Canadian Cancer Society

Challenge Grants 2026 (CHA-26)
Grant Recipients

Stephane Angers
University of Toronto

$525,000
2026-2029

Blocking treatment resistance in glioblastoma brain tumours

Problem: Glioblastoma is a common brain tumour with a low survival rate. These tumours contain many different cell types and genetic mutations – and even switch between different cell states during treatment to avoid destruction. Without knowing which genes are involved and how, it's hard to understand how glioblastoma resists specific treatments and whether this cell switching can be blocked to prevent treatment resistance.

Solution: Dr Stephane Angers and his team are using genome editing technology to find out which genes control the cell switching process in glioblastoma. They are also studying how glioblastoma treatment affects the cells' states and ability to switch between states. With this knowledge, they aim to enable treatment strategies that can stop glioblastoma cell switching, making the tumours more vulnerable to treatment.

Impact: Right now, there is no cure for glioblastoma and less than 5% of people survive longer than 5 years after diagnosis. By uncovering how glioblastoma resists treatment, Dr Angers and his team hope to find ways of overcoming this resistance, making treatment more effective for people with these brain tumours.

Why is this project important and what does this funding mean to you?
"Glioblastoma is exceptionally difficult to treat because its cells can adapt and change in response to therapy. This funding will allow us to uncover the genes that enable that flexibility and identify ways to block it. Our goal is to make glioblastoma cells less able to escape treatment – and ultimately give patients more effective and durable treatment options."

Houda Bahig **$525,000**
Centre de recherche du CHUM **2026-2029**

Shorter radiation treatments to lessen long-term side effects

Problem: Human papillomavirus (HPV)-related throat cancer is one of the fastest-growing cancers in Canada. It often affects younger, otherwise healthy people who live for many years after treatment. The current treatment – 7 weeks of radiation therapy – works well, but it can cause long-term side effects like difficulty swallowing, dry mouth or changes in taste, which can affect people's lives long after treatment ends.

Solution: A shorter course of radiation therapy would likely lead to fewer long-term side effects. Dr Houda Bahig and her team are trialing a specialized 4-week treatment that delivers a precise dose of radiation to the tumour while giving healthy surrounding tissues as little radiation exposure as possible. They will compare treatment success, side effects and other factors like cost and travel time.

Impact: Early results suggest that the new treatment works well and may cause less difficulty swallowing than the standard treatment. If successful, it could offer a safer, shorter, more patient-centred treatment that works equally well, increases access to care and improves quality of life for people with these cancers.

Why is this project important and what does this funding mean to you?
"This funding gives us the opportunity to test a treatment that could be just as effective, but shorter and easier on patients. Our goal is to reduce the long-term impact of treatment while making high-quality cancer care more accessible and less disruptive to people's lives."

Mathieos Belayneh **$525,000**
BC Cancer, part of the Provincial Health Services Authority **2026-2029**

Reducing nerve pain for people living with and beyond cancer

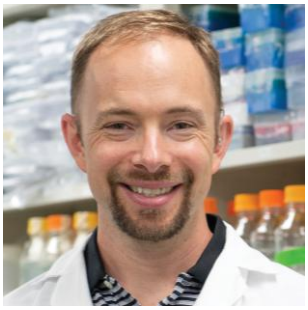
Problem: Up to 70% of people receiving chemotherapy develop long-term, painful nerve damage that affects the hands, feet, arms and legs, reducing mobility and quality of life. Methadone may be more effective for nerve pain than other opioids and may carry a lower risk of dependence, but it has not been well studied for this condition.

Solution: Dr Mathieos Belayneh and his team will run a clinical trial comparing methadone with the current standard treatment, duloxetine, to determine which drug better reduces chemotherapy-related nerve pain. They will also study methadone's effects on mobility, quality of life and long-term dependence.

Impact: This research could lead to more effective pain management after chemotherapy, improving mobility and quality of life for people living with and beyond cancer.

Why is this project important and what does this funding mean to you?
"In clinic, we see many patients who made it through chemotherapy only to be left with pain and numbness in their hands and feet that never really goes away. It can make it difficult to walk, sleep, work and enjoy everyday life. Many try several pain medications without meaningful relief simply because nothing better has been properly tested. This grant allows us to properly evaluate one promising medication at a national scale with the goal of improving quality of life for people living with and beyond cancer."

