fatigue scales. Global quality of life was correlated substantially with most of the scales but cognitive functioning. The coefficients for the correlation between the items differed between 0.12 and 0.97 and all the subscales were strongly correlated with the scales those they formed. The highest correlation between the EORTC QLQ-C30 and KPS was for the physical functioning ($r=0.62$, $p<0.05$). The Turkish version of the EORTC QLQ-C30 is a valid and reliable instrument for the Turkish lung cancer patients and can be used in clinical study.

926 POSTER

Final results of a randomized phase II study evaluating the role of erythropoietin during radiochemotherapy for pelvic tumors

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Background: Anemia is a poor prognostic factor for patients undergoing radiochemotherapy (RCT) for pelvic tumors. The purpose of this randomized clinical trial was to test the efficacy and safety of the administration of human recombinant erythropoietin (EPO) in patients undergoing concurrent RCT.

Material and Methods: Patients with previously untreated FIGO stage IB –IIIB carcinoma of the cervix or stage B2 -C carcinoma of the bladder and Hb between 10.0-13.0 g/dl were randomized to treatment with RCT alone or with EPO (10,000 U Sc 5 days/week) starting on Day 1 of RCT. EPO administration was stopped whenever Hb level > 14g/dL. RCT consisted of 90mg/m2 carboplatin once weekly during the 5-6 week course of external beam radiotherapy (2 Gy qd) to the pelvis. Cervix cancer patients underwent intracavitary brachytherapy following RCT. Patients were given supplemental iron only if blood serum iron was less then 60mg. Complete blood counts were measured weekly during RCT. Blood transfusion was given for Hb < 9 g/dl.

Results: Between October 1998 and July 1999, 55 patients were enrolled in this study, of whom 54 (28 in the EPO group and 26 in the control) were evaluable; the other patient died of intercurrent disease during treatment. The groups did not differ significantly in patient age, gender, baseline Hb level, tumor stage or primary site. Blood transfusion was necessary for 10 patients (38.5%) in the RCT alone group compared to 2 patients (7.1%) in the EPO group ($p=0.008$). The change in Hb during therapy was -0.5 g/dl in the RCT group despite the blood transfusions versus 1.0 g/dl in the EPO group ($p<0.001$). Treatment interruption was necessary in 9 patients (36%) in the RCT group mostly due to transfusion requirements versus 1 patient (4%) in the EPO group ($p=0.01$). There were no complications attributable to EPO other than deep vein thrombosis in one patient. 18 patients (69.2%) had a complete response to RCT in the RCT only group versus 22 (78.6%) in the EPO group. 8 patients (30.8%) had a partial response in the RCT only group versus 6 (21.4%) in the EPO group ($p=0.540$). Time to progression at 3 years did not differ significantly between the two groups ($p=0.809$) as well as overall survival ($p=0.961$).

Conclusion: Administration of EPO during concurrent RCT significantly decreased the need for red blood cell transfusion and treatment interruption and increased Hb levels in this randomized trial.

927 POSTER

Prevention of chemotherapy-related episodes of febrile neutropenia (FN) in small-cell-lung-cancer (SCLC) patients: in practice not theory.

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Background: Use of G-CSF to prevent chemotherapy-related FN, although subject to (inter)national guidelines, is still associated with wide variations in use and uncertainty about when they are clinically indicated. Also antibiotics (AB) prove to be an effective, less expensive, prophylactic strategy. Within the framework of an ongoing randomised multicenter prospective trial in the Netherlands, comparing the clinical and economical effects of primary prophylactic AB versus AB in combination with G-CSF in SCLC patients at risk of FN, a survey was carried out to assess current daily practice.

Material and methods: A validated survey solicited data on respondents' patterns of G-CSF and AB use through two hypothetical clinical scenarios for a 62 year old man with small cell lung cancer beginning chemotherapy (primary prophylaxis), and a 65 year old woman who is about to begin her second cycle of chemotherapy after hospitalization with FN following the first cycle (secondary prophylaxis). Dutch pulmonologists with a specific interest in oncology were addressed.

