Research for impact

Creating hope for a better future

2022 Annual Report

VIERTEL Cancer Research Centre

Cancer Council Queensland

Contents

Cancer Council Queensland acknowledges Traditional Custodians of Country throughout Queensland and recognises the continuing connection to lands, waters, and communities. We pay our respects to Aboriginal and Torres Strait Islander cultures and to Elders past, present, and emerging.

About CCQ

Our mission

To lead Queenslanders in a partnership against cancer.

Our strategy

Navigating cancer together.

Cancer Council Queensland is here to support all Queenslanders impacted by cancer by reducing cancer risk, improving early detection and improving the quality of life for those who have had a cancer diagnosis.

Our values

Responsible

We are committed and accountable, we have pride in our work, and we accept ownership for our actions and behaviours.

Equitable

We engage with each other, our clients and the community, with respect and fairness.

Inclusive

We embrace diversity and value others, empowering authentic participation.

Collaborative

We encourage and empower each other, working together to achieve our goals.

Message from the CEO

Andrew Donne

The Viertel Cancer Research Centre plays a vital role in Cancer Council Queensland's mission to lead Queenslanders in a partnership against cancer.

Cancer Council Queensland understands the importance of developing real-world evidence and translating that evidence into practice to provide the best possible supportive care and information services for Queenslanders. We are proud to support the world-class population-based research our Viertel Cancer Research Centre conducts – research that is focused solely on improving outcomes for people affected by cancer.

I am pleased to share with you the progress made across our priority areas in 2022. We have continued research in cancer prevention and screening to understand how to reduce cancer risk behaviours and to improve participation in bowel cancer screening. We have explored the needs and experiences of rural and regional cancer patients and carers who must travel long distances for cancer treatment, and we are developing clinical guidelines to assist in the important transition from hospital to home care. We are continuing to build an expanded version of the Australian Cancer Atlas to understand variation not only in cancer incidence and survival, but also in cancer risk, screening, and treatment. We are developing new ways of communicating cancer information and building opportunities for the community to inform and engage with our research. And, we are working to improve the lives of children with cancer through our world-leading Australian Childhood Cancer Registry and associated collaborations.

The details of these projects, which you will find in this report, illustrate the impressive scope and quality of the research initiatives and collaborations underway at the Viertel Cancer Research Centre.

I extend my appreciation to Cancer Council Queensland's Board of Directors and Chair, Mr. Robert Gregg, our immediate past-Chair Dr Anita Green, our dedicated staff, and esteemed research collaborators, and I thank the thousands of community members whose support and participation drive our mission. Together, we are actively working towards improving outcomes for all Queenslanders affected by cancer, no matter where they live.

Finally, I express my sincere gratitude to the Sylvia and Charles Viertel Charitable Foundation and the Foundation Trustees, whose twenty-year support of Cancer Council Queensland and of the Viertel Cancer Research Centre has made this work possible. Through your support, you have improved the lives of countless people and we thank you.

Andrew Donne
Chief Executive Officer

Our Strategic Priorities

Research

Translate evidence to practice
Improve prevention and early detection
Drive better outcomes for those impacted by cancer
Improve outcomes for children with cancer
Understand the epidemiology of cancer
Leverage cancer data
Support external research

Enable

Prevent

Educate and empower
Drive behaviour change
Advocate and engage
Champion health equity

Support

Innovative services and programs
Health professional and community partnerships
Improved survivorship
End of life and palliative care
Mental health and wellbeing
Advocate for government funding

Our work is enabled by: high performing people, strong partnerships, accreditation, financial sustainability, technology and sound governance.

Cancer in Queensland the facts

32,547

Queenslanders were diagnosed with cancer in 2020.

53%

Overall, five-year survival from cancer in Queensland has increased from **53%** in the 1980s to 73% during 2016–2020.

More than **287,000** Queenslanders are alive today after a cancer diagnosis in the past 30 years (1991–2020).

287,000

9,840

Queenslanders died of cancer in 2020.

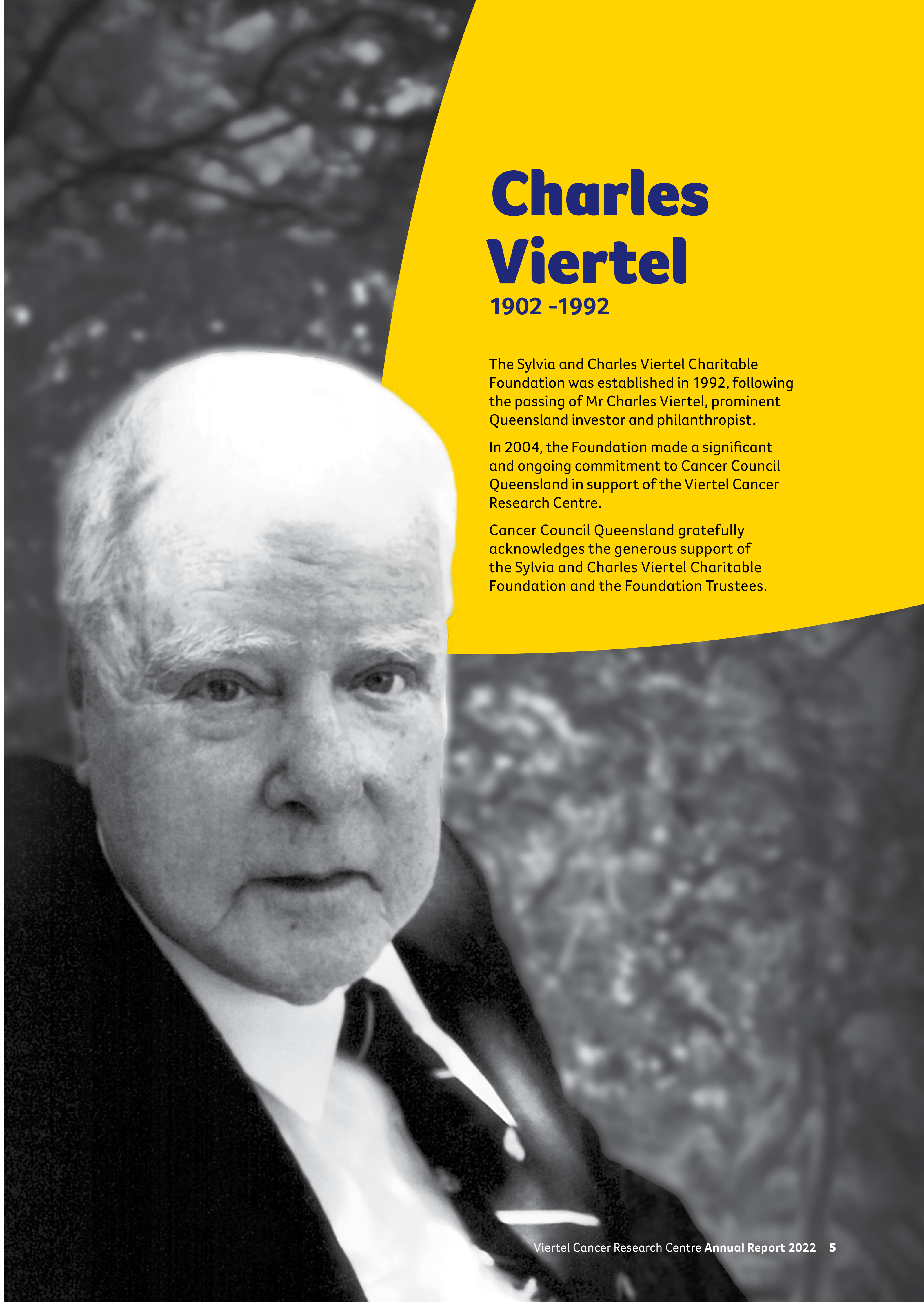
38,000

Based on current trends and predicted population changes, approximately **38,000** Queenslanders are expected to be diagnosed with cancer in the year 2028.

1 in 2

Queenslanders are expected to be diagnosed with cancer before the age of 85.

Data source: Queensland Cancer Register, CCQ Data extract, 1982-2020.



Charles Viertel

1902 -1992

The Sylvia and Charles Viertel Charitable Foundation was established in 1992, following the passing of Mr Charles Viertel, prominent Queensland investor and philanthropist.

In 2004, the Foundation made a significant and ongoing commitment to Cancer Council Queensland in support of the Viertel Cancer Research Centre.

Cancer Council Queensland gratefully acknowledges the generous support of the Sylvia and Charles Viertel Charitable Foundation and the Foundation Trustees.

Contributing to the global cancer research effort (2004-2022)

730

Scientific publications with a total citation count of over **44,000**

(Source: SciVal, June 2023)

2.8

On average, our publications are cited **2.8** times more than the world average.

(Source: SciVal, June 2023)

125

Publications in the **top 10%** most cited publications worldwide (field-weighted)

(Source: SciVal, June 2023)

13

Publications in the **top 1%** most cited publications worldwide (field-weighted)

(Source: SciVal, June 2023)

97%

of publications involve national or international collaboration

(Source: SciVal, June 2023)

Media impact

7,155

Mentions in news, blogs, social media, and policy.

