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Editorial Comment: Imaging of the Postoperative Breast—How the Addition of Artificial Intelligence–Based Computer-Aided Detection and Digital Breast Tomosynthesis Can Improve Accuracy and Confidence

Imaging of the postoperative breast can be confusing and stressful for both the patient and the interpreting physician. Architectural distortion and collections may represent normal postoperative findings and be difficult to distinguish from recurrent malignancy on mammography. As the number of patients undergoing breast-conserving therapy (BCT) continues to rise, technology that allows us to improve our sensitivity and specificity for interpreting postoperative breast imaging should be welcomed with open arms. False-positive callbacks, especially in the postoperative period, lead to unnecessary stress and biopsies, which can be disheartening for a patient who has just undergone breast cancer treatment.

The authors of this study evaluated and compared the recall rates and diagnostic performance of digital mammography (DM) after adding digital breast tomosynthesis (DBT) or artificial intelligence–based computer-assisted detection (AI-CAD) software in women with a personal history of breast-conserving surgery for breast cancer. As expected, the addition of DBT and AI-CAD lowered the recall rate compared with DM. The addition of AI-CAD also increased sensitivity, specificity, and accuracy for the affected breast compared with DM and DM plus DBT. The recall rate for the unaffected or contralateral breast was lower for DM plus AI-CAD than for DM but was not lower for DM plus DBT.

This is an important article in the era of expanding use of artificial intelligence and may significantly impact the management of the postoperative breast. AI-CAD provides an additional tool in our breast imaging arsenal that may increase confidence in the postoperative period by patients as well as interpreting and referring physicians alike. I plan to implement AI-CAD in the interpretation of the postoperative breast and encourage others to follow suit.

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