cases. In rest 33.3% cases jaundice did not come down and those were managed with other palliative care. Average cost of the procedure was 35Euro (approx) where average cost of successful metallic stent was 800Euro (approx).
Conclusion: We concluded that Percutaneous Transhepatic Biliary Drainage was cost effective method of reducing obstructive jaundice in advanced hepatiobiliary & pancreatic cancer. It was well tolerated by the patients.

1146 POSTER

Cost-effectiveness of zoledronic acid in the prevention of fractures in postmenopausal women with early breast cancer receiving aromatase inhibitor: Application to the United Kingdom

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Background: The Z-FAST trial demonstrated that zoledronic acid (ZA) prevents aromatase inhibitor (AI)-induced bone loss in postmenopausal women with early-stage breast cancer. The present analysis assessed, from the UK's National Health Service perspective, the cost-effectiveness of ZA in this patient population, stratified by baseline BMD levels.
Materials and Methods: A Markov model was developed to project the lifetime incidence of osteoporotic fractures, quality-adjusted life years (QALYs), and healthcare costs as a function of BMD for women with early-stage breast cancer (aged 60 years old at therapy initiation) on AIs (for 5 years) with or without ZA (twice per year). Risk equations were obtained from the literature as were the estimates of the effects of fractures on costs, quality of life and mortality. Distinction was made between three levels of fracture risk as measured by the mean baseline femoral neck BMD [0.8258 g/cm^2 (consistent with trial baseline); 0.8000 g/cm^2; and 0.7500 g/cm^2] corresponding with a remaining lifetime hip fracture risks of 13.4%, 15.5% and 20.2%. The change in BMD levels (and predicted risk of fractures over time) were taken from the first 2 years of Z-FAST and extrapolated to 5 years, consistent with the duration of AI therapy. After the first 5 years, BMD was assumed to change at the rate observed in the general population of same age. Future costs and effects were discounted at 3.5% annually. Results are presented when only considering hip fractures, (for which economic data are better documented), and when considering the cost of all fractures.
Results: In the primary analysis, ZA is projected to decrease the cumulative risk of fractures from 8.6% in the low risk, to 10.0% in the medium risk and 13.4% in the high risk group. When only including the effects on hip fractures costs per QALY gained are estimated at £29,661, £24,938, £17,867. When also including the impact on the costs associated with other fractures ratio's result of £19,302, £14,645 and £7,724 per QALY, all well below a £30,000 per QALY threshold.
Conclusions: This analysis suggests that ZA is cost effective in the prevention of fractures in postmenopausal women with early breast cancer receiving AI in the UK. The cost effectiveness improved when baseline BMD dropped and when all fractures where included. These results are likely conservative as the effect on quality of life associated with preventing non-hip fractures has not been included.

1147 POSTER

The role of transient liminality in expressed expectations for breast care and treatment

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Background: The intervening time period between presenting in primary care with a breast concern and receiving an appointment in a symptomatic breast clinic is an atypical instance when a woman is neither healthy nor ill. The objective of this study was to develop and psychometrically evaluate a questionnaire that could explore the expectations for breast care and treatment from women immediately prior to their initial symptomatic breast clinic consultation.
Materials: One hundred and twenty women completed a newly devised 20-item questionnaire. The Breast Expectation Inventory (BEI) aimed to elicit their expressed expectations for breast care and treatment with regards to their prospective clinic appointment.
Results: Principal Components Factor Analysis produced a three factor solution that reflected biomedical aspects, psychological consequences and social implications of care. Endorsement of specific factors by participants was mediated by the speed of referral to the clinic.
Conclusion: The psychometric properties of the questionnaire suggest that the BEI questionnaire is reliable and valid although further psychometric evaluation is required. It would appear that the intervening period of time between being referred to secondary care and attending for the first appointment is one of 'transient liminality' – a suspended state where the woman is neither healthy nor ill. In attempting to distance themselves from their potentially damaged body, women attend to either the processes or outcomes of care or to the psychosocial consequences of their possible disease state. Women referred to symptomatic breast services have strong expectations for prospective treatment, care and wider psychosocial issues. Practitioners should be cognisant of this. Using the Breast Expectation Inventory they could identify and specifically address potential psychological issues raised by the referral.

1148 POSTER

Opioid rotation versus combination for cancer patients with chronic uncontrolled pain: a randomized study

