cally for proliferation markers MIB1 (Ventana) and p34 CDC2 (Biogenex, San Ramon, CA). Patients were followed for a mean of 61 months (range 1–164 months).

Results: There were 63 (54%) node negative and 65 (56%) node positive cases. On univariate analysis MIB1 (p 0.002) and p34 CDC2 (p = 0.001) overexpression, HER-2/neu gene amplification and lymph node positive status (p < 0.0001) predicted disease related death.

HER-2/neu gene amplification correlated with lymph node metastasis (p = 0.001) and also predicted disease related death in lymph node negative patients (p = 0.029).

In multivariate analysis of combined lymph node negative and lymph node positive patients, HER-2/neu amplification (p = 0.04) and lymph node positive status independently predicted disease related death.

Conclusions: MIB1 and p34 CDC2 proliferation marker overexpression, HER-2/neu oncogene amplification and lymph node metastasis all predict disease related death in breast cancer, with HER-2/neu amplification and lymph node status independently predicting outcome. HER-2/neu amplification by FISH predicts disease related death in breast cancer independent of lymph node status.

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Prognostic factors in human breast cancer

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A variety of new prognostic factors for breast cancer have been advocated, however their potential for identifying the time of relapse or the patient survival are still uncertain. In order to estimate the prognostic impact of different parameters we evaluated breast infiltrating ductal cancer specimens from 150 patients with a maximum 15 and a mean 9.4 years follow up by means of flow cytometry DNA analysis (DNA Index and S-phase fraction), the immunohistochemical assessment of Her/neu, Cathepsin D expression and the evaluation of the AgNORs through argyrophilic method.

55% of cases proved aneuploid with DNA Index between 1.1 and 2.42, whereas 45% of cases proved diploid. SPF, obtained to diploid cases only, was higher than median value (8.4%) in 37% of cases while 52% of cases showed the AgNOR value higher than cutoff value (9.5). Her/neu overexpression was detected in 34% of the cases, whereas 38% proved Cathepsin D positive.

The data obtained in our study carried out by univariate analysis, confirm the prognostic value of the individual indexes. As a matter of fact, cancer patients with DNA aneuploid. High SPF, Her/neu overexpression, high Cathepsin D levels and AgNOR exceeding 9 present a shorter DFS. The DNA Index is a highly significant prognostic parameter (rs = 0.56, p < 0.001) and also is the only factor able of discriminating node negative patients. The multivariate Cox model shows that DNA Index is the most important prognostic fact (coeff. = 2.74). We conclude that the data obtained from DNA flow cytometry, associated with other parameters, can be of great importance for the decision at the level aggressiveness of adjuvant therapy for a individual patients.

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Axillary node involvement in T_1 breast cancer in pre-menopausal Chinese

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Purpose: Chinese Breast Cancer have some differences from that of western country, one of that is that half of the patients are ages between 35–50, The aim of the study is to assess the frequency of axillary rode involvement in T_1 breast cancer in young female, and to correlate the risk of nodal involvement in Chinese.

Methods: The study population consisted of 197 cases who were treated with modified radical mastectomy in our hospital from 1990 to 1995. All patients were T_1 lesion and age younger than 50. The lymph nodes all were classified to level I, II, III and Rotter's node. The number of dissected node were greater than 10. None of them has axillary recurrence in the follow up period. We analyzed patient's age, tumor size, axillary lymph node status, histologic grade, lymph vessel emboli, hormone receptor status, and P53 expression with immunochemical stain and flow cytometry.

Results: 1. T_1 breast cancer have a 27.92% risk of axillary LN involvement in premanupasl Chinese (24.14% for tumor 1 cm or smaller). 2. Patients

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younger than 50 years old are less likely to have positive lymph rode than older (P:0.038).

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The local recurrence after breast conserving surgery: The prognosis and the diagnosis

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Purpose: To study the relationship between local recurrence after breast conserving surgery and the distant metastases.

Material and Methods: Between January 1981 and December 1989, 409 patient with invasive breast were treated with conservative surgery and radiation therapy, with actuarial follow-up of 12 years. Life tables were computed by the actuarial method and the comparisons of the distribution of length of time to local recurrence and distant metastases were made with the summary χ^2 test. The follow-up programme conducted a clinical exploration mammogram, echography and cytological punctures under echographic control.

Results: The overall actuarial survival rate at 12 years was 86%, with a 12 years distant metastases free of 64% and 12 years actuarial breast recurrence free rate of 78%. The 10 years actuarial distant metastases free rate in patients without local recurrence was 82%, in the patients who developed a local recurrence the rate was only 42% (p < 0.01). The patients who developed local recurrence within 4 years of original diagnosis, 33% developed distant metastases, in contrast the patients who developed later breast relapses only 9.5% developed distant metastases (p < 0.05).

Conclusion: The local recurrence after breast conserving surgery is associated with a distant metastases. The early local recurrence is a predictor factor of distant metastases.

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Significance of soluble interleukin-2 receptors and natural killer cells in breast cancer

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Purpose: The aim of this study was to assess whether sIL-2r levels and/or percentage of natural killer (NK) cells were correlated with the pathologic stage and grade of tumors in breast cancer patients.

Methods: The study group consisted of 32 consecutive female patients undergoing surgery for breast cancer. The average age was 58 years. Sixteen patients underwent radical mastectomy, 13 had quadrantectomy with axially lymph node dissection and 3 had tumorectomy. Serum sIL-2r using the ELISA technique and NK cell count using flow citometry were determined prior to surgery. Tumor stage was recorde according the AJCC/UICC classification.

Results: Average sIL-2r levels was 1431 pg/ml. There was no significant correlation between sIL-2r levels and tumor stage or grade. However the sIL-2r were significantly higher in pts with ductal vs. those with lobular carcinoma and in pts with recurrent tumors of the same initial histotypo vs those who had primary and recurrent tumors of different histotypes. The NK cell count was significantly increased in in high grade tumor and there were inverse correlations between NK cell count and tumor size and the presence of lymph node metastasis. There was no correlation between sIL-2r levels and NK cell count.

Conclusion: These data show high sIL-2r levels may indicate breast tumor recurrence and tumor extension may be inversely correlated with NK cell count.

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Thymidylate synthetase levels in breast cancer: A predictor for early prognosis and outcome of adjuvant chemotherapy

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Purpose: Thymidylate synthetase (TS) plays an essential role in the synthesis of DNA. The levels of TS were concluded to be indicators for early prognosis and retrospectively the outcome of adjuvant chemotherapy in breast cancer.