

## Delivering productivity, equity and value through genomics and precision medicine

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Australia has reached an inflection point in genomics and precision medicine. Scientific capability, clinical evidence, and industry capacity now significantly outpace the health system's ability to translate genomics into routine, equitable care.

Without targeted national investment, Australia risks continued fragmentation, avoidable health system waste, lost productivity, and delayed access to life-saving innovations for patients and families.

InGeNA's 2026–27 pre-Budget priorities focus on scaling what already works. They are designed to deliver near-term patient benefit while building the foundations for a more productive, prevention-focused and precision-enabled health system.

This submission sets out practical, implementable investments that align with the Government's commitments to Genomics Australia, the National Health Genomics Policy Framework, the Australian Cancer Plan, and productivity-driven health reform.

### The Case for Investment

#### **Genomics is no longer emerging. It is essential infrastructure.**

Genomics underpins modern healthcare across cancer, rare disease, reproductive health, neuroscience and chronic disease. It enables:

- earlier and more accurate diagnosis
- targeted and effective treatment selection
- prevention and risk-based screening
- avoidance of low-value care and adverse outcomes

Australia has already invested heavily in genomic research, clinical programs and industry capability.

However, translation into standard clinical care remains uneven, constrained by fragmented funding models, lack of national infrastructure, and inconsistent access across jurisdictions.

As a result:

- patients experience delays, duplication and inequity
- clinicians face administrative burden and limited system support
- governments incur avoidable downstream costs from ineffective care

Strategic, time-limited investment over the next Budget cycle can unlock the value of existing assets and deliver measurable returns for patients, the workforce and the economy.

### Why Action Is Needed Now

#### 1. **Rising demand and system pressure**

Genomic testing volumes are increasing rapidly, particularly in cancer and rare disease. Without national coordination, this growth increases inefficiency rather than productivity.

#### 2. **Clear evidence of value**

Australian data demonstrates that comprehensive genomic profiling and genomics-enabled care are highly cost-effective, improve survival and quality of life, and reduce downstream health system costs.

#### 3. **Productivity and workforce participation**

Improved survival, reduced morbidity and better quality of life translate directly into:

- longer workforce participation
- reduced absenteeism
- lower informal carer burden
- avoided premature mortality

#### 4. **Alignment with national reform agendas** These priorities directly support:

- Genomics Australia's precision oncology focus
- the National Health Genomics Policy Framework
- the Australian Cancer Plan
- the Government's productivity and value-for-money objectives

### InGeNA's Role and Approach

InGeNA represents Australia's genomics and precision medicine industry, working in collaboration with clinicians, researchers, consumer organisations and government. These recommendations were developed in wide consultation with our industry members and consumer and clinical partners.

Our recommendations are:

- system-level, not condition-specific silos
- patient-centred, with equity embedded by design
- implementation-ready, using proven programs and infrastructure
- economically grounded, with clear cost, effort and return profiles

Some priorities deliver immediate benefit to precision oncology, while others provide cross-cutting system benefit that will support genomics-enabled prevention, early detection and precision care across all conditions.

## Overview of Priority Areas

This submission proposes **four linked investment priorities**, each with a clear proposal, purpose, cost and implementation pathway:

1. **Stagewise implementation of Comprehensive Genomic Profiling (CGP) in cancer**, beginning with rare, less-common and advanced cancers and scaling to all cancers by 2030.
2. **A federated funding model** to secure sustainable precision oncology and transition proven national programs into routine care.
3. **A roadmap to establish an Australian national genomics test directory as a coordinated mechanism for genomic test availability, access, electronic ordering and reporting is implemented, enabling consistent access, transparency and timely and efficient adoption across Australia** providing a single national source of truth for high-value genomic testing and reporting.
4. **National genomic data infrastructure** to enable interoperability, scale and system productivity.

