



FINDING CURES. HEALING KIDS.

**GARRON FAMILY
CANCER CENTRE**
2020 IMPACT REPORT



A LEADING EXPERT PULLS UP A CHAIR

Dr. Cynthia Hawkins, new Garron Family Chair in Childhood Cancer Research, takes on brain cancer.

THE MOST DEVASTATING childhood brain cancer is known as diffuse intrinsic pontine glioma (DIPG) Located in the brain stem, the deadly tumour is inoperable and incurable, despite decades of research. Labs at SickKids are bustling with researchers working tirelessly on new discoveries to change this. Dr. Cynthia Hawkins, senior scientist, neuropathologist and newly appointed Garron Family Chair in Cancer Research at SickKids, is a shining star in the field. In fact, her lab was the first to identify a recurring mutation in the DIPG tumour that has helped form the bricks and mortar of our collective biological understanding of the disease. Her research continues to be both an anchor and a springboard for much of the work being done in DIPG at SickKids and around the world.

With your support, Dr. Hawkins has been able to explore single-cell sequencing of DIPGs, learning not only about the characteristics of individual tumour cells, but also what roles normal cells around them play in the progression of DIPG. “We’re doing this because we need to build a multi-pronged approach. Figuring out how can we stop the cancer cells from dividing and how to keep them from spreading – then we can really take advantage of novel treatments and move the bar on survival for these kids.”

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Dr. Cynthia Hawkins

Dr. Hawkins continues to model and analyze different molecular pathways that are responsible for DIPG and test their response to combinations of targeted drugs.

On the clinical front, Dr. Hawkins is laser-focused on the safe but swift movement of breakthrough research from the lab into clinical testing. This includes the incredible SickKids discoveries into medulloblastoma – the most common type of malignant brain tumour in children – that were made in the lab of Dr. Michael Taylor, neurosurgeon, senior scientist and fellow Garron Family Chair in Cancer Research at SickKids. Dr. Taylor’s lab discovered 12 different subtypes of the tumour - “the dirty dozen,” researchers call it. Now, doctors can identify and develop therapies for these specific subtypes instead of a treating them all in the same way. Dr. Hawkins knew what a profound discovery this was, and she was instrumental in moving it into the clinic – and fast. This collaborative work marked a significant step forward in personalized treatment for brain tumours and serves as an example of what we can accomplish when we work together.

Dr. Hawkins is an incredible addition to a leading team of expert researchers at the GFCC. We look forward to reporting on the advancements she continues to make to save kids with cancer.



TREATING SURVIVORS

Today, more children with cancer are expected to survive. However, research from a recent study at SickKids demonstrates that many childhood cancer survivors will develop some kind of late effects of their cancer or its treatment—including increased risk of heart problems, mental health concerns, and new cancers. “Survivorship is an integral part of paediatric oncology. There can be significant long-term consequences of chemotherapy, radiation and other cancer treatments. It’s important to provide life-long individualized care for treatment effects,” says Dr. Paul Nathan, Director of the AfterCare Program and Oncologist at the GFCC. The SickKids AfterCare Program provides survivors of childhood cancer with so many critical services, including surveillance for specific late effects, health promotion opportunities, as well as school and psychosocial support.

FROM FEAR TO HOPE

The first Social Work Fellow in Oncology makes a lasting impact on patients and their families.

FROM A CANCER diagnosis through to treatment and all the way to recovery, Shawna Markowitz, Social Worker and Fellow in Oncology at the GFCC, is there for the whole family. “I help families shift from a place of immobilizing fear to hope. I work with them to soften the psychosocial impact of their illness. Being a social worker is about encouraging and empowering patients and families to find the strength to cope with cancer,” Shawna explains. Shawna teaches them coping skills, explains new and sometimes complicated information, helps them access community resources, and is often also a shoulder to cry on.

Her work is integrated into part of a wider team—collaborating with departments across the hospital—like psychology, psychiatry, and Child Life Services, to provide the most holistic care possible.

Shawna also develops, organizes and runs educational sessions and workshops to support the needs of patient siblings, ages six to 18. With COVID-19 protocols now in place, these 90-minute sessions will be hosted online.

1400+
CHILDREN ARE DIAGNOSED
WITH CANCER EACH YEAR
IN CANADA. EVERY ONE OF
THEM NEEDS MEDICAL AND
PSYCHOSOCIAL SUPPORT.

