3606 POSTER

Cancer control programme by training of the rural medical practitioner by work up and continuation of the programme using telemedicine system – a project from West Bengal, India

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Background: In India, total cancer burden is more than 25 lacs and there is an increment of 10 lacs new patients per year, which is 1/10 of total cancer burden in the world. Majority of the cancer in this part of the country are tobacco and diet related. It is estimated that, by proper preventive measures we can reduce the current level of increment of 1,00,000 annually by 2020. Rural health system in West Bengal is mainly dependent on rural medical practitioner and health workers. 80% of the services are rendered by the unqualified practitioners and health workers. The aim of our state based non-Governmental cancer control programme is to reduce the cancer burden by proper awareness among rural medical practitioner and health workers. We also intended to teach them about symptoms of cancer and pick up cancer in early stage to provide appropriate treatment.
Material & Methods: During the period of January 2009 – December 2011 a cancer screening and awareness programme is being conducted in various districts of West Bengal twice in every month by NCRI. There are 7 peripheral centres in 7 different district places of West Bengal. First of all 2 days training by workshop are being conducted among the rural practitioners. They are taught about dealing about oral cancer by examining the oral cavity, any history of tobacco intake, breast cancer by self breast examination and cervical cancer by Pap smear examination. Hands on experience are given to them by video presentation and practical demonstration. The cases which are detected positive are sent to our hospital for planning of appropriate treatment and advanced cases are advised for pain and palliative treatment in the peripheral centres. The peripheral centres are connected with the main centre, NCRI, by telemedicine.
Result: In this Govt. of India funded project, a total of 30,000 rural medical practitioners and health workers are being trained. 10 blocks around each centre are being selected. In the ongoing process over 3 years it is estimated that 70 lacs population will be covered by the rural medical practitioner and health workers for awareness and early detection cancer.
Conclusion: At the present scenario, 80% of the patients are detected in advanced stage and they are not being properly treated. We hope, by our present project, more than 80% of population in the covered area will be detected early and get appropriate treatment in time.

3607 POSTER

Organisational hazards when treating patients with cytotoxic drugs

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Background: Due to a couple of lethal accidents with cytotoxic drugs a risk assessment was called for, as a possible driver for process re-engineering.
Material and Methods: A proactive risk analysis method, DEB (Deviation-Effect-Barrier) analysis [1] was applied to the process "Treatment of patients with cytotoxic drugs", at a department of oncology. In the analysis latent failures were identified, the strength of existing safety barriers assessed, and suggestions made for implementing of new barriers or strengthening of old ones.
Results: The study identified a number of latent failures:

1. The procedures for updating the manual for chemotherapy regime are unsafe.
2. The procedures for cooperation between department of oncology and pharmacy are implicit and not clear.
3. Responsibility and authority for the nurses are not defined.
4. Necessary competence for doctors is not properly defined.
5. The procedures for evaluation of the results of blood tests are unsafe.
6. The procedures for tracing the results of blood tests are inappropriate.
7. The procedures for transfer of information from manual to CTC (Cytotoxic Treatment Card) is inappropriate.
8. The procedures for filling in the CTC are unsafe.
9. The procedures for marking the CTC with proper patient ID are unsafe.
10. The technical equipment (infusion pumps) is of different brands at different ward units at the department of oncology.
11. The procedure for monitoring the patient during treatment is unsafe.

The most dangerous errors were:

- Clinical misjudgement of the patient before prescription
- Misjudgement of laboratory results
- Necessary blood tests not taken
- Blood test results are forgotten
- Errors in prescription and errors in filling in the cytotoxic treatment card
- Wrong infusion administered to the patient (wrong drug, wrong amount, wrong infusion rate).

Conclusion: Overall, the safety barriers at the ward unit were weak or non-existent. Several error opportunities could be reduced by computerisation of key tasks.
Based on the findings from the study a generic checklist for hazard identification was proposed.
Due to the study a re-engineering of the studied process took place.

