

## Plenary Lecture

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### **Implementation of new biological knowledge into cancer management**

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**Background:** In the last few years, progress in molecular biology has improved our understanding of the biology of cancers and has consequently influenced our management of these diseases in terms of prevention, individualization of treatment, and supportive measures. Progress in molecular genetics has identified subgroups of people at high risk for developing cancer. For example, women with BRCA<sub>1,2</sub> gene mutations are at high risk for breast and ovarian cancers, leading clinicians to propose prophylactic oophorectomy and mastectomy and to accelerate the search for chemopreventive agents.

**Recent developments:** Analysis of the genetic profiles of tumors through microarray technology is emerging as a powerful prognostic tool that, in the near future, might be used to individualize the treatment of cancer patients (e.g., in breast cancers and lymphomas) and as a predictive tool that might facilitate treatment "tailoring".

Developments in molecular biology have also led to the discovery of specific abnormalities in cancer genes responsible for cancer proliferation, invasion and angiogenesis. These abnormalities are currently the target of many new anti-cancer agents called "molecular-targeted therapies". Glivec<sup>®</sup> (anti C-kit) for the treatment of gastrointestinal stromal tumors, and Herceptin<sup>®</sup> (anti HER-2/neu) for the treatment of breast cancer are among these interesting agents.

As a result of the cross-talk observed between cancer cells and their microenvironment via cytokines and growth factors, research has begun to target these signals at the level of cancer cells as well as at the level of normal ones that are under the influence of tumor cells, for example osteoclasts and osteoblasts. The latter has enabled the development of efficient supportive measures (bisphosphonates).

A major challenge to the oncology community is how best to develop these agents in the clinic (e.g., maximum tolerated dose versus biologically active dose; bulky versus residual disease; and so on). Indeed, the last few months have witnessed the failure of some new biologic agents to improve patient outcome in large phase III clinical trials. Another challenge will be to elucidate "resistance mechanisms" of cancer cells exposed to these new highly specific target therapies.

Finally, molecular biology techniques enable the detection of a limited number of cancer cells in lymph nodes, blood and bone marrow. The clinical significance of these cells is under investigation.

**Conclusions:** We are very fortunate to witness the transition from "empirical oncology" to "molecular oncology". For oncology nurses as well as for oncologists, this transition will bring a number of challenges, including the need to cope with a rapidly expanding "targeted" drug list.

## Proffered Papers

### Research in oncology nursing

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#### **The treatment decision-making preferences of people with colorectal cancer**

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**Background:** Although policy documents in the UK encourage patient participation in treatment decision making it is not clear if patients diagnosed with colorectal cancer are comfortable with the role of active decision maker. The preferences that patients have for participating in treatment decision-making and the reasons that underpin those preferences are

poorly understood. This study explores decision making preferences and develops a measurement instrument for determining patients preferences for engaging in the decision making process.

**Methods:** A two-stage study was undertaken using qualitative and quantitative approaches.

Stage 1 investigated the views of patients (n=41) and health professionals (n=35) on patient involvement in treatment decision-making using semi-structured interviews.

Stage 2 involved the development of an attitude rating scale that measured patient preferences for involvement in decision-making, using a cross sectional survey approach (n=375).

**Results:** Stage 1. Availability of treatment choices was dependent on stage of disease. Patients and health professionals perceived that choices were limited at initial primary surgery but were available in the adjuvant stages of treatment. Anxieties were raised for patients when asked to make treatment choices, preferring that doctors made decisions on their behalf. Trust in health care professionals based on medical expertise was a pertinent issue. Participation was a difficult concept for patients to comprehend and a preference for involvement' rather than participation' was expressed.

Stage 2. A 27-item scale was constructed from stage 1 findings and factor analysis techniques were employed to analyse data. A number of pertinent factors were extracted using this statistical technique. The most important factors related to involvement in decision-making, trust in medical expertise and information sharing.

**Conclusion:** Involvement rather than participation may be a role that more accurately reflects patients' preferences with regard to treatment decision-making. Policy makers should acknowledge preferences for involvement rather than advocating a participatory role for all.

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### The emerging role of the cancer research nurse in promoting evidence based care in radiotherapy.

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**Background:** The management of treatment toxicity by patients and health professionals continues to play a central role in radiotherapy practice. For care to be most effective, it is vital that interventions are informed by current and appropriate knowledge. The purpose of this work is to illustrate the emerging role of the cancer research nurse in promoting evidence based practice relating to the management of radiotherapy toxicity.

**Material and Methods:** Studies of early and late effects of radiotherapy treatment have been carried out at the Christie Hospital. Systematic recording of treatment effects using patient questionnaires devised from the LENT SOMA scoring system have been undertaken in retrospective and prospective studies. A qualitative study of sexual health following cervical cancer treatment is being conducted. A prospective study exploring the association between acute skin reactions and perineal irradiation has also been carried out.

