# The Impact of your Support

February 2026

Children's Cancer Institute

# Thank you for your support in 2025

On behalf of everyone at Children's Cancer Institute, and from all the children and families you are helping, thank you so much for your incredible support.

Last year, I was honoured to be appointed the new Executive Director of Children's Cancer Institute, beginning in my new role on 1 December.

Since joining the Institute, I've been struck by the immense generosity of its supporters. People, like you, who understand the vital role of research in achieving  better outcomes for children with cancer.

I'm privileged to follow in the footsteps of Professor Michelle Haber AM, whose leadership and vision have made this Institute a global leader in childhood cancer research. The foundations built over the past 40 years – in partnership with wonderful supporters like you – are extraordinary, and I'm very excited to have the opportunity to build on that.

On taking up this role, I moved with my wife and two daughters to Sydney from the UK — a major undertaking but also the start of a wonderful new adventure!

For the last 17 years, I have led the Paediatric Oncology Experimental Medicine Centre at the Institute of Cancer Research in London, which is internationally renowned for its breakthroughs in first-in-child therapeutics and genomic driven precision medicine, and which hosts several flagship programs including SM Paeds, the UK's equivalent to Australia's Zero Childhood Cancer Program (ZERO).

**"Since joining the Institute, I've been struck by the immense generosity of its supporters. People, like you, who understand the vital role of research in achieving better outcomes for children with cancer."**

**"This is an incredibly exciting time in which cutting-edge research can deliver major advances to the treatment and survival of children with cancer faster and more effectively than ever."**

As a clinician researcher – working both as a paediatric oncologist and a laboratory researcher – I've dedicated my life's work to changing the way that children with cancer are treated. I've been a long term collaborator of Children's Cancer Institute and have always admired its work which has produced clear benefit for children with cancer through the clinical application of scientific discovery over so many years.

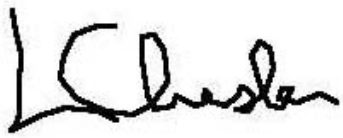
As you read through the pages of this report, you will see some outstanding examples of the Institute's research impact that you have helped make happen. I hope you feel proud of your contribution.

Recently we moved into our new world-class facilities in the Minderoo Children's Comprehensive Cancer Centre (MCCCC). The first of its kind in Australia, we are now side-by-side with our clinicial colleagues at the Kids Cancer Centre at Sydney Children's Hospital, Randwick, who we've collaborated with for the past 40 years.

This is an incredibly exciting time in which cutting-edge research can deliver major advances to the treatment and survival of children with cancer, faster and more effectively than ever.

To be able to lead the Institute into this exciting new chapter is an enormous privilege and I'm so excited about what we can achieve. As we look to capitalise on the opportunities that now stand before us, your continued support will be more critical than ever.

Working together, we can achieve our ultimate goal of curing all children with cancer. As we say at the Institute: it's not if, it's when.



**Professor Louis Chesler**
**Executive Director**
**Children's Cancer Institute**

# 2025 Snapshot

**260**
**researchers**
Including
72 students
48 new researchers

**89**
**scientific publications**
49% with our researchers as first/senior author

**550**
**active collaborators worldwide**
150 new in 2025

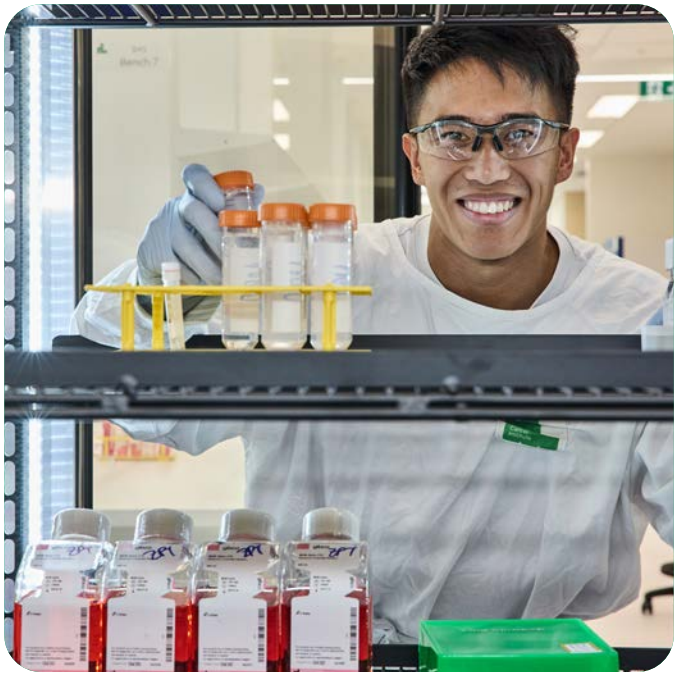
**Our research contributed to over**
**26**
**clinical trials**

