Breast Cancer Foundation NZ 2026 Election Manifesto

Technical Appendix

Breast Cancer Foundation NZ

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How to read this appendix

This appendix is the supporting evidence and implementation detail for the three policy asks. The appendix distinguishes between established evidence, emerging evidence and implementation assumptions. Where a claim is based on international evidence, this is stated. Where New Zealand-specific data are available, they are prioritised.

The case for action

Early detection saves lives

Stage at diagnosis is one of the strongest predictors of breast cancer survival. International evidence and New Zealand clinical data consistently show that breast cancers found earlier have substantially better outcomes than cancers diagnosed after regional or distant spread.[1,2]

In Aotearoa New Zealand, more than half of breast cancers are diagnosed after symptoms appear rather than through organised screening. Data used in the manifesto indicate that cancers diagnosed through the symptomatic pathway are nearly three times more likely to be late stage than cancers detected through screening.[1,3]

Indicator	Current evidence base	Implication
Stage at diagnosis	Five-year survival is substantially higher for early-stage disease than metastatic disease.	Finding cancer earlier remains one of the most effective ways to reduce deaths.
Symptomatic diagnosis	Approximately 55% of breast cancers are diagnosed after symptoms appear rather than through screening.	The system must improve both screening and public awareness of breast symptoms.
Equity	When breast cancer is found through symptoms, inequities in outcomes widen for wāhine Māori and Pacific women.	Earlier detection is an equity intervention as well as a clinical intervention.

Delays cost lives

Timeliness matters throughout the cancer pathway. A systematic review and meta-analysis found that each four-week delay in cancer treatment was associated with increased mortality across several treatment modalities and cancer types, including breast cancer.[4]

For breast cancer, diagnostic timeliness is increasingly dependent on pathology because treatment selection requires tumour type, grade and biomarkers such as ER, PR, HER2 and, in some contexts, Ki-67. Delays or inconsistency in pathology can therefore affect both treatment timing and treatment selection.[5,6]

Access to medicines matters

Earlier diagnosis cannot deliver its full survival benefit if effective treatment is unavailable. Modern breast cancer care increasingly depends on access to targeted therapies, immunotherapies and medicines that reduce recurrence or slow progression.

What happens if we do not act

Policy area	Risk of inaction	Who is most affected
Enhanced screening for high-risk women	Cancers in women with dense breasts or other high-risk features continue to be missed by standard mammography alone.	Women with extremely dense breasts; women with inherited risk; Māori, Pacific and Asian women where screening participation or density-related risk intersects with access barriers.
Digital pathology	Diagnostic bottlenecks worsen as cancer volume rises and specialist pathology capacity remains constrained.	People in regional areas; patients requiring specialist biomarker interpretation; public-sector patients if private services move ahead faster.
Life-saving medicines	New Zealanders continue to wait years for medicines that are standard care in comparable countries.	People with aggressive or high-risk disease; patients unable to self-fund; whānau carrying the financial and emotional burden of delayed access.

Policy 1: Enhanced screening for high-risk women

Who is high-risk?

For this manifesto, high-risk women include women whose breast density or clinical risk profile means standard two-yearly mammography may be insufficient. Final eligibility criteria should be developed with BreastScreen Aotearoa, breast radiologists, genetic cancer services, Māori health advisors and consumer representatives.

High-risk group	Why they are included	Implementation note
Extremely dense breasts (BI-RADS D)	Dense breast tissue both increases breast cancer risk and makes cancers harder to see on mammography.	Requires routine density measurement and reporting.
Lifetime breast cancer risk of 20% or greater	International supplemental screening guidance commonly uses this threshold for enhanced surveillance.	Requires validated risk models and clear referral pathways.
BRCA1, BRCA2 and other high-penetrance pathogenic variants	These women have substantially increased lifetime breast cancer risk.	Should align with genetic health service pathways.
Personal history of breast cancer or high-risk precursor lesions	Risk of subsequent breast cancer is higher than population baseline.	Needs coordination with post-treatment surveillance.
Chest-wall radiotherapy before age 30	Recognised high-risk exposure, for example after treatment for Hodgkin lymphoma.	Small cohort; likely managed through specialist surveillance.

