Omico.



40,000 REASONS TO ACT.

Building on 11 years of progress to make precision oncology part of everyday cancer care.

Omico.

About Omico

Omico is helping transform what is possible for Australians affected by cancer — improving outcomes today while building the evidence for better cancer care tomorrow.

We are an independent, national, not-for-profit **cancer research organisation** that has worked for over 11 years to improve outcomes through research-led, evidence-based precision oncology.

Through our research programs, Australians with cancer, as well as people at increased risk of cancer, can benefit from advances in genomics and other emerging molecular technologies that are expanding the possibilities of precision oncology.

For eligible patients with incurable cancer, our research programs provide molecular profiling and treatment matching at no cost, helping identify potential treatment and clinical trial opportunities. By building a detailed picture of the biology of an individual's cancer, molecular profiling can identify biomarkers that help match patients with targeted treatments and biomarker-led clinical trials that may otherwise have been out of reach.

Through separate research programs, we also investigate inherited cancer risk, generating evidence to improve the identification of people at increased risk and inform cancer prevention, early detection and treatment.

Our role extends well beyond testing. Omico connects molecular profiling with expert clinical interpretation, treatment and clinical trial matching, research and data. We bring together Australia's leading cancer centres, clinicians, researchers, industry, government and patient communities through a nationwide network.

Over 11 years, we have built and refined the infrastructure, systems, expertise and operational capabilities needed to deliver precision oncology reliably across the nation.

Today, over **10,000 Australians are referred to Omico each year**, from metropolitan, regional, rural and remote communities across the country. This growing experience continues to strengthen the evidence and capability that Australia can draw upon to improve cancer care.

Acknowledgement of Country

We acknowledge Aboriginal and Torres Strait Islander peoples as the Traditional Custodians of Country throughout Australia and pay our deepest respects to Elders past, present and emerging.

For Aboriginal and Torres Strait Islander peoples, health has always been about more than the absence of disease. It is grounded in connection to Country, culture, family and community.

As precision oncology transforms cancer care, we have an opportunity and a responsibility to ensure First Nations peoples are part of that future. We are working to ensure Aboriginal and Torres Strait Islander voices help shape how precision oncology is delivered, through genuine partnership and knowledge sharing as this national capability grows.

The promise of precision oncology is deeply personal: understanding of songlines, blood stories and DNA spans 65,000 years. Closing the gap and extending the invitation to First Nations peoples to be included in precision oncology is at the forefront of Omico's charter.

Our ambition for equity should be just as personal. As we look forward, we must ensure no community is left behind.

Professor Maree Toombs
Head of Indigenous Engagement, Omico
Proud Euralayie/Kooma woman

40,000 REASONS TO ACT.

40,000 represents how far we've come — and the opportunity ahead for precision oncology in Australia.

Over 11 years, more than 40,000 Australians have been referred to Omico's research programs. The participants in these programs have helped us build the evidence, experience and capability Australia has in precision oncology today.

But 40,000 also represents the scale of the opportunity ahead.

Currently, each year around **10,000** Australians are referred to Omico's PrOSPeCT program, which provides eligible people with incurable cancer access to molecular profiling and treatment matching at no cost to the patient.

Yet our analysis indicates that around **40,000 Australians with incurable solid cancers each year could potentially benefit** from this kind of precision oncology approach.

Meeting this need will require more than expanding research programs. It requires changes to the health system itself.

But Australia is not starting from scratch. Omico has built substantial national infrastructure, expertise, systems, capability and evidence. These foundations can be learned from and leveraged as Australia determines how precision oncology can become part of routine cancer care.

These are our 40,000 reasons to act.

Behind these numbers are people. We dedicate this report to every person who has participated in Omico's research over the past 11 years, and to the families, loved ones and carers who have shared the journey with them. Their contribution has helped build knowledge that can benefit Australians well beyond their own experience.

We also acknowledge the clinicians and researchers, hospitals and research institutions, patient and community organisations, industry and philanthropic partners, and collaborators across the cancer community who have made this work possible.

We thank successive Australian Governments for their significant investment in Omico's research and precision oncology, and particularly the Hon Mark Butler MP, Minister for Health and Ageing, Disability and the National Disability Insurance Scheme (NDIS), for his continued support and the Australian Government's most recent investment in PrOSPeCT. We also acknowledge the NSW Government's financial support for the initial PrOSPeCT program.

To everyone who has been part of the journey so far: thank you. Together, we have built strong foundations for Australia's next move.

Foreword

It is a privilege to write my first foreword as Chair of Omico at such an important time for the organisation, and in Australia's cancer care journey.

Over 40,000 Australians have now been referred to Omico's research programs. Each represents an individual experience of cancer, but together they represent something more: 11 years of evidence, learning and practical experience about what it takes to make precision oncology work in Australia.

That experience matters now.

Precision oncology is already changing what is possible for people facing incurable and difficult-to-treat cancers. As the science continues to advance, so too must our ability to translate those advances into better outcomes for Australians, wherever they live.

Over the past 11 years, Omico has built substantial national capability — something of significant national value.

Through research, and by bringing together expertise across cancer care, genomics, industry and patient advocacy, we have enabled thousands of Australians to access advances in precision oncology while building evidence, experience and capability for the future.

Importantly, we have learned what it takes to translate precision oncology into meaningful patient benefit. It requires more than access to molecular profiling. It requires an end-to-end pathway from molecular profiling to treatment and clinical trial opportunities, supported by the systems, processes, technology and specialist expertise at every step.

None of this has happened in isolation. It reflects sustained collaboration and investment across government, research, clinical care, industry, advocacy and the wider cancer community.

Together, we have built strong foundations. But research programs alone cannot deliver precision oncology as part of routine cancer care for all Australians who could benefit. **The next challenge is a system-level one.**

Australia is well placed to make that move. We have expertise, infrastructure, networks, systems, data and evidence to draw on, and practical experience of what works, where barriers remain and what will be required to translate advances in precision oncology into routine cancer care.

Omico is ready to bring its experience, systems and capability to the next stage, working with government and the cancer community on practical solutions that build on existing strengths and deliver lasting change.

Australia's next move is to build on the evidence, experience and national capability already established, moving beyond research-led access to make precision oncology part of routine cancer care for all Australians who could benefit.

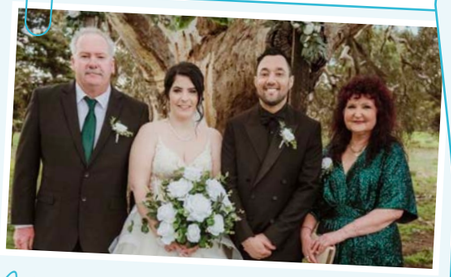
RICHARD VINES
Chair, Omico



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Beyond the numbers.
The lives behind our work.



Marina

Since my daughter's wedding, we've welcomed our ninth grandchild! We're putting in a pool at home and I can't wait to be in there with all the grandies.

My treatment stopped more than 12 months ago because of the side effects. At my last scan, I still had no evidence of disease.

My oncologist says it's "when, not if" the cancer returns, but I refuse to live in fear. Next year is our 40th wedding anniversary and I have every intention of being here to celebrate it. Precision oncology gave me hope.



Emily C

Before the match to the trial in Orange, we felt like we had exhausted all treatment options.

Molecular profiling then identified a BRAF mutation and helped connect me with a clinical trial in Orange, involving fortnightly trips from Canberra for treatment.

"Being on this trial has given me so much more hope. I'm just really excited for the future, which I haven't had for a long time. I have a lot to live for."



Jason

I'm about to have my 47th round of immunotherapy and chemotherapy. For more than two years, treatment has meant a four-hour round trip to Albury every fortnight. Soon I'll be able to have treatment closer to home.

Despite the challenges of treatment, I'm back at the gym three days a week, consulting two to three days a week and able to travel again. My wife Vanessa and I went to New Zealand this year, including a helicopter ride to a glacier on Mt Cook.



Beth

"You've got to live!"

Last December, I celebrated my son's wedding. If not for Omico, the original MoST and all of you and your teams' passion, the perfect day would have been very different.

While my treatments have needed to change over time, decisions continue to be guided by the molecular profile of my cancer. This year, I joined a new clinical trial with encouraging results.

As a former lung cancer nurse, I'm passionate about helping others understand the opportunities precision oncology can offer. This year, I became Omico's first STAR Ambassador – Screening and Therapy Advocate with Real-life experience – a title I chose to reflect both my clinical and personal experience of cancer.



Nathan

After chemo and radiation, my bowel cancer spread to my liver. Then molecular profiling gave my oncologist important information to help guide my treatment. I completed two years of immunotherapy and I've been cancer-free since January.

Our son was born in July and he's doing really well. Work is still hectic and I'm renovating the backyard, building the deck and planter boxes, moving soil, laying grass and planting trees.

"I'm doing amazing. Nothing is stopping me!"



Emily L

My cancer progressed in October last year. Since December, I've had multiple surgeries and further molecular profiling, which revealed a biomarker to match to a new targeted therapy.

After three cycles, my scans showed a very encouraging response, with side effects more manageable than with previous treatment.

In between treatment rounds, my husband and I ran 10km to raise money for cancer research. For me, *"progress means having another treatment option and, ultimately, more time to keep living our lives."*



Peta

My pancreatic cancer came back after surgery and chemotherapy and had spread to my liver. Molecular profiling found a KRAS G12D mutation and in April I started a targeted trial, taking an oral treatment.

Now I have scans every eight weeks and the results have always shown improvement. I'm not in pain anymore and I don't need painkillers, although I do still feel tired at times.

"Never give up. There's so much research in pancreatic cancer now. There is hope."



Christine

After two years with no evidence of disease following treatment for ovarian cancer, symptoms and blood tests earlier this year showed a recurrence. I went through further chemotherapy and finished in August.

I've now started a clinical trial investigating another treatment option, while continuing to work part-time as a partner in a law firm.

"An option of treatment is absolute gold. It gives motivation and hope. I'm so grateful."

Executive summary

40,000 REASONS TO ACT.

Building on 11 years of progress to make precision oncology part of everyday cancer care.

Precision oncology is changing what is possible for Australians facing cancer. The opportunity now is to make its benefits available to more people, faster, through routine cancer care.

Each year, **at least 40,000 Australians with incurable solid cancers could potentially benefit** from precision oncology. This represents a substantial and continuing national need.

Over the past 11 years, more than 40,000 Australians have been referred to Omico's research programs, helping build the evidence, experience and national capability needed to make precision oncology work in Australia.

These two figures tell an important story: what has been achieved through research, and the continuing opportunity to bring precision oncology into routine cancer care for many more Australians.

Australia has substantial national capability to build upon

Omico has built, operated and refined a **national research engine for precision oncology** – an interconnected system of infrastructure, technology, processes and specialist expertise that supports patients from referral through molecular profiling, expert interpretation, treatment and clinical trial matching, and follow-up. This generates valuable evidence about what works and where barriers remain.

Working with clinical, research, industry and advocacy partners, Omico has supported 120 oncology clinical trials and established a clinical trial network spanning 99 centres across Australia. Its research programs have also broadened access for people in regional, rural and remote communities.

Australia is not starting from scratch. Omico's National Research Engine represents substantial capability and practical experience that Australia can draw upon to help integrate precision oncology into routine cancer care.

Identifying a treatment opportunity does not guarantee access to it.

Translating molecular insights into treatment requires effective pathways connecting patients with clinical expertise, trials and therapies.

Evidence of patient benefit

Omico's research demonstrates the potential of precision oncology to identify treatment opportunities, improve access to innovative therapies and extend lives.

71.3% of patients profiled received a matched treatment recommendation[1]

19,316 PEOPLE

3,921 people accessed a clinical trial or matched therapy outside a trial[1]

~65% longer median overall survival[2]

21.2 VS 12.8 MONTHS

Australia's next move: From research to routine care

Scientific progress is moving faster than Australia's ability to make advances in precision oncology available to patients.

Research programs have demonstrated what is possible but cannot meet the national need alone. **A change to the health system is required.**

Two challenges Australia must solve

1 Expand access to clinical trials and innovative treatments

Increase clinical trial capacity, improve equitable access to molecular profiling and strengthen the pathways connecting patients with treatment opportunities. This would also help attract international clinical research and investment to Australia.

