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TDLU Involution and Breast Cancer Risk - Reply

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To the Editor,

We appreciate the interest of Degnim et al in our article (1). As mentioned in their letter, our previous study consisting of 200 cases and 915 controls from the Nurses' Health Studies showed a suggestive inverse association between visually assessed involution and breast cancer risk (adjusted OR=0.71, 95% CI 0.49–1.02 comparing predominant type 1 lobules versus mixed or no type 1 lobules) (2). Our current, updated analysis with 288 cases and 1374 controls also found a suggestive inverse association (adjusted OR=0.80, 95% CI 0.59–1.07) (1). We demonstrated in a separate paper using the three standardized measures of TDLU involution (3,4) and an independent set of 40 images that our automated method was highly correlated with visual assessment (5). As such, TDLU involution when assessed both visually and by the automated method was not strongly associated with breast cancer risk among our study participants diagnosed with benign breast disease (1).

We agree with Degnim et al that the lack of a significant association between automated TDLU involution measures and breast cancer risk in our recent study may be due to limitations of our measurement approach or reflect differences between our study population and the Mayo cohort. We discussed those points in our article, and we mentioned the need for future collaborations to evaluate our automated method in other epidemiological cohorts (1). We also agree that accurate and unbiased methods to measure TDLU involution are important, and that integration of automated measures of TDLU involution, molecular data, and radiologic features holds promise for improving breast cancer risk assessment. We welcome future scientific exchange to improve our automated method as well as evaluate computational methods developed by others within the Nurses' Health Studies.

Sincerely,

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