observer using standard published criteria to distinguish between positive and negative.

Results: Only one patient in the study had a complete response to primary medical treatment. Of those that had a partial or non significant response no clear pattern emerged but 6 of these tumours expressed bcl2 which was not expressed by the tumour that responded to treatment. There were 7 invasive ductal carcinomas that showed a partial or no response to chemotherapy and 5 of these had a significant in situ component.

Conclusion: The numbers are small but the presence of insitu carcinoma may indicate that the tumour is less likely to completely resolve with chemotherapy. Of the markers studied bcl2 expression may indicate a more chemotherapy resistant tumour.

492 POSTER

Male breast cancer: A 20 year review of 60 patients in Slovenia

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Male breast cancer is a rare disease. There are about 10 new male breast cancer patients each year in Slovenia. The aim of our retrospective study in which 60 male breast cancer patients treated at the Institute of Oncology in Ljubljana from 1975 to 1995 were included, was to find out the characteristics of male breast cancer in Slovenia and factors which influence the prognosis.

The median age at diagnosis was 61.5 years (range 20–83), 28 (47%) patients had UICC stage I–II, 22 (36%) stage III and 10 (17%) stage IV disease. All patients with stage I–II underwent radical surgery, 10 of them received adjuvant chemotherapy or hormonal therapy and 9 were locoregionally irradiated. Radical surgery was performed in 13 out of 22 patients with stage III disease, 8 of them received adjuvant treatment and 13 locoregional irradiation. Pathology review: 32 (68%) invasive ductal, 2 (4%) invasive lobular, other invasive 13 (28%). Between 40 patients with known histological node status, 60% were node positive and 40% node negative. ER and PR were positive in 73% and 62%, respectively. At the median follow up of 44 months (1–229), 5- and 10-year disease specific survival of all 60 patients was 64% and 39% and 5- and 10-year disease free survival (DFS) for 50 patients stage I–III was 56% and 39%, respectively. DFS was significantly affected by cT, nodal status and UICC stage, but not by histological type and adjuvant therapy.

493 POSTER

Change of Cu/Zn-superoxide dismutase in breast cancer tissue related to the tumor proliferation and differentiation being one of prognostic indicators

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The localization of Cu/Zn- and Mn-superoxide dismutase (SOD) in the breast cancer tissues (papillotubular carcinoma, 12; solidtubular carcinoma, 21; scirrhous carcinoma, 16; medullary carcinoma, 1; secreting carcinoma, 1; lobular carcinoma, 1; Paget's disease, 1) were studied by an immunohistochemical technique in 10% formalin fixed paraffin embedded thin sections using anti-human Cu/Zn- and Mn-SOD antibodies. Both SODs were strongly immunocytochemically stained in the normal breast gland, while they were not stained clearly in many cancer tissues. Furthermore, Cu/Zn-SOD was stained in higher incidence in well differentiated tubular carcinoma than in poorly differentiated. It tended to less stain in the tumors which developed recurrence or poor prognosis, and in the tumors with diploidy pattern of DNA flow cytometry. Mn-SOD stained in similar way as Cu/Zn-SOD, but we could not find any significant difference among the subgroups classified by each factor since the incidence of positive stained tumors was too small in every group.

In conclusion, the intensity of SOD staining seems to change relating to the cell proliferation and differentiation in the breast carcinoma and can be one of the prognostic indicators since SOD decreased in the poorly differentiated carcinoma or in the tumors which developed distant metastasis.

494 POSTER

Significance of blood flow analysis using color doppler ultrasound for prediction of relapse in patients with breast cancer

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Background: ™FIt would be exciting if you can know in advance whether a certain breast cancer is likely to relapse after the operation. This study evaluates if blood flow analysis of breast cancer prior to the surgery is useful for the prediction of its relapse.

Methods: ™FColor Doppler ultrasound was performed in 123 women with breast cancer between September 1991 and October 1994. Peak systolic velocity (PV) and acceleration index (AI) within the mass were analyzed.

Results: ™FIn twelve cases in which no color flow signal was detected, no one showed relapse of the lesion. In contrast, 23 patients with high PV (PV™ $\int$15 cm/s) and high AI (AUMJ12/s) (AI™ $\int$12/s), high rate (30.4%) of relapse was encountered. The lesions with low PV and/ or low AI (88 cases) relapsed at the rate of 5.4%(5 cases). In cases (40) with lymph node metastasis, high PV and high AI group showed 50% of relapse, but the relapse rate of the others was only 8.3% (2 cases).

Conclusion: ™FThe blood flow analysis seems promising for the prediction of relapse in patients with breast cancer.

495 POSTER

Surgeon's related quality of breast cancer surgery

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Purpose: Does good surgeon mean better chance for survival or even less postoperative complication?

Methods: The analysis was made basing on 895 fully documented cases after mastectomies performed by 10 surgeons during 5 year period in the 80's. Several parameters were assessed for quality control of surgeon's related results.

Results: There was some significant difference in the mean time of all operations performed by surgeons (range 82–92 min), especially for Halsted procedure (range 73–89 min; $p < 0.005$). These results were not affected by cancer advancement or a weight of patients. Axillary dissection was also correlated with surgeons and average number of resected nodes ranged from 12 to 15 ($p < 0.005$). We didn't find any differences in postoperative complication rates and with the length of hospital stay which would be related with surgeons. When survival rates were assessed in group of patients without lymph node metastases borderline significant differences between surgeons were observed. Results of 10-year survival ranged from 61.6% to 78.2% $p = 0.052$. After multivariate Cox analysis of several independent factors (including nodes status, tumour size, grading, etc.) surgeons did not have any more influence on survival.

Conclusion: Our data showed, that surgeons differ. However, in our centre the existing differences were of technical character and not connected with postoperative complication rate or with long-term survival results.

496 POSTER

Prognostic importance of active thermography in breast cancer

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Purpose: To reveal active thermography prognostic possibility in breast cacer patients we have analysed the remote results and the data of thermography in 1568 breast cancer patients (T.I – 286 patients; T.II – 789; T.III – 386; T.IV – 107).

Methods: The patients were examined by method of active thermography (Shekhter et al., 1982; Marzetti et al., 1983; Mazurin V. Ya. et al., 1985, 1996) with use of the thermograph and the thermovisions 'Phakel' and 'Raduga'. All the patients had hystological confirmation of diagnosis, were undergone various types of treatment and were observed during more than 7 years.

Results: All the patients were divided in 3 groups: I – with value of temperature gradient above tumor 1,5′C; II – with value of temperature gradient above tumor – 1,5′C-2′C; III-value of temerature gradient was over 2′C. One noted that high values of temperature gradient above tumor in cancer patient in the other indentical indexes (stage of process, condition of immune system, concomitant pathology age, morphological shape of tumor,