Priority	Proposal	Timeframe	Investment Ask	Outcome
Comprehensive Genomic Profiling (CGP) for priority cancer populations	Fund CGP as standard of care for patients with confirmed or suspected rare, less-common and advanced cancers, aligned with pan-tumour PD-L1 eligibility, as the first stage toward CGP for all cancers by 2030	From 2026, scaling to all cancers by 2030	\$80 million per annum	Improved survival and quality of life for high-need patients, reduced ineffective treatment, improved workforce participation, and strong value for money for the health system
Federated funding model for sustainable precision oncology	Establish a coordinated State–Commonwealth funding mechanism, including inclusion of genomic cancer testing within the NHRA, and transition national programs (PrOSPeCT, ZERO Childhood Cancer) into routine care	From 2026	No separate funding request (mechanism)	Sustainable, equitable access to genomic testing and precision medicines; maximises return on existing research investment; reduces fragmentation
National Genomic Test Directory (NGTD) roadmap	Commission a roadmap to design and implement an Australian NGTD, including governance, HTA pathways, and phased national rollout	2026–2027	\$0.5 million (one-off)	Develop an Australian cost-effective fit-for-purpose system for test access. Equitable national access to high-value genomic tests through a single, actively managed system that ensures effective ordering, annual review, and value for money.
National genomic data infrastructure	Implement proven genomic digital health solutions to enable interoperable ordering, results delivery, and patient access across health systems and My Health Record	2026–2028	\$20 million	Genomic data efficiency and effectiveness solution to remove paper-based processes and data silos, improves clinical efficiency, supports patient access, and underpins national programs such as CGP

**Summary Table: Investment Asks (Pre-Budget 2026–27)**

## Overall Value Proposition

These investments offer immediate benefits to patients and long-term changes to the system. The priorities focus on precision oncology to tackle current inequities in cancer care. They also aim to provide whole-of-system benefits by scaling genomics across all conditions as Australia moves towards a precision medicine health system. This approach seeks to reduce waste, prevent patient harm, and boost productivity. Overall, these investments will improve patient outcomes and equity, cut down on low-value care and system waste, enhance workforce participation and productivity, and maximise the return on existing public and private investments.

## 1. Embedding Genomics into Cancer Care

### Executive Summary

Genomics Australia has identified precision oncology as a national priority to address inequities in access to genomics-led cancer care. InGeNA recommends a commitment to provide Comprehensive Genomic Profiling (CGP) as standard of care for patients with confirmed or suspected rare, less-common and advanced cancers from 2026, aligned with pan-tumour PD-L1 immunotherapy funding.

This should be supported by a stepwise national implementation plan to make CGP standard of care at diagnosis for all cancers by 2030, developed in consultation with key stakeholders.

Delivery requires:

A federated funding model consolidating State and Commonwealth contributions, including incorporation of genomic cancer testing into the NHRA, to ensure consistent and equitable access.

Integration and scale-up of proven national programs, including ProSPeCT and ZERO Childhood Cancer, transitioning them into routine clinical care to maximise return on existing research investment.

A staged rollout aligned with system readiness, with funded CGP for rare, less-common and advanced cancers by 2026, and CGP for all cancers at diagnosis by 2030.

This priority aligns with the National Framework for Genomics in Cancer Control (Cancer Australia) and Rare Cancers Australia's 2025 reports calling for comprehensive and affordable CGP for rare, less-common and advanced cancers by 2026.

### Proposal / Ask

- Fund CGP as standard of care for patients with confirmed or suspected rare, less-common and advanced cancers from 2026, aligned with pan-tumour PD-L1 eligibility.
- Develop a national stepwise plan to extend CGP to all cancers at diagnosis by 2030.
- Establish national governance and expand existing infrastructure to support sustainable delivery.
- Integrate national research programs and infrastructure into routine clinical care.
- Secure a federated funding model for precision oncology through the NHRA.

### Benefits

- Enables earlier, more accurate diagnosis and identification of effective treatments.
- Improves response rates and survival through broader access to precision therapies.
- Reduces ineffective treatment spend and improves health system efficiency.
- Standardises CGP pathways nationally, reducing geographic and socioeconomic disparities.
- Transitions genomics from research into routine care using existing infrastructure.
- Aligns with Genomics Australia and Cancer Australia national priorities.

### Investment and Value Proposition: Comprehensive Genomic Profiling (CGP)

#### Proposed Investment

Australia diagnoses approximately 40,000 patients with rare, less-common, and advanced cancers each year. This is 24% of the total diagnoses and approximately 33% of cancer deaths <sup>1</sup>. At an estimated \$2,000 per CGP test, providing CGP to this priority population represents an annual testing cost of approximately \$80 million.

Australia's platforms through ProSPeCT, ZERO Childhood Cancer and leading cancer centres provide a solid foundation. Current delivery through these national precision oncology programs demonstrates both feasibility and scalability:

- **Current demand:** ~185 patients per week (~9,600 patients per year), equating to ~\$19 million in testing costs annually.
- **Projected demand by 2030:** ~250 patients per week (~13,000 patients per year), equating to ~\$26 million annually.

These figures demonstrate that early implementation can be phased, aligned to system readiness, and scaled in line with demand.

