

BreastScreen Australia Information for *Consumers* on Breast Tomosynthesis

Key Messages

- Breast tomosynthesis (3D mammography) has been approved for screening and diagnosis of breast cancer.
- Tomosynthesis can be of benefit in an assessment setting.
- However, more evidence is needed before tomosynthesis can be considered for possible implementation in the BreastScreen Australia program for population screening of well women.
- As currently recommended, having a free mammogram every two years with BreastScreen Australia will give women the best chance of detecting and surviving breast cancer.
- The Standing Committee on Screening will continue to monitor and analyse the emerging evidence.

Q&As

What is breast tomosynthesis?

Breast tomosynthesis (3D mammography) is a new digital mammography technology that is in the testing and clinical evaluation stages for its possible benefits in screening and assessment.

Tomosynthesis uses a modified digital mammography unit to create 3D images.

Currently, BreastScreen Australia uses 2D (two-view) digital mammography as the primary test to screen women for breast cancer.

Why doesn't BreastScreen Australia use tomosynthesis in the routine screening process?

There is scientific evidence that tomosynthesis may be of benefit to assist with a definitive diagnosis for women whose routine 2D mammograms have shown they could have breast cancer.

There is currently insufficient scientific evidence for the benefit of tomosynthesis as a replacement for 2D mammograms, as the routine screening test for **population screening** of well women. Population-based screening is where a test is offered systematically to all individuals in a defined target group as part of an organised program.

We do not yet have a clear picture of the benefits and costs of using breast tomosynthesis for population screening generally within the BreastScreen Australia service.

Any new technologies for breast cancer screening must meet the Australian criteria for population screening as outlined in the Population Based Screening Framework.

In October 2014, the Standing Committee on Screening (SCoS), the national body that provides policy advice on screening to all Australian Governments endorsed a *Position Statement on the use of Tomosynthesis within BreastScreen Australia services* which recommends that, based on current evidence, the use of tomosynthesis as a screening technology in BreastScreen Australia be confined to clinical trial settings.

2D digital mammography remains the most effective screening test at this time. Tomosynthesis can be of benefit in an assessment setting.

The results of further Australian clinical trials are needed before the technology could be recommended for routine population screening. Clinical trials are research studies essential for evaluating if a drug, device, service or intervention is safe and effective.

Women should continue to feel confident that having a free mammogram every two years with BreastScreen as recommended, will give them the best chance of detecting and surviving breast cancer.

Are some states and territories already using of tomosynthesis as part of BreastScreen Australia services?

Jurisdictions are gathering evidence on tomosynthesis for breast screening but BreastScreen Australia will make a national decision on its use in the BreastScreen program.

Have other countries rolled out tomosynthesis for population screening?

Australia is aware of one other country that has recently begun the use of tomosynthesis for population screening.

However, population screening programs in different countries are not identical and we need to be confident that tomosynthesis is appropriate in an Australian population screening setting before we can consider introducing it.

What kind of radiation does tomosynthesis deliver?

Tomosynthesis/3D Mammography delivers Ionising radiation. The amount would vary depending on how and when tomosynthesis was used and may be higher compared to 2D mammography although the evidence remains unclear.^{i, ii} . A higher radiation dose will occur when using 2D and 3D mammography together and this needs to be considered compared to the potential benefits for people who receive this level of screening.

The radiation dose is safe and well within Australian guidelines and would be comparable to the amount of radiation that a person would receive when flying from Australia to London and back.

Current Recommendation

Women aged between 50 and 74 years are strongly encouraged to have a free screening mammogram every two years.

Women aged between 40 and 49 years, or 75 years and older can also have a free screening mammogram through BreastScreen Australia.

Speak with your GP or phone BreastScreen Australia on 13 20 50 to make an appointment. A doctor's referral is not needed.

ⁱ Dance DR, Strudley CJ, Young KC, et al. Comparison of breast doses for digital tomosynthesis estimated from patient exposures and using PMMA breast phantoms. In: Maidment AD, Bakic PR, Gavenonis S (eds) *Proceedings of the 11th international conference on breast imaging (IWDM 2012)*. Berlin: Springer; 2012, 316-321.

ⁱⁱ Skaane P, Bandos A & Gullien R. Comparison of Digital Mammography Alone and Digital Mammography Plus Tomosynthesis in a Population-based Screening Program. *Radiology*: Published online before print & January 2013.