

DNA Screen Implementation Trial

Pre-Budget Submission 2026–27, 30 January 2026

EXECUTIVE SUMMARY

Investing in preventive health is a proven way of increasing national productivity, reducing health system spending, and keeping Australians out of hospital. This proposal requests investment in a new preventive health program based on genomics, grounded in medical and health-economic evidence, that will boost Australia's productivity while simultaneously delivering savings to the health system.

Broader access to preventive genetic testing or “DNA screening” offers great potential to enable early detection and prevention of serious diseases, such as cancer, in a way that is not currently possible. This could save tens of thousands of lives, reduce health system spending on later-stage treatments, and deliver productivity gains. Government investment will enable this potential to be realised.

The **DNA Screen program**, led by Monash University, is a world-first initiative to increase the prevention and early detection of cancer and heart disease in adults through population DNA screening. This submission recommends funding the next phase of DNA Screen with an **\$50 million** investment from the 2026–27 Federal Budget, to enable a 100,000-person transitional phase or “implementation trial”, delivered in partnership with Government, to prepare Australia for a new future DNA screening program.

This proposal is underpinned by robust, [published health economic evidence](#), demonstrating the cost-effectiveness of preventive adult DNA screening at scale. Beyond the savings in direct health system treatment costs, health economic modelling indicates conservative productivity gains of ~\$3 billion associated with scaling-up preventive DNA screening. This impact is delivered by preventive genomic screening because high-risk individuals identified are far more likely to develop life-threatening disease, and to do so during their peak productivity years of their 30s and 40s. The economic benefits of this national investment have been publicly discussed by key political figures, including Assistant Treasurer Dr Daniel Mulino, at the September 2025 [DNA Screen Parliamentary Event](#).

BACKGROUND

Adult DNA screening is distinct from other types of genetic testing, such as reproductive carrier screening and newborn screening, as its sole purpose is to offer adults ethical testing for their personal disease risk of adult-onset diseases. There is strong evidence that adult population DNA screening would not only save lives but also be cost effective and potentially cost saving for the Australian health system. The proposed approach targets only high-risk, medically actionable conditions where effective interventions are available to manage risk and prevent disease. Three conditions meet the criteria:

- Hereditary breast and ovarian cancer (HBOC; *BRCA1*, *BRCA2*, and *PALB2* genes)
- Lynch syndrome (LS – bowel, endometrial, and other cancers; *MLH1*, *MHS2*, and *MHS6* genes)
- Familial hypercholesterolemia (FH, or genetic high cholesterol; *LDLR*, *PCSK9*, and *APOB* genes).

The unmet need. Together, HBOC, LS, and FH affect 1 in 75 Australians or ~300,000 adults, causing a high burden of early-onset cancers and heart disease that run in families. HBOC, LS, and FH can be identified using a single DNA sequencing test. There is an urgent unmet need to identify more people at risk of these conditions and keep them out of hospital, especially during early adulthood when access to proven interventions can prevent disease, lead to early detection, and save lives.

Reimbursed testing for these genetic conditions in the public health system (MBS items 73296, 73354, 73352) is currently offered to those who meet strict testing criteria, such as a personal diagnosis and very strong family history of disease. However, most people with these genetic predispositions do not meet these criteria, with an estimated **90% of individuals at high risk for HBOC, LS, and FH remaining unidentified**. Moreover, those identified often already have late-stage disease, causing significant costs and a high burden to the health system before genetic testing is offered.

New approaches to increase access to DNA testing earlier are urgently required to identify more people at high genetic risk of these inherited cancers and heart disease, who can then engage with prevention and early detection strategies. Population-wide, low-cost DNA testing for all Australian young adults through the public health system is the most efficient and equitable way of identifying such individuals.

ECONOMIC CASE

Cost effectiveness. DNA Screen has published a major [cost-effectiveness analysis](#) undertaken with health economic experts from Monash University, the Cancer Council and other institutions. The study found that offering DNA screening to young adults for the above three conditions would be cost-effective in the Australian public health system, at currently realistic testing costs of ~\$200–400 per test.

The model yielded an Incremental Cost Effectiveness Ratio (ICER) of \$23,926 per Quality Adjusted Life Year (QALY) gained, compared with the status quo of criteria-based testing. In scenario analysis with 3% discounting, an ICER of \$4758/QALY was obtained, with many model iterations being **cost saving**. The cost-effectiveness does not depend on uptake rate, as lower uptake requires less investment.

Productivity gains. Building upon the cost-effectiveness analysis, the indirect economic benefits – measured in productivity loss averted – were also calculated. This was done using the human capital approach, valuing lost economic output due to both morbidity-related productivity loss (due to sick leave and reduced workforce participation after disease diagnosis) and mortality-related (due to premature death before retirement age). The analysis found that implementing adult population DNA screening in Australia is estimated to yield a **productivity gain of \$2.9 billion**, improving total productivity loss from \$11.5 billion under usual care (no screening scenario) to AU\$8.6B under the DNA screening scenario.

