

and proposals. However the tool alone isn't enough, it become an important tool only if included in a integrated project of improvement of care quality and of development of professional culture oriented to the nurse research and of the using evidence in the own professional practice.

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POSTER

#### Urinary Neopterin Concentrations at Screening Predict Serious Adverse Events in Cancer Patients Enrolled in Clinical Trials

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**Background:** Clinical trials are essential for the progress of cancer therapy, but risk and benefit of experimental therapy should be carefully assessed in each individual patient. Biomarkers that would identify patients with high risk of adverse event are urgently needed for optimal patient management from the medical as well as nursing perspective. Neopterin, a product of activated macrophages, is a well-defined prognostic biomarker in cancer patients. In previous studies, increased neopterin was also associated with the toxicity of anticancer therapy. From a practical nursing perspective, determination of neopterin could be of advantage because measurement could be performed in urine, without the need for venepuncture.

**Material and Methods:** One-hundred and twenty-eight cancer patients screened for inclusion in clinical trials at a single site were studied. Neopterin/creatinine ratio was determined in morning urine samples obtained at the screening visit by high performance liquid chromatography. Differences were examined by Mann-Whitney test, and correlations were studied with Spearman's rank correlation coefficient. The decision on statistical significance was based on  $p=0.05$ .

**Results:** A non-significant trend of higher neopterin concentrations was observed in patients who were excluded ( $n=16$ ) from enrollment (mean  $\pm$  standard deviation  $305 \pm 196$  vs.  $232 \pm 152$   $\mu\text{mol/mol}$  creatinine;  $p=0.12$ ). Urinary neopterin was significantly increased in 18 patients who subsequently had serious adverse event ( $350 \pm 223$  vs.  $210 \pm 124$   $\mu\text{mol/mol}$  creatinine;  $p=0.003$ ). A significant correlation between neopterin and Karnofsky performance status was also noted ( $r_s = -0.24$ ;  $p=0.008$ ).

**Conclusions:** Urinary neopterin correlates with performance status in cancer patients. Neopterin could represent a biomarker of risk of serious complications in clinical trials.

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POSTER

#### Development and Psychometric Validation of an Evaluation Instrument for a Breast Cancer Nursing Consult

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**Background:** Nursing consultations are a new development in breast cancer care in Belgium. A breast cancer consult refers to the meetings in which support is given by the breast care nurse to the specific care demands of breast cancer patients. It is essential to assess patients' experiences and perspectives about this new care development. The aim of this study is to offer breast care nurses (BCN) a validated instrument to evaluate their breast cancer nursing consult.

**Method:** A literature review was performed to identify patients' expectations about nursing consultations and the desired support in relation to their needs. In addition, the data of four qualitative studies about breast cancer patients' experiences (45 semi-structured interviews with breast cancer patients and four focus group interviews with BCN) were reviewed in order to develop the evaluation instrument.

Face validity of the instrument was assessed by breast cancer patients, BCN and nurse specialists.

Psychometric validity (internal consistency, stability and construct validity) of the instrument will be evaluated among a convenience sample of 80 breast cancer patients.

**Results:** A 71-item instrument was developed. Comprehensibility and phrasing of each question was assessed by eight breast cancer patients. Major revisions were performed and seven questions were added to the questionnaire. Questions were classified in nine themes, reflecting important aspects of nursing consultations and breast cancer care. The relevance of each question was assessed by 15 BCN. Discussion raised about 32 items which had both high and low relevance-scores. Consensus was sought in two panel discussions with eight BCN. Seven questions were deleted and eight questions were reformulated. Another four questions were removed as BCN found them to overlap with other items in the questionnaire. Finally four new relevant items, as suggested by the BCN, were included. The final questionnaire consisted 71 items.

The subdivision of questions among nine themes was assessed by eight nurse specialists. The appropriateness of the classification was evaluated. Thirteen items, which were classified under two possible themes, were ranked under the theme with the highest mean score. Only one item with a low mean score was replaced after a second assessment of the nurse specialists.

**Conclusion:** This study is the first step in the validation of an evidence-informed instrument to evaluate breast cancer care of a nursing consultation. Validity of the instrument will be evaluated by 80 breast cancer patients between April 2011 and June 2011. The preliminary data, available in August 2011, will reveal an insight in the psychometric properties of this new evaluation instrument. At the same time, questionnaires are being disseminated to a larger sample of approximately 300 patients to increase the validity of this new developed instrument.

