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01. THE EFFECT OF TUMOUR RISK AND PATIENT FACTORS ON THE THREE-YEAR SURVIVAL FOR WOMEN WITH EARLY STAGE TRIPLE NEGATIVE BREAST CANCER (TNBC) IN ENGLAND AND WALES: A POPULATION BASED COHORT STUDY WITHIN NATIONAL AUDIT OF BREAST CANCER IN OLDER PATIENTS (NABCOP)

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Introduction: Women with triple negative breast cancer (TNBC) have high risk of early mortality. We investigated factors influencing BC-survival for women with surgically treated TNBC, as part of NABCOP.
Methods: Women aged ≥50yrs receiving surgery for unilateral early stage (1-3a) TNBC in England and Wales between 2014–2017 were identified from linked national datasets. Competing risks survival models were used to investigate associations between patient fitness (comorbidity), tumour characteristics and BC survival at 3-years.
Results: 97% of 3,785 women aged 50-69yrs and 92% of 2,254 women aged ≥70yrs received surgery.
For women aged 60, 70 and 80yrs, with stage 1 TNBC and no comorbidities, 3%, 3% and 4% respectively had died from BC at 3-years, increasing to 15%, 18% and 22% respectively for stage 3a TNBC. Death from causes other than BC at 3-years was reported for <7% of women without comorbidities.
In comparison, the increase in rate of death from any cause among women with ≥2 comorbidities was mainly due to death from causes other than BC. For women aged 60, 70 and 80yrs with stage 1 TNBC, death from any cause at 3-years was 8%, 12% and 20% respectively; increasing to 23%, 31% and 43% respectively for stage 3a TNBC.
Conclusion: Tumour stage and not older age mainly determined death from BC at 3-years in fit women. In women with poor fitness, death from any cause at 3-years was higher in older women. Fitness assessments are recommended in identifying older women who may benefit from the most active interventions.

02. DEVELOPMENT OF AN END-PRODUCT EVALUATION TOOL FOR ASSESSMENT OF SIMULATED AXILLARY CLEARANCE

Keerthini Muthuswamy[1], Rebecca Fisher[1], Fotis Petrou[1], Stella Mavroveli[1], George Hanna[1], Dimitri Hadjiminas[2], Paul Thiruchelvam[2], Daniel Leff[1,2]. [1] *Department of BioSurgery and Surgical Technology, Imperial College London, London, United Kingdom;* [2] *The Breast Unit, Charing Cross Hospital, London, United Kingdom*

Introduction: Axillary de-escalation and omission of axillary lymph node dissection (ALND) in patients with low volume sentinel node disease has reduced trainee exposure and confidence. The concern is to equip surgeons to tackle complex axillary disease. An ALND simulator was developed and an end-product assessment tool was interrogated for construct validity.
Methods: Following ethical approval (IRAS:226651), 30 surgeons (10xconsultants,11xtrainees, 9xcore/FY) performed a simulated level III ALND with junior assistance. An end-product assessment tool was developed using an iterative process with experts in the field. Simulated ALND models and resection specimens were retrospectively reviewed and scored against the end-product assessment tool by two consultant surgeons.
Results: End-product scores differed significantly based on expertise (p=.038). Specifically, experts outperformed novices [median(IQR):expert=5(5)vs.novice=3(1);p=.037], trainees outperformed novices [median(IQR):expert=5.5(4)vs.novice=3(1);p=.022]. However, no significant difference was observed between trainees and experts (p=9.39). Similarly, nodal harvest was significantly greater amongst experts than novices (p=.000), and trainees than novices (p=.009), but not between experts and trainees (p=.463). No significant difference was observed between groups in haemostatic quality (p=.093), or damage to the axillary vein (p=.864), long thoracic nerve (p=.094), or thoracodorsal pedicle (p=.054).
Conclusions: An end product assessment tool developed for ALND distinguishes between surgeons of low and high volume experience. This is the first tool to assess competence in ALND and merits further validation. It is important to examine how the tool could better delineate differences between trainees and expert cancer surgeons.

03. IMPACT OF PROGESTERONE RECEPTOR STATUS ON ONCOLOGICAL OUTCOMES IN OESTROGEN RECEPTOR POSITIVE BREAST CANCER PATIENTS – A SYSTEMATIC REVIEW AND META-ANALYSIS

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Introduction: Assessment of oestrogen (ER) and progesterone receptor (PR) status provides important prognostic information in breast cancer. However, the impact of single progesterone receptor negativity is less well defined. A systematic review/meta-analysis were undertaken to examine the impact of progesterone receptor negativity on outcomes in oestrogen receptor positive breast cancer.
Methods: The study was performed according to PRISMA guidelines. Databases were searched to identify studies comparing disease free survival as the primary outcome and overall survival as the secondary outcome between progesterone receptor positive (PR+) and negative (PR-) status in ER positive breast cancer (ER+). A meta-analysis of time-to-effect measures was performed, specifically hazard ratios (HRs).
Results: Seven studies including 10613 patients in the ER+PR+ group and 2371 patients in the ER+PR- group met the inclusion criteria. Treatment characteristics did not differ significantly between the two groups. Patients in the ER+PR- group had a higher risk of disease recurrence over the study time period than those who had ER+PR+ disease (DFS HR 1.57; 95% confidence interval [CI]: 1.30 – 1.80; $p < 0.01$) and was more significant in patients who were HER2 negative (DFS HR 1.63; 95% confidence interval [CI]: 1.34 – 1.98; $p < 0.01$). A similar result was observed for overall survival (OS HR 1.60; 95% CI: 1.19 – 2.14, $p < 0.01$).
Conclusion: Progesterone receptor negativity is associated with a significant reduction in disease free and overall survival in ER+ patients. This has

implications for treatment and surveillance in these patients.

