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Incident cancer cases: what can we learn from the previous screening round?

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Methods A retrospective analysis of all incident cancers with their previous screening round mammograms diagnosed between April 2006 and March 2008 at the North London Breast Screening unit was performed.
Results Two hundred and forty cancers were reviewed. In 187 cases (77.9%) the previous round mammograms were normal (group A), in 53 cases (22.1%) an abnormality was detected (group B). Of these, five (9.4%) were classified as normal/benign, 40 (75.5%) were uncertain and eight (15.1%) were suspicious. There was no significant difference in the size of the lesions between the two groups; there was, however, a significant increase in size in the lesions in group B on the subsequent mammograms (P <0.0001). Of the lesions in group B, 25 (47%) of the cases had microcalcifications only on the previous mammograms; this is higher than previously published data of 27% and 17% [1,2] with all of these cases being subsequently diagnosed as either DCIS or IDC. Group A had less non-invasive (53, 29%) and grade 3 tumours (26, 20%) compared with group B (non-invasive = 18, 34%; grade 3 = 9, 29%) and more grade 1 tumours (51, 39% vs. 8, 26%) with a similar amount of grade 2 tumours between the groups (41% and 45%).
Conclusions In 22% of incident cancer cases an abnormality is present on the previous screening round mammogram, and the most frequently overlooked lesions are microcalcifications.
References

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Vacuum-assisted core biopsy of B3 lesions showing atypia on needle core biopsy: a worthwhile exercise?

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Introduction There has been increasing interest in the use of vacuum-assisted core biopsy (VACB) over the past two decades. There remains some uncertainty about its role in the presence of cytological or architectural atypia on needle core biopsy (NCB). We have recently been offering VACB for selected B3 cases with atypia. MDT discussion, where technical suitability and potential value of VACB is debated, is used to select appropriate cases.
Methods A retrospective case review of all B3 lesions diagnosed at NCB between 1 March 2008 and 1 March 2010.
Results A total of 166 B3 lesions were diagnosed: 123 underwent surgical biopsy, of which 30 were malignant (eight invasive, 22 non invasive), 10 had LCIS and 83 were benign. Forty-three B3 lesions underwent VACB: 18/43 lesions had shown atypia at NCB and following VACB, seven were upgraded to DCIS, three were downgraded to B2, six remained as B3 with atypia (5/6 had surgery – three malignant, two benign). VACB failed in two cases. Twenty-five out of 43 cases had shown no atypia at NCB. One out of 25 was upgraded to B4 on VACB, but no malignancy was seen at surgery. Twenty-four out of 25 cases were downgraded to B2.
Conclusions Our results show a potential benefit of this technique in selected cases. We were able to upgrade 39% of B3 lesions with atypia, thereby allowing immediate definitive surgery. We were able to avoid surgical excision in 3/18 (17%) of B3 lesions with atypia.

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Educational abstract

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Role of imaging in gynaecomastia: results of a Royal College of Radiologists Breast Group Annual Scientific Meeting 2009 survey

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Introduction Gynaecomastia is a benign enlargement of male breast tissue that has no proven excess risk of breast cancer. Clinical evaluation is required to exclude breast cancer, but the role of imaging in the male breast is unclear. Our aim was to determine practice in other units, review literature and formulate informed and realistic departmental guidelines.
Methods A questionnaire was created, and copies placed on delegates' seats. Descriptive statistics applied.
Results Of approximately 160 delegates, 90 questionnaires were returned from at least 58 different units. Delegates reported (estimated) greater than 864.75 years collective experience, each performing (on average) 4.3 male breast assessments per month. Sixty-five per cent (58/89) of delegates that responded reported routine imaging in clinically typical gynaecomastia, rising to 89% (79/89) in clinically typical unilateral gynaecomastia. However, 78% (68/87) of responding delegates agreed with the statement 'Imaging is not necessary in cases of clinically typical gynaecomastia'. Three delegates reported experiencing a case of ultrasonically typical gynaecomastia that subsequently proved to be breast cancer. Imaging protocol and biopsy practice varied greatly between units. Delegates volunteered concerns that the NHS breast service is inequitable between males and females, and that guidelines were needed to rationalise imaging.
Conclusions Based upon questionnaire findings and literature review, guidelines have been now been drawn up in our unit**.** There is great variation evident in UK gynaecomastia imaging practice. National discussion and agreement on evidence-based guidelines could help rationalize use of precious NHS resources and reduce imaging of this benign condition.

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Malignant microcalcification: prediction of excision margins by separating calcified and noncalcified core biopsies

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Introduction Suspicious microcalcification is investigated by vacuum-assisted core biopsy. Many patients, in whom malignancy is diagnosed, go on to have breast-conserving surgery where positive resection margins require re-operation. The aim of this study was to determine whether there is an increased risk of positive margins when malignancy is identified in cores without microcalcification.
Methods In this institute, core biopsy samples are separated into those containing calcification and those not. Sixty-eight consecutive patients undergoing breast-conserving surgery were selected. From the histology report, the presence of malignancy in each group of cores was recorded. The adequacy of margins following the local excision and the need for re-operation was then analysed.
Results Sixty-eight patients were included in the study. The mean age at diagnosis was 56.7 (range 40 to 77). All 68 patients had malignancy in the cores containing calcification. Twenty-three (34%) patients had malignancy in these cores alone and nine (39%) of these patients required further surgery. Forty-five patients had malignancy in both of the sets of cores, 24 (53%) required further surgery for inadequate margins. Although there is a difference between the re-operation rate, this is not statistically significant (P = 0.3124, Fisher's exact test).
Conclusions Malignancy is commonly diagnosed in cores that do not contain microcalcification. Although there appears to be a higher rate of inadequate margins in this group (53% vs. 39%), in this study the difference was not statistically significant. Following the findings of this initial study, we are now increasing the sample size of the group.