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THE DIAGNOSTIC AND PROGNOSTIC VALUE OF S-OSTEOCALCIN IN PATIENTS WITH RECURRENT BREAST CANCER

C Kamby, C Egsmose, G Söletormos, P Dombernowsky.
Dept. of Oncology and Clinical Chemistry, Herlev Hospital and Dept. of Rheumatology, Copenhagen Municipal Hospital, Denmark.

S-osteocalcin was measured in 60 patients included in a staging programme for recurrent breast cancer. Other diagnostic procedures comprised S-alkaline phosphatase (S-AP), bone scan (B-scan), bilateral iliac crest bone marrow biopsies and radiological bone survey. Radiological bone metastases were seen in 61% and bone biopsies were positive in 46%. Radiology and bone biopsy served as key diagnoses as to the presence or absence of bone metastases. The diagnostic efficiency of B-scan and S-AP was greater than that of S-osteocalcin and S-osteocalcin levels were not associated with extent or number of bone metastases. However, the S-osteocalcin values were significantly decreased in patients who had visceral metastases. The median duration of survival after recurrence was 13 months for patients with low levels (=<2.0 nmol/l), compared to 18 months for patients with medium values (2.0-2.9 nmol/l), and 25 months for patients with values >3.0 nmol. Using the Cox proportional hazards method S-AP and S-osteocalcin were significant, independent prognostic factors.

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EARLY DETECTION OF BREAST CANCER IN ISRAEL

G. Rennert
National K.H. Cancer Control Center, Carmel Med Ctr, Israel Cancer Assn & Ministry of Health, Haifa 34362, Israel

Breast cancer is the leading cancer in women in Israel with increasing incidence rate. A big increase in the number of screening mammography units and of tests performed has been evidenced in Israel in the recent years. This is in part due to a major effort to encourage the use of this technique. Two expected markers of this process and its outcome are the rate of women reporting having had a mammogram and a shift in breast cancer stage distribution at diagnosis. While in a study in one mammography unit only 18% of the invited women showed-up, another 30% of those invited reported having had a recent mammogram. The expected change in stage distribution of breast cancers is not taking place yet and only about a third of the cancers are diagnosed in stage I. The newly implemented National Program is expected to improve the status of breast cancer diagnosis and lead to reduced mortality.

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PURE AND MIXED MUCINOUS CARCINOMAS OF THE BREAST : A COMPARATIVE STUDY.

N Dohollou, JM Dilhuydy, M Trojani, MH Dilhuydy, M Durand, F Bonichon.
Departement of Radiotherapy. Fondation Bergonie. Bordeaux, France.
A series of 151 mucinous breast carcinomas was treated at the Fondation Bergonie from 1972 to 1990 : 67 were diagnosed as "pure" mucinous carcinomas (PMC) and 84 as "mixed" mucinous carcinomas (MMC). All patients were operable cases. The stages (TNM) were different in the two groups : 51% were stage T1, 42% were stage T2 in the PMC group, vs17% T1 and 72% T2 in the MMC group (p <0,0001). 90% of the patients in the PMC group were N0 vs only 65% in the MMC group (p <0,0011).
The ten year corrected cumulative survival rate for operable cases in the PMC goup was 82% ± 7% (SE) vs 26% ± 12%(SE) for the MMC group, the difference being statistically significant (p <0,0016).The reference carcinomas (3903 operable cases) treated during the same period had a ten year survival rate of 69% ± 11%(SE).
The single most important factor for predicting recurrence-free survival among the 151 patients was lymph node status : in the PMC group, 85% of the patients had no lymph node metastasis at surgery, vs only 39% in the MMC group (p<0,0001).For a median follow-up of five years, the relative survival curves show no significant increase in cancer mortality in the PMC group.
We may conclude that the biological and clinical features are different in the pure mucinous carcinomas when compared to both mixed mucinous carcinomas and reference infiltrating carcinomas.