**82**
**awards/recognitions**
including
13 new conjoint appointments
10 academic progressions
14 internal research promotions

**855**
**children enrolled on the Zero Childhood Cancer Program**
now over 3000 in total

**$29.37m**
**raised by our amazing supporters**

**$3.23m**
**in Gift in Will legacies**



# Delivering Precision Medicine for Every Child and Young Person with Cancer

**Thanks to your generous support, in partnership with the Australian Government and the Minderoo Foundation, the Zero Childhood Cancer Program (ZERO) - the world-leading national precision medicine platform which we lead in partnership with the Kids Cancer Centre at Sydney Children's Hospital, Randwick - is continuing to transform childhood cancer care in Australia.**

This combined support has effectively established ZERO and precision medicine as standard of care for Australian children with cancer, with over 3,000 children and young people enrolled to date.

In March, the Australian Government made a significant commitment of $112.6 million to support the continuation of ZERO for children aged 0 to 18, and to enable a gradual expansion of the program to young people aged 19 to 25 with paediatric-type cancers, a group with historically poor outcomes. This expansion is expected to support an additional 300 young Australians with cancer each year, bringing the total number of children and young people who will have access to ZERO's comprehensive precision medicine program every year to approximately 1,300.

This investment marks an important step forward, strengthening the foundations of ZERO and helping extend its reach, with the aim to now take the necessary steps to embed this world-leading program into the Australian health system as a permanent, clinically accredited platform.

**It is this ongoing partnership with supporters like you that allows the program to grow, evolve and respond as new discoveries are made. As we continue to develop new tools and make breakthroughs in the lab, these advances will be incorporated into ZERO, delivering new capabilities into the health system for the benefit of all children with cancer.**

## A Powerful New Tool Advancing Personalised Cancer Care

One example of this is an innovative new tool developed by our researchers that allows for new 3D bioprinted tumour models to rapidly identify the most effective treatments for each child with a solid tumour. Published in the journal *EMBO Molecular Systems Biology* - these advanced new models of children's tumours or "tumouroids" retain the characteristics of the original cancer and can be grown rapidly in the lab.

Led by Professor Maria Kavallaris AM, this approach overcomes major barriers seen in traditional models - including insufficient tumour material and months-long development times - by using 3D bioprinting combined with a specialised hydrogel environment. Tumouroids generated from cancers such as neuroblastoma and sarcoma can now be produced in days, enabling researchers to test drug sensitivities quickly and reliably.

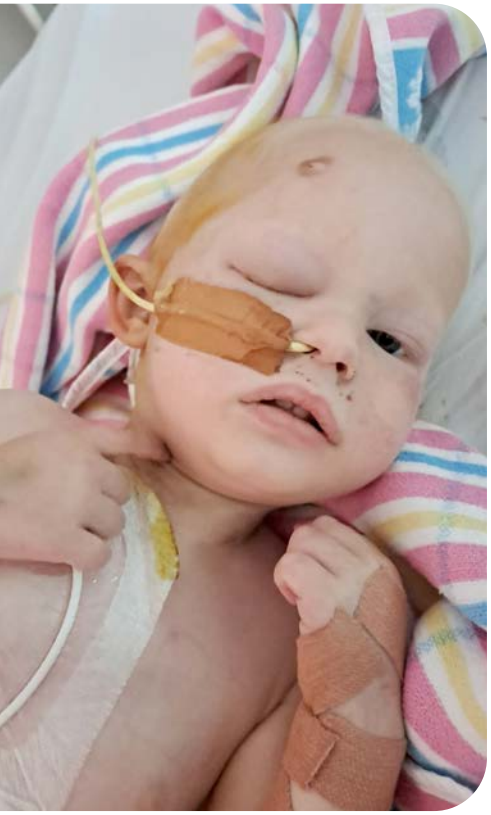
"The technology we've developed is a major advance because it allows us to rapidly grow tumours - including cancers that have been very difficult to grow in the lab in the past - that maintain the features of the original sample, meaning that they are truly representative of the patient's tumour. This allows us to test for drug sensitivities not only quickly, but with confidence that the results are relevant," said Professor Kavallaris.