(Source: Altmetrics, June 2023)

Our partners and collaborators

International

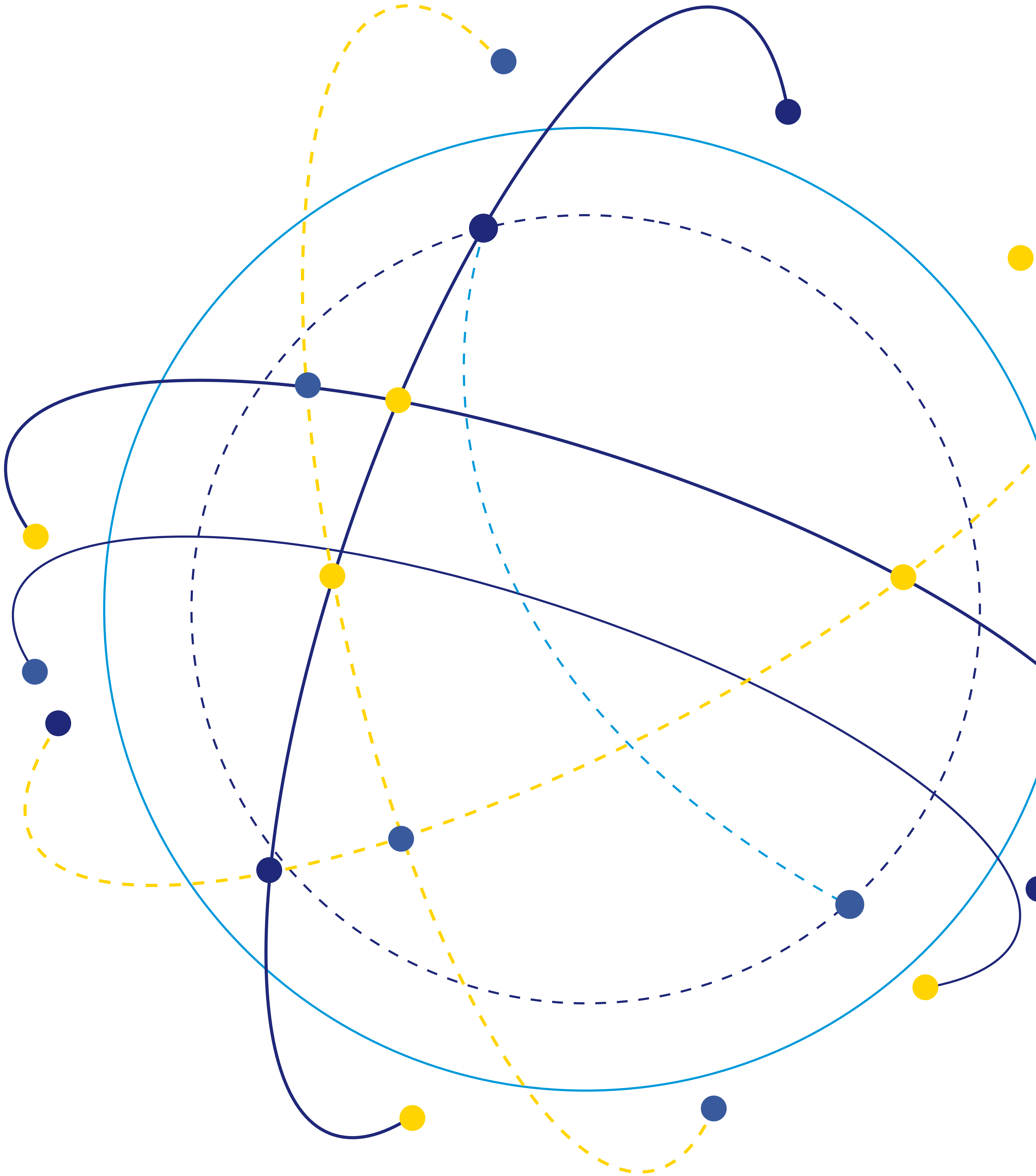
- African Cancer Registry Network
- Dana-Farber/Boston Children's Cancer and Blood Disorders Center, Boston
- European Joint Action on Rare Cancers
- Global Initiative for Cancer Registry Development
- Istituto Nazionale dei Tumori, Milan
- International Agency for Research on Cancer, Lyon
- Integral Cancer Center Netherlands (IKNL)
- International Association of Cancer Registries
- Karolinska Institute, Sweden
- Northern Ireland Cancer Registry
- Paediatric Oncology Group of Ontario
- The Hospital for Sick Children, Toronto
- Union for International Cancer Control, Geneva
- University College London (UCL)

Queensland

- Griffith University
- Mater Hospital & Mater Medical Centre
- Princess Alexandra Hospital
- QIMR Berghofer Medical Research Institute
- Queensland Children's Hospital
- Queensland Health
- Queensland University of Technology
- The University of Queensland
- University of Southern Queensland
- Metro South (Brisbane) Hospital and Health Service

National

- ARC Centre of Excellence for Mathematical and Statistical Frontiers
- Australasian Association of Cancer Registries
- Australian and New Zealand Children's Haematology/Oncology Group (ANZCHOG)
- Australian Institute of Health and Welfare
- Australian Skin and Skin Cancer Research Centre
- Cancer Australia
- Cancer Council New South Wales (including The Daffodil Centre)
- Cancer Council Victoria
- Curtin University
- Flinders University
- Menzies School of Health Research, Charles Darwin University
- Perth Children's Hospital
- Prostate Cancer Foundation of Australia
- South Australian Health and Medical Research Institute
- Sydney Children's Hospital
- The Children's Hospital, Westmead
- The University of Adelaide
- The University of Melbourne
- The University of New South Wales
- The University of South Australia
- The University of Sydney
- The University of Western Australia
- Victorian Cancer Registry
- Women's and Children's Hospital, Adelaide



Impact on health policy and practice

Our research into behavioural change for cancer prevention has informed the redevelopment of Cancer Council Queensland's Cancer Risk Calculator – a free online tool for measuring and reducing cancer risk in the community.

Our evidence of bowel cancer screening barriers and facilitators has directly informed effective national media campaigns promoting participation in the National Bowel Cancer Screening Program.

Our design for a national cancer data ecosystem has informed the Australian Government's plan to improve national health data access and cancer research linkage.

Our published reports on rural cancer survivorship have informed health and hospital services across Australia, which are seeking recommendations to improve outcomes for their rural cancer patients.

We have developed new methods to increase participation in bowel cancer screening, which we co-designed with the community and health professionals.

Our expertise in scientific measurement has informed the evaluation and improvement of Cancer Council Queensland's psychological support services.

Our work to enhance the collection of childhood cancer data in Australia has enabled the Australian Government to track progress in childhood cancer outcomes.

Our revised protocols for assigning stage at diagnosis of childhood cancer have been produced in seven languages and are enabling the worldwide implementation of the Toronto Guidelines for childhood cancer staging.

Our co-leadership of the scientific advisory boards for two international childhood cancer research initiatives is highlighting areas where childhood cancer survival can be improved.

Our data from the Australian Childhood Cancer Registry has helped the Children's Health Queensland Hospital and Health Service support service provision in remote areas.

Our findings of improved survival for childhood cancer between 1995 and 2016 have provided clear evidence for the population-wide impact of new multimodal treatments and improved supportive care.

Our development of protocols for collecting non-stage prognostic childhood cancer indicators is enabling a better understanding of variations in survival within Australia.

The Australian Cancer Atlas has been incorporated into post-graduate teaching curricula and has prompted community and local government action to improve cancer control.

Our novel statistical and visualisation methods have informed the development of a national cancer atlas in the Netherlands, which received over 1 million views at its launch.

Our mentoring and supervision of university-based post-graduate research students has contributed to an increased cancer research workforce capacity in Queensland.

Our work has directly informed the draft Queensland Cancer Strategy for Aboriginal and Torres Strait Islander Peoples.

Our evidence of rare cancer population impacts received national media coverage, raised awareness among clinical and patient support groups, and led to new research collaborations to improve understanding of these cancers.

Our leadership of the Board of Directors of the International Association of Cancer Registries is contributing to improved global cancer registration practice.

Our membership of the national Primary Care Collaborative Cancer Trials Group is assisting strategic planning for cancer research within Australian primary care.

Our mentorship as part of the International Agency for Research on Cancer's 'Global Initiative for Cancer Registry Development' has contributed to improved knowledge and quality of childhood cancer registration and data in low and middle-income countries.

Key projects in 2022

Priority area	Projects	Page
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Meeting the needs of cancer survivors	Needs and experiences of regional cancer patients and families who travel for treatment	18
	Improving rural cancer survivors' transition home after treatment in a major city	20
Achieving equity in cancer outcomes	The Australian Cancer Atlas 2.0	22
	Impact of treatment delays on breast cancer survival	24
Informing and engaging the community	Developing new ways of communicating cancer information through data visualisation and digital storytelling	26
Improving the lives of children with cancer	Expanding and improving the quality of national and international data on prognostic indicators for childhood cancer	28
	Trends in childhood cancer survival	30
	National data linkage project examining late effects of treatment among childhood cancer survivors	32

Improving participation in bowel cancer screening

What is the need?

Over 15,000 Australians are diagnosed with bowel cancer every year and over 5,000 die from the disease. Ninety percent of bowel cancer cases can be successfully treated if detected early. Unfortunately, only 41% of eligible Australians complete and return their free biennial bowel cancer screening kit, and thousands of Australians every year miss their opportunity to detect and potentially cure bowel cancer before it progresses. Participation is even lower among younger and first-time invitees, men, and those who are socio-economically disadvantaged. Our research to date suggests there are a wide range of individual barriers deterring people from bowel cancer screening, and multi-faceted interventions specifically targeting these barriers will be crucial to increasing uptake in Australia's National Bowel Cancer Screening Program.

What is the project?

Cancer Council Queensland is a partner and research collaborator in a multi-disciplinary initiative to co-design and trial a variety of user-centred, evidence-based interventions to increase participation in bowel cancer screening. The project involves consumers, health professionals, the Australian government, and researchers across Australia. Cancer Council Queensland is leading the development of interventions through an iterative co-design process involving multiple rounds of surveys and interviews with consumers, followed by workshops where evidence is reviewed by stakeholders and investigators and suitable interventions are selected for trial.

What has been achieved in 2022?

We have drawn on strategies from the behavioural science literature that have been successful in other countries, and the experiences of Australians who do and do not complete their screening kit, to develop several interventions. These interventions include a motivational narrative video, individual text message reminders, a variety of in-home prompts, and enhanced promotional and instructional materials. All interventions are designed to improve the likelihood that each person who receives an invitation in the mail will complete and return their screening kit. The next step is to test these new initiatives in a real-world setting. We have begun recruitment for a national randomised controlled trial to assess the effectiveness of a promising intervention that combines a targeted text message with a video that general practitioners will send directly to their eligible patients.

What is the impact?