Breast density and missed cancers

Dense breast tissue appears white on a mammogram. Breast cancers also often appear white. This makes cancers harder to detect, particularly in women with extremely dense breasts.[9,10]

Breast density is also an independent breast cancer risk factor. The clinical problem is therefore two-fold: women with extremely dense breasts are at higher risk of developing breast cancer, and mammography is less sensitive for detecting cancer in this group.[9,10]

New Zealand-specific evidence is important. A cross-sectional study of New Zealand women found ethnic differences in volumetric breast density, including higher absolute dense volume among Māori women compared with New Zealand European women. Asian women also demonstrated high breast density profiles in that study.[11]

Issue	Evidence	Policy relevance
Masking	Dense tissue and tumours can both appear white on mammograms.	Women may receive a normal mammogram result even when a cancer is present.
Risk	Higher density is independently associated with higher breast cancer risk.	Density should be treated as part of risk assessment, not simply a technical imaging issue.
Equity	New Zealand research shows ethnic differences in density patterns.	A national pathway should monitor equity impacts rather than assume equal benefit across groups.

Current evidence for supplemental imaging

MRI has the strongest evidence base for supplemental screening in women with extremely dense breasts. The Dutch DENSE trial found that supplemental MRI in women with extremely dense breasts and a negative mammogram increased cancer detection and reduced interval cancers.[12]

Second-round DENSE trial results showed a lower false-positive rate than the first round, an important finding for implementation because false positives and additional biopsies are common concerns in supplemental screening programmes.[13]

Contrast-enhanced mammography (CEM) is an effective and increasingly relevant option. CEM uses an iodinated contrast agent to highlight areas with increased blood supply, a feature commonly associated with cancers. It can often be delivered using upgraded mammography equipment, which will make it more scalable than MRI in a constrained health system.[14]

The 2025 BRAID randomised trial reported that abbreviated MRI and CEM detected substantially more invasive cancers than automated breast ultrasound among women with dense breasts and a negative standard mammogram.[15]

Why CEM rather than MRI alone?

Clinical trials show MRI remains the reference standard for supplemental screening in women with extremely dense breasts. However, CEM offers a more scalable first phase within New Zealand's screening infrastructure. Is more cost effective and yields similar sensitivity in high-risk co-horts. [12,15,16]

Factor	MRI	CEM	Policy implication
Evidence base	Strongest for extremely dense breasts; interval cancer reduction shown in DENSE.	Growing evidence; BRAID shows strong additional cancer detection.	MRI should remain available for highest-risk women; CEM can support wider phased implementation.
Infrastructure	Requires MRI scanner capacity and specialist breast MRI reading.	Can use upgraded mammography platforms plus contrast capability.	CEM is more feasible for BreastScreen sites with suitable equipment.
Cost and throughput	Higher cost and longer scan time.	Generally lower cost and shorter appointment time than MRI.	Better fit for a scaled public screening pathway, subject to local costing.
Limitations	Capacity constraints; access barriers; gadolinium contrast.	Iodinated contrast; radiation exposure; need for cannulation; local protocols required.	Both require governance, informed consent and adverse-event management.

International developments

Jurisdiction	Relevant development
United States	From 10 September 2024, mammography facilities became subject to updated MQSA requirements, including breast-density assessment and patient notification.
Europe	EUSOBI recommends offering MRI screening every two to four years to women aged 50 to 70 with extremely dense breasts, where feasible.
United Kingdom	BRAID is testing supplemental imaging options including abbreviated MRI, automated breast ultrasound and CEM.
New Zealand	Health New Zealand has published a technical review of breast density reporting and is considering what would be required to include density measurement and reporting in BreastScreen Aotearoa.

References: FDA MQSA final rule and updates; EUSOBI recommendation; BRAID; Health New Zealand breast density technical review.7,15,16,17

Risks, safeguards and monitoring

Supplemental imaging is not risk-free. A national pathway should explicitly monitor false positives, recalls, additional biopsies, contrast reactions, radiation exposure, workforce pressure and overdiagnosis uncertainty.[12,13,15]

Risk	Why it matters	Suggested safeguard
False positives and recalls	Additional imaging can identify suspicious findings that are not cancer.	Track recall rate, biopsy rate and positive predictive value by site and ethnicity.
Contrast reactions	CEM requires iodinated contrast.	Use standard contrast safety protocols, renal risk screening where indicated, and adverse-event reporting.
Overdiagnosis uncertainty	More sensitive testing may detect cancers that would not otherwise have caused harm.	Evaluate interval cancers, tumour biology, treatment burden and long-term outcomes.
Workforce capacity	Supplemental imaging increases imaging and reading workload.	Phase rollout; credential radiographers and radiologists; monitor reading times and backlog.
Equity impact	New technology can widen inequity if access is easier for already-served groups.	Prioritise high-volume and high-equity-need sites; report participation and outcomes by ethnicity, deprivation and geography.

Proposed phased rollout

We propose a phased national rollout beginning with high-volume BreastScreen Aotearoa sites that also serve high-equity-need populations.

