

# 787590 Re-excision following breast conservation surgery in modern times: A single institution's quality study looking at re-excision following segmental mastectomy at both the institutional and individual surgeon level



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## PURPOSE

- Breast conservation is performed in the majority of breast cancer patients in the United States and re-excision is a known risk with wide variability in the published rates.
- We performed a single institution quality study which looked at our current re-excision rates, both as an institution and individually as surgeons, and the associated factors.

## METHODS

- Our institution has 6 breast surgeons and is an accredited breast center. We performed a retrospective chart review of patients undergoing a segmental mastectomy (CPT code 19301) from 2016-2018.
- Re-excision was defined as return to the operating room for either another segmental mastectomy or full mastectomy within 90 days.
- Patient characteristics, tumor histology, imaging findings, and neoadjuvant treatment were recorded. Individual surgeon re-excision rates were reported for each year and compared to re-excision rates generated by the tumor registry and reported to each surgeon.
- Prior to seeing their individual rates, each surgeon was asked to estimate their re-excision rate, report factors associated with re-excisions, and whether re-excision rates should be a quality measure.

## RESULTS

- 1,508 segmental mastectomies (CPT code 19301) were completed during the studied time frame and 238 re-excisions were performed (on 205 patients), with an overall institutional re-excision rate of 15.8%.

## RESULTS

### Characteristics of Re-excision patients 2016-2018

	N (%)
<b>TOTAL PATIENTS</b>	205
<b>AGE [Mean ± SD]</b>	63.2 ± 11.7
<b>CANCER TYPE PRE-OP</b>	
DCIS	71 (34.6)
IDC	89 (43.4)
ILC	24 (11.7)
Other	21 (10.2)
<b>RESIDUAL TYPE OF CANCER POST-OP</b>	
DCIS	64 (31.2)
IDC	98 (47.8)
ILC	29 (14.2)
Other	14 (6.8)
<b>SIZE IN SITU DISEASE (N=64)</b>	
< 2.0 cm	17 (26.6)
2.0-3.9 cm	26 (40.6)
≥ 4.0 cm	20 (31.3)
Unknown	1 (1.6)
<b>SIZE INVASIVE DISEASE (N=141)</b>	
< 2.0 cm	91 (64.5)
2.0-3.9 cm	31 (22.0)
≥ 4.0 cm	14 (9.9)
Unknown	5 (3.6)
<b>DISTANCE FROM MARGIN IN-SITU DISEASE (N=64)</b>	
< 1 mm	32 (50.0)
≥ 1.0 mm	8 (12.5)
Involved	24 (37.5)

<b>DISTANCE FROM MARGIN INVASIVE DISEASE (N=141)</b>	
< 1 mm	25 (17.7)
≥ 1.0 mm	37 (26.2)
Involved	73 (51.8)
Unknown	6 (4.3)
<b>NEOADJUVANT CHEMOTHERAPY</b>	3 (1.5)
<b>PRE-OPERATIVE MRI</b>	55 (26.8)
<b>TYPE OF LOCALIZATION</b>	
Wire	45 (22.0)
Seed	133 (64.9)
US in OR	3 (1.5)
Unknown	24 (11.7)
<b>TYPE OF SUBSEQUENT SURGERY</b>	
Re-excision	143 (69.8)
Mastectomy	23 (11.2)
Multiple Re-excisions	15 (7.3)
Re-excision(s) followed by Mastectomy	23 (11.2)
Re-excision followed by Mastectomy and Re-excision	1 (0.5)
<b>NUMBER OF RE-EXCISIONS</b>	
1	167 (81.5)
2	30 (14.6)
3	8 (3.9)

## RESULTS

- Cancer was found in the re-excision specimens in 53.4% of re-excision cases. The re-excision rates for 2016, 2017, and 2018 were 16.2%, 15.1%, and 16.0% respectively. The re-excision rate varied significantly between surgeons, ranging from 3.3% to 30.0% overall from 2016-2018.
- Patients with ductal carcinoma in situ (DCIS), particularly a larger size of DCIS, were more likely to require re-excision ( $p < 0.0001$ ).
- The tumor registry reported an overall re-excision rate of 20.7% compared to the chart review re-excision rate of 15.8%.
- All six surgeons underestimated their re-excision rate by 4.2% on average, with the underestimation varying from 0.6-8.3%. None of the surgeons felt that margins are an accurate metric of quality in regards to breast cancer surgeries.

## CONCLUSIONS

- Despite the margin guidelines, re-excision rates following breast conservation surgery vary widely by breast surgeon within a single institution and using different methodology to calculate re-excision rates.
- Institutions considering a re-excision quality study should take these factors into account.