

analysed 100 cells, each of them according to 32 cell features and introduced into database along with the ER and PR receptor status in tumour tissue.

The results of the cell population computer analysis have shown distinct differences in cell population structure between ER+ and ER- tumours (percentage of cells with certain chromatin structure, presence of well defined nucleoli associated chromatin etc.) as well as between PR+ and PR- tumours. There were also cell population differences among various ER± PR± status combinations in tumours.

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POSTER

TAMOXIFEN ADJUVANT HORMONAL TREATMENT ACCORDING TO PROGNOSTIC FACTORS. SHORT TERM RESULTS OF A SERIES OF 695 T1 T2/N0 N1 BREAST CARCINOMAS

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From 1982 to 1990, 695 women less than 75 years, without any previous or synchronous carcinoma, suffering from an invasive breast cancer classified as T1 T2/N0 N1/M0 according to clinical TNM staging, were enrolled in this study. 82.4% underwent a breast conservative procedure and 17.2% a modified radical mastectomy; all the patients received a post-operative irradiation. Histological axillary lymph node status, Scarff-Bloom grade and/or cytological grade, estradiol receptor content, were used to define three groups of patients. 416 women were N-/grade I II/ER+ (group I), 110 were N-/grade III/ER+ (group II), 169 were N+ ≤ 3/grade I II/ER+ (group III); patients from groups II and III received tamoxifen (20 mg per day for 2 years) due to grade III or N+ ≤ 3, considered as poor prognostic factors. With a median follow-up of 35 months (1-138) the overall survival of the three groups was respectively 95%, 96%, 96% (logrank NS) and the disease free survival 86%, 93%, 90% (logrank NS); the actuarial local regional remission rate was 94%, 97%, 99% ($P = 0.07$). Such results need to be updated, but show the ability of tamoxifen to tailor the short term survival thanks to prognostic factors.

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POSTER

TISSUE EXPRESSION AND SERUM LEVELS OF HER-2/NEU IN PATIENTS WITH BREAST CANCER

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We have analyzed serum levels of soluble HER-2/neu by using an enzyme linked immunosorbent assay in 42 patients prior to any therapy and put it into relation to the overexpression and amplification of HER-2/neu in the primary tumor after surgical excision and to data obtained by pathohistological staging. In addition, we have investigated the sera of 62 patients with stage IV breast cancer. We have further compared the possible prognostic value of serum HER-2/neu to two other known serological tumor markers CEA and CA15-3 in both patient groups.

We have observed an elevated serum HER-2/neu level (>20 U/l) in 6/42 (14.2%) preoperatively patients, out of whom those with HER-2/neu tissue expression/amplification showed elevated serum levels in 42.8%. In contrast, 8.5% of patients without HER-2/neu expression/amplification in the primary tumor presented with elevated serum levels. There was a significant difference in soluble HER-2/neu serum concentrations between patients with tumors of different size ($P < 0.0001$) and various degrees of axillary lymph node involvement ($P < 0.0001$), thus reflecting a close correlation of tumor load with serum concentrations of soluble HER-2/neu. In patients with stage IV disease, 27 out of 62 (43.5%) had elevated soluble HER-2/neu serum levels. A highly significant correlation of serum concentrations of HER-2/neu with CA 15-3 ($P < 0.002$) was observed.

We conclude that the measurement of serum HER-2/neu levels at diagnosis defines a small subgroup of breast cancer patients with a relatively advanced stage of disease. Its strong correlation with tumor load in patients with stage II disease and the high prevalence in patients with stage IV disease make it a promising tool for the assessment of disease activity and biologic behaviour in breast cancer.

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POSTER

PROGNOSTIC FACTORS IN BREAST CANCER LESS THAN 3 CM WITHOUT HISTOLOGIC LYMPH NODE INVOLVEMENT

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Axillary lymph node involvement is the most important prognostic indicator for breast cancer. Nevertheless, nearly 25% of patients with histologic negative lymph node will develop distant metastasis. Between 1974 and 1985, 201 patients with breast cancer, less than 3 cm, without axillary lymph node involvement were followed in the "Centre René Gauducheau". The aim of our study was to analyse on this population which clinical and histological parameters were correlated with local recurrence or distant metastasis. We realise a multivariate analysis using the Cox model. We showed that hormonal status, age and multifocality were significantly and independently correlated with local recurrences, and that pathologic grading (SBR), tumor localization in the breast were prognostic factors of distant metastasis.

Finally we found that the nuclear grading (MSBR) 4 or 5 permit to determine in the population SBR II, a sub-group of women associated with a high risk of metastatic evolution, in which it will be probably necessary to discuss systemic adjuvant therapy to prevent distant metastasis.

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POSTER

SOLUBLE CD44 STANDARD AND V6 IN SERUM OF BREAST CANCER PATIENTS: AN INDICATOR FOR THERAPY RESPONSE

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CD44 splice variants which contain sequences encoded by exon v6 (CD44 v6) seem to be involved in the process of tumor growth and metastasis in some human tumors. Besides cell surface expression, CD44 v6 was also identified in soluble form (sCD44) in the serum. To evaluate the prognostic potential of CD44 serum levels for clinical progression we determined the concentration of CD44 v6 and CD44 standard in sera of 88 breast cancer patients. Sera of tumorectomized, non-metastatic breast cancer patients contained sCD44 v6 and sCD44 std similar to those of healthy blood donors. In contrast, the mean values for sCD44 v6 and std of sera from metastatic breast cancer patients were significantly higher than those of patients with non-disseminated tumor disease. We found no correlation of sCD44 v6 and sCD44 std serum levels to age, tumor grading, disease-free interval, hormone receptor levels and location of metastases (visceral vs. non-visceral) in breast cancer patients. However, sCD44 v6 concentrations correlated with the number of metastatic sites, while those of sCD44 std form did not. The lack of correlation of v6 expression to lactate dehydrogenase (LDH) levels, a marker of tumor load, indicates that high v6 levels reflect rather the metastatic potential of tumor cells than tumor burden. Furthermore, v6 expression correlated with responsiveness to hormone- or chemotherapy: 93% of patients with low v6 serum levels (≤ 386 ng/ml) responded to therapy, while only 33% of the overexpressing patients responded. Therefore determination of sCD44 v6 serum concentrations may provide a valuable prognostic marker for responsiveness to drug treatment of breast cancer.

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POSTER

FOLLOW-UP ROUTINES FOR EARLY STAGE BREAST CANCER PATIENTS IN ISRAEL

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Controversy continues to exist in the literature concerning the necessity and intensity of routine follow-up tests in breast cancer patients after primary treatment. In order to assess the current status of care in Israel, we sent a questionnaire to all 18 cancer clinics requesting details of tests ordered during the first five years after diagnosis. For each cancer clinic a score was calculated according to the number and frequency of tests. The economic cost of all the procedures was then calculated. We found a wide disparity of routines with the score ranging from 12 to 89 (median 52). The cost similarly reflected up to a six fold difference between the most and least expensive center. Since intensive follow-up of early stage breast cancer patients does not appear to improve survival, the policy should be reconsidered.