3036 POSTER

Comparison of Health-related Quality of Life (HRQoL) in Patients Reporting the Same Adverse Event (AE) Fatigue on Different Treatments

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Background: Because AE assessment is done by an outside observer, it is considered by some to be an objective measure of treatment impact. However, as AEs are graded by the treating physician, they alone may not depict the full effect on patients. We examined the relationship between the AE fatigue and HRQoL to assess whether patients with the same grade of severity have the same HRQoL across different treatments.
Methods: In a phase III trial, 750 treatment-naïve patients with metastatic renal cell carcinoma were randomized 1:1 to receive repeated cycles of oral sunitinib (SU) 50 mg/day on a 4-weeks-on-2-weeks-off schedule (n = 375) or interferon-alfa (IFN) 9 MU subcutaneously thrice weekly (n = 360). We used the following HRQoL scales and subscales as outcomes: FKSI-15, FKSI-DRS, FACT-G, and EQ-5D. AEs were graded using the National Cancer Institute Common Terminology Criteria for AEs (NCI CTCAE), v3.0. We focused on the AE fatigue (grades 1 [lowest] to 4 [highest]), assigning a value of 0 to a patient for whom fatigue was not reported during a cycle. A repeated measures mixed-effects model was used to study the relationship between HRQoL scores and fatigue grade by treatment.
Results: The relationship between HRQoL and the AE fatigue was close to linear. HRQoL was generally better with SU for any grade of AE fatigue. In the absence of AE fatigue, all differences in HRQoL score were not only superior with SU but also statistically significant most of the time ($P < 0.05$). For AE fatigue of grades 1 and 2, all differences but one (the FKSI item "I have pain") numerically favored SU and the majority were statistically significant. A similar pattern for grade 3 AE fatigue also favored SU but few results were statistically significant, likely because of the smaller sample size. The difference in the FKSI item "I feel fatigued" showed less fatigue with SU for all grades of AE fatigue, a finding that was also statistically significant.
Conclusions: Our results show that patients with the same grade of AE fatigue on different treatments may have different HRQoL. In this study, patients on SU who experienced the same grade of fatigue as patients on IFN generally had more favorable FKSI-15, FKSI-DRS, FACT-G, and EQ-5D scores. Although these scores may have been impacted by other AEs and differences in efficacy, favoring SU, this suggests that assessment of symptomatic AEs by CTCAE grading does not fully capture a patient's experience and should be interpreted alongside HRQoL and other AEs.

3037 POSTER

Sense of Coherence (SOC) is Stabile up to 3 Years Postoperatively − a Longitudinal Prospective Study in Women Surgically Treated for Breast Cancer

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Background: The majority of women with breast cancer have a long life expectancy, some however with symptoms attibuted to treatment which affects quality of life. Sence of coherence (SOC) is a health related quality of life instrument with 13 items that reflect on the individual's ability to manage difficulties acording to a slutogenesis therory model by Antonowski. High scoring levels of SOC relate to a better coping strategy to the illness regardless of the severity of the disease. The SOC scoring results may be associated with treatment effects. There is also uncertainty to whether SOC measurments remain stable over time. SOC summated scales vary between 13−91 where 13−45 is considered low. Normadata report scales between 50−70. Overall aim: To elucidate SOC in a prospective longitudinal study where its stabiltity over time, its asscoiation with reported symtoms before and after breast cancer treatment is analysed.
Material and Methods: One hundred and twenty five women in a single institution who underwent breast cancer surgery between 1999–2001 were included. Eight declined participation. Descriptive statistics, regression and survival analyses were used.
Results: Mean age of the patients at study entry was 55 (30−76) years. One hundred and seventeen women completed the SOC questionnaire preoperatively, 103 one year postoperatively, 93 after 2 years and 90 after 3 years. Preoperatively 10% scored <55 and 10% >83. Preoperatively 33/111 (26%) reported pain/discomfort in arm shoulder region. The mean summated SOC scale preoperatively was 70 (SD 10.18), 1 year postoperatively 70 (SD 11.24), 2 years 72 (SD 11.26) and 3 years postoperatively it was 71(SD 11.39).
Conclusion: This study corroborates those reports stating that SOC is stable over time. As a group our cohort showed that SOC scales were similar to norma data. These data will be further analysed for poosible interaction between SOC and treatment modaliteis.

