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.

355 POSTER

Needle localization breast biopsy for nonpalpable breast lesions

Monika Nagadowska, Ewa Wesołowska, Danuta Pietrow, Ewa Dziewulska, Jacek Gałezyński. *The Maria Skłodowska-Curie Cancer Center and Institute of Oncology, Warsaw, Poland*

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 witch 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.

356 POSTER

Mammographic parenchymal, patterns and breast histology

S. Bayar[1], S. Tükel[2], S. Koçak[1], S. Aydıntuğ[1], S. Dizbay Sak[3]. *Dept.s of [1]Surgery; [2]Radiology; [3]Pathology, Ankara, Univ. Med. School, Turkey*

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 hyperlasia, 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 ($p < 0.01$).

357 POSTER

Stereotactic-guided biopsy of occult breast lesions

M. Lazzerini[1], R. Incarbone[2], L. Bonavina[2]. *[1]Department of Radiology; [2]General Surgery and Surgical Oncology Institute, Ospedale Maggiore, I.R.C.C.S., Milan, Italy*

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

Methods: Forthy-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%. Microcalfications 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.

358 POSTER

Management of palpable asymmetrical thickening of the breast

K.L. Cheung. *Department of Surgery, The University of Hong Kong, Queen Mary Hospital, Hong Kong, China*

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.

359 POSTER

Reduction of calcifications and breast cancer: Description of a case

C. Armocida[1], D. Santini[1], L. Di Pancrazio[1], E. Ceresatto[1], R. Negri[1], M. Criscuolo[2], E. Gallo[1]. *[1]Centro Screening Mammografico; [2]Dipartimento di Anatomia e Istologia Patologica, Azienda USL e Azienda Ospedaliera Policlinico, Modena, Italy*

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 parenchima requir more diagnostic exams. So, we decided to perform clinical examination and ultrasonography without, however, achieving diagnostic important notes. Stereotaxic fine-needle aspiration was performed on microcalcifications that showed citologically mammary dysplasia