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3608 POSTER

Development of a post adjuvant exit lifestyle toolbox

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Background: An increasing number of randomised trials are providing evidence that an optimal lifestyle after cancer can improve disease-free survival and overall chance of cure. Despite this, very few oncology units have integrated lifestyle strategies as part of their adjuvant management.
Materials and Methods: This two-year project involved patient volunteers, personal fitness instructors (PFI) and healthcare providers, including primary care trusts (PCT) representatives. The first phase involved a MEDLINE, Proquest, EMBASE and Cochrane Library search for literature addressing the benefits of lifestyle after cancer [1]. These data provided a foundation for a lifestyle manual and supporting lifestyle website [2]. It also convinced the PCTs to extend funding for their "exercise prescription programme", to include cancer rehabilitation. This required extra training for the PFIs to meet the standards determined within the 2001 Department of Health exercise referral document [3]. A cancer rehabilitation course was therefore designed in conjunction with a national training organisation, which provides a level 4 accreditation for PFIs. Finally, a convenient sized hand-held file was designed with feedback from our volunteer groups.
Results: This project has enabled us to successfully implement the UK's first post-adjuvant lifestyle toolbox, and establish Europe's first cancer rehabilitation training programme for PFI. Patients now receive an exit lifestyle interview, a prescription for an exercise programme supervised by a trained PFI in a local gym and a hand-held file containing a "Lifestyle after cancer manual", explaining the benefits of healthy living advising "What to do more of" and "What to avoid".
Conclusions: An evidence-based exit lifestyle toolbox has now been established. All UK oncologists can now write exercise prescriptions for their patients' exiting adjuvant therapies, and the training programme established in this project will ensure PFI have the necessary skills. The next stage in this project is to evaluate the impact of this strategy on patients' lifestyle choices.

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3609 POSTER

An economic analysis of arthralgia/myalgia versus recurrence in women with hormone receptor-positive (HR+) breast cancer (BC) on aromatase inhibitors (AIs)

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Background: The symptoms of arthralgia/myalgia (A/M) are associated with estrogen suppression and are more common with AIs relative to tamoxifen (TAM). AIs have demonstrated superior efficacy when compared with TAM. In the Breast International Group (BIG) 1−98 trial, letrozole (LET) treatment significantly reduced the risk of distant metastasis (DM). The updated 76-month BIG 1−98 analysis suggests that early reduction in DM ultimately leads to overall survival (OS) benefit; there were 40 fewer deaths with LET compared with TAM (Mouridsen H. *Cancer Res.*

2009;69[suppl]:66s. Abstract 13). It has been reported that women with new joint symptoms at 3 months after initiating an AI have a significantly lower risk for recurrence compared with women not reporting these symptoms (Cuzick J et al. *Lancet Oncol*. 2008;9:1143–1148).
Methods: Data from the Henry Ford Health System (1995–2005) were used to identify postmenopausal HR+ early BC patients who received at least 1 year of AI therapy after surgery. Total health care costs of managing A/M associated with hormone therapy as well as BC recurrences were estimated from charges incurred during health care encounters for these conditions.
Results: Of 834 eligible patients, the incidence of treated A/M was 21%, and the total health care cost was ~$429 per symptomatic patient/yr. The average annual cost of any BC recurrence was previously reported at ~$131,000/yr, with the greatest cost seen with DM at ~$265,783/yr (Wiederkehr D et al. *J Clin Oncol*. 2008;26[15s]:76s. Abstract 1141).
Conclusions: The economic costs of treating A/M are nominal, particularly in light of the superior efficacy of AIs and the economic burden of BC recurrences. DM is the most costly recurrence, and in BIG 1−98, reducing early DM appeared to impact OS. Discontinuing AIs or switching to less effective therapies in an effort to manage A/M should be weighed against the benefit of AI therapy in reducing BC recurrences, particularly DM, as well as the high costs associated the managing these recurrences.

3610 POSTER

Healthcare utilization and treatment patterns among cutaneous T-cell lymphoma (CTCL) patients in the United Kingdom and Brazilb

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Background: CTCL is a burdensome condition potentially associated with high healthcare utilization (HCU). Our objective was to quantify HCU and treatment patterns among a CTCL cohort requiring systemic therapy in the United Kingdom (UK) and Brazil.
Material and Methods: A retrospective chart review study of CTCL patients treated with ⩾1 systemic therapy at hospitals in the UK and Brazil. Patients were followed from initiation of systemic therapy (index date) for up to 1 year in Brazil or until death in the UK. Patients were required to have ⩾1 year follow-up, an index date on or after January 1, 2002 and have reached disease stage ⩾ IIB at index date or some point in the observation period for inclusion. CTCL-related treatments (systemic, skin-directed [SD], ancillary), clinical outcomes and HCU were abstracted from charts. HCU was evaluated as number per patient per year (PPY). The UK included only deceased patients.
Results: A total of 32 (UK) and 15 (Brazil) CTCL patients were included. Mean study follow-up duration and patient age were 2.0/1.0 yrs and 58/49 years for UK/Brazil, respectively. Disease stage at index date for UK/Brazil were ⩽IIA (43.8%/0%), IIB (15.6%/46.7%), III (21.9%/40.0%), IVA (15.6%/13.3%), IVB (3.1%/0). A total of 82 (1.26 PPY) and 20 (1.33 PPY) systemic therapies were observed in UK and Brazil. Patients received 1 (37.5%/66.7%) 2 (18.8%/33.3%) and 3−7 systemic therapies (43.8%/0%) in UK/Brazil. Interferon-alpha (IFN-α) and methotrexate were widely used systemic therapies in the first 4 therapy lines and baxarotene in subsequent lines in UK, while IFN-α was the predominant systemic therapy in Brazil. A total of 161 (5.03 PPY) and 15 (1.00 PPY) distinct concomitant SD therapies were used in 100%/73.3% patients in UK and Brazil. PUVA/Fucibet/dermovate/aqueous cream (UK) and PUVA/betamethasone cream (BRA) were widely used. Observed units of HCU are shown in the table.