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POSTER

#### Establishing Safety Culture Between the Members of Healthcare Team

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**Background:** Safety culture is a combination of values, approaches, perceptions, qualifications and behaviour patterns of individuals or groups that determine support, manner and ability for management of healthcare practice and safety issues. European Commission estimates that safety complications happen in 8 to 14% of hospitalizations in Europe. In 2010 Slovenian Ministry of Health issued a National quality and safety strategy in healthcare (2010–2015). The goal of the strategy is to achieve a total quality management and high safety of healthcare services through introduction of culture of continuous improvement and systematic connecting.

**Material and Methods:** Members of the multiprofessional healthcare team at the medical oncology unit at the Institute of Oncology Ljubljana decided to improve quality and safety in routine work processes with different approach. In previous practices our approaches to management of safety issues were unsystematic, mostly oriented in major complications, and were dealt within particular professional groups, and rarely in connection with other professional team members. The described approaches proved to be ineffective in safety management. With increased complexity of systemic cancer treatments, the need for connecting all professional groups involved in patient care, for centered patient care, for evidence based care, and for continuous evaluation of routine work processes and introduction of change when necessary, aroused. We decided to place safety and quality of patient care as a priority of each team member, irrespective of position and profession. Vital importance to our new approach was systematic awareness and reporting of safety complications and its management.

**Results:** In 2011 we have started systematically performing safety meetings of all healthcare professionals and other personnel involved in patient care safety events. At the safety meeting we analyze the event, we discuss and agree on necessary measures and write a report. On this basis we introduce agreed safety measures and changes in patient care to prevent repetition of safety complications. We are very aware that we must collaborate and share information if we want to reduce safety complications and that every team member can contribute to safety of patient care. At this point we are still learning about open communication, analyzing and reporting of safety events without assigning the blame to individual team members, but rather to focus on system improvement. The poster will present an evaluation data of new management of safety events.

**Conclusions:** With until now performed safety meetings we managed to capture many deficiencies in our system of patient care, which would otherwise remain unsolved and concealed. Safety meetings definitely help improve patient safety but we still have a lot to learn on our journey toward improved safety culture.

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POSTER

#### Development and Area Adaptation of Flow Charts Related to Gynecologic Oncology Nursing Practices

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**Aim:** This study is planned to be a one grouped semi-experimental research to develop and adapt the flow charts of the nursing practices applied to gynecologic oncology patients to the field.

**Methods:** The research was conducted between October 2008 and March 2009 in 6 hospitals in Istanbul (3 health ministry hospitals, 2 private

hospitals and 1 university hospital) where their effective programs they practice. The scope of the study included 97 midwives/nurses who had been working as caregivers of gynecologic oncology patients in this unit at least for 6 months and who participated in this study voluntarily; 87 people composed the sampling because of the absence of nurses who were on vacation or on sick leave when the data were collected and who didn't want to participate in the study. The data were formed by descriptive information form and by the researchers and then collected via "Forms to Determine the Efficiency of Flow Charts". Before data collection process, the risks related to gynecologic oncology problems were identified, the literature scanning was made to search the existence of flow charts based on the practices and the discovered charts were reviewed so the efforts to create a flow chart began. As a result of the evaluations, it was decided to create 15 flow charts intended for risks, symptoms, operation processes and discharge. Questionnaires to determine the activity were applied to participants before and after the practice.

**Results:** As a result of the study, it was determined that the efficiency of the flow charts increased significantly ( $p < 0.01$ ) after the practice of the participants and there wasn't a significant relationship ( $p > 0.01$ ) between the age group, education level, occupational period in this job and in the gynecologic oncology field and their evaluations of the practice before and after it was applied.

**Conclusion:** The results of the study revealed that participants who worked in the nursing staff; who worked in university and private hospitals and who supported the existence of a flow chart in the field evaluated the flow charts positively.

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POSTER

#### Evaluation of a Trichometer to Quantify the Prevention of Hair Loss by Scalp Cooling During Chemotherapy

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**Background:** Alopecia is a distressing and common side effect of chemotherapy. Scalp cooling during chemotherapy may be a safe and effective method of preventing hair loss in medical oncology. Results vary and depend on many factors, such as type and dose of chemotherapy. Since there is a need for objective grading systems for alopecia, we have investigated the use of a trichometer to quantify hair loss.

**Material and Methods:** The trichometer (Hair check<sup>®</sup>) is a device that measures the quantity of hair (the product of number of hairs and their diameters) in a defined area of the scalp. The range of normal values when measuring fine to coarse hair with a trichometer is 75–100 Hair Mass Index (HMI). Patients with early breast cancer were treated at the Medical Centre Alkmaar with six cycles of adjuvant FEC chemotherapy (5-fluorouracil 500 mg/m<sup>2</sup>, epirubicin 100 mg/m<sup>2</sup>, cyclophosphamide 500 mg/m<sup>2</sup>) in combination with scalp cooling using the Paxman<sup>®</sup> PSC1 system. After informed consent, hair quantity was measured at the temporal area with a trichometer before each chemotherapy cycle.

