

## Abstract #2685

### Smooth vs. Textured Tissue Expander Breast Reconstruction: Complications and Efficacy

McLaughlin CM, Parham CS, Hughes A, Fritsche M, Muller J, Potochny JD, Ravnic DJ

**Introduction:** Ongoing recognition of Breast Implant Associated – Anaplastic Large Cell Lymphoma (BIA-ALCL) and its link with textured devices has brought a paradigm shift in prosthetic-based breast reconstruction. Many institutions, including our own, no longer offer textured devices for expansion during immediate or delayed reconstructions. There is a paucity of data regarding the efficacy of smooth surface tissue expanders. We sought to compare the complication profile of smooth and textured surface tissue expanders in breast reconstruction patients.

**Methods:** A retrospective review of patients who underwent tissue expander based breast reconstruction from 2013-2018 was undertaken. Rates of surgical and nonsurgical complications defined as postoperative seroma, hematoma, dehiscence, and cellulitis were assessed. Mechanical complications, defined as expander malposition and rupture, were also evaluated. Mixed effects logistic regression and mixed effects linear models were used to compare textured to smooth implants. Patient age, body mass index, and number of reconstruction surgeries were adjusted for in all analyses.

**Results:** Data was collected on a total of 389 patients and 707 tissue expanders, 125 of which were smooth and 582 textured tissue expanders. Compared with smooth expanders, patients with textured implants had 4.7 increased odds of a complication not requiring surgery (38.6% vs 11.8%, p-value < 0.001), including a significant increase in seroma (17.8% vs. 2.7%, p-value <0.001) and hematoma (8.6% vs. 0.6%, p-value 0.01) formation.

However, smooth tissue expanders had a significantly increased odds of complications requiring surgery at 13.2% compared to 5.6% for textured tissue expanders (p-value = 0.02). Though specific complications requiring surgery did not reach significance, textured expanders had increased risk of developing hematoma (2.4% vs. 1.7%) and cellulitis (2.2% vs. 1.6%) requiring operative intervention.

Thirteen percent of smooth tissue expanders were malpositioned or ruptured compared with 0.5% of textured tissue expanders (p-value <0.001). There was no significant difference between time to completion of reconstruction between the two devices (textured expanders 191 days and smooth expanders 209 days, p-value = 0.13).

**Conclusion:** We evaluated the complication profile of textured vs. smooth tissue expanders. Smooth tissue expanders present a reasonable alternative to textured devices as the time frame to definitive reconstruction was equivalent between the two devices, though they had differing complication profiles. Smooth tissue expanders may prove beneficial when considering the risk of BIA-ALCL associated with textured devices.