Results: The response rate was 70% (47 out of 67). Physicians did not support G-CSF use for primary prophylaxis in small cell lung cancer, only 4% used G-CSF in this setting 'always',2% 'usually', 17% 'sometimes', 32% 'rarely' and 43% 'never'. Respondents were mixed in their support for G-CSF and/or AB as secondary prophylaxis: 'Same dose-No G-CSF/ AB' in 6%, 'Reduced dose-No G-CSF/AB' 4%, 'Same dose-AB' 13%, 'Reduced dose-AB' 6%, 'Same dose-G-CSF' 40%,'Reduced dose-G-CSF' 6%,'Same dose-AB+G-CSF' 19% and 'Reduced dose-AB+G-CSF' 0%. Working in a non-academic setting is associated with a preference to use 'same dose-G-CSF' as secondary prophylaxis (2 out of 12 'academic'respondents (16%) versus 17 out of 32 'non-academic' (53%)). Whereas 'same dose-AB' was preferred by respondents working in an academic setting (4/12 (33%) versus 2/32 (6%)). No differences were found for other factors as year of registration (before or after 1990) or number of new SCLC-patients/ year (more or less than 10).

Conclusion: G-CSF use is still popular in secondary prophylaxis of FN in SCLC patients. Future efforts should focus on effectively implementing evidence resulting from randomised trials, to employ in practice a more rational, cost-effective and uniform approach to prevent FN in patients at risk.

928 POSTER

What factors predict family physician referral for palliative radiotherapy?

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Background: Palliative radiotherapy is an effective treatment option in the management of metastatic bone pain, tumor hemorrhage, fungation or ulceration, dyspnea, blockage of hollow viscera, and shrinkage of any tumors causing problems by virtue of space occupancy. Expert opinion suggests that while 50-60% of cancer patients can benefit from radiotherapy, only 30-35% of cancer patients receive radiotherapy in Ontario, Canada. Why this disparity? Our work set out to identify the factors influencing family physicians' referral for palliative radiotherapy. The Ottawa Model of Research Use (OMRU) was designed to provide a practical framework to systematically evaluate supports and barriers to the utilization of an evidence-based intervention, such as palliative radiotherapy. Using the OMRU framework, the factors associated with a family physician's intention to refer a patient for palliative radiotherapy were categorized into four areas related to: 1) the patient, 2) the family physician, 3) the practice environment, and 4) the intervention, i.e., radiotherapy program referral.

Materials and methods: A survey was designed, piloted, and sent to a random sample of 400 primary care physicians in the Eastern Ontario region.

Results: A response rate of 50% was obtained with 84% of physicians regularly involved in caring for patients with advanced cancer. 62% had previously referred a patient for radiotherapy. Factors determined to be significantly associated ($p<0.05$) with patient referral for palliative radiotherapy include: 1) patient preference (trend, $p=0.06$), 2) practice: regularly caring for patients with advanced cancer, hospital admitting privileges, and rural based, 3) family physician: their knowledge of the effectiveness of radiotherapy, and 4) radiotherapy program: accessibility of the radiation oncologist and family physician awareness of the referral process for radiotherapy.

Conclusions: This survey has helped identify some of the practical supports and barriers to the use of palliative radiotherapy by family physicians which will be used to guide the development and improve utilization of our palliative radiotherapy program.