2 Accelerate the implementation of effective innovations into routine care

Generate and evaluate evidence to inform better health policy, guide funding and implementation decisions, and ensure effective innovations reach more patients, faster. This will help direct healthcare resources where they deliver the greatest benefit.

These priorities must be addressed together, connecting earlier patient access with the evidence needed for broader implementation.

The solution: A nationally coordinated learning health system

Omico proposes establishing a new national institution — a research-led learning health system (LHS) — to connect clinical research, earlier patient access, real-world evidence generation and the implementation of effective innovations into routine care, dramatically shortening the time between scientific discovery and patient access.

A national LHS could:

- Expand equitable patient access and shorten the time to treatment with precision therapies by coordinating molecular profiling, clinical expertise and clinical trial opportunities across Australia.
- Accelerate evidence generation through clinical and real-world data.
- Inform health policy, funding and implementation decisions through evidence about effectiveness, value and health system impacts, supporting timely and sustainable adoption of beneficial innovations.
- Strengthen clinical research and investment, attracting new trials and partnerships to Australia.

The LHS would complement Australia's existing regulatory and health technology assessment processes, generating evidence to support more timely, informed decisions.

Building on Australia's strengths

Australia already has substantial expertise, infrastructure, systems and evidence to draw upon. Omico's established national research capability and practical experience can make an important contribution.

Government leadership and cross-sector collaboration are now needed to expand clinical trial access and establish a national learning health system, building on Australia's existing strengths to deliver lasting change.

The pieces exist.
Now is the time to bring them together.

We have at least

40,000
REASONS TO ACT.

Every year.

Omico.

01

Precision oncology is changing cancer care today

Omico.

Precision oncology works

Precision oncology is a modern approach to cancer care that uses detailed molecular information to guide more precise, personalised decisions about cancer prevention, risk management and treatment.

Traditionally, cancer treatment has been guided largely by where a cancer starts in the body, such as the bowel, breast or lung, and how it appears under a microscope. But cancers that develop in the same part of the body can have different characteristics, which can influence how they grow and respond to treatment.

Precision oncology identifies the genetic and other molecular changes in cancer cells that may be driving their growth. Advanced molecular profiling technologies, including comprehensive genomic profiling (CGP), whole genome sequencing (WGS) and immunohistochemistry (IHC), can identify biomarkers — such as changes in DNA or proteins expressed by cancer cells — that can inform treatment decisions.

This is what makes treatment more precise. Rather than relying primarily on the type and location of the cancer, doctors can use molecular information to match patients to treatments targeting specific changes or vulnerabilities in their cancer cells. This can identify treatments and clinical trial opportunities more likely to work for an individual, that might not otherwise be identified through routine testing.

Precision oncology also helps us understand inherited cancer risk and inform prevention and risk management. Some inherited genetic changes can increase a person's likelihood of developing certain cancers. Identifying these changes can inform genetic counselling, risk assessment and surveillance, including screening to detect cancer earlier. This information may also be important for family members who carry the same inherited genetic variant.

The evidence strongly supports that matching patients to treatments based on the molecular characteristics of their cancer can improve outcomes and extend survival. Omico's research has demonstrated these benefits for Australians with advanced cancer, while its research into inherited cancer risk and surveillance has also generated evidence that has changed clinical practice.

DR MIKE FREELANDER
Federal Member for Macarthur



"I have, as a practicing physician watched the gradual evolution of Australian oncology over the last 50 years. However, progress over the last 10 years has been dramatic with improved access to better targeted treatments led by rapid advances in genomics.

In Australia, Omico has been at the forefront of this change, and it is revolutionizing cancer treatments, now moving into other platforms, so called "multi-omics" with a multipronged approach to cancer treatment. This will deliver better outcomes with improved productivity, less hospitalisation and lower cost to the modern health system."

Omico's national research initiatives

Since 2016, Omico has established and delivered national research programs spanning cancer treatment, inherited cancer risk and surveillance.

Together, these initiatives have improved access to precision oncology, generated evidence of clinical benefit and informed changes to clinical practice.

Cancer treatment & clinical trials

MoST – Molecular Screening and Therapeutics

Australia's first national molecular therapeutics program, using molecular profiling to identify potential clinical trial opportunities for people with advanced or metastatic cancers who were taking or had completed their last line of effective treatment. MoST matched patients to precision treatments, extending lives for some, while building evidence that precision oncology can improve outcomes.

- **Status:** closed to recruitment but long-term follow-up continues
- **Referrals:** ~ 8,300
- **1,176** went on to commence clinical trials or novel therapies

PrOSPeCT – Precision Oncology Screening Platform Enabling Clinical Trials

Australia's largest cancer genomics initiative for people with advanced, incurable or poor prognosis solid cancers, providing access to precision oncology and generating evidence to inform its integration into routine cancer care.

- **Status:** open
- **Referrals:**
  Phase 1: 21,500, closed on 31.12.2025
  Phase 2: 25,000 referrals through to mid-2028
- **Economic Growth:**
  $200m foreign direct investment, 258 direct jobs, 1,290 estimated indirect jobs, 39 research traineeships

CaSP – Cancer Screening Program

The program within PrOSPeCT that provides molecular profiling and matching to clinical trial and treatment opportunities, at no cost to the patients.

Inherited cancer risk

RiSC – Genetic Cancer Risk in the Young

Research studying people diagnosed with cancer at a young age, or multiple primary cancers at any age, exploring the genetic variants that contribute to inherited cancer risk, and help inform treatment, screening and risk reduction.

- **Status:** closed to recruitment but long-term follow-up continues
- **Participants:** 1,474

SMOC+ – Surveillance Study in Multi-Organ Cancer Prone Syndromes

Investigates how whole-body MRI can be used to monitor people at high inherited risk of developing cancers in multiple organs and building evidence for earlier cancer detection and better outcomes.

- **Status:** open
- **Participants:** 310; 124 cancers detected in 66 participants, almost all treated with curative intent



Evidence that precision oncology can extend lives

The most mature findings from Omico's MoST study provide compelling evidence of the benefits of precision oncology.

An analysis of 3,383 people with advanced, treatment-resistant cancers who underwent molecular profiling found that patients who received treatments matched to biomarkers supported by prospective clinical evidence had substantially longer median survival than those who received unmatched treatments.

These findings demonstrate the value of molecular profiling and treatment matching, even for people who have exhausted standard treatment options, and reinforce the importance of making precision oncology more widely accessible to Australians with cancer.

Median overall survival in the MoST study[2]

21.2 MONTHS — Biomarker-matched treatment

12.8 MONTHS — Unmatched treatment

~65% — Longer median overall survival

40,000 referrals. A national picture of precision oncology.

Across its national research initiatives, Omico has now received 40,000 referrals from clinicians seeking additional treatment options for their patients or opportunities to investigate inherited cancer risk.

More than 36,000 of these referrals have been to MoST and PrOSPeCT, creating one of Australia's largest collections of molecular and clinical information from people with advanced cancer.

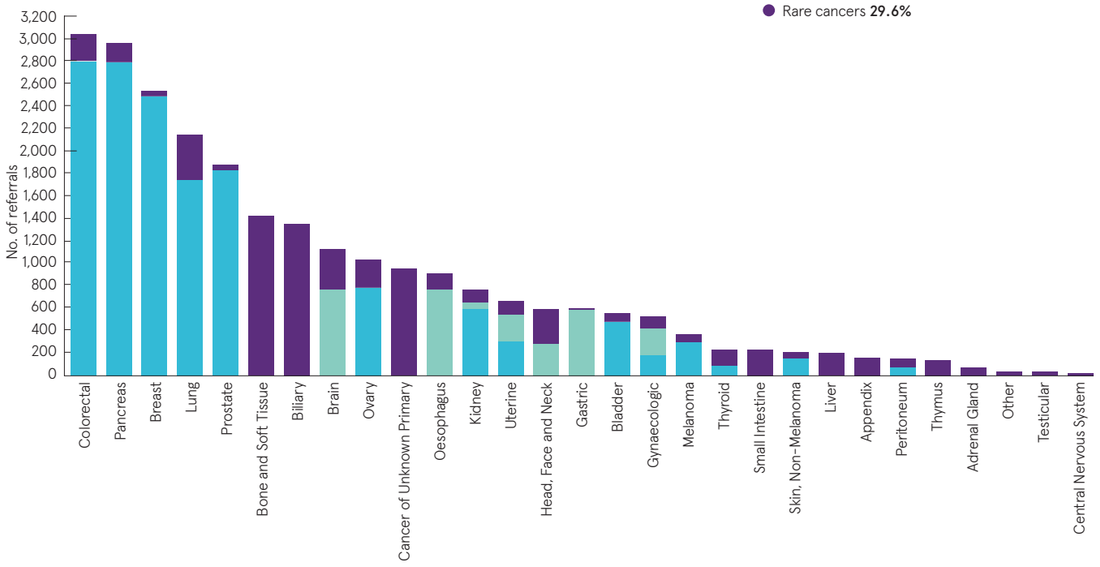
This experience is helping Omico understand the molecular differences within and across cancer types, identify potential treatment opportunities and build the evidence needed to inform routine precision oncology care.



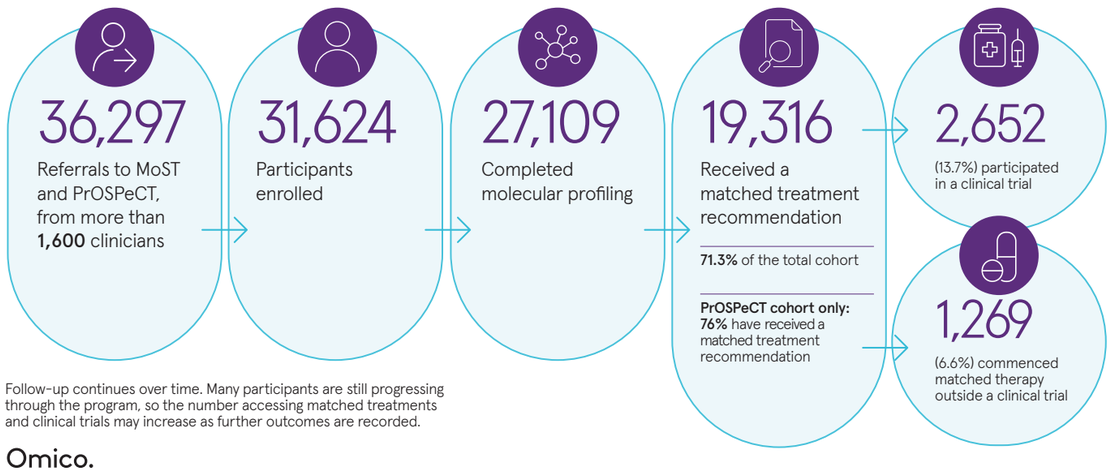
MoST and PrOSPeCT: A snapshot

A diverse range of cancers

Cancer classification by primary site (PrOSPeCT Cohort)



From referral to treatment opportunity



Follow-up continues over time. Many participants are still progressing through the program, so the number accessing matched treatments and clinical trials may increase as further outcomes are recorded.

Understanding the molecular differences in cancer

1,947 Unique actionable variations identified across the MoST / PrOSPeCT cohort

1,106 MoST

1,472 PrOSPeCT

Across the MoST and PrOSPeCT cohorts, Omico has identified almost 2,000 distinct actionable variations — molecular changes that may point to potential treatment or clinical trial opportunities.

The greater number identified through PrOSPeCT reflects the expansion of Omico's research to a larger and broader population of Australians with incurable cancer, alongside advances in molecular profiling and growing scientific knowledge about which biomarkers can be targeted by treatments.

These findings demonstrate both the extraordinary molecular diversity of cancer and the value of looking beyond where a cancer originates in the body to identify treatment opportunities that might otherwise be missed.

