

Integration of 3D digital mammography with tomosynthesis for population breast-cancer screening (STORM): a prospective comparison study

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Objective

To evaluate the effect of the addition of tomosynthesis to conventional 2D mammography in population breast-cancer screening.

Materials and Methods

Participants had a digital mammogram using the Selenia® Dimensions® system from Hologic with integrated 2D and 3D mammography performed in the combo mode..

Results

Based on 7294 screenings:

	Number of Cancers	Cancer Detection Rate	False Positive	False Positive Rate, %
2D mammography	39	5.3 / 1000 screens	322	4.4%
2D plus 3D mammography	59	8.1 / 1000 screens	254	3.5%

Cancer detection increased 51% across all ages and breast densities for integrated 2D and 3D mammography compared to 2D mammography. The authors estimated that false positive recalls could have been reduced by 17% without decreasing the cancer detection rates.

Conclusion

Integrated 2D and 3D mammography improves breast-cancer detection and has the potential to reduce false positive recalls.

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