04. POST-MASTECTOMY RADIOTHERAPY IN PATIENTS WITH IMMEDIATE BREAST RECONSTRUCTION – RESULTS FROM THE IBRA-2 (IMMEDIATE BREAST RECONSTRUCTION AND ADJUVANT THERAPY) PROSPECTIVE COHORT STUDY

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Introduction: Long-term data now indicates that post-mastectomy radiotherapy (PMRT) may positively impact on overall survival. As a result, the indications for PMRT are widening. Rates of immediate breast reconstruction (IBR) are increasing, but IBR remains controversial in the context of planned PMRT. The aim of this study was to examine current practice of PMRT in patients undergoing mastectomy with and without IBR in the iBRA-2 prospective cohort study.
Methods: The cohort included 2,540 patients undergoing mastectomy +/- IBR at 76 centres across the United Kingdom and Ireland between 1st July and 31st December 2016. Patients were recruited consecutively using the trainee collaborative model. Patient demographics, operative, oncological and adjuvant treatment data were collected and analysed comparing rates of PMRT in patients undergoing mastectomy +/- IBR.
Results: Of all patients in the cohort, 35.6% (n=909) were recommended for PMRT at the post-operative MDT meeting. In 4.9% (n=125) discussion of PMRT was advised. PMRT was significantly less likely to be recommended in patients undergoing IBR (32.1% of implant-only, 34.3% of pedicled flap, and 35.5% of free flap reconstructions) than in patients undergoing mastectomy alone (45.7%) (p<0.001).
On multivariate analysis, only implant-based reconstruction was inversely associated with PMRT (Odds ratio=0.66, confidence interval 0.44-0.99). Patients in Scotland (OR 0.35, 0.17-0.73) and Ireland (OR 0.36, 0.17-0.74) were statistically less likely to receive PMRT.
Conclusions: Approximately one third of patients undergoing IBR were recommended for PMRT with only implant-based reconstructions less likely to receive PMRT. This study also highlighted regional variation in PMRT practice which merits further investigation.

05. BRIDGING THE AGE GAP IN BREAST CANCER - ANALYSIS OF THE IMPACT OF COMORBIDITY, DEMENTIA AND FRAILTY ON THE RATES OF SURGERY IN OLDER WOMEN

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Background: Up to 40% of UK women >70 years with primary operable breast cancer are treated with Primary Endocrine Therapy (PET) rather than surgery, often due to co-existing co-morbidity or frailty. Factors predicting non-surgical treatment were assessed in a large prospective UK cohort study.
Methods: Prospective data from the multi-centre UK cohort study "Bridging the Age Gap" on treatment received (Surgery vs. PET) were analysed according to comorbidity (modified Charlson), dementia (MMSE) and frailty (ADL and IADL) using Chi Squared test in SPSS. National and local ethics committee approval was obtained for all UK participating sites.
Results: A total of 3460 women aged >70 years with operable breast cancer were recruited; 2784 were treated surgically and 493 received PET. Older age was associated with increased PET; with 4.0% of 70-74 year olds treated this way, compared to 49% of those 85+ (p<0.001). Increasing co-morbidity was associated with greater PET usage; with 4.0% of patients with no comorbidity being treated with PET, rising to 31.9% for patients with 3+ comorbidities (p<0.001). A MMSE score of <27 was associated with an increased PET rate (24.2% vs 9.8% in those who scored 27+, p<0.001). Dependency in one or more ADL or IADL was associated with increased use of PET (8.7% vs 27.2% for ADL (p<0.001) and 7.1% vs 31.9% for IADL (p<0.001).
Conclusions: This analysis clearly demonstrates that extreme old age, co-morbidity, dementia and frailty are important factors in determining treatment for older women diagnosed with operable breast cancer in the UK.

06. IMPACT OF PROGESTERONE RECEPTOR STATUS ON RESPONSE TO NEOADJUVANT CHEMOTHERAPY IN OESTROGEN RECEPTOR POSITIVE BREAST CANCER PATIENTS

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Introduction: Breast cancer patients respond differently to neoadjuvant chemotherapy (NAC) based on hormone receptor subtype. Oestrogen receptor positive/HER-2 receptor negative (ER+HER-) patients respond poorest but effects of progesterone receptor (PR) status on response within this group has not been elucidated. The aim was to assess the impact of PR status on response to NAC in ER+HER- patients.
Methods: Patients receiving NAC over a seven-year period (2011-2017) were identified from a prospective database within a specialised breast unit. Clinicopathological details were collated for all patients. Primary outcomes including breast complete pathological response (PCR) rate and axillary PCR rate were compared between patients found to be progesterone receptor positive and negative. Secondary outcomes including grade and presence of lymphovascular invasion were also assessed.
Results: 206 patients were identified (151 in the ER+PR+HER- group and 55 in the ER+PR-HER- group). When compared with the PR+ group, patients found to be PR negative were more likely to achieve a breast PCR (3.3% vs 25.4%; Chi Square test; p=0.001). In patients who were initially node positive, PR negativity was associated with a higher rate of axillary nodal PCR compared to those found to be PR positive (12.2% vs 25.5%; Chi Square test; p=0.04). ER+PR-HER- patients were more likely to have higher grade tumours but not LVI.
Conclusion: Over a quarter of ER+HER- patients who are PR negative will have a complete pathological response to NAC in the breast and axilla and should be considered for NAC at diagnosis.