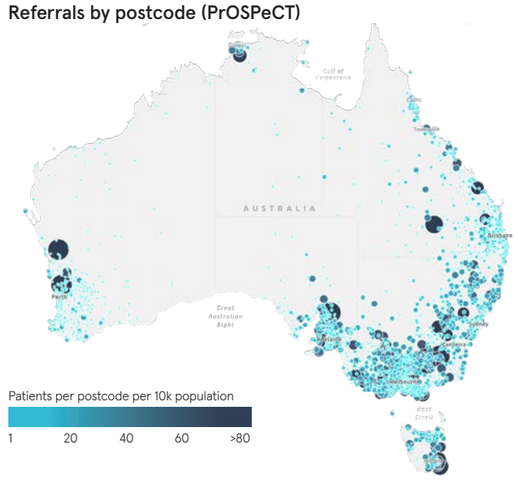
Reaching Australians where they live

Where someone lives should not determine their opportunity to benefit from precision oncology. Building on MoST, PrOSPeCT was designed to broaden access for Australians with incurable cancer, including those living in regional, rural and remote communities.

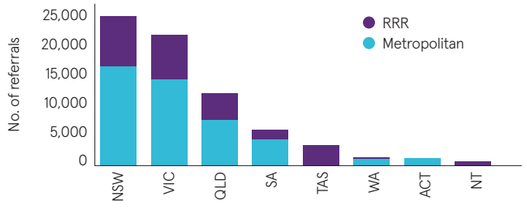
31.6% of **MoST and PrOSPeCT** referrals came from regional, rural and remote Australia.

35.7% of **PrOSPeCT** referrals came from regional, rural and remote Australia.

Referrals by postcode (PrOSPeCT)



Referrals by metropolitan and RRR* status (PrOSPeCT)



* Regional, Rural, Remote

Spotlights: The people and the science

These spotlights bring together insights from Omico's national research programs with the personal experiences of people facing advanced and challenging cancers, illustrating the real-world impact of precision oncology.













Omico.

Spotlight on

Bowel Cancer
Meet Nathan

"It was a gamechanger"

Nathan Borg was just 29 years old and months away from his wedding when he was diagnosed with bowel cancer.

After radiation, chemotherapy and surgery, the cancer was later found in his liver.

Comprehensive genomic profiling (CGP) through Omico revealed that Nathan's tumour was MSI-high, a molecular feature that can make some bowel cancers responsive to immunotherapy. Importantly, because of a specific genetic change in his tumour, **this feature would not have been identified through routine testing alone**.

The finding gave Nathan's oncologist critical additional information to guide his treatment. Nathan went on to complete two years of immunotherapy and has been cancer-free since January 2026.

He and his wife welcomed a baby in July 2026. Today, Nathan is working full-time in a "hectic" role and spending his weekends renovating their backyard.

Omico's Cohort Data

3,615 Bowel cancer referrals' 9.96% of the MoST + PrOSPeCT cohort

55.5% **44.5%**
Sex: Male I Female

72.5% **27.5%**
Metro I Regional/rural/remote

14.1% aged < 40 years at diagnosis, 34.8% aged < 50 years

3,187 participants, of whom 2,911 (91.3%) have completed molecular profiling

2,341 (80.4%) of those profiled received a matched therapy recommendation. Of these...

332 went on to participate in a clinical trial

236 commenced a matched therapy outside a clinical trial

510 unique actionable variations identified across the bowel cancer cohort



What we're learning

Professor David Thomas, Omico Founder and Chief Science & Strategy Officer

We have learnt that early onset cancer, and bowel cancer in particular, is on the rise. This is an alarming development we do not yet fully understand. Our RiSC cohort is designed to map inherited risk as an explanation, but that will not be the full story.

Spotlight on

Rare and Less Common Cancers
Meet Emily L



"Another option when others had been exhausted"

Emily Lahey was 27 years old in 2019 when she was diagnosed with NUT carcinoma, a rare and aggressive cancer with very limited treatment options.

After chemotherapy, radiotherapy and immunotherapy, Emily was referred to Omico for molecular profiling. The profiling identified a biomarker that could be matched to a targeted treatment, which Emily accessed through a government-supported compassionate access program. The treatment kept her cancer mostly stable for several years, giving Emily the opportunity to maintain a relatively normal life.

When Emily's cancer progressed again in late 2025, she underwent multiple surgeries and further molecular profiling supported by Omico. This testing identified a biomarker that helped inform a new treatment approach, leading Emily to commence an antibody-drug conjugate (ADC) in July 2026.

Early scans have shown a very encouraging response. While the treatment brings its own challenges, Emily has found the side effects more manageable than those of her previous chemotherapy. In between treatment rounds, Emily recently completed a 10km fundraising run with her husband for the Australian Cancer Research Foundation.

Drawing on her own experience, Emily continues to advocate for cancer research, greater awareness of rare cancers and improved access to precision oncology.

"For those of us living with cancer, progress means having another treatment option when others have run out. Ultimately, it means more time to keep living our lives."

Omico's Cohort Data

14,995 referrals, representing 41.3% of the MoST + PrOSPeCT cohort

51.5% **48.5%**
Sex: Male I Female

75.6% **24.4%**
Metro I Regional/rural/remote

26.5% aged < 50 years at diagnosis

13,093 participants, of whom 11,268 (86.1%) have completed molecular profiling

7,515 (66.7%) of those profiled received a matched therapy recommendation. Of these...

1,295 went on to participate in a clinical trial

488 commenced a matched therapy outside a clinical trial

1,270 unique actionable variations identified across the rare and less common cohort

What we're learning

Professor David Thomas, Omico Founder and Chief Science & Strategy Officer

Molecular profiling does identify opportunities for treatment in even the rarest cancers. It can also lead to a more accurate cancer diagnosis in one in 25 patients, with important implications for clinical decision-making, treatment selection and access to appropriate care.



CHRISTINE COCKBURN
Chief Executive Officer, Rare Cancers Australia

"Precision oncology transforms what's possible for people with rare and less common cancers. CGP can unlock new, tailored treatment opportunities, including clinical trials. But identifying an option means little if patients cannot access it. To realise its full potential, CGP must be paired with timely, affordable access to specialist expertise and innovative treatments. Our vision is an Australian health system where everyone with a rare, less common or advanced cancer has equitable access to personalised care."

Spotlight on

Pancreatic Cancer
Meet Peta

"Never give up. There's so much research in pancreatic cancer now. There is hope."

Peta Clark, aged 67, is a retired nurse from Shepparton. In October 2024, she was diagnosed with pancreatic cancer after investigations into vomiting, diarrhoea and abdominal pain unexpectedly revealed a tumour and cysts on her pancreas.

The following month, Peta underwent surgery to remove her spleen and part of her pancreas, along with 17 lymph nodes. Tests confirmed that none of the lymph nodes contained cancer.

Six weeks later, she began chemotherapy, continuing until mid-2025. Several months after finishing treatment, Peta developed back pain and her tumour markers began to rise. Scans showed the cancer had returned to her pancreas and spread to her liver.

Her oncologist referred her to Omico for molecular profiling, which identified a KRAS G12D mutation. Peta underwent further chemotherapy and radiation therapy, with her final radiation treatment on Christmas Eve. During this time, her medical team pursued a clinical trial matched to the molecular characteristics of her cancer.

In April 2026, Peta began treatment through the clinical trial. Since then, scans every eight weeks have continued to show improvement. Peta says her doctors often come into the room excited by her results. She is now free from pain and no longer needs pain medication, although fatigue remains part of life on treatment.

Omico's Cohort Data

3,888 Pancreatic cancer referrals, 10.7% of the MoST + PrOSPeCT cohort

54.8% **45.2%**
Sex: Male I Female

77.4% **22.6%**
Metro I Regional/rural/remote

91% aged ≥ 50 years at diagnosis

3,319 participants, of whom 2,622 (79%) have completed molecular profiling

2,265 (86.4%) of those profiled received a matched therapy recommendation. Of these...

148 went on to participate in a clinical trial

31 commenced a matched therapy outside a clinical trial

517 unique actionable variations identified across the pancreatic cancer cohort



What we're learning

Professor David Thomas, Omico Founder and Chief Science & Strategy Officer

Even the toughest of cancers, like pancreatic cancer, will one day be solved by a molecular view of cancer, and developing drugs that exploit that knowledge. Only two years ago, we expected to find an effective treatment for only one in 10 patients with pancreatic cancer. That figure is now 90%. We expect these recent advances, which depend on genomic technologies, to translate into the first major improvements in life expectancy for this group in the last 50 years. Our own data suggests it is possible to quadruple the chances of being alive five years after enrolment into our programs.



MICHELLE STEWART
CEO, Pankind, Pancreatic Cancer Australia.

"As new pancreatic cancer treatments become more targeted, knowing the specific driver in each person's tumour becomes more important. Everyone diagnosed should have timely access to molecular testing, and to the treatments and trials their results point to."

Spotlight on

Gynaecological Cancer
Meet Christine



"An option of treatment is absolute gold. It gives motivation and hope. I'm so grateful."

Christine Crupi was diagnosed with ovarian cancer in July 2022, aged 41. Following surgery and chemotherapy, she was able to access the targeted therapy olaparib, a PARP inhibitor, on compassionate grounds for two years. During this time, regular scans and blood tests showed no evidence of disease.

In early 2026, Christine noticed symptoms returning, and at her regular review in March, blood tests showed rising tumour markers, signalling a possible recurrence. Her oncologist arranged further chemotherapy and referred her to Omico's CaSP program, where her existing molecular profiling results were reviewed by Omico's Molecular Oncology Board (MOB), a multidisciplinary team of experts who provided treatment recommendations to her referring clinician.

Omico's Cohort Data

3,041 referrals representing 8.4% of the MoST + PrOSPeCT cohort

100% Sex: Female

75.4% Metro | **24.6%** Regional/rural/remote

23.3% aged < 50 years at diagnosis

2,672 participants, of whom 2,408 (90.1%) have completed molecular profiling

1,859 (77.2%) of those profiled received a matched therapy recommendation. Of these...

991 went on to participate in a clinical trial

115 commenced a matched therapy outside a clinical trial

550 unique actionable variations identified across the gynaecological cohort

Christine completed chemotherapy in August and, with ongoing guidance from her treating oncologist, has recently commenced a clinical trial investigating an innovative treatment known as an antibody-drug conjugate (ADC), offering another option following her cancer recurrence.

Despite the challenges of ongoing treatment, Christine continues to work part time as a partner in a law firm, advocate for better outcomes for women with ovarian cancer and juggle the demands of a busy family life with young children.

Christine's experience highlights that putting precision oncology into practice involves more than molecular profiling. It requires connecting genomic insights with clinical history, expert interpretation and clinical care, alongside access to innovative treatment opportunities through clinical trials.

What we're learning

Professor David Thomas, Omico Founder and Chief Science & Strategy Officer

One in 12 of the patients referred to Omico has a gynaecologic cancer. Molecular profiling can identify potential treatments in almost four in five patients with gynaecologic cancers, and at least half of those opportunities could be expected to increase survival.

OVARIAN CANCER AUSTRALIA



DEBBIE SHIELL
Chief Executive Officer, Ovarian Cancer Australia

"People affected by ovarian cancer want every opportunity to access the treatment that is most likely to benefit them. Precision oncology helps make that possible. It provides a deeper understanding of their cancer and guides more personalised treatment decisions. Every woman who might benefit deserves access to this, regardless of where she lives."

Spotlight on

Brain Cancer
Meet Emily C

"Being on this trial has given me so much more hope. I'm just really excited for the future, which I haven't had for a long time. I have a lot to live for."

When Canberra primary school teacher Emily Capper was diagnosed with brain cancer aged 31 in 2022, she was initially told she had just 9-14 months to live.

Three surgeries, radiation and three types of chemotherapy followed. When her cancer stopped responding to treatment in 2025, her oncologist began looking for another option.

Emily was referred to Omico's CaSP. Molecular profiling identified a BRAF mutation in her tumour, information that helped connect her with a clinical trial in Orange, NSW.

Emily began the targeted therapy trial in April 2026 and continues to travel from Canberra to Orange every fortnight for treatment.

Omico's Cohort Data

1,702 referrals representing 4.7% of the MoST + PrOSPeCT cohort

61.2% Sex: Male | **38.8%** Female

75% Metro | **25%** Regional/rural/remote

46.7% aged < 50 years at diagnosis

1,517 participants, of whom 1,367 (87.2%) have completed molecular profiling

775 (56.7%) of those profiled received a matched therapy recommendation. Of these...

