separately, under distinct assumptions regarding pre-post test associations, from two-group studies.
Results: The overall weighted mean ES for two-group comparisons was. 52 (higher mean for treatment than control) for physical function, 35 for symptoms other than fatigue, and. 27 for body composition. More modest positive effect sizes were documented for mood (.19), quality of life (.14), fatigue (.11), and exercise behavior (.04). ES were larger among single group pre-post design studies (function =. 70, mood =. 49, symptoms =. 41, quality of life =. 34, fatigue =. 32, physical activity behavior =. 31, body composition =. 11), but typically followed the same pattern as two-group comparisons. ES among control group participants were typically negative and not (statistically) significantly different from 0. Modified funnel plots of ES by sampling variance suggested missing small sample studies with small or negative ESs.
Conclusions: Exercise interventions resulted in small positive effects on health and well-being outcomes. ES magnitude results were consistent with previous efforts to synthesize parts of this literature. The findings suggest challenges remain in designing interventions that are effective with more subjects and that are successful in attaining larger outcome improvements among subjects. Exercise characteristics essential to achieve favorable outcomes, such as form (e.g. endurance, resistance, flexibility) and dose, could not be synthesized due to scant data. Further research with more diverse samples is essential.

1530 POSTER

Improving symptom outcomes following chemotherapy administration: the experience of WISECARE+

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Background: WISECARE+, a pan-European, quasi-experimental cancer nursing study, evaluated the impact of a nurse-led, evidence-based symptom management intervention on the actual symptoms experienced by adult patients receiving chemotherapy. It focused on nausea, vomiting, fatigue and oral problems and was conducted in 8 units across 5 clinical sites in Europe.
Materials and Methods: This study was undertaken in three phases: pre-intervention, intervention and post-intervention.
During the pre-intervention phase (which lasted 7 months), patients completed a daily symptom questionnaire for 14 consecutive days following each cycle of chemotherapy. This questionnaire incorporated the Chemotherapy Symptom Assessment Scale (Brown et al 2001) and the Oral Assessment Guide (Eilers et al 1988). During this phase, nursing care was delivered according to local practice.
The intervention was then presented to the clinical sites over a 2 month period. This included extensive background literature, guidelines for symptom management and novel methods of communicating with patients about their symptom experiences. The clinical sites were given guidance on methods of integrating this symptom management intervention in practice.
During the post-intervention phase (which lasted 7 months), patient symptom data was collected in the same manner as above. Symptom management of nausea, vomiting, fatigue and oral problems was organised and delivered on the basis of the symptom management intervention.
Results: Data were received from 235 patients across Europe. All data were analysed using SPSS 12 for Windows. Differences between the pre- and post-intervention scores were evaluated using non-parametric tests as the data were not normally distributed. Symptoms of nausea ($p = 0.025$), vomiting ($p < 0.001$) and oral problems ($p = 0.001$) were significantly reduced in the post-intervention phase of the study. There was no significant change in fatigue experiences between pre- and post-intervention phases ($p = 0.611$).
Conclusions: This symptom management intervention resulted in significant improvements in patients' symptom experiences during a course of chemotherapy however, its lack of impact on experiences of fatigue warrants further investigation. Future work may involve incorporating additional symptoms into this model of symptom management.

1531 POSTER

The impact of exercise on symptoms and side-effects in cancer patients undergoing chemotherapy

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Background: The aim of this study was to evaluate the effects of a six weeks intervention with structured physical activity, relaxation techniques and massage on the symptoms/side-effects of cancer patients in chemotherapy.
Material and Methods: In order to obtain a continuous registration of side effects, a diary was developed and used throughout the intervention. The diary contains a structured part based on questionnaires and a "free text" part for the patients to write down their feelings and experience related to the symptoms in question. The patients scored side effects on a scale from 0–4 using the Common Toxicity Criteria and reported the scores in the questionnaires. Twelve possible symptoms/side-effects were registered daily: Lack of appetite, nausea, vomiting, diarrhea, numbness, constipation, physical fatigue, mental fatigue, treatment-related fatigue, muscle pain, arthralgia and "other pain".
Results: During the intervention a decrease in the scoring of 10 of the 12 side effects was found, while the score for vomiting and nausea remained unchanged. Patients with evidence of disease ($n = 26$) had a significant higher level of side effects than patients with no evidence of disease ($n = 28$). Both groups did experience a significant reduction in the sum of side-effects during the intervention.
Conclusions: The results indicate that six weeks of exercise in cancer patients with or without residual disease being treated with chemotherapy can lead to a reduction of treatment-related symptoms.