### Health Economic Value to the Australian Health System

Evidence from the Omico MoST study <sup>2</sup>, Australia's first national precision oncology program for adults, demonstrates that CGP delivers strong value for money when compared with single-gene testing approaches. Using Australian healthcare cost inputs, incremental cost-effectiveness ratios were estimated at:

- **\$1,210 per QALY gained** for cholangiocarcinoma (CCA)
- **\$6,807 per QALY gained** for colorectal cancer (CRC)
- **\$1,248 per QALY gained** for non-small cell lung cancer (NSCLC)

These values are **well below commonly accepted cost-effectiveness thresholds**, indicating that CGP is a highly cost-effective intervention for advanced solid cancers.

### Clinical outcomes further reinforce this value:

CGP enabled testing of approximately 27,587 patients in Omico over 10 years as reported in the Impact Report <sup>3</sup> with 8,500 patients in the MoST study with advanced or metastatic cancer.

Patients receiving genomically matched treatment experienced up to 50 percent longer survival compared with those who did not receive matched therapy.

### System, Economic, and Equity Benefits

From a productivity and economic perspective, the additional QALYs generated through CGP translate into tangible system-wide benefits. Improved survival and quality of life increase the likelihood that patients can remain in, or return to, the workforce, reducing absenteeism and premature exit from employment. Improved outcomes also reduce the unpaid carer burden borne by families, supporting broader labour force participation.

These gains reduce productivity losses associated with premature mortality, which represents a significant economic cost beyond direct healthcare expenditure. As part of Treasury assessment, these survival gains could also be considered through a value of a statistical life scenario, demonstrating that even modest improvements in survival have the potential to offset a substantial proportion of program costs.

CGP also delivers downstream fiscal benefits by reducing low-value and avoidable care, including:

- avoidance of ineffective therapies and prolonged exposure to treatments with limited benefit
- reduced treatment-related adverse events and associated hospitalisations
- shorter diagnostic pathways and reduced duplication of testing
- reduced progression-related disability, with flow-on impacts for disability supports and aged care

Taken together, CGP delivers health gains at low cost per QALY while supporting **productivity, fiscal sustainability, and equitable access**, making it a high-value investment for both the health system and the broader economy.

Beyond direct health system benefits, national precision oncology programs have generated broader economic returns

- More than \$200 million in foreign investment attracted.
- Over 1,500 jobs created, supporting Australia's life sciences and clinical research ecosystem.
- Strong equity outcomes, with 36% of participants from rural and regional communities, and more than 2% identifying as Indigenous, demonstrating a system designed to support equitable access.

### Investment Request

We request an investment of \$80 million per annum to fund Comprehensive Genomic Profiling (CGP) as standard of care for approximately 40,000 Australians diagnosed each year with rare, less-common, and advanced cancers, based on an estimated cost of \$2,000 per test.

This investment enables equitable national access to genomic testing for the patient population with the highest immediate clinical need and provides a scalable foundation for extending CGP to all cancers by 2030.

### References

- 1 Australian Institute of Health and Welfare. Cancer data in Australia 2024 <https://www.aihw.gov.au/reports/cancer/cancer-data-in-australia/contents/overview>
- 2 Spencer, S. et al., (2025) **Clinical and economic value of comprehensive genomic profiling in patients with advanced solid cancers using Australian real-world data: Preliminary analyses.** [https://ascopubs.org/doi/10.1200/JCO.2025.43.16\\_suppl.e15084](https://ascopubs.org/doi/10.1200/JCO.2025.43.16_suppl.e15084)
- 3 Omico Impact Report: From Momentum to Mainstream (2025) <https://www.omico.com.au/news/omico-launches-a-new-landmark-report/>

## 2. Roadmap for an Australian National Genomic Test Directory (NGTD) by 2030

### Executive Summary:

Fund the development of a roadmap to design and implement an Australian National Genomic Test Directory (NGTD) by 2030, to streamline and standardise high-value genomic testing at scale and enable consistent, equitable access to genomics-led care. The NGTD would establish a nationally coordinated framework for genomic test availability, access, electronic ordering and reporting, supporting timely, transparent and cost and resource efficient adoption across Australia.

The NGTD would provide a single national reference for genomic tests available in Australia, addressing the current complexity of navigating test availability across multiple listings and pathways. It would operate as a fit-for-purpose, actively managed system, with an annual clinical and economic review process to ensure only tests with demonstrated value remain available, redundant or superseded tests are removed, and costs are regularly assessed to ensure value for money for taxpayers.

International experience demonstrates the effectiveness of this approach. A comparable model in England has supported timely clinical access, consistent commissioning, and efficient resource allocation across the health system.