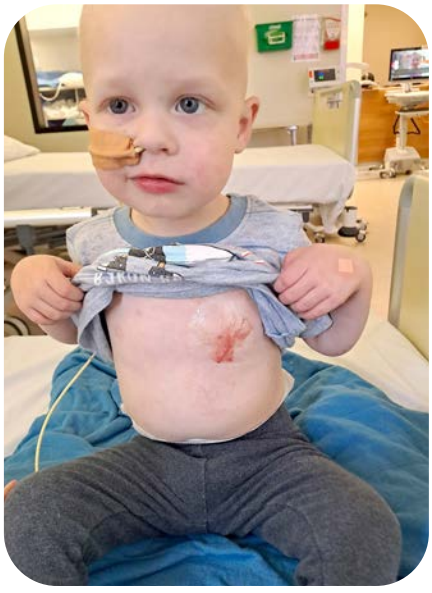
Critically, this technology has been shown to work smoothly with ZERO's high-throughput drug screening platform, meaning it can be integrated into existing precision oncology workflows to better identify the most effective therapies for individual patients.

**Your support fuels innovation: by enabling fundamental research into tools like tumouroids, we can shorten the time from lab discovery to tangible clinical impact, helping ensure more children get the right treatment, at the right time.**

**CLICK HERE TO WATCH THE VIDEO & FIND OUT MORE ABOUT THIS EXCITING RESEARCH**

# Ryder’s story





**Ryder was 10 months old and just learning to crawl. His mum, Kelly, was about to go back to work having been on maternity leave, while dad, Alan, was working full-time. Big sister Charlise (Charlie) was three.**

‘We were a happy little family, and Ryder was just a little baby starting to know what life is,’ says Kelly.

First, he just seemed a bit unwell and developed a bit of a cough. Then, he developed facial palsy on one side of his face. One eye didn’t close when he cried, which his parents thought a bit strange.

‘We took some videos of when he was crying to show the doctor. And he was like, that’s not normal, go to Wollongong Hospital and make sure you don’t leave without a scan.’

From there, things started to happen very quickly.

‘Ryder’s face really dropped, and he had no movement on one side of his face. I was really worried because my sister Lisa had a brain tumour as a child. She was diagnosed at two and passed away when she was 7 and I was 10.’

‘I always had in the back of my mind that one of my kids might develop a tumour like my sister did. So I was like: Oh no, it’s happening.’

Ryder had an MRI scan and was admitted to hospital. Late the next night, a doctor came to see Kelly and told her the news that it was a brain tumour. The next day, they were transferred to Sydney Children’s Hospital and Ryder was put in the neurosurgery ward, under the care of Dr Marion Mateos.

Ryder had brain surgery to investigate the condition of his tumour. Unfortunately, it was found to be growing amongst vital nerves and close to the brainstem, so could not be safely removed.

A biopsy was taken and a sample sent for analysis by the Zero Childhood Cancer Program (ZERO) team.

As a result of the surgery, Ryder experienced vocal cord palsy, meaning that he couldn’t swallow properly and had to have a nasogastric tube put in.

‘He was one hundred percent tube fed for about two years,’ says Kelly. ‘Afterwards, he just didn’t know how to swallow. A dietician had to teach him how to eat food.’

When the results of the ZERO testing came in, Kelly and Allen were told Ryder had a rare, fast-growing cancer known as atypical teratoid/rhabdoid tumour (ATRT).

The testing also showed that Ryder had a genetic mutation inherited through the family which is known to cause ATRT. As a result, older sister Charlie needed to be tested to find out if she also carried the same genetic mutation. Much to their relief, she did not.

Ryder began intensive chemotherapy, which Kelly describes as 'brutal.'

Ryder also received radiation therapy under general anaesthetic five days a week for six weeks - treatment that Kelly says the radiation oncologist was not keen on because Ryder was so young (14 months).

'They didn't really want to do it, but basically, we had no other option.'

During this time, Ryder's dad Alan and sister Charlie stayed at Ronald McDonald House, with Kelly and Ryder joining them on weekends when Ryder's health allowed it.

Thankfully, every scan showed that Ryder's tumour was responding well to treatment. In February 2023, Ryder had 'second look surgery' to try to remove what was left of his tumour. The surgery was a success, revealing that the tumour was all dead, and able to be removed.

Chemotherapy continued until August, then, after a break, Ryder was started on a trial drug called Tazometastat for 12 months - a targeted therapy also identified by ZERO, given to prevent the tumour from growing back.

Today, at four years old, Ryder is full of energy and making up for lost time.

There are no signs of facial palsy or any other treatment related damage. Every three months, he has his kidneys scanned to check for potential side effects, and will continue to have this until he's 5 years old as there is a chance that tumours can grow in his kidneys as well.

