusions: Nurses, as providers of holistic care, must offer more structured, clear and concise information to patients on follow-up procedures at the end of their acute treatment phase and improve coordination between healthcare professionals.

Joint EONS/ESO symposium

(Wed, 26 Sep, 13:45−15:45)

The role of the breast cancer nurse

8072 INVITED

The role of the breast care nurse

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In Europe a lot of women each year get the diagnose breast cancer. There is more and more social awareness which leads to an increase of worried patients who visit out patient (breast) clinics. Therefore it takes more and more time to rule out breast cancer.

Nowadays patients are better informed (internet), more articulated and critical. Guidelines are more individualized and there are more decision-making points. Patients appreciated more time for communication in the diagnostic as well in the follow-up period of their treatment. It takes a lot of time to inform the patient thoroughly. The specialist doesn't have that amount of time. These developments were reason for the Netherlands to employ breast care nurses (BCN). It is highly recommended in the Dutch guidelines and now a days every hospital has one.

The role of the BCN is different in many countries of Europe and there is a severe lack of an evidence-based description of the role of the BCN. Each country and even each hospital has it's own opinion whether or not they want to employ a BCN and if they do, what the role of that person must be.

Definition of a breast care nurse: In general a BCN is a nurse who gives nursing care to women with breast cancer before, during and after treatment. The BCN has advanced knowledge of the health needs, preferences and circumstances of the patient. There are five domains of practice identified: supportive care, collaborative care, coordinate care, information provision and education and clinical leadership.

Patients are very satisfied and report receiving a lot of support, counseling and information from the BCN. The availability of a BCN would affect their choice of hospital.

Tasks of a BCN: *Preoperative*: Information delivery (operation procedure, procedure around operation, expectations), nursing history for ward, coordination/continuity of the care, intermediary between patient and specialist (patients advocate), psychological guidance and support and easily reachable and accessible. *Postoperative*: Visiting patient at ward, information delivery (wound/breast prosthesis, dismissal procedure, mode of life), drain removal/wound check-up, fluid puncture, psychological guidance and easily reachable and easy accessible.

Conclusion: The BCN is an important person for the breast cancer patient during diagnostic, treatment and follow-up period. It is therefore important to do scientific research in all of Europe to prove importance and to create a uniform role of the BCN.

8073 INVITED

A nurse is a nurse? A systematic review of the effectiveness of specialised nursing in breast cancer

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Objective: In Anglo-American and Scandinavian countries, the nursing of women in breast centres has been provided by specialised nurses, namely Breast Care Nurses (BCN), for at least the past 20 years. Nevertheless effectiveness of specialised nursing care in breast cancer has received limited attention. Therefore a systematic literature review was conducted, aiming at presenting and discussing role models of specialised nursing in the area of breast cancer and suggesting avenues for future research in this field.

Method: The review is based on a systematic search of the medical databases MEDLINE and CINAHL for articles published between 1980 and 2006. Studies were selected according to predefined inclusion and exclusion criteria. All randomized controlled trials or clinical trials were included. Study selection, data extraction, and assessment of methodological quality were performed independently by 2 reviewers.

Results: 12 studies could be included in the review. Outcomes of specialised nursing were classified in six inductively developed dimensions: improvements of physical impairment, psychosocial problems, patient satisfaction, decision making processes, collaboration in a multiprofessional teams, and improvement of costs. The studies differ with respect to the roles of specialised nursing as well as of the measured outcome variables; thus, the comparability and generalisability of results are limited. Findings indicate that specialised nursing in breast cancer may contribute to improved physical and psycho-social well-being.

Conclusion: In view of the limited comparability, the authors call for (i) a more uniform definition of models of specialised nursing in breast cancer care, as well as (ii) rigorous confirmatory studies to evaluate their effectiveness. These two aspects are pivotal in providing a reliable basis for future health care strategies.

8074 INVITED

European survey of the breast care nurses' role

Y. Wengström. *Sweden*

Abstract not received.

8075 INVITED

Accreditation of breast care clinics in Europe

A. Costa. *European School of Oncology, Director, Milan, Italy*

In October 1998 the First European Breast Cancer Conference took place, jointly organised by the EORTC Breast Cancer Cooperative Group, EUSOMA and Europa Donna.