

and accuracy were calculated to be 87.0%, 81.8%, and 85.3%, respectively, when the cut off value of CEA and NCC-ST-439 levels in nipple discharge were set at 300 mg/ml and 1,000 U/ml, respectively.

Conclusion: A combination assay with CEA and NCC-ST-439 is thought to be useful adjunctive tool in the diagnosis of non-palpable breast cancer.

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POSTER

Needle localization breast biopsy for nonpalpable breast lesions

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Background: The use of screening mammography resulted in higher detection rate of nonpalpable breast lesions and increased need for open needle localized breast biopsies (NLBB).

Materials and Methods: From January 1995 to June 1997 two hundred NLBB in Breast Unit at the Cancer Center in Warsaw were performed. A clustered microcalcification (46%), apiculated mass (28%), a new solid mass (17.5%), or an enlarging lesion on reexamination (11.5%) were considered suspicious mammographically and therefore warranted biopsy. Median patients age was 52 years. Over 50% of NLBB were performed under local anesthesia.

Results: Pathologic analysis of the 200 NLBB revealed 125 (62.2%) benign lesions. There were 75 breast cancers (37.5%) of which 50 were invasive carcinomas. Complications associated with NLBB consisted of 2 (1%) missed lesions and 2 (1%) abscesses.

Conclusions: NLBB can be performed using local anesthesia exclusively with only 1% chance of missed lesion and very small rate of other complications.

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POSTER

Mammographic parenchymal patterns and breast histology

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The relation between mammographic appearance of breast parenchyma, and the risk of breast cancer is not well defined. There have been some studies based on the previous mammographic patterns of the breast carcinoma patients. We aimed to evaluate the relation between mammographic patterns and histopathological features of the breast tissue. So we performed tru-cut tissue biopsies to breasts with all types of mammographic patterns and compared the histopathological results.

Seventy patients who admitted with mastalgia were studied. Mammographic parenchymal patterns were evaluated according to the classification described by Wolfe, and the breast tissue specimens were evaluated and classified as described by Page and Dupont.

Mammography	Parenchymal histopathology					Total
	Nonproliferative	Mild EH	Mod. EH	SEH	AH	
DY	5	16	5	2	1	29
P ₂	10	1	1	—	—	12
P ₁	15	3	—	—	—	18
N ₁	11	—	—	—	—	11
Total	41	20	6	2	1	70

(EH): epithelial hyperplasia, Mod. EH: moderate epithelial hyperplasia, SEH: severe epithelial hyperplasia, AH: atypical hyperplasia)

A great correlation is found between the DY mammographic pattern and breast tissue with epithelial hyperplasia, which increases the breast cancer risk ($p < 0.01$).

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POSTER

Stereotactic-guided biopsy of occult breast lesions

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Purpose: To analyze the accuracy of stereotactic coal injection and wire localization followed by excisional biopsy for suspicious breast lesions.

Methods: Forty-five patients underwent pre-biopsy stereotactic coal injection for suspicious mammographic images. Of these, 25 patients had also stereotactic wire localization. Microcalcifications were the most common indication to biopsy (58%). Localization was accomplished by means

of a dedicated stereotactic device using all fundamental spatial projections. Coal was injected through a 20 gauge needle. A hooked wire was inserted for deep lesions. Surgery was performed under local anaesthesia and in outpatient basis. Radiologic studies of the specimen were performed for each patient. The positive predictive value of mammography for carcinoma was calculated.

Results: Overall, radiologic studies of the specimen demonstrated a complete removal of the lesions in 44 patients (98%). In 1 patient with deep microcalcifications, localized only with coal, a partial excision was performed. The positive predictive value of mammography for cancer was 49%. Microcalcifications were associated with cancer in 10 patients (38%).

Conclusion: Preoperative stereotactic localization proved to be an effective and accurate procedure allowing a complete excision of the lesion in 98% of patients and a correct histologic diagnosis in all patients.

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POSTER

Management of palpable asymmetrical thickening of the breast

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Purpose: Management protocols for a discrete palpable breast lump are standardised in most centres while the approach to an area of palpable asymmetrical thickening has seldom been addressed. The present study is a prospective evaluation of a diagnostic algorithm designed for women presented to the symptomatic breast clinic with asymmetrical thickening detected on physical examination.