Implementation of the NGTD could be undertaken by the Department of Health and Aged Care using Departmental funding allocations (DREs) rather than new Budget measures, with central oversight to ensure cost-effective operation, similar to the English model.

### Proposal / Ask

Commission the design of a roadmap for an Australian NGTD, that includes governance structures integrating Commonwealth and States, an HTA model with national pathways for public funding and an agile directory review and update process for tests with demonstrated clinical utility. The roadmap should include a phased rollout, with time-bound milestones for a pilot and subsequent national scaling of operations by 2030.

### Purpose and benefits

- **Ensures equitable access** through a single national reference for approved genomic tests and reimbursement.
- **Improves efficiency and value for money** by reducing duplication of assessments across governments and curating the most clinically and cost-effective tests each year. Enables cost planning and controls.
- **Provides transparency** for patients and clinicians, similar to the England model, showing which tests are available for which conditions.
- **Enhances patient outcomes** by enabling targeted, evidence-based treatments and faster diagnosis in rare and inherited diseases.
- **Accelerates medicine access** for rare cancers by de-linking tests to therapies and supporting pan-tumour reimbursement models.
- **Supports planning and accountability** at both a Commonwealth and State level through a comprehensive, portfolio review approach, with greater transparency on test reimbursement and capability requirements.
- **Provides centralised data** on test use, costs, and outcomes, enabling better national resource allocation and policy oversight.
- **Drives investment** from industry into research by aligning with international guidelines and placing Australia as a rapid responder to technology innovation.

### Cost and Effort

Cost: \$500,000

Effort: Moderate

### 3. Enable genomic data sharing to streamline patient care

#### Executive Summary

Fund a National Genomic Data Infrastructure Initiative to:

- improve patient access to genomic information and enable secure information sharing through My Health Record (MHR)
- link existing, proven genomic digital health solutions and genomic testing data systems across Australia, including use of FHIR/HL7 for ordering and results exchange
- mandate adoption of FAIR data principles across genomics information sharing to remove data silos

This initiative is a practical and cost-effective investment focused on patients, families, and clinicians. It will transform how genomic healthcare is delivered by removing paper-based genomic test orders and data out of silos, enabling secure and consistent exchange of information across the health system.

A national interoperable genomics data platform will provide the digital foundation for evidence-based decisions at individual, community, and national levels. It will support seamless test ordering and results delivery, helping to embed genomics as part of routine clinical care across Australia.

This approach delivers early benefits while laying the groundwork for future digital improvements, without waiting years for new standards to be developed. It is the approach being used in the UK to overcome the same challenges and constraints.

#### Purpose

##### What Is Genomic Data Interoperability

Genomic data interoperability is the ability of clinical health systems, laboratories, research organisations and MHR to exchange genomic information securely and consistently.

It allows patients to receive optimal care through optimal information sharing and exchange by genomic data, test orders and test results, family history and other data elements to move seamlessly, while protecting privacy and ensuring data integrity, and helping patients to access and optimise the use of their genomic information.

##### The Challenge: Fragmented Clinical Care

Australia's genomic testing system remains largely paper-based and fragmented. Laboratories use different order forms or portals, requiring clinicians to repeatedly re-enter clinical information such as family history and phenotypes. This duplication increases administrative burden, introduces error risk, delays diagnosis, and contributes to inequity across regions and services.

Without funded national infrastructure linking clinical systems, laboratory systems and MHR, genomics cannot be delivered efficiently or at scale. The current model diverts clinician time away from patient care, increases costs, and limits the ability to use genomic data to support prevention, prediction and early intervention.

##### The Solution: A Patient-Centric, Interoperable Foundation

Deliver interoperability by leveraging the implementation of genomic systems that are already proven and ready to deploy.

This initiative will:

1. Replace paper and manual orders with interoperable digital ordering solutions that laboratories can receive and process immediately that are agnostic of the health system.
2. Use existing genomic data systems that capture relevant clinical context such as family history, phenotype, medications etc.
3. Deliver genomic test results electronically to clinicians at point of care and into MHR, enabling secure access with wrap around support for patients and families.
4. Enable patients to have access to their genomic results in MHR and improve their options for prevention, treatment and management.

This approach delivers early benefits while laying the groundwork for future digital improvements, without waiting years for new standards to be developed. It is the approach being used in the UK to overcome the same challenges and constraints.

The proposed Australia-wide genomics data infrastructure will link existing genetics services, MHR, and clinical information systems to create a scalable, secure, and equitable foundation for national genomic healthcare.

## Benefits

**For patients and families:** it ends the cycle of repeating their medical history and ensures results follow them across health services and locations, as well as improving access to prevention, and awareness of treatment and options.

