

malignancies was designed to evaluate the effects of darbepoetin alfa on haemoglobin and transfusion endpoints, as well as on health-related quality of life (HRQOL).

Methods: A multicenter, randomized, double-blind, placebo-controlled study of 12-week treatment with darbepoetin alfa (2.25 mcg/kg once weekly) was conducted in anaemic (haemoglobin < 11.0 g/dL) cancer patients with lymphoproliferative malignancies receiving multicycle chemotherapy. Patients completed the 13-item FACT-Fatigue subscale score at baseline and after 4, 8, and 12 weeks.

Results: 349 patients were randomized to the study (176 darbepoetin alfa; 173 placebo). Mean change (SE) in haemoglobin for patients completing 12 weeks of treatment was significantly greater for the darbepoetin alfa group vs the placebo group (2.66 [0.20] g/dL versus 0.69 [0.14] g/dL, $p < 0.001$). Patients treated with darbepoetin alfa showed a greater improvement in their FACT-Fatigue subscale score compared with placebo, regardless of their level of fatigue at baseline. However, baseline FACT-Fatigue score had a significant ($p < 0.001$) effect on the change in FACT-Fatigue score such that patients with lower baseline scores had greater improvements than patients with higher baseline scores. After adjusting for baseline score, increases in FACT-Fatigue subscale scores with darbepoetin alfa treatment were significantly greater than those observed with placebo (difference of 2.28 points [95% CI, 0.19, 4.37], $p = 0.032$). In addition, there was a statistically significant ($p < 0.001$) relationship between change in haemoglobin and change in FACT-Fatigue over the treatment period.

Conclusion: The results of this phase 3 study confirm that darbepoetin alfa is effective in significantly improving both haemoglobin concentrations and fatigue relative to placebo in patients with lymphoproliferative malignancies receiving concurrent chemotherapy.

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POSTER

Quality of life in breast cancer patients eighteen months after diagnosis

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A longitudinal study was conducted to measure quality of life in breast cancer patients. Quality of life was assessed at three points in time: baseline, 3 months after diagnosis and completion of the initial treatment and after 18 months post diagnosis. The EORTC QLQ-C30 and its breast cancer questionnaire (QLQ-BR23) were used to measure quality of life. In all, 167 breast cancer patients were interviewed. Of these, for 99 patients both baseline and follow-up data were available. Thus, paired test analysis was performed to compare baseline data with that of 18 months follow-up assessment. The results showed that there was reduction in patients' physical, role, social emotional and cognitive functioning. The change in global quality of life was significant (mean score 59.2 vs. 31.9, $P < 0.0001$). In addition body image, and sexual activity as measured by the QLQ-BR23 showed a significant worsening (all $P < 0.0001$). Also patients reported a higher degree of symptoms at follow-up. Of these pain, fatigue and breast symptoms were significant (all $P < 0.0001$). In general the findings indicate that breast cancer patients even after 18 months post diagnosis suffer from a poor quality of life. This suggests that the continuity of care for breast cancer patients is needed to ensure patients' health status. Since most reduction was observed in patients' global quality of life, indeed this is a good indicator to ascertain clinical achievements in management of breast cancer patients.

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POSTER

Treatment of radiation - induced lung damages after breast conserving therapy

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Background: Studying the improvement opportunity and the response of treatment on acute and late symptomatic radiation pulmonary damages by applying the Indomethacin® and moderate dose of Dexamethason® after breast-conserving therapy.

Material and method: Between 1992 and 1997 yrs., 122 early breast cancer patients were treated with postoperative radiotherapy after preserving surgery by "negative" margin (BCT). For all patients CT treatment planning was made for precise outlining of the CTV and the organs at risk. The target volume was irradiated with two tangential fields (60°) without boost for the tumor bed to the prescribed total dose of 50Gy in 25 fr. for

5 wks. The adjuvant system treatment includes VI courses chemotherapy type sandwich of application and Tam in patients, with SR+.

Results: 8 year local control in 95, 1% of patients were accomplished, as in 1, 6% acute radiation pneumonitis (RP) and 1, 6% pneumofibrosis (PF) were diagnosticised. Symptoms of RP 6-9 mths after completion of therapy and 4-6 yrs in patients with PF become evident. The cardinal symptoms in all patients were dyspnea and nonproductive cough. All patients with PF did not present previous history of RP. CT scans of the chest and 99mTc MIBI image were more sensitive than chest radiography in the detection of radiation damages. The patients are between 61-70 years old as with 50% of them diabetes mellitus type II is present. With 75% of the patients with lung damages low graded oedema of the arm is found. The irradiation of the homolateral IMN with wide field leads to frequent lung toxicity ($p=0.006$). The treatment schemes included 14 days cycle of administration of Indomethacin® (3X25mg daily) and Dexamethason® 3 times weekly x 4mg and than with Vitamin E and A. Complete resolution of signs and symptoms were observed 1 month after RP and 3-6 months after PF.

Conclusions: The treatment of post-radiation pulmonary complications with Indomethacin® and moderate doses of Dexamethason® leads to complete response in all patients after BCT.