HCU Type	UK		Brazil	
	# Units	Units PPY	# Units	Units PPY
Hospitalization episodes	27	0.41	5	0.33
Hospital days	1031	15.79	20	1.33
ER visits	0	0.00	1	0.07
Bone marrow transplantations	3	0.05	0	0.00
Blood transfusions	0	0.00	1	0.07
Lab tests	497	7.61	205	13.67
Outpatient visits	212	3.25	200	13.33

Conclusions: CTCL treatment is multi-faceted requiring significant HCU in studied UK and Brazilian institutions. These results quantify the burden of CTCL and may help evaluate the impact of new systemic CTCL therapies on overall healthcare use.

3611 POSTER

Establishing a concept of cancer literacy – a delphi study among Swiss oncology experts

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Background: Two types of studies have been conducted around the concept of health literacy, which in the last years has gained widespread acceptance in the field of Communication and Medicine: on the one side, empirical research on the different aspects of health literacy and their relationship with health outcomes (DeWalt et al. 2004; Paasche-Orlow et al. 2006; Sudore et al. 2006), and on the other side studies aimed at discussing and implementing new and existing theoretical definitions of the concept (Nutbeam 2008; Schulz & Nakamoto 2005). The present study is a tentative endeavour to contribute to the conceptual work around health literacy, i.e. to specify the concept with regard to the limited area of cancer. The main idea is that of elaborating and operationally defining a concept of cancer literacy. A key issue in this endeavor is the question of what to include in the concept, and what to omit.
Material and Methods: It is hard to know which features of laity communication competence are important to operationally define health literacy in general and cancer literacy in particular, without taking the knowledge and experience of health care providers into account. To achieve an operational definition of cancer literacy in the general population, building upon the professional experience of health care providers (oncologists, GPs, nurses from oncology wards, social workers, public health professionals), a Delphi study among cancer experts (N = 50) from the three linguistic regions of Switzerland has been conducted.
Results: The paper presents the main results of the three waves of the Delphi study that was the first to operationally define the concept of cancer literacy, highlighting its main aspects, their relative importance and the degree of agreement among the participants.
Conclusions: The study is the first step of a larger research project funded by Oncosuisse and carried out by a Swiss university, which foresees other studies in this area, such as a content analysis of the Swiss newspaper coverage of the aspects that have emerged as crucial constituents of cancer literacy, and the development of a measuring instrument that will help define the most health illiterate and cancer illiterate segments of the population and produce information on which aspects of health and cancer literacy are most in need of improvement. This will help designing information campaigns and public policies that are targeted to where the deficiencies are.

3612 POSTER

Improving chemotherapy capacity by switching from intravenous to oral vinorelbine: TAMINO, an international time and motion audit

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Background: Efficiency, safety and patient-centred care are key criteria for a world-class chemotherapy service. This paper describes a time and motion audit of patient pathways in eight European Union (EU) centres. A previous audit (Taylor et al) showed that patients treated with oral vinorelbine (NVBo) spent 1 h 30' less in hospital and required 33% less pharmacy time than patients treated with intravenous vinorelbine (NVBiv). The objective of TAMINO (Time And Motion International study with NAVELBINE® Oral) was to explore whether switching from NVBiv to NVBo as a single agent for patients treated at the hospital for advanced non-small cell lung cancer (NSCLC) or advanced breast cancer (ABC) would result in a similar conclusion for patients, doctors and pharmacists across the EU.
Material and Methods: Eight centres in four EU countries were selected to reflect the diversity of chemotherapy administration processes. Process and waiting times for 123 patients were measured: 72 NVBo (59%) and 51 NVBiv (41%), 81 (66%) NSCLC and 42 (34%) ABC. Treatment pathways were identified in each centre. Process and waiting times were measured for an average of 15.4 patients [8−20] at each centre and for each process the average and range calculated.