implants as the initial choice). Predictive variables were age, body mass index (BMI), comorbidities, radiotherapy, neoadjuvant or adjuvant chemotherapy, plane of tissue expander (prepectoral or subpectoral) and type of mastectomy. Outcome variables included flap loss, seroma, hematoma, surgical site infection (SSI), wound dehiscence, delayed wound healing, operative times and takeback.

**Results:** The study included 50 patients: 29 patients in Group I, 11 patients in Group II, and 10 patients in Group III. Unilateral free flaps in Group II had shorter operative times (318 minutes) compared to Group I unilateral free flaps (528 minutes) (p=.02). Average operative time for bilateral flaps was also longer in Group I (550 minutes) compared to Group II (488 minutes) (p=.2). There was no flap loss in Group I or Group II. Nine patients (31%) had prophylactic mastectomies in Group I compared to zero patients in Group II (p=.04). Patients who had immediate tissue expansion as a first stage changed their mind from DIEP to implant for second stage at a rate of 48% (10/21). No difference was found for age (50.7 years Group II versus 46.4 years Group III, p=.4), BMI (31.3 kg/m² Group II versus 33.8 kg/m² Group III, p=.3), or radiation (46% Group II versus 40% Group III, p=.9).

**Conclusion:** Delayed-immediate DIEP reconstruction has several advantages over immediate DIEP flap including shorter free flap operative times. Patients changed their preference of second stage reconstruction from autologous to implant 48% of the time after immediate tissue expander placement. A patient-centered advantage of delayed-immediate reconstruction is extending the time window patients have to make their decision regarding their final reconstruction after the malignancy has been treated.

### 76

**Implications Of Instituting An Eras Pathway In Patients Receiving Chemotherapy In Microsurgical Breast Reconstruction**

*Ricardo Garza, Jr., BS¹, Carolyn E. Boyle, MSN, CRNA¹, Julie L. Cooper, BS¹, Yash Kadakia, BA¹, Sami Khan, MD², Sumeet S. Teotia, MD¹, Nicholas T. Haddock, MD¹*

¹UT Southwestern, Dallas, TX, USA, ²Stony Brook University, Stony Brook, NY, USA.

**Purpose:** Neuropathy is a common side effect of chemotherapeutic agents. Manifestations chemotherapy induced neuropathy can present in a myriad of fashions, ranging from numbness, tingling, and pain to motor weakness and autonomic dysfunction. Given the nature of breast reconstruction, a significant portion of the patients have a history chemotherapy exposure; its effect on postoperative pain management has not been previously explored.

**Methods:** The study is a retrospective review of patients who underwent DIEP flap breast reconstruction by the 2 senior authors from January 2016 to September 2019. The patients were separated into two groups, Pre-ERAS (Enhanced Recovery After Surgery), and ERAS. The primary outcome observed was postoperative opioid consumption, measured as Oral Morphine Equivalents (OME). P-values were obtained through univariate linear regression.

**Results:** In total, 256 patients were analyzed, out of which 113 had chemotherapy exposure. The difference between opioid consumption in patients in the Pre-ERAS group without and with chemotherapy exposure was statistically significant (211.5mg vs 278.5mg, p=0.0279). There was no difference between opioid consumption with concern to chemotherapy history in the ERAS group (137.4mg vs 133.0mg, p=0.7251).

**Conclusion:** Patients with chemotherapy exposure required more opioids to be comfortable. It is unknown if this difference is secondary to increased pain or less effectiveness of opioids. More research is necessary to assess if there are better ways to address pain postoperatively on patients with chemotherapy exposure.

### 77

**Evaluation Of Aesthetic Revisions After Autologous Breast Reconstruction: An Analysis Of 3,780 Free Flaps**

*Said Azoury, MD, Arturo J. Rios-Diaz, MD, Jessica R. Cunning, MBA, Cutler Whitely, BS, Robyn B. Broach, PhD, Joseph M. Serletti, MD, Joshua Fosnot, MD*

University of Pennsylvania, Philadelphia, PA, USA.

**Purpose:** Data on aesthetic revisions after free flap autologous breast reconstruction (FFABR) are lacking. We sought
to ascertain aesthetic revision rates after FFABR, as well as patient-level and operative characteristics associated with revisions.

