The patients with pain had worse QL outcomes in comparison to the patients without (the results in terms of subscales scores are described in the table).

Subscales	Pain	No Pain	p value
PHY	57.5	70.3	< 0.0001
POW	77.6	84.9	< 0.001
PSY	64.5	79.6	< 0.0001
REL	56.9	69.7	< 0.0001

Conclusion: From our results, it seems that the different surgical techniques do not produce different incidence of pain. Nevertheless pain is a relevant sequela of BC surgery and is able to affect the patients QL.

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1305   POSTER

Quality of life after axillary lymph node dissection versus sentinel lymph node biopsy

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Objective: Sentinel lymph node biopsy (SLN) is a less invasive method than axillary lymph node dissection (ALND) for axillary staging in breast cancer patients. The aim of this study is to determine the impact of pain on quality of life (QoL) and to assess the shoulder/arm mobility after the two surgical methods SLN and ALND.

Methods: 37 patients with newly diagnosed Stage I or II breast cancer were included in this prospective study. Group I (18 patients) received ALND, Group II (19 patients) received SLN. All patients completed the European Organisation for Research and Treatment of Cancer Quality of Life Questionnaire C30 (QLQ-C30)and B24 (QLQ-B24), the McGill Pain Questionnaire (German version) and a visual analogue pain scale. Measurement of shoulder/arm mobility was performed in all patients. Evaluation was performed before surgery (baseline), 6 hours after surgery, on day 1, 3 and 5 after surgery, one week after demission and 3 months after surgery.

Results: Preoperative QoL was comparable in both groups. Pain was reported significantly more often in group I (81%) than in group II (16%). Shoulder/arm mobility was significantly better in group II (mean = 145.00)than in group I (mean = 114.58) for abduction (p 0.0002) and in group II (mean = 142.06) than in group I (mean =121.25) for flexion (p 0.006).

Conclusion: Patients who receive SLN show less pain and better shoulder/arm mobility than patients after ALND. QoL is better in patients with SLN than in patients with ALND. Assessment of QoL should be considered in the establishment of new surgical methods.

1306   POSTER

Factors influencing cosmetic results after breast conserving management in breast cancer

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We aimed to determine predictive factors affecting cosmetic results after breast conserving management in breast cancer. Data on 96 patients with 97 breast cancer cases, who had been admitted to Uluda* University M. A. Radiotherapy Center between October 1995 and December 1998 and managed with breast conserving treatment, were analyzed to determine the factors affecting cosmetic outcome. Possible factors affecting cosmesis were grouped as patient related, tumor related and treatment related.Mann-Whitney-U test was used in univariate analyses while logistic regression was used in multivariate analyses. Median follow-up time was 29.5 months ranging between 11 and 53 months and median age at admission was 50 (range of 22-84). Cosmetic results were grouped in five categories, excellent, good, fair, poor and very poor, using criteria, such as presence of fibrosis, telangiectasia, shape of breast, asymmetry, status of areola, pigmentation. Treated breasts were scored by the patients, three radiation oncologists and a breast surgeon independently. In the analy-

sis performed using scores given by the patients, cases with scores 3 and above (unsatisfactory) were compared with cases with scores below 3 (satisfactory). Eighty-two patients (84%) considered cosmetic result as satisfactory (excellent/good) while 15 patients (16%) considered unsatisfactory (fair/poor/very poor). In univariate analysis using Mann-Whitney-U test, type of surgery (p=0.0655) was the statistically significant factors affecting cosmetic results. In multivariate analysis using logistic regression, tumor quadrant (p=0.0060) and elapsed radiation therapy days (p=0.0090) were the most significant factors. Median values were taken into consideration for the scores given by the physicians and cases with scores 3 and above (unsatisfactory) were compared with cases with scores below 3 (satisfactory). Eighty-two cases were evaluated as satisfactory (84%) while 15 cases were unsatisfactory (16%). In this set of data, patient age (p=0.0144), menopausal status (p=0.0111), institution which surgery was performed (p=0.0045), type of surgery (p=0.0044), placement of metallic clips (p=0.0083) and skin fibrosis (p=0.038) were found to be significant in univariate analysis using Mann-Whitney-U test. In multivariate analysis using logistic regression, institution where surgery took place (p=0.0015), menopausal status (p=0.0087) and telangiectasia (p=0.0657) were the most significant factors.

