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Influence of patient's age on decision in oncology

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Purpose: Several studies have reported age-related differences in the management of patient with cancer. The aim of this study was to define the most important factors observed in general practitioner's practice for the clinical management of patients with cancer.

Methods: A questionnaire was developed to assess physician's decision process in the management of cancer. Each questionnaire presented a simulated case of prostate or breast cancer. A picture of the patient was also provided as well as a description of symptoms and medical history. From a presentation of a newly discovered tumour, cases varied for age (younger or older), medical history (absence or presence of comorbidity) and functional status (good or bad).

A total of 678 questionnaires were distributed at 3 meetings of continuing education in general practice and family medicine. Physician received each 2 randomly selected cases and gave his decisions about the patient's diagnosis and treatment. For the statistical analysis, multivariate analysis was used to assess the effects of patient's age, functional status, comorbidity and physician's characteristics on diagnosis and treatment decisions.

Results: Our analysis indicated that older patients, when diagnosed with cancer, were more likely to be oriented directly for a non-curative approach (odds ratio, 13.71; 95 percent confidence interval [95%CI], 5.67 to 33.12; $p=0.0001$ for prostate cancer and odds ratio, 17.67; 95%CI, 4.04 to 77.31; $p=0.0001$ for breast cancer). For prostate cancer, physicians estimated that age was the most important decision factor, before functional impairment and comorbidity. For the treatment of breast cancer, physicians proposed a tumorectomy and postoperative radiotherapy less often to older patients (odds ratio, 0.30; 95%CI, 0.17 to 0.52; $p=0.0001$) and more often tamoxifene as only treatment to older patients (odds ratio, 7.21; 95%CI, 3.43 to 15.17; $p=0.0001$). For the treatment of prostate cancer, surgical treatment was less often proposed to older patients (odds ratio, 0.09; 95%CI, 0.04 to 0.18; $p=0.0001$), and hormone therapy as only treatment was more often proposed to older patients (odds ratio, 4.10; 95%CI, 2.326 to 7.26; $p=0.0001$).

Conclusion: Our study suggests that age is the single most important factor in general practitioner's decision-making about the management of cancer patients, surprisingly more important than functional status and comorbidity.

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First results of a prospective randomized study on the impact of psychooncological intervention in cancer patients on quality of life and endocrino-immunological parameters

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Purpose: The objective of this study was to evaluate psychooncological support for inpatients with colorectal cancer undergoing surgery in terms of anxiety, quality of life (QoL) and endocrino-immunological parameters.

Methods: The design was a randomized controlled trial with repeated measurements. Patients in the experimental group received individualized psychotherapeutic support during the stay; those in the control group were provided with a daily program of classical music. All patients were assessed 1 day before surgery and 10 days and 3 months after surgery using the EORTC-QLQ-C30 for Quality of Life, and the STAI-X1 for State Anxiety. Additionally, measurements of the cortisol level (IMMULITE), activity of Natural Killer (NK) cells (LDH) and counts of NK and T cells (FACS) were made.

Results: Of 203 patients screened for the study, 106 met the inclusion criteria, 53 in the experimental group and 53 in control. Results indicated that the groups were comparable at baseline on socio-demographic and clinical characteristics, State Anxiety and all scales of the QLQ. At baseline, there were significant correlations between State Anxiety and Global Health Status (QL) ($r=0.41$) as well as with five other scales of the QLQ. Preliminary results using 57 of 106 patients showed significant correlations between counts of NK cells (CD3+CD16+/CD56+) and State Anxiety ($r=-0.30$) and Global Health Status ($r=0.44$) at baseline. General Linear Models showed, that the number of treatment sessions in combination with the group allocation had significant effects on Emotional Functioning, Cognitive Functioning,

Fatigue and Pain. For example, Emotional Functioning demonstrated a significant within subject effect over 3 months ($F(df=2)=6.23$) with significant between subject effects for the type of group ($F(df=1)=4.71$) and number of treatment sessions ($F(df=1)=4.43$).

Conclusion: The psychooncological support had an important impact in inpatients with colorectal cancer, depending on the number of treatment sessions that patients received. The number of treatment sessions were dependent on postoperative length of stay, suggesting that the amount of intervention may be important in determining patient outcomes. The study was sponsored by German Cancer Help.

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A study to evaluate the feasibility of implementing a patient information file for patients with cancer

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Purpose: To examine the practical implications of implementing the Team-work Personal Information File (TPIF), which was devised by the UK based charity, the National Cancer Alliance (NCA). Within this specifically, to evaluate patients' and health professionals' perceptions of the design and content of the File and the usefulness of the File at different stages of the patients' cancer journey.

