

Women affected by multifocal tumours were younger, and had proportionately higher ER positivity and lower triple negativity. Adjusted odds of a BRCA2-associated BC being multifocal were four-fold higher than BRCA1-associated tumours (OR: 3.71, CI: 1.77–7.78, $P=0.001$).

Conclusions: Results suggest higher than anticipated prevalence of multifocality amongst BRCA carriers diagnosed with BC, and this appears driven by a high incidence among BRCA2 mutation carriers, with ER positive disease. Further validation and prospective studies are necessary to accurately assess the risk of multifocality in BRCA-associated BC.

28. THE BREAST ANGIOSARCOMA SURVEILLANCE STUDY (BRASS)

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Introduction: Breast angiosarcomas (AS) are rare, poorly understood tumours which may develop spontaneously (primary AS, (PAS)) or secondary to lymphoedema or radiotherapy following breast cancer (secondary AS, (SAS)). Data on optimal management and outcomes is scarce. This retrospective cohort study seeks to improve understanding and help inform a future prospective study.

Methods: UK centres treating AS were invited to participate through Trainee Research Collaborative Networks. Patients with a tissue diagnosis of primary or secondary AS of the breast/chest wall between 2000 - 2015 were eligible for inclusion. Data collection is ongoing (appropriate approvals obtained), and will complete March 2019.

Results: To date, 73 patients have been entered from 11 centres (100% female, average age at diagnosis of AS; 63 years (range 29–83)). Most cases (86%) are SAS, average lag time from primary breast cancer to development of SAS was 7.8 years. Median follow up period is 6.9 years with all-cause mortality at 49%.

All cases were discussed at an MDT; 60% of patients were documented to have been discussed at a Sarcoma MDT, and 53% at a Breast MDT.

Fifty-eight patients (79%) were considered by MDT to be resectable at the time of diagnosis and underwent surgery. Distribution of specialty of lead surgeon was: 55% Breast, 28% Plastic and 7% Sarcoma. Just under half (48%) were treated within Regional Sarcoma Centres.

Conclusion: UK NICE Guidelines suggest these tumours should be managed by specialist sarcoma teams within Sarcoma Centres, however this currently appears to be aspirational and regional variation is significant.

29. THE MAGSEED® EXPERIENCE: ONE YEAR ON

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Introduction: Patients with impalpable breast lesions require accurate localisation before surgery to optimise excision and minimise re-operation for compromised margins. We identified that our theatre utilisation and efficiency were adversely affected by localisation timing and radiological capacity, and adopted an innovative metallic seed technique as an alternative to wire guided excision. One year later, we reviewed our results.

Methods: We used the Magseed technique for 66 patients with single lesions <4cm from the skin surface. One additional patient had two lesions requiring localisation (total 67). Magseeds were inserted by two radiologists, and excised by four breast surgeons.

Results: Patient ages ranged from 35 to 83 years (mean 59.7, median 60). Fifty eight lesions were localised and removed for invasive cancer or DCIS. The remaining nine were excision biopsies in which one cancer was found. Seven specimens required re-excision for margins <1mm. Closest radial margin to malignancy measured between 0 and 19mm with a median value of 4mm.

All seeds except one (which required wire insertion) were localised successfully and removed with the lesion.

Conclusions: Our experience suggests Magseed is an effective alternative to wire localisation of impalpable lesions. Although numbers are small the re-excision rate, overall safety and ease of use appear acceptable. Performing localisation prior to the day of theatre has led to improved theatre utilisation.

Further studies to compare margin status, re-excision rate and specimen weight between matched cohorts of patients treated either by wire or Magseed localisation are planned, as well as formal evaluation of patient satisfaction.

30. INTERIM ANALYSIS OF AN EVALUATION OF CLINICAL OUTCOME AND PATIENT AND CLINICIAN SATISFACTION WITH MAGNETIC SEEDS COMPARED WITH GUIDE WIRES FOR LOCALISATION OF IMPALPABLE BREAST LESIONS FOR SURGERY

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Introduction: Guide wire localisation remains the most commonly used technique for localisation of impalpable breast lesions in the UK. One alternative is magnetic seed localisation. We investigated the accuracy, re-excision rates, patient and clinician satisfaction in two consecutive cohorts.

Methods: A prospective service evaluation of consecutive cases was set up with Clinical Research Committee approval. Data were collected on clinico-pathological findings, and patient, radiologist and surgeon satisfaction. 100 cases each of wire and Magseed localisation will be collected.