1307   POSTER

Epoetin alfa overcomes much of the QOL deficit seen in anaemic cancer patients

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Background: Anaemia has been shown to have a marked effect on Quality-of-life (QOL) in cancer patients. Comparison of clinical trial QOL data with population norm data shows how large an impact treatment of anaemia can have.

Methods: The FACT-An (Functional Assessment of Cancer Therapy-Anaemia) QOL instrument was administered to a nationally representative sample of 1400 people using an Internet survey panel in the US. These results were then compared to FACT-An results from a 375-patient, randomized, double-blind, clinical trial evaluating epoetin alfa vs. standard care in anaemic cancer patients.

Results: 1080 people responded to the Internet survey. On a 0-100 scale (with higher scores indicating better QOL) mean QOL scores were 74.2 for General QOL, 77.06 for Fatigue, and 77.6 for the Anaemia subscale. In the clinical trial, prior to starting treatment, baseline scores for the Epoetin alfa group were 68.4 (General QOL), 57.1 (Fatigue) and 60.5 (Anaemia subscale), a deficit of 5.8, 19.96, and 17.1, respectively, from the norms. Baseline scores for the control group were similar. By the end of the clinical trial, epoetin alfa resulted in a statistically significant improvement in QOL over standard care of 5.61 (General QOL), 9.90 (Fatigue), and 15.89 (Anaemia subscale). This advantage represents 97%, 50%, and 93%, respectively, of the initial QOL deficits. Nearly the entire deficits for General QOL and the Anaemia subscale are completely corrected, while the deficit in Fatigue is cut in half.

Conclusion: Based on norm data for the FACT-An, epoetin alfa leads to large and significant improvements in QOL, relative to the initial QOL deficit. We interpret these changes as highly significant and favourable for anaemic cancer patients.

1308   POSTER

Psychometric properties of the EORTC quality of life core questionnaire (QLQ-C30) in EORTC trials

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Purpose: The EORTC QLQ-C30 is one of the most widely used QL measures applied in cancer clinical trials. This study aimed to look at the

psychometric properties of the QLQ-C30 in 32 countries with a database of 9000 patients.

Method: All EORTC studies incorporating the EORTC QLQ-30 were systematically selected for this study. Inclusion criteria for trials were if the trial contained the QLQ-C30 (version 1, 2 or 3) and if patient responses had been coded into the EORTC database. Given that a number of studies were still in early stages of recruitment, a total 114 EORTC studies were reviewed of which 52 met the criteria for being included in the final analysis. Review of the original protocols was conducted to identify variables characterising trials.

Results: Of the 52 studies meeting inclusion criteria the majority were palliative based treatment trials. The majority of cancer patients were Melanoma, Prostate, Head and Neck, Breast and Lung.

Missing data range from 14% to 17% of patients having at least 1 item missing though the average percentage of missing items per patient range from 1.1% to 1.5% which in turn yields an average 0.7% to 0.9% of missing scales per patient. In particular items relating to Role Functioning and Financial Difficulties were the most common items missing (3%).

Factor analyses for all 3 versions of the questionnaire are similar, though some difference has been found when examining individual cancers. Interdomain correlations, in each of the 3 versions of the QLQ-C30 were strongest in Role Functioning, Pain and Global Health Status.

Cronbach's reliability measure shows constant or increased reliability in newer versions of the questionnaire, for example, the pain scale increases from 0.82 to 0.86 from version 1 to version 3.

Conclusion: We believe this is one of the first studies to examine the scales of all three versions of the QLQ-C30 with a large sample across a large number of countries. We found that in general all 3 versions of the QLQ-C30 have similar psychometric structures and that the measure proves to a be a useful tool to use within a clinical trials setting and that missing data is continually reducing over time, indicating increasing compliance among staff/patients.

1309   **POSTER**

Factors influencing arm morbidity after surgery and radiation therapy in breast cancer

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Purpose: The aim of this study was to determine the factors influencing arm morbidity in patients with breast cancer after surgery and post-operative radiation therapy.

Materials & Methods: Four hundred and sixty nine patients with breast cancer treated at the Department of Radiation Oncology, Uludag University Medical College were included in this study. Arm edema and range of motion of shoulder were evaluated as arm morbidity. Possible factors evaluated were patients' age, menopausal status, stage of disease, nodal stage, presence of extra-capsular invasion, number of removed and involved lymph nodes, dose of axillary radiotherapy, chemotherapy and hormonal therapy. Mann-Whitney-U test was used for uni-variate analyses while logistic regression was used for multivariate analyses.