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Background: For cancer patients with inadequate pain relief, a switch to an alternative opioid is the preferred option for symptomatic improvement. However, multiple opioids are often simultaneously administered for anecdotal reasons.
Materials and Methods: Patients with uncontrolled cancer pain despite treatment of oral morphine equivalent $\geqslant$100 mg/d were randomly assigned to oral opiods to transdermal fentanyl (rotation) group or oxycodone plus fentanyl (combination) group. Patients answered a questionnaire that included pain severity (0 to 10) and interference items at baseline and after one week. Primary outcomes were change in pain score and treatment success. Treatment success was achieved when the intensity of pain decreased by at least 33% of the baseline value recorded before randomization. At least 21 patients per group were required.
Results: Of 50 patients who completed baseline questionnaire, 39 patients answered questionnaire after one week of treatment. Baseline pain scores and interference items were similar between both groups. After one week, pain scores (mean$\pm$SD) were significantly improved in both groups: maximal pain (6.2$\pm$2.2 to 4.7$\pm$2.4 vs. 6.5$\pm$1.8 to 5.1$\pm$2.3) and current pain (5.3$\pm$3.1 to 3.1$\pm$3.1 vs. 4.7$\pm$2.2 to 2.1$\pm$1.8) for rotation group and combination group, respectively. Treatment success was achieved in 11 and 12 patients in the rotation and combination group ($p = 0.982$). Ten patients (42%) in the rotation group and 16 patients (62%) in the combination group reported that they achieved relief from pain ($p = 0.085$). The incidence of adverse events was similar in both groups; but fewer patients experienced constipation with opioid rotation than with combination (17% vs. 42%, respectively; $p = 0.048$). The frequency of rescue analgesics (50% vs. 69%; $p = 0.166$) and dose modification (29% vs. 38%; $p = 0.488$) were similar in the rotation and combination groups. Similar number of patients withdrew treatment owing to adverse events (13% vs. 8%) or inadequate pain control (17% vs. 19%).
Conclusions: In patients with chronic uncontrolled cancer pain, both opioid rotation and combination strategies appear to provide significant relief of pain and patient satisfaction.

1149 POSTER

Recombinant lectin ATL-104 reduces the duration and severity of intestinal epithelial damage caused by 5-fluorouracil in rats

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Background: Chemotherapy and radiotherapy are effective against neoplasia. However, they can also damage normal cells in the alimentary tract. This leads to epithelial breakdown, ulceration and intense pain (dose-limiting mucositis). Orally consumed plant lectins can stimulate gut growth in vivo. The potential of the recombinant lectin ATL-104 to ameliorate gut epithelial damage has been investigated.
Methods: Rats (5 animals/group) given lectin orally (200 mg/kg) once daily for 3 days. Dosed with 5-fluorouracil (5FU, one dose, 150 mg/kg, ip) on day 4. Euthanased and small intestine collected up to 4 days later. Standard histochemical evaluation.
Results: Rapid loss of crypt clonogenic stem cells and collapse of villi was evident after dosing with 5FU alone. By 2 days, few progenitor cells were detectable and crypts were not readily discernible. Cell division re-started thereafter and the clonogenic stem cell population appeared to re-establish by 4 days. Despite this, regenerating crypts and villi remained disorganised. Pre-treatment with ATL-104 ameliorated the effects of 5FU. Crypt cell loss occurred as with 5FU alone, but was much less marked. By two days post-5FU, micro-crypts (clusters of dividing, goblet and Paneth cells) appeared throughout the gut. These were sites of regrowth. By 4 days, crypts and villi were highly organised and returning to normal.

Intestinal parameters at 4d post-5FU for rats pre-treated or not with ATL-104

	5FU	ATL-104/5FU	Non-treated Control
Intestine dry wt (mg)	791±49 a	1064±42 b	1142±41 b
Intestine protein (mg)	172±16 a	411±62 b	425±27 b
Jejunal villus height (um)	151±8 a	372±27 b	523±67 c
Jejunal crypt depth (mm)	113±17 ab	139±13 b	82±15 a
Cells/crypt section	65±10 a	72±11 a	51±6 a
PCNA +ve cells/crypt section	56±9 a	28±19 b	11±5 b

Values in a row with distinct letters differ significantly ($p < 0.05$). PCNA, proliferating cell nuclear antigen.

Conclusion: Pre-treatment of rats with ATL-104 reduced damage caused by 5FU and aided rapid restoration of normal gut structure. ATL-104 is thus a possible treatment for mucositis.
Acknowledgement: MD was supported by Alizyme TL, GG by Scottish Executive Environment and Rural Affairs Department

1150 POSTER

MPAC subscales, validated in Spanish, demonstrated sensitivity to change in cancer pain evaluation

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Background: A Spanish version of the Memorial Pain Assessment Card (MPAC) has been recently validated in patients with cancer pain. The present work evaluates the sensitivity to change of the validated Spanish version by oncologic patients in the clinical practice.
Materials and Methods: Epidemiological, prospective, 2-months multi-center study, conducted at 4 services of oncology. The included patients had continuous chronic cancer pain with susceptibility to change (pain intensity >3 in a Visual Analogue Scale [VAS]). The MPAC card (including the 4 subscales: VASPR [pain relief], VASPI [pain intensity measured by VAS] Tursky [pain intensity measured by an 8-items descriptors], and VASMOOD [psychological distress]) was administered at baseline and at 1 and 2 months. Sensitivity to change in each MPAC subscales was evaluated by comparing 2 months versus baseline scores. Information about clinical situation and satisfaction of the patient and the health care professionals with the MPAC card was also collected.
Results: Fifty-four patients with oncologic pain (76% men) with a mean (SD) age of 57(11) years were included. 74% of patients presented metastasis, and in 80% of cases the treatment was palliative. All the MPAC VAS subscales showed sensitivity to change across the 2-months period: mean VASPI at baseline 6.6 (1.7) vs 3.5 (2.0) at 2 months ($p < 0.0001$, Wilcoxon test [WX]); VASPR 4.5 (1.9) vs 6.3 (2.3) ($p < 0.0001$ [WX]); VASMOOD 5.5 (2.1) vs 4.0 (2.1) ($p = 0.0008$ [WX]). Furthermore, 90.5% of patients showed changes in Tursky subscale (11.9% increased pain, 78.6% less pain), being these changes significantly associated with VASPI scores ($p = 0.0006$, Kruskal-Wallis test). Both patients and medical personnel agreed in the card use facility (63% and 71% of cases, respectively).
Conclusions: All the MPAC subscales, in its Spanish version, demonstrated sensitivity to change in the evaluation of cancer pain. Its facility of administration may allow a useful and quick evaluation of the oncologic pain in the clinical practice.

