

Position Statement on the use of Tomosynthesis within BreastScreen Australia Services

Breast tomosynthesis (3D mammography) is a new digital mammography technology that is in the early stages of testing and clinical evaluation for its possible benefits in screening and assessment. Currently, BreastScreen Australia uses two-view digital mammography as the primary test to screen women for breast cancer.

Tomosynthesis uses a modified digital mammography unit to create 3D images¹. A number of low-dose images (usually 11-25) of a compressed breast are taken from different angles and then digitally reconstructed to create a 3D image². The radiation dose with tomosynthesis may be higher compared to two-view mammography, however the evidence remains unclear.^{3,4}

Preliminary study results suggest that tomosynthesis has the potential to decrease the number of women who are recalled for further tests (reduce recall rates) and possibly increase the detection of breast cancer (improve sensitivity). A number of small studies have shown favourable results when comparing tomosynthesis to digital mammography.^{5,6,7,8,9,10 11}

BreastScreen Australia is a population based screening program for well women, and robust evidence is required before tomosynthesis could be used as a routine screening tool. This is because the relative harms and benefits to well women of radiation dose, and the cost, efficiency and effectiveness of using this technology are as yet unclear. The results of further clinical trials are needed before the technology could be recommended for population screening.

At this time, two-view mammography continues to be the most effective population primary screening test for breast cancer.¹² New technologies for breast cancer screening must meet the Australian criteria for population screening as outlined in the Population Based Screening Framework.^{13,14}

There is evidence that tomosynthesis can be of benefit in an assessment setting.^{15 16 17} There is less supporting evidence for the benefit of tomosynthesis as the screening test for population screening of well women. It is therefore important to wait for results from international and Australian clinical trials, before tomosynthesis is considered for routine screening use within BreastScreen Australia.^{4,18,19}

The Standing Committee on Screening recommends that, based on current evidence, the use of tomosynthesis as a screening technology in BreastScreen Australia be confined to clinical trial settings. **Two-view mammography remains the most effective screening test at this time.** Tomosynthesis can be of benefit in an assessment setting.

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- ¹⁴ Department of Health and Ageing, Evaluation of the BreastScreen Australia Program – Evaluation Final Report – June 2009. Commonwealth of Australia 2009.
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