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Abstract Book

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Invasive Lobular Carcinoma of the Male Breast: A Rare Case Based Review

Dr Javaria Aleem[1]
[1]Isle of White NHS Trust, St Mary's Hospital, United Kingdom

Invasive lobular carcinoma (ILC) of the male breast is an exceptionally rare malignancy, representing approximately 1%–2% of all male breast cancer cases. Its rarity is attributed to the limited development of lobular structures in males, which typically require oestrogen stimulation. Consequently, current understanding is largely derived from case reports and extrapolation from female breast cancer data.

We report the case of a 49 years old male who presented with a palpable nodular lump behind the left nipple–areola complex. Triple assessment was performed. Mammography demonstrated a 22 mm irregular mass, while ultrasound revealed a 25 mm hypoechoic lesion with irregular margins. No pathological left axillary lymphadenopathy was identified. Ultrasound guided core biopsy confirmed invasive pleomorphic lobular carcinoma, grade 2, which was oestrogen receptor (ER) and progesterone receptor (PR) positive, and HER2 negative.

The pathogenesis of male ILC is often linked to increased oestrogen exposure, including obesity, liver disease, Klinefelter syndrome, and exogenous hormone therapy, although cases may occur without identifiable risk factors. Diagnosis relies on imaging and histopathological confirmation, with loss of E-cadherin expression as a key feature.

Management typically follows female breast cancer protocols, with mastectomy and adjuvant endocrine therapy forming the cornerstone of treatment. Although outcomes may be favourable, prognosis is often poorer than in females due to delayed diagnosis and advanced disease at presentation. Increased awareness and further research are essential to improve outcomes in this rare condition.

From Paper to Digital: Improving Patient Information and Reducing Waste in Breast Imaging

MD Virginia Botto[1], FRCR Matthew Wallis, Sophia Lane, Nicola Jones, MD Elisabetta Giannotti
[1]Cambridge University, Cambridge, United Kingdom, [2]University of Turin, Turin, Italy

Background: Patient information leaflets are essential for patient-centred care in breast imaging. However, paper-based distribution is often ineffective, with many leaflets misplaced or discarded, contributing to unnecessary costs and environmental burden. Aligning clinical practice with sustainability principles is increasingly important within NHS Net Zero targets.

Aim: To evaluate the feasibility and early adoption of digital patient information delivery in a breast imaging unit, with estimation of potential environmental and patient benefits.

Methods: This is an ongoing quality improvement project within an NHS breast-imaging unit. Key steps include: (a) development of a centralised digital library; (b) stakeholder engagement; (c) creation of QR code access pathways; (d) integration into the patient portal (EPIC) supported by standardised smart phrase and (e) pilot implementation in clinical practice. Baseline quantitative data (n=20 patients) and qualitative staff feedback were collected.

Results: Baseline analysis demonstrated a 65% leaflet utilisation rate. Of these, 46% related to benign conditions not requiring active follow-up, highlighting the value of durable digital access. At 59 g per leaflet (≈88.5 g CO_2 each), this corresponds to ~1.15 kg CO_2 per 20 patients. Early implementation has shown good staff engagement and feasibility of workflow integration. The project is ongoing, and further evaluation will assess integration, uptake, and utilisation of digital leaflets as availability expands.

Conclusion: A digital-first approach to patient information is feasible and scalable, with potential to improve access while reducing environmental impact. This pilot study could be expanded across breast units, with significant potential for cost savings and patients and environmental benefit.

Binning the Footprint: The Environmental Impact of Waste Diversion in Breast Radiology Procedures.

Dr Xi Liang Ling[1], **Dr Virginia Botto**[1], Dr Elisabetta Giannotti[1]
[1]Cambridge Breast Unit, Cambridge University Hospitals NHS Foundation Trust , Cambridge, United Kingdom

Introduction: Healthcare waste disposal methods may vary up to 50-fold in their carbon footprint [1]. In alignment with the National Health Service (NHS) net-zero goals [2], this study aims to quantify the carbon footprint reduction from actively diverting ultrasound-guided breast intervention waste to dry mixed recycling.