07. A SYSTEMATIC REVIEW AND META-ANALYSIS OF CLINICAL, PATIENT-REPORTED OUTCOMES AND COST OF DIEP FLAP VERSUS IMPLANT-BASED BREAST RECONSTRUCTION

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Introduction: Comparative data on clinical outcomes and cost of DIEP and implant-based reconstruction (IBR) is limited. We conducted a systematic review to compare cost, clinical and patient-reported outcomes (PROs).
Methods: The protocol was registered on PROSPERO (CRD42017072557) *a priori.* EMBASE, MEDLINE, Google Scholar, CENTRAL, SCI and Clinicaltrials.gov were searched from January 1994—August 2018. Two reviewers independently screened and extracted outcomes on complications, cost

and PROs. Study quality and risk of bias (RoB) were assessed using GRADE and Cochrane's ROBINS-I tool respectively.
Results: Out of 6381 articles screened, 18 were included (unilateral 919 DIEPs, 452 implants; mean age 49 years, follow-up (months): DIEP 28.9; IBR 42.9. There were 7 prospective/9 retrospective cohort studies, 2 case series and no RCTs. Mean flap loss and fat necrosis rates were 3.90% (SD 3.86) and 9.67% (SD 17.0) respectively. There was no difference in mean length of stay [DIEP 8.42 days (SD 2.23) vs IBR 7.90 days (SD 5.34), p=0.82]. Mean number of revision procedures was lower in DIEP (0.80; SD 1.07) vs IBR (1.53; SD 1.52), p<0.01. Study quality was low with serious RoB. One study (n=275) reported $11,941/QALY ICER for DIEP, with higher breast QALY (DIEP 19.5; IBR 17.7) using BREAST-Q; two studies (n=275) showed no overall cost differences, favouring DIEP. Two studies (n=339) evaluating PROs favoured DIEP.
Conclusion: DIEP reconstruction may be more cost-effective and yield superior PROs. However, poor quality, bias-ridden studies limit the findings. Level-I evidence evaluating core outcome sets and cost-effectiveness will facilitate national-level policy and shared decision-making.

08. CAN WE TRUST OUR DATA? A COMPARATIVE ANALYSIS OF IBRA AND HES DATA

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Introduction: Implant-based breast reconstruction is the most commonly performed reconstructive procedure in the UK. Data from the iBRA study demonstrated implant loss at 3 months as high as 30%. Data acquired by GIRFT found an implant loss rate of 7.5% at 12 months nationally. GIRFT relies on HES data, whereas the iBRA study was a National Trainee Research Collaborative. We have used HES data to validate our iBRA cohort.
Method: Searching HES data using the following codes: B30.1, B30.2, B30.3, B30.4, S48.20, B29.8, Y02.2, we developed a dataset of patients who had mastectomy and immediate breast reconstruction with implants during the iBRA study period.
Results: Implant loss at 3 and 12 months is shown in the table. Causes for variation between the datasets will be explored and presented. Different codes were used to describe the same surgical procedure, the complexity of the different codes will be also be presented.

Royal Marsden outcomes	iBRA data n = 102 (%)	HES n = 235 (%)
Implant loss at 3 months	7 (6.9)	11 (4.7)
Implant loss at 12 months		19 (8.1)

Conclusions: Unit level and possibly surgeon level data will be published in the public domain in the near future. There are limitations to iBRA due to the nature of voluntary data entry and to HES due to a variation in the utilisation of the large number of existing codes. Collaboration between clinicians and informatics teams is essential to improve data quality. Without this we cannot adequately provide informed consent to our patients.

09. IS NEOADJUVANT RADIOTHERAPY PRIOR TO MASTECTOMY AND AUTOLOGOUS RECONSTRUCTION SAFE? COMPARISONS BETWEEN PRADA TRIAL PATIENTS AND HISTORICAL CONTROLS

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Introduction: For patients with locally advanced node-positive disease requiring post-mastectomy radiotherapy (PMRT), integrating breast reconstruction poses challenges. Irradiating autologous tissue may cause fibrosis, fat necrosis, shrinkage and longitudinal degradation of symmetry. Many patients are denied immediate breast reconstruction (IMBR). An approach to avoid flap irradiation is neoadjuvant radiotherapy (NRT) to the tumour-bearing breast prior to mastectomy and IMBR. The aim of this study was to evaluate the safety of this approach.
Methods: Following ethical approval (IRAS:15/LO/1071; amendment AM/1806/86), a retrospective case-control study was undertaken to compare the complication profiles of patients recruited to receive NRT prior to IMBR within or outwith the PRADA trial (NCT02771938)(n=42), and unmatched historical controls receiving PMRT, either following immediate free-flap reconstruction (n=41) or simple mastectomy (n=44).
Results: There was no significant difference between cohorts in tumour grade (p=.470), histological subtype (p=.108), ER (p=.200), PR (p=.239), HER2 (p=.559) or nodal status (p=.153). Simple mastectomy patients were significantly older [mean age years ± Std:NRT=48.5±8.6, PMRT=49.4±9.3, flat chest=58.0±9.2;p<0.001). There was no significant difference between groups in unplanned return to theatre at twelve weeks. There were no free-flap failures in any group. Critically, there was no statistically significant difference in skin necrosis rates. A greater proportion of patients undergoing simple mastectomy required post-operative antibiotics (p=.013). A greater proportion of open wounds were observed in patients undergoing PMRT to free-flaps (p=.051).
Conclusions: NRT prior to autologous IMBR was not associated with significantly greater complication profiles when compared to unmatched historical controls, supporting the safety of radiotherapy sequence-reversal.

