

Method: TS levels were measured within tumors by TS binding assays in 47 female primary breast cancer patients excluding stage IV patients operated on from July 1993 to October 1995. TS levels were compared between patients with early recurrence and disease free patients within three years. These patients were classified into two groups by TS levels (high TS group vs low TS group). Disease free survival rates were compared between these groups statistically.

Result: TS levels ranged from 1.0 pmol/g to 30.8 pmol/g (mean: 10.3 pmol/g). TS levels in twelve patients with early recurrence were significantly higher (17.7 ± 7.4 pmol/g) than those in 35 disease free patients (7.3 ± 6.1 pmol/g) ($p = 0.0002$). The high TS group (TS ≥ 10 pmol/g) and the low TS group (TS < 10 pmol/g) consisted of 17 and 30 patients respectively. Age, TNM stage, histological characteristics, nodes status and ER status were not significantly different between these groups. The three year disease free survival rate of the high TS group was significantly poorer than that of the low TS group (47% vs 90%, $p < 0.0001$). Moreover in 22 patients with four or more positive nodes, the high TS group's survival rate was significantly poorer than the low TS group. In 19 advanced patients who had received adjuvant chemotherapy such as CMF or CEF, the mean TS level of six patients with breast recurrence was 14.5 pmol/g which was higher than that of 13 patients with no recurrence (8.2 pmol/g).

Conclusion: The TS level is an important indicator for early prognosis in patients with breast cancer. The outcome of adjuvant chemotherapy in advanced patients will be expected for patients in the low TS group.

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POSTER

A proposed prognostic factor for node-negative invasive breast carcinomas: Evaluation based on the intraductal component, particularly the presence of comedo-type necrosis

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Purpose: Node-negative invasive breast carcinomas relatively have a good prognosis with some exception. The aim of this study was to correlate their prognoses with some morphological features based on the intraductal component.

Methods: Ninety-four patients with node-negative invasive breast carcinoma with the intraductal component were classified into two types: the com () type included tumors which showed little or none of necrosis in the intraductal component, and the com (+) type included tumors which had a significant comedo-type necrosis. The Kaplan-Meier method was used to calculate disease-free survival. Moreover, in tumor specimens from 82 patients, the expression of p53, c-erbB-2, and Ki-67 protein was examined by immunohistochemistry.

Results: Disease-free survival was significantly poorer in the com (+) type than in the com () type ($p = 0.007$). The expression of p53 and c-erbB-2 was found in only 2 (4.2%) and 1 (2.1%) of 47 com () cases, respectively, whereas it was observed in 16 (45.7%) and 15 (42.9%) of 35 com (+) cases, respectively. High expression of MIB-1 was seen in 20 (42.4%) of 47 com () cases and 28 (80%) of 35 com (+) cases. The chi-square test showed a significant correlation between com type and each expression of p53, c-erbB-2 and MIB-1 ($p < 0.0001$, $p < 0.0001$, $p = 0.0015$).

Conclusion: These results suggest that the presence of comedo-type necrosis is associated with a biologically aggressive phenotype, and thus the subclassification of com (+) or com (-) types can be useful as a prognostic factor in node-negative invasive breast carcinoma.

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Relationship between tumor shrinkage and changes kinetic cell activity after primary chemotherapy (PC) in breast cancer (BC) patients

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Ki67 labelling index (LI) was evaluated immunohistochemically in tumor specimens obtained before and after PC in 145 patients with T2-4, N0-1, M0 primary BC submitted to a median of 3 cycles of either CMF regimen (days 1,8 every 28) or single agent epirubicin (120 mg/m², every 21 days).

Tumor shrinkage greater than 50% was obtained in 112 patients (72.8%), 38 of them being complete responders (24.7%). PC significantly decreased the Ki67 LI: median 16% (range 1-90%), 7% (0-55%), before and after PC respectively. More than 50% decrease in Ki67 expression significantly correlated with tumor response (either complete or partial) both in univariate and multivariate analysis. Changes in cell kinetic activity, however, did not parallel with tumor regression in 22 patients. In addition a great proliferation activity ($>15\%$ of Ki67 positive cells) have been observed in 19 residual tumor of responding patients. Elevated Ki67 LI at post-chemotherapy residual BC was found to be significantly related with short disease free interval (65% vs 85% DFI at 5 years). To conclude reduction in kinetic cell activity as a whole correlated but did not always match with the clinical response. Elevated kinetic cell activity after PC was related to poor prognosis. All these data suggest that the proliferation activity may be a useful toll that in addition with tumor response can discriminate early BC patients who would benefit from the cytotoxic treatment from those who would not.

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Relationship between estrogen receptor (ER) status in primary breast cancer (BC) specimens and serum CA 15-3 levels at first relapse of disease

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It has been shown a strict relationship between CA 15-3 concentration and ER expression in the cytosol of both primary and metastatic BC specimens. In newly diagnosed (BC), CA 15-3 serum levels are influenced by the disease extent (DE). We recorded data from 430 BC patients between October,88 and April, 97.260 patients (61%) were ER+ at diagnosis. At relapse, 278 (65%) had 1 organ involved, 118 (27%) 2 organs involved, and 34 (8%) >2 ; dominant sites of recurrence were 26% in liver, 32% in lung, 28% in bone and 14% in soft tissue. CA 15-3 overall sensitivity was 61%. Supranormal CA 15-3 levels were found in 183/260 patients (70%) with ER+ primary BC as compared to 78/170 patients (46%) with ER- ones ($X^2 p < 0.0001$). CA 15-3 sensitivity paralleled the DE (assessed according to Swenerton, 1979). However, in patients with limited DE, elevated CA 15-3 levels were found in 71/123 (58%) with ER+ primary BC and in 18/70 (26%) with ER- primary tumors ($X^2 p < 0.0001$), the corresponding percentages were 84% vs 57% ($p < .001$) in patients with intermediate overall tumor load and 84% vs 58% ($p = n.s.$) in those with elevated DE. ER status, DE and the presence of pleural effusion were independent variables predicting for CA 15-3 supranormal values according to a multivariate logistic regression analysis. The relationship between CA 15-3 supranormal rate at first relapse of disease and ER expression at diagnosis suggests that the steroid hormone receptor status might be a stable phenotype in BC patients. These data also suggest that the capability of CA 15-3 to early detect the disease relapse might be confined to patients with ER+ primary BC.

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POSTER

Prognosis of 56 male breast cancers - Comparison with females

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Purpose: Due to a very low incidence rate of male breast cancer the prognostic factors are not so clear. Sometimes poorer than in females prognosis is suspected.

Methods: A study of 56 male and 952 female breast cancers was carried out and survivals were assessed in uni-, and multivariate analysis.

Results: Overall 5 and 10-year survivals of males treated by radical surgery were 71.6% and 38.9% (respectively). Lymph node status hardly influenced prognosis (81.5% NO patients survived 5 years compared with 65% N+ patients). In multivariate Cox analysis only grading and lymph node status were independent factors which influenced males' survival. Relative risk of death was over 4 times higher for grade III tumours and near 3 times higher for males with metastatic axillary lymph nodes. An additional comparison of identical male and female breast cancer groups (pNO) showed marginally significant ($p = 0.08$) differences in survival. At 5th and 10th year, 82.3% and 69.1% (respectively) women were alive compared with 54.1% and 45% men. When multivariate Cox analysis was performed in the whole breast cancer group of patients, sex did not predict survival,