

**Introduction:** Therapeutic mammoplasty (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

Radhika Merh, Haresh Devalia, Mohsin Dani. Maidstone and Tunbridge Wells NHS Trust, Maidstone, United Kingdom

**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

Shazia Khan, Emma MacInnes, Irene Athanasiou, Haley Hocking, Ghulam Wattoo, Kadappa Kolar, Clare Rogers, Olumuyiwa Olubowale, Kathryn Rigby, Nazir Kazzazi, Lynda Wyld. Doncaster & Bassetlaw Teaching Hospitals NHSFT, Doncaster, United Kingdom

**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)

Amy R. Godden<sup>1,2</sup>, Aikaterini Michal<sup>1</sup>, Carol Pitches<sup>1</sup>, Lisa Wolf<sup>1</sup>, Patricia Alderton<sup>3</sup>, Katherine D.C. Krupa<sup>1</sup>, Peter A. Barry<sup>1</sup>, Jennifer E. Rusby<sup>1,2</sup>. <sup>1</sup>Royal Marsden NHS Foundation Trust, Sutton, United Kingdom; <sup>2</sup>Institute of Cancer Research, London, United Kingdom; <sup>3</sup>Royal Marsden NHS Foundation Trust, CTU, Sutton, United Kingdom

**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

Rebecca L. Wilson<sup>1</sup>, Katie Stocking<sup>2,1</sup>, Cliona C. Kirwan<sup>2,1</sup>, Joseph M. O'Donoghue<sup>3</sup>, Richard A. Linforth<sup>4</sup>, Richard K. Johnson<sup>1</sup>, James R. Harvey<sup>1,2</sup>. <sup>1</sup>Manchester University NHS Foundation Trust, Manchester,