1532 POSTER

Results of an open non-randomised case study to evaluate a new soft silicone dressing Mepilex® Lite in the management of radiation skin reactions

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Background: Moist desquamation reactions develop in nearly a third of patients who undergo radical radiotherapy treatment to common sites (Wells et al 2004). Such reactions can be painful, distressing and difficult to manage, particularly as they are likely to develop in awkward places such as the neck, axilla and other skin fold areas. Broken skin provides a focus for infection but considerable controversy exists over the most suitable means of protecting moist areas and preventing further skin breakdown during radiotherapy. It is difficult to find a dressing which stays in place comfortably, provides an optimum healing environment, is easy to remove and also helps to relieve symptoms. This paper describes an evaluation of a new soft silicone dressing (Mepilex® Lite) in the management of patients with radiation skin reactions.
Methods: This case study was conducted in two cancer centres, one in Scotland and one in Sweden. Patients were potentially eligible if they were undergoing radical radiotherapy for breast or head & neck cancer and were experiencing severe erythema and/or moist desquamation with at least one symptom. Dressings were applied to the affected areas until skin reactions had healed. Weekly skin assessments were performed using the Radiation-Induced-Skin-Reaction-Assessment-Scale (RISRAS) and digital photography. Patients were encouraged to complete a daily diary, and radiotherapy staff were asked to evaluate the use of the new dressing.
Results: 16 patients were recruited. Many found the dressings comfortable to wear, protective during movement and sleep, soothing and easy to apply and remove. Some patients with extensive areas of moist desquamation found the dressings heavy, and a few commented that they removed a superficial layer of skin when changed, although it is likely that this was non viable tissue rather than healthy skin. 3 patients decided to discontinue using the dressing and 2 experienced severe itching (a known symptom of erythema) and were withdrawn from the study. The majority were very positive about the benefits of Mepilex® Lite and found it easy to adapt to their needs.
Conclusions: Mepilex® Lite has a number of properties which make it particularly suitable for the management of radiation skin reactions. This study suggests that it is a practical, comfortable and safe means

of protecting vulnerable skin and promoting healing during radiotherapy treatment.

1533 POSTER

Self-reported adverse health conditions (AHCs) among Norwegian men with prostate cancer (PC) who are members of The National Cancer Prostate Association (PROFO)

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Objective: To characterise men with PC who are members of PROFO and to describe their experience of AHCs.
Methods: A questionnaire was anonymously mailed to 600 men who are members of PROFO. The questionnaire had 34 multiple choice questions, demographics, the patient's acknowledge about his PC and AHCs. A reminder was sent after 3 weeks.
Results: The survey yielded a response rate of 62% (n = 370). The median age was 67 years (range 48–88) with significantly difference to the median age of PC patients recorded to the Cancer Registry of Norway. At the diagnosis 72% of PROFO members had localised disease and for 49% ⩽2 years had elapsed since diagnosis. PROFO members were better educated than men above the age of 50 years in the general population.
In spite of the above AHCs most PROFO members described their overall health as satisfactory.
Conclusion: Health-care workers should be aware of PC patient's considerable amount of AHCs which may remain undetected if not specifically asked for.
Results from questionnaire surveys as the present may improve information to be given to new patients. Furthermore, PROFO should increase attempts to reduce the shown differences between PROFO members and the majority of Norwegian PC patients.

	Androgen deprivation		
Adverse health conditions	Yes	No	Total
Impotence	75%	75%	75%
Urinary leakage	20%	38%	26%
Frequent urination	52%	37%	48%
Defecation problems	28%	9%	22%
Hot flushes	64%	11%	48%
Muscle weakness	40%	11%	31%
Joint pain	34%	8%	26%
Fatigue	56%	22%	45%
Sadness	29%	19%	26%