**Results:** Since July 2010, 14 patients have been examined in this pilot study. The mean HMI before and after six cycles of chemotherapy was 63 (range:32–92) and 37 (range 29–45), respectively. Hair mass declined after each cycle of chemotherapy (mean values: 13 HMI after cycle 1, 11 HMI after cycle 2, 4 HMI after cycle 3–6). Due to unacceptable hair loss five patients stopped scalp cooling after the first cycle of chemotherapy and one after three cycles.

**Conclusions:** In patients treated with adjuvant FEC chemotherapy and scalp cooling, most hair loss is seen after the first two cycles. After that, only slight hair loss occurs. This study will be continued to collect information to optimise the scalp cooling protocol and improve outcome in preventing alopecia. Updated data will be presented during the ECCO conference.

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POSTER

#### Educating Nurses for Provision of Care to Cancer Patients Outside of Cancer Centre

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**Background:** Institute of Oncology Ljubljana is the only cancer centre in Slovenia. It provides cancer care services on the secondary and tertiary level. As cancer care is becoming more complex with increasing complexity of cancer treatment delivery, throughput of patients is higher every year, bed stays are short, the use of ambulatory care and oral medication is increasing, it is not possible to offer integrated cancer care to all patients at the only oncology centre in Slovenia. Current situation has shifted care

from cancer centre to general hospitals and home and created the need for widening cancer knowledge to nurses working at secondary (general hospitals) and primary (nurses working with general practitioners and community nurses) level of healthcare system.

**Material and Methods:** Much of the cancer nursing provision is cancer centre based, however clearly much of the care is now being provided in general hospital and in community and general health care settings. The need to up skill nurses working in those settings became one of our priorities. In the last two years we performed a number of educational programs tailored to the specific knowledge needs of nurses caring for cancer patients outside of our cancer centre. Contents of the educational programs included currently most relevant topics in cancer nursing. Delivery of knowledge and skills was provided in different mode from day seminars and workshops to extensive and intensive training.

**Results:** In 2009 and 2010 a number of educational programs were performed for nurses from different levels of healthcare system.

Content	Mode of education	No of nurses from cancer centre	No of nurses from tertiary and secondary level	No of nurses from primary level	No of nurses from other institutions
Care of cancer patients on oral systemic treatment	One day seminar	130	13	18	6
Care of cancer patients on systemic treatment	One day seminar and workshops	54	19	3	7
Care of cancer patients on systemic treatment – specialist nursing training	4 to 12 weeks training, duration dependent on previous experiences in cancer nursing	/	4	/	/
Caring for cancer patient with vascular access port	Workshop	/	58	37	4
Wound management in cancer care	One day seminar	53	8	26	11

**Conclusions:** Education is clearly an important tool for up skill of nurses for provision of care to cancer patients outside of cancer centre. Education not only improves care, but can enhance patient outcomes. Evidence is limited as to whether current educational provision is fit for purpose in meeting care demands. In future process and outcome evaluation of performed education will also be required.

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POSTER

#### Evaluation of the Clinical Nurse Specialist Input Into the Breast Reconstruction Pathway at Guys & St Thomas' Hospital Foundation Trust (GSTT): Addressing the Unmet Support Needs of Patients Undergoing Breast Reconstruction

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**Background:** Between April 2010 and April 2011, 250 patients underwent breast reconstruction at GSTT – A London cancer treatment centre. All patients diagnosed with breast cancer are offered immediate reconstruction at the time of initial surgery.

It is acknowledged that women considering reconstruction have unmet emotional & physical needs as well as important goals and concerns that can affect their decisions about an experience of reconstruction. In particular, some breast cancer patients have unmet needs and are unprepared for the full effect of surgery on their lives & for the recovery process (Lee et al, 2010). The literature highlights the importance of being offered good information & support from the clinical nurse specialist at all stages of the reconstruction pathway (Ganz et al 1992, The National mastectomy & breast reconstruction audit, 2011).

**Materials and Methods:** Both informal and formal patient feedback highlighted patients feeling isolated and unsupported following breast reconstruction. This led us to review the current patient pathway and CNS input at the reconstruction stage of the patient experience. Gaps in the service were highlighted which enabled us to define a very patient focused pathway whereby patients are supported at key points in the pathway by the CNS to assist with decision making and support needs following surgery.

**Result:** Following review of the service, a structured nurse led pre assessment clinic has been set up with input from other allied health professionals to address the specific needs of a patient having immediate breast reconstruction.