Shawn Beug **$525,000**
Children's Hospital of Eastern Ontario Research Institute Inc. **2026-2029**



Safer, more effective treatment for children with brain tumours

Problem: For children with brain tumours called high-grade gliomas, treatment rarely cures the cancer and can have serious long-term health effects. Immunotherapy often doesn't work because these tumours tend to have varied characteristics that make them hard to target. The tumours can also suppress the immune system, preventing it from attacking the cancer.

Solution: A treatment called tumour-infiltrating lymphocyte (TIL) therapy uses a person's own tumour-fighting T cells – but it can be hard to generate enough of these cells or get them to target the tumour strongly enough. Dr Shawn Beug and his team are exploring drugs that can make tumours more susceptible to TIL therapy while also strengthening the immune system's anti-cancer activity.

Impact: Using these drugs, the researchers aim to make TIL cells that work more effectively against cancer. By improving TILs and making tumours more vulnerable to attack, the drugs could offer a new combination treatment option that saves lives and reduces long-term health problems for children with high-grade gliomas.

Why is this project important and what does this funding mean to you?
"For our team, this funding means momentum. It allows us to pursue a treatment strategy that could help the immune system fight pediatric brain tumors more effectively while keeping our focus on what families need most: better chances of survival, fewer long-term side effects and treatments that can eventually become more accessible."

David Busolo **$525,000**
University of New Brunswick **2026-2029**

Helping Arabic-speaking refugee women access breast cancer screening

Problem: Detecting breast cancer early is essential in saving lives and improving outcomes. However, Arabic-speaking immigrant and refugee women in Canada may find it hard to access screening. Language, culture, social factors and other systemic issues can create barriers that delay screening and affect their cancer experience.

Solution: Dr David Busolo and his team are implementing a community-led navigation program to change the way Arabic-speaking refugee women access screening in New Brunswick. The team will work with Arabic-speaking navigators, local settlement agencies and health services to help refugee women get mammograms.

Impact: This research will lead to better health literacy, trust in cancer screening services and mammogram participation among Arabic-speaking refugee women in New Brunswick. By providing a culturally responsive framework for navigating breast cancer care in Canada, it will also help policymakers and healthcare professionals reduce inequity and improve outcomes for people with breast cancer.

Why is this project important and what does this funding mean to you?
"This funding allows us to move beyond describing the barriers Arabic-speaking refugee women face and begin changing the systems that create them. By working alongside women, communities, settlement organizations and healthcare services, we hope to make breast cancer screening easier to understand, trust and access. Our goal is to ensure that every woman feels heard, respected and supported as she makes decisions about her health."

Kristin Campbell
University of British Columbia
Lauren Capozzi
BC Cancer - Kelowna

$525,000
2026-2029

Implementing exercise programs to improve cancer outcomes

Problem: A recent clinical trial showed that adding a structured exercise program to treatment for colon cancer reduced recurrence rates by 28% and increased survival by 37%. Although the trial was successful, structured exercise programs are not yet a part of standard cancer care – so most people with colon cancer don't get access to them.

Solution: Working with clinicians, people with lived experience and other partners, Dr Kristin Campbell and Dr Lauren Capozzi are creating a practical plan to bring structured exercise programs into cancer treatment clinics worldwide. They will test the plan at BC Cancer Kelowna and monitor its success. Finally, they will develop a national policy and advocacy strategy to support the program's adoption across Canada.

Impact: This work will create a blueprint that all clinics can use to guide them indelivering structured exercise programs, then test its effectiveness at a single site before launching in additional clinics. Ultimately, the goal is to offer all people with colon cancer in Canada access to structured exercise as part of their care – increasing survival, reducing recurrence risk and improving health and quality of life.

How has working directly with people who have lived or living experience of cancer shaped your understanding of the issue or question you are addressing?
"I see every day in my clinic people living with colon cancer who have heard about the Challenge Trial results but are unsure of how to get started and what types of exercise to do. This project will solve this problem by supporting patients right from clinic into an evidence-based structured exercise and behaviour change program – what we now know can improve survival, function and quality of life."