136 went on to participate in a clinical trial

35 have commenced matched therapy outside a clinical trial

427 unique actionable variations identified across the brain cancer cohort



What we're learning

Professor David Thomas, Omico Founder and Chief Science & Strategy Officer

Brain cancers remain the hardest nut to crack. We have seen some significant recent advances in treatment for some of the lower grade brain tumours, but glioblastoma multiforme is stubbornly resisting global efforts to make a difference. But we are confident that, like pancreatic cancer, the answers will lie in a molecular understanding of this disease. Brain tumours will be a priority for us over the next five years.



ASSOCIATE PROFESSOR ROB ZIELINSKI
Senior Staff Specialist Medical Oncologist, Head of Cancer Services, Orange Hospital, Director of Orange Clinical Trials & Research Unit (OCTRU)

"To me, Omico is about realising and maximising scientific discovery to make sure no one misses out on being offered genomically targeted therapies. Omico has built an amazing and supportive ecosystem that assists cancer clinicians, as much as patients, by guiding cancer care through the discovery of genetic changes rather than relying on scientific or clinical guesswork. Like Emily, I take real confidence from knowing that Omico connects my patients to the latest scientific breakthroughs/discoveries and to an ever-expanding clinical trial community, so they have the best possible chance at living longer and better."

Spotlight on

Cancer Care in Regional, Rural & Remote Australia
Meet Jason



"It's given me my life back."

Jason Langdon, from Mansfield in regional Victoria, was diagnosed with advanced oesophageal cancer in April 2024, aged 57.

His oncologist commenced him on combination immunotherapy and chemotherapy treatment, while also referring him to Omico for comprehensive genomic profiling and expert analysis to identify potential matched treatment and clinical trial options.

Jason describes these potential options as something he has "***in his back pocket***" should he need them in the future.

He continues to respond well to immunotherapy and chemotherapy, having now completed 46 fortnightly rounds of treatment. For more than two years, Jason has made the four-hour round trip to Albury for treatment. Soon, he will be able to receive treatment closer to home in Wangaratta, easing some of that burden for him and his wife Vanessa.

Omico's Cohort Data

11,463 referrals representing 31.6% of the MoST + PrOSPeCT cohort

51.6% **48.4%**

Sex: Male | Female

19.3% aged < 50 years at diagnosis

10,041 participants, of whom 8,464 (84.3%) have completed molecular profiling

6,382 (75.4%) received a matched therapy recommendation. Of these...

759 went on to participate in a clinical trial.

374 have commenced matched therapy outside a clinical trial

1,081 unique actionable variations identified across the regional and remote cohort.

Despite the demands and challenges of ongoing treatments, Jason has returned to the gym three days a week, resumed consulting on major infrastructure projects and enjoyed travelling again. A highlight was a holiday in New Zealand with Vanessa, including a helicopter ride to land on a glacier at Mount Cook.

What we're learning

Professor David Thomas, Omico Founder and Chief Science & Strategy Officer

Some of our finest oncologists are located in regional and rural Australia. In the past three years, we have learnt that they are committed to providing the best possible care for their patients, including through providing access to clinical trials of novel therapies. We know cancer patients from the bush are doing it tough, but Omico is committed to ensuring they don't miss out. We specifically ran a national clinical trial exclusively outside metropolitan Sydney, Melbourne and Brisbane, and showed it was possible to enrol patients as fast as at metropolitan sites: perhaps even faster.

Spotlight on

Breast Cancer
Meet Marina

"I acknowledge that cancer may return, but I refuse to live in fear. Omico did more than genomic testing or personalising a treatment regime. They gave me hope."

Marina Dunn has faced three different types of breast cancer since her first diagnosis in 2013, aged 48.

Her first diagnosis was ductal breast cancer, treated with surgery and radiation. Three years later, she was diagnosed with lobular breast cancer, undergoing further surgery followed by seven years of treatment.

When enlarged lymph nodes appeared in her neck, extensive testing could not identify the cancer type. Marina was referred to Omico, where comprehensive genomic profiling (CGP) provided important new insights into her cancer, helping establish a diagnosis of a third, different breast cancer. These findings informed a personalised approach to her treatment.

Marina stopped treatment more than 12 months ago due to side effects but continues to have no evidence of disease. While she undergoes regular monitoring, she is determined to embrace life rather than live in fear of cancer returning.

Since her diagnosis, Marina has celebrated milestones she once feared she might miss, including her daughter's wedding, welcoming her ninth grandchild and travelling to Papua New Guinea. She is now looking forward to her 40th wedding anniversary.

Omico's Cohort Data

2,909 referrals representing 8% of the MoST + PrOSPeCT cohort

1.1% **98.9%**

Sex: Male | Female

75.1% **24.9%**

Metro | Regional/rural/remote

44.7% aged < 50 years at diagnosis

2,550 participants, of whom 2,223 (87.2%) have completed molecular profiling

1,972 (88.7%) of those profiled received a matched therapy recommendation. Of these...

121 went on to participate in a clinical trial

143 have commenced matched therapy outside a clinical trial

614 unique actionable variations identified across the breast cancer cohort



What we're learning

Professor David Thomas, Omico Founder and Chief Science & Strategy Officer

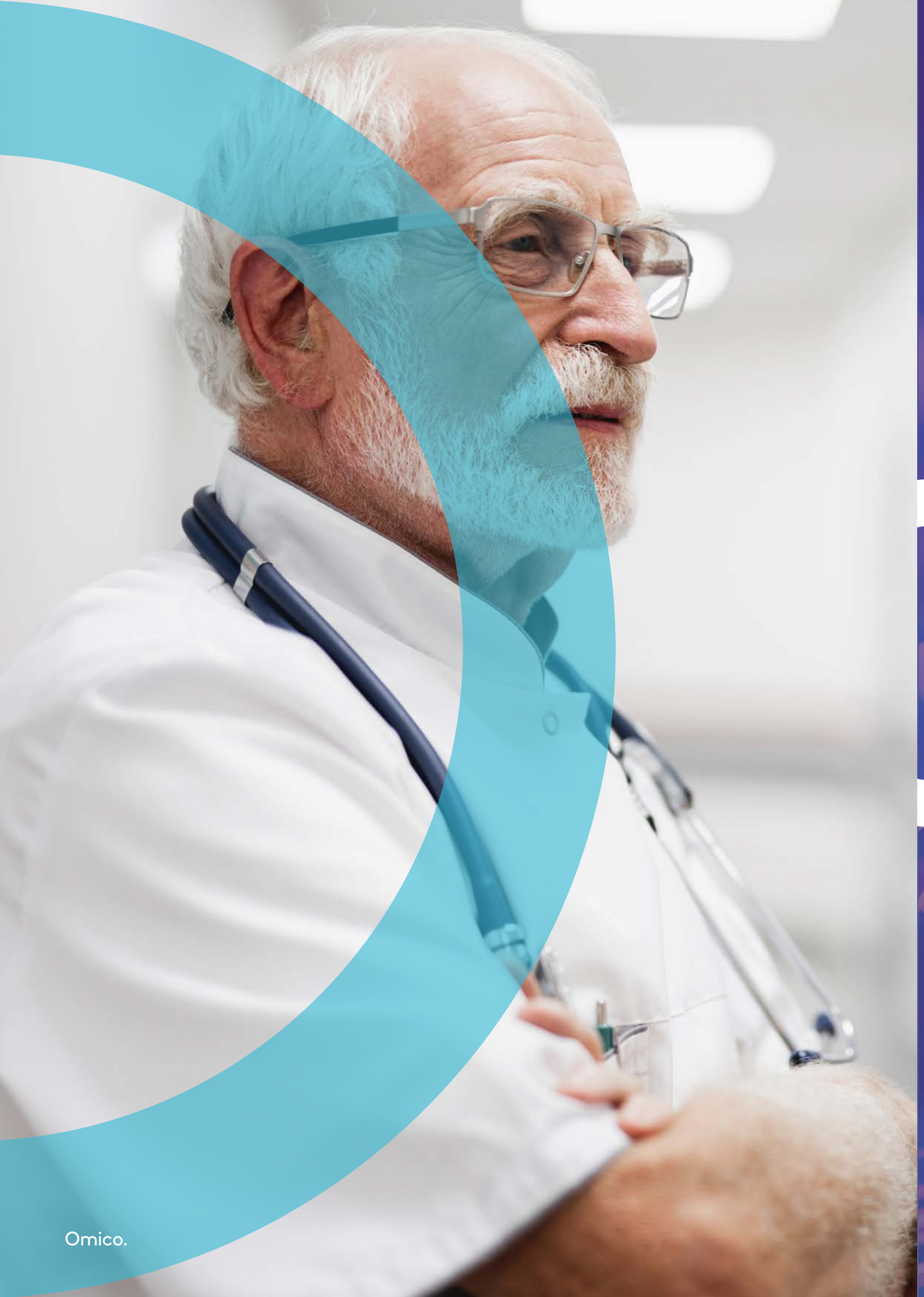
Breast cancer provides shining proof that molecular profiling and the use of targeted therapies can increase survival rates for this disease well above 90%. It also demonstrates what a focus on developing new drugs can achieve, with more matched therapy recommendations than for almost any other cancer type. One of our tasks in the next five years will be to understand why these treatments fail, and how to prevent that failure.

mbc ACTION AUSTRALIA



JILL CARLAND
Director, MBC Action Australia

"Metastatic breast cancer can change over time, making it critical that treatment decisions are informed by the most current understanding of an individual's disease. CGP can identify genomic alterations that may open additional treatment or clinical trial opportunities. MBCAA believes everyone living with metastatic breast cancer who may benefit from genomics-guided care should have equitable access, regardless of where they live."



Omico.

02

Building on 11 years of progress and impact

Omico.

Progress continues in 2026

Over the past year, Omico has continued to build on 11 years of research, experience and collaboration — extending access to precision oncology, advancing its research and clinical capabilities, and contributing expertise and evidence to the wider health system.

A significant milestone was the Australian Government's further $71 million investment in PrOSPeCT, supporting another 25,000 referrals through to 2028–29. But PrOSPeCT is only part of the story. Across Omico, work continues to evolve, creating new opportunities to advance precision oncology and its contribution to Australian cancer care.

Omico has steadily grown its reach, network and national capability. The past year has seen significant further progress across key measures of scale, reach and impact.

National research reach and capability: 2025–2026

	2025	2026
Clinical trial network - centres across all states and territories	80	99
Regional clinical trial centres in our network	27	32
Omico supported clinical trials	118	120
Industry sponsored clinical trials supported by Omico under PrOSPeCT	91	93
Referring clinicians	1,453	1,602
NATA-accredited laboratories providing CGP in Australia	7	8
Referrals of patients across all programs	31,470	40,000
Participants enrolled across all programs	27,587	34,926

LOREDANA ESPOSITO
Head of Site Management, Bayer Pharmaceuticals (ANZ-IN)



"Australia is currently the leading recruiting country for one of our biomarker-led studies. Omico has played an important role in the success of this and many of our studies by helping match suitable patients with precision oncology clinical trial opportunities efficiently. By reducing recruitment uncertainty, Omico is helping Australia remain at the forefront in an increasingly globally competitive oncology trial landscape. We look forward to continuing our partnership with Omico, whose program is helping position Australia as a destination of choice for precision oncology research."

In May 2026, a further $71 million investment from the Australian Government in the Federal Budget secured the continuation of PrOSPeCT through to 2028–29, supporting an additional 25,000 referrals from Australians with advanced, incurable or poor prognosis cancers.

1 *The next phase of PrOSPeCT is underway*

This investment will enable more Australians to access potentially life-extending treatment opportunities. Modelling estimates that an additional 1,133 Australians could reach five-year survival, with 799–1,570 life-years gained. Importantly, it also enables Omico to continue generating the evidence needed to inform more personalised cancer care in the future.

PrOSPeCT 2.0 builds on the experience, evidence and national infrastructure established through PrOSPeCT 1.0.