Methods: The algorithm involves repeat physical examination and selective use of ultrasound with or without mammographic examination, followed by fine needle aspiration cytology for a mass lesion or core biopsy for cases with persistent thickening but with no mass lesion demonstrable on imaging.

Results: At the time of review, 111 Oriental women with a mean age of 39 years (range: 20–72 years) were included. Ninety-three women were premenopausal and 40 had associated mastalgia on the same side of the thickening. Most of the thickening was over the upper outer quadrant of the breast (63%). The thickening resolved spontaneously in 72% of women over a median period of 6 weeks (range: 2–52 weeks). In 7 cases, solid mass lesions were found on imaging. Two had benign fine needle aspirates while 5 were due to carcinoma. Nineteen women with negative imaging but with persistent thickening were subjected to core biopsy. Eighteen had histological features of benign breast change. The remaining one was shown to have carcinoma, making up a total of 5.4% of malignancy in the whole series.

Conclusion: Most palpable asymmetrical thickening of the breast is due to benign breast change which resolves spontaneously. On the other hand, primary breast cancer can present in the same way. A selective combination approach is probably the appropriate way to arrive at the diagnosis.

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POSTER

Reduction of calcifications and breast cancer: Description of a case

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Purpose: Early diagnosis of breast cancer increases survival of patients, therefore it is very important to recognize early mammographic signs.

Methods: A mammographic screening program began in the city of Modena in 1995. After the first round 18.880 (71.4% of invited women) age group 50–69 years, were screened and 198 (1%) resulted affected by breast cancer.

Case: F.M., 60 years old, in 1996 the screening mammography diagnosed breast cancer. She made her first mammography in 1988 in which only one calcification of 1 mm of diameter was visible in left upper lateral quadrant. In 1992 the patient had a second mammography that documented reduction of the preceding calcification and the appearance of another microcalcification near the first one. In 1996 screening mammography showed a cluster of other microcalcifications with dense parenchymal background, in the area of the two previous microcalcifications.

Results: In our opinion, microcalcifications that are clustered with dense background parenchyma require more diagnostic exams. So, we decided to perform clinical examination and ultrasonography without, however, achieving diagnostic important notes. Stereotactic fine-needle aspiration was performed on microcalcifications that showed cytologically mammary dysplasia

but surgical biopsy revealed infiltrating ductal carcinoma with multiple foci of in situ carcinoma.

Conclusion: At present calcifications, particularly calcification clustering, that increase or appear, must make suspicious the radiologist. There are not still sufficient elements of analysis about calcifications that disappear. It is not possible draw definitive closures on single clinical case observed but it might represent an element of deserving reflection.

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POSTER

The use of technetium-99m methoxyisobutylisonitrile (^{99m}Tc-MIBI) breast scintigraphy to evaluate palpable breast masses

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Purpose: The main purposes of this study is to assess the sensitivity and specificity of ^{99m}Tc-MIBI breast scintigraphy for tumor detection and to determine whether it could be used to differentiate malignancies from benign masses.

Methods: Thirty-eight female patients (age range: 31–79 years) with palpable breast masses which were detected by mammography and/or physical examination underwent ^{99m}Tc-MIBI breast scintigraphy in order to assess the value of ^{99m}Tc-MIBI scans in the detection of breast carcinoma and the differentiation of malignant from benign lesions.

Results: Twenty-seven of the thirty-two cases of breast carcinoma were detected by ^{99m}Tc-MIBI breast scintigraphy. In contrast, none of the six benign lesions could be detected by this method. The diagnostic sensitivity, specificity and accuracy were 84%, 100%, 87%, respectively, in the differentiation of malignant and benign breast masses.

Conclusion: We consider ^{99m}Tc-MIBI breast scintigraphy is useful in distinguishing malignancies from benign breast masses.

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POSTER

The axilla – What can mammography offer?

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Purpose: This presentation will demonstrate the normal variations and pathological processes that can be seen in the axilla using standard routine mammography. It will also outline guidelines for further intervention or tissue sampling should they arise. This paper will discuss the potential role of other techniques used in imaging the axilla and compare them to standard mammography.

Materials & Methods: Over 30 consecutive cases were selected from 2 busy breast imaging practices where lesions in the axilla were reported on routine mammography examinations. In each case further investigations either by alternative imaging, clinical examination or tissue sampling was instigated on the basis of the mammogram.

