

Breast Density Reporting and Supplemental Screening in Aotearoa New Zealand

A practical pathway to earlier detection

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Decision sought

We ask Ministers to understand in principle that BreastScreen Aotearoa should measure and report breast density consistently, and that reporting should be linked to a publicly funded, risk-based pathway rather than left to private access.

1. Confirm that screening participants should receive their breast density category and a clear explanation of what it means.
2. Direct Health New Zealand to design the clinical pathway that follows notification, including risk assessment, primary-care guidance and targeted supplemental screening.
3. Fund a prospective pilot and New Zealand economic model before national expansion.

This proposal does not seek automatic MRI or ultrasound for every woman with dense breasts. It seeks consistent information and targets additional imaging for those most likely to benefit. In core screening ages, stage IV disease costs about NZ\$61,600 to NZ\$70,200 more per woman than stage I. [9]

Why action is needed

Breast density has two clinical effects. It increases the likelihood of developing breast cancer and makes cancer harder to see on a mammogram. Dense tissue and most cancers both appear white, so a negative mammogram is less reassuring in an extremely dense breast. Around 40 to 45 percent of screening-age women have heterogeneously dense breasts and about 6 to 10 percent have extremely dense breasts. Reporting supports informed choice, risk assessment and safer interpretation of a negative result. [1]

Health New Zealand's technical review provides a strong foundation for action and states that work is under way on the requirements, costs, benefits and timeframes for adding density measurement and reporting to BreastScreen Aotearoa. Its 2026 AI procurement expressly includes breast density reporting, but excludes breast cancer risk prediction and stratification. The technology pathway is therefore progressing ahead of the clinical pathway. [1,2]

If density is reported without a funded next step, women who can pay privately will be better placed to act. A national policy should prevent that inequity rather than formalise it.

The evidence supports a targeted pathway

International policy is converging on disclosure, while supplemental imaging is increasingly targeted to women with extremely dense breasts or elevated overall risk. The evidence is strongest for MRI, with contrast-enhanced mammography emerging as a potentially scalable alternative and ultrasound offering a more accessible but lower-yield option. Tomosynthesis improves mammography but does not remove severe masking. [4-8,14]

The United States requires density notification after every mammogram, Australia has adopted written notification as national policy, and the European Society of Breast Imaging recommends MRI every two to four years for women aged 50 to 70 with extremely dense breasts. Public funding and implementation remain variable. [1,4,5,14]

Evidence	Key result	Relevance to New Zealand
Reddy and Lasham 2026 [3]	In a New Zealand private clinic, tomosynthesis detected 6 of 16 invasive cancers beyond 2D mammography. Ultrasound and MRI found another 4 invasive cancers occult on other imaging.	Local proof of concept that risk- and density-informed multimodality imaging can find clinically important disease missed by mammography.
DENSE trial [6]	Inviting women with extremely dense breasts to MRI reduced interval cancers by about 2.5 per 1,000 screens, from approximately 5.0 to 2.5.	Strongest randomised evidence that MRI reduces a central failure of mammographic screening.
BRAID trial [8]	Added detection was 17.4 per 1,000 with abbreviated MRI, 19.2 with contrast-enhanced mammography and 4.2 with automated ultrasound.	Supports prioritising contrast-based imaging when capacity, contraindications and patient preference allow.
J-START [12]	Among Japanese women aged 40 to 49, stage II or higher cancers were 26 percent with mammography plus ultrasound and 33 percent with mammography alone.	Provides stage-shift evidence for ultrasound, while requiring cautious translation to New Zealand's population and age range.

What the New Zealand study adds

Reddy, the Pilot Study Team, Knowlton and Lasham studied 2,401 women in an Auckland clinic, including 2,171 in the screening pathway. All screening participants received 2D mammography and tomosynthesis; women with extremely dense breasts were offered ultrasound and women meeting the study's highest risk threshold were offered abbreviated MRI. Nineteen cancers were diagnosed, including 16 invasive cancers. MRI also improved assessment of multifocal and multicentric disease. [3]

The study is retrospective, from one private clinic, and includes a small number of cancers. It does not establish population-wide cost-effectiveness, mortality benefit or the capacity required for national delivery. It does establish a credible local signal and a workable clinical model. The appropriate next step is a publicly funded prospective pilot, not continued reliance on private access.