	PrOSPeCT 1.0	PrOSPeCT 2.0
Period	March 2023–Dec 2025	2026–2028/29
Referrals	21,500	Further 25,000
Investment	**$185m**+ in public and private funding, including $61.2m Australian Government funding	**$101.8m** Australian Government funding, comprising an initial $30.8m + further $71m

Australian Government
Cancer Australia



PROFESSOR VIVIENNE MILCH
Medical Director, Cancer Australia

"The National Framework for Genomics in Cancer Control recognises that precision oncology continues to evolve, with genomics providing a key foundation for more personalised cancer care. As we enter a multi-omics era, platforms such as Omico will be vital to building the evidence for integrating emerging technologies into routine care and ensuring all Australians, no matter where they live, can benefit from advances in precision cancer medicine."

Australian Government
Department of Health, Disability and Ageing
Genomics Australia



TIFFANY BOUGHTWOOD
Australian Health Genomics Commissioner, Genomics Australia

"Genomics Australia has a vision: that Australia's health system will be transformed by genomics, and deliver better outcomes through prediction and prevention, early diagnosis, personalised management and targeted treatment. Building upon the impact of Omico, Genomics Australia is striving to translate personalised cancer care from research to sustained and mainstreamed practice."

Omico's first clinical trial to recruit almost exclusively outside major metropolitan centres.

2 *Advancing regional clinical trial access*

Almost 36% of referrals to PrOSPeCT come from regional, rural and remote Australia, supported by a national network that includes 32 clinical trial centres in regional areas.

The Omico-supported MoST-TAP study shows what this reach can make possible. Designed for people with advanced solid tumours identified through molecular screening, it is Omico's first clinical trial to recruit almost exclusively outside major metropolitan centres.

Recruiting primarily through regional hospitals, for example Geelong, Bendigo, Orange, Port Macquarie and Albury, the study enrolled 46 patients over 18 months, creating opportunities for people to participate in precision oncology research closer to home.

In 2026, Omico continued to advance its commitment to improving equitable access to precision oncology for First Nations people, through partnership, culturally safe approaches and continuous learning.

3 *Advancing equitable access for First Nations people*

Under the leadership of Professor Maree Toombs, Head of Indigenous Engagement, Omico is progressing initiatives to improve awareness and understanding, develop culturally safe approaches to research participation, and establish First Nations governance of data and biospecimens.

One example of this commitment in action is a project at Royal Darwin Hospital, where Omico supported local clinicians and staff to develop and implement a culturally informed approach to enabling Aboriginal and Torres Strait Islander people with incurable cancer to access Omico's Cancer Screening Program (CaSP).

Recognising barriers associated with electronic referrals and telephone-based consent, Omico worked with the hospital team to enable dedicated Aboriginal liaison support, in-person consent and additional clinical trial coordination. The initiative substantially increased Aboriginal patient participation, with findings published in the *Internal Medicine Journal* in 2026.

PROFESSOR MAREE TOOMBS
Head of Indigenous Engagement, Omico
"What particularly stands out is the demonstrated impact of the dedicated cultural support, with significantly higher participation during the supported period. This provides compelling evidence for the value of culturally specific staffing and relationship-based approaches."



A culturally safe approach can change participation

BEFORE

10 Aboriginal patients recruited over **6** months

→ Dedicated clinical trials nurse + Aboriginal Liaison Officer
→ Proactive identification and culturally informed engagement
→ Flexible, supported consent

AFTER

35 Aboriginal patients referred over **12** months

Representing around **24%** of all trial recruits

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Precision oncology is evolving rapidly. New biomarkers, therapies and emerging clinical evidence continue to expand the opportunities to identify treatments matched to the molecular characteristics of a patient's cancer.

4 *Omico's Molecular Oncology Board*

Keeping pace with advances in precision oncology

Omico's Molecular Oncology Board (MOB) must continually evolve its knowledge and expertise to keep pace with these developments. Bringing together specialists across medical oncology, molecular pathology, cancer genetics and bioinformatics, the MOB interprets molecular profiling results in the context of the latest scientific and clinical evidence to identify potential treatment and clinical trial opportunities.

The pace of change is reflected in the proportion of Omico participants receiving a matched treatment recommendation following molecular profiling — increasing from approximately 60% in 2023 to approximately 85% today.

Beyond its role in supporting treatment recommendations, the MOB also provides opportunities for referring oncologists to engage with emerging molecular evidence and its clinical implications, contributing to knowledge sharing across the oncology community.

In 2026, the MOB has expanded to nine medical oncologists, two pathologists, a clinical geneticist and a genetic counsellor. We are developing new processes to identify emerging biomarkers, such as mutational signatures, and immunohistochemical screening for antibody-drug conjugate trials.

Omico's research extends beyond matching treatments to cancers. Its longstanding work in inherited cancer risk seeks to improve understanding, diagnosis and surveillance for people and families with an increased genetic risk of developing cancer.

5 *Advancing research into inherited cancer risk*

New evidence from SMOC Junior

In 2026, early findings from Omico's SMOC Junior study demonstrated the importance of cancer surveillance for children and young people with inherited cancer risk. Among 20 participants, surveillance identified four new primary cancers in three individuals. These early findings highlight the potential value of surveillance in detecting new cancers in people at high inherited risk.

The research is also examining the experiences of participating families, including the emotional and practical challenges of ongoing surveillance. Early findings highlight the importance of coordinated multidisciplinary care, clear communication and psychosocial support.

Exploring new approaches to inherited cancer diagnosis

Omico is collaborating with Oxford Nanopore Technologies to investigate previously unexplained cases of Li-Fraumeni syndrome, a rare inherited condition associated with increased cancer risk.

Drawing on participants from Omico's International Sarcoma Kindred Study (ISKS) and Cancer Risk in the Young (RiSC) study, the collaboration is exploring long-read sequencing and integrated molecular approaches to identify changes that conventional testing may miss. This work aims to generate new evidence that could improve diagnosis and care for affected individuals and families.

In 2026, we have begun to explore common as well as rare variation, structural variation and tandem repeats as explanations for missing heritability.

National coordination is essential to translating advances in precision oncology into routine cancer care. In 2026, Omico continued to extend its relationships across clinical care, research, industry and government, bringing together expertise, evidence and capabilities to support a more coordinated approach to precision oncology in Australia.

6 *Advancing coordination across Australia's health system*

Partnerships with cancer care providers, including Icon Cancer Centre and GenesisCare, are helping connect more patients and clinicians with Omico's research programs and potential clinical trial opportunities. These relationships complement Omico's established national networks and support its commitment to equitable access.

Omico has also continued to engage with national organisations including Genomics Australia and Cancer Australia, contributing its experience and evidence to discussions about how advances in precision oncology can be integrated into routine cancer care.

Internationally, Omico's connections with researchers, clinical leaders and technology innovators are creating further opportunities for scientific exchange and collaboration, supporting the development and evaluation of emerging approaches to precision oncology.

These partnerships are part of a much larger national ecosystem that sits behind every patient's precision oncology journey.

ASSOCIATE PROFESSOR LOUISE NOTT
Director of Medical Oncology (AU/NZ) and Medical Oncologist, Icon Cancer Centre, Hobart



"Icon Cancer Centre and Omico's partnership demonstrates the power of collaboration in expanding access to precision oncology across Australia. Through Icon's national network, patients can access comprehensive molecular profiling, expert molecular tumour boards, and opportunities for clinical trials and emerging therapies. More than 1,600 patients have been referred nationally, including from regional and remote communities. By connecting local clinical care with national research infrastructure, our partnership helps make precision oncology a more routine, equitable and sustainable part of cancer care for all Australians."

ICON CANCER CENTRE

03

Inside Omico's national research engine

Omico.

The Patient Pathway

From referral to treatment opportunity

Participation in Omico's research programs begins with a referral from a clinician.

While our programs span different areas of precision oncology research, the pathway below follows a patient referred to the Cancer Screening Program (CaSP) for molecular profiling, based around comprehensive genomic profiling (CGP), to identify potential matches to innovative treatment and clinical trial opportunities. CaSP is a clinical research study approved by Monash Health Human Research Ethics Committee (RES-22-0000-537A). There is no cost to patients to participate in CaSP.

Who can participate in CaSP?

Patients must be aged 16 years or older who have solid cancers that are confirmed as advanced, metastatic, incurable or associated with a poor prognosis.

The CaSP patient journey

1. **REFERRAL** — An eligible patient is referred to CaSP by their treating clinician.
2. **CONSENT** — The patient receives information about CaSP and consents to participate.
3. **TUMOUR TISSUE** — A suitable tumour sample is located and prepared for testing.
4. **MOLECULAR PROFILING** — The tumour is comprehensively profiled to identify potentially important genomic and molecular changes in the cells.
5. **EXPERT INTERPRETATION & MATCHING** — Omico's Molecular Oncology Board (MOB) reviews molecular profiling and clinical information to identify potential matches to innovative treatments and clinical trials.
6. **RESULTS TO MY CLINICIAN** — The MOB report is provided to the patient's referring clinician.
7. **TREATMENT OR TRIAL OPPORTUNITY** — The clinician and patient consider whether an identified treatment or clinical trial is appropriate and accessible.
8. **FOLLOW-UP EVERY 3 MONTHS** — Omico follows-up to understand treatment or trial access and outcomes.

TYPICAL TIMEFRAME IS 5-6 WEEKS*

URGENT REFERRALS 3-4 WEEKS*

* From patient consent to MOB report delivery to clinician

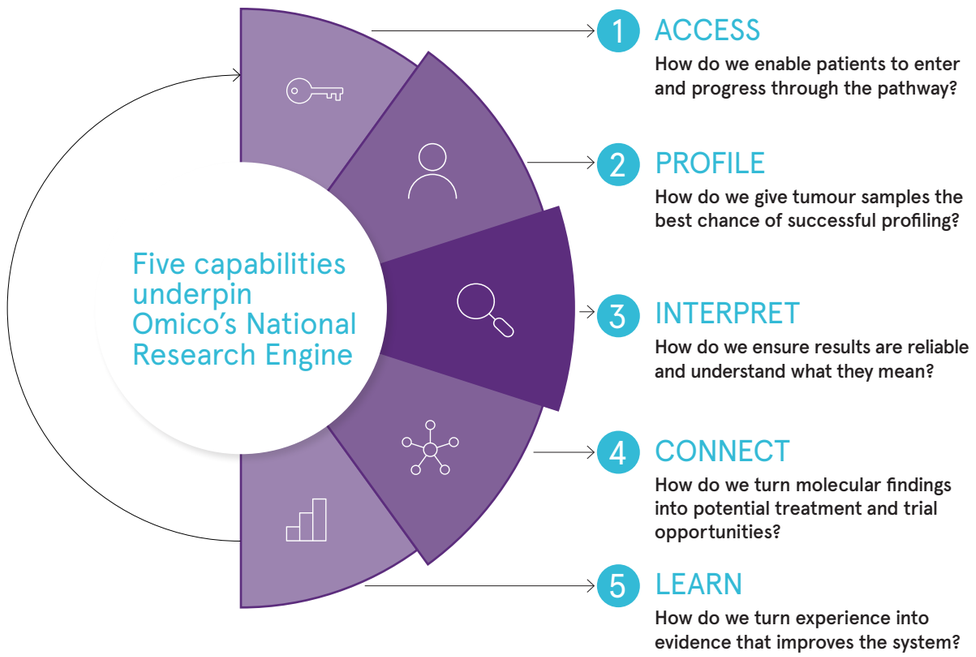
Omico's National Research Engine

For patients and their treating clinicians, the pathway to precision oncology should be as straightforward as possible. But making that apparently simple pathway work for thousands of Australians requires something far more complex behind the scenes.

Omico has built, operated and continually refined a sophisticated, research-led national capability through 40,000 referrals. This National Research Engine comprises and evaluates the systems, processes, technology, specialist expertise, quality controls, infrastructure and operational know-how required to make precision oncology work reliably at a national level.

Equitable access to our research programs is a guiding principle across Omico's National Research Engine. Our systems, processes and national capabilities are designed to help address barriers to precision oncology, including for people in regional, rural and remote communities, those with rare and complex cancers, and Aboriginal and Torres Strait Islander peoples.

From referral and consent to molecular profiling, expert interpretation, treatment and clinical trial matching, and evidence generation, Omico's National Research Engine brings together five interconnected capabilities that make the end-to-end pathway possible.



