macromastia and received both pre- and postoperative surveys. All patients who attended shared medical appointments during the study period were administered the preoperative BREAST-Q® as a condition-specific measure of satisfaction and wellbeing. Patients who received surgical treatment were also administered the postoperative BREAST-Q® at least 3 months after surgery. BREAST-Q® scores range from 0–100 for each tested domain, with 100 corresponding to highest well-being or satisfaction. In addition, we recorded grams of breast tissue removed during surgery and postoperative complications.  

**EXPERIENCE:** During the study period, 22 patients who attended shared medical appointments were scheduled for reduction mammoplasty. Six surgeries were cancelled due to inability to obtain insurance coverage. The remaining 16 patients received surgery, eight of whom have taken follow-up surveys and were thus included in this analysis.  

**RESULTS:** For BREAST-Q domains that were measured pre- and postoperatively, the average scores significantly increased after surgery as follows: satisfaction with breasts increased from 21.8 to 76.0 (p=0.01), psychosocial well-being increased from 40.1 to 85.3 (p=0.04), and physical well-being increased from 24.6 to 83.6 (p=0.01). There was not a significant increase for sexual well-being, though average score increased from 35.8 to 72.8 (p=0.68). Postoperatively, patients also reported an average score of 92.6 for satisfaction with outcome, 81.3 for satisfaction with information, 82.4 for satisfaction with nipples, 100 for satisfaction with surgeon, 100 for satisfaction with medical staff, and 100 for satisfaction with office staff. The average weight of breast tissue removed was 802.0 grams per side.  

**CONCLUSION:** This is the first report of adolescent satisfaction and well-being before and after breast reduction surgery using the BREAST-Q®. Given that we saw a significant increase in patient well-being and satisfaction after surgical treatment, the BREAST-Q® should continue to be validated in the adolescent population so plastic surgeons can further demonstrate the functional and psychosocial benefits of adolescent reduction mammoplasties to third-party payors.  

Reference Citations:  
1. Pusic AL, Klassen AF, Scott AM, et al. Development of a new patient reported outcome measure for breast surgery: the BREAST-Q. Plastic and Reconstructive Surgery 2009;124(2):345–53

---

**Mechanical Analysis of Reduction Mammopasty Effects on Spinal Musculature**  
**Presenter:** George Kamel, MD  
**Co-Authors:** Jonathan Morris, MD; Aaron Lefkowitz, BA; Katie Weichman, MD; Oren Tepper, MD; Evan S Garfein, MD  
**Affiliation:** Montefiore Medical Center, Bronx, NY  

**INTRODUCTION:** Breast weight places a considerable burden on the spine, and can lead to back pain and postural changes. Reduction mammoplasty improves these physical symptoms, but the mechanical effect of the change in breast mass is unknown. The purpose of the study is to examine the mechanical effects of reduction mammoplasty on the forces across erector spinae muscles. It is hypothesized that the patient’s body habitus, breast size and level of ptosis will affect forces across the erector spinae muscles.  

**METHODS:** Using a cantilever model, the sum of the forces and moments were solved in using static modeling parameters. Mechanical models composed thick and thin body width with high mass and low mass grade III ptotic breasts were created. The variables included were body thickness, mass of the breast, and center of gravity of the breast. It was assumed breasts were homogenous and symmetric. The forces were uniformly distributed across the spine and absorbed by the muscles attached to the spinous process. The mass of the breasts and their center of gravity were altered. The reaction forces across the spine was calculated for each combination of body width, change in breast mass, and change in breast center of gravity.  

**RESULTS:** Independent of body habitus, the percentage of breast tissue mass resected was directly proportional to the decrease in forces on the spinal erector muscles. Decreasing the amount of breast tissue below the inframammary fold raised the center of the gravity of the breast. The thinner a patient’s trunk the greater the effect raising the center of gravity had on the forces on the spinal muscles.  

**CONCLUSION:** Reduction mammoplasty reduces the force across the spinal muscles. In thin patients reducing the ptotic grade had a greater effect than in overweight patients. Further
studies are needed to correlate the results of this mechanical model with clinical findings.

**Modification to the Central Mound Breast Reduction Technique: Addition of an Internal Mastopexy**

**Presenter:** Han L.T. Hoang, MD  
**Co-Authors:** Jaco Festekjian, MD; Meaghan Barr, BS; James Rough, MD; Andrew L. Da Lio, MD  
**Affiliation:** University of California Los Angeles, Los Angeles, CA

**INTRODUCTION:** The central mound breast reduction technique was first described by Balch in 1981 and verified by Hester et al in 1985. This technique was originally designed to reduce the post-op ptosis and superior nipple areola tilt. In this technique, the nipple areola complex depends on the parenchymal circulation and not any dermal pedicle. This allows reduction and reshaping of the breast by resection in all directions. However, as with all other breast reduction technique, the reduced breasts often lack superior and medial fullness. We modified the central mound technique by adding an internal mastopexy to add upper pole fullness and to eliminate tension on the skin closure inferiorly.

**METHODS:** All patients who had breast reduction with internal mastopexy from 02/2014 to 02/2016 were included in the study. Demographic data including BMI and post-operative outcomes (including all complications) were retrospectively assessed. In our technique, the primary components of the procedure can be summarized as follows:

1. Wide skin undermining via Wise pattern skin design exposing the entire breast on the breast ‘capsule’ itself.  
2. Circumferential resection of the large and ptotic breast in a dome shaped fashion.  
3. Creation of a superior / upper pole glandular ridge.  
4. Internal mastopexy by securing the cut superior edge of the newly shaped breast mound to the upper pole glandular ridge with absorbably sutures.  
5. Tension free closure of the mammoplasty skin flaps.

**RESULTS:** Twenty patients underwent breast reductions for macromastia or for symmetry. A total of 32 breasts were reduced. Average weight of reduction was 424 g (range from 129 to 748). Average BMI was 27.16 (range 20.7 to 36.86). Average follow up was 162 days (range 6–619). There were no major complications. Minor complications included 3 minor wound breakdowns at the trifurcation point managed conservatively and one hematoma. There were no nipple losses in this series.

**CONCLUSION:** The maximally vascular central mound breast reduction technique is safe. This technique allows surgeons to perform an internal mastopexy which takes most of the tension off of the skin closure and optimally augments upper pole fullness.

**Propensity Score-Matched Analysis of Societal Preference-Based Quality of Life (EQ-5D): A Comparison of Both Autologous and Implant Breast Reconstruction with Mastectomy Only**

**Presenter:** Casimir A.E. Kouwenberg, MD  
**Co-Authors:** Marc A.M. Mureau, MD, PhD; Jan J.V. Busschbach, PhD  
**Affiliation:** ErasmusMC, Erasmus University Medical Center Rotterdam, Rotterdam

**INTRODUCTION:** Generic preference-based health-related quality-of-life measures such as the EuroQol-5D (EQ-5D) are increasingly used as an outcome measure. They are most useful in economic evaluations, as they can be used to obtain the quality adjusted life years (QALY) of interventions. Evaluations that use QALY are currently the preferred method for evaluating cost-effectiveness as they allow for comparison across interventions and conditions and are capable of incorporating a societal perspective. The EQ-5D is the gold standard for obtaining such QALYs, yet no EQ-5D reference values are available for the different breast reconstruction (BR) techniques, preventing state-of-the-art cost-effectiveness evaluations of BR. Therefore, we aimed to evaluate the EQ-5D-5L in patients who had undergone postmastectomy BR for breast cancer.