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THE NATIONAL BREAST CANCER EARLY DETECTION PROJECT -IMPLEMENTING A TQM COMPONENT
G. Rennert
Dept. Community Med & Epidemiol, Carmel Med Ctr, Israel Cancer Assn & Ministry of Health

Activities aimed at early detection of breast cancer were shown to significantly reduce mortality among women over the age of 50. Yet, in order to achieve this goal two major conditions have to be fullfiled: high compliance rate and high quality of the diagnostic & treatment processes. When the Israeli National Mammography Project was initiated a follow-up & quality control program was established. This program is responsible for the medical quality of the radiologic interpretation of the mammography films, to the quality of the pathologic evaluation and to the adequacy of the surgical procedures used. To do so, a series of quality standards were set and all mammography units were computerized with a tailored quality-oriented computer program. The specific quality criteria will be presented as well as the experience of other countries with similar activities.

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DNA CONTENT AND PHASE S CELLS FRACTION IN BREAST CANCER PATIENTS WITHOUT NODAL INVOLVEMENT.

M. Muñoz , I. Marugán, I. Benet, A. Lluch , F. Jarque, E. Vizcarra, P. Azagra, J. García-Conde. Dept. Hematology and Medical Oncology. University Hospital. Medical School. Blasco Ibáñez, 17. 46010 Valencia (Spain).
DNA content and phase S cells fraction are important prognostic factors in breast cancer patients without nodal involvement. **Materials and Methods:** 167 tumour specimens of breast cancer patients without nodal involvement were analyzed. DNA content and phase S cells fraction were correlated with known prognostic factors of relapse. **Results:** Patients characteristics were: Hormonal status: 32 (19%) were premenopausal and 132 (79%) postmenopausal. Tumor size: T_1: 52 (31%), T_2: 115 (69%). Hormonal receptors: ER+in 109 (65%) and ER - in 58 (35%), PR + in 90 (54%) and PR- in 77 (46%). Histological grade was known in 59 cases (35%), 2 with grade I, 38 with grade II and 19 with grade III. 68 patients received adjuvant therapy with adriamycin - containing regimens, and 42 with adjuvant hormonal therapy (tamoxifen). 40 patients were not treated with adjuvant therapy. 78 tumours specimens (47%) were diploids and 81 (49%) aneuploids, 10 of which were multiploids. Phase S fraction could be determinated in 137 specimens (82%). Mean of phase S fraction was 7%. 66 tumours specimens (40%) had a phase S fraction of 7% or less, and 71 tumours specimens have a higher than 7% phase S fraction. No significative differences were observed between DNA content and phase S fraction. and either a significative correlation was seen between DNA content a phase S fraction and other prognostic factors described (age, hormonal status, hormonal receptors and histological grade). Relapse free survival at five years with a median follow-up of 24 months (6-126) in patients with diploid tumour specimens is better than patients with aneuploid tumours, with statistical significance. However, no differences were observed between patients with tumours with high phase S fraction and low phase S fraction. Further clinical follow-up is needed to establish prognostic value in relapse-free-survival and overall survival of DNA content and phase S fraction in patients with breast cancer without nodal involvement.

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SOLUBLE TUMOR MARKERS IN BREAST CANCER (BC) PTS AS PREDICTORS OF RELAPSE

B Klein[1], T Klein[3], I Levin[4], J Shapira[5], H Lurie[2],
[1]Oncology Unit, Golda Med Center, Petah Tiqva; [2]Dept of Oncology, [3]Tissue Typing Lab, Beilinson Med Center, Petah Tiqva; [4]Urology Unit, Soroka Hosp, Beer Sheva; [5]Oncology Unit, Meir Hosp, Kfar Saba; Israel

The serum levels of B-2 microglobulin (sB-2M), CD8 (sCD8), interleukin 2 (sIL-2), IL-2 receptor (sIL-2R), tissue polypeptide-specific (sTPS) antigen, intercellular adhesion molecule 1 (sICAM-1), CEA, and CA15-3 were measured in 135 BC pts. Of these, 97 were newly diagnosed after surgery and 38 were on long-term follow-up without active disease. Twenty pts relapsed after median follow-up of 20 months.In the latter, initial "on-study" values were:CEA normal in all; CA15-3 elevated in 1, sTPS level (>106 u/ml) in 80%; sCD8 (>400u/ml) in 70%; sB-2M (>4.0) in 50%; sIL-2R in 50%; sIL-2 in 20%; sICAM-1 in 10%. Adding the values of sCD8 sTPS and sB-2M increased the predictive value to 93% in relapsed pts. These data suggest that serum CD8, B-2M and TPS may have prognostic value and initial high levels indicate poor prognosis.