These five research capabilities draw on Omico's specialist teams, systems, technology and operational expertise. Together, they form an interconnected National Research Engine, built, tested and continually refined through real-world experience across 40,000+ referrals.

Turn the page to see how Omico's national research engine works.

ACCESS

Omico has developed a research-led model addressing national referral, consent and decision support systems to coordinate patient participation. This includes collecting and verifying detailed clinical information, liaising with referring medical teams to resolve missing information, assessing eligibility, managing consent and tracking patients through the pathway.

Even with online automation, each referral requires approximately 20 minutes of staff processing — equivalent to more than 3,300 hours annually at 10,000 referrals.

PROFILE

Within its research programs, Omico coordinates tissue retrieval, assessment, preparation and transport, selecting laboratories and sequencing platforms according to clinical needs and their different capabilities. When tissue is inadequate or testing fails, specialist teams manage repeat retrieval, remediation and alternative pathways.

Around 12% of patients who consent and proceed to molecular profiling require additional specimen handling. Of these, 89% achieve successful sequencing following further retrieval or processing.

INTERPRET

Omico combines research-based bioinformatics quality assurance, specialist molecular interpretation and assessment of clinical evidence. Its Molecular Oncology Board (MOB) brings together expertise across medical oncology, pathology, cancer genetics and bioinformatics, supported by standardised frameworks that help translate complex molecular findings into meaningful information and potential treatment matches.

Omico's specialist online review process has capacity for up to 210 cases per week, with approximately 8% requiring more detailed multidisciplinary discussion through the MOB.

CONNECT

Within its research activities, Omico combines continuously updated clinical trial intelligence, biomarker matching and specialist expertise to identify relevant treatment and trial opportunities. Its clinical trials team also works with life sciences companies and biotechnology firms to support trial planning, feasibility and recruitment, helping attract more precision oncology trials to Australia, including regional locations.

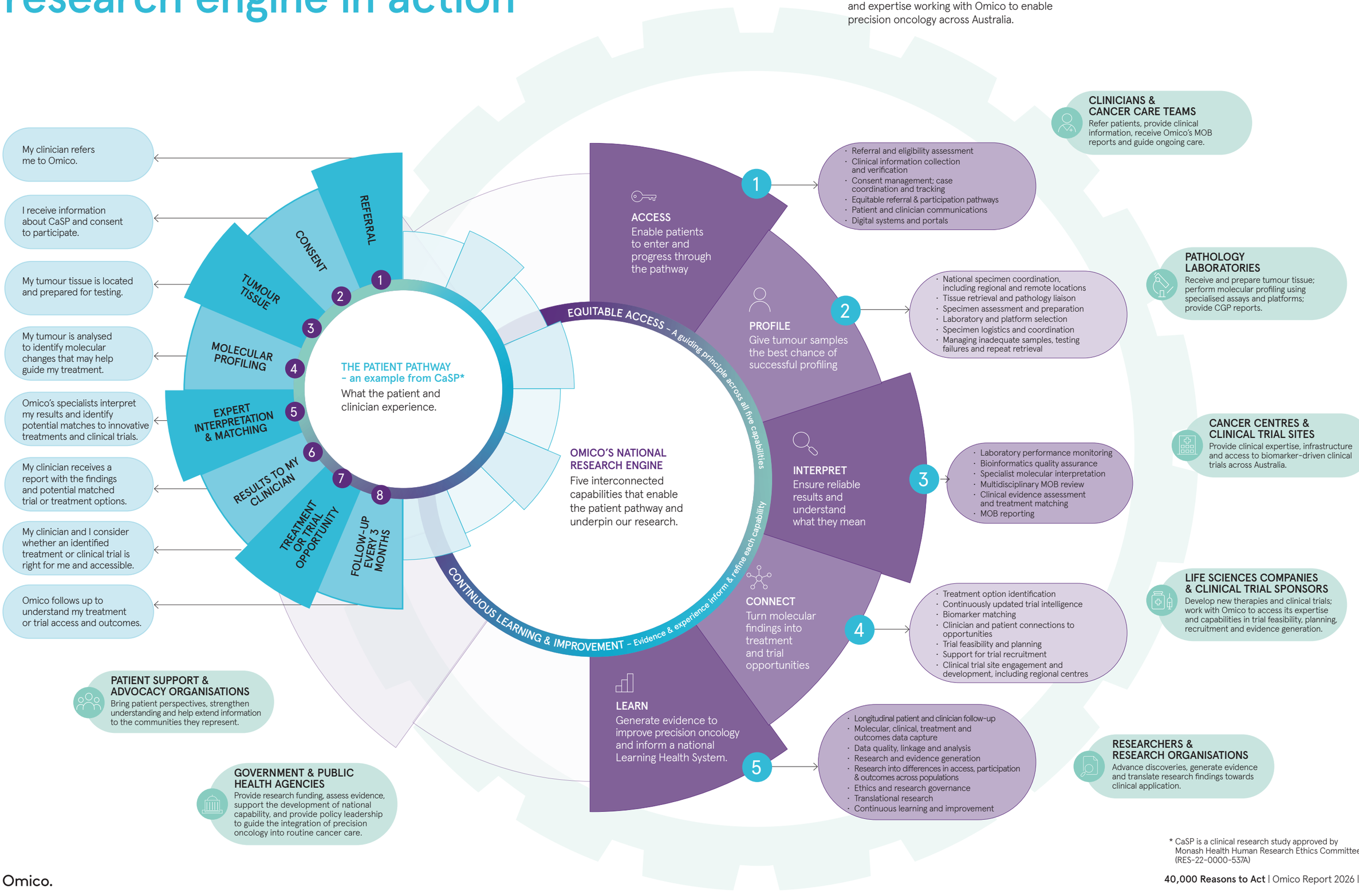
Omico has supported 120 clinical trials and established a national clinical trials network spanning 99 centres. Importantly, 16 trials would not have come to Australia without Omico's molecular profiling infrastructure, creating additional opportunities for Australian patients to access innovative treatments.

LEARN

The primary objective of these programs is to generate evidence to support clinical care. Omico captures and analyses molecular, clinical, treatment and outcomes data, supported by clinical follow-up, data quality systems, research governance and translational research. This generates real-world evidence to improve precision oncology and inform its integration into routine cancer care.

Omico's research generated the evidence for annual whole-body MRI surveillance for people with Li-Fraumeni syndrome. Omico then led the submission that secured Medicare funding from 1st March 2023, changing clinical practice and improving access to surveillance for families with this inherited cancer risk.

Omico's national research engine in action



* CaSP is a clinical research study approved by Monash Health Human Research Ethics Committee (RES-22-0000-537A)



LOUIS CHESLER, MD, PHD
Executive Director, Children's Cancer Institute

"Precision oncology is evolving beyond genomics towards the integration of transcriptomics, proteomics and other emerging technologies that can provide a more complete understanding of each patient's cancer. Omico is playing a pivotal role in establishing precision oncology for adults with cancer as a national capability in Australia, creating the infrastructure, evidence and partnerships needed to translate innovation into routine care. Together with the complementary ZERO Childhood Cancer Program for all children and young people, led by Children's Cancer Institute, these initiatives are helping build a learning health system that will continuously improve outcomes for patients across all ages."

DR MARYANN RAKOPOULOS
APAC Hub Associate Director, Servier Australia, International Centre for Therapeutic Research (ICTR).

"Through our partnership with Omico, Servier has strengthened its clinical research capabilities in rare cancers. Together, we are advancing more innovative, data-driven and patient-centric approaches to clinical trials, including opportunities for extension to regional trial patients in a decentralised setting."





DR VIVEK RATHI
CEO and Medical Director, LifeStrands Genomics Australia

"Integrating advanced genomic diagnostics into Omico's established national precision oncology pathway helps translate laboratory capability into meaningful opportunities for patients. By connecting high-quality testing with expert interpretation and access to clinical trials, we can help more Australians receive care informed by the biology of their cancer. For patients, this can mean greater clarity, more informed treatment choices and access to options that might otherwise remain unexplored."



PROFESSOR MARK SHACKLETON
Professor of Oncology in the Department of Medicine, Monash University

"Omico has shown how a coordinated approach can connect people with cancer to precision oncology diagnostics and expertise while building the evidence and capability needed to deliver them more widely. Its platform offers a strong foundation for making access more equitable, particularly for people outside major centres. The next step is to build on that work so precision oncology becomes part of routine cancer care for everyone who could benefit."

04

Innovation at Omico: Advancing what's possible

Omico.

Innovation at Omico: Advancing what's possible

Advances in precision oncology are creating new opportunities to understand cancer, identify treatment targets and develop more personalised approaches to care.

Omico is helping drive this progress by developing, introducing and evaluating new technologies, analytical methods and research approaches. Building on its national research infrastructure, extensive patient cohorts, data and specialist expertise, Omico is extending what can be learned from cancer biology and patient outcomes, and how that knowledge can be translated into clinical benefit.

The following examples highlight areas of innovation across Omico's research.

1 Unlocking the potential of real-world data

Omico has built one of the world's largest and richest precision oncology real-world datasets, bringing together genomic, clinical, treatment and outcomes information from more than 20,000 patients who have consented to their data being used for research.

Collected prospectively through Omico's national research programs, this integrated dataset provides a detailed view of patients' cancer characteristics, treatment pathways and outcomes. Its depth, quality and connectivity make it a valuable resource for research and evidence generation.

In 2026, Omico launched its real-world data initiative, combining this resource with specialist expertise to support researchers and life sciences companies in investigating biomarkers, treatment patterns and patient outcomes, and generating evidence to inform research, clinical development and treatment lifecycle management.

Omico's real-world data scale

20,000+
Consented patient records.

3.2
Petabytes of data, including genomic, clinical, treatment and outcomes information.

For context:

Approximately 250 times larger than GenBank's downloadable flat-file release[3]

GenBank is a major international repository of publicly available DNA sequences, maintained by the US National institutes of Health.



Comparison based on data volume, October 2026

2 Developing new approaches to evidence generation

Omico is developing innovative analytical methods to generate new evidence from real-world patient data, helping address challenges in evaluating cancer treatments.

One example is its work on **external control arms**, which use existing patient data to construct comparison groups for assessing survival outcomes, particularly when conventional randomised clinical trials are difficult or impractical, such as in rare biomarker-defined patient populations.

Omico researchers have developed a methodology that combines patient matching, weighting of prognostic factors and repeated sampling to create comparison groups for survival analysis. This approach aims to improve the reliability and interpretability of comparisons using real-world data.

The methodology is the subject of research presented at the 2026 ESMO Congress, demonstrating its application to patients participating in Omico's precision oncology programs. These tools will provide fundamental value for health technology assessment and policy implementation.

3 Expanding molecular profiling: Identifying new treatment targets

Omico is expanding its molecular profiling capabilities through the introduction of immunohistochemistry (IHC) screening as a research tool.

While comprehensive genomic profiling (CGP) identifies changes in a tumour's DNA, IHC examines proteins expressed in tumour tissue, potentially revealing additional targets for emerging therapies.

Through its translational oncology laboratory, Omico is developing and applying this approach to investigate targets for antibody–drug conjugates (ADCs), an emerging class of cancer treatments. ADCs use an antibody to recognise a protein on a cancer cell and deliver a cancer-killing drug, creating new opportunities for targeted treatment.

Omico has screened more than **2,000** patients for various protein targets using IHC.

In 2025, Omico began prospective screening for B7-H3 in sarcoma, supported by the Cooper Rice-Brading Foundation and Tour de Cure. By August 2026, approximately 435 tumour samples had been assessed, with 65% meeting the laboratory's criteria for B7-H3 positivity. These findings are helping inform a proposal to investigate B7-H3-directed therapies in advanced or metastatic soft tissue sarcoma.

Building on this work, Omico launched a research-use-only IHC screening pilot in July 2026 for patients with advanced gynaecological cancers referred to CaSP. The pilot screens for three emerging therapeutic targets — FRα (FOLR1), TROP2 and B7-H3 — that are attracting increasing interest in ADC development. Conducted alongside CGP, this additional screening may identify potential treatment targets not routinely assessed in standard care, helping inform future clinical trial opportunities while generating new research evidence.

What does IHC protein screening add to CGP?