3038 POSTER

Delivering Science Based, Patient Driven Image Guided Prostate Radiotherapy − Striving for Patient-Centred Care in an Era of High Precision Radiation Therapy

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Background: Although transrectal ultrasound-guided fiducial marker implantation for prostate localization during radiotherapy has been traditionally utilized, it is nonetheless an invasive procedure that is not without morbidity. With the advent of cone-beam computed tomography (CBCT)-based setup corrections and evidence showing the non-inferiority of this soft tissue matching technique in experienced hands, the opportunity arises to potentially offer patients a choice of image-guided radiation therapy (IGRT) modalities. However, to date, the authors are unaware of any literature documenting patient involvement in selecting the IGRT modality. The aim of this study is to perform a qualitative study to examine patient self-reported morbidity of fiducial marker insertion and their preference of IGRT modality − CBCT vs. fiducial markers.
Material and Methods: Twenty four patients with a diagnosis of localized prostate cancer who were on dose-escalated radiation therapy were accrued. Prior to radiotherapy, four gold markers were inserted into the prostate using a transrectal approach for target localization during radiation, which is our current standard of care. Detailed self-administered questionnaires and/or structured interviews were used to gather data regarding the patient-perceived morbidity of fiducial marker insertion and their preference of IGRT modality. Content analysis was performed using the questionnaire/interview data and recurring themes were extracted. Simple descriptive statistics were used for the quantitative data.
Results: Overall, fiducial marker insertion represented an unpleasant and uncomfortable experience for patients. A significant proportion (45%) reported experiencing at least moderate pain with the procedure. A psychological sensation of embarrassment was associated with the procedure for some. Nevertheless, patients generally expressed a view of being determined to "do anything that would benefit my chance of curing the prostate cancer" and accepted fiducials because it permitted "accurate treatment". However, if given the option of a non-invasive CBCT technique that could achieve the same outcomes, the majority (90%) either remained neutral or opted for the new non-invasive technique. The mean scores for patient-perceived quality of life/satisfaction ratings using a 7-point scale (1 = Terrible; 7 = Delighted) in each of the global care areas of "radiation therapy", "prostate biopsy", and "marker insertion" were 6.2 (range 5−7), 4.9 (range 1.5−7), and 4.8 (range 1−7), respectively.
Conclusions: Knowledge gained from this study is instrumental for ongoing program development and technology implementation to provide high quality patient-centred care − aiming to deliver not only radiation treatments with high precision, but also with high quality of life factors incorporated.

3039 POSTER

Relationship Between Plasma Cytokine Levels and Physical or Psychological Functioning in Patients With Advanced Cancer

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Background: The relationships between cancer-related symptoms and several proinflammatory cytokines have been well documented. However, in previous studies, the number of examined cytokines was limited. Here,

we have examined the association between functional impairments of cancer patients and circulating cytokines using a multiplex technique.
Methods: 50 patients with solid malignancies were registered in the study. Physical and psychological functions were assessed using the QOL questionnaire (QLQ-C30, version 3.0) of the EORTC. Plasma cytokine levels(IL-1beta, IL-1RA, IL-2, IL-4, IL-5, IL-6, IL-7, IL-8, IL-9, IL-10, IL-12(p70), IL-13, IL-15, IL-17, basic FGF, eotaxin, G-CSF, GM-CSF, IFN-gamma, IP-10, MCP-1, MIP-1alpha, MIP-1beta, PDGF-BB, RANTES, TNF-alpha, VEGF) were measured in all patients and assessed the relation to functional scale scores. The institutional Ethical Committee approved the study, and each patient gave written informed consent.
Results: Univariate analysis showed circulating levels of IL-6 and VEGF to have a significant negative correlation with physical functioning scales. Levels of IL-6, G-CSF and VEGF were negatively correlated with cognitive and emotional functioning scales in univariate analysis. Multivariate analysis showed that circulating IL-6 level is a significant independent determinant of physical and cognitive functioning and that circulating VEGF level is a significant independent determinant of emotional functioning in patients with cancer.
Conclusion: We have revealed the relationship between multiple circulating cytokines and functional impairment in patients with cancer, and demonstrated that levels of circulating IL-6 and VEGF can be biologic markers of cancer-related functional impairment. IL-6 and VEGF might play pivotal roles in the pathophysiology of cancer symptoms and functional impairments. These cytokines are highly promising candidates for therapeutic interventions to improve functions of patients with advanced cancer.

3040 POSTER

Culture-related Issues in the Translation of Quality of Life Questionnaires for Use in International Cancer Clinical Trials: Example of Classification and Solutions for EORTC Measures