Methods: Recycling bins were introduced in all three ultrasound rooms at the Cambridge Breast Unit (CBU) to divert recyclable waste from clinical waste streams. Waste was collected and weighed over five days in April 2026. The daily number of biopsies performed on these days and annual volumes were identified to establish a per-procedure waste average and estimated annual waste diversion. Standardised carbon emission factors were applied to compare the impact of offensive and clinical waste disposal versus recycling.

Results: Daily recyclable waste averaged 765 g. With an average of 10.5 interventions per day, this equated to 72.9 g per procedure. Based on an average of 2,600 annual interventions, an estimated 190 kg of waste would be diverted to recycling yearly. The carbon footprint for recycling is 21 kgCO2e/t compared to 229 kgCO2e/t for both offensive and clinical waste, resulting in an annual reduction of approximately 40 kgCO2e.

Discussion: This intervention is a simple, low-cost step with immediate impact. Most waste generated before procedures, including packaging, can be safely recycled. The annual saving equates to driving 145 miles in an average UK car or the sequestration of two mature trees [3,4], while also providing financial savings, representing a scalable approach across services.

Mammographic biomarkers of cardiovascular risk in women: a narrative review of recent evidence

Dr Davide Capra[1], Dr. Zhongying Deng[1], Dr. Nicholas Payne[1], Prof. Mark Dewey[1], Prof. Fiona Gilbert[1], Prof. Iris Allajbeu[1]
[1]Department of Radiology, Addenbrookes Hospital, Cambridge University Hospitals NHS Foundation Trust, Cambridge, UK

Introduction: Cardiovascular disease (CVD) is leading cause of mortality in women but is often underestimated. Mammography provides an opportunity for opportunistic cardiovascular risk assessment through imaging biomarkers such as breast arterial calcifications (BAC) and breast density (BD).

Method: Narrative synthesis of recent meta-analyses and cohort studies on BAC, BD and cardiovascular outcomes.

Results: In a meta-analysis including 68,584 women, BAC were significantly associated with prior CVD (OR 2.71, 95%CI 2.13–3.45, p<0.0001), diabetes (OR 1.97, 95% CI 1.71–2.27, p<0.0001) and hypertension (OR 1.82, 95%CI 1.52–2.18, p<0.0001). BAC were associated with incident stroke (RR 2.05, 95%CI 1.58–2.65, p<0.0001), heart failure (RR 2.14, 95%CI 1.38–3.32, p=0.001), cardiovascular mortality (RR 2.94, 95% CI 1.32–6.54, p=0.008), and all-cause mortality (RR 2.04, 95% CI 1.08–3.84, p=0.027)[1].
Lower BD was consistently associated with higher cardiovascular risk. In a cohort of 4,268,579 women, lowest BD class showed higher CVD risk (HR 1.29, 95% CI 1.26–1.32), and adding BD to the Framingham score improved risk stratification (NRI +7.15%, 95% CI 6.85–7.69, p<0.0001)[2]. In a prospective cohort of 16,763 women, low BD predicted major adverse cardiac events (HR 3.48, 95% CI 1.48–8.26)[3]. In a retrospective study on 153 women, low BD was associated with coronary artery disease (OR 3.21, 95%CI 1.58–6.53, p=0.001) and with higher volume of epicardial adipose tissue (106.6±43.0 ml vs 81.0±31.6 ml for higher BD, p<0.001)[4].

Discussion: BAC and BD are independent cardiovascular risk markers, supporting their use for opportunistic, cost-effective cardiovascular risk stratification in women.

Co-designing personalised mammography learning plans with a custom GPT

Dr Ziba Gandomkar[1], Dr Muath Ibrahim[1], **Mr Craig Cetinich[2]**, Professor Mary Rickard[3], Ms Tonia Nuttall[2], Professor Patrick Brennan[1]
[1]University of Sydney, Camperdown, Australia, [2]DetectedX, Camperdown, Australia, [3]Sydney Breast Clinic, Sydney, Australia

Introduction: Ongoing education in mammography is often limited by time pressures, uneven exposure to relevant cases, and uncertainty about which learning activities are most appropriate for an individual's needs. To address this, we piloted an AI-enabled curriculum planning tool built as a custom GPT that creates personalised, time-limited learning plans linked to case-based mammography modules.