'He's a very happy kid,' says Kelly. 'I think we can all learn something from him.'

**CLICK HERE TO WATCH RYDER'S VIDEO**

# Hope for Children with Neuroblastoma: The Path to Better Treatments

**Children's Cancer Institute researchers are advancing transformative new strategies against neuroblastoma - a devastating childhood cancer that remains difficult to treat, especially in high-risk cases.**

A major breakthrough from our Experimental Therapeutics & Molecular Oncology Group shows that restricting neuroblastoma's access to the essential amino acid arginine can significantly disrupt tumour growth and enhance response to existing therapies.

Neuroblastoma cells are unable to make arginine themselves and rely on circulating sources for survival. By using an enzyme called arginase to lower arginine levels, researchers observed profound tumour suppression in laboratory and specialised mouse models. Importantly, when combined with standard chemotherapy and immunotherapy, this approach not only slowed cancer progression but also extended survival without added toxicity.

"Excitingly, we found that if we lowered arginine levels in mice with high-risk neuroblastoma, this substantially extended their survival," commented Associate Professor Jamie Fletcher, co-lead of the study. "It also improved their responses to standard chemotherapy and immunotherapy, with no increased toxicity."

**With your support, these promising preclinical results could pave the way toward future clinical trials that could improve outcomes for children with aggressive neuroblastoma, which currently has a survival rate of around 50%.**

# Asher's Story: Courage, Heartbreak and the Need for Better Treatments

**Asher was a vibrant toddler whose life was turned upside down when, at just two and a half years old, he was diagnosed with Stage 4 neuroblastoma - an aggressive childhood cancer.**

What followed was nearly two years of relentless treatment filled with gruelling chemotherapy, major surgery, a bone marrow transplant and rounds of radiation and immunotherapy, as his devoted parents navigated the reality of hospital wards, separation from family, and devastating side effects.

Despite brave responses to initial treatment and facing life-threatening complications - including a rare post-transplant condition that nearly took his life - Asher's cancer ultimately did not respond to available therapies. As his family made the heart-wrenching transition to palliative care, they were reminded that for too many children like Asher, current treatment options are not enough.

Asher passed away at four and a half years old, leaving behind the profound impact of his courage, compassion and resilience. His mum Stacey reflects on the "horrific" intensity of his journey and urges greater awareness of what children endure - and why research is so vital. She is now a passionate advocate for advancing science so that future children do not face the same limitations in treatment options that her son did.

"He only lived for four and a half years, but he taught us a lot of stuff, especially in those last few weeks. About true courage and true determination. It really shone through him, which is very inspiring," says Stacey.

"I don't think people realise what these kids go through, how horrific it is. It's hard for people to hear how horrendous it was, but that's childhood cancer. We need research."

**There is an urgent need for new, more effective and less toxic therapies for high-risk neuroblastoma. Your continued support is helping us pioneer research to find these answers.**

# Matty's Hope: From a Family's Loss to a Beacon for Research

**When Matthew "Matty" Lam was diagnosed with Diffuse Hemispheric Glioma, H3 G34-mutant - a rare and aggressive brain cancer - in late 2021, his life and that of his family changed forever.**

Matty was just 19, full of life and surrounded by love. Despite receiving the best possible care, his diagnosis revealed the devastating truth - this rare childhood brain cancer was barely understood, and no targeted therapies existed.

Matty faced treatment with extraordinary courage - enduring radiation, chemotherapy and intense physical struggles - yet the disease continued to progress. On 29 July 2022, surrounded by his family, he passed away, just five months short of his 21st birthday. His loss was felt deeply by all who knew him and highlighted the urgent gaps in knowledge and treatment for rare childhood cancers like G34-DHG.

Rather than let his story end there, Matty's family and community turned grief into purpose. They partnered with Children's Cancer Institute to launch Matty's Hope - the first dedicated Australian research project focused on this rare brain tumour.

"During Matt's brain cancer journey, we searched endlessly for answers. We scoured the internet and consulted oncologist friends, only to discover that brain cancer is a minefield and still very much a mystery," says Matty's family. "To this day, we know very little about the brain cancer Matt had. We only know that it is extremely rare, highly aggressive and predominantly affects children."

The response has been extraordinary, far surpassing all expectations. Support has flowed in from Matt's sports clubs and school, as well as community organisations and individuals, many of whom never met Matt but were deeply moved by his story. Driving them all was a shared belief that research will change the future and offer hope through discovery.

