Surgery was planned 15 days after chemotherapy; pathological status and immunohistochemical studies were obtained in all patients.

Results: Sensitivities for a correct prediction of tumor presence after chemotherapy were 65% for scintigraphy, 34% for clinical evaluation and 69% for mammography. Specificities for a correct prediction of tumor absence after chemotherapy were 100% for scintigraphy, 33% for clinical evaluation and 33% for mammography. 99mTc-MIBI in this series did not correlate with p-170 expression, proliferating nuclear antigen, Her-2/neuoncogene protein, anti-human endothelial cell CD31 antigen, estrogenic and progestinic receptor status.

Conclusions: 99mTc-MIBI is effective in monitoring the response to presurgical neoadjuvant chemotherapy in LABC patients. Its diagnostic yield is clearly superior to clinical evaluation alone and to mammography in patients with complete response. Subcellular metabolic correlates of MIBI uptake need further evaluation in larger series.

33 ORAL

Flap recurrence following mastectomy for breast cancer: local failure or systemic disease

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Purpose: Treatment of Flap Recurrence (FR) after mastectomy for breast cancer remains controversial. We attempted to identify histopathological and clinical characteristics of FR which predicted for poor survival.

Methods: Between 1976 and 1991, 2755 mastectomies without radiotherapy were performed for breast cancer in our unit, an overall FR rate of 10.3% was observed (mean follow up = 12.2 yrs range 5–20 yrs). 256 FR's following mastectomy for T1-T3 tumours were identified and examined for factors predicting survival.

Results: Nodal status at presentation ($P < 0.05$), time to recurrence and presence of concurrent systemic disease (CSD) influenced survival. Five year survival for those women with CSD at the time of FR (n = 45%) was poor when compared to survival in women without CSD (55%) ($p = 0.0001$) Early recurrence (<2 yrs following mastectomy) correlated with poor survival ($p < 0.0001$) even allowing for CSD ($p < 0.001$). The type of recurrence (single spot, multiple spot or field change) did not influence survival. The site of first systemic recurrence (FSR) following FR (bone = 19%, visceral = 64%, both = 17%) contrasted with the FSR in women who did not have FR (bone = 63%, visceral = 21%, both = 16%) ($p < 0.001$).

Conclusion: Flap recurrence occurring in the first year following mastectomy for breast cancer predicts poor survival. All FR is likely to be a manifestation of systemic visceral metastasis and therefore all require systemic therapy.

34 ORAL

Determinants of prognosis after first isolated locoregional recurrence of breast cancer

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Purpose: Prognosis of breast cancer patients after occurrence of first isolated locoregional recurrence is evaluated in the data of four prospective studies of the GBSG.

Methods: From 1984 to 1989, 2746 patients have been recruited into the studies. During follow-up (median = 8 years). 337 patients developed an isolated locoregional recurrence as first event. Progression-free (PFS) and overall survival (OS) after locoregional recurrence was determined (median follow-up = 4.5 years) and analyzed by means of a multivariate Cox regression model.

Results: 185 patients developed a second event of whom 150 patients died. PFS and OS rates at 3 years are 0.45 and 0.62, respectively. Significant and independent prognostic impact was due to nodal status, tumor grade and estrogen receptor of the primary tumor and to the length of the disease-free interval (DFI) after primary treatment. Sufficient separation of resulting risk strata have been achieved by a simple classification scheme solely based on nodal status and DFI.

Conclusion: Determinants of prognosis after first isolated locoregional recurrence have to be taken into account for designing risk adapted, future clinical studies in these patients. Risk strata can he defined by means of a simple classification scheme.

35 ORAL

Identification of recurrent breast cancer with radiolabelled isonitriles

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Purpose: The radiolabelled isonitrile, Tc-99m MIBI, is known to have a high level of accuracy in identifying primary breast cancer. However, it may be of more use in suspected recurrent breast cancer when previous surgery and radiotherapy changes the radiological appearance of the breast. The aim of this project was to assess the accuracy of Tc-99m MIBI in suspected recurrent breast cancer.

Methods: 54 patients (mean age 60 years) with clinical or mammographic suspicion of recurrence were studied 1–23 years (mean 6 years) after initial diagnosis and treatment. 24 patients had undergone mastectomy so a total of 84 breasts were studied. All patients underwent breast and local tissue imaging with Tc-99m MIBI and 80 breasts also had x-ray mammograms. The results of imaging were correlated with cytological or histological examination, correlative imaging and 6 months clinical follow-up.

Results: 31 patients had recurrent cancer within the breast tissue, 13 were identified by mammography (sensitivity 41%), and 21 by Tc-99m MIBI (sensitivity 70%). The specificity of 2 methods were similar (Tc-99m MIBI-83% vs mammography-91%). In addition 19 sites of cancer were confirmed outside the breasts, 15 (79%) were identified on the Tc-99m MIBI scan.

Conclusion: Tc-99m MIBI imaging is able to identify recurrent breast cancer both within the breast and surrounding loco-regional tissues and may provide unique and complementary information to mammography.

36 ORAL

Isolated local-regional recurrence of breast cancer: Impact of rediatherapy on dissemination and survival

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Purpose: To evaluate the impact of local-regional control on dissemination and survival of patients with isolated local-regional recurrence treated with curative radiotherapy only.

Methods: From 1983–85, 83 mastectomised patients with histologically verified isolated local-regional recurrence of breast cancer participated in a prospective study investigating the frequency of metastases. The rate of second local failure, time to dissemination and survival were related to 31 potential prognostic factors using uni- and multivariate survival analyses.

Results: Median follow-up (range) was 122 months (111–144). 30 patients had local-regional failure. The actuarial failure rate was 48% after 10 years. 51 patients developed metastases; median time to distant disease was 51 months. Median survival was 84 months and survival rate was 36% after 10 years. Node status at primary diagnosis and haemoglobin level at recurrence were significant independent prognostic factors for both survival and dissemination. 10-year survival of node negative patients with normal haemoglobin was 50% compared to 2% for patients with positive nodes and low haemoglobin levels. Local-regional failure after radiotherapy for isolated local-regional recurrence had neither influence on the risk of dissemination nor the duration of survival.

Conclusion: One third of the patients has local-regional confined disease which can be controlled by radiotherapy only; achievement of local-regional control had no influence on risk of distant disease and death. Poor prognosis patients can be selected by simple methods and should be considered for future adjuvant systemic therapy.