Methods: Over a period of six months, the TPIF has been offered to patients with ovarian, prostate, colorectal, breast, head and neck and lung cancer attending different hospitals across the South East London and Oxford Cancer Networks. Feedback from patients and health professionals has been central to this study and, as such, their views have been sought using a combination of approaches including questionnaires and semi-structured interviews.

Results: Half of the patients who have been offered the TPIF have chosen to accept it. 160 copies have been distributed across both cancer networks. Feedback from health professionals and patients alike indicate that there are a number of clear issues underpinning the relatively small number of files distributed during the timespan of the study. These include views around the size of the TPIF and the relevance of the generic information contained within it, alongside more practical issues associated with the extent to which it can be integrated with other forms of patient information utilised locally. Health professionals' concerns about offering the file to patients inappropriately, alongside their perceptions about the additional time burden and logistical problems related to implementing the TPIF in the clinical setting appear also to have contributed.

Conclusion: The provision of information and communication in cancer care has been given a high priority by the English Department of Health. Early results suggest that a culture of openness about information and partnership between health professionals and patients has popular support from both patients and staff, but there are problems in implementing the TPIF into routine clinical practice. It is clear from this that further development of the TPIF should take account of these findings to ensure that it can more optimally provide cancer patients with personalised, appropriate and timely information.

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Adult psychosocial functioning following childhood cancer: the different roles of sons' and daughters' relationships with their fathers and mothers

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Aims: To assess gender differences in the role of family relationships as risk or protective factors for psychosocial functioning in adults who suffered from childhood cancer

Methods: 102 adult survivors (82% of those eligible, 35 female and 57 male) of childhood Acute Lymphoblastic Leukaemia and Wilms' Tumour, and 102 matched controls (74% of those eligible) aged 19-30 were interviewed. Interpersonal and social role functioning, and current relationships with each parent were assessed in standardised investigator-based interviews with subjects

Results: Adult survivors, both men and women, were more likely than controls to have impaired close relationships (love relationships and friendships) -OR 8.47, 3.14-22.86 - and poorer day to day coping - OR 3.65, CI 1.67-7.99. Cancer survivors were more likely than controls to experience current lack of encouragement from their fathers (OR 2.23 1.22-4.06), and to a lesser extent from their mothers (OR 1.92 CI 1.08-3.40). In women lack of paternal encouragement was strongly associated with impaired close relationships (OR 11.37, 2.33-55.6) but not in men (OR 2.97, 0.90-9.82). Lack of maternal encouragement was modestly associated in men with poor close relationships (3.33, 1.12-10.02) but not at all in women. Paternal encouragement (OR 4.25, 1.56-11.57) and maternal encouragement (2.84, 1.16-6.99) were moderately associated with poor coping in men, but not women. These effects were seen equally across the cancer and control groups.

Conclusions: Encouragement from fathers seemed to be particularly important to daughters establishment of close relationships outside the family. There may be considerable implications for adult survivors of cancer who have a high rate of difficulties in this area. Prospective studies are needed to clarify whether the relationships influence or reflect relationships and coping in the young adults.

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Changing financial incentives by a new reimbursement system for radiotherapy

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Purpose: Although randomised trials support single fractions in palliative treatments of bone metastases, fractionated schedules remain the mainstay in Belgium. It was analysed whether the forthcoming change in the Belgian radiotherapy reimbursement system might induce financial incentives towards the use of single fractions.

Materials and Methods: The radiotherapy costs of different palliative fractionation schedules were computed with an Activity-Based Costing model developed at the Leuven radiotherapy department. Resource costs (wage, equipment, space, material and overhead costs) were collected for the year 1999, as well as data on this year's productivity. The thus calculated costs were compared to the Belgian reimbursement modalities. This was done as well for the actual system, which is dependent of the number of fractions, as for the new system to be implemented in 2001, which is not fractionation related.

Results: The calculated costs of palliative irradiation treatments for bone metastases with parallel opposed fields using simulation, monitor unit calculation, blocks and in vivo dosimetry are 600, 1010 and 1513 Euro for delivering 8Gy/1fr, 20Gy/5fr and 30Gy/10fr respectively. The actual reimbursement foresees respectively 164, 1664 and 2079 Euro, resulting in a net loss of 437 Euro in case of a single fraction, and in a net gain of 654 and 565 Euro if a schedule of 5, respectively 10 fractions is administered. When considering the future reimbursement, being 1924 Euro irrespective of the number of fractions, the monetary gain progressively diminishes (from 1323 to 913 and 411 Euro) with increasing number of fractions.

