



## ASO Author Reflections: Should Breast Density Influence Patient Selection for Breast-Conserving Surgery?

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### PAST

New federal legislation in February 2019 requiring breast density notification in all U.S. states in mammogram reports has increased awareness of breast density. Increased breast density has been associated with increased risk of breast cancer, decreased mammographic sensitivity, and higher risk of breast cancer recurrence.<sup>1–3</sup> It has been reported that women with dense breasts are less likely to have breast-conserving surgery (BCS) and are more likely to require re-excision of margins.<sup>4,5</sup> This may be attributable to difficulty with preoperative planning due to decreased mammographic accuracy in dense breasts. However, in recent years, the adoption of “no ink on tumor” as an adequate margin, and the introduction of cavity shave margins, have led to a reduction in re-excision rates.<sup>6,7</sup> Given the overall decrease in re-excision rates, should there be a reluctance to offer BCS for women with dense breasts?

### PRESENT

We performed a retrospective review of a prospectively maintained database of all women who had BCS for stage I or II invasive breast cancer between January 2014 and October 2014, following the adoption of the Society of

Surgical Oncology (SSO)–American Society for Radiation Oncology (ASTRO) consensus guidelines on the management of margins.<sup>8</sup> Breast density was independently assessed by two experienced radiologists and dichotomized by score 1/2 versus 3/4. The overall re-excision rate was 15.1%. Younger age was associated with increased breast density ( $p < 0.001$ ). On multivariable analysis, breast density was significantly associated with increased odds of re-excision (odds ratio 1.37, 95% confidence interval 1.00–1.86), as was multifocality and extensive intraductal component (EIC). Although we identified an increased risk of re-excision amongst women with dense breasts, we did not identify an increased mastectomy rate after initial BCS, or inferior disease-free survival, at a median follow-up of 4 years (0–5.3 years). Although follow-up is limited, this offers reassurance for women with dense breasts to proceed with BCS.

### FUTURE

The reporting of breast density to both women and clinicians enhances the discussion of the use of supplemental screening options, and the discussion of risk for women with dense breasts. Supplemental screening options are available, but there is little consensus on when and which additional measures should be routinely used. As the assessment of density is subjective, further research and technological advancement is needed to standardize reporting and reduce interobserver variability. Our data support the need for further study in developing techniques to improve accuracy of preoperative tumor assessments and/or surgical techniques aimed at decreasing re-excisions in women with dense breasts.

**DISCLOSURES** The authors have no conflicts of interest to disclose.

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