

## **Autologous Fat Grafting Does Not Increase Risk of Oncologic Recurrence in the Reconstructed Breast**

**Presenter: Max A. Shrout, MD**

**Co-Authors: Krishna S. Vyas, MD, PhD, MHS, Ryan C. DeCoster, MD, Jack C. Burns, MD, MS, Louis C. Rodgers, BS, James P. Mercer, BS, Brian D. Rinker, MD, Henry C. Vasconez, MD**

**Affiliation: Mayo Clinic Arizona, Phoenix, AZ**

**Introduction:** Autologous fat grafting (AFG) is a popular and effective method of breast reconstruction following mastectomy; however, the oncological safety of AFG remains in question. The purpose of this study is to determine if AFG increases the risk of cancer recurrence in the reconstructed breast.

**Methods:** A matched, case-control study was conducted from 2000 to 2017 at the senior author's institution. Inclusion was limited to female patients who underwent mastectomy and breast reconstruction with or without AFG. Data were further subdivided at the breast level. Chi-square analyses were used to test the association between AFG status and oncologic recurrence. A Cox proportional-hazards model was constructed to assess for possible differences in time to oncologic recurrence. The probability of recurrence was determined by Kaplan-Meier analyses and confirmed with log-rank testing.

**Results:** Overall, 428 breasts met study criteria. Of those, 116 breasts (27.1%) received AFG while 312 (72.9%) did not. No differences in the rates of oncologic recurrence were found between the groups (8.2% versus 9.0%;  $p < 1.000$ ). Unadjusted (HR:1.03, CI: 0.41 – 2.60;  $p < 0.957$ ) and adjusted hazard models showed no statistically significant increase in time to oncologic recurrence when comparing AFG to non-AFG. Additionally, no statistical differences in disease-free survival were found ( $p = 0.96$  by log rank test).

**Conclusion:** AFG for breast reconstruction is oncologically safe and does not increase the likelihood of oncologic recurrence. Larger studies (e.g. meta analyses) with longer follow-up are needed to further elucidate the long-term safety of AFG as a reconstructive adjunct.

## **Current Practices in Pathologic Assessment of Breast Tissue in Female-to-Male Transgender Top Surgery**

**Presenter: Jacob P. Veith, MD**

**Co-Authors: Isak A. Goodwin, MD, David Magno-Padron, MD, Katherine A. Panushka, MD, James R. Willcockson, MD, Jared W. Garlick, MD, Cindy P. Matsen, MD, Alvin Kwok, MD, MPH, Cori Agarwal, MD**

**Affiliation: University of Utah, Division of Plastic Surgery, Salt Lake City, UT**

**Purpose:** All genetically female at birth individuals are at risk for developing breast cancer. No guidelines exist for the surveillance of breast cancer in these patients particularly for those choosing to undergo female-to-male transgender top surgery. We aim to investigate current experiences and perioperative practices among American Society of Plastic Surgery (ASPS) member surgeons performing top surgery.

**Method:** An anonymous, 19 question electronic survey was sent to ASPS surgeons. General proportions were calculated from the survey responses.

**Results:** Of the 107 respondents, only 71 (67%) perform top surgery. 28% routinely remove all breast tissue that they encounter and 74% send all specimens for pathologic analysis. High cost to patients was the greatest barrier to sending specimens to pathology. 8.7% reported having had a diagnosis of breast cancer or pre-cancerous finding within a specimen, and 4.4% have had a patient or cared for a patient diagnosed with breast cancer after top surgery. DCIS and atypical ductal hyperplasia were the most commonly found pathologic diagnoses. 85% require breast imaging prior to top surgery in patients over 40 years old. Only 70% counsel patients on postoperative breast cancer screening. Most commonly recommended screening regimens were self and medical professional breast exams.

**Conclusions:** Wide variation exists in the management of pre-, intra-, and postoperative breast cancer screening for patients undergoing female-to-male transgender top surgery. Our data highlights the need for standardization of care and further studies documenting the risk, incidence, and prevalence of breast cancer in the transmasculine population before and after chest surgery.