Dr Lauren Capozzi
Cancer Physiatrist and Provincial Medical Director
BC Cancer - Kelowna

Hallie Coltin
CHU Sainte-Justine Research Centre
Leandra Desjardins
CHU Sainte-Justine Research Centre

$522,150
2026-2029

Supporting mental health in fathers of children with cancer

Problem: A childhood cancer diagnosis affects the whole family. Fathers face significant stress and uncertainty after a child is diagnosed with cancer – but very little research has been done on their mental health. As a result, they may suffer in silence and there is a gap in psychosocial services to meet their specific needs.

Solution: Dr Hallie Coltin and Dr Leandra Desjardins are studying fathers' mental health after a child's cancer diagnosis. First, they will look at data from almost 10,000 fathers of children with cancer to find out whether they experience severe mental health issues more frequently than other fathers. Second, they will survey fathers of children with cancer about their symptoms of depression, anxiety, post-traumatic stress, substance abuse or anger. These studies will shed light on the experiences of fathers whose children are diagnosed with cancer and what risk factors predict mental health outcomes.

Impact: The results of this project will fill a major knowledge gap and highlight where support for fathers is most urgently needed. By identifying the specific challenges fathers of children with cancer face and the circumstances that contribute to their vulnerability, the research will shape more effective, father-oriented mental health services.

Why is this project important and what does this funding mean to you?
"We are so grateful to the Canadian Cancer Society for hearing the need to better understand and support mental health in fathers of children diagnosed with cancer. This recognition is important to fathers and families of children diagnosed with cancer across Canada and towards a future of better and more equitable psychosocial care."

Dr Leandra Desjardins
Full Scientist and Assistant Professor
CHU Sainte-Justine Research Centre and Université de Montréal

Clark Dickerson
University of Waterloo

$486,233
2026-2029

Pinpointing the cause of shoulder problems after breast cancer treatment

Problem: Many people who receive radiotherapy for breast cancer experience lasting physical side effects including pain, weakness and limited arm movement. Without treatment, mild discomfort can worsen over time, leading to shoulder limitations that can make everyday tasks difficult.

Solution: Dr Clark Dickerson and his team are collaborating with Dr Ramana Rachakonda to study whether exposing shoulder muscles to radiation during treatment leads to these problems. This is the first study to compare physical outcomes between people receiving breast and lymph node radiation and those receiving only breast radiation. The collaborative multicentre research team will follow people during treatment and for 2 years after to measure mobility, strength and quality of life.

Impact: This project will identify the cause of shoulder limitations, enabling earlier detection and better prevention strategies. Ultimately, it will improve long-term recovery, reduce pain and enhance quality of life for people living beyond breast cancer.

Why is this project important and what does this funding mean to you?
"I am very excited for this funding, which will allow us to determine the cause of limitations in arm movement in some people following lymph node radiation treatment. This research will lead to a better understanding of when and why the limitations are occurring and which people are at risk of these limitations. Furthermore, it will help us to understand potential radiation dose tolerances to these structures and thus work to minimize the dose to the muscles to reduce the risk of these limitations. Additionally, it will allow us to understand when to refer these people to rehabilitation specialists or exercise programs"

Dr Ramana Rachakonda, project knowledge-user
Radiation Oncologist
Waterloo Regional Health Network (WRHN) Cancer Centre

Sean Egan **$524,343**
The Hospital for Sick Children **2026-2029**

Paving the way to better treatment for lobular breast cancer

Problem: About 10–15% of all breast tumours are called lobular breast cancer. Most lobular breast cancers respond well to hormone treatment, but it's common for these tumours to recur. More effective therapies are needed to prevent lobular breast cancer from returning and to treat recurrences when they arise.

Solution: Before new cancer treatments are trialed in humans, they are first tested in the lab to make sure that they are likely to be safe and effective. Currently, there are no reliable lab models that have the unique features and genetic mutations commonly associated with lobular breast tumours. Dr Sean Egan and his team plan to develop new models that have these characteristics and share them with the cancer research community.

Impact: Right now, potential treatments for lobular breast cancer are tested in lab models with the characteristics of other breast cancer types. This means even treatments that work in the models may not be effective in people with lobular tumours. New lab models that have the unique features of lobular breast cancer will allow researchers to identify new treatments faster and more accurately.

How has working directly with people who have lived or living experience of cancer shaped your understanding of the issue or question you are addressing?
"By working with lobular breast cancer patient advocates, I have come to appreciate the urgent need to identify new, effective and less toxic therapies for this disease, as well as the important role that mouse models can play in facilitating such discoveries."

