(p<0.05). No significant differences were noted regionally between autologous and non-autologous procedures when comparing race (p>0.05). More NAR surgeries were performed regionally and nationally compared with AR.

**CONCLUSION:** There appears to be a racial disparity among patients who have mastectomies and those that receive immediate breast reconstruction. However, there does not appear to be racial differences when choosing a particular reconstructive technique. There are more NAR surgeries being performed regionally and nationally when compared to AR.

**P55. PREGNANCY ASSOCIATED BREAST CHANGES AFTER NIPPLE SPARING MASTECTOMY**

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**PURPOSE:** We evaluate patients of reproductive age who have undergone nipple sparing mastectomy (NSM) and implant-based reconstruction, comparing those who have become pregnant and those who have not with respect to clinical and radiologic changes reported on follow-up. Recent studies suggest that almost 40% of patients diagnosed with breast cancer, who are of reproductive age, want to have children after completing treatment. However, there is a dearth of literature evaluating outcomes for this population.

**METHODS:** Any patient 45 years of age or younger at the time of NSM was defined to be of reproductive age and selected for evaluation and followed prospectively. The presence or absence of breast exam changes in the setting of pregnancy after NSM were recorded.

**RESULTS:** 35 patients became pregnant after NSM and 159 patients did not become pregnant after NSM. Of those who became pregnant, nearly half reported some clinical change just prior to, or immediately after delivery. These included color change and discharge at the residual nipple areolar complex, and palpable nodularity elsewhere. For those with palpable changes, an ultrasound was performed and hypoechoic lesions with variable vascularity were identified. For those who went on to excision, lactational hyperplasia was the most common diagnosis.

**CONCLUSION:** This study aids clinicians in guiding patients who plan on becoming pregnant after NSM. Patients who became pregnant after NSM commonly had clinical breast changes, with majority found to be benign. Ultrasound is an appropriate first line investigation for changes including hyperplasia of remaining ductal and glandular tissue.

**P56. FACTORS ASSOCIATED WITH IMPLANT FLIPPING IN IMMEDIATE BREAST RECONSTRUCTION**

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**PURPOSE:** Implant-based reconstruction remains the most common form of post-mastectomy breast reconstruction. With ever-evolving device characteristics, including the advent of high-profile, cohesive, fifth-generation implants, the incidence of anterior-posterior flipping of implants is presenting a new challenge. Patient and device characteristics associated with this phenomenon have yet to be fully elucidated.

**METHODS:** Patients who underwent nipple- or skin-sparing mastectomy with subsequent two-stage or direct-to-implant reconstruction with smooth implants between 2015 and 2021 were retrospectively identified and stratified by incidence of implant flipping. Patient, procedural, and device characteristics were compared.

**RESULTS:** A total of 165 patients (255 breasts) were evaluated. 14 cases of implant flipping were identified (flip rate 5.5%). All flips occurred in patients with cohesive implants (OR 87.0, p=0.002). On univariate analysis, extra full implant profile (OR 11.2, p<0.001) and use of a smooth tissue expander for two-stage reconstruction (OR 4.1, p=0.03) were associated with flipping. Implants that flipped were larger than those that did not (652.5 ± 117.8 versus 540.1 ± 171.0 cc, p=0.0004). Prepectoral implant placement (OR 2.7, p=0.08) and direct-to-implant method (OR 3.17, p=0.07) trended toward association, but this effect was not significant. Patient BMI, weight fluctuation during the reconstructive course, mastectomy weight, ADM use, and seroma or periprosthetic infection were not associated with flipping.
CONCLUSION: Patients who receive a highly cohesive, high profile, larger implant appear to be at higher risk for implant flipping. These device characteristics are an important consideration in device selection to minimize discomfort, aesthetic deformity, and the need for reoperation.

P57. TOTAL BREAST RECONSTRUCTION WITH REVERSE EXPANSION (RE) AND AUTOLOGOUS FAT TRANSFER (AFT): SINGLE CENTER EXPERIENCE WITH 2000 BREASTS

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PURPOSE: Autologous breast reconstructions provide long-term patient satisfaction but flaps are in-patient invasive procedures with morbidities and potential complications. Less invasive AFT reconstructions stall because fat is not an expander. This may be solved by pre-expansion of the mastectomy followed by AFT to the de-expanded recipient laxity.

METHODS: For the immediate reconstructions, we insert subpectoral expanders and graft 150-200ml as individual fat ribbons teased in-between the exposed muscle fibers. After adequate post-operative expansion, we remove the expander and graft the expanded tissues with 200-400ml of fat and restore the breast mound by inserting an implant half the expander volume. To convert the already-expanded implant reconstructed breasts to autologous fat, we remove the implant, replace it with a 50% smaller one and graft the loosened tissues. In both situations we repeat the procedure every three months till the patient is implant free.

RESULTS: We reviewed 2000 consecutive breasts reconstructions with RE and AFT performed in our ASC. Non-radiated mastectomies required 3.2 sessions. At each session, the expanded breast volume remained constant as the intervening mastectomy tissue volume doubled while the implant volume halved. Radiated breasts took 5.8 sessions, with less grafting and less than halving implant size per session. Patient satisfaction was very high, especially in implant to fat converted patients. Complications were minimal, more frequent in the radiated breasts and mostly due to overgrafting or excessive scar release in previously complicated reconstructions.

CONCLUSION: Despite our extensive experience with flaps, RE and AFT is now our favorite breast reconstruction method. Patients like it best.

P58. RISK OF POST MASTECTOMY LYMPHEDEMA IN AUTOLOGOUS BREAST RECONSTRUCTION: A MULTI-CENTER 10-YEAR ANALYSIS OF 9,660 PATIENTS STRATIFIED BY FLAP-TYPE AND TIMING OF RECONSTRUCTION

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PURPOSE: Following mastectomy, over 20% of women experience lymphedema. Previous studies suggest a possible protective effect of breast reconstruction against lymphedema development. This study analyzes risk of developing post-mastectomy lymphedema following autologous reconstruction by flap-type and temporality using a real-time, federated electronic medical record network (TriNetX Inc, Cambridge, MA).

METHODS: 85,776,922 de-identified patient records were retrospectively screened from 2006-2021. 60,157 post-mastectomy patients aged 18-99 met criteria and were allocated into paired cohorts using common procedural terminology codes. Cohorts were then compared to assess lymphedema outcomes relative to timing (immediate vs. delayed) and flap-type (DIEP/TRAM/lattissimus). Paired cohorts were compared and stratified by timing of reconstruction. Outcomes were assessed following stringent balancing for age, race, radiation, chemotherapy, hormone therapy, smoking, diabetes, obesity, and axillary lymph node dissection. Post-operative lymphedema rates within 2, 5, and 10-years of mastectomy were analyzed.