

nodal involvement were 72% and 38%, respectively. The same values for axillary US-guided FNAC were 61% and 89%, respectively, while the combination of the two methods was characterized by a sensitivity of 76% and a specificity of 38%.

We conclude that axillary US and US-guided FNAC are valuable methods for selecting patients who may not need SLN biopsy for staging, but should undergo axillary dissection immediately. It must be kept in mind that the axillary nodes might have pathologic findings even in the absence of nodal metastasis, as demonstrated by 3 lymphoma cases and a tuberculous infection in our series.

131 POSTER
The effectiveness of routine follow-up to detect locoregional recurrences after treatment for early stage invasive breast cancer: a systematic review

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Background: Whether routine follow-up after treatment for primary breast cancer has any prognostic benefit is a topic of ongoing debate. The aim of this paper is to review the effectiveness of routine follow-up to detect locoregional recurrences after treatment for early stage invasive breast cancer.

Methods: We performed a systematic review and meta-analysis of studies published in peer-reviewed journals on the effectiveness of routine follow-up to detect isolated locoregional recurrences in patients treated for primary operable breast cancer. As main outcome measure we considered: the proportion of asymptomatic locoregional recurrences diagnosed during routine visits compared to the proportion of symptomatic locoregional recurrences diagnosed during or outside routine visits. Twelve studies that involved a total of 5045 patients and 378 locoregional recurrences were identified.

Results: Pooling data showed an overall estimate of 40% of locoregional recurrences diagnosed during routine consultation before the patient had symptoms (95% C.I.: 35–45); of these 47% (95% C.I.: 39–54) were diagnosed after mastectomy and 36% (95% C.I.: 28–43) were diagnosed after breast conserving therapy. The studies about the follow-up of patients after mastectomy were all published before 1995, whereas all studies, with the exception of one, about breast conserving therapy were published after 1995. There was no information in the literature on treatment or survival benefit, nor on quality of life. Besides differences in therapy, we have not been able to discern subgroups of patients in whom results were different.

Conclusion: An important percentage of isolated locoregional recurrences is diagnosed during routine consultation prior to symptomatic presentation, in patients treated for early stage invasive breast cancer. This systematic review highlights the need for further development of a cost-effective routine for the follow-up of patients after a diagnosis of breast cancer.

132 POSTER
Breast cancer staging and treatment planning according to internal mammary lymph node morphology

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The rate of the internal mammary lymph nodes (IMN) metastasis in breast cancer patients is in the range between 12 and 55% according to different publications. Unfortunately nowadays there is the lack of the preoperative non-invasive routine methods for the definite detection of the IMN involvement.

During 1998–2003 1088 patients underwent either videothoroscopic IMN dissection (710 women) or open IMN biopsy (378 women). Very low rate of intra and post-surgical complications connected to videothoroscopic IMN dissection could be registered in all the patients. No specific complications were detected during or after open IMN biopsy. 210 of all the patients (19.3%) had morphologically verified metastasis in IMN. In 5.3% IMN involvement was detected without axillary lymph node metastasis. According to our results there is IMN metastasizing rate dependence on the additional involvement of the axillary lymph nodes, patients age, size and histological structure of primary breast tumor and no statistically significant connections could be found with location, estrogen receptor level and menstruation function of the patients. Only patients

with verified IMN metastasis underwent radiation therapy at this zone. No recidives in parasternal region was detected in non-irradiated women in 5-year monitoring period. It was shown that patients with IMN metastasis have significantly worth prognosis in comparison with IMN negative. Both techniques could be recommended to the breast cancer patients for correct staging and treatment planning.

133 POSTER
The role of ultrasonography in addition to mammography in the detection of breast cancer

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Background: Mammography is the only proved efficacious screening imaging modality for breast cancer. Additional breast ultrasonography is often performed to assess indeterminate mammographical findings.

Aim of the study: To evaluate the diagnostic performance of ultrasonography as an adjunct to mammography in the detection of breast cancer and to identify clinical indications.

Material and methods: Records of women referred for breast imaging to the Regional Oncology Outpatient Unit in Gdansk from January 2001 to June 2001 were retrospectively analyzed. Results of mammography and ultrasonography were assessed using a 5-point grading scale of increasing suggestion of malignancy. Indications for referral, age, hormonal use and results of clinical examination were evaluated. Median age was 52 years (range 35–78). Median follow-up was 16 months (range 12–28). Detailed data will be provided at the conference.