1151 POSTER

Fatigue in cancer patients at the time of rehabilitation

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Background: Fatigue is one of the most common side-effects during cancer treatment. Reduced quality of life during chemo- and radiation therapy may be due to fatigue. Much less information is available about fatigue and its role after treatment, e.g. at the time of rehabilitation.
Dallund offers a one week residential course in rehabilitation to cancer patients from all over Denmark. Each year approx. 650 patients visit Dallund on average 8.3 months after their last treatment (range 1–107 months, mode 2 months). 53% of these patients are women with breast cancer. Since 2004 all 1,272 patients have completed the Dallund Scale, which is a highly structured one page questionnaire qualified to disclose the patients' need of rehabilitation. On this scale 68% indicate that they are distressed by tiredness.
Purpose:
1. To investigate the frequency and the quality of fatigue among Dallund's patients as measured by the Multidimensional Fatigue Inventory (MFI-20, Danish version).
2. To analyse possible correlations of fatigue to diagnosis and treatment.
3. To identify possible differences in the experience of fatigue between breast cancer patients and the remainder group patients at the rehabilitation centre.

Methods: All patients coming to Dallund between January and May 2006 (estimated 200) are asked to fill in MFI-20. The data are collated to the patients' diagnoses and treatments and may be further compared to Dallunds other information about the individual patients, e.g. from the Dallund Scale.
Results: Using MFI-20, we get a much more differentiated picture af the patients fatigue. It appers that a great deal of our patients has a general fatigue – feel tired and tire easily. It further appers that a great deal does not have significant problems with mental fatigue.

1152 POSTER

STARS – surveillance on the treatment of anaemia: a retrospective survey

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Background: Based on EORTC guidelines, erythropoiesis-stimulating agents are recommended to increase hemoglobin (Hb) levels in patients (pts) with chemotherapy-induced anaemia (CIA). This registry aimed to observe clinical practice in pts treated with darbepoetin alfa (DA) including ease of use of a new DA SureClickTM prefilled pen, and to evaluate guideline compliance with respect to Hb level at treatment initiation (Hb 9−11 g/dL) and treatment target (Hb 12−13 g/dL).
Methods: This was a multicenter, retrospective, observational study in pts with CIA who had received DA 500 mcg every 3 wks (Q3W) for $\geqslant$9 wks. Data collected: demographic and clinical characteristics; Hb levels; DA administration; chemotherapy; physician's satisfaction with DA efficacy; and qualitative evaluation of ease of SureClickTM pen use.
Results: A total of 75 pts were analysed: 64% were men; mean (SD) age, 64±12 years; 81% had solid tumours (22.7% non small-cell lung; 12.0% prostate; 10.7% bladder; 6.7% breast; 4.0% small-cell lung; 2.7% colorectal; 22.2% other); and 19% had haematological tumours (13.7% non-Hodgkin lymphoma; 5.3% other). Fifty-six percent had a primary nonmetastatic cancer, 33% had metastases, and 11% had recurrences. Platinum-containing regimens were administered to 37% of pts. Iron was given to 16% of pts (33% IV; 67% oral). A total of 290 chemotherapy cycles were evaluated. Mean evaluation time was 60 days (range, 1–209). At DA initiation, mean Hb was 10.0 g/dL (range, 7.2−12.9 g/dL). During evaluated chemotherapy cycles, 70−87% of pts had a Hb value <11 g/dL. Hb target was 12−13 g/dL in 79% of pts and 10−12 g/dL in 4%. A total of 23 pts (31%) required transfusions (median 2 units). Mean Hb at transfusion was 8.3 g/dL (range, 5.9−9.9 g/dL). In the physician survey, recovery from low RBC count after DA treatment was considered "very good" (11%), "good" (50%), and "satisfactory" (24%). Improvement of anaemia symptoms was "very good" (17%), "good" (58%), and "satisfactory" (20%). The SureClickTM pen was used "always at the clinic" in 67% of pts and "always at home" by 31% of pts, and ease of use was considered "very good" by 61% of caregivers and 68% of pts. One adverse event was related to the SureClickTM pen (pain at administration site).
Conclusions: In this registry of pts treated with DA Q3W, the majority of pts were treated in accordance with EORTC guidelines. In addition, physicians found DA 500 mcg Q3W to be effective and both pts and caregivers found the SureClickTM pen easy to use.