Method: At a hands-on workshop during the European Congress of Radiology, participants used the tool to generate an individual learning plan tailored to their goals and restricted to fewer than four weeks. They then began the first recommended module during the session. The available modules covered structured mammographic interpretation, AI-assisted reading, lesion description using BI-RADS principles, recognition of benign and malignant patterns, and feedback-based review. After the activity, participants completed an anonymous survey evaluating plan quality, usability, usefulness, likelihood of reuse, and willingness to recommend the tool. Confidence in building an effective mammography learning plan was assessed before and after the session.

Results: Thirteen participants completed the evaluation. Responses showed strong acceptability, with most participants reporting that the plans aligned well with their goals, fit their available time, and preserved learner choice. Ratings for usability, usefulness, and intention to reuse were also positive. Confidence in creating a mammography learning plan increased markedly after the activity.

Discussion: This pilot suggests that AI-supported curriculum co-design is feasible, helpful, and confidence-building in mammography education. Future work should examine whether this approach improves engagement and performance, and whether delivery within a dedicated platform is preferable to a conversational interface.

A radiological service evaluation of the breast cancer pathway at a tertiary referral centre

Dr Keegan Curlewis[1], Phawan Hurhangee[1], Victoria Stewart[1], Tran Seaton[1]
[1]Imperial College Healthcare NHS Trust, London,

Introduction: The Timed Breast Cancer Diagnostic Pathway [1] establishes key performance standards, including the expectation that 85% of patients should commence treatment within 62 days of referral.
This service evaluation was conducted at Imperial College Healthcare NHS Trust to assess compliance with the pathway standards, evaluate changes in workload, and identify factors contributing to failure in meeting the standards.

Method: A retrospective collection of all cancer patients referred via the pathway in 2015 and 2024 was performed. Data was collected from the radiology information system and electronic patient records.

Results: There was a 15% increase in the number of patients on the pathway between 2024 and 2015. The percentage of patients who met the 62-day standard dropped from 92% to 66%. The number of MRI's performed tripled, and the percentage of additional procedures performed (mainly repeat biopsies) increased by 81%.
Patients who underwent MRI guided biopsies and stereotactic biopsies were statistically more likely ($p<0.05$) to breach in both years.
The most common reason given for breaching changed from patient factors (including patient choice) to complex diagnostic pathways (multiple imaging procedures).

Discussion: We demonstrate a decrease in the percentage of patients meetings the 62-day standard between 2015 and 2024 at our centre due to the increase in the number and complexity of patients referred.
This has resulted in a significant increase in secondary imaging and biopsies to accurately determine disease extent, which has lengthened pathway times. Future work will explore surgical and pathology factors and identify measures to improve compliance.

Our experience of SCOUT® radar localisations: a retrospective audit.

Dr Rosanna Frost[1], Dr Jie Fei Lau[1], Dr Hend Abdelmageed[1], Dr Diana Dalgiesh[1], Mrs Francesca Moakes[1]
[1]Royal United Hospitals Bath, Bath, United Kingdom

Background: There has been an exponential rise in the number of cancers diagnosed in our unit each year. For the impalpable masses we are transitioning away from wire localisations which have inherent limitations, well described in the literature (1,2). We introduced SCOUT in June 2022, this is an audit of our unit's experience.

Method: Retrospective audit of consecutive patients who underwent a SCOUT guided wide local excision between June 2022 and October 2025. The data collected included placement accuracy and modality used, histology, placement prior to neoadjuvant treatment, surgical outcomes (re excision rate) and reliability.

Results: 185 SCOUT localisations were performed. 99.4% were placed within 10mm of the target, (range 0-32mm). 92% were placed under US guidance. Failure to detect an audible signal following deployment was recorded in two patients. One became audible following two cycles of chemotherapy, one required wire guided localisation on the day of surgery. 182 SCOUT reflectors were excised. 18/182 required re excision of margins (9.8%). 2/182 lost signal intraoperatively requiring an image intensifier to localise the SCOUT.