BreastScreen Aotearoa operates through eight lead providers covering defined geographic regions. Approximately 60–65% of all screening mammograms occur in the four largest metropolitan catchments.

Phase one sites	Site rationale	Suggested safeguard
Auckland Central	Highest-volume screening site nationally; largest Māori and Pacific populations in urban Auckland	
Counties Manukau/ South Auckland	High screening volumes; significant equity gap for Māori and Pacific women; younger demographic profile	
Waikato (Hamilton)	Midland hub; covers high-needs populations across Bay of Plenty, Lakes, and Tairāwhiti	
Wellington Capital region	Serves Wellington, Hutt Valley, and Wairarapa	
Canterbury (Christchurch)	Largest South Island site; serves Canterbury and South Canterbury	
Southern (Dunedin or Invercargill)	Ensures lower South Island access	

An alternative configuration could prioritise Northland in Phase 1, given the region's disproportionately high breast cancer mortality among wāhine Māori and significant travel barriers.

Final site selection should be confirmed through engagement with the National Screening Unit and BreastScreen Aotearoa, informed by:

- Current mammography volumes by site and estimated proportion of women in the high-risk cohort.
- Existing equipment capability (some newer units may require only software activation and training)
- Workforce capacity for contrast administration and CEM interpretation
- Equity analysis to prioritise regions with the greatest screening-to-outcome gaps for Māori and Pacific women

Estimated costs

Component	Estimated cost (NZD)
Hardware upgrade	(digital mammography → CEM-capable) six sites $1.5-2.1 million
Power-injectors and ancillary equipment	Six sites $0.2-0.3 million
Radiographer training (2-3 staff per site)	$0.1-0.15 million
Radiologist credentialling	(12 readers) $0.06-0.12 million
Total capital (phase one)	$1.9-2.7 million
Contrast agents	Estimated 5,000 exams/year $0.4-0.6 million per year
AI density-assessment licensing	TBD
Total ongoing operating	$0.6-1.0 million/year

Costing and validation methodology

These figures are based on Australian trial data and scaled to assume roll out to six sites around Aotearoa New Zealand. They should be treated as a policy-level estimate, not a procurement-ready budget. Final costing will depend on:

Cost component	What must be validated	Likely evidence source
Equipment upgrades	Which existing BreastScreen units can be upgraded to CEM; which require replacement.	Vendor quotations; BreastScreen Aotearoa asset register; site visits.
Power injectors and consumables	Injector costs, consumables, cannulation equipment and contrast protocols.	Vendor quotations; public radiology procurement data; NZ CEM providers.
Software and licensing	CEM software, density-assessment software, maintenance and service contracts.	Vendor quotations; Health NZ procurement; Australian and UK trial costing inputs.
Workforce	Radiographer training, radiologist credentialling, additional reading time and administration.	BreastScreen workforce modelling; RANZCR input; Auckland Breast Centre implementation experience.
Operating costs	Contrast agent costs, staff time, additional assessments, biopsies and follow-up.	Local activity-based costing; pilot data; health-economic modelling.
Information systems	Density reporting, result letters, national data capture and audit dashboards.	Health NZ digital teams; National Screening Unit; BreastScreen IT platforms.

Policy 2: Digital pathology infrastructure

The diagnostic bottleneck

Pathology is central to breast cancer diagnosis and treatment planning. It confirms malignancy, determines tumour type and grade, and reports biomarkers that guide surgery, chemotherapy, endocrine therapy, HER2-directed therapy, immunotherapy and treatment de-escalation.[5,6]

Health New Zealand's pathology workforce analysis confirms the size and distribution of the pathology workforce and states that pathology work is crucial for timely diagnosis and treatment across primary care and hospital systems.[18]

The Royal College of Pathologists of Australasia has reported a critical shortage of pathologists in Australia and New Zealand and has called for urgent workforce planning to address current and predicted shortages. In New Zealand the current workforce shortage is 7.8%, expected to rise to 11% by 2030.[19]

Pressure point	Evidence	Impact on breast cancer pathway
Workforce capacity	Health NZ workforce analysis and RCPA workforce review identify pathology workforce constraints.	Limited capacity can slow biopsy reporting and biomarker turnaround.
Rising demand	Te Aho o Te Kahu's 2025 State of Cancer report projects substantial growth in cancer diagnoses over coming decades.	More biopsies, resections and biomarker tests will need to be processed.
Regional access	Specialist breast pathology expertise is not evenly distributed.	Patients outside major centres may face slower access to specialist review.
Precision medicine	Treatment increasingly depends on accurate and consistent biomarkers.	Variation or delay can affect treatment selection.