Shawna’s fellowship position, supported with donor dollars, has been critical to the health and well-being of patients and families. So much so, that the position has now become permanent. Thanks to philanthropy, we can continue to focus not only on cures, but on healing the whole child.

MEET ETHAN

**His treatment was killing him.
So the GFCC found another way.**

ON THE DAY before Christmas, Ethan woke up too weak to get out of bed. Just a few weeks prior, he had found a lump in his groin. Initial tests were inconclusive, but on this cold morning in December, it was clear that something was very wrong.

Ethan was rushed to SickKids where a diagnosis was confirmed: high risk acute lymphoblastic leukemia—ALL. He started chemo immediately for what would likely be a three-year treatment journey. But Ethan suffered setbacks. He had several seizures, and in March of 2020, a reaction to the chemo drugs led to pancreatitis, landing him in the ICU. Ethan recovered, but he needed a break from chemo so he could regain his strength.

In the meantime, Ethan's dedicated SickKids team got him on an experimental immunotherapy drug to help fight the disease. The medication is less toxic than conventional chemo and often highly effective. Ethan could also receive it by infusion, while at home, wearing a special backpack. He could be treated comfortably under the same roof as his family—even do some activities he used to enjoy.

In September of 2020, Ethan began his final cycle of the medication. "The nurses and Child Life Specialists are so helpful and warm. They try to keep me engaged and optimistic", Ethan says. He'll resume a new chemo protocol soon, now stronger and healthier. With his whole team watching and cheering, Ethan is on his way towards recovery.

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- ETHAN



CANCER IN THE TIME OF COVID

Adapting to change amidst a global pandemic

Getting treatment for a life-threatening disease is not elective. It's essential. In the wake of COVID-19, the entire GFCC team has adapted quickly, pivoting quickly to face challenges head on and opening doors to opportunities for patients and families through a more robust model of virtual care. Although in-person care is still necessary in many cases, better virtual cancer care has helped reduce the frequency of hospital visits and travel time, as well as the financial impact of childcare on the family, especially for those living remotely. "We've been able to reduce the burden of care without affecting the quality of care", says Dr. Jim Whitlock, Director of the Garron Family Cancer Centre at SickKids. The GFCC will continue to build upon this platform to meet the needs of all of our patients so they can get the care they need, when they need it, and no matter where they are.

HYPERMUTANT TUMOURS

Discover how SickKids doctors cure a deadly and aggressive cancer predisposition syndrome by unleashing the power of the immune system. Visit www.sickkidsfoundation.com/podcast, Apple Podcasts, Google Podcasts or Spotify to listen and subscribe to the SickKids VS Podcast for more incredible stories.



A VIRTUAL PATHOLOGY NETWORK IMPROVES DIAGNOSIS

SickKids is helping to diagnose hundred of cancer cases nationwide

THE TERRIBLE news of a cancer diagnosis is often communicated by an oncologist, but it's made by a pathologist. Pathology, the study of disease, is the bridge between symptoms and clinical care, and underpins every aspect of the patient experience, from cutting-edge diagnostic testing to treatment plans. "We have to get it right from the start. A cancer patient's journey to recovery depends on the diagnosis," says Dr. Gino Somers, Paediatric Pathologist and Head of the Division of Pathology at SickKids.

SickKids has one of the largest and most specialized pathology departments in the country. From the 1400 cases of childhood and adolescent cancer diagnosed in Canada every year, the department receives hundreds of second-opinion consultations from health providers across the country, most of whom are trying to confirm a difficult diagnosis. Current methods to accomplish this are slow

and cumbersome. "Glass slides are couriered from across Canada. Sometimes they come to us broken. It all takes too long. We need a better process to provide the care we're capable of on a national scale," says Dr. Somers. And so, in partnership with seven other Canadian paediatric health care institutions, the Canadian Pediatric Digital Pathology Network at SickKids was born. High-resolution slides are now digitized using a scanner, and results are read and analyzed by expert pathologists in real-time using the most novel techniques available and accessible at SickKids. Slides are also being stored in a digital archive to help residents and fellows develop better expertise.

Thanks to the inspiring support of generous donors, this program can continue to grow and evolve, smoothing the journey from diagnosis to treatment, with the hope of better outcomes for Canadian kids with cancer.

THANK YOU.

Every day, SickKids is working towards improving the lives of children, and our success depends on the support of donors like you. Your commitment to the GFCC at SickKids ensures that we can continue to offer the best possible health outcomes for children so they can live longer and healthier lives. Thank you for your remarkable generosity.



For more information, please contact:

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