

Optimising the Early Detection of Breast Cancer in Australia

Cancer Council Australia

April 2020

Background

There is growing interest in more risk-based, personalised approaches to breast cancer detection and screening, driven by evolving research on stratified risk, advances in breast imaging technologies and increased stakeholder interest.

An illustrative example is the growing interest in mammographic density, which is an established risk factor for both breast cancer and reduced mammographic accuracy. However, there is no conclusive evidence nor scientific consensus on how mammographic density should be measured and combined with other risk information, how best to communicate findings to women, and optimal management of women in high and low risk groups. Additional factors such as disparities in health service utilisation, family history and lifestyle risk factors may also be considered in developing risk-based approaches to screening.

Phased approach to data analysis and reporting

The Australian Government Department of Health has funded Cancer Council Australia to explore options for risk-based, personalised approaches to breast cancer screening in Australia. Now in its second phase, the project is continuing to build and assemble evidence to help build consensus on optimal screening and assessment pathways for women in particularly high and low risk groups.

In 2019 the project produced summaries of evidence on:

- Australian screening outcomes by risk group
- Risk assessment tools
- Mammographic breast density and screening outcomes
- Alternative screening modalities by risk group
- Overdiagnosis by risk group
- Costs, benefits and harms of risk-based breast cancer screening as estimated by modelling studies
- Potentially valuable data reports

These summaries indicate significant opportunities for optimising early detection of breast cancer in Australia over the longer term, and a need for ongoing and more detailed/systematic evidence collection and review, and stakeholder engagement, in order to inform any potential substantive changes in policy and practice.

In 2019 the project completed environmental scans to help understand the context of the current screening program and clinical practices outside the program, such as existing

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practices around risk assessment tools, current trends in risk-based clinical practices, international practices, and Australian stakeholder activity and perspectives relating to risk-based practices. Information was drawn from national statistical data, statistics collected by clinical groups, journal and grey literature, stakeholder websites, and extensive stakeholder consultation.

Ongoing work includes

- Updates to earlier summaries of evidence
- Systematic reviews to critically review and compare available tools for breast cancer risk assessment and measurement of mammographic density,
- Review and evaluation of population-level trials in terms of arising evidence and their potential translation to the Australian evidence.
- Clinical and health economics modelling to evaluate the likely benefits, harms and costs of various risk-based screening protocols.
- Information on BreastScreen jurisdiction-level risk-based screening practices, policies and related data and reports to help understand the value of these practices.

Project governance and personnel

The project is coordinated by Cancer Council Australia with regular input and advice from an independent, multidisciplinary group of experts. In its first, scoping-level phase the project was supported by an Expert Management Group (EMG) comprising 30 members. The current phase is now supported by a smaller Expert Advisory Group.

Project Coordination Group

Name	Role	Affiliations
Dr Carolyn Nickson	Project lead	Cancer Council NSW / University of Melbourne
Professor Karen Canfell	Executive lead	Cancer Council NSW / University of Sydney
Professor Bruce Mann	Co-Chair, Expert Advisory Group	Professor of Surgery, University of Melbourne Director of Breast Tumour Stream, Victoria Comprehensive Cancer Centre
Paul Vardon	Co-Chair, Expert Advisory Group	Director Cancer Screening Unit, Queensland Health
Megan Varlow	Stakeholder engagement, strategic advice	Cancer Council Australia
Paul Grogan	Strategic advice	Cancer Council NSW

Key project personnel

Name	Role	Affiliations
Dr Carolyn Nickson	Project lead	Cancer Council NSW / University of Melbourne
Dr Pietro Procopio	Modeller	Cancer Council NSW / University of Melbourne
Dr Louiza Velentzis	Epidemiologist	Cancer Council NSW / University of Melbourne
Dr Sabine Deij	Economist and data analyst	Cancer Council NSW / University of Melbourne
Suzanne Hughes	Systematic reviewer	Cancer Council NSW
Victoria Freeman	Systematic reviewer	Cancer Council NSW
Denise Campbell	Systematic reviewer	Cancer Council NSW
Chelsea Carle	Systematic reviewer	Cancer Council NSW
Amy Tayre	Project support	Cancer Council NSW