929 POSTER

Antiemetic patterns of care for radiotherapy-induced nausea and vomiting

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The risk of developing RINV varies and depends on several patient- and treatment-related risk factors, such as age, gender, size and localization, dose and schedule. The impact of RINV on QoL may be considerable, particularly with prolonged symptoms associated with fractionated radiotherapy. Guidelines for the treatment of RINV recommend the 5-

HT3-receptor antagonists (RAs) for moderate- to high-risk radiotherapy and radio–chemotherapy regimens.1 A survey was recently conducted in Europe to assess prescribing patterns and factors affecting treatment decisions for RINV. The results from a questionnaire completed by 200 radiation therapists/oncologists from 5 countries will be presented. Respondents were screened to ensure that they saw more than 50 patients/month, and that at least 50% of these patients were at moderate to high risk of RINV. The results suggest that the 5-HT3-RAs are underused – of 93 cancer patients treated with radiotherapy in an average month, only 1/3 were treated with these agents. Nor was there much of a perceived increase in 5-HT3-RA use since the previous year, with 62% of respondents indicating that their use of 5-HT3-RAs had remained the same. Use of the 5-HT3-RAs varied with treatment region, with the highest proportion of use among patients receiving radiotherapy for gastro-intestinal (53%) or abdominal (51%) cancers. Ondansetron was the most frequently prescribed antiemetic (41%), followed by granisetron (24%) and metoclopramide (20%). Efficacy and lack of side-effects were rated as the two most important factors when choosing a particular agent, though efficacy and experience were the main reasons given for prescribing ondansetron. The results show low levels of 5-HT3-RA prescribing in Europe, and their use may sometimes stem from familiarity. Metabolic and pharmacodynamic differences in the 5-HT3-RAs have implications for effective treatment of particular patient groups such as the elderly, for whom issues such as comorbidity and polypharmacy may have profound effects on the efficacy and safety of individual agents. Such factors will therefore require consideration when determining which agent to use. Increased awareness of evidence-based guidelines on emetogenic risk factors and recommended treatment, as well as of the efficacy and safety profiles of the various 5-HT3-RAs, could substantially improve control of nausea and vomiting in radiotherapy-treated patients.

Reference

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930 POSTER

The efficacy and safety of lanreotide (28-day prolonged release) in relieving clinical symptoms associated with carcinoid tumours: a 6-month, open, multicentre, dose-titration study

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Background: 28-day prolonged release (PR) lanreotide (Autogel®) is a new aqueous gel formulation of this somatostatin analogue. It is presented as a prefilled syringe (injection volume <0.5ml) given by deep subcutaneous (sc) injection, and demonstrates a sustained release with duration of benefit of 28 days. The aim of this study was to investigate the efficacy and safety of 28-day PR lanreotide (Autogel®) in the control of diarrhoea and/or flushing associated with carcinoid tumours.

Materials and Methods: 71 patients with symptomatic carcinoid tumours were recruited who had recorded 3 or more stools per day and/or 1 or more moderate/severe flushes per day over the week prior to first treatment. The most troubling symptom for each patient at baseline was identified as the target symptom. Patients received a deep sc injection of 28-day PR lanreotide (Autogel® 90mg, every 28 days for 2 months. The dose was then titrated down to 60mg if the patient was a responder, or up to 120mg if a non-responder. Responders (defined as a reduction of 50% or more from baseline of the mean daily number of episodes of the target symptom) could have monthly dose titrations thereafter.

Results: Diary card symptom assessments showed significant improvement from baseline (flushing 3.0±3.2; diarrhoea 5.0±2.7) throughout the study (Table). By the end of the study 25/31 (81%) flushing and 30/40 (75%) diarrhoea patients showed an improvement from baseline. Tumour marker levels also improved, so that by Month 6 the median 5-HIAA and Chromogranin A levels had decreased from baseline by 24% and 38%, respectively. The diarrhoea subscale of the EORTC-C30 questionnaire indicated a 33% improvement from baseline. For all data analyses, any missing data were imputed using the last observation carried forward method.

