Results: Patients treated with NVBo spent on average 2 h. 31' in hospital vs. 3 h. 56' with NVBiv (a 36% reduction). Duration of consultation was similar for NVBo and NVBiv (10' vs. 12' respectively). Time for preparation and dispensing was 33' vs. 1 h. 8' respectively (51% reduction). Patients waited in the clinic after administration for 13' with NVBo vs. 43' with NVBiv (70% reduction). The results were heterogeneous among the eight centres, with a clear advantage for NVBo in six, a modest advantage in one and a disadvantage in one. This reflects the diversity of patient pathways. The six centres that clearly favoured NVBo allowed a more individualised patient pathway.
Conclusion: NVBo reduces the time spent by patients and pharmacists in chemotherapy service delivery. Care pathways differed across the EU centres studied. This raises the question as to which is the optimal model in terms of efficiency, safety and patient-centred care, including the possibility of home delivery. We propose to further investigate differences in care pathways that may be due to variables such as financial incentives, competency frameworks and safety issues. This methodology may be applicable to the introduction of other oral products.

3613 POSTER

Determinants of health service satisfaction among cancer patients and their care givers in oncology services: a survey study from two teaching hospitals in Turkey

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Background: To look into the associates of health service satisfaction among cancer patients and their primary care givers treated in the oncology services of two teaching hospitals in Turkey.
We specifically wanted to evaluate whether any specific patient, disease, or treatment related factors predicted health service satisfaction in cancer patients.
Materials and Methods: Consecutive cancer patients treated by the oncology departments of two teaching hospitals, as well as their primary caregivers were interviewed. The impact of various demographic, social, financial, educational factors and religious motive, anxiety and depression scores (calculated according to the Hospital Anxiety and Depression Scale; HADS), disease or treatment related factors, on Health Service Satisfaction (HSS; assessed by a visual analogue scale) was evaluated both for patients and caregivers. In addition, for patients, scores from global quality of life domain of EORTC QLQ C-30 questionnaire were also recorded. General Linear Models were constructed to investigate the individual association of the factors above with HSS.
Results: A total of 417 patients (245 patients, 172 caregivers) were recruited into this study. Overall, the median HSS was high for both the patients (9, Min: 1, Max: 10), and their caregivers (9, min: 0, max: 10). The only determinant of HSS for cancer patients was the specific hospital that participated in this study ($F = 4.11$, $P = 0.044$). The predictors of HSS for the caregivers were social security status and education level of the caregiver ($F = 2.76$, $P = 0.020$, and $F = 5.28$, $P = 0.023$, respectively). In particular, HSS declined with higher educational level and better social security status.
Conclusions: HSS for patients appear to be directly linked with the type or quality of the service received in a particular hospital, whereas, caregivers are influenced by health services with respect to their social and cultural background. Notably, HSS does not seem to be associated with disease, treatment, quality of life, and psychological factors. This study shows the importance of social and cultural background, in addition to the hospital itself, to optimize HSS in cancer patients and their caregivers.

3614 POSTER

Understanding, voluntariness and informed consent in daily clinical trials practice: perceptions of oncology nurses

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Background: Bioethics places great value on disclosure, understanding and voluntariness as the basis of informed consent but these requirements have not been subjected to investigation during the daily conduct of cancer clinical trials that is independent of researchers and participants. Oncology nurses frequently care for patients involved in cancer clinical trials and therefore can provide a potentially independent insight into the ethical conduct of these trials.
Methods: A random sample of 446 members of the Cancer Nurses Society of Australia was invited to participate in a survey that evaluated their understanding and perceptions of ethical issues relevant to clinical trials. Following the development of a general survey instrument, multi-item scales were constructed to assess patient understanding, willingness to participate and informed consent (6, 4 and 6 statements respectively; Cronbach's alpha 0.75, 0.76 and 0.74 respectively).
Results: Of 192 respondents, 75% were actively involved in the care of trial patients. The majority (75% or more) perceived that patients at least some of the time had unrealistic expectations of trial treatments and would participate in anything that offered hope. More than 80% perceived that patients were willing to have toxic treatments, to consent quickly, and to participate knowingly in trials of limited efficacy, at least some of the time. Furthermore, more than 50% perceived that patients did not understand the nature and risk of trial participation at least some of the time. The majority perceived that patients consented freely and knew how to withdraw from a trial most of the time, but insufficient time to decide about trial participation and coercion were perceived at least some of the time by 29% and 19% of respondents respectively.
Conclusions: Oncology nurses perceived that patient understanding, willingness to participate and informed consent were appropriate in most cases but fell short of the ethical ideals of clinical trial conduct. The multi-item scales developed in this study warrant further evaluation across different cultures in order to assess their reliability and validity as measures of the ethical conduct of cancer clinical trials.