Conclusion: SCOUT is a precise method of localising non palpable breast lesions. This contributes to good surgical outcomes with our re excision rate lying below national average (3). The introduction of non-wire guided localisation has led to improved patient flow particularly beneficial for patients undergoing neoadjuvant treatment. In our experience we had a device failure rate of 2%, with lesion hardness and haematoma felt to have contributed to post deployment signal failure.

Male Breast Imaging Practice at North Middlesex University Hospital

Dr Celion Tang[1], Dr Thomas Conner[1], **Dr Madiha Hussain**[1]
[1]North Middlesex University Hospital, London, United Kingdom

Introduction: Male breast presentations are usually benign, with gynaecomastia being the most common male breast condition (1). Gynaecomastia refers to benign enlargement of male breast glandular tissue due to hormonal imbalance. In contrast, male breast cancer is rare but clinically significant, representing ~0.6% of all breast cancers. National guidance from the Royal College of Radiologists (RCR) and the Association of Breast Surgery (ABS) outlines appropriate investigation pathways (2,3). We aimed to assess adherence to these guidelines and evaluate radiological correlation with clinical grading.

Method: A retrospective audit on adult male patients (≥18 years) who had breast imaging via one-stop breast clinic at North Middlesex Hospital, London, between January and December 2025, was performed. Imaging findings, clinical (P classification), and radiological grading (U classification) were obtained. Correlation between clinical and imaging findings, as well as biopsy rates and histological outcomes, was analysed.

Results: 84 patients underwent imaging, with 104 ultrasounds performed. Most lesions were P1/P2 (71%, n=74/104), in which they strongly correlated with benign U1/U2 (98%, n=73/74). Out of all cases, three U3 were identified, two of which demonstrated significant pathology (granular cell tumour and squamous cell carcinoma). Outcome of remaining U3 lesion was unknown as patient declined further investigation. Clinical/P grading was undocumented in 23% cases, limiting clinic–radiology correlation.

Discussion: There was strong correlation between benign clinical and imaging findings, supporting current guidance to limit imaging in clearly clinically benign cases, including gynecomastia. U3 lesions, although rare, were associated with clinically significant pathology, reinforcing the need for biopsy.

The Hidden Footprint of Breast Imaging Modalities: Comparing the Data Storage Burden of Breast Imaging Modalities

Dr Xi Liang Ling[1], Dr Osman Janjua[1], **Dr Elisabetta Giannotti**[1]
[1]Cambridge Breast Unit, Cambridge University Hospitals NHS Foundation Trust, Cambridge, United Kingdom

Introduction: The environmental impact of radiology extends beyond direct energy consumption to encompass the digital infrastructure required for image archiving and data storage [1]. While breast imaging modalities generate varying volumes of digital data, their relative storage footprints remain poorly quantified. This study aims to estimate and compare the data storage burden per examination across common breast imaging techniques.

Methods: All breast imaging examinations performed in 2025 at a single tertiary breast unit were retrospectively analysed. The modalities evaluated included digital mammography, digital breast tomosynthesis (DBT), ultrasound (US), magnetic resonance imaging (MRI), and contrast-enhanced mammography (CEM). For each modality, total annual data storage (GB) and the number of examinations were extracted from institutional PACS systems. The mean data size per examination was calculated by dividing total storage by the number of studies.

Results: A total of 42,944 examinations were analysed. MRI generated the largest data volume, averaging 531.1 MB per examination. This was followed by DBT (339.1 MB/examination) and CEM (95.9 MB/examination). In contrast, standard mammography (33.5 MB/examination) and US (3.9 MB/examination) produced substantially smaller data footprint.

Discussion: Breast imaging modalities exhibit significant variance in their data storage requirements, with advanced techniques such as MRI contributing disproportionately to digital infrastructure demands. Quantifying the data footprint per examination provides an additional metric for assessing the environmental impact of imaging pathways. These findings advocate the integration of digital sustainability considerations into modality selection and workflow.

