care advice, tailored towards the nature and severity of symptoms that they have reported. Using a modem, patients then transfer their symptom information to a nurse at the specialist cancer centre. If the symptoms are consistently severe or out with expected norms', the system will alert the nurse via a pager who will then contact the patient, following a specific protocol. All contacts and action taken are documented. Daily symptom reports are collated into a cycle symptom report for review prior to the patients' subsequent cycle of chemotherapy.

Results: The feasibility and acceptability of the handheld technology to patients and health professionals forms the basis of the results. Patients have responded positively to initial pilot work with the handheld computer system and recruitment is currently ongoing. Full results will be available by September, 2003.

Conclusions: It is anticipated that this unique information and communication system will not only enhance continuity of care and resource allocation but will be used to build an individual profile of symptoms, ensuring that patients' previous experiences are used to shape their future care, promoting the concept of individualised patient directed care.

Reference

[1] Wagemann CP and Tossier C (2002) Documentation goes wireless: a look at mobile healthcare computing devices *Journal of AHIMA* 73:8:36-9

1207 POSTER

Dendritic cell-based vaccines: implication for oncology nursing

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Background: In ongoing clinical studies at our institute dendritic cell vacines are investigated for their capacity to induce anti-tumor immune responses in patients with various tumor types. At the department of Medical Oncology stage IV (protocol A) and stage III (protocol B) melanoma patients are treated with peptide-pulsed dendritic cells (DC).

Materials and methods: DC are obtained from patients by leukaferesis followed by cell culture. In protocol A the DC are injected 3 times iv./id., followed by 3 vaccinations of peptide alone. The primary endpoint is the immune response. In protocol B the DC are visualised by radioactive Indium and are injected id or intranodally prior to a radical lymph node resection. Subsequently patients are vaccinated 3 times in combination with IL-2. Migration of DC to lymphnodes is the primary endpoint. After each vaccination immunological responses are measured in peripheral blood. After the last vaccination a delayed type hypersensitivity skin test is performed from which biopsies are taken.

Results: To date 43 patients have been treated (31 stage IV, 12 stage III) and several objective clinical responses have been observed. Side effects were limited to malaise, fever, rigors, chills, and local reactions at the injection site

Oncology research nurses are involved in this program in informing patients, psychological support, instruction of injecting IL-2, monitoring side effects and logistics. In the future research nurses will be involved in performing skin tests and vaccinating patients.

Conclusions: We will discuss the implications of experimental treatment modalities such as DC-vaccins for oncology nursing in daily practice.

1208 POSTER

Advanced, computerised cold cap for preventing chemotherapy induced alopecia.

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Background: Besides nausea/vomiting and fatigue, patients receiving chemotherapy experience alopecia as one of the worst side effects. Purpose: The purpose of the present study is 1) to evaluate if it is possible to prevent chemotherapy-related alopecia by using an advanced, computerised cold cap, 2) to evaluate the side effects, and 3) to evaluate the cost.

Material and methods: Patients with primary breast cancer receiving adjuvant chemotherapy, 5-FU, epirubicin, and cyclophosphamide (FEC). The cold cap used has several advantages: 1) it is possible to regulate the temperature individually, 2) the time of cooling down can be prolonged to minimise the discomfort, and 3) data from the treatment session are monitored and recorded automatically. All patients received seven courses of FEC. Before every course the patients were pre-cooled for 20 minutes (3C or 5C depending on the thickness of the hair). The post-cooling time after discontinuation depended on the actual dose of epirubicin given. Prior to the first course the patient filled in a questionnaire in order to validate their hair. During course 2-7 the patient filled in a visual analogue scale (VAS) to monitor the degree of alopecia and side effects related to the scalp cooling. After the last course the patient repeated a questionnaire monitoring the overall benefit of the scalp cooling treatment. In addition, clinical photos were used to validate the hair-loss. At any time during the treatment the patients could choose a free wig, but if they did, the treatment with the cold cap was discontinued.

Results: An interim analysis after a period of 6 month shows that 26 patients were treated with scalp cooling. Only 3 of these patients preferred a wig due to their own evaluation of the loss of hair. In other terms 88% did not use wig. All the patients found the side effects and the extra use of time acceptable. Only minor difficulties in the implementation of the scalp cooling treatment were experienced, and it was fairly easy to learn how to handle the equipment. Regarding the economics, the first estimation tells us that the expenses of the scalp cooling treatment are lower than budgeted wig expenses.

Conclusion: Scalp cooling with advanced computerised cold cap seems to be effective with acceptable side effects, a paying proposition, and clearly preferred by the patients.

1209 POSTER

The use of web based information in handheld computers in supporting patients receiving outpatient chemotherapy

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Background: The aim of the study is to assess the value of, usability and accessibility of web-based symptom management information installed on handheld computers in self care advice provision for patients receiving chemotherapy.

Design Specification: Information provided must be both usable and accessible to an older population who may have little or no computing experience and in addition may have never accessed the Internet. General symptom information takes the format of a web site. Other web-based information on chemotherapy, cancer and useful contacts are also provided, in the format of an "e-book".

Design Issues: The handheld has a screen size of 240*160 pixels (approx. 3") and therefore poses a particular challenge in making vast amounts of information accessible and usable to patients of all capabilities, Given that 50% of the patients participating in the trial are likely to be of an older demographic, it is imperative to consider the needs of this user group in all stages of the design process. As there is very little research on what makes an interface usable for older adults (Hawthorn, D. 2000), the interface design has been trialled by patients attending a Colorectal Cancer Clinic (i.e. those patients in the older demographic) at each stage of the design process. Changes were then made to the design based on the feedback to facilitate a user-friendly interface, which would be accessible to all.

Results: The usability, accessibility and value of the information form the basis of the results. Initial trials of the interface have shown that patients respond favourably to the technology and the information provided, even those who have no computing or Internet experience. Full results will be available by September, 2003.

Conclusions: It is anticipated that this unique information and communication technology will promote the concept of individualised patient directed care and facilitate patient empowerment.

Reference

[1] Hawthorn, D. (2002) Possible implications of ageing for interface designers. *Interacting with Computers* (12) pp. 507-528

1210 POSTER

Danish national special interest group in nausea and vomiting (SIG N&V) has made an audit on nausea and vomiting with cancer patients receiving chemotherapy

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SIG N&V is nationally represented and organized by the National Cancer Group for Nurses (FS13) and sponsored by Glaxo SmithKline