total nipple necrosis and infection, hematoma, skin necrosis and wound dehiscence and reconstruction outcome results.

RESULTS: Reconstruction was achieved without any failure or NAC losses in all 40/40 breasts, 20 bilateral targeted two stage risk reducing mastopexy/reduction and NSM/SIR procedures. Patients median BMI was 30(22–44). Six patients were smokers and one had hypertension. Anatomical shaped silicone implants were used in all cases, average size 555 cc, (310 to 690). Average OR time for NSM/SIR was 125 minutes (90 to 235). The median time between procedures was 133days (105–266). Two patients had a re-operation due to hematoma and fat necrosis. Five patients had minor complications. The median follow-up is currently 220 days (30 to 602).

CONCLUSION: Targeted preshaping mastopexy/reduction of the large, ptotic and deformed breast prior to NSM/SIR has proven to be a successful method to overcome the drawbacks of the procedure for this challenging group of patients. It can be planned and performed safely with a time span of three to four months between surgeries. It appears that the nipple areola complex is pre-conditioned by this two stage approach as we did not experience any vascular compromise or necrosis of the NAC, even in high risk patients.

DISCLOSURE/FINANCIAL SUPPORT: None

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The Nipple-Areola Preserving Mastectomy

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BACKGROUND: Conservative mastectomy procedures, such as the nipple-sparing mastectomy (NSM), present appealing options for patients with small invasive or non-invasive malignancies, and those needing prophylactic mastectomies. Despite outstanding postoperative cosmetic results, nipple-areola complex (NAC) and mastectomy skin flaps (MSF) survival remains a concern, with nipple excision secondary to partial or total necrosis been noted in up to 30% of the cases following nipple-sparing mastectomies (NSM).1–4 The two-stage nipple-areola preserving (NAP) mastectomy, aims to decrease the rate of NAC loss and MSF necrosis following conservative mastectomies.

MATERIAL AND METHODS: Seventy patients who underwent NSM due to malignant and benign conditions, were divided into two groups: those who underwent our two-stage NAP mastectomy were matched to the group of mastectomy patients without preservation techniques. Demographic data and postoperative results were retrospectively assessed.

RESULTS: The NAP group comprised 45 flaps (24 patients) and the NSM group comprised 75 flaps (46 patients), with no significant difference in terms of age, BMI or ASA score. None were actively smoking. Mean time between the delay of the flap and breast reconstruction was 17.6 days (range of 10–35 days) in the NAP group. No signs of NAC vascular compromise were observed in the NAP group. Nipple necrosis rates were significantly greater (p=0.0136) in the NSM group. Two patients within the NAP group required nipple excision at the time of their mastectomies after biopsies performed at the time of the NAC delay were positive for malignancy or atypia.

CONCLUSION: Vascular delay techniques favor the blood supply of a tissue following a surgical wound, effectively improving the survival of the NAC and MSF after nipple-sparing mastectomies.

DISCLOSURE/FINANCIAL SUPPORT: Aside from the inherent commercial interest, none of the authors has a financial disclosure for any of the products or devices mentioned in this manuscript.

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Breast Tissue Expanders and MRI: Defining Surgeons’ Opinions, Clinical Outcomes, and Optimal Parameters for Safety

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INTRODUCTION: Manufacturers’ claims that internal (ferromagnetic) port-containing breast tissue expanders (FPCBTE) are contraindicated in magnetic resonance imaging (MRI) surprisingly lack direct experimental basis, and may unwittingly negatively impact patient care. This study sought to define surgeons’ opinions on the compatibility of MRI and FPCBTE, determine if they can be safely combined, and identify modifiable variables that can maximize safety.

MATERIALS AND METHODS: First, ASPS members were given a validated, web-based survey of their opinions on the compatibility of FPCBTE and MRI. Second, a review of patients with FPCBTE who had undergone 1.5 Tesla (T) MRI has been performed. Finally, ex-vivo study of FPCBTE from each FDA-approved manufacturer (Natrelle, Sientra, and Mentor) was undertaken in different MRI settings (3T, shielded 1.5T, and unshielded 1.5T), measuring both torque and deflection angle.

RESULTS: In the survey, 48% of survey respondents believe FPCBTE is an absolute contraindication to MRI, and a full 28% reported that they would only offer delayed reconstruction if the possibility of requiring an MRI existed. Finally, 75% would recommend non-MRI imaging or an additional anesthetic episode if a patient with FPCBTE required MRI. In the clinical series, there were no complications (pain, heat, migration, skin changes, or capsule changes) among 71 women with FPCBTE who underwent 1.5T MRI. In the ex-vivo study, Natrelle devices had the least torque and smallest deflection angles in all 3 environments, and that unshielded 1.5T MRI exerted the least ferromagnetic effect in devices from each of the 3 manufacturers.

CONCLUSIONS: Our study confirms that the compatibility of FPCBTE and MRI is largely misunderstood, it is possible for MRI to be safely performed with FPCBTE in place, and, in an experimental setting, Natrelle devices in unshielded 1.5T MRI were least affected by the magnetic force. This study defines a widespread misunderstanding that has implications for a generation of women, and works towards a better understanding of the modifiable variables that can allow women to undergo the safest, highest quality breast reconstruction.

DISCLOSURE/FINANCIAL SUPPORT: None of the authors has a financial interest in any of the products, devices, or drugs mentioned in this manuscript.

Technique to Promote Symmetry in Two-Staged Bilateral Breast Reconstruction in the Setting of Unilateral Post-Mastectomy Radiation

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INTRODUCTION: Bilateral breast reconstruction in the setting of unilateral post-mastectomy radiation therapy (PMRT) remains one of the most difficult reconstructive challenges due to significant radiation-induced asymmetry from capsular contracture and superior migration of the irradiated reconstructed breast. We describe a novel and straightforward intraoperative technique for creating compensatory asymmetry to maximize post-radiation symmetry in immediate bilateral tissue expander (TE) and acellular dermal matrix (ADM) reconstruction requiring unilateral PMRT.

MATERIALS AND METHODS: A cohort of 25 bilateral TE/ADM breast reconstructions with planned unilateral PMRT was performed using this approach and outcomes were reviewed. On the PMRT side, the ADM edge was inset to a lower inframammary fold (IMF) position resulting in a near “bottoming-out” effect. On the non-PMRT side, the ADM was inset using a triple point stitch onto the IMF in a higher chest wall location. The planned PMRT side TE was over-expanded and second-stage exchanges were performed 6+ months post-PMRT.

RESULTS: Post-PMRT results showed improved symmetry as the PMRT side migrated superiorly to match the contralateral non-irradiated side. Minimal pocket or IMF adjustments were required during second-stage procedures, with just six patients (24%) requiring minor lowering and one patient (4%) requiring elevation of the PMRT side IMF. Thus, a majority (72%) of patients undergoing bilateral mastectomy and unilateral PMRT did not require any IMF modifications during the second-stage procedure.

CONCLUSION: A differential ADM inset and TE pocket creation for bilateral TE/ADM breast reconstructions with planned unilateral PMRT can minimize the typical adverse aesthetic effects of PMRT on reconstruction results and maximize symmetry.