Breast cancers diagnosed following a consensus read, a locally developed learning tool

Dr Ivelina Milanova[1], Dr Sheena McLaggan[1]
[1]Bedfordshire and Hertfordshire Breast Screening Service, Luton, United Kingdom

Introduction: Beds/Herts Breast Screening provides services across a large area in the East of England. All screening mammograms are double read. If there is agreement, women are either discharged to routine screening or recalled for assessment.
If there is a difference in opinion, a consensus read is performed.
The goal is to learn from cases where one qualified reader didn't recall a mammogram with subtle changes that were subsequently confirmed as cancer during the screening episode. We developed a learning tool that is used by all readers in the unit.

Methods: This is a retrospective review of all consensus cancers diagnosed between 2023 and 2024.
Information was obtained from NBSS and the local PACS.
A PowerPoint presentation with a separate slide for each case was prepared.
Each slide includes reason for recall, additional imaging findings, histology, diagram indicating the location of the abnormality on the mammogram and key learning points with references.
The corresponding images are stored in a separate folder on PACS.
Readers work through the presentation independently reviewing the images first and then comparing their findings with the provided information.

Results: This is a locally developed learning tool by a trainee and a radiologist. It was distributed to all readers who complete it as part of CPD.
Readers progress through the material at their own pace, reflecting not only on their own consensus cases but on all cases with subtle mammographic changes and confirmed cancer within the study period.

Discussion: The tool received excellent feedback from all readers

Radial scars – A retrospective audit of the rate of upgrade following 7G vacuum excision of radial scars diagnosed on core biopsy through the National Breast Screening Programme

Dr Ivelina Milanova, Dr Asha Nair, Dr Natalia Zakharova
[1]Bedfordshire and Hertfordshire Breast Screening Service, Luton, United Kingdom

Introduction: Radial scars (RS) are benign lesions of the breast. They are usually incidental findings. RS are classified as high-risk lesions, B3, and usually proceed to 7G vacuum excision. The rate of malignant upgrade after excision is up to 45%, with lower rates if no atypia is seen on the core biopsy.

Method: Retrospective audit of the malignant upgrade rate of all radial scars diagnosed on core biopsy through the National Breast Screening in the Beds and Herts Breast Screening Unit from April 2021 to April 2025.

Data was obtained from NBSS.
The audit reviewed: reason for recall, lesion features as described by the assessor in clinic following additional imaging, imaging guidance for biopsy, histology findings and the corresponding imaging opinion, rate of upgrade following excision after initial diagnosis of a RS on core biopsy.

Results: 27 NHS Breast Screening Patients had a RS, with or without atypia, reported on histology following a stereotactic or ultrasound guided core biopsy. 3 further RS were reported following 7G vacuum excision for other pathology
No DCIS or Invasive carcinoma was reported on histology following excision in our review.
15 % of the RS with no atypia on core biopsy showed atypia on excision.

Discussion: We demonstrated excellent accuracy in sampling with 100% presence of the RS on vacuum excision and no malignancy in the excision specimen Bi-RADS 6, new edition USA, suggests that RS will be classified histologically as benign, B2. Advice on how these will be managed in future is awaited.

Audit of the incidents of breast cancers in women over the age of 70 who are no longer called for breast screening.

Zeharit Morrison[1], Dr Natalia Zakharova[1]
[1]The Beds & Herts Breast Screening Centre, Luton, United Kingdom

Background: In the UK, women aged over 70 years are no longer routinely invited for breast screening, although self-referral remains available every three years.

Aim: To compare tumour characteristics and outcomes in women over 70 diagnosed via self-referral breast screening versus symptomatic presentation, including differences between previously screened and never screened symptomatic women.

Materials and Methods: A retrospective audit was performed of women over 70 diagnosed with breast cancer between 2019 and 2024. Patients were grouped as screening-detected or symptomatic. Symptomatic cases were subdivided into previously screened and never screened. Data included tumour type, grade, size, lymph node status, ER/PR status, and treatment option. Population denominator data were unavailable.

Results: Fifty-one screening-detected cancers and seventy-seven symptomatic cancers were included. Screening-detected tumours were smaller (mean 20 mm versus 32 mm), more often node-negative (69% versus approximately 60%), and had fewer high-grade lesions (G3 21% versus 30%). DCIS components were more frequent in the screening cohort (39% versus 32%), and breast-conserving surgery was more common (49% versus 34%). Among symptomatic patients, those previously screened had smaller tumours, predominantly intermediate-grade disease, and higher rates of surgery. Never screened women presented with larger tumours, higher-grade disease, increased nodal involvement, and greater need for mastectomy or non-surgical management.

