

Bre 15**THE DIAGNOSTIC VALUE OF THE 45° MEDIOLATERAL PROJECTION IN MAMMOGRAPHY**

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In the present work, the 45° medio-lateral (m-l) projection mammography, is compared with the commonly used cranio-caudal (c-c) and medio-lateral (m-l) projections. In a retrospective study we compared 500 known cancer with respect to their visibility in the different projections.

Visualized in all 3 projections	438	87.6%
m-l and 45° projections	14	2.8%
c-c and 45° projections	8	1.6%
c-c and m-l projections	7	1.4%
Only in the 45° projection	4	0.8%
Only in the m-l projection	2	0.4%
Only in the c-c projection	4	0.8%

We found that 95,4% of all cancers could be diagnosed by mammography. Of these, 98,6% could be seen in the 45° projection.

In a prospective study, we looked at another 500 mammographies. This time only considering the 45° projection. We then compared these results (45°) with those of the radiologist (all 3 projections).

	Insuspicious		Suspicion of benign alteration		Suspicion of malignant alteration		Control	
Our value	418	32	23	28				
	+	-	+	-	+	-	+	-
Value of Radiologist	322	96	16	16	15	8	19	9

We diagnosed 15 (75%) of 20 cancers and evaluated 2 (10%) others as suspicious (together 85%). Three cases (15%) were described as insuspicious.

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Bre 16**RESULTS AND EXPERIENCES WITH STEREOTAXIC FINE NEEDLE BIOPSY (SFNB)**

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In breast cancer the prognosis is influenced decisively by the size of tumor and by whether metastases have spread to the axillary lymph nodes. To diagnose tumors that are less than 1 cm in size clinical examination and palpation are rather crude procedures with limited value. In order to solve those problems with nonpalpable breast lesions the method of SFNB was developed in Sweden in 1977. Our experiences with this Mammostest-system exist since 1983. To date 543 patients have been referred. In 53 cases (9.8 %) the biopsy could not be performed for methodological reasons. Of 490 patients, 38.2 % (n=187) were subjected to SFNB and then operated on after preoperative stereotaxic chromolocalization. Taken together, 78.6 % (n=147) of these cases showed benign histologies. Including one false negative cytological report, malignancy was found in 21.4 % (n=40). Morphometrically, 20 of these tumors were smaller than 5 mm. One control group (31.6 %) was subjected to repeated biopsies and mammography. A second control group (32.8 %) was followed up only mammographically. In both groups the findings were unchanged after two years. The statistical results (cytology vs. histological examination, Chi-square-test) of 187 patients showed a sensitivity of 97.5 % and a specificity of 95.2 %. This is equivalent to the standard achieved in the diagnosis of cervical cancer, which is generally considered optimal. It follows from this that SFNB is a method of high validity, easy to perform, not very time-consuming, and well tolerated by all patients. It is a valuable addition to mammography.

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Bre 17**CYTOKERATIN ANTIBODIES IN THE EARLY DETECTION OF BONE MARROW INVOLVEMENT IN BREAST CANCER**

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The purpose of our study was to investigate the value of cytokeratin antibodies for early confirmation of bone marrow involvement in breast cancer. Since September 1984 we have obtained bone marrow for cytological and histological evaluation from 50 patients during primary operative treatment bilaterally from the anterior iliac crest. In all cases no previous evidence of distant metastases had been found. The histological examination was done on undecalcified bone marrow sections. The immunocytochemical studies were carried out on interphase preparations of bone marrow aspirates (an average of 6 preparations per patient and side). For staining cytokeratin antibodies (PKK 1, Lab System, Helsinki) and the immunalkaline-phosphatase-method were used. Keratin positive cells were found in 4 of 50 cases (8%). 2 of the immunocytochemically positive cases already showed histological evidence of neoplastic bone marrow infiltration (4%). The keratin positive cases were characterized as follows:

$T_1N_{pos}(1/24)M_0, ER-, PR-, ductal\ invasive\ carcinoma$
(d.i.c.-NOS); $T_2N_{pos}(11/24)ER+, PR+, d.i.c.(NOS)$,

$T_1N_{pos}(23/23)M_0, ER+, PR+, d.i.c.(NOS)$; $T_4N_{pos}(24/24)$

$M_0, ER+, PR-, d.i.c.(lobular\ type)$. Our study was able to prove that immunocytochemistry is superior to conventional histology in confirming tumor cells in bone marrow. Our results, however, did fall clearly below the 28% described by Redding et al. (1983) with EMA-antibodies.

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Bre 18**ESTROGEN RECEPTORS IN BONE MARROW BIOPSIES OF BREAST CANCER METASTATIC TO THE SKELETON**

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The usefulness of receptor determination for the prediction of human breast cancer hormone dependency is well documented. Breast cancer metastases also contain receptors and much data exist concerning their presence in lymph nodes. The purpose of this study was to investigate estrogen receptors of bone marrow metastases in patients with breast cancer. 22 women with skeletal metastases confirmed by bone scan/or x-ray were biopsied on the anterior iliac crest using the Jamshidi technique. The tissue obtained sufficed for the determination of estrogen receptors (ER) as well as for histological examination. Cytosolic ER was calculated from a five point Scatchard plot according to the recommendations of the EORTC. The histology of the primary tumor was known in 20 cases (19 ductal invasive carcinoma, 1 adenoid cystoid carcinoma). The steroid receptor status of the primary tumor had been determined in 13 cases. The majority of the women (n=15) had previously received a variety of antihormonal treatment (tamoxifen, medroxyprogesterone acetate, ovariectomy). Results: 10 of the 22 cases showed histological evidence of bone marrow metastases. The concentrations of ER ranged from minor 1 to 20.0 fmol/mg protein, which can be considered negative or borderline concentrations. There was no significant difference between the patients with bone metastases (median ER 9.5 fmol/mg protein) and those without (median ER 2.9 fmol/mg protein). Because of the small number of patients, the low ER content and the similar incidence of ER in marrow with and without metastases, it is difficult to classify groups with hormone sensitive or insensitive tumors. Kan et al. (1984) demonstrated the absence of steroid receptors in the epiphyseal cartilage of dogs and rabbits. This finding supports the hypothesis that the physiological effects of estradiol on skeletal growth seem to be a secondary effect without hormone-receptor interaction. On the other hand the low ER may be explained by changes in the receptor status due to the patients' previous hormonal treatment.

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