Evidence for digital pathology

Digital pathology converts glass slides into high-resolution digital images that can be reviewed remotely, shared for second opinions, used in multidisciplinary meetings and integrated into quality assurance processes.

A systematic review and meta-analysis found high diagnostic concordance between digital pathology and light microscopy for primary diagnosis, supporting digital pathology as a clinically credible model when properly validated and governed.[20,21]

Capability	Clinical or system benefit	Governance requirement
Remote specialist review	Faster access to subspecialist opinion across regions.	Credentialling, clinical responsibility and reporting protocols.
Workload sharing	Allows scarce expertise to be used across sites.	National image management and agreed workflow rules.
MDT support	Digital images can be reviewed efficiently in multidisciplinary meetings.	Integration with oncology and hospital systems.
Quality assurance	Supports audit, peer review and standardisation.	National QA framework and performance indicators.
Future AI validation	Creates the digital substrate needed for validated decision-support tools.	Local validation, bias monitoring and regulatory oversight.

Biomarker consistency and precision treatment

Modern breast cancer treatment requires accurate reporting of ER, PR, HER2, Ki-67, tumour grade and other pathological features. International evidence shows that some biomarkers, particularly Ki-67, can have significant inter-observer variability.[6]

Digital pathology can support standardised review, second opinions, audit and future validated computational tools. It does not remove the need for expert pathologists; rather, it allows specialist expertise to be used more consistently across the system.

Implementation requirements

Implementation component	Why it is required
Whole-slide scanners	To digitise slides at sufficient quality for diagnostic use.
National image management system	To store, retrieve and share images securely across sites.
Laboratory information system integration	To ensure images, reports and patient records are linked safely.
Cybersecurity and data governance	To protect sensitive health information and maintain public trust.
Workforce credentialling	To ensure pathologists and laboratory staff are competent in digital workflows.
Clinical governance	To define diagnostic responsibility, quality standards and escalation processes.
Evaluation framework	To measure whether digital pathology improves timeliness, consistency and equity.

Policy 3: Access to life-saving medicines

The funding gap

New Zealand's medicines access problem is a structural investment issue. PHARMAC can only fund medicines within the budget available to it.[7,8]

The International Cancer Benchmarking Partnership (ICBP) shows New Zealand's cancer survival lags behind comparable countries like Australia and Canada. Access to modern medicines is one of the levers we control.

Measure	New Zealand	OECD average
GDP spent on publicly funded pharmaceuticals	0.4%	1.4%
Public health expenditure on medicines	4.9%	13.3%
Average wait for funding (Options for Investment list)	6.7 years	-

Source: NZIER/CANGO analysis; OECD-derived expenditure comparisons.

Triple-negative breast cancer as a case study

Triple-negative breast cancer is an aggressive subtype with poorer outcomes than many hormone receptor-positive breast cancers. It disproportionately affects younger women and is a priority area for equitable access to effective treatment.

KEYNOTE-522 demonstrated that adding pembrolizumab to neoadjuvant chemotherapy followed by adjuvant pembrolizumab improved outcomes in high-risk early-stage triple-negative breast cancer. The 2024 overall survival publication in the New England Journal of Medicine reported a statistically significant overall survival benefit.[26]

Funding early-stage TNBC Keytruda is necessary: it is not a speculative medicine, and it is not merely end-stage treatment. It is an intervention used with curative intent to improve the chance of long-term survival.[26]

Why early access matters

Outcome domain	Potential benefit of timely medicine access
Clinical outcomes	Reduced recurrence, delayed progression, improved survival or improved quality of life, depending on medicine and indication.
Health-system costs	Potential reduction in avoidable admissions, later-line treatment, emergency presentations and prolonged treatment burden.
Equity	Reduced reliance on private payment, Givealittle campaigns or overseas relocation.
Whānau impact	Less financial distress, less caregiving disruption and more time with family.
Trust in public services	Maintains confidence that New Zealanders can access internationally standard care.

Implementation considerations

A medicines access proposal should preserve PHARMAC's role in clinical and economic assessment while addressing the funding envelope and transparency of time-to-access.

Implementation element	Purpose
Clear the backlog of cost-effective medicines on Options for Investment	Fund medicines already assessed and prioritised, subject to available budget.
Multi-year investment pathway	Prevent the backlog from rebuilding after one-off Budget uplifts.
Annual reporting on time-to-funding	Create transparency and political accountability.
International benchmarking	Compare New Zealand access with Australia, the United Kingdom, Canada and Europe.
Equity monitoring	Measure whether funded medicines reach Māori, Pacific peoples, rural patients and lower-income patients.

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