Conclusion: Self-referral breast screening in women over 70 is associated with earlier detection, more favourable tumour biology, and higher eligibility for breast-conserving surgery. Previously screened symptomatic women demonstrate intermediate outcomes compared with never screened, supporting continued promotion of self-referral screening and targeted outreach to non-attending older women.

Exploring the utility of Shear Wave Elastography in Symptomatic breast clinics: Can we develop an elasticity ratio to help us utilise this modality for assessment of benign and malignant lesions?

Dr Hira Naqvi[1], Dr Judy Davis[1], Dr Soek Mui[1], Dr Aisha Khan[1], Dr Edward Goble[1], Dr Sandeela Sattar[1]
[1]City And Sandwell Hospitals Birmingham, Solihull, United Kingdom

Introduction: To analyse the elasticity ratio (ER) of any biopsied symptomatic breast lesion above 10mm using Shear Wave Elastography (SWE).

Background: SWE is a non-invasive imaging modality which gives a quantitive value to tissue stiffness. Accurate breast lesion characterisation remains critical to avoid unnecessary biopsies. This study investigates the utility of SWE to develop guidelines on ER differentiating benign from malignant lesions.

Method: We conducted a prospective study of symptomatic patients who underwent biopsy of lesions >10mm. SWE was performed as part of their diagnostic work up.
Measurements in kPa were obtained and we calculated ER from the lesion and normal parenchyma. Final histological diagnosis served as a reference. Currently we have analysed 30 cases.

Results: Preliminary analysis indicates both Samsung and GE machines show benign lesion ER at a range of 0.9 to 1.2 (B2 histology). Mean ratio for histologically benign lesions is 1.0 in the Samsung machine and 0.7 in the GE machine.
Malignant lesions have shown an ER range of 4.1- 1.3(B5b lesions). Mean ER of malignant lesions was observed to be 2.4 in the Samsung machine and 2.0 in the GE machine.
Malignant lesions consistently demonstrated higher stiffness values and higher lesion-to-background ratios.

Conclusion: Our results demonstrate a cutoff elasticity ratio of <1 is reassuring and a ratio > 2 is suggestive of a malignant lesion.
This shows SWE has added value in conjunction with 2D ultrasound features to build on use of SWE to assess breast lesions.
Further validation in larger cohorts is needed.

A qualitative interview study exploring experts' perspectives on the future of evaluation for breast screening AI tools

Ms Soumya Arun[1], Dr Adam Brentnall[1], Dr Oleg Blyuss[1], Prof Rhian Gabe[1], **Dr Judith Offman**[1]
[1]Queen Mary University of London, London, United Kingdom

Introduction: Artificial intelligence (AI) may help to tackle challenges associated with breast screening such as a shortage of radiologists (Corines et al. 2026). Study designs used to evaluate breast screening AI tools include retrospective and prospective observational studies, and randomized controlled trials (RCTs) (Corines et al. 2026; Lång et al. 2023). Each of these has its advantages and disadvantages (Kim 2024). This study explored experts' perspectives on the future of evaluation for breast screening AI tools, focusing on AI as a second reader.

Methods: Semi-structured expert interviews were conducted with 13 healthcare professionals, researchers, policy makers and governance experts from nine countries, including the UK, the US, and Denmark. Framework analysis was used to identify themes.

Results: Interviews indicated a need for change in approaches used for AI evaluation. Participants considered study outcomes, regulatory frameworks and robustness of evaluation, but particularly emphasised the need for faster evidence generation. Suggestions provided to facilitate faster evidence generation ranged from alternative study designs, such as traditional observational studies, target trial emulation and use of surrogate endpoints in RCTs, to bridging evaluation and implementation through earlier piloting, in-service evaluation and ongoing performance monitoring. Other suggestions included modelling and increased international collaboration.