Earlier diagnosis has a material economic benefit

New Zealand research linked public hospital, pharmaceutical, cancer-registration and mortality data for 22,948 women. Five-year public treatment costs rose sharply with stage. In core screening ages, stage IV disease cost about NZ\$61,600 to NZ\$70,200 more per woman than stage I disease, in 2019/20 New Zealand dollars. [9,10]

Age at diagnosis	Stage I	Stage II	Stage III	Stage IV
45 to 59	\$36,922	\$47,269	\$65,213	\$98,527
60 to 69	\$32,064	\$37,791	\$52,725	\$102,292

Illustratively, shifting 100 cancers from stage IV to stage I would correspond to approximately NZ\$6.2 million to NZ\$7.0 million in gross five-year public treatment-cost differences for women aged 45 to 69. Stage II rather than stage IV represents about NZ\$51,300 to NZ\$64,500 less per woman. Shifting 100 cancers from stage III to stage I would correspond to about NZ\$2.1 million to NZ\$2.8 million. [9]

These figures are not a forecast and should not be presented as net programme savings. A full model must subtract the cost of density software, risk assessment, imaging, workforce, recalls, biopsies, overdiagnosis and capital. It should also count quality-adjusted life years, reduced treatment burden and fewer advanced cancers. Dutch modelling found MRI every four years cost-effective for women with extremely dense breasts, but the result depends on local costs and capacity. New Zealand must model its own pathway. [7]

A proportionate public pathway

Screening result	Next step	Purpose
BI-RADS A or B and average risk	Continue standard programme mammography	Mammographic sensitivity is comparatively high
BI-RADS C	Explain reduced sensitivity and assess overall risk when clinically indicated	Avoid universal additional imaging for a large group while identifying women with other risk factors
BI-RADS D	Offer formal risk assessment and a funded supplemental-screening discussion	Address the highest masking burden and strongest density-specific evidence
Dense breasts plus elevated overall risk	Prefer MRI or abbreviated MRI where suitable; consider contrast-enhanced mammography or ultrasound according to contraindications and capacity	Use the modality most likely to improve detection while managing resources and harm
New symptom at any density	Refer for diagnostic assessment regardless of the last screening result	A negative mammogram does not rule out symptomatic cancer

The implementation risks are manageable

Density reporting should proceed with safeguards. An Australian randomised trial found that notification increased women's intention to discuss density with a general practitioner but also caused modest increases in anxiety and confusion. Clear communication and navigation are therefore essential. [11]

- Use a nationally agreed result letter that gives the actual density category, explains masking and risk, and states what happens next.
- Give general practitioners and screening staff a concise decision pathway with funded referral options.
- Protect diagnostic and established high-risk MRI capacity through phased eligibility and explicit service standards.
- Monitor harms, delays and access by ethnicity, deprivation, disability and geography.

A staged decision protects quality and affordability

A national commitment to measurement and disclosure can be made now. The modality, interval and eligibility details should be tested prospectively before full national expansion.

Stage	Ministerial direction	Evidence required
Foundation	Set governance, validate measurement, agree communication and model workforce and imaging capacity	Accuracy, density distribution, demand and equity impact
Prospective pilot	Report density at diverse sites and fund a targeted BI-RADS D and elevated-risk pathway	Understanding, uptake, recall, biopsy, detection, interval cancers, stage, access and cost
Controlled expansion	Scale only when quality, capacity, cost and equity thresholds are met	Advanced cancers prevented, cost per QALY, site consistency and diagnostic-service impact

Actions requested within six months

1. Confirm that BreastScreen Aotearoa pilot participants should receive their density category and an explanation of its implications.
2. Assign national accountability for the clinical pathway, communications, workforce, funding, data and evaluation.
3. Require an implementation timetable linking density reporting to risk assessment and referral pathways.

4. Fund a prospective pilot across diverse sites, including supplemental imaging for the defined groups.
5. Commission a New Zealand model of advanced cancers prevented, QALYs, treatment costs, harms and equity outcomes.

New Zealand now has a national technical review, an active density-reporting procurement and local clinical evidence. We ask Ministers to request that reporting be linked to the pathway described above.

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