versus 5420um2). In addition, LACB nerves had a larger area per fascicle than the ACB nerves (6784um2 versus 5420um2), demonstrating differences in individual fascicle size between LACB and ACB nerves.

CONCLUSIONS: A better understanding of characteristics of the anterior cutaneous intercostal nerve branches can optimize the site of recipient site coaptation. On preparation of the internal mammary vessels, preservation of the LACB can provide better size, with good sensory innervation for coaptation.

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Routine Sampling of Internal Mammary Lymph Nodes During Microsurgical Breast Reconstruction – Experience Based on 524 Microsurgical Breast Reconstructions

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PURPOSE: Exploration of the internal mammary vessels during microsurgical reconstruction presents an ideal opportunity for identifying and sampling the internal mammary lymph node (IMLN) basin.

METHODS: A retrospective review of patients undergoing microsurgical breast reconstruction using the internal mammary vessels as recipient vessels was conducted from March 2000 to December 2014. Patient demographics, tumor characteristics, preoperative lymph node mapping, reconstructive timing and outcomes were studied.

RESULTS: A total of 524 microsurgical breast reconstructions in 516 patients were performed using the internal mammary vessels. IMLNs were sampled in 53 immediate and 42 delayed breast reconstructions. Eight (seven in the immediate and one in the delayed group) of the sampled nodes were positive for cancer metastasis, for an incidence of 8.4% in identified lymph nodes. All patients with metastatic IMLNs subsequently received local-regional radiation and chemotherapy. All patients were alive, and 6 were disease-free at the conclusion of the study period, which had an average follow up of 67.3 months.

CONCLUSION: Visible IMLNs should be routinely sampled during recipient vessel preparation for microsurgical breast reconstruction. This series underscores the essential role of plastic surgeons in assisting with disease staging to provide adequate adjuvant treatment and improve the survival of breast cancer patients.

Comparison of Donor-Site Morbidity, Functional Outcome, and Pain Following Abdominal Autologous Breast Reconstruction

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PURPOSE: Abdominal flap reconstruction is the most popular form of autologous breast reconstruction given its superior long-term aesthetic outcomes. Options include pedicled TRAM (PTRAM), free TRAM (FTRAM), DIEP, and SIEA flaps. Prior studies comparing outcomes among these modalities have often produced contradictory results. The current study aims to compare abdominal donor-site morbidity, functional outcome, and patient satisfaction among these autologous flap reconstructions.

METHODS: Drawing from the practices of 11 centers and 57 surgeons, patients undergoing PTRAM, FTRAM, DIEP, SIEA, or mixed MS-FTRAM+DIEP flaps were prospectively evaluated for abdominal donor-site complications and patient-reported outcomes (PROs). The PROs were measured by BREAST-Q survey to assess breast satisfaction and well-being-abdomen, and PROMIS survey to assess physical function and pain, pre-operatively and at one and two years post-operatively. Mixed effect regression models were used
to assess the effects of procedure type on outcomes, controlling for a range of demographic and clinical variables.

RESULTS: One year follow-up data were available for 693 patients, including 90 PTRAMs, 104 FTRAMs, 398 DIEPs, 62 SIEAs, and 39 Mixed flaps. Among these, 463 patients had two year data (56 PTRAMs, 76 FTRAMs, 261 DIEPs, 44 SIEAs, and 26 Mixed flaps). In the regression model, DIEPs and SIEAs were associated with higher donor-site complication rates at both one (OR=2.2, p=0.03; OR=5.1, p<0.001, respectively) and two years (OR=3.3, p=0.004; OR=7.3, p<0.001), compared with FTRAMs. Analysis of BREAST-Q results at one year showed higher levels of physical well-being-abdomen for DIEPs (Beta=5.6, p=0.02) and SIEAs (Beta=9.3, p=0.007), compared with FTRAMs. Bilateral reconstructions were associated with significantly lower scores on BREAST-Q physical well-being-abdomen (p<0.0001) and with higher PROMIS pain scores (p=0.005), compared with unilateral procedures. Although no procedure effects were seen in physical function or pain on the PROMIS survey at one or two years, older age and higher BMI were associated with lower physical function at two years.

CONCLUSION: Our findings suggest that although DIEP and SIEA flaps are associated with higher risks of complications, they may have less impact on abdominal well-being in the short term, compared with TRAM flaps. Further research is needed on the long-term impacts of these procedures.

Ultrasound Study of the Natrelle 410 Anatomical Silicone Breast Implant Rupture: Over a 5-Year Follow-Up

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PURPOSE: The incidence of breast implant rupture, an important complication, is on the increase. Ruptures usually start as shell rupture, gradually progress into intracapsular rupture, and finally progresses into extracapsular rupture or silicone granuloma. It is recommended that ruptured implants are exchanged before they progress into silicon granuloma. However, since a lower rate of lifetime reoperations is desirable, it is important to ascertain the appropriate time to undergo the operation. Although magnetic resonance imaging is the golden standard for detecting ruptures, ultrasonography is lately recognized as a fast and convenient option. The aim of this study is to reveal rupture rates and to define typical signs of shell rupture and intracapsular rupture.

METHODS: This study included 345 women with 460 implants (379 breast reconstruction and 81 contralateral breast augmentation, all of them were Natrelle 410 breast implants) who had undergone breast reconstruction surgery after mastectomy from 2005–2010 in our institute. From 2014, the authors started ultrasonography on annual visits. Plastic surgeons or ultrasound technicians evaluated implants with high frequency linear probe (12MHz) and classified them into 5 signs (normal, minor shell split, isolated liquid sign, hyperechoic gel between capsule and shell, and hyperechoic inner silicone gel). Magnetic resonance imaging and implant exchange were performed on possibly ruptured implants.

RESULTS: Follow-up rate was 86%. Overall rupture rate at over 5 years was 3.3% (15 of 460 implants). Of those, 9 implants had intracapsular rupture (all of them were exchanged) and 6 implants had shell rupture (2 were exchanged and 4 were put on continuous follow-up). Two explanted implants which had shell rupture showed the ultrasonographic signs of minor shell split or isolated liquid sign. Even though there were very small holes in the shell, shell ruptured implants kept their form and cohesiveness. Nine implants which had intracapsular rupture no longer kept their original form so it was difficult to remove their leaked gel completely. Intracapsular ruptured implants showed both signs of hyperechoic gel between capsule and shell, and hyperechoic area in silicone gel.

CONCLUSIONS: Overall rupture rate was similar to the Natrelle 410 Core Study. In this study, we could distinguish between shell rupture and intracapsular rupture using ultrasound. And implants that had shell rupture were put on careful follow-up until they progress into intracapsular rupture.

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An Algorithm for Creation of the Male Nipple Areolar Complex in the Female to Male Transgender Population

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INTRODUCTION: Female to male (FTM) chest wall reconstruction is becoming widespread in the North