**RESULTS:** Of 45,591 SPARCS records, 20,181 women underwent immediate post mastectomy reconstruction. 15,761 (78.1%) underwent implant-based reconstruction while 4,420 (21.9%) underwent autologous reconstruction. Implants were chosen by 26% of patients in 2005, which increased to 36.4% by 2013. Flap-based reconstruction was chosen by 1% in 2005 and increased to 20.3% in 2013. Among women undergoing autologous breast reconstruction, all age groups up to the age of 75 (p<0.0005 for all groups) and all racial groups demonstrated a significant increase in reconstruction rates (p<0.0001 for white, p<0.0005 for black, p<0.0228 for Hispanic). Patients with either Medicare (p=0.0042) or Commercial (p<0.0001) insurance had significantly increased rates of autologous reconstruction with Medicare patients having the steepest increase in reconstructive rates (RR 1.45). Patients across all regions of the state had an increase in flap-based reconstruction with the steepest increases occurring upstate compared NYC, Long Island and the surrounding areas (RR 1.52 for upstate regions). Patients in all income brackets showed a significant increase in flap-based reconstructive rates (p=0.002 or less for all comparisons). Medicare patients and those age 65–74 had a significantly increased odds of having implant-based reconstruction after 2011 when compared to pre-2011 (OR 1.1 vs. 1.4). Flap-based reconstruction utilization showed a sharp increase in the pre-2011 years especially between 2008–2009 with a slower rate of increase post-2011 (OR 1.98 vs. 1.17).

**CONCLUSIONS:** The largest increase in autologous breast reconstruction utilization in NYS occurred between 2008–2009 while implant based reconstruction rates leveled off after 2010. In general, younger patients with commercial insurance from higher median income brackets tended to have the greatest increase in utilization of either reconstructive method. Medicaid patients and those from lower income brackets showed a significantly increased trend in flap based reconstruction between 2009–2011. Although an increase in both flap and implant based reconstruction were observed, these changes appear to have occurred prior to the enactment of the NYS Reconstruction Act in 2011. Legislative changes likely are not the only factor that influences health care utilization and it may require a longer follow-up period post-legislation to establish the exact influence of legislation as an independent factor.

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**P3**

**Readability, Complexity, and Suitability of Online Resources for Mastectomy and Lumpectomy**

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**PURPOSE:** Nearly half of American adults have low or marginal health literacy. This negatively affects patients’ participation, decision-making, satisfaction, and overall outcomes. Previous studies in this area focus primarily on readability of online health information. This study compares online resources for mastectomy versus lumpectomy using expanded metrics including readability, complexity, and suitability.

**METHODS:** Ten most popular websites for mastectomy and lumpectomy were identified using the largest Internet engine (Google). Each website was assessed for readability (SMOG, Simple Measure of Gobbledygook), complexity (pMOSE/iKIRSCH), and suitability (SAM, Suitability Assessment of Materials). Scores were analyzed by each website and overall.

**RESULTS:** Readability analysis showed average reading grade level of 15.38 and 13.80 (p=0.04) for mastectomy and lumpectomy literacy respectively. Both exceeded the recommended sixth grade level. Complexity analysis via PMOSE/iKIRSCH revealed a mean score of 6.5 for mastectomy corresponding to a “low” complexity and 8th-12th grade education. Lumpectomy literature had a lower PMOSE/iKIRSCH score of 5.8 corresponding to a “very low” complexity and 4th-8th grade education (p=0.05). Suitability assessment showed mean values of 41% and 46% (p=0.83) for mastectomy and lumpectomy literacy respectively, both are interpreted as “adequate” for the intended audience. Inter-rater agreement for PMOSE/iKIRSCH are 92% (k=0.73, p<0.001), and 96% (k=0.87, p<0.001) for mastectomy and lumpectomy literacy respectively. Similarly, inter-rater agreement for suitability analysis was 94% (k=0.84, p<0.001), and 90% (k=0.73, p<0.001).

**CONCLUSION:** Online resources for surgical treatment of breast cancer overall are above the recommended literacy level. When comparing mastectomy to lumpectomy, online resources for mastectomy have a higher reading grade level and tend to be more complex.

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**P4**

**Can Surgical Technique Impact Length of Stay and Post-Operative Outcomes in Breast Reconstruction?**
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PURPOSE: Pre-pectoral breast reconstruction is a less invasive technique that shows promise in improving patient outcomes. This study compares hospital length of stay (LOS) and post-operative outcomes of pre-pectoral (PP) and dual plane (DP) techniques of breast reconstruction.

METHODS: This single-site, retrospective cohort study included data from breast reconstruction procedures from June 2013 to March 2016. Data collected included demographics, chemotherapy/radiation exposure, surgical technique, LOS, drain usage, post-operative incision care and 90 day post-operative complications. Two-sided T-test and Chi-square or Fisher’s Exact tests were performed at α = 0.05.

RESULTS: The study included data on 176 patients (DP=117, PP=59) and 335 breasts (DP=225, PP=110). The PP group had significantly higher BMI (p=0.0017), and a significantly higher proportion of patients with diabetes (p=0.0073), hypertension (p=0.0061), and prior breast surgery (p=0.0415). A higher proportion of PP patient received incisional negative pressure wound therapy (p<0.0001) for incision care. There were no differences in complication rates between the two groups. The PP group had a significantly lower LOS compared to DP (mean: 1.1 vs. 1.8 days, p=0.0001). In the PP group, 94.9% patients were discharged after 1 hospital day compared to only 25.6% of the DP patients (p<0.0001).

CONCLUSION: This study demonstrated a significantly lower hospital LOS in the PP group compared to DP technique. Complication rates were similar between the two groups even though the PP group was more complex. Studies with a long-term follow up will be critical in understanding the true differences between surgical technique and clinical outcomes.

P5

Qualitative and Quantitative Analysis of Autologous Fat Grafting: A Randomized Controlled Trial

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PURPOSE: Despite a lack of high-level evidence to support improved skin/scar quality, interest in autologous fat grafting for such continues to grow. However, current treatment paradigms lack objective, high level evidence of long-term efficacy. This multi-center, double-blinded, randomized, placebo-controlled trial aimed to evaluate the effect of autologous fat grafting in patients with cutaneous scars.

METHODS: 17 patients with cutaneous scars affecting quality of life were enrolled and underwent Coleman-type fat grafting. Grafting was completed with either autologous fat or saline at 1mL/cm², and outcomes measured at baseline, 6 and 12 months. Grafted scars were evaluated using the following criteria(instrument): subjective scar quality assessment (POSAS), hardness (durometer), elasticity (cutometer), color/pigment (colorimeter) and histological analysis. Statistics were completed using SPSS.

RESULTS: Patients were 42% female, with an mean age of 42.1 ±12.9 years. POSAS score totals, cutometer and durometer analyses were not significantly different between grafted (fat) and control (saline) scar appearance, elasticity or hardness at 0, 6, or 12 months, respectively. A single significant colorimetric difference in the a* coordinate at 6 months (p = 0.037) was demonstrated, but was not durable at 12 months (p = 0.49). Individual POSAS parameter statistics and histology results are pending.

CONCLUSION: Recently, fat grafting has been increasingly touted for its ability to improve skin/scar quality and appearance. However, our study results demonstrate that this may not be supported by objective or subjective evidence obtained under randomized, placebo-treated conditions. Any putative improvements in scar quality from fat grafting are also achieved using saline controls.