Increasing participation in bowel cancer screening will substantially improve the health and longevity of Australian adults. If participation in the National Bowel Cancer Screening Program can be increased to our target of 60%, an additional 37,000 bowel cancers and 25,000 bowel cancer deaths could be prevented over the next 20 years.

Empowering communities through co-design

Our efforts to improve cancer screening are driven by real voices – voices that matter. Hundreds of Australians from all walks of life have shared their experiences with us, pointing out barriers to bowel cancer screening and helping us to design practical and effective solutions to overcome them.

Co-designing screening uptake strategies with the community means they are tailored to peoples' needs and preferences. The result is more effective strategies that are more likely to resonate with our community.

Community members who participate in our interview and co-design studies have the opportunity to make a real and significant contribution to health research in Australia.

Getting involved in research also encourages participants and their friends and family to look after their own well-being by screening for cancer.

We have co-designed several interventions to increase participation in bowel cancer screening within the Australian community, and we continue to work alongside the community, as well as universities and the government to trial these interventions within the National Bowel Cancer Screening Program.

> *"I think it's fantastic that you're doing this because this is something that is so important. I get frustrated with myself when I just don't get around to doing my bowel cancer screening kit. Anything that can help that is a great idea."*
>
> **Research participant**

> *"Cancer can happen to anyone; it doesn't discriminate. I don't want anyone to have to go through what I went through. I'd like chemotherapy to never exist. I'd like screening to be able to detect cancer at the very earliest of stages so that invasive treatments such as these are not necessary."*
>
> **Bernadette, a young cancer patient**

Effect of mental health and socioeconomic disadvantage on cancer risk behaviours

What is the need?

Over 30% of cancers are potentially preventable by changing health behaviours, including avoiding smoking, reducing alcohol consumption, increasing physical activity, and maintaining a healthy body weight.

While most research in the field of cancer prevention has focused on who is more likely to engage in cancer risk behaviours, there is a significant gap in understanding why, i.e., the drivers of health behaviour. Successful public health interventions to improve cancer prevention will depend on identifying the underlying psychological mechanisms that drive cancer-related health decisions in different segments of the population.

What is the project?

This project aims to understand the role mental health and socio-economic disadvantage play in cancer prevention and cancer screening behaviour and how these factors interact. Findings will inform innovative solutions for improving health behaviour based on targeted behaviour change techniques.

Main findings this year

Analysis of survey data from over 2,000 community members has highlighted socio-demographic disparities in cancer risk behaviours across Australia, and the significant negative impact that extreme anxiety, stress, social disadvantage, and self-efficacy have on cancer screening adherence.

This is supported by our systematic review of over 70 international studies indicating those groups most likely to benefit from primary care support for cancer prevention and screening, and the type of messaging that will be most effective. Our analyses have shown trait-based positive and negative mood appears to have little effect on people's general tendency toward cancer risk behaviour such as alcohol consumption, poor diet, and smoking. Following from this, we are investigating daily stressors and whether interventions targeting these will be a more effective strategy for reducing cancer risk behaviours in some individuals.

What is the impact?

Preventable cancers are responsible for many thousands of deaths and substantial healthcare costs each year. Understanding the individual drivers of cancer risk behaviours will enable us to adapt and design appropriate targeted advice and strategies both for preventing cancer and for detecting cancer early, based on the needs of at-risk segments of the community. This research aims to provide Queenslanders with the tools they need to reduce their cancer risk and will lead to a better informed and healthier community.

"What would really help me is understanding what I can do at my stage of life to lower my chances of getting cancer."

48-year-old tradesperson

Needs and experiences of regional cancer patients and families who travel for treatment

What is the need?

Almost one third of Australians affected by cancer live rurally and must travel to major cities for treatment. For these people, a cancer diagnosis often requires regular and extended periods away from home and family, causing emotional, practical, and financial disruptions for patients and their caregivers. Both patients and caregivers from rural areas experience poorer than average physical and emotional outcomes and have high unmet needs for information and support. Our research shows rural cancer survivors face multiple challenges and often lack the emotional and practical support they require when travelling to receive treatment in major cities.

What is the project?

The "Travelling for Treatment" project is capturing the experiences over time of more than 1,000 rural cancer survivors and their caregivers who travel to major cities in Queensland for cancer treatment. The findings to date have provided a better understanding of the needs of rural people effected by cancer and have supported efforts to improve the experiences of patients while travelling as well as their overall long-term health and well-being. Part of this involves obtaining a deeper understanding of how caring for someone with cancer affects the carer's own health and wellbeing, the types of support carers need, and how carers would prefer to receive that support.

Main findings this year

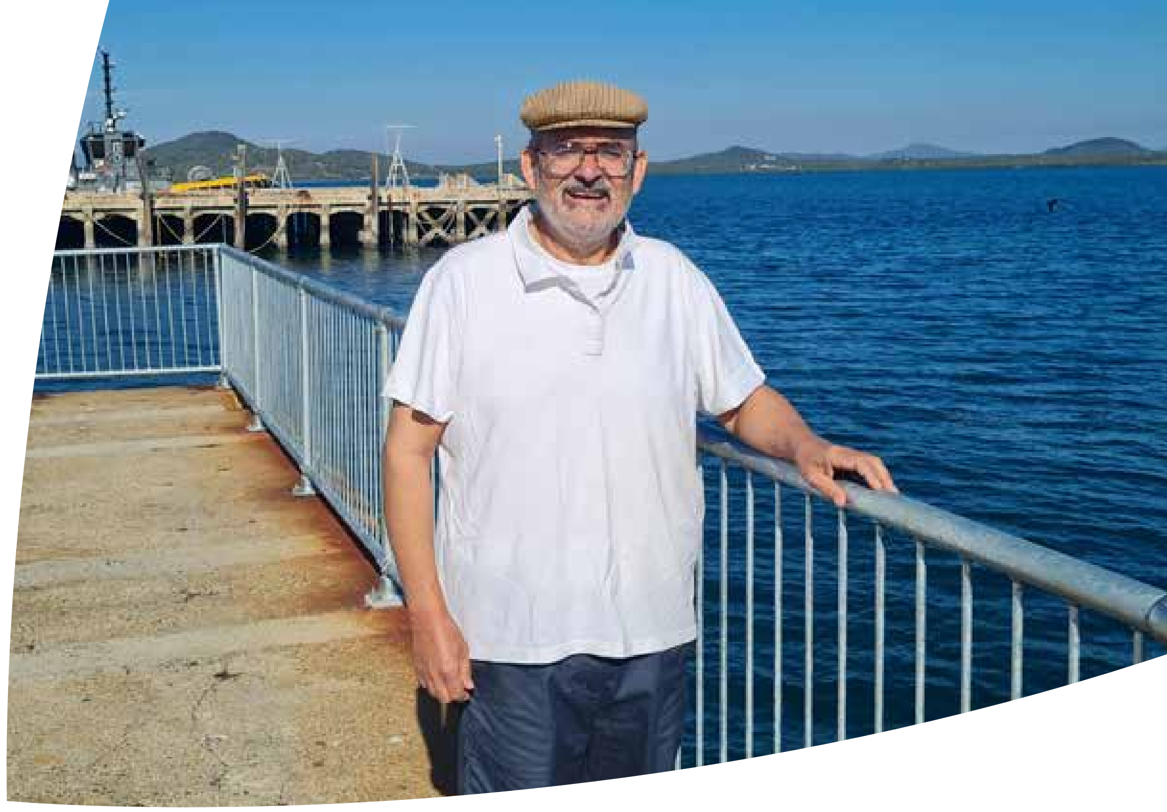
Interviews with over 400 rural cancer patients and caregivers have revealed substantial disruptions to employment following diagnosis with 43% of patients and 21% of caregivers having left their paid work entirely as a result of the cancer diagnosis.

These findings highlight the importance of workplace adjustments and flexibility to maintain paid employment wherever possible. Our findings have also highlighted concerns with the implementation of the Queensland Government Patient Travel Subsidy Scheme (PTSS) that provides vital financial support to rural and regional patients. Approximately 30–40% of patients experience challenges understanding and following the PTSS claims procedure, and many experience delays in receiving reimbursement. These findings are informing Cancer Council Queensland's efforts to advocate for improvements to the PTSS delivery.

For those caring for someone with cancer, we have found there is a significant impact on the caregiver's health and well-being, including decreases in diet quality, planned exercise and quality sleep, increased smoking and alcohol consumption, and reduced social connectedness. In response, we are developing interventions to address these specific concerns, starting with programs to improve diet quality and social interaction for rural caregivers and patients while receiving treatment away from home.

What is the impact?

Evidence-based system changes promoting the social, emotional, and financial health of cancer survivors are essential to reducing cancer's impact on regional and rural cancer patients. Initiatives to improve caregiver health and well-being and to promote a better quality of life for rural caregivers will improve their capacity to provide vital care for loved ones living with cancer.



Gerald's story

Gerald Caparros, from Bowen in rural Queensland, has been supporting his wife, Angela, with breast cancer since 2019. While she was going through treatment, they stayed at Cancer Council Queensland's Gluyas Rotary Lodge in Townsville.

Nothing prepares you for a loved one's cancer diagnosis. For Gerald, one of the most challenging parts of being a caregiver was knowing how to best support his wife through treatment and understand her needs.

"Staying at the lodge made things much easier."

Gerald remembers the difference having accommodation during treatment made to him and his wife. The lodge's bus service to and from the hospital eased the burden of travel and parking, allowing them to focus on getting through treatment and recovery.

"I noticed that the minute we started taking the shuttle bus there and back, we were more relaxed."

Through the research conducted by the Viertel Cancer Research Centre, people like Gerald have had the opportunity to talk about their experiences as caregivers. This has been a key source of support for these caregivers, who often feel overlooked in a medical system that focuses on caring for the patient.

From this research, Gerald hopes to see more support available to family and friends. Gerald sees opportunities for better access to counselling and psychological support for caregivers. He also sees a need for help with the practical aspects of caregiving, such as tips for food preparation and symptom management during treatment.

Through the insights gained from talking to rural caregivers like Gerald, Cancer Council Queensland is developing practical interventions to support rural Queenslanders who are caring for a loved one with cancer.