10. LOSS RATES IN SLING-ASSISTED IMPLANT-BASED BREAST RECONSTRUCTION OVER TIME SEEM TO RELATE TO PROPORTION OF PATIENTS WITH KNOWN RISK FACTORS RATHER THAN ANY LEARNING CURVE

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Introduction: Ongoing audit of sling-assisted, implant-based breast reconstruction (SAIBBR) in Edinburgh has identified factors contributing to implant loss. It was hoped that as a result of this, loss rates would have dropped over time. The present study aimed to assess if there was a reduction in reconstructive loss rate.
Methods: SAIBBR has been performed on 766 occasions in the Edinburgh Breast Unit between July 2008 and June 2018 with median follow up of 795 days. Smoking and radiotherapy have previously been identified as significant risk factors for reconstruction loss and outcome data has been fed back to breast team members on an annual basis. Data on rate of loss of implant was analysed across the unit in 6 monthly increments and on 8 individual surgeons with an experience of over 60 cases.
Results: There was no statistically significant change in loss rate over time and no obvious trend towards improvement. Instead there seemed to be an association between loss rate and the proportion of patients with known risk factors.
Conclusions: SAIBBR has a relatively high loss rate which persists in our unit despite good understanding of risk factors. Surgeons and patients are continuing to choose this option despite risks, presumably because it is relatively quick and simple, may sometimes be the only realistic reconstructive option and can still produce a respectable result in the majority of cases. These factors must be taken into consideration when assessing unit or surgeon level loss rates in implant-based breast reconstruction.

11. THERAPEUTIC MAMMAPLASTY IS A SAFE AND EFFECTIVE ALTERNATIVE TO MASTECTOMY WITH OR WITHOUT IMMEDIATE BREAST RECONSTRUCTION, PARTICULARLY IN HIGH-RISK PATIENTS: COMBINED ANALYSIS OF 2,916 PATIENTS IN THE IBRA-2 AND TEAM MULTICENTRE PROSPECTIVE COHORT STUDIES

The TeaM Steering Group, The iBRA-2 Steering Group, The Mammary Fold Academic and Research Collaborative *United Kingdom*

Introduction: Therapeutic mammaplasty (TM) may allow women to avoid mastectomy but few well-designed studies have evaluated the success of this approach or compared the short-term outcomes of TM with mastectomy+/-immediate breast reconstruction (IBR). We combined patients recruited to the national trainee-led iBRA-2 and TeaM studies to evaluate the success of TM and to compare the short-term outcomes of TM and mastectomy+/-IBR.
Methods: Patients in the TeaM study who underwent TM to avoid mastectomy were identified and demographic, complication, oncology and adjuvant treatment data compared to patients undergoing mastectomy+/-IBR in the iBRA-2 study. The primary outcome was the rate of successful BCS in the TM group. Secondary outcomes included post-operative complications and time to adjuvant therapy. Appropriate approvals were obtained.
Results: 2,916 patients (TM n=376; mastectomy n=1,532; IBR n=1,068;[implant-based n=675; pedicled-flap n=105; free-flap n=288]) were included in the analysis. Patients undergoing TM were more likely to be obese, smoke and to undergo bilateral surgery than those undergoing IBR. Patients undergoing mastectomy+/-IBR, however were significantly more likely to experience complications than the TM group (TM-21%; mastectomy only-37%; implant-based reconstruction-33%; pedicled-flaps-40%; free-flaps-41%; $p<0.001$). Breast conservation was possible in 87% of TM patients. There were no clinically-significant delays to adjuvant treatment.
Conclusions: TM may allow high-risk patients who would not be candidates for IBR to avoid mastectomy and is associated with significantly fewer complications than IBR. Further work is needed to explore the comparative patient-reported and cosmetic outcomes of the different approaches and to establish long-term oncological safety.

12. PEDICLED PERFORATOR FLAPS (LICAP, MICAP) ARE SAFE AND ECONOMICAL ALTERNATIVES TO MASTECTOMY AND COMPLEX RECONSTRUCTION IN A SELECT GROUP OF PATIENTS

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Introduction: Pedicled perforator flaps, such as the lateral intercostal artery perforator (LICAP) and medial intercostal artery perforator (MICAP) flaps, allow volume replacement using autologous tissue in breast conservation surgery (BCS), avoiding complex reconstruction surgery. Here we analyse initial outcomes and cost savings made in a District General Hospital for patients undergoing either technique as part of their oncoplastic breast treatment.
Methods: A prospectively completed database was searched between 01/10/2016 to 31/08/2018 for patients who had either LICAP or MICAP flap in immediate sitting following BCS by two oncoplastic breast surgeons in the same unit. Patients were typically followed up at 2 weeks post surgery with results of the operative histopathology. We reviewed their length of stay (LOS), early post-operative outcomes and short-term financial implications.
Results: 52 patients met the inclusion criteria**.** Mean LOS was 1 day; there was no flap necrosis observed. Post-operative histology showed 6 patients had positive tumour margin (11.5%); 2 of 6 underwent total mastectomy and 4 of 6 had re-excision of margin, with the flap intact. For 46 patients (88.5%) who did not require a second operation, a mean relative saving of £3300 per case was made, due to no mesh or drains and shorter LOS when directly compared to implant- and mesh-based reconstruction.
Conclusion: LICAP and MICAP flap techniques in BCS are technically feasible with minimal donor site morbidity, early post-operative recovery, excellent cosmetic outcome and good graft reliability. Additionally, they are more cost-effective when compared to complex breast reconstruction. Further long-term follow-up data is required.