	Month					
	1	2	3	4	5	6
Flushing (n=31)						
Mean (SD) Episodes	2.2(2.5)	1.9(2.8)	1.8(3.0)	1.7(3.0)	1.7(3.1)	1.7(3.0)
Δ from Baseline	-0.8	-1.1	-1.3	-1.3	-1.3	-1.3
	(-21%)	(-48%)	(-56%)	(-56%)	(-57%)	(-56%)
	p=0.006	p<0.001	p=0.001	p=0.001	p<0.001	p=0.001
Responders (%)	39%	58%	61%	71%	65%	65%
Diarrhoea (n=40)						
Mean (SD) Episodes	4.1(2.3)	4.0(2.2)	4.0(2.2)	3.9(2.2)	3.8(2.3)	3.9(2.2)
Δ from Baseline	-0.9	-1.0	-1.0	-1.2	-1.2	-1.1
	(-15%)	(-18%)	(-16%)	(-20%)	(-21%)	(-19%)
	p<0.001	p<0.001	p<0.001	p<0.001	p<0.001	p<0.001
Responders (%)	8%	13%	13%	15%	23%	18%

The incidence of the most common drug-related adverse events were abdominal pain (20%), fatigue (13%), diarrhoea (11%) and cholelithiasis (10%).

Conclusions: 28-day PR lanreotide (Autogel® was effective in reducing flushing and diarrhoea associated with carcinoid neuroendocrine tumours. The degree of improvement and safety profile are consistent with previous studies with other formulations of lanreotide.

931 POSTER

Reflexology for symptom relief in patients with cancer: a Cochrane systematic review

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Background: Reflexology is defined as the systematic application of pressure to specific reflex points on the feet (or hands) and is employed in cancer and palliative care largely to improve patients' quality of life and reduce psychological distress. The aim of the study is to investigate whether reflexology decreases psychological morbidity, symptom distress and/or improves the quality of life in patients with a cancer diagnosis.

Methods: Comprehensive search strategy developed, utilising databases including: Cochrane Controlled Trials Register, Database of the Cochrane Complementary Medicine Field, MEDLINE, CINAHL, BNI, EMBASE, AMED, PsycINFO, SIGLE, CancerLit, Dissertation Abstracts International. Experts in the field of complementary therapies contacted and hand searches of relevant journals undertaken.

Results: 312 articles retrieved. Only 7 merited in-depth examination: *Excluded* - Dobbs-Zeller 1986 - based on anecdotal evidence, Shatkina 1991 - no control group, Yung 1993 - not randomised & no baseline data collection. Insufficient information available for decision - (Sabia 1992). *Included* - Hodgson 2000 and Stephenson 1997, 2000 (both references reflect one study only).

Conclusions: Preliminary analysis concluded that although the available evidence is limited, it does suggest that reflexology can confer some physical and psychological benefits to people with cancer, over those offered by a foot massage or no-intervention control. However, a number of methodological issues still require resolution: sample sizes were small and follow-up periods very limited; possibility for bias occurred in both studies with unclear randomisation methods, lack of allocation concealment and in one study, interventions and outcomes assessed by same person. Neither study assessed side effect profiles.

932 POSTER

French physicians' attitudes toward legalisation of euthanasia and the ambiguous relation between euthanasia and palliative care

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Background: In France, euthanasia is strictly forbidden by law. In 1999, the Parliament established a "right to palliative care", which has reactivated public debates about euthanasia.

Methods: A cross-sectional survey of a stratified probability sample of 1,552 French GPs, oncologists and neurologists, conducted in 2002.

Findings: Overall, 917 physicians (response rate, 59.1%) participated in the survey. Oncologists were less likely than GPs and neurologists to consider that high dose morphine prescription, palliative sedation and withdrawing life-sustaining treatments (WLST) were euthanasia. Oncologists are also less prone to support the legalisation of euthanasia (OR=0.68, CI 95%= [0.49;0.94]). Multivariate analysis showed that this result is due to oncologists' greater experience and training in palliative care.

Interpretations: In France, physicians' attitude about the legalisation of euthanasia is strongly influenced by whether they distinguish palliative care from euthanasia or not. Improved palliative care requires better training of