> *"Participating in the research expanded my awareness of the things that were going on in my mind and the challenges of taking care of someone with cancer.*
>
> *It gave me the opportunity to express some of those challenges. That's been a game changer."*

Improving rural cancer survivors' transition home after treatment in a major city

Funded by the Sylvia and Charles Viertel Charitable Foundation in memory of Daniel Raumer

What is the need?

When rural cancer survivors return home to their communities after treatment in major cities, they have relatively limited access to healthcare services and support. They must rely on their own self-management to maintain their health and well-being during recovery and beyond. For this reason, providing rural cancer survivors with comprehensive survivorship support and information is key. However, our research shows that as many as two-thirds of rural cancer survivors do not receive the information they need to manage their long-term health. There are gaps in the provision of diet and exercise advice, referrals to emotional and financial support services, scheduled follow-up appointments and symptom monitoring over time. There is a clear need to improve current practices for delivering supportive care information to rural cancer survivors.

What is the project?

In consultation with health professionals and rural people affected by cancer, we are developing Transition of Care Guidelines for use by clinicians who treat cancer patients from rural areas. The Guidelines will outline the survivorship information and advice that should be provided and how it should be delivered to rural patients transitioning from city hospital treatment to long-term home and community-based care.

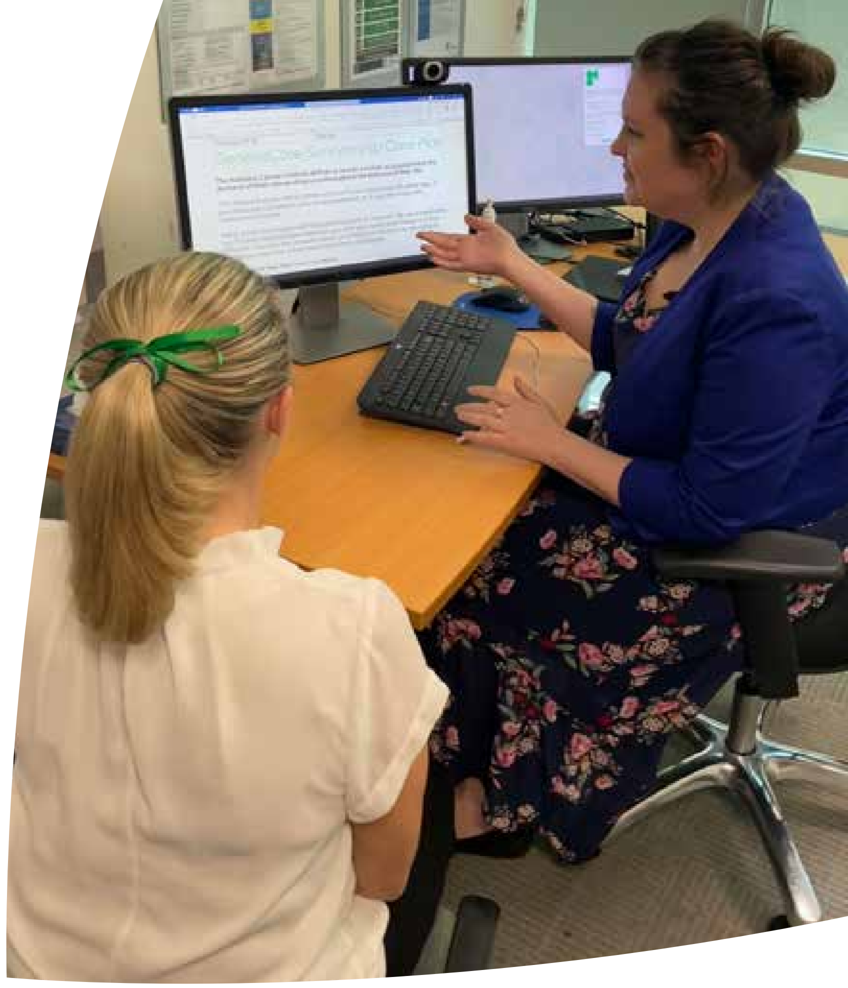
What has been achieved in 2022?

Two systematic reviews of the scientific literature have provided a baseline understanding of what is currently known about the information needs of rural cancer survivors in Australia and the mechanisms that underly the successful information delivery. Interviews with over 20 health professionals involved in the treatment and care of rural cancer survivors have given us an understanding of current practices and the best potential solutions for improving the transition from hospital to home care. Synthesis of these data is underway to inform the first draft of the Guidelines, which will then be formally evaluated by health professionals and cancer survivors.

What is the impact?

The Transition of Care Guidelines will provide an urgently needed framework for the consistent and reliable delivery of survivorship information to the many thousands of cancer patients who return to rural communities after treatment in major cities each year.

Spotlight on our collaborators



Dr Leesa Jackson

Career Medical Officer and cancer survivorship research collaborator

When Dr Leesa Jackson's father-in-law was diagnosed with cancer, the gaps she saw in his care changed her career trajectory. Leesa pivoted from radiation oncology to cancer survivorship, where she now provides survivorship care planning consultations to support patients to navigate their post-treatment care.

"When my father-in-law was diagnosed with cancer, the onus was on him to pass messages and referrals between his doctors," Leesa explains. "Patients should not be their own project manager, especially during and after treatment for cancer."

"The survivorship care plans I develop with patients can bridge these gaps. They tell patients where to get support, who follows up with them, which health practitioner oversees what, and the things they can be doing to live well after treatment."

"A cancer diagnosis makes you realise you do not have control over your health, and the most important thing we can do is give that back to the patient. Survivorship care plans help those who have been through cancer with the evidence-based things they can do to take back ownership and control of their health."

This support is particularly important for people returning to a rural community after receiving treatment in a major city. "The same gaps my father-in-law experienced are felt even more by the rural patients who come to bigger centres for their treatment. Many are sent back home, unsure what to do next."

"The Clinical Oncology Society of Australia says equitable access to services is key to good survivorship care. Everyone should be able to get the same quality of care no matter where they live in Australia."

Cancer Council Queensland is partnering with Dr Jackson to evaluate the benefit of survivorship care planning consultations for cancer survivors and their caregivers, and to investigate opportunities to expand this support to more rural Queenslanders affected by cancer.

> *"The opportunity to evaluate and extend my work through Cancer Council Queensland's research is incredibly important for rural patients. Right now, there is limited survivorship support available to rural patients when they finish treatment. I'm excited to see that change."*

The Australian Cancer Atlas 2.0

https://atlas.cancer.org.au

What is the need?

Launched in 2018, the Australian Cancer Atlas has provided an unparalleled, high-resolution visualisation of social and geographical variation and inequity in cancer incidence and survival across Australia. In response to its increasing popularity and use in the community, work on an updated version of the Atlas began in 2021, in collaboration with the Queensland University of Technology. The Australian Cancer Atlas 2.0 will take advantage of rapidly advancing technology for digital mapping and visualisation to improve the useability and scope of this popular resource and improve how the key results are communicated to its diverse audiences.

What is the project?

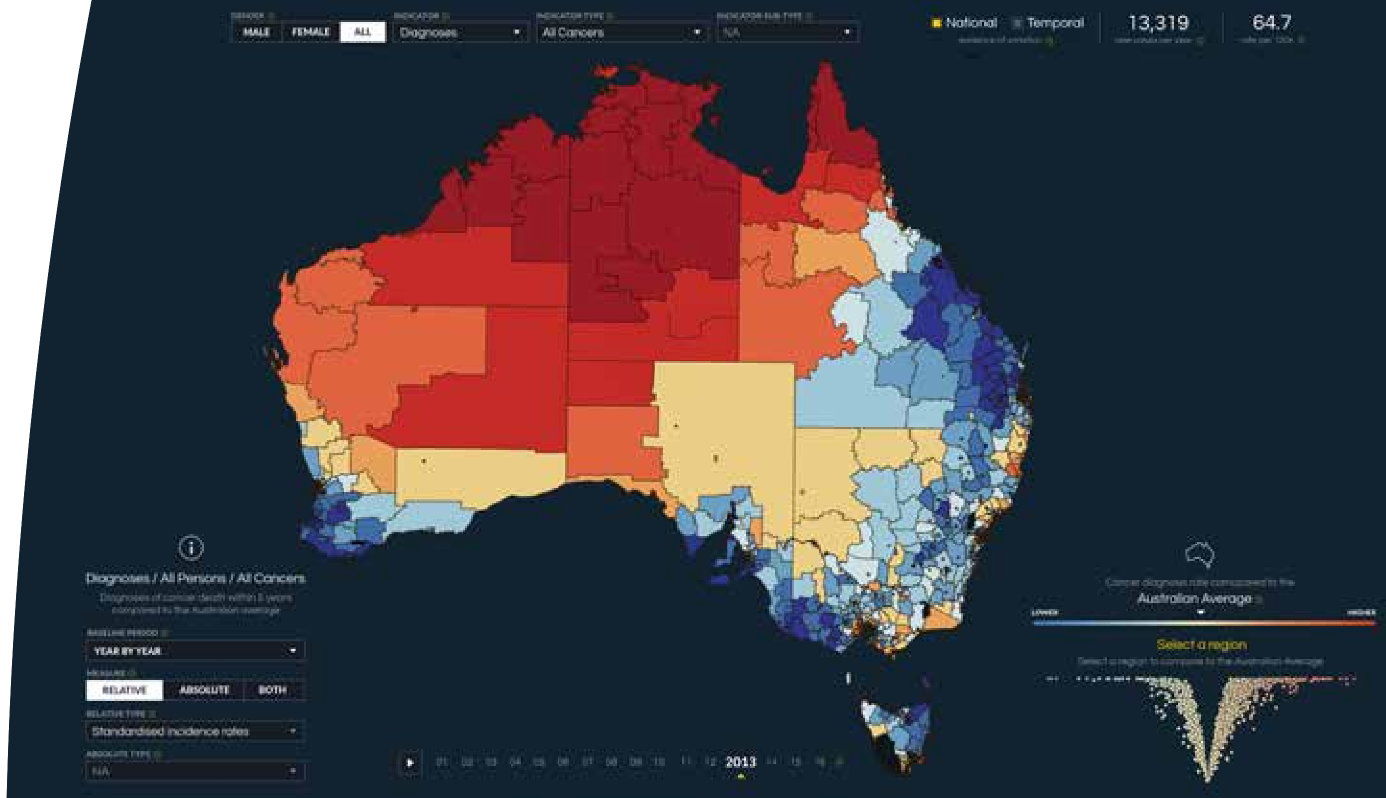
The Australian Cancer Atlas 2.0 will continue to be a free online digital atlas of cancer. Built on the original Australian Cancer Atlas, it will incorporate a complete redesign of the content and how it is communicated to the user. New measures will include cancer risk factors, participation in cancer screening programs, clinical characteristics of cancer and use of treatment according to the residential locations of all cancer patients diagnosed in Australia. In addition, it will include details of how the geographic variation in some of these measures has changed over time.