Mary-Louise Greer **$68,590**
The Hospital for Sick Children **2026-2029**

Safer monitoring for children at risk of lung cancer

Problem: Children with the genetic condition DICER1 syndrome are at risk of developing a rare childhood lung cancer. When detected early, the outcomes for this cancer are good – but it is much harder to treat when detected late. Right now, children at risk are monitored using CT scans, but this means they are repeatedly exposed to radiation.

Solution: Although CT scans expose children to radiation, MRI scanning does not. Dr Mary-Louise Greer and her team are testing MRI as an alternative to CT scanning in babies under 6 months old who have DICER1 syndrome and need to be monitored. They will perform both MRI and CT scanning on the children and then compare what the two scans show.

Impact: If MRI works as well as CT for monitoring DICER1-related lung lesions, children with DICER1 could be monitored with MRI instead of CT. This would reduce their radiation exposure without compromising on scan quality, improving their long-term safety and giving their families one less reason to worry.

Why is this project important and what does this funding mean to you?
"This funding will enable me and my team to see if MRI can be used to identify lung cysts just as well as CT does in our youngest, most vulnerable patients being screened for this syndrome. We hope this will let us remove one layer of risk for infants and anxiety for families."

Chantal Guillemette
Université Laval

$525,000
2026-2029

Using hormone signals to personalize prostate cancer treatment

Problem: Although aggressive prostate cancer responds well to hormone therapy when caught and treated early, it remains a difficult disease to manage. Tumours vary from person to person, making it difficult to personalize treatment and avoid treating too little or too much. Hormone-based therapies can also impact people's quality of life.

Solution: Dr Chantal Guillemette and her team will leverage the world's largest prostate cancer registry to find better ways to personalize treatments. The researchers will study hormonal signals in the blood to better understand how those signals affect the way cancer progresses and responds to therapy.

Impact: This study will help identify hormone markers that can guide treatment selection, helping ensure that people with prostate cancer receive the treatments most likely to work for them and avoid those that aren't needed or may not be effective. This will lead to better outcomes and quality of life.

How has working directly with people who have lived or living experience of cancer shaped your understanding of the issue or question you are addressing?
"Discussions with people living with prostate cancer have helped us better understand the different experiences patients have with treatment, from side effects to why some treatments work better or longer for some people than others. Their experiences inspire our work every day and give us hope that our research will lead to more personalized treatments, helping more patients live longer and better lives."

Robert Hamilton **$525,000**
Princess Margaret Cancer Centre - UHN **2026-2029**

Shorter, more effective, more personalized prostate cancer treatment

Problem: When prostate cancer begins to spread throughout the body, the standard treatment is radiation therapy and medication to lower the levels of male hormones. This approach is expensive and can cause serious side effects.

Solution: Previous research has shown that an existing drug called atorvastatin can make hormone deprivation therapy more effective. Dr Robert Hamilton and his team are studying whether adding atorvastatin to a shorter course of standard treatment works as well or better against prostate cancer. They are also analyzing prostate cancer samples to look for genetic material that can help doctors better personalize treatment.

Impact: Adding atorvastatin to standard therapy could allow for shorter treatment. New tissue markers for prostate cancer could help predict who is likely to need more aggressive treatment and who can avoid unnecessarily harsh therapies and side effects. Both would make prostate cancer treatment more affordable and reduce treatment time and side effects, improving people's quality of life.

Saima Hassan **$525,000**
Centre de recherche du CHUM **2026-2029**

Using AI to improve precision treatment for aggressive breast cancer

Problem: People with inherited *BRCA1* or *BRCA2* gene mutations often develop aggressive forms of breast cancer. Although these people can benefit from PARP inhibitors, a class of targeted treatments that block cancer cells from repairing damaged DNA, not everyone responds. Several studies have focused on changes within the tumour itself that can influence response to PARP inhibitors, but growing evidence suggests that the tumour microenvironment also plays an important role in how well these therapies work.

Solution: Dr Saima Hassan and her team are investigating how breast tumours interact with their microenvironments to learn who will benefit from PARP inhibitors. Using AI, they will integrate clinical and genetic information from tumours and their microenvironments in people with breast cancer to identify markers that predict who might benefit from these therapies. They will also explore whether selected people without *BRCA* mutations could respond well.