Results: Out of 4600 consecutive patients in 80 (1.7%) mammography suggested breast cancer. Of the remaining 4520 patients in 830 cases ultrasonography was additionally performed following the suggestion of a radiologist. No additional malignancy was detected and neither were clinical indications for additional ultrasonography defined.

Conclusions: The role of additional ultrasonography performed as an adjunct to mammography in the detection of cancer is negligible. No subgroup of patients who would benefit this procedure was selected.

134 POSTER
Routine mammograms in symptomatic women <50 yrs with normal physical examination: is it justified?

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Introductory Sentence: This unique abstract studies whether routine mammography is justified in "symptomatic" women under the age of 50 yrs who are found to have a normal clinical breast examination. As there is growing pressure to lower the age of entry into breast cancer screening programmes this study assumes significance.

Introduction: In the UK breast cancer screening is offered to all women between the ages of 50 and 69 yrs. There is little doubt that breast cancer screening enhances both early diagnosis and improves survival. It is also well accepted that a vast majority of breast cancers will be diagnosed in "symptomatic" women. This retrospective study looks into whether routine mammograms of "symptomatic" women below the age of 50 yrs with normal physical examination will significantly increase the number of breast cancers diagnosed. In addition we wanted to assess whether the current practice of referring women with unremarkable breast examination for routine mammograms is justified.

Methods: The mammogram results of 754 women below the age of 50 yrs referred on account of varied breast symptoms and found to have normal physical examination were analysed. Women who had any suspected abnormality on physical examination or recalled for further assessment for any reason were excluded. Only patients that the clinician was happy to discharge but arranged for routine mammograms to complete the assessment were included.

Results: The median age of the cohort was 44 years (range 35–50) and 61% were premenopausal. 6/754 (0.79%) of the women were recalled following routine mammograms. 3 of these were discharged after further imaging. The remaining 3 went on to have needle localised excision biopsies. 2 of those were invasive breast cancers and 1 was sclerosing adenosis. Routine mammography of our cohort therefore yielded only 2 breast cancers (2.6 per 1000) which would otherwise have been missed had these women not had routine mammograms.

Discussion: For a breast cancer programme to remain viable it is estimated that a diagnosis of 5 breast cancers per thousand women screened is to be achieved. There is also growing pressure to lower the age of entry into screening to 40 yrs. This study demonstrates that relying on clinical examination alone would be half as effective as in screening programmes. Our data do not support the current practice of carrying out

routine mammography in symptomatic clinics for woman <50 yrs regardless of physical findings. Such a practice would also have a significant negative economic impact on existing limited resources. We therefore conclude that routine mammography in symptomatic women found to have normal breast examination is not justified.

135 **Enhancing Mammography: Digital optical breast imaging for the early detection of breast cancer – The infra-red technology** POSTER

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Introduction: More than two thirds of all breast biopsies performed in the Western World for the early detection of breast cancer, due to suspicious mammographic findings, turn out to be benign and therefore unnecessary, creating a stressful, discomforting, and painful procedure for the patients and increasing medical costs for the community. Mammography as gold standard for the early detection has a low specificity and is therefore limited in their ability to differentiate between malignant and benign lesions. In addition mammograms in dense breasts, are difficult to interpret. Recent developments in technology make it possible to identify vascular changes associated with malignant growth. The dynamic optical breast imaging device (DOBI) applies these new imaging and processing technologies non-invasively to differentiate between malignant and benign lesions by the detection of neo-angiogenesis.

Patients and Methods: Between April and November 2003 a prospective study to further investigate this new prototype device was performed at our institution. Aim of the study was to evaluate whether unnecessary biopsy could be prevented using this technology. 100 patients (aged 25 to 77) scheduled for open biopsies (palpable and non palpable lesions) were entered into the study. All patients were scanned with the DOBI device preoperatively and findings were compared with those of the definite histology report and previous imaging.

Results: Preliminary results of the calculated sensitivity, specificity, and the negative predictive value of DOBI are highly promising.

Discussion: The concept of this diagnostic tool is provide information to guide biopsy recommendations. The results of our study demonstrated the ability of this new technology to discriminate non-invasively between benign and malignant lesion which may lead to avoid unnecessary interventions. Further studies are needed to support these data.

136 **Usefulness of multidetector-row computed tomography for the diagnosis of the intraductal extension of breast carcinoma** POSTER

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Background: Intraductal extension of the lesion is one of the most important factor for the assessment of breast conserving surgery. The purpose of this study is to evaluate the clinical usefulness of multidetector-row CT (MD-CT) for the diagnosis of the intraductal extension of breast carcinoma.