What has been achieved in 2022?

The development of the Australian Cancer Atlas 2.0 has benefited from the contributions of several postgraduate research students who have been involved in the development, testing, and application of new statistical methods. Their contributions have also provided a unique opportunity to build the expertise of young cancer researchers in this field. We have published new evidence of the geographical patterns of specific cancers including mesothelioma and rare cancer types and have developed improved methods for visualising geographical patterns and communicating to users what these patterns mean.

What is the impact?

The Australian Cancer Atlas 2.0 is at the forefront of mapping technology, developing, and applying innovative methods to a wide range of cancer-related measures. It will help the community, government, and others to visualise the vast disparities in cancer outcomes by geographical location across Australia, and to understand some of the factors that underly that disparity. This knowledge is essential for the development and implementation of evidence-based policies to reduce inequity in cancer outcomes, supported by an informed community.



Cancer is a community problem

The Australian Cancer Atlas gives communities the information they need for collective action.

"It might take a village to raise a child, but it will take a whole community to beat bowel cancer.

According to the Australian Cancer Atlas, Warwick is 27% above the national average for excess bowel cancer deaths. Along with the Southern Downs Regional Council, the Queensland Rotary Bowelscan Committee is hoping a whole-of-town approach will turn that around with an important awareness campaign.

A Rotary spokesperson said, 'On our recent tour through Queensland, the people we met in Warwick were visibly shocked when they heard that high bowel cancer statistic for their town. Everyone we met had no idea and all wanted to know how they can help.'"
South Downs Regional Council[1]

> *"With the recent availability of the Australian Cancer Atlas, we can now map the incidence of liver cancer, which is the fastest rising cause of cancer mortality in Australia....This type of detailed mapping is key to the identification of priority areas to inform public health action in reducing this burden."*
>
> **Dr Jennifer MacLachlan and Prof Benjamin Cowie, Director, WHO Collaborating Centre for Viral Hepatitis, Melbourne**

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1 From https://www.sdrc.qld.gov.au/council/alerts-news-notices/2021-news/2021-july/council-partners-with-rotary-on-an-important-health-issue-screen-early-for-bowel-cancer-and-save-lives

Impact of treatment delays on breast cancer survival

What is the need?

Breast cancer is the second most common cause of cancer-related death in Australian women after lung cancer. Research has found one-third to half of all women diagnosed with breast cancer do not receive prompt treatment, and this delay is likely linked to lower survival. In 2020, Cancer Australia updated Australia's national guidelines for treating early-stage breast cancer. These guidelines are based on expert opinion rather than evidence because there is a lack of data about the actual impact of the timing of the different phases of treatment on breast cancer survival.

What is the project?

Cancer Council Queensland's Breast Cancer Outcomes Study involved more than 3,300 women diagnosed with breast cancer in Queensland between 2010–2013. The study was designed to investigate questions related to the timeliness of diagnosis and to determine those factors that influence survival outcomes, including the timeframes between diagnosis and each phase of treatment.

Main findings this year

We have confirmed almost half of the women in the study experienced longer time intervals between treatment phases than are recommended by the national guidelines. Compared to those who received treatment within the recommended timeframes, women who experienced such delays had a 40% higher chance of dying from breast cancer during the study.

Specifically, women who waited more than 29 days from diagnosis to surgery, more than 36 days between surgery and chemotherapy, or more than 31 days between chemotherapy and radiotherapy were at a significantly higher risk of dying from breast cancer.

Women whose breast cancer was detected because of symptoms rather than through screening, those who did not carry full private insurance cover, and those who lived outside the south-east corner of Queensland were more likely to face longer treatment delays.

What is the impact?

This is the first evidence that women who experience treatment intervals longer than those recommended by current national treatment guidelines experience significantly lower survival. The study, published in the Medical Journal of Australia, has demonstrated the importance of adherence to the current clinical guidelines for early breast cancer in Australia, and is a significant step forward in improving breast cancer outcomes.

Cath's story

Cath, a Brisbane local, was diagnosed with stage three breast cancer nine years ago. During her treatment, she met her 'chemo buddy' - a regional woman who, despite having a similar diagnosis to Cath, experienced a vastly different outcome. Their stories highlight how barriers to prompt treatment impact breast cancer survivorship.

As someone with a family history of breast cancer, Cath has always been vigilant in doing breast checks. When she noticed symptoms in her left breast, she acted immediately.

"For me, the time from diagnosis to treatment was really quick. I made an appointment with my GP on Thursday, and by the following Tuesday I was in theatre having a mastectomy. Three weeks after my surgery I started my first round of chemotherapy."

It was during her treatment that Cath saw first-hand how fortunate she was to be able to access prompt treatment.

"My chemo-buddy, a lady I was introduced to through a mutual friend, had similar diagnosis, time frames, and pathology to me – though she did have more lymph node involvement than I did. But she had her own business, a café in the small town she lived in, and she had to power on wherever she could. She'd say to me, 'I have a mattress in the back office, that I can lie down and sleep on when I need to.'"

"And, while my treatment was only ten minutes down the road, she had to get on a plane to fly to her treatment. There was such a difference between our treatment journeys. For me, the treatment did what it was meant to, and I am here nine years later. My chemo-buddy, she wasn't so fortunate. She passed away."

Cath says that losing her friend was the reason she is now so committed to raising awareness and funds for Cancer Council Queensland's support services.

"I used many of the CCQ services. The 13 11 20 help line was amazing, especially when I needed reliable information or to chat to someone outside of my friends or family. I also used their wig fitting service, counselling, and hard copies of their books on how to speak to your kids about cancer."

Research conducted by Cancer Council Queensland through the Breast Cancer Outcomes Study is helping to provide the evidence needed to improve outcomes for women with breast cancer, like Cath and her friend, no matter where they live.

"These resources really reduced my stress and made my recovery easier. I want more people to know what is available to them. Especially the transport and accommodation services, which go a long way to making treatment easier for regional patients."

Developing new ways of communicating cancer information through data visualisation and digital storytelling

What is the need?

An informed and supportive community is essential for successful and sustainable cancer control. People require accurate, easily accessible, and appropriate information to make informed health decisions and to effectively advocate for policies that meet the community's needs and improve cancer prevention, early detection, and outcomes. As the community's primary source of information about cancer, Cancer Council Queensland provides the most up-to-date data on cancer diagnosis rates and survival rates, information about cancer risk behaviours, prevention, and screening, and where to find support when needed. It is vital that all such information is clear and accessible to a wide variety of audiences.

What is the project?

The field of science communication is advancing rapidly. In this project, we are exploring advanced data analytic techniques, dynamic visual storytelling, and interactive visualization to develop new methods to effectively convey information and data to a variety of audiences across a range of channels.

What has been achieved in 2022?

Queensland Cancer Statistics Online (QCSOL) is an interactive online community resource containing the latest available Queensland cancer statistics. Originally developed using Business Intelligence software, we have developed the next version of QCSOL using the more flexible R-Shiny applications. This change offers greater capacity in reporting options, improves routine updates through documented syntax files, and expands the range of statistical measures and visualization options available.

Visual storytelling is an emerging method of communication that uses still photography, illustrations, animated or other videos, plots and maps, graphics, and audio to disseminate information. It is a method that is intended to improve user engagement, drive emotions, and motivate the viewer to action. We have collaborated with visual design experts to create successful prototypes that explain for lay audiences the interaction between geographical patterns of prostate cancer diagnosis and survival across Australia and the impact of rare cancers in the community. Visual storytelling will assist users to interpret other key geographical patterns revealed by the Australian Cancer Atlas 2.0.

What is the impact?

Building our capacity to effectively communicate research findings and cancer information to a broad range of users will improve understanding and awareness of cancer in the community, improve decision-making about health behaviour, drive health system changes and inspire community-based efforts to reduce the impact of cancer.

Expanding and improving the quality of national and international data on prognostic indicators for childhood cancer

What is the need?

Certain clinical measures are known to influence prognosis for children with cancer. These include stage at diagnosis and characteristics of the tumour such as its molecular classification and cytogenetics (known as non-stage prognostic indicators). Complete information on prognostic indicators is important for assessing and interpreting differences in childhood cancer survival over time and between countries. However, information on most of these factors is not included in cancer registries anywhere in the world, and until recently there was no international consensus about how these data should be collected.

What is the project?

Over the last few years, Cancer Council Queensland has co-led, with our international colleagues, the development and implementation of methods to improve international harmonisation of data on stage at diagnosis of childhood cancer. This year, we aimed to expand and improve data on non-stage prognostic indicators for childhood cancer at a population level in Australia, and to test feasibility for use by other countries.

What has been achieved in 2022?

We have demonstrated the feasibility of new guidelines for collection of non-stage prognostic indicators for childhood cancer, and the Australian Childhood Cancer Registry has become the first childhood cancer registry in the world to collect non-stage prognostic indicators at a national level for some childhood cancers.

We have also continued to implement protocols for collection of data on stage at diagnosis. Updated versions have been published on the International Association of Cancer Registry website[2] and translated from English into Spanish, French, Italian, Japanese, Portuguese, and Bulgarian. These protocols have been incorporated into the CanStaging+ online tool[3], which supports the automatic calculation of cancer stage for all ages and now includes our protocols for calculation of cancer stage in children.