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POSTER

The health related quality of life and preference of breast conservation for breast cancer patients in north Taiwan.

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Introduction: To evaluate the quality of life and preference of breast conservation of breast cancer patients after radical treatment.

Material and Method: There were 220 breast cancer patients received questionnaire to report their health related quality of life (QoL) and preference of treatment choice in two different hospitals in northern Taiwan, one in metropolitan and other in suburb area. The median age was 49 (32-69). The median year after radiotherapy was 5 year (ranging from 1 to 12 years) Functional Assessment of Cancer Therapy Breast (FACT-B) questionnaire was used to assess QoL. The preference of treatment and need of breast reconstruction was also evaluated. Sixty three (28.6%) patients received breast conservation treatment and 157 (71.3%) patient received modified radical mastectomy. One hundred and seventy eight (80.9%) patients received chemotherapy as adjuvant chemotherapy, 82 patients received adjuvant radiotherapy, 119 patients received hormone therapy.

Result: There is no significant difference in QoL including in different subscales between breast conservation patients or mastectomy patients. Education level, income, marital status, living alone or not and adjuvant therapy did not affect the QoL in different subscale. However, there are 2 (3.2%) patients received breast reconstruction or wearing artificial breast in breast conservation group and 78 (49.7%) patients received breast reconstruction or wearing artificial breast in mastectomy group ($p=0.00$). If choosing again for the treatment, 12 (19.0%) patients will change to mastectomy in breast conservation group and 76(48.4%) patients will change to breast conservation treatment in mastectomy group ($p=0.00$).

Conclusion: Mastectomy or not had no impact to quality of life of breast cancer patients in northern Taiwan. However, about half mastectomy patients will want to receive breast reconstruction treatment and will change to breast conservation treatment if they had second chance.

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POSTER

Role of palliative radiotherapy in pediatric solid tumours.

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Background: Palliative radiotherapy is given with the intent of relieving symptoms in advanced tumors. Although pediatric malignancies are exquisitely sensitive to chemotherapy, in certain circumstances radiotherapy has a role in symptomatic management of advanced tumors. The common indication for palliative radiotherapy are pain relief from bone metastasis and nerve compression, control of bleeding, ulceration and fungation, impending air way obstruction, SVCOC, spinal cord compression, impending or pathological fracture, brain metastasis etc. As in developing country its still common to see the childhood patients presenting with advanced cancers, palliative radiotherapy has been offered to most of them for symptomatic treatment. We did a retrospective study to define the role of palliative radiotherapy in pediatric solid tumors.

Materials and methods: The hospital records of all the pediatric patients with solid tumors and those who have received palliative radiotherapy from January 1993 to December 2000 were retrospectively analyzed. There were total of 57 patients aged between 1 to 15 years (median 5year) with male to female ratio of approximately 1.9:1. Retinoblastoma was the most common malignancy constituting about 40%; ERM of head and neck region was next common tumor of about 23%. Other tumors, which diagnosed were neuroblastoma (5 patients), Ewing's sarcoma-3, Hodgkin's disease, NHL and neurofibrosarcoma-2 each, osteosarcoma, hepatoblastoma, esthesioneuroblastoma and malignant melanoma 1 each. The common indications for palliative radiotherapy are locally advanced disease presenting with bleeding, fungation, and ulceration and in some intracranial extension. This group constituted 65% of the cases. Five patients required radiotherapy for cord compression while another 12 patients received RT for bone metastasis, pathological fracture in long bones and brain metastasis in 1 patient.

Of the above patients, 65% have not received any form of treatment before palliative radiotherapy while 35% received some form of treatment, most commonly chemotherapy. The dose of palliative radiotherapy delivered varies from 4Gy, 5Gy and 8Gy in single fraction to 12Gy/3#, 15Gy/5#/1week and 20Gy/5#/1week. 28% of the patients received 20Gy/5#/1week for locally advanced tumor while 8Gy in single fraction was given for bone metastasis and pathological fracture. 4 and 5Gy single fraction treatment was given to control bleeding from primary tumor. While fractionated 12Gy and 15Gy radiotherapy given for spinal cord compression and locally advanced disease. Some patients who showed good response to palliative radiotherapy were further treated with other modality.

Results: Statistical analysis was done using SPSS version 10 for windows soft ware. At the end there were 50 evaluable patients for analysis while 7 patients did not return after palliative RT. The follow up ranged from 4 weeks to 285 weeks (calculated from the time of palliative radiotherapy to last visit). The median follow up was 20weeks. 8 patients (16%) had follow up of more than 1 year. Of these 50 patients 83% had a partial response (both objective and symptomatic) and 17% had not responded to RT (osteosarcoma, neurofibrosarcoma thigh and 2 patient with cord compression). 50% of patients who achieved partial response received further treatment mostly with combination chemotherapy (vincristin, carboplatin, adriamycin, prednisone, etoposide etc). The disease status at the last visit revealed 2 patients died of disease, 5 patients remained disease free (2patients with HD, 1 each of retinoblastoma, ERM, and hepatoblastoma all with follow up 1 to 5 years and all received further treatment). Rests were alive with symptomatically controlled disease when last seen. Survival analysis by Kaplan-Meier method was done and the survival at year was 22%. There were no major radiotherapy related toxicities. On multivariate analysis there was no significant difference for type of tumor, RT dose and treatment response.