CGP
Identifies changes in a tumour's DNA that may help guide treatment

IHC protein screening
Detects proteins expressed in tumour tissue that may be targets for emerging therapies.
(Research-use-only)

A fuller picture of the tumour
Additional information to help identify potential treatment targets and investigate relevant clinical trial opportunities.

What can our genes tell us about medicine response?

Whole-genome sequencing analysis of 3,205 participants in a healthy older Australian reference cohort

41% **of participants** carried at least one confirmed high-risk genetic configuration associated with medicine response

140 **previously uncatalogued observations** of predicted loss-of-function genetic variation identified for further investigation

Understanding genetic differences in medicine response could help clinicians select more effective treatments and reduce adverse effects.

4 Pharmacogenetics: Understanding individual responses to medicines

Genetic differences can influence how individuals respond to medicines, including how drugs are metabolised, how effectively they work and the likelihood of adverse effects. Understanding these differences could help clinicians make more personalised decisions about medicine selection and dosing.

In research published in *Frontiers in Pharmacology* in 2026, Omico researchers collaborated on a study using whole-genome sequencing to investigate inherited genetic variation associated with medicine response. The study analysed data from 3,205 participants in the Medical Genome Reference Bank, focusing on 12 high-risk pharmacogenes with established links to prescribing decisions across a range of medical conditions, including cancer.

Researchers found that approximately **41% of participants carried at least one confirmed high-risk genetic configuration. They also identified 140 previously uncatalogued predicted loss-of-function observations,** demonstrating how whole-genome sequencing can reveal genetic variation beyond that captured by tests targeting known variants.

The findings demonstrate how common genetic differences associated with medicine response can be, while revealing previously uncatalogued variation for further investigation. This research could help build the evidence needed to better predict how individuals respond to medicines, ultimately supporting more personalised prescribing decisions that improve treatment effectiveness and reduce adverse effects.[4]

JENS RUETER
Chief Medical Officer, The Jackson Laboratory Medical Director, Maine Cancer Genomics Initiative



"State of the art biomarker testing has clearly evolved beyond just next-generation sequencing and genomic analysis. To be contemporary, a precision oncology program must incorporate a multi-omic approach, combining genomics with proteomics, transcriptomics, epigenomics and metabolomics. In addition, a more sophisticated of immune system-related biomarkers such as immunopeptidomics will help better characterize the likelihood of patients responding to next-generation immunotherapy. Very few, if any, programs can generate, collect and interpret the data as well as Omico and I remain excited about the possibilities of this program."

05

Australia's next move

Omico.

The growing gap between scientific progress & patient access

Precision oncology is transforming cancer care. Advances in genomics, molecular technologies and innovative therapies are creating new opportunities to extend and improve lives.

But scientific progress is moving faster than Australia's ability to make these advances available to patients.

Access to comprehensive molecular profiling and innovative treatments remains inequitable. New therapies are becoming increasingly personalised, often targeting small groups of patients, while traditional approaches to evaluating and funding treatments can struggle to keep pace.

Australia faces an urgent challenge: how to provide faster, more equitable access to potentially life-saving treatments while generating the evidence needed to ensure that new therapies deliver value and can be sustainably integrated into routine care.

Omico's national research programs are increasingly demonstrating what is possible. But research programs alone cannot deliver precision oncology as routine cancer care. The next step requires changes to the health system itself.

Two challenges we must solve

Omico sees two interconnected priorities for Australia.

1 Expand access to clinical trials and innovative treatments

Clinical trials provide an essential pathway to emerging cancer treatments while generating evidence about their safety and effectiveness. Yet only a minority of Australians with cancer participate in clinical trials, and opportunities vary considerably depending on where patients live and receive care.

For biomarker-driven trials, access also depends on molecular profiling to identify patients who may benefit from particular treatments.

Australia needs to expand its clinical trial capacity, improve equitable access to molecular profiling and strengthen the systems that connect eligible patients with those trials.

This would simultaneously improve health outcomes, while strengthening the country's position as a destination for international clinical research and investment.

2 Accelerate the implementation of effective innovations into routine care

Clinical trials can only be part of the answer. Once proven, the challenge becomes how new treatments can more rapidly become routine care.

For increasingly personalised treatments, conventional evidence may not fully address questions about effectiveness in broader patient populations, long-term outcomes, costs and value to the health system.

More than this, our real-world data can inform better and more effective health policy, ensuring precious resources are invested with maximum impact, and avoiding harm.

These priorities are closely connected. Expanding access to innovation and generating evidence for its broader implementation should be part of the same national approach.

The solution: A nationally coordinated learning health system

Omico proposes the establishment of a new national institution — a research-led learning health system (LHS) — to connect clinical research, earlier patient access, real-world evidence generation and implementation into routine healthcare.

Its purpose would be to accelerate access to promising new treatments while generating the evidence needed to determine how effective innovations can be made more widely available, equitably and sustainably.

A Learning Health System uses evidence generated through research and patient care to continually improve clinical practice and inform decisions about the adoption of new treatments and technologies.

For precision oncology, a national LHS could deliver benefits across patients, healthcare, research and industry:

What could a national learning health system deliver?

Expand equitable patient access and shorten the time to treatment with precision therapies by coordinating molecular profiling, clinical expertise and clinical trial opportunities across Australia.

Accelerate evidence generation by systematically collecting and analysing clinical, molecular, treatment and outcomes data to understand how innovations perform at scale in the real world.

Inform health policy, funding and implementation decisions by providing evidence about effectiveness, value and health system impacts, supporting timely and sustainable adoption of beneficial innovations.

Strengthen clinical research and investment by connecting Australia's research and healthcare capabilities with international life sciences companies, creating opportunities for new trials, partnerships and innovation.

Importantly, a national LHS would complement, rather than replace, Australia's existing regulatory and health technology assessment processes, including the TGA, PBAC and MSAC. As science inexorably advances, an LHS could help by generating the evidence needed for timely, informed decisions.

International models offer lessons. The UK's National Institute for Health and Care Excellence (NICE) is one example of a learning health system model.

Australia has an opportunity to learn from such approaches while developing a model suited to its own health system — and to go further by connecting evidence assessment with active evidence generation, clinical research and earlier patient access.

An LHS de-risks innovation by anticipating and addressing the many consequences of system-scale reform, including workforce, infrastructure and service requirements, rather than managing these afterwards, which is costly and inefficient.

The ambition is a health system that not only adopts scientific advances, but continually learns how to deliver them more effectively, equitably and sustainably.

> "Rather than waiting for evidence to come to us, Australia has an opportunity to generate it, giving patients faster access to promising treatments while building the real-world evidence needed to inform their broader use."
>
> **PROFESSOR DAVID THOMAS, Omico**



DR BENEDIKT CHRISTOPH WESTPHALEN
Director Center for Personalised Medicine, LMU Hospital and Comprehensive Cancer Center Munich

"Cancer genomics has laid the foundation for personalised cancer care, but genomics alone will only carry us so far. The next step in precision oncology is multi-modal and data driven. It requires systems that generate high-quality data at scale, allow rapid testing of hypotheses, and enable translation in both directions, from bench to bedside and back. Omico is well placed to serve as an integrator and accelerator of emerging technologies and novel diagnostic and therapeutic assets, acting as both a driving force of innovation and a learning health system."

PROFESSOR TRACEY O'BRIEN
NSW Chief Cancer Officer CEO, Cancer Institute NSW

"Precision oncology is evolving rapidly from a focus on genomics alone towards a broader integration of genomic, molecular, clinical and outcomes data. The real opportunity lies not simply in generating more data, but in creating learning health systems that can turn those insights into better decisions for patients. Platforms such as Omico play an important role in building the evidence, infrastructure and partnerships needed to evaluate emerging technologies and understand where they can deliver meaningful benefit. As this field matures, continued evidence generation will be critical to informing future policy, clinical practice and investment decisions."

Cancer Institute NSW

Building on Australia's strengths

Australia has substantial expertise and capability across its health and research sectors, including world-class clinicians and researchers, hospitals, pathology and genomic laboratories, clinical trial networks, universities, industry partnerships and national health agencies.

These capabilities provide a strong foundation for a more connected national approach.

Over 11 years, Omico has built and refined a National Research Engine for precision oncology, bringing together the complex infrastructure, systems, expertise and partnerships needed to connect patients with innovative treatments and generate evidence.

As this report has demonstrated, delivering precision oncology reliably at a national level requires far more than access to molecular profiling. Omico's experience in integrating these interconnected capabilities provides an important foundation for the next phase of Australia's precision oncology journey.

These are not simply achievements to acknowledge. They are capabilities Australia will need for its next step.

Establishing a national LHS will require government leadership and close collaboration across healthcare, research, industry and patient communities. Omico's established national platform, practical experience and collaborative partnerships position it to make a substantial contribution to designing and delivering this next phase.

The opportunity is to bring together existing strengths and develop a new national institution that can support the transition from research-led access to precision oncology as part of routine care.

"There is a fundamental difference between proving that genomics works and making it work for an entire population. The next phase is about translating scientific advances into everyday health care to make genomics move from exceptionalism to commonplace.

Research and routine care need to operate as a single learning system. We're not simply delivering today's care. We're using the experience of today's patients to inform the care we can offer tomorrow. The health system needs to become a learning system working in partnership with patients, industry, academia and others to ensure that scientific progress translates into meaningful improvements in care."

PROFESSOR DAME SUE HILL DBE
Chief Scientific Officer for England and Senior Responsible Officer for Genomics, NHS England

National Press Club of Australia address "Scaling Clinical Genomics: Lessons from the NHS for Australia", 14 October 2026

"The pieces exist. What is missing is an institution that connects and can harness them."

PROFESSOR DAVID THOMAS, Omico



40,000 REASONS TO ACT.

Approximately **40,000 Australians with incurable solid cancers could benefit from precision oncology every year.** For these patients and their families, faster access to potentially life-saving treatments matters.

Australia's next move must be to expand access to clinical trials and establish a national learning health system (LHS) that dramatically shortens the time between scientific discovery and patient access, while generating the evidence needed to bring effective treatments into routine care.

This means connecting what works, learning from and leveraging what we have built, and creating a pathway for more Australians to benefit from precision oncology.

The pieces exist.

Now is the time to bring them together to deliver lasting change.

Every year, we have 40,000 reasons to act.

Partners & Acknowledgements

Progress in precision oncology depends on collaboration.

Omico acknowledges the patients and families who participate in our programs, the clinicians and researchers who support them, and the government, industry, philanthropic and community organisations whose contributions help make our work possible.

Together, they have enabled Omico to build the expertise, evidence, infrastructure and partnerships that Australia can draw on for what comes next.