Conclusion: Actual financial incentives stimulate the delivery of fractionated regimes for the palliation of bone metastases in Belgian radiotherapy centres. With the future reimbursement system it is hoped that by penalising the fractionated schedules unnecessary long treatments can be abolished.

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Examining preferences, utility values and cost-effectiveness for gemcitabine plus cisplatin (GEM/cis) for the treatment of bladder cancer - A discrete choice conjoint analysis conducted in Australia

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GEM/cis displays similar efficacy to treatment with methotrexate, vinblastine, doxorubicin plus cisplatin (MVAC) in the treatment of advanced bladder cancer. The main advantage of GEM/cis over MVAC is superior tolerability and lower incidence of severe adverse effects. In cost-containing environments, payers must decide whether a more favorable toxicity profile justifies the higher cost of newer agents. This decision should include not just consideration of direct medical costs, but also patient quality of life (QoL). Our objective was to determine whether GEM/cis offers value for money when compared to MVAC. Direct medical costs were calculated for each treatment based on resource utilization data collected during a

randomized phase III trial. Costs included were chemotherapy, hospitalizations, concomitant medications, transfusions, health care professional visits, and medical procedures. Utility values were determined to capture the QoL differences between the two therapies. Utility values are weightings that reflect the QoL of different health states. Utility values range from 0-1, with 0 representing death and 1 perfect health. A novel methodology, called discrete choice conjoint analysis, was employed to examine the value associated with the toxicity profile of GEM/cis compared to MVAC. This approach offers the potential to provide discrete utility values for each attribute of an intervention. Utility values were obtained from surveys of oncology nurses. Attributes considered were alopecia, weight improvement, mouth ulcers, thrombocytopenia, and febrile neutropenia. Results from the surveys indicated a preference for treatment with GEM/cis. The extra utility benefit with GEM/cis was 0.204, with most of the benefit deriving from reduced risk of febrile neutropenia, mouth ulcers and alopecia. Using these results, a cost-utility analysis was conducted and submitted to the Australian Pharmaceutical Benefits Advisory Committee to assist in deciding whether GEM/cis should receive public subsidy. The ratio derived was cost-effective, with an incremental cost per quality-adjusted life-year gained (QALY) of AU\$25,000, which falls within an acceptable range for Australia. Sensitivity analyses indicated that the results were robust. Cost-effectiveness ratios are very valuable in deciding whether an intervention represents value for money. In addition to being cost-effective, GEM/cis offers comparable survival with a superior toxicity profile and QoL benefit.

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Outpatient integrated psycho-functional rehabilitative treatment after primary therapy for breast and head & neck cancer: final results on 280 patients

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Purpose: To verify the activity and feasibility of an experimental integrated protocol targeted to patients (pts) referring at our institution following primary surgery for breast (BC) or head & neck (H&N) cancer, being these two populations both characterized by a high incidence over the working age, a significant social impact, relatively long-term disease-free interval, and similar functional post-surgical disabilities.

Patients and Methods: 1) Quantification of residual disabilities and rehabilitative needs: physical deficit, functional damage (Constant's scale), and psychologic distress (psycho-oncological file and SAT-P); 2) Integrated rehabilitative treatment: grouping therapy (max 6 pts) of 10 sittings, lasting 2 hours each, 2 times/week, starting within 2-4 weeks (max 8) from surgery; educational training focused on physico-functional restoring and adaptation to the new body scheme; psychological counseling for the emotional discomfort disease and/or treatment-related; personalized occupational therapy to restoring daily home occupational and/or working activity; 3) Ergonomic assessment through WorkSET equipment; 4) Rehabilitative follow-up at 6 and 12 months from the end of treatment.

Results: From September 1998 to March 2000, a total of 280 pts (227 BC and 53 H&N) were treated, while on chemo- and/or radiotherapy adjuvant treatment. Data analysis showed a statistically significant improvement of functional score for all evaluated parameters ($p < 0.001$), with good patient compliance and low drop-out. The ergonomic assessment showed a restarting of working activity within 3-8 weeks (median 5), with a satisfactory occupational fitness in both groups; a good recovery of most aspects of daily life was detected in 90% of pts, while the emotional and social abilities resulted longer endangered in H&N pts.

Conclusions: The innovative model we proposed resulted feasible in the outpatient setting, assessable in all the considered parameters, reproducible and effective, since different levels of treatment can be identified in relation to disease outcome and existing disabilities. The identification of a therapeutic "standard" based on both practical aspects (deficit quantification and correction) and speculative issues (cognitive approach, data production, comparative trials) was also allowed, while the ergonomic evaluation was useful in identifying the patient's ability in recovering his/her own role in the socio-familial circle.