for prophylaxis, 106 patients (33.3%) underwent unilateral mastectomy for cancer and 23 patients (7%) underwent unilateral mastectomy for prophylaxis. Univariate analysis of data from the bilateral mastectomy with reconstruction cohort showed patients in the therapeutic group had more comorbidities, higher BMIs, and greater ASA scores on average (All p<0.005). Postoperative outcomes were then examined by multivariate analysis, which showed no significant differences in overall complication, reoperation or readmission rates. There was however, a significantly higher surgical-site infection rate within 30-days (p<0.02) and 90-days (p<0.02) in patients who underwent a bilateral prophylactic procedure.

CONCLUSION: Bilateral mastectomy with immediate reconstruction is a safe procedure when performed for therapeutic or prophylactic reasons. Despite being in overall better health, the prophylactic cohort had higher rates of surgical-site infections. More studies will be needed to elucidate the cause of this increased infection rate.

A Review of Our Experience on Gender Affirmation Top Surgeries

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With increasing acceptance, more transmen or non-binary patients are seeking gender affirmation subcutaneous mastectomy (top surgery). The goal of subcutaneous mastectomy is to create a flatter chest contour by removing excess chest tissue and skin, as well as the reducing and re-positioning of the nipple-areola complex. While data is accumulating on top surgery in transmen or non-binary patients, there is a paucity of large cohort studies on top surgery in this patient population.1-4

OBJECTIVES: Our primary goal is to determine whether top surgery can be safely performed in transgender patients seeking gender affirmation chest surgery.

METHODS: This is a retrospective cohort study to describe our experience in top surgery on transmen or non-binary patients between 1st May, 2012 to 31st December, 2016. Several surgical techniques, were used, including double incision, peri-areola incision, breast reduction and buttonhole incision. Complications and revisions were evaluated. Complications included but were not limited to seroma, hematoma, infection, wound dehiscence that required re-operation, hospitalization or medical treatment. Revisions included any operative intervention to modify or improve the contour of the chest, nipple areola complex or scars after the initial top surgery. Patients who were interested in further revision surgeries were also evaluated.

RESULTS: Of the 538 patients, 93.1% had double incision, 4.5% had peri-areola incision, 1.5% underwent breast reduction and the remaining 0.9% had buttonhole incision. Mean age was 29.7 years for double incision, 25.6 years for peri-areola incision, 29.9 for breast reduction and 32 years for buttonhole incision (non-significant). Mean BMI was 27.9 for double incision, 23.5 years for peri-areola incision, 27.6 for breast reduction and 25.8 for buttonhole incision (non-significant). Mean ASA classification was 1.6 for double incision, 1.3 years for peri-areola incision, 1.7 for breast reduction and 1.7 for buttonhole incision (non-significant). Complications occurred at 15.7% for double incision, 21.3% for peri-areola incision, 0% for breast reduction and at 60% for buttonhole incision (p=0.2). Revisions were performed in 18.7% of patients who had double incision, 30.4% of those who had peri-areola incision, 14.3% of those with breast reduction and 40% of those who had buttonhole incision technique respectively. Patients who had complications or revisions were significantly more likely than their counterparts to seek further revisions (47% versus 0%, p=0.049).

CONCLUSION: Top surgery can be safely performed in transmen or non-binary patients. Patients should be carefully selected for the appropriate surgical technique and be educated about the associated risks.

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**Surgical Treatment of Breast Asymmetry Improves Quality of Life in Adolescents and Young Women**

**Presenter:** Joseph M. Firriolo, MD  
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**PURPOSE:** Persistent breast asymmetry beyond skeletal maturity of at least one cup-size difference is associated with psychosocial deficits. This longitudinal cohort study measures the impact of surgical correction of breast asymmetry on adolescent health-related quality of life.

**METHODS:** Validated surveys were administered to skeletally mature females with breast asymmetry undergoing surgical correction and comparably aged female controls: Short-Form 36v2 (SF-36), Rosenberg Self-Esteem Scale (RSES), and Eating-Attitudes Test-26 (EAT-26). Cohorts completed surveys at baseline and postoperatively/follow-up at 6 months, 1 year, 3 years, 5 years, and 7 years.

**RESULTS:** The mean ages of breast subjects (n=42) at surgery and controls (n=103) at baseline were 17.4 and 16.7 years, respectively. All asymmetry forms were included (most frequent size difference was two cups; mean volume difference was 213 mL). At baseline, asymmetry subjects performed significantly worse than controls in the role-emotional SF-36 domain and on the RSES and EAT-26. Postoperatively asymmetry subjects experienced significant improvements in three SF-36 domains (social functioning, role emotional, mental health) and on the EAT-26. These results largely did not vary by age, BMI category, and asymmetry severity. Postoperative asymmetry patients performed equally to controls in all eight SF-36 domains, and on the RSES and EAT-26.

**CONCLUSION:** Surgical correction of asymmetry in adolescents and young women is associated with improved psychosocial wellbeing, unaffected by age, BMI category, or severity. Postoperatively, breast patients performed comparably to unaffected controls. Providers should be aware of the psychosocial improvements surgery can provide adolescents with persistent, distressing asymmetry.

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**Breast Reconstruction Effects on Post Mastectomy Pain Syndrome: A Meta-Analysis**

**Presenter:** Meera Reghunathan, BS  
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**PURPOSE:** Post Mastectomy Pain Syndrome (PMPS) is characterized by neuropathic pain from direct nerve injury during oncologic breast surgery that can result in chronic opioid dependence and long term disability. Reports on prevalence vary greatly, but the negative effects of PMPS on Quality of Life (QOL) and Patient reported outcomes (PROs) are well established. To our knowledge, this study represents the first meta-analysis that defines the incidence of PMPS in patients undergoing mastectomy, with and without subsequent breast reconstruction.

**METHODS:** The Cochrane and PubMed databases were queried using specific key terms related to breast surgery and PMPS. A total of 166 citations from 1991 to 2017 were then reviewed to identify 21 unique manuscripts. Inclusion criteria included study size greater than 30, minimum 2-month follow-up after surgery, and explicit documentation of whether patients pursued post-mastectomy reconstruction. Studies which reported only arm or abdominal pain were excluded. Studies which did not distinguish between post-lumpectomy and post-mastectomy pain were excluded. Comprehensive Meta-Analysis Software and Microsoft Excel was used for statistical calculations. An unweighted single-factor ANOVA was performed to evaluate whether undergoing breast reconstruction significantly effects the incidence of PMPS.

**RESULTS:** Sixteen manuscripts described the prevalence of post-mastectomy pain and 10 described the prevalence of post-reconstruction pain (5 had data for both). Of the 21 included studies, 16 were retrospective cohort/ cross-sectional studies and 5 were prospective studies. Study