This collective support is already making a real difference. Funds raised have enabled Dr Kenny Ip (pictured, right), who leads the Matty's Hope research project within the Institute's Brain Tumour Group, to advance vital work uncovering the mechanisms driving G34 brain cancer and to explore therapeutic avenues that were previously out of reach.

One part of this multi-pronged research project aims to accelerate scientific understanding of G34-DHG by testing thousands of compounds through the Institute's Drug Discovery Centre and identifying new molecular targets that could lead to effective therapies. However, a key challenge in brain cancer treatment is the blood-brain barrier, which prevents most drugs from reaching tumours.

Using artificial intelligence, researchers are now able to rapidly analyse thousands of data points to determine which drugs can and cannot cross the blood-brain barrier. This ensures the research stays hyper-targeted, progressing only with compounds that have the potential to reach the tumour and deliver real impact, specifically against the H3 G34-mutant.

"We have identified more than 200 compounds that can kill G34-mutant tumour cells. There is now real hope that we could find a cure for this currently incurable disease," says Dr Kenny Ip.

**Matty's legacy - his spirit, kindness, and determination - now lives on through a research effort that is bringing light to an area where very little was previously known, offering hope to other young people and families facing similarly devastating diagnoses and made possible by the generosity of donors whose continued support ensures this vital research can thrive and Matty's legacy endures.**

**CLICK HERE TO VIEW A VIDEO UPDATE ON MATTY'S HOPE**

# Hope for Children with Deadly Brain Cancers

**For children diagnosed with diffuse midline glioma (DMG) - including the incurable brain cancer DIPG – there is a desperate need for new therapeutic strategies. Average survival is just 12 months, and for decades, families have been told there are no effective treatment options. Changing this reality requires bold, sustained research - and it is your support that makes this possible.**

Thanks to you, our researchers have achieved a major breakthrough by developing a new dual-therapy strategy for the treatment of DMG. Published in the international journal Science Translational Medicine, this research shows that combining two next-generation targeted therapies is likely to be far more effective against this deadly brain cancer than either therapy used on its own.

Led by Professor David Ziegler and Associate Professor Maria Tsoli, the research tackles one of the greatest challenges posed by DMG: how to 'switch off' all the genes that drive the uncontrolled growth of this cancer.

By targeting two critical proteins involved in gene activation, our researchers were able to simultaneously switch off thousands of these cancer-driving genes. In our laboratory studies, this approach not only killed tumours but also significantly extended survival in mice.

Crucially, research also revealed something equally exciting: the combined treatment worked to 'unmask' cancer cells, exposing them to the immune system. This opens the door to future combination approaches that could include immunotherapy - offering new hope where none previously existed.

Because this work builds on drugs currently in clinical development - including one already proven safe in children - it creates a clear and accelerated pathway toward clinical trials. Further research is now underway to refine the combination and move closer to testing it in children with DMG.

**Your support is helping turn scientific insight into real hope for children facing the most aggressive brain cancers.**

# A Legacy That Will Change the Future for Children with Cancer

**Dorothy lived a life shaped by resilience, independence and a deep belief in community. She valued knowledge, generosity and compassion - and believed every child deserves the chance to grow up and grow old. Although she had no children of her own, the illness and loss of a neighbour's infant profoundly affected her and helped shape her determination to support children facing serious medical challenges.**

In honour of this belief, Dorothy made an extraordinary decision to leave the bulk of her estate - a gift of over $1 million - to Children's Cancer Institute. This transformational gift will have a lasting impact on research dedicated to curing childhood cancer.

Dorothy's gift strengthens our mission to cure every child of cancer by entrusting the Institute to invest her legacy where it is needed most, enabling our scientists to pursue innovative, translational research that accelerates discoveries from the laboratory to the clinic and helps develop safer, more effective treatments with fewer side effects.

While survival rates have improved, childhood cancer remains the leading cause of disease-related death in Australian children. Three children still lose their lives every week. Gifts like Dorothy's ensure that research does not slow, and that scientists can continue pushing toward the day when that number is zero.

Dorothy lived simply and gave deeply. Her generosity now lives on in the work of researchers striving to change outcomes for children with cancer. Her legacy is more than a donation - it is an enduring investment in hope, progress and a future where every child has the chance to grow up and grow old.

**CLICK HERE TO LEARN HOW LEGACY GIFTS SUPPORT CHILDREN WITH CANCER**

Children's Cancer Institute

# Together we will cure every child of cancer. It's not if, it's when.


**Contact us to find out more:**

info@ccia.org.au

1800 685 686

ccia.org.au