With thanks to our members, partners, collaborators and supporters:

Omico Members

Northern Territory
Northern Territory Government (Department of Health)

Victoria
Peter MacCallum Cancer Centre

South Australia
Central Adelaide Local Health Network Incorporated

Western Australia
Linear Clinical Research Ltd

Tasmania
Represented by its Department of Health

Australian Capital Territory
ACT Government

New South Wales
The University of Sydney (NH&MRC CTC) and Garvan Institute of Medical Research

Queensland
Metro South Hospital and Health Service

Omico Supporters, Partners and Collaborators over time include:

- Australian Government (Department of Industry, Science and Resources, Department of Health, Medical Research Future Fund)
- NSW Government
- ALK Positive
- Alterome Therapeutics
- Amgen
- ANZGOG (Australia New Zealand Gynaecological Oncology Group)
- AP Biosciences
- AstraZeneca
- Atridia
- Australian Genomics Health Alliance
- Australian Teletrial Program
- Australian Translational Genomics Centre (ATGC)
- Avance Clinical
- Bayer
- BEAT Bladder Cancer Australia
- BeOne
- BioGrid
- BioPlatforms Australia
- Boehringer Ingelheim
- Breast Cancer Network Australia
- Canteen
- Care-fully
- Cholangiocarcinoma Australia
- Children's Cancer Institute
- Cholangiocarcinoma Foundation Australia
- Chordoma Foundation
- Cooper Rice-Brading Foundation
- Douglas Hanly Moir Pathology
- EHE Rare Cancer Foundation Australia
- Eisai
- Elevation Oncology
- Fore Biotherapeutics
- Fortrea
- Foundation Medicine
- GenesisCare
- George Clinical
- GI Cancer Trials
- Head & Neck Cancer Australia
- Humanise Health
- Hummingbird Bioscience
- Icon Cancer Centre
- Illumina
- Immunocore
- Inherited Cancer Australia
- InGeNA
- Leukaemia Foundation
- LifeStrands Genomics Australia (in collaboration with Mayo Clinic Laboratories)
- Lilly
- Love Your Sister Foundation
- Macquarie University
- Medicines Australia
- Melanoma Patients Australia
- Merck
- Metastatic Breast Cancer Action Australia
- Microba
- Minderoo Foundation
- MOMA
- MSD
- MTP Connect
- Myeloid Therapeutics
- NCI
- Nelune Foundation
- NeuroEndocrine Cancer Australia
- NSW Health Pathology
- One Day
- Ovarian Cancer Australia
- Pancare Foundation
- PanKind Pancreatic Cancer Australia
- Paspaley
- Peace of Mind
- Pfizer Oncology
- PharmaEngine
- PMV Pharma
- Praxis
- Prelude Therapeutics
- Prostate Cancer Foundation
- QIMR Berghofer
- Rare Cancers Australia
- Roche
- Roche Diagnostics
- SA Pathology
- Seagen
- Servier
- So Brave
- Sonic Healthcare
- Southern Star Research
- Sun Pharma
- Synnovation Therapeutics
- Syntro
- Telix
- Tessellate B
- Think Pink
- TOGA - Thoracic Oncology Group of Australasia
- UNSW
- UNSW Centre for Molecular Oncology
- UNSW Precision Care Initiative

Plus many others.

Omico National Clinical Trial Network

NT:

Royal Darwin Hospital
(incl. Alan Walker Cancer Centre)

WA:

GenesisCare - Mandurah
Fiona Stanley Hospital
GenesisCare – Joondalup
GenesisCare – Murdoch
GenesisCare - Wembley
Linear Clinical Research
Ramsay Health - Joondalup Health Campus
Sir Charles Gairdner Hospital

SA:

Cancer Research SA
Flinders Medical Centre
GenesisCare - Calvary North Adelaide Hospital
GenesisCare - Elizabeth Vale (Playford Health Hub)
GenesisCare - South Terrace
GenesisCare - Toorak Gardens, Burnside Hospital
Icon Cancer Centre - Windsor Gardens
Icon Cancer Centre - Kurralta Park
Lyell McEwin Hospital
Queen Elizabeth Hospital
Royal Adelaide Hospital
Southern Oncology Clinical Research Unit (SOCRU)

Key:

Metropolitan sites
Rural, regional, remote sites



VIC:

Bendigo Health (incl. Bendigo Hospital)
Grampians Health - Ballarat
Grampians Health - Horsham
Grampians Health - Stawell
Maryborough District Health Service
Northeast Health Wangaratta
South West Oncology
Austin Health (incl. Austin Hospital)
Barwon Health
(incl. University Hospital Geelong)
Cabrini Brighton
Cabrini Malvern
Monash Comprehensive Cancer Consortium (MPCCC)
Olivia Newton John Cancer Research Institute
Peter MacCallum Cancer Centre (PMCC)
St Vincent's Hospital Melbourne
The Alfred

QLD:

GenesisCare – Noosa
GenesisCare – Rockhampton
GenesisCare - Urraween
Icon Cancer Centre - Mackay
Rockhampton Base Hospital
Toowoomba Base Hospital
Townsville University Hospital
Icon Cancer Centre - Chermside
Icon Cancer Centre - North Lakes
Icon Cancer Centre - South Brisbane
Icon Cancer Centre - Southport
Icon Cancer Centre - Townsville
Icon Cancer Centre - Wesley
Mater Hospital Springfield
Mater Hospital Brisbane
(incl. Mater Adult Hospital and Mater Cancer Care Brisbane)
Prince Charles Hospital
Princess Alexandra Hospital
Royal Brisbane & Women's Hospital
Ramsay Health- Sunshine Coast University Private Hospital
Sunshine Coast Haematology and Oncology Clinic
Tasman Health Care

ACT:

The Canberra Hospital (incl. Canberra Region Cancer Centre)
University of Canberra Hospital

TAS:

Launceston General Hospital
North West Regional Hospital
Royal Hobart Hospital
Icon Cancer Centre - Hobart

NZ:

Auckland Hospital

NSW:

Armidale Rural Referral Hospital
Bathurst Health Service
Border Medical Oncology
Coffs Harbour Health Campus
(incl. Mid North Coast Cancer Institute Coffs Harbour)
Dubbo Health Service
(incl. Western Cancer Centre Dubbo)
GenesisCare – Maitland
Moree District Hospital
Narrabri District Hospital
Orange Health Service
Port Macquarie Base Hospital
Shoalhaven District Memorial Hospital (incl. Shoalhaven Cancer Care Centre)
Ramsay Health - Southern Highlands Private Hospital & Southern Highlands Cancer Centre
Tamworth Rural Referral Hospital
Calvary Mater Newcastle
Campbelltown Hospital
Chris O'Brien Lifehouse
GenesisCare - Campbelltown
GenesisCare - Frenchs Forest
GenesisCare - Hurstville
GenesisCare – Kingswood
GenesisCare - North Shore (St Leonards)
Gosford Hospital
Lidcombe Hospital
Liverpool Hospital (incl. Ingham Institute)
Macquarie University Hospital
Prince of Wales Hospital
Royal North Shore Hospital
Ramsay Health - Wollongong Private Hospital
Scientia Clinical Research
St George Hospital
St Vincent's Hospital Sydney
(incl. The Kinghorn Cancer Centre)
Westmead Hospital
Wollongong Hospital
(incl. Illawarra Cancer Centre)
Wyong Hospital

Glossary

Antibody-drug conjugate (ADC)
An emerging class of cancer treatment that uses an antibody to recognise a protein on a cancer cell and deliver a cancer-killing drug, creating new opportunities for targeted treatment.

Biomarker
A feature in a person's cancer cells, such as a change in a gene, molecule or protein, which helps doctors understand how the cancer behaves and what's causing it to grow.

Biomarkers can guide diagnosis, predict how a cancer might respond to treatment, and help match patients to the most effective therapies.

Comprehensive Genomic Profiling (CGP)
A single test that looks at many genes in a sample of cancer tissue to find changes (biomarkers) that may be driving the cancer's growth. These results help doctors match patients to precision treatments or clinical trials.

External control arm
A comparison group created using existing patient data to help assess treatment outcomes, particularly when conventional randomised clinical trials are difficult or impractical.

Gene / Genetics
A **gene** is a piece of DNA that carries instructions for how the body's cells grow and function.

Genetics is the study of how genes are inherited and how changes in them can cause or influence diseases, including cancer.

In cancer, certain genetic changes can make cells grow uncontrollably. Identifying these changes helps doctors match patients to treatments that target them.

Genome / Genomics
The **genome** is the complete set of all a person's genes – their entire genetic code.

Genomics is the study of all these genes together, and how they interact with each other and the environment to influence health and disease. Genetic biomarkers can be mapped using genomic techniques.

In precision oncology, genomics helps reveal the full picture of genetic changes driving a person's cancer, guiding more effective and personalised treatments.

Germline / inherited genetic variation
An inherited genetic change that is present in all cells of the body and can be passed down to future generations. Some germline changes can increase a person's risk of developing cancer.

Health Technology Assessment (HTA)
A process used by government experts to decide whether new medicines, tests, or treatments should be publicly funded, based on how well they work and their cost.

Immunohistochemistry (IHC)
A laboratory test that looks for specific proteins in cancer cells or tissue samples. In cancer care, IHC helps identify the type of tumour and can show whether certain targeted treatments are likely to work.

Learning Health System (LHS)
A health system that uses data and evidence generated through research and patient care to continually improve clinical practice, treatment access and health system decisions.

Mainstream / Mainstreaming
In healthcare, "mainstreaming" means making something part of **routine**, **funded**, **everyday care**, rather than limited to research programs or specialist access.

For Omico, **mainstreaming precision oncology** means ensuring that every Medicare-eligible Australian who can benefit has **funded access** to molecular profiling and personalised treatment as a standard part of cancer care, **regardless of their wealth**, **postcode or background**.

Molecular Profiling
A way of studying all types of molecular changes (including, but not limited to, genes and proteins) in a person's cancer cells to understand what makes it unique. This information helps guide more personalised treatment decisions.

There are several types of molecular profiling tests, and these continue to evolve. **Comprehensive Genomic Profiling (CGP)** is currently at the heart of this approach, while newer tests such as **proteomic** and other advanced molecular analyses are emerging to provide an even fuller picture of how a cancer behaves.

Medical Services Advisory Committee (MSAC)
An expert committee that advises the Australian Government on whether new medical tests, procedures, and technologies should be publicly funded through Medicare. MSAC looks at how safe, effective, and cost-effective a service is before it can be added to the Medicare Benefits Schedule (MBS).

Molecular Oncology Board (MOB)
A multidisciplinary team of specialists who review molecular profiling and clinical information to help identify potential treatment and clinical trial opportunities.

Multi-omics
The integration of genomics with other molecular technologies, including proteomics, transcriptomics and other emerging approaches, to provide a more complete understanding of a person's cancer.

National Institute for Health and Care Excellence (NICE), UK
An independent organisation in the United Kingdom that reviews evidence about new medicines, tests, and treatments to decide whether they should be used in the National Health Service (NHS). NICE helps ensure patients have access to effective and affordable care.

Pharmaceutical Benefits Advisory Committee (PBAC)
An expert committee that recommends which medicines should be subsidised by the Australian Government under the Pharmaceutical Benefits Scheme (PBS). PBAC assesses how well a medicine works, its safety, and whether it provides value for money compared to existing treatments.

Pharmacogene / Pharmacogenetics
A **pharmacogene** is a gene that can influence how a person responds to a medicine, including how the medicine is processed, how well it works or the likelihood of adverse effects.

Pharmacogenetics is the study of how inherited genetic differences affect a person's response to medicines.

Understanding these differences could help clinicians make more personalised decisions about medicine selection and dosing.

Precision Oncology
An approach to cancer care that focuses on the individual. It uses detailed information about a person's cancer, such as specific **biomarkers** (protein or genetic changes), to **match treatments** that are most likely to work for them.

This approach can reveal important information about a cancer that would otherwise remain unknown, uncovering new treatment options or clinical trials that may extend life and improve quality of care. Precision oncology makes treatment more **personalised, targeted and precise.**

Proteomics
The study of proteins, which are the working parts of cells. In cancer cells, looking at proteins can reveal how a tumour behaves, and help find new ways to treat it.

Real-World Data (RWD)
Real-world data are information collected from patients and their medical teams during everyday care — not just in clinical trials — such as electronic health records, claims databases and registries.

When analysed, these data generate **real-world evidence** (RWE), which helps show how treatments work in practice and guides decisions about access, reimbursement and best care.

Therapeutic Goods Administration (TGA)
Australia's national regulator of therapeutic goods, including medicines, medical devices, and diagnostic tests. The TGA assesses and approves products for safety, quality, and efficacy before they can be supplied in Australia.

Tumour-Agnostic Therapy
A treatment that effectively targets a specific **biomarker**, such as a genetic, molecular or protein change, regardless of where the cancer started.

Most current tumour-agnostic therapies are guided by **genetic changes** in cancer cells, but new research is expanding this approach to include other types of biomarkers, such as protein-based features revealed through proteomic testing.

Whole Genome Sequencing (WGS)
A test that looks at all of a person's DNA, their entire genome, to find changes that may cause or influence cancer. It can uncover rare or complex changes not seen with other tests.

WGS can be used to understand the genetic drivers of a known cancer, helping to guide treatment, or to identify inherited genetic changes that may increase a person's risk of developing cancer in the future.



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Data currency

Unless otherwise stated, Omico program data presented in this report is current to 31 August 2026. The figure of 40,000 referrals reflects program activity to September 2026.

Omico.

The pieces exist.

Australia's next move is to bring them together to deliver lasting change.

We have at least

40,000
REASONS TO ACT.

Every year.

Omico.

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