Material and Methods: From 2002 to October 2003, consecutive 44 patients were enrolled in this study. We grouped the cases into three categories according to the degree of intraductal extension from the main tumor, diagnosed by MD-CT findings: intraductal component less than 10 mm, 10 mm to 20 mm, and more than 20 mm. To evaluate the accuracy for the detection of the lesion, the histological cross-sections were studied retrospectively, and we analyzed the relationship between the tumor size, histology, menopausal status of the patients and the degree of intraductal component.

Results: Forty-four breast lesions (100%) were detected by the MD-CT. About the degree of the intraductal component, significant correlation was found between the pathological finding and radiological categories. Especially, strong correlation was found at the pathological t2 tumor ($p < 0.01$) and postmenopausal women ($p < 0.01$).

Conclusions: Dynamic MD-CT finding of the breast carcinoma was found to be correlate to the histological degree of the intraductal extension of the lesion, and thought to be useful in the preoperative assessment of breast conserving surgery, especially for postmenopausal and t2 patients of breast carcinoma.

137 **DCIS after 11G directional vacuum assisted biopsy: underestimation of invasive breast cancer** POSTER

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Purpose: to determine if the accuracy of Mammotome[®] device in the diagnosis of DCIS is correlated with the diameter of the lesion and with the sampling rather than excision of the target.

Patients and methods: we retrospectively analysed 1819 US or stereotactic guided biopsies performed with 11 gauge Directional Vacuum Assisted Device (DVAD); in 287 cases of these the diagnosis was DCIS. All but 2 patients underwent surgical treatment. The rate of underestimation was correlated with the diameter of the lesions (≤ 10 mm, 11–20 mm, 21–30 mm and >30 mm) and the entity of target removed (sampling or excision).

Results: Most of the lesions targeted were microcalcifications (95%). After surgery in 226 cases (79.3%) the diagnosis of DCIS was confirmed, while invasive cancer was found in 59 cases (20.7%). The underestimation rate was strictly related with the diameter of the lesion: 2.8%, 15.9%, 41.3%, 30.0% in ≤ 10 mm, 11–20 mm, 21–30 mm and >30 mm respectively. When the lesion was excised we observed only 2.9% (2/70 cases) of invasive cancer compared to 26% of underestimation in the remaining cases, in which the lesion was incompletely removed during the diagnostic procedure.

Conclusions: When the lesion is up to 10 mm or completely excised, DCIS is likely to be confirmed after surgery. As a consequence the diameter of the target and the entity of removal have to be specified in the radiological report.

138 **Extending quality assurance to all breast cancers** POSTER

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The Association of Breast Surgery at BASO (ABS at BASO) works with the NHS Breast Screening Programme to carry out an annual audit of the treatment of screen detected breast cancers in the United Kingdom. This audit has contributed to improvements in clinical practice because it is accepted as accurate and relevant by the clinicians themselves, who personally sign off their own data. It is a vision shared by many within the NHS that the national screening audit and quality assurance processes be extended to breast cancers in patients of all ages, not only the approximately 20% which are screen detected.

Currently, ABS at BASO carry out a symptomatic audit, but this audit does not achieve complete case ascertainment of all symptomatic breast cancers. For example, in the West Midlands health region, only 6 of the 20 breast units supplied data to the symptomatic audit for the financial year 2001/02.

The charity Breakthrough Breast Cancer, has funded a research project which aims to produce high quality outcome data which clinicians can trust on the detection and management of all breast cancers. The project will enable surgeons to supplement the treatment data that they are able to collect locally with the data routinely collected by regional cancer registries.

The first stage of the project was to pilot the process by matching surgeons' data with data held at the West Midlands Cancer Intelligence Unit (WMCIU), the population based cancer registry for the West Midlands health region. A cohort of 3877 breast cancers was diagnosed in 2001/02 of which 787 (20%) were screen detected and 538 (14%) were submitted to the 2001/02 symptomatic audit. The remaining 2552 symptomatic cases were not submitted to audit. 98% of the 3877 cases in the cohort could be assigned to a unique treating clinician. This demonstrates that data already submitted to the cancer registry could be used by clinicians to supplement their own audit data.

139 **Which is the real size? Radiological and histological size of tumours: a comparison in palpable and non-palpable breast lesions** POSTER

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Background: Breast conserving surgical approach requires precise preoperative diagnosis concerning the number of foci and the extent of