What is the impact?

Childhood cancer is rare and pooling data from multiple countries is necessary to answer scientific questions. Access to standardised data is therefore critical. Cancer Council Queensland has been at the forefront of efforts to improve the consistency and comparability of childhood cancer data around the world. As a result of this work, the first multi-national studies are underway to understand the role of stage and other prognostic indicators in explaining the large variation in childhood cancer survival between nations. Within Australia, this work has allowed benchmarking of national childhood cancer incidence and survival according to stage and will contribute to a better understanding of improvements in stage-specific survival over time. Accurate information on prognostic indicators for children with cancer will inform the development of targeted cancer control strategies to improve childhood cancer outcomes around the world.

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[2] http://www.iacr.com.fr/index.php?option=com_content&view=article&id=153

[3] https://canstaging.org/

Emily's story

The day before our child's diagnosis, we weren't a cancer family either.

On the first day of March, our world changed forever when our four-year-old daughter Emily was diagnosed with stage 4 neuroblastoma, a rare and aggressive childhood cancer that has a five-year survival rate of just 50%.

After losing her appetite and complaining on and off about a sore tummy, our otherwise healthy daughter was thought to have overlapping bacterial infections and started (and restarted) on antibiotics.

However, over time Emily's symptoms worsened, and one morning she woke with a limp, unable to bear weight on her right leg.

At the hospital, we were assured that Emily presented well. Her blood tests were normal. A nurse told us that Emily couldn't have "anything serious, like cancer." When the doctors decided to discharge Emily with another course of antibiotics, we pushed for a scan of her abdomen.

The scan revealed a large mass, the size of a grapefruit, on Emily's adrenal gland. The sonographer who broke the news could only apologise, saying, "I'm so sorry. I don't know what to tell you."

An hour later, Emily was transferred to the Oncology ward at the Queensland Children's Hospital.

Here, we learned that Emily's cancer had spread to her spine, head, legs, bones, and bone marrow. Our oncologist described Emily's cancer as a "silent monster" because by the time neuroblastoma is diagnosed, it has usually metastasised.

At the QCH, we also learned that Emily's treatment would be gruelling: 18 months of chemotherapy, major surgery, multiple rounds of radiation, two bone marrow transplants, and immunotherapy.

Astoundingly, Emily had a "perfect response" to frontline treatment. After completing five rounds of chemotherapy and undergoing surgery to remove her primary tumour, she was declared cancer-free.

In a cruel twist of fate, Emily developed a rare fungal infection during her bone marrow transplant. Because Emily's immune system was destroyed by the high-dose chemotherapy that she received during treatment, her tiny body was unable to fight the infection. The infection travelled to Emily's brain and caused multiple aneurysms, resulting in severe brain damage.

After four days in the ICU, where she continued to fight her hardest, Emily died in our arms in the hospital garden. She left us the same way she came to us: in our embrace, surrounded by love, with no trace of cancer in her body.

> *"Childhood cancer research must continue so that doctors can develop better treatments and ultimately find a cure for this terrible disease."*

Trends in childhood cancer survival

What is the need?

International, collaborative clinical trials have demonstrated significant improvements in survival for many types of childhood cancers over recent decades. However, there has been no population-level assessment of the extent to which clinical trial results have translated into real-world improvements in childhood cancer survival for all patients in Australia.

What is the project?

To measure the impact of advances in childhood cancer treatment on survival at a population level, we used data from the Australian Childhood Cancer Registry to investigate how survival has changed between the 1980s and now. Analyses were performed by type of cancer and results were adjusted for key factors including sex, age group, remoteness of residence, area-based socioeconomic status, type of treatment received and stage (i.e., how far the cancer had spread at diagnosis). We also estimated the number of lives saved over this time as a consequence of the improvement in childhood cancer survival rates.

Main findings this year

We found the overall five-year survival rate for childhood cancer increased from 73% for patients diagnosed between 1983–1994 to 86% for patients diagnosed between 2007–2016. After adjusting for key factors, the risk of death within five years of diagnosis for all childhood cancers combined has almost halved since the early 1980s. The largest gains in survival have been for children with leukaemia, lymphoma, and neuroblastoma. A few exceptions remain, however – there has been little or no improvement in survival for some childhood cancers such as certain types of liver, brain, and bone tumours.

Using baseline information from 1983–1994, it was estimated that between 1995–2016, there were 39% fewer deaths within five years of diagnosis than would have occurred had survival rates not improved. This equates to over 1,500 fewer deaths as a direct consequence of advances in treatment and supportive care following a childhood cancer diagnosis.

What is the impact?

Our findings provide clear evidence of the progress in the fight against childhood cancer in Australia. Research into trends of childhood cancer survival at a population level shows the impact of changes in treatment; informs advocacy and service planning; provides accurate information for doctors, patients, and their families; and supports continuing improvement in childhood cancer outcomes.

“One of the things I do on a day-to-day basis is talk with parents whose child has been newly diagnosed. It’s good being able to give them hope - with some clarity and clear evidence gained from the Australian Childhood Cancer Registry. It’s certainly hard work and there’s a long road ahead but the data tell us that we can cure 90% of all children diagnosed with leukaemia.”

Dr Andy Moore

Paediatric oncologist, Queensland Children’s Hospital

National data linkage project examining late effects of treatment among childhood cancer survivors

What is the need?

Our research has shown an increasing incidence of childhood cancer, combined with improvements in survival since the early 1980s, has led to a growing population of childhood cancer survivors in Australia. Cancer and its treatment, occurring at a time of rapid physical growth and development, places childhood cancer survivors at high risk of severe adverse health outcomes, known as late effects. Current understanding of late effects comes largely from older studies from North America and Europe using sample survey data. There is an urgent need for contemporary, accurate, detailed, population-level information about late effects among childhood cancer survivors in Australia.

What is the project?

Our goal is to build a national linked platform to comprehensively assess and document the late effects of childhood cancer and its treatment in Australia. The clinical details of children who were diagnosed with cancer before the age of 15 and recorded in the Australian Childhood Cancer Registry since 1983 (approximately 25,000 children) will be linked to existing state, territory and Commonwealth datasets containing wide-ranging information on health and other key outcomes.

What has been achieved in 2022?

National data linkage projects are complex undertakings involving the active participation and support of Data Linkage Units in each Australian state and territory, multiple data custodian approvals, and ethics approvals in each jurisdiction. In the first phase of this multi-year project, we have negotiated with all jurisdictions through the national Population Health Research Network (PHRN) to develop the data linkage protocol and commenced submission of ethics and data custodian approvals required to conduct the project. We have also completed a review of information sources and data items in each jurisdiction and determined availability, completeness, and consistency of data on the key outcomes of interest. These outcomes include mortality, second cancers, health service utilisation, medicines prescribed, health conditions other than cancer, mental health, fertility, early childhood development, and educational outcomes.

What is the impact?

This project will provide the first contemporary and accurate picture of the long-term health burden faced by childhood cancer survivors diagnosed in Australia, including evidence of those subgroups of children who are most at risk of serious late effects. This knowledge is important for patients and their families and will allow the development of targeted surveillance programs aimed at early detection, treatment, and mitigation of late effects in the Australia's increasing population of childhood cancer survivors.

Spotlight on our collaborators

Jodie Pappas

Ms Jodie Pappas is a consumer representative and collaborator on our Australian Childhood Cancer Registry project, which aims to examine the late effects of childhood cancer treatment. She is the Team Leader of the Intake and Connection Team at Redkite, an organisation that provides support to children with cancer and their families. In her role at Redkite, Jodie and her team offer support and navigation to families who have a child with cancer. Jodie is also responsible for triaging individuals who may require more in-depth support from Redkite's community-based social workers.

Jodie brings not only her professional expertise to this important project, but also her personal lived experience as a mother of a childhood cancer survivor. Her journey began in December 2012 when her daughter was diagnosed with Pre-B Acute Lymphoblastic Leukaemia Average Risk when she was four and a half years old. Throughout her daughter's treatment at the Royal Children's Hospital in Melbourne, which concluded in February 2015, Ms Pappas witnessed and experienced the challenges and triumphs of the cancer journey.

The Pappas family initially faced ongoing physical health concerns resulting from the rigorous treatment, but most of those have now subsided. However, even eight years into her daughter's survivorship, the lingering psychosocial impact of their childhood cancer experience remains.

Jodie and her family have a unique perspective and a deep understanding of the needs and challenges faced by families dealing with paediatric cancer.

> *"Our lives after childhood cancer are filled with uncertainty. Every little thing… we question if it is because of the cancer. We don't know when problems will arise or what those problems will be. This uncertainty makes living difficult, there is now a level of anxiety that is always there."*

Our Team

Our leadership team

Professor Joanne Aitken

Director of Research

Professor Joanne Aitken is Director of Research at Cancer Council Queensland, Director of the Australian Childhood Cancer Registry, a member of Cancer Australia's Advisory Council and President and Chair of the Board of the International Association of Cancer Registries. She is a cancer epidemiologist who is internationally recognized for her work in the epidemiology of skin cancer and cancer in children.

She received her BSc (Honours) from Griffith University, her Science Masters from the Harvard School of Public Health and her PhD from the University of Queensland. She has an Honorary Professorial appointment in the School of Public Health, The University of Queensland, and an Adjunct Professorial appointment at Queensland University of Technology. Professor Aitken has over 325 publications in journals including The Lancet, The Lancet Oncology, and the Journal of Clinical Oncology. Her work has been cited over 16,000 times in the scientific literature.

Professor Peter Baade

Senior Manager, Descriptive Epidemiology

Peter is Senior Manager of Descriptive Epidemiology in the Viertel Cancer Research Centre, with adjunct university appointments at Queensland University of Technology, University of Queensland, and Griffith University. An experienced biostatistician, his primary research interests are to describe the patterns of cancer-related indicators both nationally and internationally, and to better understand why these outcomes depend on where people live, including the role of remoteness, area disadvantage and cultural identity. He is the co-lead investigator on the award-winning Australian Cancer Atlas project. He has published over 290 peer reviewed manuscripts in national and international journals including Lancet Public Health, Journal of Clinical Oncology and CA: Cancer Journal for Clinicians, along with numerous monographs, and has been an investigator on research projects receiving over $14 million in funding. His work has been cited over 31,000 times in the scientific literature.

