

of up to 5 cm are suitable for SN detection, while larger tumors should not be examined. Involvement of skin and/or breastwall often leads to false negative results.

P55 Minimally invasive surgery in wire-guided breast biopsy: Role of specimen mammography in predicting margins

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Recent management of breast cancer has focused on minimally invasive surgery followed by adjuvant therapy. Specimen mammography (SM) is essential in confirming correct excision of mammographic lesions but may also support one-stage surgery by predicting margins of clearance. Immediate SMs were studied in 59 women having wire-guided excision in the incident round of a breast screening programme. After exclusion of 15 patients due to incomplete data 44 SMs were evaluated by a blinded observer to determine correct lesion excision and also margins of clearance compared with final histology. A representative biopsy was confirmed in 38 (86%) – the lesion was correctly re-excised in the other six. The results for margin clearance were:

Spec. Mamm.	Histology		Total
	Complete	Incomplete	
Complete	9 (43%)	12 (57%)	21
Incomplete	3 (13%)	20 (87%)	23
Total	12	32	44

In conclusion, S.M. not only confirms sampling of the correct lesion but predicts incomplete margins with a sensitivity of 63%, a specificity of 75% and a predictive value of 87% allowing immediate wider excision. Adjuvant therapy can therefore be planned with minimal surgical re-interventions.

P56 First experience with the advanced breast biopsy instrumentation. A new system for stereotactic excisions of suspicious non-palpable breast lesions

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Up to now non-palpable suspicious radio-opaque breast lesions had to be resected by open surgery following wire localisation. The advanced breast biopsy instrumentation (ABBI) allows radiological stereotactic guided localisation and resection of non-palpable lesions with high accuracy. Tissue cylinders of 5, 10, 15 or 20 mm in diameters can be excised under local anaesthesia and on an ambulatory basis. We have treated 20/21 patients with suspicious clusters of microcalcification (n = 19) and with undetermined round-lesions of the breast (n = 2). In one case (5%) the breast was too small to meet the safety margins of the system. In 2/20 cases (10%) the ABBI procedure was unprecise due to a light dislocation of the breast gland caused by the advancing oscillating knife cylinder. The procedure was well tolerated in all cases and no wound complications have occurred; cosmesis is excellent. Histopathologically 16 lesions were benign (80%) and 4 malignant (20%). Among the 18 microcalcifications there were 2 invasive carcinomas, 2 ductal carcinoma in situ (DCIS), 1 lobular hyperplasia, 8 mastopathies, 1 fibroadenoma, 1 duct papilloma and 3 dystrophic calcifications. The 2 round-lesions were a fibroadenoma and a mastopathy. The 2 patients with invasive cancer were surgically reexcised followed by ipsilateral endoscopic axillary lymph node dissection. The invasive breast cancers and the DCIS were treated by consecutive irradiation of the breast. Patients with benign histologies (n = 16; 80%) didn't need any further treatment.

With the ABBI system non palpable mammary lesions can be precisely localised and excised. Patients with limited DCIS which are resected with clear margins derive most benefits from this technique because only irradiation of the breast and no further surgery is needed.

P57 Risk factors of local recurrence in women with ductal carcinoma in situ (DCIS) according to the treatment

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The selection of therapeutic options for DCIS is a controversial issue. The Van Nuys prognostic index (VNPI) (Cancer 1996, 77, 2267) attempts to resolve this by quantifying known and important prognostic factors in DCIS making them the basis in the management of the treatment.

Purpose: In order to validate the VNPI, we conducted a retrospective study about 72 patients (pts) with DCIS treated in our institution between 1975 and 1995.

Population: All the slides were reviewed in double blind fashion: 59 pts were retained, 14 rejected [4 invasive (IDC), 1 microinvasive, 9 atypical ductal hyperplasia] – mean age: 53 years (32–76) – Post-menopausal: 60% – mammographic detection (64.4%).

