Discussion: A Comparison of Textured versus Smooth-Surfaced Implants in Subfascial Breast Augmentation

Amir H. Dorafshar, MD[1]
Laura R. Brown, MD, PhD[2]
Chicago and Peoria, IL

We read with great interest Dr. Brown's article, "A Comparison of Textured versus Smooth-Surfaced Implants in Subfascial Breast Augmentation."[1] Dr. Brown concludes that subfascial placement of breast implants is a reliable technique, with no statistically significant differences in outcomes between smooth and textured implants. He asserts that, given the risks of breast implant-associated large-cell lymphoma (BIA-ALCL) associated with textured implants, there are no data to support their continued use in subfascial breast augmentation.

We commend Dr. Brown for his extensive single-surgeon experience; meticulous documentation of patient demographics, breast morphology changes, and adverse outcomes; and thorough follow-up data. Capsular contracture rates vary significantly depending on implant type, surface, plane of dissection, and length of follow-up, prompting multiple studies to identify risk factors. Several large studies and meta-analyses have shown that textured implants have lower capsular contracture rates than smooth implants, and submuscular implants fare better than subglandular ones.[2–7] However, more recent, conflicting studies have shown similar capsular contracture rates for smooth and textured implants in the subglandular plane or the submuscular plane, contributing to the ongoing debate over the ideal implant surface and placement.[8,9]

Dr. Brown's study, which included 385 patients undergoing subfascial breast augmentation with either smooth (n = 176) or textured (n = 209) implants, found capsular contracture rates of 4.7% (n = 9) for smooth implants and 6.2% (n = 13) for textured implants, with a follow-up of approximately 164 weeks for smooth implants and 186 weeks for textured implants. He concludes that there is no statistically significant difference in capsular contracture rates between smooth and textured implants.

Although Dr. Brown's study provides valuable additional data on capsular contracture rates for smooth versus textured implants in the subfascial plane, caution is needed in interpreting the results. A power analysis indicates that nearly 7500 patients would be required to detect a statistically significant difference between the 2 groups. Although the study includes a respectable number of patients, it is underpowered to definitively determine whether there is a difference between smooth and textured implants in the subfascial plane. This limitation raises the possibility of a type II error, where a true difference exists but is not detected because of the study's limited power. In addition, capsular contracture may not yet have presented, as shown by Calobrace et al., who found that nearly half of capsular contractures (41%) occurred within the first 2 years and 80% within the first 5 years.[5]

Given that several larger, more robust studies with longer follow-up have demonstrated clinically significant differences between smooth and textured implants, particularly in the subglandular and submuscular planes, it is important to be cautious in drawing conclusions about capsular contracture rates based on these data alone. Furthermore, without direct head-to-head comparisons, we cannot definitively determine whether the subfascial and submuscular approaches yield equivalent outcomes. Larger patient cohorts and extended follow-up are necessary to make conclusive comparisons. The value of implant registries for tracking demographics, implant types, surgical details, and long-term outcomes cannot be overstated.

Nonetheless, Dr. Brown's study is significant in showing that, based on his single-surgeon experience, smooth and textured implants in the

From [1]private practice; and the [2]University of Illinois, College of Medicine Peoria.
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subfascial plane produce comparable outcomes in the medium term. This suggests that surgeons can be reasonably confident in using smooth implants in the subfascial plane, achieving similar results to textured implants, without the associated risk of BIA-ALCL. We thank the editors for the opportunity to review this article.

Amir H. Dorafshar, MD
60 East Delaware Place, Suite 1430
Chicago, IL 60611
adorafshar@evolveyourlife.com
Instagram: @evolveyourlifechicago

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REFERENCES

1. Brown T. A comparison of textured versus smooth-surfaced implants in subfascial breast augmentation. *Plast Reconstr Surg.* 2025;155:639–645.
2. Wong CH, Samuel M, Tan BK, Song C. Capsular contracture in subglandular breast augmentation with textured versus smooth breast implants: a systematic review. *Plast Reconstr Surg.* 2006;118:1224–1236.
3. Barnsley GP, Sigurdson LJ, Barnsley SE. Textured surface breast implants in the prevention of capsular contracture among breast augmentation patients: a meta-analysis of randomized controlled trials. *Plast Reconstr Surg.* 2006;117:2182–2190.
4. Stevens WG, Nahabedian MY, Calobrace MB, et al. Risk factor analysis for capsular contracture: a 5-year Sientra study analysis using round, smooth, and textured implants for breast augmentation. *Plast Reconstr Surg.* 2013;132:1115–1123.
5. Calobrace MB, Stevens WG, Capizzi PJ, Cohen R, Godinez T, Beckstrand M. Risk factor analysis for capsular contracture: a 10-year Sientra study using round, smooth, and textured implants for breast augmentation. *Plast Reconstr Surg.* 2018;141:20S–28S.
6. Stevens WG, Calobrace MB, Alizadeh K, Zeidler KR, Harrington JL, d'Incelli RC. Ten-year Core Study data for Sientra's Food and Drug Administration-approved round and shaped breast implants with cohesive silicone gel. *Plast Reconstr Surg.* 2018;141:7S–19S.
7. Liu X, Zhou L, Pan F, Gao Y, Yuan X, Fan D. Comparison of the postoperative incidence rate of capsular contracture among different breast implants: a cumulative meta-analysis. *PLoS One* 2015;10:e0116071.
8. Lista F, Austin RE, Saheb-Al-Zamani M, Ahmad J. Does implant surface texture affect the risk of capsular contracture in subglandular breast augmentation and breast augmentation-mastopexy? *Aesthet Surg J.* 2020;40:499–512.
9. Zhu L, Zhu J, Qian Y, Jiang H. Reduced capsular contracture with smooth and textured breast implants following submuscular mammoplasty: systematic literature review. *Future Oncol.* 2021;17:5177–5187.