**Results:** The systematic recording of treatment toxicity in different disease groups has identified the incidence, severity, and complexity of radiotherapy treatment side effects and the presence of unmet patient and health care professional needs. These studies have demonstrated the value of using comprehensive reporting systems not only to investigate factors which influence treatment side effects such as treatment, dose and fractionation, but also each system's ability to identify patient's problems. The studies have demonstrated the need for appropriate referral, support and management by research nurses. As a result of this, work is ongoing with treatment teams relating to the quality and timeliness of patient information. This also includes information for nursing staff regarding treatment regimes, information flow between care settings and the incorporation of a comprehensive system for assessing and recording of acute and late treatment effects into routine practice.

Lastly, the research nurses are also involved in nurse education programs and staff development events promoting evidence based care in relation to radiotherapy toxicity.

**Conclusions:** The radiotherapy cancer research nurses' role continues to evolve. The systematic collection of detailed patient data of treatment side effects continues to provide high quality comprehensive data that health professionals require to minimise treatment side effects, and that multidisciplinary treating teams require in order to develop evidence based guidelines and care.

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### Barriers in implementing research findings in cancer care. The Hellenic registered nurses perceptions

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**Background:** This study is the final step of an educational research program organized by The Greek Oncology Nursing Society and supported by EONS ROCHE grand 2002. The study aimed at exploring Greek nurses' opinion about barriers to research utilization faced in every day practice and at comparing these barriers between nurses working in oncology and general hospitals, as well as, at central and provincial hospitals.

**Materials and methods:** The instrument consisted of three parts, introduction, demographic data and the Barriers Scale (S. Funk et al 1991). The data was provided by a convenience sample of 301 nurses working in 12 randomly selected hospitals all over the country. Permission was obtained from Funk to use her instrument. Permission to undertake the study was obtained by Board Directors and Scientific Committee of each selected hospitals. Data were analyzed at the Statistical package for Social Sciences (SPSS) software, version 10.

**Results:** The vast majority of the respondents were female (85.4%) The mean age was 37,5 years and 23,5% subjects were younger than 30 years old. Almost half of the nurses worked in oncology (47.5%) and half in general hospitals (52,5%). The majority worked in the clinical setting (89.9%), and a minority had an administrative (6,8%) or at in service education position (3,3%). Moreover (51.8%) were working in central hospitals (in Attica) and (48.2%) in provincial ones. The top two barriers were related with the availability of research findings. The question "research report and articles are not readily available" was rated as the greatest barrier. The lowest barrier was "The nurse is unwilling to change/try new ideas". English language was considered as a moderate to a great barrier for the vast majority of participants (78%). Nurses who did not have internet access perceived the presentation of research as a great barrier. No significant differences were found between the types of hospital (oncology/general) and geographical area (central/provincial).

**Conclusion:** This paper has pointed out some areas where actions could be taken to promote research implementation. Specific plans may need to be developed in particular areas, probably taking advantage of international experience.

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### Use of complementary methods by Icelandic cancer patients

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Complementary method is defined as a method used by patients undergoing conventional medical treatment to complement mainstream health care. The main purpose of this study was to examine the use of complementary methods by patients undergoing cancer treatment. A survey instrument originally by Eisenberg et al. (1993) and adapted to cancer patients by Sparber et al. (2000) was translated and adapted to Icelandic cancer patients. A convenience sample of 121 patients undergoing cancer treatment was recruited from an outpatient oncology/hematology department.

The findings show that the majority of study participants (97%) used at least one complementary method with an average use of 6 methods/patient. Women used significantly more methods (6, 95) than men (4, 15). The most frequent reported methods were herbs and natural substances (70%), exercise (69%) and spiritual methods (69%). The main reasons for the use of complementary methods were: to do everything that can help (46%); responsibility for one's own health (41%) and to manage side-effects of cancer treatment. Only 41% and 29% discussed the use of complementary methods with their physicians and nurses respectively.

Significantly more use of complementary methods was observed among patients who had used such methods before being diagnosed with cancer. The use of relaxation, massage and spiritual methods was significantly higher among women than men. The use of relaxation and energy methods were significantly higher among young than old patients whereas swimming was significantly higher among older patients. The use of natural substances, herbs and spiritual methods was significantly more frequent among those with less than high school education than among those with more education.

Icelandic cancer patients undergoing cancer treatment seem to be frequent users of various complementary methods and the prevalence is higher than has been observed in other countries. Oncology nurses need to make an effort to assess, discuss and educate about the use of complementary methods in regard to issues of well-being and safety.

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### How electronic nursing documentation can demonstrate oncology nursing

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**Background.** Nursing documentation has the ability to provide a picture of actual nursing practice. Furthermore the use of standardised language and classification systems makes it possible to cluster related concepts and to