Pathologic findings: mean size = 14.6 mm – Comedocarcinoma = 30.5%, necrosis = 74.5% – nuclear grade = low (44%), intermediate (25.5%), high (30.5%); VNPI based on size, margins and Van Nuys pathological classification (VNPC):

Score	1	2	3
Size (mm)	<15:53.5%	16–40:37.9%	>40:8.6%
Margins (mm)	>10:17%	1–9:64%	<1:19%
VNPC (nuclear grade and necrosis) → 58 pts	non high grade, without necrosis: 38%	non high grade, with necrosis: 32%	high grade with or without necrosis: 30%

3 groups (G) were identified: G1 = (VNPI 3–4) 17/58; G2 = (VNPI 5–6–7): 35/58; G3 = (VNPI 8–9): 6/58. **Treatments** (58 pts): lumpectomy (L): 5%; lumpectomy + irradiation (L + XRT): 62%; mastectomy (M): 33%; axillary dissection: 56% all negative nodes.

Results: median follow-up: 73 months – Local recurrence[®]: 8 all in (L + XRT) group.

	L (3 pts)	L + XRT (36 pts)	M (19 pts)	R (8 pts)
G1 (17 pts)	2	10	5	2 DCIS (7–10 years)
G2 (35 pts)	1	22	12	2 DCIS – 2 IDC (3–5 years)
G3 (6 pts)	0	4	2	1 DCIS – 1 IDC (1–2 years)

Conclusion: no significant relation was found between relapse and clinical presentation, size, histologic subtypes and necrosis. Nevertheless, we found a trend to earlier and more frequent local recurrences in high nuclear grades and VNPI 8–9 (G3). This series will be included in a large retrospective multicentric study (French Cancer Institute) in order to select patients needing mastectomy. Actually no randomized trial include a 'mastectomy' arm. Such retrospective studies together with prospective trials NSABP-17 – EORTC 10853) after a long term follow-up should help in validation of the VNPI and in the understanding of risk factors for local recurrence.

P58 Prospective risk adapted therapy of ductal in situ breast cancer

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Breast conserving therapy of ductal carcinoma in situ (DCIS) still remains under controversial discussion. 118 patients with 122 (4 bilateral) ductal carcinoma in situ have been treated in Women's Hospital Bayreuth and University Women's Hospital Erlangen between 1985 and 1996. Treatment was tailored individually according to histopathological criteria in a prospective study. In risk groups (RG) I (n = 27/22.1%) and II (n = 44/36.1%) with diseases of small to medium extent and wide free margins considered to be under low risk of local recurrence breast conserving therapy (BCT) was performed without further local treatment. In high risk cases (RG III, n = 47/38.5%) with larger volumes of DCIS, multifocal growth pattern or poor margins postoperative radiotherapy (RT) or secondary mastectomy was offered. In tumors with involved margins or multifocal and multicentric growth (RG IV, n = 4/3.3%) secondary mastectomy was recommended considering BCT as inadequate.

4 (3.3%) tumors of RG III and RG IV were treated by BCT alone neglecting the study design (2 of them developed recurrent invasive cancer). In 26 tumors of RG III and RG IV (21.3%) mastectomy was performed according to treatment plan.

After a median follow up of 68 (12–139) months in 92 (75.4%) tumors treated by BCT according to study design with or without RT 7 (7.6%) local recurrences were observed, 3 of them as invasive cancer. Median disease free survival was 28 (6–60) months. 1 patient deceased of recurrent cancer. Recurrence rate for low risk tumors treated by BCT alone was 7.9% (RG I: 0.0%/RG II: 9.1%) for high risk cases of RG III treated by BCT and RT 14.3%. Retrospective classification of these 92 tumors according to Van Nuys Prognostic Index (VNPI) showed 44.6% (n = 41) of low risk tumors with VNPI score 3–4, 46.7% (n = 43) tumors of moderate risk with VNPI score 5–7 and 8.7% (n = 8) of high risk with VNPI score 8–9. Local recurrence rate was 4.9% for low risk tumors treated by BCT alone, 6.7% for tumors of moderate risk treated by BCT alone, 7.7% for tumors of moderate risk treated by BCT and RT and 25.0% for high risk tumors treated by BCT and RT.

DCIS represents a very heterogeneous entity. Close collaboration of radiologist, surgeon and pathologist allows differentiation of therapy. Application of VNPI scoring system to this prospectively treated group of patients confirms and validates prognostic impact of VNPI concerning management of DCIS. Under strong selection keeping in mind the prognostic factors breast conserving therapy offers an important treatment option in these patients.