forearms on postoperative days 8, 26, 42, and 82, as well as forehead lift and eyelid revisions on postoperative days 42 and 82. Computerized surgical outcome analysis was performed on postoperative day 29, and functional assessments were performed at 3 and 6 months posttransplant. Extremity skeletal landmarks were all found to be within 4 mm of the computerized surgical plan. Range of motion, grip strength, Carroll's test scores (left = 58 at 6 months posttransplant versus 13 pretransplant, right = 61 at 6 months posttransplant versus 20 pretransplant), and Disabilities of the Arm, Shoulder, and Hand evaluation (37 at 6 months posttransplant, versus 90 pretransplant) showed substantial improvement. At over 6 months post-transplant, the patient has had no episodes of acute rejection on an innovative immunologic surveillance protocol.

**CONCLUSIONS:** Combined full face and bilateral hand transplant is a feasible comprehensive reconstructive solution for composite face and bilateral hand injury in the appropriately selected recipient. Team preparation, coordination of multidisciplinary care, meticulous donor selection, intensive physical and occupational therapy, and vigilant immunologic surveillance are essential features of procedural success and postoperative recovery.

## Prospective Patient-reported Psychosocial Outcomes of Facial Feminization Surgery

***Presenter: Rachel Caprini, BS***

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**PURPOSE:** Gender affirming surgery is an essential component in the treatment of gender dysphoria. While health insurance plans have deemed several gender-affirming surgeries as medically necessary, facial reconstructive procedures continue to be debated due to a deficiency of high-level evidence for quality-of-life improvements. As face perception neural networks allow for immediate gender identification, facial gender-affirming surgery is frequently the first and most important surgery for many patients with gender dysphoria, particularly in the transfeminine population. In this work, we administer a battery of validated, quantitative patient-reported outcomes measures examining the psychosocial functioning of a cross-section of transgender patients who have or have not received facial feminization surgery (FFS).

**METHODS:** In total, 96 patients (age 33.07 ± 10.60 years) receiving an FFS consultation at the University of California, Los Angeles were prospectively enrolled from 2019 to 2021 and administered 11 adult Patient-Reported Outcomes Measurement Information System item banks, including version 1.0 anxiety short form 8a, version 1.1 anger short form 5a, version 1.0 depression short form 8b, version 1.2 global health form, version 2.0 satisfaction with sex life form, version 1.0 positive affect short form 15a, version 1.0 meaning and purpose short form 4a, version 2.0 emotional support short form 4a, version 2.0 companionship short form 4a, and version 2.0 social isolation short form 4a. Descriptive statistics and linear regression analyses were performed.

**RESULTS:** Patients who received FFS (assessed 236.35 ± 143.30 days postoperatively) demonstrated improvements in anxiety, anger, depressive symptoms, sex life, positive affect, emotional support, and meaning and purpose instrument scores. Because psychosocial functioning is likely to be influenced by multiple factors, we developed a linear regression model to understand whether FFS would be an independent predictor of psychosocial scores. Other predictors included were the presence or absence of other gender affirming surgery, binary or non-binary gender identity, duration of hormone treatment, age at the time of assessment, and global health scores as a measure of baseline health. For anxiety scores, this model accounted for 36.6% of the variance [$F(6,78) = 7.512$, $P < 0.001$], and for anger scores, this model accounted for 23.2% of the variance [$F(6,78) = 3.919$, $P = 0.02$]. The completion of FFS independently predicted lower anxiety scores (beta = −0.197, $P = 0.04$) and lower anger scores (beta = −0.219, $P = 0.04$). With the exception of global health, no other variables were significantly predictive of either anxiety or anger scores.

**CONCLUSIONS:** Our prospective, cross-sectional assessment of psychosocial outcomes demonstrated a global improvement in psychosocial functioning in patients who have received FFS. The linear regression model that includes other potential predictors of variance in scores such as other gender affirming surgery, age, and duration of hormone therapy demonstrated that completion of FFS was an independent predictor of lower anxiety and anger scores. This work is the first Level II evidence study in quality of life of outcomes for patients who have undergone FFS and it is also the first study utilizing robust, validated instruments

for assessment. Future directions of this work include longitudinal analyses of patient outcomes after FFS.

## Impact of Obesity on Outcomes of Panniculectomy and Abdominoplasty: An ACS-NSQIP Analysis

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**INTRODUCTION:** Obesity is a modifiable risk factor for complications after panniculectomy and abdominoplasty. The purpose of this study was to evaluate the association of body mass index (BMI) with complications after abdominal reconstructive surgery, using the National Surgical Quality Improvement Program(NSQIP) database.

**METHODS:** In a retrospective review of the NSQIP from 2013 to 2019, adult patients who underwent panniculectomy with or without abdominoplasty were included. In total, 78 patients with missing BMI were excluded. Procedures were categorized to panniculectomy alone or combined. Obesity was considered as BMI ≥ 30 kg per $m^2$. We made composite variables for 30-day any complication, wound complications (surgical site infections, wound disruption, and bleeding), and major complications (all complications except urinary tract infection and superficial wound infection). Regression analysis was used to identify the independent effect of obesity on the outcome, which was reported as odds ratio (OR).

**RESULTS:** An estimated 14,313 patients were studied (mean age 46.3 ± 12, 89.2% women). In total, 5457 patients (38.1%) had both panniculectomy and abdominoplasty. There were 1635 (11.4%) patients with any complication, 1055 (7.4%) with major, and 1421 (9.9%) with wound complications. A total of 527 patients (3.7%) underwent unplanned re-operation, and there were only five deaths. Any complication was more in the obese patients (15.9% versus 6.9%). Major complications rate was 10.3% in the obese group versus 4.4% in nonobese patients. Wound complications occurred in 14% of obese patients versus 5.8% in nonobese patients. Multivariate analysis showed that obesity was an independent predictor of any complication, major complication, wound complications, and unplanned re-operation.

**CONCLUSIONS:** Obesity is an independent predictor of complications after abdominal reconstructive surgery. Complications including wound complications are more in the obese patients. Weight loss strategies should be considered in obese patients (BMI ≥ 30 $kg/m^2$) who consider abdominal reconstruction.

## Surgical and Nonsurgical Factors Associated with Salvaging Exposed VEPTR Hardware

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**BACKGROUND:** Vertical expandable prosthetic titanium rib (VEPTR) devices were designed to treat childhood scoliosis and thoracic insufficiency syndrome, but present a profound subcutaneous hardware burden. It remains unknown whether certain wound locations or systemic risk factors affect navigation of the reconstructive ladder in these children. The purpose of this study was to examine surgical and nonsurgical factors associated with soft tissue reconstruction to allow devices to remain implanted and enable continued rod expansions and promote ongoing chest wall growth.

**METHODS:** Between 2014 and 2020, a prospective institutional database was queried for patients with VEPTR hardware complications who required soft tissue reconstruction. Hardware salvage was considered successful if reconstruction allowed hardware to be retained until the next VEPTR expansion.

**RESULTS:** Fifty-eight patients required VEPTR hardware salvage. Patients required VEPTR hardware salvage due to wound complications at median age 8.4 years (95%CI 7.0–10.5), which was 4.6 years (95%CI 3.1–5.9) and 8.0 expansions (95%CI 4.0–11.0) after initial VEPTR hardware placement.