

P23

Axillary lymph node fine needle aspiration in breast cancer staging: diagnostic impact of a second 20G spinal needle

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Breast Cancer Research 2010, **12**(Suppl 3):P23 (doi: 10.1186/bcr2676)

Introduction All breast cancer patients in our centre undergo ipsilateral axillary ultrasound, followed by fine needle aspiration (FNA) where appropriate in line with NICE guidelines. We use two needle passes into a suspicious node, without suction. Improved preoperative detection of nodal metastasis allows patients improved triage to appropriate axillary surgery. We present our analysis of the impact of the second needle in our axillary FNA procedure.

Methods All breast cancer patients undergoing axillary FNA from April 2010 to July 2010 were included, where possible. The first FNA was labelled '1' and the second '2'. Individual and overall FNA results were compared with final surgical pathology, where available.

Results The study included 27 female patients. There was a difference in the cytology grading (described LN0 to LN5) allocated between the first and second needle in five cases (19%). The second needle increased sample adequacy on three (11%) occasions. Of the 17 patients that had axillary surgery, three had no lymph node metastases and the preoperative FNA cytology was LN2. There were no false positive cytology results. Preoperative cytology was LN5 overall in 11/14 (79%) patients with nodal metastases, with LN5 obtained only in the second pass in 4/14 (29%) cases (first-pass results: LN2/LN2/LN0/LN0). No complications were reported.

Conclusions A second needle pass into suspicious axillary lymph nodes in breast cancer patients has been validated by this study, increasing our preoperative rate of detection of lymph node metastases.

P24

Fine needle aspiration versus touch imprint cytology in ultrasound-guided core of breast masses

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Breast Cancer Research 2010, **12**(Suppl 3):P24 (doi: 10.1186/bcr2677)

Introduction The aim of this study was to compare the results of fine needle aspiration (FNAC, current practice) with imprint cytology (CIC) from ultrasound-guided cores taken in the one-stop clinic setting. CIC allows same-day results with one biopsy procedure. Literature suggests CIC provides a higher sensitivity/C5 rate, although there are few direct comparisons of CIC with FNAC.

Methods From October 2009 to April 2010, wherever possible, CIC was performed in patients undergoing both ultrasound-guided FNAC and core biopsy. CIC slides were independently reported blind to FNA results. Results were compared with core biopsy histology and therapeutic excision histology, when available.

Results The cases included 90 female patients with 93 masses (54 malignant, 39 benign masses based on final histology). In the malignant group the C5 rate was 61% (33/54) for FNAC, 83% (45/54) for CIC and 85% (46/54) for the combination of FNA and CIC. No cancers in this sample had an initially benign core result with malignant FNA or CIC result. In the benign group the C2 rate was 41% (16/39) for FNA, 69% (27/39) for CIC, and 64% (25/39) for the combination of FNA and CIC. There were no false positive C5 results. Imprints were easy to perform and there was no damage to the core biopsy material. Cytologists encountered no problems interpreting CIC.

Conclusions The use of CIC in ultrasound-guided core biopsies in place of conventional FNAC has been validated by this study. No significant obstacle to adopting core imprint cytology has been identified.

P25

Educational abstract

Educational abstract not submitted for online publication.

Breast Cancer Research 2010, **12**(Suppl 3):P25 (doi: 10.1186/bcr2678)

P26

Educational abstract

Educational abstract not submitted for online publication.

Breast Cancer Research 2010, **12**(Suppl 3):P26 (doi: 10.1186/bcr2679)

P27

Effect of the introduction of preoperative MRI scans for lobular cancer in an individual breast unit

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Breast Cancer Research 2010, **12**(Suppl 3):P27 (doi: 10.1186/bcr2680)

Introduction NICE guidelines suggest that patients with lobular breast cancer should be offered an MRI scan to measure the tumour size and to exclude multifocality and contralateral tumours. The aim of this study was to ascertain the effect of this guideline.

Methods This guideline was introduced in January 2009. Patients with lobular cancer were selected from before and after this date. Cases were reviewed and compared for type of surgery, positive resection margins and alteration in patient management. The number of additional targeted USS and biopsies was also recorded.

Results Sixty-nine patients were included in the study, of which 22 had preoperative MRI scans. There was no significant difference in mastectomy rates (MRI = 45.5% vs. no MRI 57.5%, $P = 0.44$) and no significant difference in positive margins following WLE (MRI 41% vs. no MRI 35%, $P = 0.23$). Of the 22 MRIs 11 additional findings were reported, six in the contralateral breast, leading to nine targeted USS and eight further core biopsies. Three of these core biopsies confirmed malignancy. Two MRI scans demonstrated multifocality and one diagnosed contralateral DCIS. Four patients' management was altered due to the MRI result, one of these was due to an increase in size. There was one case of multifocality that was invisible on all imaging.

Conclusions This study has shown that the guideline for preoperative MRI scanning in lobular cancer will alter the surgical management in approximately 20% of patients. An additional 20% of patients will undergo additional imaging and biopsies that do not alter management.

P28

Educational abstract

Educational abstract not submitted for online publication.

Breast Cancer Research 2010, **12**(Suppl 3):P28 (doi: 10.1186/bcr2681)

P29

An audit to assess the impact of introducing a protocol of bilateral whole breast and axillary ultrasound for assessment of screen-detected cancers

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Breast Cancer Research 2010, **12**(Suppl 3):P29 (doi: 10.1186/bcr2682)

Introduction: Our protocol for assessment of women with screen-detected malignancy was changed to include bilateral whole breast and axillary ultrasound (BBUS) following a prospective study that confirmed the benefit of this in 2002 [1]. This audit assesses the impact of introducing this change.

Methods Biopsy results for all women with screen-detected cancer diagnosed between April 2003 and March 2009 were reviewed to identify cases where multiple biopsies had been performed. The reason for additional biopsy and subsequent management were recorded. The data were compared with control data (2001) obtained prior to the introduction of the protocol, and with national outcome data for screen-detected cancer.

Results A total of 199,307 women were screened during the audit period, and 1,700 women were diagnosed with breast cancer. Table 1 demonstrates the findings for women diagnosed with cancer who had additional biopsies,