Discussion: Given the rapid pace of AI developments, lengthy RCTs may be impractical for AI evaluation (Mani and Björck 2019). This study provides expert insights into alternative evaluation approaches which could potentially facilitate more timely evidence generation and clinical translation of AI tools for breast screening.

Initial experience of Contrast Enhanced Mammography at University Hospitals Plymouth NHS Trust: Does sensitivity for cancer detection match the literature?

Dr Olubukola Omidiji[1], Dr Wesam Rjoop[1], **Dr Karen Paisley**[1]
[1]University Hospitals Plymouth NHS Trust, Plymouth, United Kingdom

Introduction: Contrast-enhanced-mammography (CEM) exhibits better cancer detection than conventional mammography (reported sensitivities 91-100% (96% in meta-analysis, GE/Hologic)1. Literature suggests comparable accuracy to MRI for T-staging and multifocality2. CEM is becoming established in clinical practice and included in RCR and NHSBSP guidelines3,4. CEM was introduced at University Hospitals Plymouth in 2022. All patients undergoing MRI for local staging of breast cancer also underwent CEM. We report our experience, focusing on sensitivity for cancer detection, and compare findings with published literature.

Method: A retrospective review of initial 100 patients undergoing CEM (2022-2025) was undertaken. CEM performed after 1.5ml/kg intravenous contrast (300mgI/ml) using Mammomat-Revelation (Siemens (Munich-Germany)), software-VC20, during stand-alone CEM lists. All imaging and histology reviewed. 7 patients excluded (no CEM images (2), no cancer in breast (2), no MRI (2), post-op (1)).

Results: 131 malignant lesions detected in 93 patients (unifocal in 60): invasive lobular carcinoma (ILC) n=60, invasive ductal carcinoma (IDC) n=55, DCIS n=8 and other n=8. Overall sensitivity was significantly less for CEM than MRI (89.3% vs 98.4%, p=0.001). Of 14 lesions not visualised at CEM, 5 were DCIS (sensitivity 37.5%), 4 were off-back of mammograms, 2 were ILC (sensitivity 88.3%), 2 removed at biopsy, and 1 G2-IDC (sensitivity IDC-G1(88.9%), G2(94.1%), G3(100%)). Of 117 lesions detected on CEM, 42 (35.9%) were of low-or-low/moderate conspicuity. No contrast reactions.

Discussion: CEM was feasible and safe but showed lower sensitivity for cancer detection than MRI and compared to published literature. Reduced conspicuity of DCIS, patient positioning or vendor-specific factors may explain these differences.

Effect of contrast-enhanced mammography on same-visit breast ultrasound utilisation: a propensity-weighted observational study

Dr Ziba Gandomkar[1], Dr Muath Ibrahim[1], **Professor Mary Rickard**[2], Professor Patrick Brennan[1]
[1]University Of Sydney, Camperdown, Australia, [2]Sydney Breast Clinic, Syndey, Australia

Introduction: Breast ultrasound (US) is often performed after mammography to clarify equivocal findings, but this increases cost and patient burden. Contrast-enhanced mammography (CEM) may reduce the need for same-visit US by providing additional functional information during the diagnostic assessment.

Method: We conducted a retrospective observational cohort study at a private breast clinic, including the first diagnostic episode per patient from September 2022 to September 2025. Stabilised inverse probability weighting based on a propensity score model with 14 covariates was used to adjust for baseline differences. Outcomes were analysed using weighted logistic regression with bootstrap confidence intervals.

Results: The analytic cohort included 4,849 patients (1,740 CEM; 3,109 non-CEM). After weighting, all 13 covariates were well balanced, with standardised mean differences below 0.10. CEM was associated with substantially lower same-visit US ordering (adjusted OR 0.115, 95% CI 0.097–0.131), corresponding to an absolute risk difference of −44.0 percentage points, or 472 to 413 fewer US examinations per 1,000 patients. This reduction was driven almost entirely by lower bilateral US use (absolute risk difference −60.7 percentage points, 95% CI −63.3 to −58.1). CEM was also

associated with higher cancer detection (OR 1.74, 95% CI 1.27–2.21), and higher biopsy positive predictive value (OR 2.02, 95%CI 1.47–2.79).