3615 POSTER

The patient university: innovative tool for patient participation and empowerment

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Background: Each year in Peru of the 40 000 new cancer cases only 40 percent have access to treatments and care, In order to make cancer a national health priority and fill the existing gap created by the lack of support, information and training available to cancer patients the NGO Esperantra initiated the Patient University – a program aimed at patient empowerment and advocacy.
Material and Methods: The Patient University is an innovative strategy anchored in civil society which seeks to find new ways of creating awareness among patients and policy makers on the urgency of prioritizing Cancer control and prevention. Through specialized courses and workshops covering themes such as up to date information on cancer in general, innovative treatments and care, rights and responsibilities, leadership, strategic planning of patient organizations, self advocacy and political incidence, the patients are informed, trained and empowered. By attending the Patient University, patients, survivors, and their relatives become protagonists capable of advocating and defending the equality of access to quality treatments and medical services.
Results: The patients are being empowered and have organized themselves in Patient Organizations. During the 1st National Cancer Patient Forum organized by Esperantra, in 2007 The Peruvian Cancer Patient Coalition was created bringing together more 10 Cancer Patient Organizations from Peru. The Patient University gives the patients the opportunity to get organized, strengthen their self help networks, to debate common interests and make law proposals to improve the quality of the treatments, becoming main actors in the management of the information and knowledge on the necessities and possibilities of Cancer control and prevention, participating in law development and proposal processes.
Conclusions: The Patient University proves to stimulate patient engagement in processes such as the development of new tools and perspectives on Cancer control and prevention, improving the access to quality treatments and the quality of life of cancer patients in Peru. This experience could be easily replicated and adapted in other emerging countries where the state and health institutions do not cover the necessities of the patients and have not yet identified cancer control and care as a national health priority.

3616 POSTER

Impact of the income-based health service types on survival in patients with metastatic gastric cancer

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Background: Subscription to National Health Insurance (NHI) is a national obligation for South Korean people. For low-income citizens (about lower 3% of population), Medicaid is applied. Many recipients of Medicaid are vulnerable people such as old age singles, the homeless or the

handicapped. These populations are suspected to have worse prognosis. According to one report, on the other hand, patients with Medicaid were more likely to receive chemotherapy than patients with NHI despite the uniform health insurance coverage within the two types of health cost financing. Owing to these conflicting findings, we investigated the relationship between health insurance type and prognosis.
Materials and Methods: Patients are stage IV advanced gastric cancer patients who received palliative chemotherapy. Medical records were reviewed from January 2006 to November 2008 in Seoul Medical Center (municipal teaching hospital).
Results: Total 37 patients were found. Median age was 61 years (range 31−85) and male constituted 75.7%. Platinum (cisplatin or oxaliplatin) combined with 5-FU was the most frequently used regimen (78.4%). Twelve patients (32.4%) were recipients of Medicaid. Median PFS and OS of NHI group were 6.9 (95% CI, 1.7−12.0) and 7.8 (95% CI, 3.4−12.1). And that of Medicaid were 5.6 (95% CI, 2.6−8.6) and 7.8 (95% CI, 3.4−12.2) months. The difference from two groups were not statistically different ($p = 0.739$ for PFS and 0.466 for OS). When patients were divided into longer or shorter survivors according to mean OS (14.1±2.6 months), NHI recipients had more probability for survival (odds ratio 0.72, 95% CI 0.56−0.92).
Conclusions: The question is raised whether recipients of Medicaid have poorer prognosis than patients with NHI in metastatic gastric cancer in South Korea. Although it seems that NHI recipients has better prognosis, still we cannot sure. It should be cleared in large scale cohort study whether this is related to low socio-economic status or other uncontrolled confounder.

3617 POSTER

Significance of postoperative follow-up for colorectal cancer from economic viewpoint

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Background: Recently importance of the long-term follow-up adds to the cancer therapy as well as initial treatment. The aim of the study is to verify the postoperative follow-up for colorectal cancer from the viewpoint of cancer economics.
Material and Methods: According to a Markov model, we developed systems model to compare medical cost of the postoperative follow-up of colorectal cancer and incremental benefit (gain of the economic productivity after recovery). We used data registered in two study groups (Sugihara K, et al.) following the patients for more than 5 years in Japan for the systems model and performed a cost-benefit analysis.
Results: Registered cases of colon and rectal cancer are 5,599 in group A and 5,230 in group B. Recurrence rates in colon and rectum cancer are 2.5% and 7.3% respectively in Stage ? of group A. Those are 13.4% and 22.8% in Stage II, and 25.0% and 39.6% in Stage III. The cost-benefit ratios in colon and rectum cancer in group A are 0.14 and 0.46 in Stage ?, 0.86 and 1.34 in Stage II, and 1.27 and 2.15 in Stage III respectively. With respect of group B, those are 0.20 and 0.29 in Stage ?, 0.86 and 1.05 in Stage II, and 1.23 and 2.43 in Stage III respectively. Almost the same tendency is observed in two groups.
Conclusion: It can be said that postoperative follow-up has the definite economic effect in Stage II rectal cancer, and Stage III colon and rectal cancer. Meanwhile, postoperative follow-up has little economic effect in Stage ? colon and rectal cancer, and Stage II colon cancer, since the cumulative costs of follow-up exceed the incremental benefits.