Impact: This research could help identify the people most likely to benefit from PARP inhibitors while preventing ineffective treatment and unnecessary side effects for others. By improving patient selection and expanding the use of these targeted therapies to additional groups, this work can advance more personalized and effective care, ultimately improving outcomes for people with breast cancer.

How has working directly with people who have lived or living experience of cancer shaped your understanding of the issue or question you are addressing?
"As a breast cancer surgeon, I regularly care for women with complex tumours and see firsthand that every person's cancer can respond differently to the same treatment. Developing more personalized approaches is critical to improving survival and quality of life. The perspectives of people with lived experience of cancer help ensure that our research focuses on the outcomes that matter most."

Sabine Hombach-Klonisch
University of Manitoba
Eric Hall
University of Manitoba
Thomas Klonisch
University of Manitoba

$525,000
2026-2029

How breast cancer cells survive and regrow in the brain

Problem: Although current treatments work well against HER2+ breast cancers, they stop working when the cancer spreads to the brain. Even after the tumours disappear on scans, some cells survive and eventually regrow. Researchers don't yet know exactly how these cancers survive and resist treatment in the brain.

Solution: Dr Sabine Hombach-Klonisch, Dr Eric Hall, Dr Thomas Klonisch and colleagues have found that cancer cells change when they are treated. They transform to mimic neurons and blend in with normal brain circuitry by using similar neuronal communication networks to survive. The researchers are studying which cells survive and how – and whether blocking these connections can make the cancer cells more vulnerable to treatment.

Impact: Understanding how breast cancer cells exploit the brain's natural communication networks can help researchers find new targets for treatment. By blocking the connections between breast cancer and brain cells, it may be possible to critically impair cancer cell survival mechanisms, leading to new treatments that save lives by stopping brain metastases from returning.

Why is this project important and what does this funding mean to you?
"This funding from the Canadian Cancer Society is essential for our research team to better understand the fundamental cellular mechanisms that brain metastatic breast cancer cells use to communicate with surrounding brain cells for tumor growth after treatment."

Kristin Hope
Princess Margaret Cancer Centre – UHN
Brian Wilhelm
Institut de Recherche en Immunologie et cancérologie

$525,000
2026-2029

Understanding how childhood leukemia cells resist treatment

Problem: Although most children with acute myeloid leukemia (AML) respond to treatment, in over one-third the cancer eventually returns. When this happens, it often resists further treatment and survival rates are poor. It's not yet known how AML drug resistance works or how to block it so that the cancer can be effectively treated.

Solution: Many researchers have studied mutations in the genetic blueprint of AML. Dr Kristin Hope, Dr Brian Wilhelm and their colleagues are looking elsewhere – at the mechanisms cells use to convert that blueprint into working proteins. By studying these mechanisms, the researchers aim to find out how cells control cancer-promoting and drug-resisting proteins.

Impact: Understanding the mechanisms cancer cells use to survive and resist treatment means that researchers may eventually be able to develop new drugs that target those mechanisms. This could help overcome treatment resistance in relapsed AML, allowing children with this cancer to live longer, better lives.

Why is this project important and what does this funding mean to you?
"This funding will allow us to use cutting-edge approaches and capitalize on our teams' unique complementary expertise to understand how resistance to leukemia therapy arises and strategies to circumvent it. With the insights gained through this research, we aim to uncover new ways to make long-term therapy effectiveness a reality for many more children with AML."

Kathryn Isaac **$525,000**
University of British Columbia **2026-2029**

Using AI to improve equity and access to breast cancer care

Problem: For people with breast cancer and their families, waiting for a diagnosis or specialist appointment is highly stressful. Delays in diagnosis and treatment can lead to worse outcomes. One reason for these delays is the way information is managed within medical records, which can make it harder to identify and prioritize people who need urgent attention.

Solution: Dr Kathryn Isaac and her team are using AI to support faster and more equitable breast cancer care. Working with patient partners and healthcare teams, the researchers will develop and test tools that automatically analyze clinical reports to spot people who need urgent care and help doctors prioritize people based on their needs.

Impact: This project aims to reduce delays, improve the care experience and help ensure that every person with breast cancer receives the right care at the right time.

Why is this project important and what does this funding mean to you?
"Getting the right care quickly can make a real difference for people with breast cancer. This project will help reduce delays, improve access to timely care and make the referral process more consistent and fairer so that people receive the right care at the right time. This CCS funding will enable our team to help women receive better care faster."