13. PATIENT REPORTED OUTCOMES FOR LATISSIMUS DORSI MYOCUTANEOUS FLAP BASED BREAST RECONSTRUCTION – A 10 YEAR EXPERIENCE

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Introduction: The Latissimus Dorsi Myocutaneous Flap (LDMF) is used in post-mastectomy reconstruction or partial reconstruction. This study has evaluated long-term (12 years) patient reported outcomes from LDMF procedures using the Breast-Q.
Method: Retrospective analysis of all LDMF surgery in two UK hospitals was performed between 2006 - 2016. Case note review of indications and outcomes was performed and all patients were sent the Breast Q® patient reported outcome survey by post (unless no longer able to participate, deceased or lacking cognitive capacity). Data were analysed using Excel and SPSS.
Results: In total 226 patients were identified and 27 excluded, with 199 questionnaires being sent out in 2018. Median time since LDMF surgery was 7 years (range 2-12 years). Of these, 77 returned completed surveys (response rate 38.7%). Median satisfaction levels were generally high with 78% satisfied with the outcome of treatment, 65% satisfied with their breasts, 71% satisfied psychosocially and 75% satisfied with their chest. Overall satisfaction was high with 3 patients (3.9%) scoring below 50%, 5 (6.5%) between 51-60%, 19 (24%) between 61 and 70, 21 (27%) between 71-80%, 16 (21%) between 81-90% and 13 (17%) between 91-100%.
Conclusion: Long term follow up of a large cohort of LDMF reconstruction patients show high levels of overall satisfaction, demonstrating how temporally robust the technique is. The technique fell out of favour with the rise in popularity of ADM reconstruction although long term outcomes for ADM surgery are not yet available. The LDMF remains a valuable technique for the oncoplastic surgeon.

14. A RANDOMISED CONTROLLED TRIAL (RCT) OF 3-DIMENSIONAL SIMULATION OF AESTHETIC OUTCOME IN BREAST CONSERVING TREATMENT (BCT)

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Introduction: Almost two thirds of women with surgically-managed breast cancer undergo BCT. Standard practice is to describe likely aesthetic changes. Photographs are shown prior to reconstructive surgery or more complex oncoplastic procedures. Simulation of a patients' individual aesthetic outcome has been used in aesthetic breast and facial surgery. We hypothesise that viewing a personalised 3D simulation improves patients' preparedness for surgery.
Methods: REC approved RCT of 117 women undergoing unilateral BCT at a single centre. Three-way randomisation into standard care, viewing photographs matched for BMI, age, and tumour location, or 3D simulation. Randomisation is stratified by BMI, intention to undergo ALND, and operation type (standard WLE v mammoplasty). Primary end point is comparison of a 10cm Visualise Analogue Scale (VAS) between groups for "How confident are you that you know how your breasts are likely to look after treatment?" Sample size calculation was based on a 1.5cm difference between groups (SD of 2.0, Bonferroni correction, 80% power).
Results: 79/117 have been recruited. Median VAS in the control is group 5.9cm; 2D photography, 8.1cm; and 3D simulation, 9.1cm. Preliminary analysis suggests a significant difference between groups (Kruskal Wallis, $p<0.005$). Post-hoc pair-wise comparison suggests significance between control and simulation and 2-D photographs and simulation ($p<0.005$, $p=0.041$ respectively), but not between control and 2-D photography ($p=0.182$).
Conclusions: We will assess fully powered results in January 2019 when recruitment will be complete. Thus far, results suggest 3D simulation is advantageous over viewing 2D-images of other women and over standard care.

15. CAN STRATTICE™ REDUCE THE LONG-TERM INCIDENCE OF CAPSULAR CONTRACTURE COMPARED TO A SUBMUSCULAR IMPLANT BASED BREAST RECONSTRUCTION? – A PROSPECTIVE MULTICENTRE STUDY

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Introduction: There is little long-term data on outcomes of ADM reconstruction and its efficacy. Our aim was to establish the incidence of capsular contracture in the world's largest long-term study of Strattice™-assisted reconstruction compared to a submuscular technique and investigate the role of tonometry as an objective measure of capsular contracture.
Methods: All women who had immediate implant based reconstruction with Strattice™ or a submuscular technique between 2009 and 2015 at three tertiary centres in the UK were invited for prospective clinical examination and tonometry measurements (measurement of intramammary pressure, 0=hard − 10=soft). An eight-year retrospective review of case notes, theatre database and implant log was performed.
Results: 585 patients underwent 553 Strattice™-assisted and 242 submuscular reconstructions with median follow-up of 58 months.
8% in the Strattice™ group and 9% in the submuscular had significant capsular contracture (Baker 3/4), having had no revision surgery. Of the Baker 1/2, 3% of Strattice™ and 12% of submuscular reconstructions had undergone revision surgery for capsular contracture ($p=0.01$). Overall there was more capsular contracture in the submuscular group (12% vs. 22%, $p=0.1$).
Tonometry has a positive correlation with Baker grade ($r=0.66$, $p<0.001$). Baker 1/2 capsules had a softer reading of 5.4 compared to 4.8 in Baker 3/4 capsules, however there was no significant difference between the readings of the two groups.
Conclusion: Strattice™ reduces capsular contracture in breast reconstruction. Isolated tonometry measurements are not sensitive enough to diagnose capsular contracture but serial measurements are likely to detect changes to the implant capsule.

16. CAN PATIENTS WITH MULTIPLE BREAST CANCERS IN THE SAME BREAST AVOID MASTECTOMY BY HAVING MULTIPLE LUMPECTOMIES TO ACHIEVE EQUIVALENT RATES OF LOCAL BREAST CANCER RECURRENCE? A RANDOMIZED CONTROLLED FEASIBILITY TRIAL CALLED MIAMI UK (NCT03514654)