Conclusions: In pediatric solid tumors where the disease is advanced, palliative radiotherapy has a documented role and should be judiciously used for symptom control. Although no single dose schedule is better than other, the dose of RT should be decided taking into account the indications for RT and age of the patient. The above dose schedule showed useful response in >80% of patients and helped about 10% to remain disease free.

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POSTER

Cancer patients: patterns of internet use

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Background: The Internet becomes increasingly indispensable as a source of information for clinical questions, research, education and patients' interests.

Aim: To evaluate the Internet as a source of medical information for patients with colorectal cancer. The present survey examines the use and the influence of the Internet and other mass media on tumor patients.

Methods: From 07.02.2001 to 23.11.2001, 272 patients with prostate cancer which were referred to the Dept. of Radiotherapy were analyzed using a 36-item questionnaire developed in Freiburg.

Results: Mean age of all patients (n=272): 69 years (range: 35 - 83 years). Level of education (n=247): secondary school 57%(n=142), A-level or college / university: 42%(n=103), other or missing: 1%(n=2). Occupation (n=258): pensioner: 78%(n=201), employees: 10,5%(n=28), worker: 4%(n=10), self-employed: 5%(n=13), houseman: 0,5%(n=1), other or missing: 2%(n=5). Access to computer (n=255): yes: 16%(n=42), no: 69%(n=176), access to Internet: 15%(n=37). Frequency of Internet use

(n=30): weekly: 0%(n=0), monthly: 13%(n=4), occasionally: 37%(n=11), rare: 20%(n=6), never: 30%(n=9). Reasons of not having/using a computer or the Internet (n=161): fear of high tech: 17%(n=27), too time-consuming: 5%(n=9), too expensive: 25%(n=40), other reasons: 53%(n=85). Making use of other information sources than the doctor treating the patient (n=230): 46%(n=106). If the layman-system was used as an information source they used as an information source (n=96): Internet: 20%(n=20), other prostate cancer patients: 31%(n=31). Reliability of informations: ARD+ZDF(n=215): high: 54%(n=108), Internet(n=118): high: 22%(n=26), taxidriver(n=152): high: 11%(n=17).

Conclusions: The importance of the medium Internet as a source of information for tumor patients with prostate cancer in Freiburg is currently still low but likely to increase. The percentage of internetuser in the "normal population" over 50 years is only about 16%. Only 5% of our patients have visited the homepage of the department of radiotherapy at the University Clinic of Freiburg (<http://www.ukl.uni-freiburg.de/rad/strahlen/homede.html> or short cut: <http://go.to/radiotherapy>). The demographic structure and a further spread of Internet-access will lead to a gain of popularity of the Internet among prostate cancer patients.

The project is presented online: <http://www.krebsmedizin.info/index.php>.

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POSTER

Websolution for the prescription of antineoplastic drugs.

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Background: The Department of Oncology carried out a systematically survey concerning errors and near errors in the administration of drugs from September 2001 until June 2002.

14 errors and 16 near errors were reported. A total of 18 errors came from the administration of antineoplastic drugs.

The errors were divided in the following categories: • Incorrect drug • Incorrect dose • Incorrect timing • Incorrect preparation of the drugs • Other

Aims: The aim was to develop a web based solution which could minimize errors related to drug delivery and at the same time fulfil the following issues: • Easy to read requisitions • Easy to add and to update patient information • Automatic calculation of drug doses, drug reduction and escalation

Technical Solution The solution uses MS IIS, MS SMTP, MS Transaction server, MS SQL server and an ActiveX component developed by us. The generated documents are in Active Sever Pages and PDF formats.

Software Solution: The web solution is built on a MS SQL database, which contains information about users, treatments, standard doses and preparation of the drugs and patients data. The nurses are responsible for adding patient's data to the system based on the doctor's instructions and to update the patient data.

Prescriptions are automatically printed to the Pharmacy laboratory. As an extra precaution the prescriptions are also emailed as attached PDF documents. Through a number of pre-designed reports, the system will allow all the involved personnel to continuously monitor the drug prescriptions.

Conclusion: Changing from a manual system to electronic requisition has resulted in: • Development of precise standard operational procedures (SOP) • Easy access to all requisitions • Minimizing the number of errors and near errors. • Made it possibility to monitor the drug accumulation

Especially the Pharmacy has been satisfied by the ease in which they have access to all the requested antineoplastic. now in read and correct form. In the clinic there has been a clear indication that patients prior to the implementation of the system were given incorrectly doses of drugs, these errors have now been resolved by the system.

Molecular targeted therapy

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POSTER

Ectopic expression of the amino-terminal peptide of androgen receptor leads to androgen receptor dysfunction and inhibition of androgen receptor-mediated prostate cancer growth.

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Background: Androgen receptor (AR) is a ligand-activated transcription factor that requires androgen binding to initiate a series of molecular events leading to specific gene activation. AR has been suggested to