**For clinicians:** it provides faster, more accurate information to guide treatment and reduces administrative time.

**For the health system:** it reduces duplication, enables better resource allocation, and integrates genomics into routine care using genomic data driven insights.

This investment will:

- Equip health professionals to make faster, more accurate testing and treatment decisions.
- Support preventive and family-based care, reducing long-term health burdens.
- Streamline processes, eliminate duplicated testing, and strengthen clinical safety.
- Support national programs in precision oncology, rare disease and reproductive screening.
- Integrate with the National Genomic Test Directory to support test consistency and reimbursement.
- Align Australia with international best practice (UK, US, Canada) and attract industry partnership and innovation, including securing our leadership in clinical trials.

## Proposal / Ask

The Australian Government commit to establishing a National Genomic Data Infrastructure Initiative embedded within government-funded genomic testing programs, such as the CGP delivering foundational digital health infrastructure for end-to-end genomics by 2028.

## Cost, Effort, and Capacity

**Effort:** Moderate (multi-year staged implementation)

**Cost:** \$20 million

**Capacity:** Australia has established sovereign expertise in software, health informatics, and genomics (FHIR/Sparked-trained professionals, national pathology networks, and patient advocacy partners) to lead this work.

## Appendix 1

### Staging of CGP

#### Additional Benefits of CGP Proposals

##### *Purpose and Benefits*

- **Clinical impact:** Identify actionable alterations to guide targeted therapies and immunotherapy, improving response rates and survival.
- **Equity of access:** Standardise CGP pathways nationally to reduce geographic and socioeconomic disparities.
- **Cost-effectiveness:** Avoid low-yield treatments, optimise therapy selection, and reduce adverse events and hospitalisations.
- **Faster diagnosis:** Consolidate molecular diagnostics to shorten time-to-result and accelerate treatment initiation.
- **Clinical trial access:** Enable rapid matching to biomarker-driven trials, increasing patient options and national trial participation.
- **Data asset creation:** Build a high-quality oncology genomics dataset to inform guidelines, HTA, and future innovation.
- **Workforce development:** Upskill clinicians, pathologists, genetic counsellors, and pharmacists in genomics-informed care via Nationally accessible molecular tumour boards.
- **System readiness:** Scale infrastructure adaptable to rare cancers and future technologies (RNA-seq, liquid biopsy).
- **Strategic transition by 2030:** Moves genomics from research into routine clinical care; replaces fragmented short-term funding with sustainable **federated funding**; supports **equity of access** to both testing and precision oncology medicines for all Australians; demonstrates Commonwealth leadership and alignment with **Genomics Australia's** precision oncology focus and future-proofs **HTA** by linking CGP to companion diagnostics and real-world evidence generation.

##### *Effort and Timeline*

- **Phase 1 (0–3 months):** Governance, procurement, pathway design, pilot site selection, consent and policy templates; align 2026 CGP launch with PD-L1 funding.
- **Phase 2 (4–9 months):** Pilot operations for rare, less common, and advanced cancers; TAT optimisation; clinician training; initial KPI tracking and RWE framework.
- **Phase 3 (10–18 months):** Scale to additional centres and tumour streams; publish outcomes; define 2027–2030 expansion to all cancers; sustainability plan for federated funding.

##### *Stepwise Implementation to 2030 approach*

- **2026 Launch:** Funded CGP as standard of care for confirmed or suspected rare, less common, and advanced cancers, in parallel with pan-tumour PD-L1 immunotherapy funding; target ~40,000 patients annually.
- **2027–2028 Expansion:** Extend CGP to high-incidence tumours with established companion diagnostics (e.g., lung, colorectal, breast, prostate, ovarian, melanoma); increase lab capacity and regional access.
- **2029 Consolidation:** National scale-up with accreditation, and decision support via molecular tumour boards; integrate liquid biopsy for monitoring and difficult-to-biopsy tumours.
- **2030 Standard of Care:** CGP at diagnosis for all cancers, supported by a federated, federally funded national program; full transition of ProSPeCT and ZERO Childhood Cancer into sustained national operations.
- **Therapy impact:** Share data on patients started on biomarker-aligned therapies; response rates vs baseline.
- **Cost metrics:** Reduction in multiple small panel/single gene tests per patient. Reduction in spend on ineffective therapies and avoided adverse events.
- **Equity:** Regional variation in access and outcomes; rural and First Nations access.
- **Research/Trials:** Number matched to biomarker-driven trials; RWE sets produced for HTA and reimbursement.