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Background: Oncological safety of treating multiple ipsilateral breast cancers (MIBC) using therapeutic mammoplasty (TM) compared to mastectomy remains uncertain. A National Institute for Health Research (NIHR) - funded MIAMI feasibility phase randomized controlled trial (RCT) aims to demonstrate that sufficient numbers of eligible patients can be identified and accept randomization.
Methods: Phase 3 un-blinded prospective UK RCT. Initially aims to recruit 50 women with MIBC $\geq$40 years randomized in a 1:1 ratio to multiple lumpectomies and TM compared to mastectomy +/- reconstruction. No limitations of numbers of cancer foci with multifocal resectable by a single lumpectomy and multicentric cancers requiring separate lumpectomies. Radiation therapy (RT) will mirror IMPORT HIGH and FAST FORWARD, with individualized planning for potential dual lumpectomy RT boosts.
Results: Five centres screened 374 invasive cancers (June - Nov 2018). MIBC were diagnosed in 49 women (13.1%). Most women were ineligible for MIAMI (n=40, 81.6%) with 3 (6.1%) invited to trial participation.
Unsuitability for TM was common (n=16, 32.7%), and similarly bilateral breast cancer (n=9), previous cancer (n=7), neoadjuvant chemo (n=8), other cancers (n=3), < 2 invasive foci (n=3) and exclusive DCIS (n=2).
Three women declined randomization: two preferring a mastectomy and the other electing TM.
MIAMI TMG proposed major amendments: randomization of MIBC on mammogram and US, with breast MRI restricted to women allocated to TM only; 2:1 treatment allocation of 60 women.
Discussion: MIAMI is a world-first RCT investigating clinical and cost-effectiveness of TM being oncologically equivalent to mastectomy +/-reconstruction in MIBC. The feasibility phase will inform the main RCT.

17. FERTILITY PRESERVATION PROVISION FOR BREAST CANCER PATIENTS IN ENGLAND – A POSTCODE LOTTERY

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Introduction: Breast cancer is the most common cancer in women of reproductive age. Current NICE guidelines state that fertility should be discussed at diagnosis because of the impact treatment may have. Also standard eligibility criteria for IVF should not be used. Despite this, we suspect many Clinical Commissioning Groups (CCGs) who fund fertility preservation do apply eligibility criteria. We undertook this study to identify what differences existed.
Method: A 'Freedom of Information' request was sent to all 209 CCGs in England enquiring about eligibility criteria for cryopreservation, options and storage length for breast cancer patients.
Results: We obtained information from 204 CCGs (98%). 58 followed NICE guidelines with no eligibility criteria for cancer patients, 97 had specific policies with eligibility criteria, and 36 did not have separate policies for cancer patients. 15 CCGs stated that patients had to be under 35 years; 54 used 38, 39 or 40 years; and 62 funded cryopreservation up to age 42. 176 CCGs offered embryo cryopreservation and 167 offered oocyte cryopreservation. 97 CCGs offered 10 years' storage. 36 offered 5 years only, 17 offered 3 years and 4 only offered 1 year's worth of storage.
Conclusion: This study reveals that there is a marked difference in the provision of fertility preservation for breast cancer patients across England, contrary to NICE guidelines. Women with breast cancer across England are not getting equal opportunities to an evidence based fertility preservation service.

18. NEW MODEL OF BREAST AFTERCARE - SELF-SUPPORTED MANAGEMENT

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Introduction: Ensuring high quality care for people affected by cancer has been a pivotal point for the NHS for many years. The breast team at WATW have implemented an after care model comprising a stratified follow up pathway, which is tailored to meet patient individual concerns, based on promoting recovery, health and well-being, rather than the traditional medical model; subsequently improving patient outcomes and experiences.
Background & Aims: Evidence suggests the traditional model did not meet the individual psychological needs of breast cancer patients. Changes to the traditional breast aftercare pathway were also intended to ensure a better use of NHS resources by the removal of unnecessary follow up appointments.
Method: The initiative was to implement the Macmillan recovery package, providing patients with a 45-60 minute nurse-led treatment summary appointment at the end of initial treatment, all elements of diagnosis, surgery, treatments, potential signs of recurrence and health promotion is discussed. A holistic needs assessment is completed and patients are invited to attend a breast health and well-being event.
A surveillance mammogram is also offered at the appropriate time.
Results: A patient satisfaction questionnaire shows 99% of patients strongly agreed that the aftercare provided met all their needs and 98% felt

confident in contacting their breast care nurse.
This new model won the Macmillan excellence award for service improvement in November 2017.
Conclusion: All breast follow up patients' are offered a treatment summary appointment; saving 2,128 consultant follow up appointments to date.

19. SURGERY AND SYSTEMIC THERAPY IN OLDER WOMEN WITH EARLY STAGE TRIPLE NEGATIVE BREAST CANCER (TNBC) IN ENGLAND: A POPULATION BASED COHORT STUDY WITHIN THE NATIONAL AUDIT OF BREAST CANCER IN OLDER PATIENTS (NABCOP)

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Introduction: Chemotherapy is the only systemic therapy that can be used in TNBC and consequently there are no less toxic systemic treatments for older women with TNBC. The study evaluated the use of surgery and chemotherapy for early stage TNBC in women aged ≥70yrs compared to those aged 50–69yrs, as part of NABCOP.
Methods: Women aged ≥50yrs with unilateral early stage (1-3a) TNBC in England diagnosed between 2014–2016 were identified from the national cancer registry and linked Hospital Episode Statistics (HES) datasets. Use and details of chemotherapy were obtained from the national Systemic Anti-Cancer Therapy (SACT) dataset.
Results: Among 88,115 women aged ≥50yrs with early invasive breast cancer, 7% (n=5,734) had TNBC. Of these, 37% were aged ≥70yrs. Tumour characteristics were comparable across age groups; most were grade 3 (77%) and TNM stage 2 (54%).
The overall rate of surgery was 94%; only women aged ≥85yrs had a substantially lower rate at 76%. Among 5,411 women receiving surgery, 12% received neoadjuvant and 36% adjuvant chemotherapy, and the use of both decreased with age. Lower grade, lower stage, absence of axillary nodal involvement and poor fitness were strongly associated with not receiving chemotherapy.
Women aged ≥70yrs were more likely to receive anthracycline-based and less likely to receive a taxane-containing chemotherapy regimen compared to women aged 50-69yrs. Use of bisphosphonates increased in each study year, across all age groups.
Conclusion: Majority of women aged ≥50yrs with early stage TNBC received surgery. Fewer fit older women received chemotherapy and prescribed regimens varied by age.