Results: Seventy-seven patients (16%) had severe limitation in the range of motion, while sixty-seven (14%) had severe arm edema. Median age was 51 years (ranging between 26-86). Radiation dose of the axilla over 40 Gy, advanced stage, receiving chemotherapy, advanced nodal stage, >4 involved lymph nodes and age older than 70 years were found to be negative prognostic factors for arm edema in uni-variate analyses while radiation dose of axilla over 40 Gy and age older than 70 years were the most significant prognostic factors in multivariate analyses. Advanced stage, advanced nodal stage, type of operation (modified radical mastectomy instead of lumpectomy and axillary dissection) and >4 involved lymph nodes were detected as negative factors for motion of shoulder in uni-variate analyses. Advanced stage was the sole independent prognostic factor for motion of shoulder.

Conclusion: Advanced stage, radiation dose of axillary region and age older than 70 years might be considered as negative factors for arm morbidity in patients with breast cancer after surgery and post-operative radiotherapy.

1310   **POSTER**

Quality of life of malignant lymphoma patients during and after conventional chemotherapy

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Quality of life (QoL) is one of the important outcomes of cancer treatment. The purpose of the research was to study QoL dynamics during and after conventional chemotherapy (CT) of malignant lymphoma patients. Methods: 110 malignant lymphoma patients (63 - non-Hodgkin's lymphoma patients, mean age 50,5, 59% males; 47 - Hodgkin's disease patients, mean age 30,3, 49% males) were studied. Non-Hodgkin's lymphoma and Hodgkin's disease patients were treated by 6 or 8 courses of CHOP and COPP-ABV respectively (6 courses in case of CR after 4 courses, 8 - in case of PR). EORTC QLQ-C30 questionnaire was administered before treatment, after 1 and 4 courses of CT, after the end of CT and at the 3-month follow-up. Statistical analysis was provided by ANOVA method (p less than 0,05). Results: After the first course of CT a 12% improvement in emotional functioning (69,2 vs 77,4) and a 17% increase in general quality of life (45,9 vs 53,6) was observed as compared to baseline. At the same time there was a two-fold deterioration in nausea and vomiting scale (8 vs 16,7) and an increase in dyspnea (19,7 vs 26,6) as evidence of treatment toxicity. After 4-th course of CT decreases in pain (30,3 vs 19,8), insomnia (35,7 vs 24,9) and constipation (10,8 vs 6) levels were registered. After the end of treatment emotional functioning (69,2 vs 79,3) and general quality of life (45,9 vs 57,1) values were higher as compared to base-line. There were significant decreases in fatigue (41,7 vs 33,8) and insomnia (35,7 vs 23,2) as well. At the 3-month follow-up further increase in emotional functioning (69,2 vs 88,2) was found. Moreover the improvements of role (72,2 vs 88,3) and social (68 vs 90,3) functioning were accompanied by better general quality of life (45,9 vs 75) as compared to baseline. Conclusions: Conventional CT results in better QoL of malignant lymphoma patients. During treatment emotional functioning and general quality of life improve, and in doing so symptom manifestation decreases by the end of CT. Short-term follow-up is accompanied by the improvement in emotional, role and social functioning and general quality of life.

1311   **POSTER**

Malignant bowel obstruction in advanced ovarian cancer: "does that mean I am going to starve to death?"

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Ovarian cancer is responsible for 5 000 deaths in the UK and 25 000 deaths in the USA each year. Between 25-59% of these women die as a consequence of bowel obstruction from advanced malignancy. For those patients for whom surgical palliation is not possible, the median survival after the development of bowel obstruction is 30 days. It is reasonable to assume that death is accelerated in this patient group by the absence of nutritional support. Where symptom control is good and bowel obstruction is the only life-threatening problem, parenteral nutrition (PN) could be an eligible treatment option.

This poster aims to stimulate discussion among health care professionals, and subsequently with patients, of all aspects of such a treatment decision. The issues to be addressed include:

* challenging the distinction between ordinary and extraordinary life-prolonging PN

* ethical considerations of informed consent, beneficence and justice.

This presentation will not claim that PN per se improves quality of life in bowel obstruction but maintains life where symptoms can be reasonably managed. If it also prolongs life in the terminal phase then that is a goal worth achieving. Conclusion: In this context PN should be discussed openly among the team, the patient and her carers. Such discussion and practice will begin to redress the dearth of evidence determining the potential value of PN in this setting.