is a simple, minimally invasive, and reliable technique for the initial determination of axillary lymph node status in patients with breast cancer.

O-107 The role of axillary ultrasound (US) and fine needle aspiration cytology (FNAC) as pre-operative axillary staging procedure in patients with operable breast cancer

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Introduction: Sentinel Lymph Node Biopsy (SLNB) is the axillary staging procedure of choice in patients with operable breast cancer. However, patients with positive sentinel lymph nodes require further treatment by either axillary node clearance (ANC) or radiotherapy. The role of axillary ultrasound (US) and fine needle aspiration cytology (FNAC) in selecting patients for SLNB or ANC remains unclear.
Methods: A prospective cohort study was undertaken to assess the role of axillary US and FNAC in patients with operable breast cancer. Between October 2005 and September 2006, 100 patients with operable breast tumours and no clinically palpable axillary nodes were examined by axillary US. 24 patients with enlarged or 'malignant' nodes also underwent axillary FNAC.
Results: Overall, 44 patients had US and/or FNAC evidence of axillary nodal involvement. Only one patient with definite US evidence of nodal involvement had a negative ANC. The sensitivity and specificity of US and FNAC in determining nodal involvement were 64% and 70%; 77% and 100% respectively. In the absence of pre-operative US and FNAC, SLNB would have been inappropriate in 32% of patients. With the help of axillary US and FNAC, only 11% of SLNB procedures yielded positive nodes.
Conclusions: Axillary US and FNAC of suspicious nodes should be included in investigation of patients with operable breast cancer. It assists in the selection of the most appropriate axillary staging procedure and may reduce the rate of positive sentinel nodes.

O-108 Ultrasound scan monitoring of response to neoadjuvant chemotherapy in early breast cancer: good predictor for success of breast conservation surgery, but correlates poorly with final histology size

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Introduction: This study was conducted to assess accuracy of ultrasound scan (USS) in determining size of residual breast tumour during and after neoadjuvant chemotherapy (NC) and the likelihood of achieving breast conservation surgery (BCS).
Methods: In this retrospective study over 4 year period, 61 women with large operable breast cancers ($T_{2-4}N_{0-2}M_0$), unsuitable for BCS, were consecutively treated with NC (FEC + Taxotere) at Chase Farm Hospital. Response was monitored clinically and radiologically (USS) during the course of treatment and compared with final pathology.
Results: BCS was achieved in 48 (79%) patients. Reasons for failure of BCS were cancer progression in 2 patients, involved resection margins in 6, multi-focal disease in 3 and patient choice in 2. USS size, when compared to final histology size was accurate (within −3 to +3 mm) in only 19 (31%) patients. USS under-estimated the size in 32 (53%) patients. The under-estimation was 4–7 mm in 15 (25%) and 8–24 mm in 17 (28%) patients. USS over-estimated the tumour size by more than 3 mm (3–15 mm) in 10 (16%) patients. Clinical response (seen in 90% patients) was predictive of successful conservation in 84% whereas radiological response (80% patients) correlated with successful outcome in 90%.
Conclusion: Although USS does not correlate well with the final histopathological size of the breast tumour, it is a sensitive predictor of response to NC & the final outcome i.e. breast conservation. However, the fact that it underestimates the size should be borne in mind when planning breast conservation after NC.

O-109 Is early response a useful predictive factor in neoadjuvant chemotherapy

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Aim of study: To determine whether response after 2–3 cycles of neoadjuvant chemotherapy correlates with histopathological response obtained after completion of neoadjuvant chemotherapy. Contrast enhanced MRI was the imaging tool used in this study.
Methods: Women with histologically proven breast cancer with a tumour size $\geqslant$2 cms were considered for neoadjuvant chemotherapy. Using a prospectively maintained database we identified 77 women with 78 breast cancers who underwent neoadjuvant chemotherapy between 2002–2004. Prior to commencing chemotherapy all patients had gadolinium enhanced MRI of breasts. Tumour bulk, extent and activity were measured on MRI. Patients were started on a combination chemotherapy using FEC-75. After 2 cycles, MRI was repeated and response assessed. A response score between −1 (progression) and +4 (complete response) was given to each patient. Responders continued with the same chemotherapy. The minimal/non-responders continued on the same regimen or were switched to a taxane. All patients underwent lumpectomy or mastectomy with level-II axillary clearance after six cycles of chemotherapy. ER+ patients were commenced on appropriate endocrine therapy. They also received post-operative loco regional radiotherapy as per unit guidelines.
Results: Median age was 44.5 years. Median baseline tumour size was 5 cm. pCR was obtained in 13 patients. (16.5%) 12 of these patients scored 2 or 3 on 2nd MRI. Of the 51 patients who had a lower score on interim MRI, 1 achieved pCR when switched to alternative chemotherapy. In our study we found small tumour size and ER negativity predicted for pCR. Survival data will be presented.
Conclusions: Early response in neoadjuvant chemotherapy seems to be a predictor for complete pathological response. MRI reliably identifies early responders in neo adjuvant chemotherapy.

O-110 The challenges of using radiological 'tumour response' as an endpoint in Neo-tAnGo: a national neo-adjuvant chemotherapy breast cancer trial

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When designing a neo-adjuvant clinical trial with radiological 'tumour response' as an endpoint, specifications/recommendations are required in the trial protocol regarding the appropriate scanning techniques and format for reporting findings on the case record forms. The type of radiological scan and number of recorded dimensions of a tumour may vary, not only across hospitals but also within-hospitals across patients or assessment times. An additional issue is whether response on all existing or