**Methods:** Patients who underwent FFABR between 2008-2017 were identified in a prospectively-maintained health system-wide registry. Patients with incomplete data were excluded. The primary outcome of breast aesthetic revision included scar revisions, fat grafting, liposuction, dog ear excision and implant-related revisions. Secondary outcomes included time to first revision, number of procedures per type of revision, and factors associated with increased aesthetic revisions. Revision rates and mean number of revisions were calculated. Chi-square tests and Cox regression controlling for potential confounders were used to determine the association of patient-level and operative factors associated with aesthetic revisions. The unit of analysis was at the flap-level.

**Results:** We identified 2,352 patients undergoing 3,780 flaps; 75.4% were bilateral. Characteristics that were more likely to be present in flaps that required aesthetic revisions included White race (79.5% vs. 73%, *p*<0.01), lower ASA (class I/II: 76.6 vs. 71.1%, *p*<0.01), diagnosis of cancer (90.7% vs. 88.4%, *p*=0.03), and lymphedema (11.3% vs. 9%, *p*=0.02). Type of flap, chemotherapy and radiation therapy also differed between cohorts (*p*<0.05). There were no differences in age, obesity (BMI>30), comorbidities, reconstruction timing, or prior BCT (*p*>0.05). The rate of aesthetic revisions was 36%. The median time to first revision was 218 days after discharge (IQR 148-341), and 80.5% occurred within two years. While the majority of flaps that underwent revision required only one revision (66.2%), 12.6% underwent three or more revisions. Liposuction was the most common aesthetic revision with a rate of 17.4%. Risk-adjusted analysis showed that White race relative to Black (Hazard Ratio [HR] 1.42 [95% confidence interval [95% CI]: 1.13-1.78], *p*<0.01); delayed reconstruction relative to immediate (HR 1.16 [95%CI: 1.02-1.32], *p*<0.01); DIEP (HR 1.11 [95% CI: 1.05-1.18], *p*<0.01), SIEA (HR 1.5 [95% CI: 1.13-2], *p*<0.01), and other flap (GAP, TUG, PAP; HR 3.1 [95% CI: 2.34-4.11], *p*<0.01) relative to muscle-sparing free TRAM flap; surgical site occurrences (HR 1.31 [95% CI: 1.16-1.48], *p*<0.01); and any surgical/ non-surgical complication composite (HR 1.49 [95% CI: 1.32-1.68], *p*<0.01) were independently associated with increased aesthetic revisions.

**Conclusions:** A fourth of flaps require at least one revision after FFABR and most occur within two years. White race, type of flap, delayed reconstruction and complications are factors associated with increased aesthetic revisions. These data should be used to set appropriate expectations preoperatively and to illustrate the timeline of reconstruction in patients seeking FFABR.

78

**Affordable Care Act State-specific Medicaid Expansion Is Correlated With Increased Rates Of Implant-based Breast Reconstruction Compared To Autologous Reconstruction**

*Ishani D. Premaratne, BA¹, Yoshiko Toyoda, MD¹, Eun Jeong Oh, MA², Codruta Chiuzan, PhD², Christine H. Rohde, MD, MPH¹*

¹NewYork-Presbyterian Hospital, New York, NY, USA, ²Columbia University Mailman School of Public Health, New York, NY, USA.

**Purpose:** Breast reconstruction for the breast cancer patient has been shown to provide substantial benefits. However, disparities in access to breast reconstruction remain due to socioeconomic factors and access to health insurance. Under the Affordable Care Act, states were given the option to expand Medicaid. Thirty-two states (including DC) opted to expand Medicaid eligibility in 2014 while 19 did not. The unique, state-specific outcome of the Supreme Court ruling on Medicaid expansion provides an opportunity to study its effects by juxtaposing expansion states with non-expansion states. Our group’s prior studies have quantified the effect of Medicaid expansion on changes in insurance coverage and breast reconstruction rates in expansion and non-expansion states from 2011-2016. Given the existing health disparities especially among breast cancer patients, and the significant benefits of breast reconstruction, we now aim to study rates of autologous vs. implant-based reconstruction in Medicaid expansion states compared to non-expansion states using available data from 2010 to 2014.

**Methods:** Seven states which all expanded Medicaid eligibility in 2014 and five non-expansion states were selected for comparative analysis. Health Care Utilization Project-State Inpatient Data was queried for reconstruction rates from 2010-2014. In order to study trends in reconstruction rates over time, subgroup analysis was conducted to assess rates of implant vs. autologous reconstructions.