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Background: The questionnaires developed by the European Organisation for Research and Treatment of Cancer (EORTC) Quality of Life Group are widely used to measure quality of life in cancer patients. The expanding geographical coverage of clinical trials implies a continuous need for new translations of these measures. Besides normal linguistic problems, cultural issues arise, especially outside Europe, and have to be addressed to ensure the equivalence and validity of final questionnaires. We examined these issues in this study.
Material and Methods: The EORTC Translation Unit (TU) analyzed the total of 103 translations finalized in 2010, aiming to classify problematic cultural issues and determine solutions. Theoretical background was provided by a literature search (2002–2011) in Translation Studies publications on culture-related problems.
Results: Our analysis showed two main types of culture-bound issues: (1) specific issues related to culturally-dependent activities or phenomena (e.g. driving a car in Western Europe as opposed to Asia); (2) topical issues related to taboos (e.g. sex or death).
The former are addressed using the foreignization theory, retaining cultural concepts unknown to the target culture. Comprehensibility is checked by pilot-testing the translation on patients and, if necessary, adjustments are made and re-checked. For example, the concept of “a heavy suitcase” is retained in translations into Chinese and not replaced with “a bag of rice” and its comprehensibility is tested in patient interviews.
The latter usually involve whole scales (e.g. sexuality or future perspective) and raise suggestions of deleting the entire scale. Yet, the problematic scales are always retained and patients are invited to reword them during the pilot-testing. Their suggestions are then analyzed and used for rephrasing when possible. For example, in the last 15 multiple myeloma module translations, 20 translated items proved problematic. After analysis, we rephrased 6 items and retained the wording in 14, since either the suggestions had to be refused or no options were provided.
Conclusions: Every day the TU encounters culture-related problems in translation, which, if not addressed, could hinder the assessment of QOL results in clinical trials. No ideal solution to translation challenges exists, since they always impact the final translation and its interpretations, but the TU has developed a method based on foreignization supported by pilot-testing to ensure comprehensibility and, if necessary, analyzing possible rephrasing options suggested by patients. Daily practice and validation studies have confirmed that the quality and validity of translated questionnaires are ensured.

3041 POSTER

Oxaliplatin-induced Neurotoxicity − Comparing Four Methods of Assessment

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Background: Dose-limiting neurotoxicity is a major side-effect of adjuvant oxaliplatin treatment, producing initial acute neurotoxicity and chronic neuropathy with increasing exposure [1]. Despite the potential of increased life expectancy, these symptoms may have a profound effect on the quality of life of survivors. This, coupled with findings from clinical studies (i.e. exploring causative mechanisms, the efficacy of neuroprotective agents or decisions about dose reduction) highlights the limitations of currently available symptom assessment tools. To explore these discrepancies four methods of symptom assessment were compared.
Methods: Consecutive symptomatic patients reporting peripheral neuropathy after oxaliplatin chemotherapy for colon cancer were interviewed using a semi-structured clinical interview. Subjects’ verbatim responses were analysed by qualitative methods. Neurotoxicity was also assessed by the National Cancer Institute Common Toxicity Criteria (NCI-CTC) neuropathy sensory subscale (clinician-rated); by patient ‘self-report’ questionnaires (SRQ) and objectively by nerve conduction tests [2].
Results: Twenty patients participated (65% female; mean age 58). Mean cumulative oxaliplatin dose was 789 mg/m^2. In 40% of patients early cessation of treatment was necessitated by neurotoxicity. Mean time since treatment cessation was 39 weeks. Only 2 patients were designated by clinicians with maximum NCI grade 3 (sensory alteration or paresthesia interfering with activities of daily living), the remainder were classified as grade 1 or 2. All patients interviewed described physical limitations due to symptoms and SRQ data supported this (75% reported ‘moderate symptoms’).
Conclusions: Given the discrepancies in symptom prevalence highlighted by findings in this study, the identification and monitoring of oxaliplatin-induced neurotoxicity would benefit from more appropriate and informative clinical assessment. This would be beneficial not only in clinical trials to monitor the efficacy of interventions and research exploring aetiopathology but also in prospective studies of survivors. A method of assessing symptom severity and frequency together with disability, and which provides a cumulative score is proposed.

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3042 POSTER

Does Response Shift Affect the Change in Health Related Quality of Life During Treatment for Childhood Cancer?

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Background: Confrontation with a serious illness changes the person’s internal standards about good or poor Health Related Quality of Life (HRQL) as a result of adaptation to the imperfect health status. This change in internal standards, called response shift, might influence the measures of change in HRQL in longitudinal studies. This study assessed whether response shift affected the change in HRQL during the first three months of treatment for childhood cancer.
Materials and Methods: HRQL was assessed within two weeks after diagnosis (pre-test) and three months later (post-test) using both child- and parent-report of PedsQL and Cantril’s ladder. Health status was assessed with MSAS and Lansky Performance scale. Concurrently with the post-test, a then-test of PedsQL and Cantril’s ladder was administered where child and parent had to give a renewed judgement about the HRQL shortly after diagnosis. A difference between pre- and then-test indicates the presence of response shift. Included were children $\geqslant$8 years (n = 37), their parents, and parents of children $\geqslant$2 years (total number of parents: n = 80). Wilcoxon Signed Rank-Tests were used to compare pre- post- and then-tests.