Results: To date, 116 consecutive cases have used wire localisation and 62 subsequent cases used Magseeds (30 cases used 2 or more to bracket the lesion). The localisation procedure was reported to be easy/very easy for 64.5% of wires and 84.9% of Magseeds. Transcutaneous localisation was easy/very easy for surgeons in 59.2% of wire cases and 80.4% of Magseeds and intra-operatively in 64.7% and 80% respectively, all statistically significant (Chi squared test). There were no statistically significant differences in patient-reported levels of pain, discomfort or anxiety during or after the localisation. The wire/seed was within 5mm of the lesion in 96 and 97% of cases respectively. Re-excision was required in 13.8% of wire cases and 13% of Magseeds.

Conclusions: Radiologists and surgeons find the Magseed procedures easier than wires, however, there was no difference in patient satisfaction with the two pathways. There was no difference in accuracy of placement or re-excision rates. Magseed offers an acceptable alternative to wire localisation. Impact on local service provision should also be considered.

31. A COMBINED SCORE OF TUMOUR NECROSIS, TUMOUR BUDDING AND TUMOUR-STROMA PERCENTAGE PREDICTS CANCER SPECIFIC SURVIVAL IN PRIMARY OPERABLE BREAST CANCER

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Introduction: Features of the tumour microenvironment, including tumour necrosis, tumour budding, and tumour-stroma percentage (TSP) have been reported to have prognostic value in some cancers. However, their role in breast cancer is unclear.

Methods: Patients who underwent surgery for primary operable breast cancer in two units between 1995–2007 were included. Clinicopathological details and survival data were collected from patient records and local laboratory systems. Haematoxylin and eosin-stained slides were visually assessed for tumour necrosis, tumour budding and TSP. Kaplan Meier and Cox regression analysis were carried out for associations with cancer specific survival (CSS).

Results: 1188 patients were included in the study. 234 breast cancer deaths were recorded during a median follow up of 158 months (26–183). In ER positive disease, necrosis was independently associated with worse CSS (HR1.46, 95%CI 1.03–2.08, $p=0.033$). In ER negative disease, necrosis (HR 2.44, 95%CI 1.34–4.43, $p=0.003$), high budding (HR2.47, 95%CI 1.56–3.89, $p<0.001$) and high TSP (HR1.64, 95%CI 1.06–2.53, $p=0.026$) were independently associated with worse CSS. A combined score of tumour necrosis, tumour budding and TSP (0=all low, 1=one high, 2=two high, 3=all high) was associated with worse CSS in ER positive disease (score 3 v 0: HR 2.66, 95%CI 1.35–5.26, $p=0.005$), in ER positive, node negative disease (HR 6.42, 95%CI 1.77–23.23, $p=0.005$), and in ER negative disease (HR 8.11, 95%CI 2.68–24.51, $p<0.001$).

Conclusion: A combined score of tumour necrosis, budding and TSP predicts CSS in primary operable breast cancer. It stratifies risk in ER negative disease, and identifies a high-risk group in ER positive disease.

32. DECODING IDIOPATHIC GRANULOMATOUS MASTITIS: HAVE WE REACHED THE END OF THE TUNNEL?

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Introduction: Idiopathic granulomatous mastitis (IGM) is an evolving new problem with variable presentation. Non-availability of definite etiological factor has made this disease a terrorizing enigma.

Aims and Objective: To compare the outcomes of different modalities of treatments in IGM and to establish the standard of care.

Methodology: A prospective randomized trial was conducted. 70 cases of histopathologically proven granulomatous mastitis were taken up. 15 cases with diagnosis of tuberculosis received antitubercular therapy and were excluded from the study. Remaining 55 cases were randomized into 3 groups. Group A (steroid therapy), Group B (wide local excision) and Group C (wide local excision with total duct excision). The cases were followed up for a period of 3 to 8 months. The results were statistically evaluated.

Results: The 3 groups were equally matched as regards age, pregnancy, lactation, significant hyperprolactinaemia and reactive arthritis. The recurrence rate in Gr A, B and C were 26%, 75% and 0% respectively. Superiority of Gr C over Gr B was statistically significant ($p=0.0003$). In 5 out of 13 cases of Gr C, ductal communication was histopathologically evident.

Discussion: IGM is initiated by ductal leakage leading to prolactin (cytokine like immunomodulatory function) induced periductal parenchymal destruction. Recent evidences strongly supports this newly found role of prolactin. IGM, therefore, is a disease of the mammary ducts and enbloc duct excision is curative. Empirical steroid and immunomodulator use is not without side effects and comes at the cost of poor patient compliance.