

Prospective Study of Breast Tomosynthesis as a Triage To Assessment in Screening



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OBJECTIVE

Evaluation of the effect of tomosynthesis as a triage to assessment in recalls from screening in order to estimate if tomosynthesis improves the specificity in screening practice.

METHODS

For this prospective study, tomosynthesis was performed on 158 consecutive recalls from 2D screening on the breast containing the abnormality, from July to September 2011. The results of the tomosynthesis findings were compared with the histology.

FINDINGS

Tomosynthesis was found to have a higher specificity:

- There were 21 confirmed cancer cases out of 158 recalls from 2D screening.
- Tomosynthesis confirmed all 21 cancer cases: no false negatives.
- Tomosynthesis would have avoided recall in 102 cases (74.4% better specificity).
- The recall rate reduction of tomosynthesis was more apparent:
 - for denser breasts (although not statistically significant),
 - for asymmetric densities, distortions and nodular opacities with regular margins that are more visible with tomosynthesis due to the absence of superimposed tissue.

CONCLUSION

This study demonstrates that tomosynthesis reduces unnecessary recalls, improving the specificity by 74.4%. This result would likely not be so high in a screening situation, but due to a low recall rate in this 2D screening program (6.6% at first screening and 2.4% at repeat screening) with experienced mammography readers, a higher specificity can be expected by the use of tomosynthesis in screening.

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