Associate Professor Belinda Goodwin

Senior Manager, Health Systems and Behavioural Research

Belinda was appointed as a Senior Research Fellow at Cancer Council Queensland in July 2019 and is Senior Manager of Health Systems and Behavioural Research. She was awarded her PhD in 2017 and has a strong research background in psychology and health behaviour. Over the past three years, Belinda has been a member of the USQ/CCQ collaborative research program "Building Regional Resilience in Cancer Control" where she has led several investigations into the barriers and facilitators of colorectal cancer screening and played a key role in projects aimed to improve cancer outcomes in regional and rural Australia. As an early career researcher, she has authored more than 30 peer-reviewed publications yielding over 600 citations.

Adjunct Associate Professor Danny Youlden

Senior Manager, Childhood Cancer Research

Danny is a biostatistician with more than 30 years of experience, mostly working in health-related fields. He has been with the Viertel Cancer Research Centre since 2005. He also holds an adjunct appointment at the Menzies Health Institute Queensland, Griffith University. Danny has a pivotal role in national and international projects to place the Australian Childhood Cancer Registry at the forefront of population-based epidemiological research into childhood cancer, including his involvement in world-leading research to successfully implement data collection protocols used to determine stage at diagnosis and leading a study into producing projections for childhood cancer incidence in Australia for the first time. His other main areas of research interest are the epidemiology of skin cancer and second cancers. He has co-authored more than 80 peer-reviewed papers since joining Cancer Council Queensland and has also been the lead author on several major reports during that time.

Our Team

Our early career researchers and higher degree students 2022

Dr Larry Myers

Dr Larry Myers started his post-doctoral research position in the Health Systems and Behavioural Research team at Cancer Council Queensland in May 2021. Shortly after he was awarded his PhD, which investigated behaviour change interventions to promote participation in population bowel cancer screening programs. Larry has a strong background in health psychology and quantitative data analysis. He is currently applying these skills to develop ways to increase participation in the Australian National Bowel Cancer Screening Program to facilitate early detection. Larry also plays a key role in projects aimed to improve outcomes for cancer survivors living in regional and remote Australia.

Dr Lizzy Johnston

Dr Lizzy Johnston is an Early Career Research Fellow in the Health Systems and Behavioural Research team at Cancer Council Queensland. In this role, Lizzy is working on several projects to support the health and wellbeing of cancer survivors and their caregivers, including those living in rural Queensland. Lizzy is an Accredited Practising Dietitian (APD) and completed her PhD at the Queensland University of Technology and QIMR Berghofer Medical Research Institute. Her doctoral research investigated dietary intake, care, and communication after treatment for ovarian cancer.

Dr Laura Anderson

Dr Laura Anderson is an Early Career Research Fellow in the Health Systems and Behavioural Research Team at Cancer Council Queensland. She has a research background in health psychology and completed her PhD at the University of Queensland. Her PhD research involved understanding sexual behaviours in children and young people to promote sexual health. Laura is interested in applying these skills to promote health behaviour change and cancer risk-prevention. Currently, she is working on improving participation in the National Bowel Cancer Screening Program by identifying potential interventions to increase kit completion and kit return. Interventions will target people's planning and actions to facilitate screening kit return.

Dr James Retell

Dr James Retell is a Data Analyst with the Descriptive Epidemiology team, responsible for the reporting of cancer statistics and managing the Queensland Cancer Statistics Online (QCSOL) resource. He completed his PhD in cognitive neuroscience in 2015 and a Master of Biostatistics in 2021, where he studied delays to breast cancer treatment in Queensland women diagnosed with invasive breast cancer. He is passionate about research and statistics and has applied his expertise across numerous research fields, including population health, health psychology, and cognitive neuroscience.

Dr Kou Kou

Dr Kou Kou completed her PhD in 2019, investigating the burden of oesophageal cancer in Shandong, China. She is currently working as a Senior Research Officer in the Descriptive Epidemiology team. Her principal research interests are geographical and socioeconomic variations in cancer outcomes, survival outcomes of Australians diagnosed with cancer, and outcomes of women diagnosed with breast cancer in Queensland. She has been an author on 16 peer-reviewed published papers with more than 70 citations.

Dr Habtamu Bizuayehu

Dr Habtamu Bizuayehu held the position of project coordinator for the Australian Cancer Atlas within the Descriptive Epidemiology research team in 2022. He managed the Australian Cancer Atlas project and contributed to epidemiological research. He has been awarded a PhD in Public Health and Behavioural Sciences. He has authored and co-authored 25 peer-reviewed publications that have been cited over 4,000 times. He is experienced in large longitudinal data analysis, systematic reviews, causal modelling, and survival analysis. Dr Bizuayehu has international experience, having worked in Ethiopia for over seven years as a researcher and lecturer.

Doctoral students 2022

- James Hogg (PhD, Epidemiology)
- Conor Hassan (PhD, Statistics)
- Ankur Kohar (PhD, Epidemiology)

Masters students 2022

- Yuxin Huang (MPhil)
- John Martin (MBiostatistics)
- Jacinta Merten (MEpidemiology)

Honours and placement students 2022

- Allanah Drummond (Honours, Psychology)
- Jazmin Vicario (Honours, Psychology)
- Thelma Beaujeu (Honours, Psychology)
- Darcy Malady-Meek (Honours, Psychology)
- Ha Nguyen (Placement, Public Health & Social Work)
- Jake Wade (Placement, Public Health & Social Work)
- Sarah Kelly (Placement, Medicine)

Appendices

Publications 2022

1. Anderson LE, Ireland MJ, Myers L, Avenell C, Connaughton T, Goodwin BC. Psychological distress and bowel cancer screening participation. Psycho-Oncology. 2022. doi: 10.1002/pon.6072.
2. Baade PD, Fowler H, Kou K, Dunn J, Chambers SK, Pyke C, Aitken JF. A prognostic survival model for women diagnosed with invasive breast cancer in Queensland, Australia. Breast Cancer Research and Treatment. 2022. doi: 10.1007/s10549-022-06682-5.
3. Cameron JK, Aitken J, Reid A, Mengersen K, Cramb S, Preston P, Armstrong B, Baade P. Geographic distribution of malignant mesothelioma incidence and survival in Australia. Lung Cancer. 2022; 167:17-24.
4. Cramb SM, Whop LJ, Garvey G, Baade PD. Cancer survival differentials for Aboriginal and Torres Strait Islander peoples in Queensland: the impact of remoteness. Cancer Causes Control. 2022. doi: 10.1007/s10552-022-01643-
5. Dasgupta P, Andersson T, Garvey G, Baade P. Quantifying differences in remaining life expectancy after cancer diagnosis, Aboriginal and Torres Strait Islanders and other Australians, 2005-2016. Cancer Epidemiology, Biomarkers & Prevention. 2022; 31:1168-1175.
6. Dasgupta P, Cameron JK, Cramb S, Trevithick R, Aitken JF, Mengersen K, Baade PD. Geographical and spatial disparities in the incidence and survival of rare cancers in Australia. International Journal of Cancer. 2022. doi: 10.1002/ijc.34395.
7. Dasgupta P, Garvey G, Baade PD. Quantifying the number of deaths among Aboriginal and Torres Strait Islander cancer patients that could be avoided by removing survival inequalities, Australia 2005-2016. PLoS One. 2022; 17(8):e0273244.
8. Dasgupta P, Martinez Harris V, Garvey G, Aitken J, Baade P. Factors associated with cancer survival disparities among Aboriginal and Torres Strait Islander peoples compared with other Australians: A systematic review. Frontiers in Oncology. 2022; 12:968400.
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12. Goodwin BC, Myers L, McKenna KN, Anderson LE, Ireland MJ. The role of need for control and self-reliance in gender and age differences in bowel cancer screening participation. Psycho-Oncology. 2022. doi: 10.1002/pon.5979.
13. Goodwin BC, Viljoen B, Myers L, Ireland MJ, Dunn J, Chambers S, Ralph N, Aitken J. Identifying modifiable features of home bowel cancer screening kits to facilitate use: consumer perspectives. Public Health Research and Practice. 2022; 32(4):e32122203.
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15. Jayasinghe D, Koh U, Plasmeijer EI, Menzies SW, Aitken JF, Soyer HP, Janda M, Green AC, Betz-Stablein B. The dynamic nature of naevi in adulthood: prospective population-based study using 3D total body photography (Letter to Editor). British Journal of Dermatology. 2022; 188(3):437-439.
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27. Yu XQ, Dasgupta P, Baade P. Quantifying the absolute number of cancer deaths that would be avoided if cancers were diagnosed prior to progressing to distant metastasis, New South Wales, Australia 1985-2014. International Journal of Cancer. 2022; 150(11):1760-1769.
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Presentations 2022