20. AURICULAR ACUPUNCTURE IN TREATING MENOPAUSAL SYMPTOMS CAUSED BY BREAST CANCER TREATMENT – A PILOT STUDY

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Introduction: Hot flushes affect 51% to 81% of women with breast cancer and negatively impact quality of life. Integrative oncology can be effective at reducing these adverse symptoms. We explored the efficacy of auricular acupuncture in ameliorating symptoms of hot flushes, and improving quality of sleep and feeling of well-being when given to cancer patients within a dedicated support centre.
Methods: A prospective pilot study was conducted between April 2016 and August 2017 at a single cancer support centre within the UK. Consent was obtained from 106 patients referred with menopausal symptoms associated with hormonal treatment. Eligible patients were offered four weekly sessions of auricular acupuncture, and subsequent 'top-up' sessions. Participants completed a self-assessment questionnaire at baseline and at end of treatment using an adapted version of the validated Measure Yourself Concerns and Wellbeing evaluation tool.
Results: 77.4% of patients reported improvement in hot flush symptoms. At baseline, most patients reported severe hot flushes, improving to moderate after treatment, Wilcoxon Signed Ranks Test Z value = -8.24, $p < 0.001$. On a Likert scale of 0 to 6, this was equivalent to a reduction by 2 Likert points (95%CI 1.93 to 2.42, $p<0.001$). Sleep quality was better in 66% with equivalent reduction of 1.72 Likert points (95%CI 1.44 to 2.00, $p<0.001$). Well-being was better in 52.8%, improving from moderate to mild; 1.03 point reduction (95%CI 0.76 to 1.30, $p<0.001$).
Conclusion: Auricular acupuncture reduced the severity of hot flushes, and improved sleep quality and well-being.

21. OUTCOMES OF VASCULARISED LYMPH NODE TRANSFER FOR MANAGEMENT OF BREAST CANCER RELATED LYMPHOEDEMA

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Introduction and Aims: Lymphoedema can be a debilitating consequence of breast cancer treatment. Vascularised lymph node transfer (VLNT) is a relatively novel surgical technique for management of this condition. The aim was to evaluate the effectiveness and patient reported outcomes of VLNT.
Material and Methods: Between November 2012 and October 2017 sixteen patients underwent VLNT in combination with delayed deep inferior epigastric artery perforator (DIEP) free flap breast reconstruction. Pre and postoperative measurements of arm circumference at 3 fixed points were recorded. Patients were invited to complete a validated quality of life questionnaire for limb lymphoedema (LYMQOL).
Key Results: Postoperative upper limb measurements at all 3 points were significantly reduced from preoperative values ($p<0.005$). The circumferences of the upper limbs were reduced by an average of 3.8% at the deltoid insertion; 3.3% at the upper forearm and 5.2% at the wrist.
LYMQOL results following VLNT showed significant reductions on the effects of lymphoedema on patients' lives with statistically significant improvements in 4 of 5 domain scores - appearance, function, symptoms and QoL (all $p<0.008$).
Conclusion: VLNT is a promising surgical option for women with breast cancer related lymphoedema undergoing delayed DIEP reconstruction. It improves signs and symptoms of lymphoedema and significantly improved quality of life in these patients.

22. SNAKES AND LADDERS: THE HIGHS AND LOWS OF THE BREAST CANCER JOURNEY AND CLINICAL NURSE SPECIALIST INTERVENTION

Amanda Lowe, Samantha Giles, Jackie Noakes. *Gloucestershire Hospitals NHS Foundation Trust, Cheltenham, United Kingdom*

Breast clinical nurse specialists were invited to demonstrate the variety of work they do to other cancer CNS teams and senior leaders within the trust in order to increase understanding of their role.
The National Institute for Healthcare and Excellence (NICE) guideline for early and locally advanced breast cancer advises that all people with breast cancer should have a named clinical nurse specialist (NICE 2018).
As breast clinical nurse specialists we wanted to demonstrate our role in a visual and easily accessible way. We therefore created a large, colourful poster of a 'Snakes and Ladders board' with specific problems faced by breast cancer patients and outcomes of interventions attached. This was a pictorial analogy to represent the highs and lows seen in the breast cancer journey from diagnosis through surgery and adjuvant treatments to living with and beyond cancer.
The snakes represent the emotional, physical and psychological lows of the journey. The clinical nurse specialist intervention is noted at the bottom of the snake to identify the holistic support given.
The ladders represent the tools provided by the clinical nurse specialist to enable the person to climb the rungs to a better sense of control, emotional well-being, body image and ultimately self-management.
The board brought about a lot of discussion. It increased engagement with other cancer site clinical nurse specialists and senior managers and raised awareness of how breast clinical nurse specialists are implementing the NHS 6Cs (NHS England 2016) and our Trust's Journey to Outstanding (GHNHSFT 2018).

23. LONG-TERM OUTCOMES OF BILATERAL THERAPEUTIC MAMMOPLASTY - CLINICAL CHARACTERISTICS AND QUALITY OF LIFE

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Introduction: Therapeutic mammoplasty is the use of breast reduction techniques and radiotherapy to treat breast cancer. We have been performing therapeutic mammoplasties and simultaneous contralateral reductions at the Edinburgh Breast Unit (EBU), and would like to share our indications, approach and technical refinements.
Methods: A database of all breast cancer patients at EBU from 2007-2017 was analysed. Case note analysis was performed for all patients who underwent therapeutic mammoplasty and simultaneous contralateral reductions. BREAST-Q has been used to assess quality of life.
Results: 104 patients underwent therapeutic mammoplasty and simultaneous contralateral reductions. All were discussed at the breast multidisciplinary team meeting, and deemed to have large breasts suitable for this technique. Oncological incomplete excision rate was 3% (n=3); local recurrence rate at 5 years was 3% (n=3) and 8% (n=8) developed cancer metastasis. On the cancer side, a variety of pedicles were used to reconstruct the volume deficit following cancer resection (a single pedicle [superior/superiomedial/inferior/lateral], extended pedicle or a combination of a single and secondary pedicle). A simple algorithm will be presented. On the non-cancer side, all patients received wise pattern superomedial pedicle reductions (regardless of the pedicle used on the cancer side). 3% (n=3) subsequently requested revision surgery (2 scar revisions, 1 liposomodelling) to improve cosmesis.
Conclusion: Therapeutic mammoplasty and simultaneous contralateral reduction is a suitable surgical option in select patients, with good oncological safety profile and favourable cosmesis. We hereby share our 10-year experience including PROMS.

