

The Value of Routine Cavity Shave Margins in Breast Conservation Therapy in a Rural Academic Institution

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BACKGROUND/OBJECTIVE

- Local recurrence (LR) of breast cancer following breast-conserving surgery (BCS) is influenced by final margin status.
- Routine cavity shave margins (CSM) at the time of lumpectomy have been shown to decrease LR rates and need for additional surgery.
- We sought to evaluate the experience with CSM at a large tertiary referral cancer center servicing a rural patient population.

METHODS:

- After IRB approval, we retrospectively reviewed breast cancer patients who underwent BCS for invasive ductal (IDC), lobular (ILC) and ductal carcinoma in situ (DCIS) between January 2009 and September 2018.
- CSM technique = standard across all lumpectomies = excising and orienting each margin separately.
- EMR reviewed and data was collected related to demographics, surgical pathology, recurrence and survival.
- Descriptive statistics were calculated using mean \pm SD and comparison of outcomes to national rates was performed by reporting likelihood-ratio chi-squared test (LRT).

RESULTS



550 patients with lumpectomy and routine CSM

23% DCIS



43% IDC

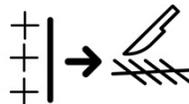
7% ILC

27% IDC and DCIS

Follow-up



4.6 years \pm 2.6 years



Overall positive margin rate \rightarrow reoperation = 9.7% vs. accepted average of 20%, LRT 43.7 ($p < 0.0001$).

Demographics

Age (Mean \pm SD), years	61 \pm 11
BMI	31 \pm 7
Tumor Size, mm	13 \pm 10

Positive Margin Rate by Tumor Histology (%)

DCIS	10.2%
IDC	6.8%
Mixed IDC + DCIS	12.1%
ILC	15.8%



CSM saved subsequent reoperation for positive margins in **10.7%** of the patients (positive lumpectomy margin and negative CSM).



Occult multifocal DCIS was detected in **18.9%** of the overall positive margins, with a negative lumpectomy margin and positive CSM, leading to subsequent reoperation."

- LR was 2.4% compared to an accepted national average rate of 9%, LRT 41.0 ($p < 0.0001$).
- The systemic recurrence rate for our cohort was 2.5%. Of the 550 patients, there were 19 deaths with 6 deaths due to metastatic breast cancer.

CONCLUSIONS

- Excision of routine CSM at the index BCS reduces positive margin rate by approximately 10%.
- CSM save subsequent reoperation for positive lumpectomy margins in patients with invasive and non-invasive breast cancer, while maintaining a low rate of recurrence.
- This can be especially important in rural regions with access to health care disparities and patients with financial hardships.