Results: Masses, asymmetric densities and calcifications were the three main categories evaluated. The masses were subdivided into lymph node and non lymph node masses. In most cases tissue sampling proved unnecessary. Clinical examination of the axilla and a proper clinical history established the diagnosis in 75% of cases.

Conclusion: In most cases, the mammographic appearances of lesions in the axilla are typically characteristic requiring no further intervention. On occasion tissue sampling may be warranted.

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POSTER

Correlation between sestamibi scintigraphy-mammography, mitochondria and neoangiogenesis in breast cancer

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Purpose: Evaluation of SestaMIBI scintigraphy in the assessment of breast's microcalcifications without associated nodular lesion and the correlation between scintigraphy data and immunohistochemical detection of mitochondria and neoangiogenesis in tumour samples.

Methods: we evaluated 27 patients. All patients underwent mammography, US, ^{99m}Tc-SestaMIBI scan and stereotactic fine needle aspiration. Patients with positive cytological pattern, inadequate cytological sampling or suspect mammographic finding underwent surgical biopsy.

Results:

Final Diagnosis	Mammography	Scan
Breast Cancer 8		4/8
• intraductal 5	- 5/5 dubious	1/5
• infiltrant Ca 3	3/3	3/3
Benign Lesion 19	14/19 (5 dubious)	18/19

Conclusions: ^{99m}Tc-SestaMIBI demonstrates a good predictive negative value and poor diagnostic specificity for DCIS; sestaMIBI uptake was related with mitochondria contents in the lesions.

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POSTER

Preliminary results in the scintigraphic and radiosurgical identification of sentinel node (SN) in early stage breast cancer

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Axillary lymph nodes dissection for breast cancer remains the most important prognostic factor and guide adjuvant therapy. We tested the scintigraphic and radiosurgical mapping of SN to verify if an adequate axillary staging and regional control is possible without radical axillary procedures.

Material and Methods: The study, began in October 1997, comprised 16 patients, aged between 35 and 78 (mean 60 years), with T1 tumor localized in 14 cases at the external superior region of the breast and in 2 case at the internal superior. All the patients underwent preoperatively two kinds of lymphoscintigraphy: 1- injection of ^{99m}Tc-colloid (30 MBq) the evening before the day of the surgery with scintigraphic imaging after about 15 hours; 2- injection of ^{99m}Tc-nanocolloid (10 MBq) in the morning of the surgery with scintigraphic imaging after 1 hour. We utilize a low energy LFOV camera with high resolution collimator for the scintigraphy (planar in two orthogonal projections); during the surgery we utilize a probe (Pol. hi. tech srl) specific for SN collimation. After induction of general anesthesia, Isosulfan blu vital dye was injected into the breast mass and surrounding breast parenchyma.

Results: The accuracy of lymphatic mapping was examined by comparing the histopathology of SN and non SN specimens. The SN accurately identifies axillary node status in all the patients. Only in 1 case (sensitivity 93.7%) it was not possible to identify the SN because the lymphatic drainage was dramatically modified by radical mastectomy 1 month before: the SN was found only by blu dye. In 1 patient the SN was identified only by probe and not with scintigraphy. In the two tumors localized in the internal superior region the SN was found not in the axilla but in the internal mammary chain. Finally in 2 case the SN was located in interpectoral region and in 2 cases in clavicular omolateral region.

Conclusions: This study is at the beginning and the number of the patients is too low for a conclusion but the experience indicates that lymphatic mapping by scintigraphic and radiosurgical technique can accurately identify the SN (wich is located in the axillary nodes only in 50% of our cases) and could guide to a less radical axillary procedure in the patients with tumour T1 N0, with obvious benefit for the patients and inducing a reduction in overall costs.

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POSTER

In situ trap method for the cytological examination of breast cancer (preliminary report)

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Purpose: We report our study on the usefulness of checking the activities of telomerase for breast cancer cytology using in situ TRAP with fluorescent primer.

Material and Method: Aspiration biopsy cytology were performed on our breast OPD patients.(ten breast cancer, two fibroadenoma, one phyllodes tumor, one mastopathy) The specimens were immediately de-erythrocyted at 4°C and were then fixed and dried on silane-coated slide glasses. In situ TRAP method with fluorescent primer (by Ohyasiki et. al.) were applied for cytology to check the activities of telomerase. The activities of telomerase were evaluated on slide glasses with primer through fluorescence microscope after PCR reaction.