1534 POSTER

Questionnaire on chemotherapy effects: a prospective study

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Objective: To asses the effectiveness of antiemetic treatment prescribed in our hospital to prevent of acute sickness as well as the influence on performance status (PS) and nutrition, in patients (pts) undergoing chemotherapy treatment.
Methods: This is a one week observational and prospective study. The questionnaires were filled down by patients who were treated with chemotherapy at our center. The questionnaire included information related to: number of vomits during the treatment and 24hrs after treatment, influence on PS and nutrition. Pharmacotherapeutic data was daily collected from the pharmacy informatic service (informatics net). Chemotherapy protocols were classified in four groups, according to ASCO guidelines, depending on the emetic effect (low, medium, high and very high). Performance status and influence on nutrition were assessed by punctuation: much, quite, poor/nothing. SPSS vr.10 program was used for the statistic analysis.
Results: 164 pts were included in the study. Patients characteristics: gender 102 (62.2%) men, 62 (37.8%) women, median age 59.1 years. Seventy (42.7%) pts filled down and returned the questionnaire. Chemotherapy treatments were classified as follows: low emetic effect 9.8%, moderate 42.1%, high 35.4% and very high 21.8%. Ondasentron and dexametasone doses were on average: 3 mgrs and 2 mgrs for the lowest emetic group, 11.6 and 11.3 mgrs for the medium, 13.5 and 17.5 mgrs for the high and 12.8 and 15.4 mgrs for the highest emetic group respectively. There weren't significant differences between ondasentron doses on medium, high and very high groups. 37.5% of the patients with the most emetic treatment, vomited the day of the administration and 28.6% did in the following day. Women vomited more than men (25.9% versus 2.6%) as well as did the younger patients (46.7 years versus 59.2 years). More than 50% of the patients receive high or very high emetic chemotherapy treatment. 85% of patients who answer the questionnaire didn't vomit during the study.
Conclusions: Alteration on nutrition is not related to the emetic effect of chemotherapy because 87.7% of the patients related few discomfort the day of treatment. Also PS is poor affected by chemotherapy, 78.5% of patients assure any trouble. Classifying treatments in four groups depending on the emetic effect, allow us to detect that patients with more emetic treatment, have poor vomit control. According to other author's bibliography, women and younger patients have less control on vomiting. However, in our study this group of pts (young and women) were treated with the high or very high chemotherapy group.

1535 POSTER

Understanding factors contributing to nausea in advanced cancer: clinical and patient perspectives

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Background: Significant advances have been made in the management of chemotherapy related nausea and vomiting. Less attention has been given to understanding nausea experienced by people with advanced cancer.
Aim: The purpose of this multi-method study was to identify clinical and psychosocial factors that are associated with advanced cancer patients' reports of nausea, to facilitate a more effective and evidence based approach to identifying factors contributing to nausea in advanced cancer.
Method: Stage one of this study involved systematic review of the literature and qualitative interviews. A protocol outlining search strategies, inclusion criteria and data extraction procedures were developed to guide systematic review of literature. 15 articles were identified as being eligible for review. The articles were reviewed by two investigators to rate the quality of evidence about contributing factors. In addition, a total of seventeen participants including four Registered Nurses, six palliative care clinicians and seven patients with advanced cancer participated in semi-structured interviews to explore perceptions and observations of the experience of nausea and factors contributing to nausea. Interviews were transcribed verbatim, and thematic analysis undertaken to identify common themes around factors contributing to nausea, as perceived or observed by clinicians and patients. Findings from the systematic review and the qualitative interviews were compared to identify areas of congruence and divergence, with areas of divergence being discussed by the investigators to determine the strength and relevance of the divergent theme.
Findings: An evidence based description of categories of factors contributing to nausea was developed. These categories included: co-morbidities; obstructive; CNS; chemical; psychological; other symptoms; environmental; dietary; activity levels. Within each of these categories, the specific clinical or psychosocial factor contributing to the experience of nausea was defined. The findings from this stage have been used to inform the development of the clinical assessment tool that is currently being evaluated in Stage 2 of this project.
Conclusion: Nausea in advanced cancer is a complex multi-faceted problem that is not well described in current research. The findings from this project will enable the development of more targeted assessment and intervention processes for patients experiencing nausea associated with advanced cancer.

1536 POSTER

Development of an assessment instrument for chemotherapy associated dysgeusia and its implications for patients

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Background: In our daily practice we see many patients (pts) treated with chemotherapy, who may respond to it but experience disturbing dysgeusia (D) (taste disturbance). This symptom is rarely reported in the pt's file or presented in the results of clinical trials. D can impact on our pts