lesions. The preoperative measurement of lesions has special importance in cases of non-palpable tumours, in order to select appropriate cases for surgical biopsy of limited extent.

Materials and methods: 171 surgical biopsies of breast malignancy were analysed retospectively from the point of view of radiomorphology, radiological and histological tumour size, number of foci, and histopathology.

97 lesions were non-palpable excised by hook-wire localised, 74 palpable tumour did not need preoperative localisation. The size of the lesions measured by US and on the mammogram were compared with each other and with the histological size.

Results: In 59% of the 97 non-palpable cases and in 67% of the 74 palpable cases the radiological and histological size was equal, or the difference was less than 20%. In cases of in-situ carcinomas (29 cases), the radiological assessment of the size was more difficult. By the non-palpable in-situ cases (24) in the half of the DCIS cases the radiological and histological sizes was equal. In the remaining 50% the difference between the two measurements was more than 20%. In the palpable group were found only 5 in-situ cases, and only in one case proved equal radiological and histological size.

In the invasive carcinoma group the radiological measurement proved more accurate: in 61% of the non-palpable cases and in 71% of the palpable cases the radiological and histological measurements gave the same result, and in only 39%, and 29% was the difference over 20%.

Analysing the radiomorphology microcalcifications and parenchymas distorsions were those alterations by both of palpable, and nonpalpable lesions, where the radiological and histological size differed from each other significantly.

Conclusion: The preoperative measurement of tumour is important in order to orientate the surgical approach.

By the palpable lesions the measurement is more accurate than in case of non-palpable, and by the in-situ cases the measurement was not useful alone to plan the surgical biopsy.

However, in cases of microcalcifications or parenchymal distorsion, care must be taken to plan the excision on the basis of radiological size alone, in order to avoid insufficient surgical treatment.

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Breast ductoscopy with a 0.55 mm (1.83 F) endoscope as additional diagnostic tool for unclear cases of nipple discharge

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Objective: Standard diagnostic tools to evaluate suspicious nipple discharge can only give indirect information about the source of the bleeding with is anticipated coming from a breast duct lesion. Microendoscopy with a breast ductoscope of only 0.55 mm (1.83 F) can offer visualization of the lesion and help in the decision to perform or avoid an exploratory breast tissue resection for histological evaluation. We discuss this new technique and its performance.

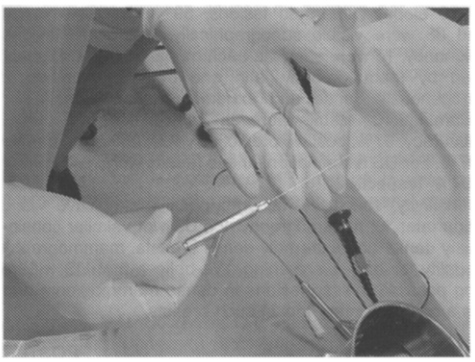

Fig. 1. LaDuScope® with 0.95 mm diameter.

Methods: We use a PolyDiagnost LaDuScope® with 0.55 or 0.95 mm outer diameter cannula and a working length of 75 mm. The optic has an outer diameter of 0.36 mm, a total length of 1200 mm, with 0° angle direct view, a field of vision of 70° and 3000 pixel resolution. Irrigation of breast duct is possible with a syringe as well as aspiration under visual control. The ductoscope is autoclavable and can be sterilized in gas or plasma sterilization. The procedure can be performed as ambulatory diagnostic procedure. The patient is awake; a slight dose of sedation eases pain and discomfort during dilatation of the mamillary duct.

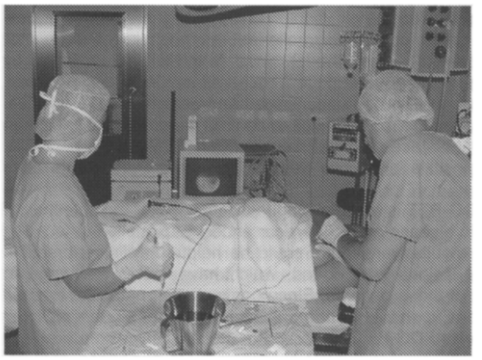

Fig. 2. OR setting for breast ductoscopy.

Results: After introduction of the ductoscope the breast ducts and walls can easily be inspected without discomfort for the patient. Instead of moving the scope rather the breast tissue is moved towards the direction of visual interest. The results of the ductoscopy can immediately be explained to the patient on the monitor, but the entire procedure is also recorded on a CD-ROM for further evaluation. The only limitation so far is that the picture on the monitor due to the resolution is rather small compared to standard endoscopy. We had no intra- or postoperative complication so far.

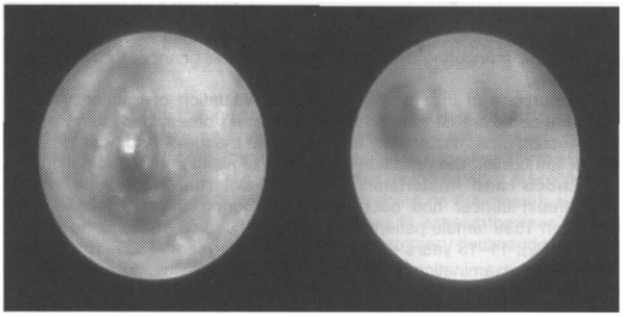

Fig. 3. Visualization of breast duct. Fig. 4. Breast duct bifurcation.

Conclusion: The procedure is safe and helpful as an additional ambulatory diagnostic tool to exclude obvious malignant causes for nipple discharge. Ductoscopy can delay or even avoid otherwise necessary operative breast tissue removal and is easily performed by an endoscopy-experienced physician. This instrument demonstrates the latest advances of technology and a trend towards a less invasive micro endoscopy of the breast ducts.

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Added value of [18F]-FDG-PET in staging breast cancer and detection of relapse

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Introduction: Staging of breast cancer consists is routinely performed by ultrasonography of the liver, chest X-ray and bone scanning. FDG-PET, an imaging modality utilizing the increased uptake of glucose by tumor cells, has proven to be a valuable tool in the staging and follow-up of a wide variety of malignancies. However, literature of the additional value of FDG-PET in breast cancer is limited.

The aim of the present study was to evaluate the role of FDG-PET in the staging of breast cancer and in the detection of loco-regional recurrence and distant metastases during follow-up.

Patients and methods: 45 patients were included in this prospective evaluation. Patients with either a suspected relapse of disease or with a primary breast cancer with a tumour positive top axillary lymph node were eligible for the study. All patients were subjected to conventional chest X-ray, ultrasonography of the abdomen, bone scintigraphy and if applicable X-ray mammography and/or ultrasonography of the breast. FDG-PET was performed in addition. In case of suspected abnormalities on FDG-PET,