



## ASO Author Reflections: Rapid Uptake of the SSO ASTRO Margin Guideline and Decreased Reoperations After Lumpectomy: A Success Story

Liska Havel, MD, MPH<sup>1</sup>, and Jeffrey Landercasper, MD<sup>1</sup>

Gundersen Medical Foundation, La Crosse, WI

### PAST

Strong evidence indicates that too many patients undergo reoperations after breast-conserving surgery (BCS) for breast cancer. The reoperation rates after BCS average 20% and range from less than 10% to more than 60%.<sup>1,2</sup> Based on survey and empirical studies, one important cause of reoperations after BCS is lack of surgeon clarity regarding the specimen margin-free width at which reexcision should be performed. Addressing this issue, the Society of Surgical Oncology (SSO) and the American Society for Radiation Oncology (ASTRO) performed a meta-analysis of margin width with recurrence in patients with stage 1 or 2 cancer receiving whole-breast irradiation therapy. The resulting margin guideline recommended that surgeons reexcise no more widely than “no ink on tumor” because wider margins did not decrease ipsilateral breast cancer recurrence.<sup>3</sup> The current study investigated the impact of this guideline on national reoperation prevalence by a meta-analysis of publications reporting reoperation prevalence before and after guideline publication.

### PRESENT

Publication of evidence-based medicine does not guarantee its rapid uptake into clinical practice. In fact, a robust literature documents delays. Publication of guidelines is one method to accelerate uptake. To measure uptake, a meta-analysis of reoperations before and after the publication of the SSO ASTRO guideline was performed. The pooled prevalence decreased from 22 to 14% (adjusted odds ratio 0.65; 95% confidence interval 0.54–0.78).<sup>4</sup> These findings support the notion that the margin guideline was being incorporated into surgical practice soon after publication. Another important take-home message here regarding strategies to improve care is that SSO and ASTRO demonstrated a successful plan-do-study-act cycle to address a gap in care. A meta-analysis of margin width and cancer recurrence was used to inform their guideline. Then multiple journals and societies promoted co-publication and endorsement to aid dissemination and uptake.<sup>5</sup> The meta-analysis described in this report used reoperation prevalence as a surrogate for guideline compliance, concluding that uptake occurred and was quite rapid after guideline publication.

### FUTURE

Whether reoperations after BCS should be deemed a “quality measure” is debatable. However, from the patient and payer-stakeholder perspectives, reducing reoperations creates value by reducing cost of care and patient burdens. Surgeon and facility reoperation rates vary to an unacceptable degree, with most exceeding the 10% reoperation rate target goal endorsed by the American Society of Breast Surgeons (ASBrS). As evidenced in the current study, rates of reoperation decreased after development of the SSO ASTRO margin guideline. Therefore, compliance with the guideline is strongly recommended as one part of a broader

---

ASO Author Reflections is a brief invited commentary on the article “Impact of the SSO-ASTRO Margin Guideline on Rates of Reexcision After Lumpectomy for Breast Cancer: A Meta-Analysis”, *Ann Surg Oncol*. 2019.

---

© Society of Surgical Oncology 2019

First Received: 22 February 2019;  
Published Online: 8 March 2019

J. Landercasper, MD  
e-mail: JLanderc@gundersenhealth.org

strategy to reduce reoperation rates.<sup>5</sup> Furthermore, nine other processes of care and techniques, with varying levels of evidence and consensus, have been endorsed by the ASBrS to reduce rates.<sup>5</sup> Additional strategies to reduce rates include participating in benchmarking programs, such as those offered by the ASBrS, the National Quality Measures for Breast Centers, and some state collaboratives such as the Surgical Collaborative of Wisconsin (<https://www.scwisconsin.org/>).

**DISCLOSURES** Drs. Havel and Landercasper received financial support from the Gundersen Medical Foundation and the Gundersen Health System for this research. There was no funding from industry or other entities.

## REFERENCES

1. Wilke L, Czechura T, Wang C, et al. Repeat surgery after breast conservation for the treatment of stage 0 to II breast carcinoma: a report from the National Cancer Data Base, 2004–2010. *JAMA Surg.* 2014;149:1296–305.
2. Landercasper J, Whitacre E, Degnim AC, et al. Reasons for reexcision after lumpectomy for breast cancer: insight from the American Society of Breast Surgeons Mastery database. *Ann Surg Oncol.* 2014;21:3185–91.
3. Moran MS, Schnitt SJ, Giuliano AE, et al. Society of Surgical Oncology–American Society for Radiation Oncology consensus guideline on margins for breast-conserving surgery with whole-breast irradiation in stages I and II invasive breast cancer. *Ann Surg Oncol.* 2014;21:704–16.
4. Havel L, Naik H, Ramirez L, Morrow M, Landercasper J. Impact of the SSO-ASTRO margin guideline on rates of reexcision after lumpectomy for breast cancer: a meta-analysis. *Ann Surg Oncol.* (2019). <https://doi.org/10.1245/s10434-019-07247-5>.
5. Landercasper J, Attai D, Atisha D, et al. Toolbox to reduce lumpectomy reoperations and improve cosmetic outcome in breast cancer patients: the American Society of Breast Surgeons consensus conference. *Ann Surg Oncol.* 2015;22:3174–83.

**Publisher's Note** Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.