1. Anderson L. Facilitators for Participation in Mail-Out Bowel Cancer Screening Programs. Poster Session - Basic Science. Clinical Oncology Society of Australia (COSA) Annual Scientific Meeting 2022, 2 - 4 November 2022, Brisbane.
2. Anderson L. Bowel Cancer Screening Participation and Psychological Distress. Oral presentation. The 2nd Early Career Researcher (ECR) Cancer Epidemiology Conference, 15 November 2022, Virtual.
3. Anderson L. Increasing mail-out bowel cancer screening: How to overcome procrastination and forgetting. Poster. Clinical Oncology Society of Australia (COSA) 49th Annual Scientific Meeting, 2 - 4 November 2022, Brisbane.
4. Baade P. Survival disparities experienced by Aboriginal and Torres Strait Islander peoples - Different perspectives but same story. International Association of Cancer Registries (IACR) Virtual Conference, 8 - 10 November 2022, Virtual.
5. Cameron J. Spatio-Temporal Modelling using Cancer Registry Data in Australia. International Association of Cancer Registries (IACR) Virtual Conference, 8 - 10 November 2022, Virtual.
6. Cameron J. Geographic differences in the incidence of malignant mesothelioma in Australia. International Association of Cancer Registries (IACR) Virtual Conference, 8 - 10 November 2022, Virtual.
7. Cramb S, Baade P, Cameron J. Communicating insights from disease maps: innovative visualisations and analyses from the Australian Cancer Atlas. Symposium on Monitoring Health Outcomes using Small Area Estimation, 16 November 2022, Australian National University.
8. Goodwin B. Action Planning Intervention. Invited speaker at research collaboration workshop. BEST Bowel Project, 29 April 2022, Melbourne University.
9. Goodwin B. Rural Transition of Care Project. Spotlight on CCQ (including segment on research). Rural Doctors Association of Queensland (RDAQ) Annual Conference 2022, June 2022, Gladstone.
10. Goodwin B. Consumer co-design of bowel cancer screening promotion videos. Invited speaker at video review research collaboration workshop. SMARTER Screen, 29 July 2022, Zoom (multiple National locations).
11. Hogg J. Risk factors and the Australian Cancer Atlas: the trepidation of instability and sparsity in small area estimation. The 2nd Early Career Researcher (ECR) Cancer Epidemiology Conference, 15 November 2022, Virtual.
12. Hogg J. Risk factors and the Australian Cancer Atlas: the trepidation of instability and sparsity in small area estimation. Symposium on Monitoring Health Outcomes using Small Area Estimation, 16 November 2022, Australian National University.
13. Johnston E. Discussing diet, nutrition, and weight after treatment for gynaecological cancer: A conversation analysis of outpatient consultations. Poster. Clinical Oncology Society of Australia (COSA) 49th Annual Scientific Meeting, 2 - 4 November 2022, Brisbane.
14. Johnston E. Support-seeking by cancer caregivers living in rural Australia. Oral Presentation Clinical Oncology Society of Australia (COSA) 49th Annual Scientific Meeting, 2 - 4 November 2022, Brisbane.
15. Johnston E. Association of protein intake with recurrence and survival following primary treatment of ovarian cancer. The 2nd Early Career Researcher (ECR) Cancer Epidemiology Conference, 15 November 2022, Virtual.
16. Kou K. Severity and risk factors of interval breast cancer in Queensland, Australia: a population-based study. International Association of Cancer Registries (IACR) Virtual Conference, 8 - 10 November 2022, Virtual.
17. Kou K. Severity and risk factors of interval breast cancer in Queensland, Australia: a population-based study. The 2nd Early Career Researcher (ECR) Cancer Epidemiology Conference, 15 November 2022, Virtual.
18. Myers L. Kit Modifications. Invited speaker at research collaboration workshop, 29 April 2022, Melbourne University.
19. Myers L. Understanding the mechanisms underlying the socioeconomic disparities in cancer screening. Screening and SES proposal to PC4. Screening and SES proposal to PC4, 29 April 2022, Zoom (multiple National locations).
20. Myers L. Mapping modifiable cancer risk in Australia. The 2nd Early Career Researcher (ECR) Cancer Epidemiology Conference, 15 November 2022, Virtual.
21. Retell J. Individual and area-level factors associated with the breast cancer diagnostic-treatment interval in Queensland, Australia. International Association of Cancer Registries (IACR) Virtual Conference, 8 - 10 November 2022, Virtual.

Grants 2022

Grants awarded 2022

Aitken J, Goodwin B. Improving the transition from hospital care to home for rural and remote cancer patients. Sylvia and Charles Viertel Charitable Foundation in honour of Daniel Raumer. 2022-2024. $120,000.

Feletto E, Taylor N, Canfell K, Lew J, Trevena L, Durkin S, He E, Goodwin B, Jenkins M, Young J. MAIL, GP, and SCALE: Mobilising national bowel cancer screening Program participation through combining individual, health Service, and population Level interventions. National Health and Medical Research Council (NHMRC) TCR – Participation in Cancer Screening Program Grant (APP2014964). 2022-2024. $1,749,060.

Jenkins, M, Wilson C, Emery J, Jiang J, Chang S, Macrae F, Baxter N, Goodwin B, Feletto E. Tackling Australia's low screening participation to prevent bowel cancer morbidity and deaths. National Health and Medical Research Council (NHMRC) Synergy Grant (APP2010268). 2022-2026. $5,000,000.

Jenkins M, Emery J, Hocking J, Goodwin B, McIntosh J, Chondros P, Wilson C, Macrae F, Lew J, Chang S. SMARTERscreen: A randomised controlled trial of patient SMS messaging in general practice to increase participation in the National Bowel Cancer Screening Program. National Health and Medical Research Council (NHMRC) TCR – Participation in Cancer Screening Programs Grant (APP2014703). 2022-2024. $1,595,839.

Grants ongoing 2022

Cust A, Canfell K, Aitken JF, Guitera P, Aranda S, Watts C, Rankin N, Fernandez Penas P. A national risk-stratified melanoma screening program in Australia: a modelling study of the benefits, harms, cost-effectiveness, and resource implications. National Health and Medical Research Council Project Grant. 2019-2022. $839,350. APP1165936.

Mengersen K, Aitken J, Cramb S, Baade P, Wraith D, Thompson H. Statistical methods for quantifying variation in spatiotemporal areal data. Australian Research Council (ACR) Linkage Project (LP200100468). 2021-2024. $204.153.

Nassar N, Aitken J, Cohn R, Wakefield C, Milne E, Baade P, Bell JC, Dalla-Pozza L, Signorelli C, Moore A. Life and health of childhood cancer survivors. Cancer Australia Priority-driven Collaborative Cancer Research Grant. 2020-2022. $596,000. APP1187545.

Ownsworth T, Chambers SK, Aitken JF, Foote M, Shum D, Gordon L, Pinkham M. Evaluation of a tele-health intervention for delivering psychosocial support to people with brain tumour and their families. National Health and Medical Research Council (NHMRC) Partnership Project Grant (APP1152217). 2018-2022. $376,857.

Soyer HP, Gordon L, Gray L, Aitken JF, Whiteman D, Janda M, Eakin E, Osborne S, Finnane A, Caffery L. Implementation of an innovative tele-dermatology network for the early detection of melanoma in high risk Australians. National Health and Medical Research Council (NHMRC) Partnership Project Grant (APP1153046). 2018-2022. $1,195,648.

Awards 2022

QUT Faculty of Health Executive Dean's Commendation for an Outstanding Doctoral Thesis

Awarded to Dr Elizabeth Johnston for demonstrating an outstanding contribution to knowledge and excellence in higher degree doctoral research practice from the Faculty of Health in 2022.

Thesis title: ***Dietary intake, care, and communication after primary treatment for ovarian cancer***

Best Oral Presentation Award – Cancer Treatment, Survival, and Care

Awarded to Dr Elizabeth Johnston for the best oral presentation in the 'Cancer Treatment, Survival, and Care' session at the Early Career Researcher Cancer Epidemiology Conference.

Best Oral Presentation Award – People's Choice Award

Awarded to Dr Elizabeth Johnston for the best oral presentation at the Early Career Researcher Cancer Epidemiology Conference as voted by conference delegates.

Honourable Mention for Best Student Presentation

Awarded to James Hogg at the Queensland Australian and New Zealand Industrial and Applied Mathematics Conference.

Best Oral Presentation Award

Awarded to James Hogg at the 2nd Early Career Researcher (ECR) Cancer Epidemiology Conference.

Australian Psychological Society Excellent Higher Degree Thesis Award

Awarded to Dr Larry Myers
Thesis title: ***Informing the Development of Interventions Aiming to Increase Participation in Mail-Out Bowel Cancer Screening Programmes***

PC4 Training Award

Awarded to Dr Larry Myers

Professional and community activities 2022

Expert advisory committees, scientific panels, and working group memberships

Local and national

- Australian Institute of Health and Welfare Cancer Monitoring Advisory Group
- Australasian Association of Cancer Registries, Executive Board
- National Adolescent and Young Adult Cancer Staging Working Group, Co-Chair
- Queensland Cooperative Oncology Group, Management Committee
- Queensland Health, Queensland Cancer Control Safety and Quality Partnership
- Queensland University of Technology, Faculty of Health Advisory Committee
- The Kids' Cancer Project, Childhood Cancer Research Steering Group
- Youth Cancer Service, National Adolescents and Young Adult Cancer Dataset Advisory Group, Deputy Chair

International

- International Association of Cancer Registries, President and Chair of Board
- Global Burden of Disease Collaborator Network, University of Washington

Professional memberships

- Australian and New Zealand Urogenital and Prostate (ANZUP) Cancer Trials Group
- Australasian Epidemiological Association
- Australian Statistical Society
- International Society for Bayesian Analysis
- Psycho-oncology Cooperative Research Group (PoCoG)
- Queensland Epidemiology Group
- Statistical Society of Australia

Reviews and editorial activities

Editorial boards and panels

- Annals of Cancer Epidemiology

Reviews for journals

- Acta Oncologica
- Asia-Pacific Journal of Clinical Oncology
- Australian Health Review
- Australian and New Zealand Journal of Public Health
- BMJ Open
- British Journal of Dermatology
- British Medical Journal
- Cancer Biology and Medicine
- Cancer Causes and Control
- Cancer Epidemiology
- Cancer Investigation
- Cancer Medicine
- Cancer Science
- ecancermedicalscience
- European Journal of Cancer Care
- International Journal of Epidemiology
- JNCI Cancer Spectrum
- Journal of Neuro-Oncology
- Journal of Pediatric Hematology and Oncology
- Journal of the European Academy of Dermatology and Venereology
- Journal of the National Cancer Institute
- Medical Journal of Australia
- Paediatric & Perinatal Epidemiology
- Spatial and Spatio-temporal Epidemiology
- The Lancet Respiratory Medicine
- Thorax

Reviews for funding bodies

- Australian Research Council
- Italian Association for Cancer Research
- JGW Patterson Foundation (UK)
- National Health and Medical Research Council
- Swiss National Science Foundation

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