24. WHAT'S BEST? TEAM-APPROACH BREAST CARE NURSING VERSUS 1-1 BREAST CARE NURSING – YOU DECIDE!

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National guidelines state that all breast cancer patients must have a keyworker but does not stipulate how this should be carried out. The theory behind the keyworker strategy is that communication will be improved and patients can build a relationship with that particular member of staff but what happens when this member of staff is away?
For this reason our Trust has implemented a team approach to breast care nursing but this approach has been challenged when we are assessed for quality assurance in relation to a perceived lack of continuity and a possible negative affect on patient care.
We therefore decided to ask patients to complete a patient questionnaire asking them about their opinion on whether they would prefer to have one keyworker or a team of keyworkers with the intention of reviewing practice if patients indicated it was necessary. Interestingly the majority of patients stated that they had no preference.
The breast care nursing team have robust systems in place to ensure excellent levels of communication and documentation and the team approach has enabled developments which have greatly improved patient care. It has also allowed patients to speak to a breast clinical nurse specialist at the time that they have the concern or question which in turn decreases their anxiety and actually helps build a rapport. The benefits and disadvantages for both methods of care will be discussed with the intention of commencing a thought-provoking debate which will lead to changes in practice.

25. THIS ABSTRACT HAS BEEN WITHDRAWN

26. SURGICAL MANAGEMENT OF DCIS DURING THE SLOANE PROJECT

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Introduction: The Sloane Project is a prospective cohort study, including 50% of UK screen detected DCIS (2003-2012).
Methods: Trends in type of breast surgery were compared with DCIS radiology, pathology and breast size.
Results: Of 10071 patients with complete data undergoing surgical excision, 2194 (21.8%) underwent mastectomy, of whom 1499 (68.3%) had simple mastectomy. Among 7877 undergoing breast conserving surgery (BCS), 83 (1%) had therapeutic mammoplasty (TM). The 4:1 BCS:mastectomy ratio remained consistent over time.
Over the decade, DCIS excised at BCS was 19.3mm (mean), at TM was 32.4mm and at mastectomy was 39.8mm. The rates of simple mastectomy decreased from 76.5% to 64.7% while there was a small increase in TMs (from 0.2% (2 patients) [2003-4] to 2% (18 patients) [2011-12]).
There was a statistically (but small [8%] clinically) significant difference in mean breast volume for BCS compared to mastectomy patients (1068ml vs 988ml respectively, p<0.0001). Mean breast volume (determined from mammography measurements) increased by 16% over the 9 years (from 1005ml to 1166ml). Size of DCIS excised increased year on year from mean 21.4mm to 24.1mm. Despite increasing breast volume, extent of the DCIS excised by WLE remained constant over time while size of DCIS excised at mastectomy increased from 36.5mm to 45.6mm.
Conclusion: Breast size and pathological size of screen detected DCIS both increased between 2003 and 2012, but BCS rates remained constant. Interestingly breast size had no apparent influence on type of surgery, although the decrease in simple mastectomy suggests breast reconstruction increased over time.

27. MULTIFOCALITY IN BRCA-ASSOCIATED BREAST CANCER: A CROSS-SECTIONAL ANALYSIS

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Introduction: Multifocal breast cancer (BC) is reported in around 10% of BCs, although previous studies have not specifically addressed its incidence in BRCA mutation carriers. We hypothesised that multifocal disease may be more common in these patients, due to genomic instability resulting in widespread field changes within breast tissue. This study set out to investigate prevalence of multifocality in BRCA-association BC in Northern Ireland.
Methods: Clinical and pathological data was retrospectively collected from 211 women with BRCA-associated BC diagnosed over a 20 year period, following approval by the Trust Audit Department. Differences in tumour characteristics were explored using Chi-squared and t-tests; odd ratios for multifocality were calculated using logistic regression analysis.
Results: 43% of women had BRCA1 and 57% BRCA2 mutations. Mean age at diagnosis was 45 years. Overall prevalence of multifocality was 25% but prevalence amongst BRCA2 carriers was over double that of BRCA1 carriers.

		BRCA status	
		BRCA1 *N* (%)	BRCA2 *N* (%)
Tumour focality	**Multifocal**	***12* (13.3)**	***40* (33.1)**
	Unifocal	***78* (86.7)**	***81* (66.9)**

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

Aikaterini Micha[1], Victoria Sinnett[1], Robin Wilson[1], Elisabeth Adams[2], Elaine Patrick[1], Lauren Hector[1], Carla Chamberlain[3], Ruth Edmonds[3], Briony Bishop[3], Gerard Gui[3], Fiona MacNeill[3], Nicola Roche[3], Marios Tasoulis[3], William Allum[1], Peter Barry[1], Jennifer Rusby[1], Katherine Krupa[1]. [1] *Royal Marsden NHS Trust, Sutton, United Kingdom;* [2] *Aquarius Population Health, London, United Kingdom;* [3] *Royal Marsden NHS Trust, London, United Kingdom*

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 clinicopathological 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-availablity 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. Emperical steroid and immunomodulater use is not without side effects and comes at the cost of poor patient compliance.