3619 POSTER

Oral cancer treatments and adherence: medication event monitoring system assessment for capecitabine

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Background: Oncological treatments are traditionally administered via intravenous injection by qualified personnel. Oral formulas which are developing rapidly are preferred by patients and facilitate administration however they may increase non-adherence. In this study 4 common oral chemotherapeutics are given to 50 patients, who are still in the process of inclusion, divided into 4 groups. The aim is to evaluate adherence and offer these patients interdisciplinary support with the joint help of doctors and pharmacists. We present here the results for capecitabine.
Materials and Methods: The final goal is to evaluate adhesion in 50 patients split into 4 groups according to oral treatments (letrozole/exemestane, imatinib/sunitinib, capecitabine and temozolomide) using persistence and quality of execution as parameters. These parameters are evaluated using a medication event monitoring system (MEMS®) in addition to routine oncological visits and semi-structured interviews. Patients were monitored for the entire duration of treatment up to a maximum of 1 year. Patient satisfaction was assessed at the end of the monitoring period using a standardized questionary.
Results: Capecitabine group included 2 women and 8 men with a median age of 55 years (range: 36−77 years) monitored for an average duration of 100 days (range: 5–210 days). Persistence was 98% and quality of execution 95%. 5 patients underwent cyclic treatment (2 out of 3 weeks) and 5 patients continuous treatment. Toxicities higher than grade 1 were grade 2−3 hand-foot syndrome in 1 patient and grade 3 acute coronary syndrome in 1 patient both without impact on adherence. Patients were satisfied with the interviews undergone during the study (57% useful, 28% very useful, 15% useless) and successfully integrated the MEMS® in their daily lives (57% very easily, 43% easily) according to the results obtained by questionary at the end of the monitoring period.
Conclusion: Persistence and quality of execution observed in our Capecitabine group of patients were excellent and better than expected compared to previously published studies. The interdisciplinary approach allowed us to better identify and help patients with toxicities to maintain adherence. Overall patients were satisfied with the global interdisciplinary follow-up. With longer follow up better evaluation of our method and its impact will be possible. Interpretation of the results of patients in the other groups of this ongoing trial will provide us information for a more detailed analysis.

3620 POSTER

Of money and healthcare

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Introduction: Certain factors must be considered when a department needs to replace a treatment unit. With the escalating cost of healthcare and the need to manage a waiting list of patients, striking a balance between cost and efficiency of a treatment machine is of utmost importance. The choice is vast; linear accelerators, TomoTherapy® units, CyberKnife® System units, are all possibilities. This study investigates the impact a cyberknife would have on the workload of a radiotherapy department, when acquired as a replacement unit. We focused on prostate patients as they are the most numerous on our waiting list.
Methods: Ten centers in the United States and five in Europe with a cyberknife in operation for at least 1 year were contacted by phone. They were asked: Daily number of patients treated and patient selection on cyberknife and whether the cyberknife replaced an old accelerator or if it was an add on.
Results: The number of patients treated daily on cyberknife ranges from 4 to 8, for an average of 6. All centers treat primarily brain and lung tumors. The US centers treat few prostate patients as insurance companies won't cover costs. All confirmed the cyberknife was an addition, not a replacement unit.
On the outgoing accelerator we treat 32 prostate patients daily over an 8 week period (208 per year). Literature reveals phase II studies for prostate patients treated with cyberknife are presently using 5 fractions over 1 week. Assuming 2 of 6 slots on cyberknife are allocated to those patients willing to participate in a hypofractionation study, the number of prostate patients treated annually with the cyberknife would be approximately 104 or 50% of the present number. Although the patients treated on cyberknife would liberate a number of slots on the conventional accelerators, the feasibility of absorbing about an extra 100 patients could be problematic. Furthermore, treatment planning for the cyberknife is done by a physicist not a dosimetrist. This must be taken into consideration in the department planning budget. Presently the start up costs of a CyberKnife® System is about $4M (US).
Conclusion: We concluded that if the cyberknife is acquired as a replacement unit, the workload on the other accelerators must increase in order to maintain the present waiting list in check. Extending the working hours is an added cost to the department. Purchasing the cyberknife as a replacement unit would neither be an efficient nor financially savvy choice.

3621 POSTER

Development of patient centred lymphoedema services

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Background: Lymphoedema is a chronic, progressive condition that requires timely and appropriate interventions, if patients' physical and psychological needs are to be met. Patients have reported that living with lymphoedema can have a negative impact on their quality of life, and