Platform for investment. The DNA Screen program has already established:

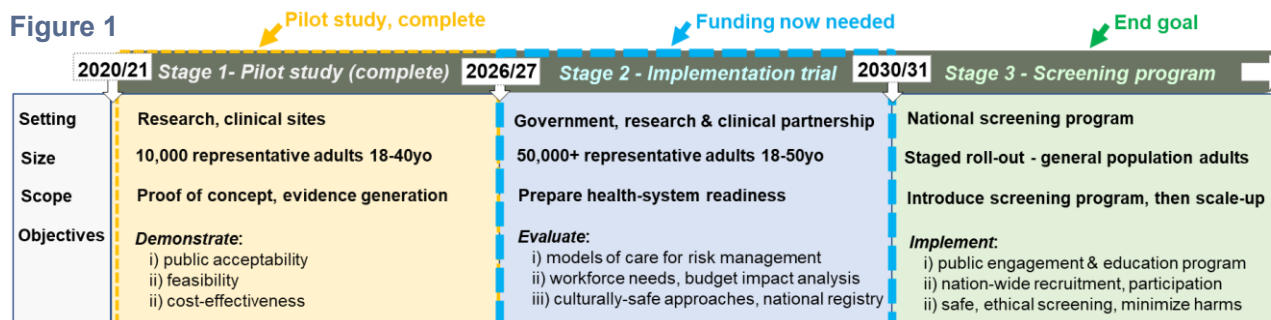
- a national network of leading researchers, clinicians and stakeholders (see [here](#))
- demonstrated feasibility and outcomes through [completion of a 10,000-person nationwide pilot](#)
- unprecedented level of public interest and [media coverage](#)
- strong political support, highlighted by a September 2025 [event at Australian Parliament House](#), hosted by the Parliamentary Friends of Genomics
- long-term engagement with Treasury on the development and introduction of the [Treasury Laws Amendment](#) (Genetic Testing Protections in Life Insurance and Other Measures) Bill 2025
- ongoing engagement with the Department of Health, Disability and Ageing about progress and opportunities for genomics and preventive health.

Feasibility and completed nationwide pilot. Informed by the prior cost-effectiveness modelling, DNA Screen recently completed a real-world prospective feasibility study and nationwide pilot of genomic screening in 10,000 young adults aged 18–40 in Australia, screening for HBOC, LS, and FH genes.

Results: Of the 30,017 people who registered from across Australia, 18,573 people were invited and 10,263 completed genomic screening with median age 31.9 years, 45.5% men and 30.0% culturally or linguistically diverse. Pathogenic or likely pathogenic variants were detected in 202 or 2.0% of those people tested. Of the 189 people referred for clinical follow-up, 97.9% accepted and 87.3% attended appointments. Notably, 74.5% of all attendees were ineligible for government-funded criteria-based genomic testing. This study was recently [published](#) in the inaugural edition of the prestigious medical journal *Nature Health* and demonstrates the feasibility of adult DNA screening in Australia.

PROPOSED IMPLEMENTATION TRIAL (Stage 2)

The proposed next stage, a 100,000-person implementation trial, would be conducted in collaboration with state and territory health systems to address key logistical and implementation challenges of DNA screening. The trial would also help build critical health system readiness and generate evidence specifically to guide the possible development of a future national DNA screening program (Figure 1).



Outcomes of the trial will include:

- DNA screening of 100,000 Australians leading to the identification and earlier treatment of ~2000 high-risk individuals
- Development and evaluation of three different models of care with specialist stakeholders
- Expanded health economic modelling, including to assess workforce needs and budget impacts
- Building of laboratory testing capacity, data privacy, and security standards
- A new framework for assessing the addition of new genes and conditions
- Standardised and transferable laboratory testing protocol
- Evidence for Government that supports the broader use of genomic testing.

More detailed documentation about the proposal has been prepared and is available on request.

Budget.

Table 1. Estimated investment required per year

	Year 1 2026/27	Year 2 2026/28	Year 3 2026/29	Year 4 2026/30	Year 5 2026/31	TOTAL
Consumables, Equipment, Lab	\$7,840,000	\$8,425,600	\$7,173,000	\$0	\$0	\$23,438,600
Personnel	\$1,260,000	\$3,353,000	\$3,509,000	\$1,910,000	\$1,670,100	\$11,702,100
Direct Research Costs	\$775,000	\$498,000	\$458,000	\$398,000	\$338,000	\$2,467,000
Partner Costs	\$930,000	\$1,308,000	\$1,308,000	\$1,308,000	\$1,181,000	\$6,035,000
Indirect & Other Research Costs	\$1,080,000	\$1,224,000	\$1,228,000	\$1,115,000	\$1,093,000	\$5,740,000
Total	\$11,885,000	\$14,808,600	\$13,676,000	\$4,731,000	\$4,282,100	\$49,382,700

CONCLUSION

This investment would deliver widespread preventive health benefits and economic gains for Australia. This will be a major investment into the health and economy of our nation into the future.

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