Discussion: In routine breast clinic practice, CEM markedly reduces bilateral US ordering while improving cancer detection and biopsy yield. These findings support CEM as a clinically efficient diagnostic tool, particularly in groups where bilateral US is otherwise commonly performed, such as women with dense breasts or elevated family risk.

Audit of Ultrasound-Guided B1 Breast Biopsies: Radiopathological Concordance and Avoidable Repeat Sampling

Dr Karolina Wieczorek[1], Dr Elisabetta Giannotti[1]
[1]Cambridge University Hospital, Cambridge, United Kingdom

Background: Ultrasound-guided breast biopsy is an important in the diagnostic pathway for breast lesions. A B1 core biopsy result can be diagnostic if concordant with imaging; however, it carries a risk of false negative outcomes.

Methods: A retrospective audit was conducted at a tertiary centre using EPIC/PACS records in patients with initial B1 result following ultrasound-guided biopsy between January and December 2025. B1 results from vacuum-assisted, MRI-guided biopsy, and surgical excision were excluded. The audit evaluated not only B5 upgrades, but also B2/B3 outcomes considered radiopathologically discordant, and assessed how many repeat biopsies might have been avoided if B1 results had been prospectively accepted as concordant.

Results: A total of 190 B1 biopsies were identified, with 114 eligible patients (F=113, M=1). 82 patients had a single biopsy and 32 repeats. Following B1 result, 13 cases remained B1 (40.6%) and the following changed: 15 to B2 (46.9%), 2 to B3 (6.3%), and 2 to B5 (6.3%, 1.7% of the total cohort). When radiopathological discordance was considered 59.4% of cases required further assessment. No true negative cases included an "Accept B1" statement in the initial ultrasound report, and repeat biopsies were performed in all non-concordant instances.

Discussion: This audit highlights the importance of radiopathological correlation in the assessment of B1 biopsy results. While the false negative rate for malignancy remains low (1.7% overall), a substantial proportion of repeat biopsies ultimately confirmed true negative outcomes. Improved prospective documentation, including explicit "Accept B1" statements in concordant cases, can reduce unnecessary repeat procedures.

Accuracy comparison of DBT-guided and traditional stereotactic-guided core biopsy of the breast microcalcifcations.

Rosalynne Bontuyan[1], **Dr Natalia Zakharova**[1]
[1]The Beds & Herts Breast Screening Centre, Luton, United Kingdom

Background: Mammographic microcalcifications graded R3 or higher require image-guided biopsy to exclude malignancy. Conventional two-dimensional (2D) stereotactic core biopsy has long been established as the standard technique for sampling such clusters. More recently, tomosynthesis-guided three-dimensional (3D) biopsy has been increasingly adopted due to its improved localisation and targeting capability. This audit evaluates and compares the diagnostic performance and sampling adequacy of 2D stereotactic biopsy and 3D biopsy for microcalcifications.

Aim: To compare the diagnostic outcomes of stereotactic 2D and 3D biopsy for microcalcifications, assess sampling adequacy, and evaluate histological outcomes.

Materials and Methods: A retrospective audit was conducted at the Hertfordshire&Bedfordshire Breast Screening Centre, reviewing consecutive stereotactic biopsies performed for microcalcifications in April-July 2025. Data collected included biopsy technique, number of cores obtained, presence of calcifications within specimens, histology. 248 biopsies were analysed, 139 procedures performed using 2D stereotactic guidance (56%) and 109 using 3D guidance (44%).

Results: Both techniques demonstrated excellent calcification retrieval. Sampling success was 99.3% for 2D biopsies (136/137 cases) and 93.5% for 3D biopsies (101/108 cases). The mean number of cores obtained was slightly higher

with the 3D technique (6.5 cores) compared with the 2D approach (5.6 cores). A higher malignant yield was observed in the 3D group (34.9%) compared with the 2D group (26.6%).
Conclusion: Both biopsy techniques are diagnostically reliable for sampling breast microcalcifications. While 2D stereotactic biopsy remains robust and widely applicable, 3D guidance offers practical advantages in targeting challenging locations. Continued use of both techniques with case-based selection is recommended.

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