Hartland Jackson **$525,000**
Lunenfeld-Tanenbaum Research Institute **2026-2029**

Understanding how dense breast tissue increases cancer risk

Problem: People who have denser breast tissue are at increased risk of developing breast cancer. Researchers don't know exactly why dense breast tissue raises the risk of cancer, so they can't currently predict which people with dense breasts are most at risk and what interventions would benefit them the most.

Solution: Dr Hartland Jackson and his team are mapping DNA, RNA and protein levels in healthy breast tissue, including dense tissue that could become cancerous. They will also test how breast cells respond to the physical and molecular changes that take place in dense tissue. Linking this information with our existing knowledge will allow the researchers to work out which tissue changes could lead to cancer.

Impact: Understanding the tissue characteristics that influence breast cancer risk will help doctors identify people who are at risk of developing cancer. Those people could then be offered lifestyle or treatment interventions to reduce breast density, potentially lowering their risk of cancer. They could also be offered enhanced screening to spot and address any signs of cancer early.

How has working directly with people who have lived or living experience of cancer shaped your understanding of the issue or question you are addressing?
"Speaking with many women who have lived through the experience of cancer and harsh treatments has highlighted the considerable treatment advances that have been made but also the challenges associated with them. Together, we plan towards a future to prevent rather than treat cancers so that more people can live their lives without this burden."

Kian Jafari Dinani **$525,000**
Université de Sherbrooke **2026-2029**

A test to identify who will – and won't – benefit from immunotherapy

Problem: A type of immunotherapy called immune checkpoint inhibitors (ICI) can be life-saving for some people with cancer whereas others don't benefit at all. It can take months to determine whether a person is eligible for – or likely to respond to – ICI treatment. These delays can cause anxiety and cost people valuable time, potentially limiting their treatment options.

Solution: Dr Kian Jafari and his team are developing a fast, sensitive test to help doctors understand how a person's cancer interacts with their immune system and whether immunotherapy is likely to work. The test will use light-based sensors to detect immune checkpoint proteins that are not measured by standard tests.

Impact: The researchers expect their new test to quickly and accurately identify people who are most likely to benefit from ICI treatment. That way, those who are likely to benefit can receive treatment sooner and those who are less likely to benefit can avoid unnecessary delays and side effects from treatments that are unlikely to work. Ultimately, the test will improve outcomes and quality of life for people with cancer.

Why is this project important and what does this funding mean to you?
"Every person with cancer deserves the best chance to receive the treatment that is most likely to help them. Thanks to the support of the Canadian Cancer Society and its donors, our team can develop new technologies that bring us closer to faster, more personalized cancer care and better outcomes for patients."

Nathalie Johnson
Jewish General Hospital

$525,000
2026-2029

Improving survival for people with aggressive lymphomas

Problem: When initial treatment fails, most people with aggressive lymphomas eventually die from their disease. A newer treatment called CAR T cell therapy works well in more than half of these cases. It is most effective when used early, before the cancer grows too large, but lymphoma recurrence often takes time to diagnose.

Solution: Dr Nathalie Johnson and her team have developed a blood test that detects cancer DNA left behind after treatment and provides results much faster than other methods. They will run a clinical trial using the test to identify people who benefit most from closer monitoring, enabling recurrence to be detected early when CAR T cell therapy is more effective.

Impact: This research could help people with lymphoma live longer and transform how doctors monitor treatment response. The team will also assess cost-effectiveness to determine whether this approach should be publicly funded and made widely accessible.

How has working directly with people who have lived or living experience of cancer shaped your understanding of the issue or question you are addressing?
"Listening to people who have experienced cancer firsthand has helped me understand the challenges and fears they face every day. Their stories remind me that our research is not just about science, but about making a real difference in people's lives."

Govind Kaigala
University of British Columbia

$525,000
2026-2029

Understanding how treatment-resistant breast cancer spreads

Problem: Stopping cancer from spreading is key to improving survival. So-called "leader" cancer cells can switch between two states, one for reproducing and one for moving to distant sites. This allows them to spread and resist treatment. New tools are needed to control these transitions and capture these cells in real time so they can be studied.

Solution: Dr Govind Kaigala and his team use miniaturized probes to collect "leader" cells from the edges of treatment-resistant breast tumours. The researchers will develop tools to control the cells' states. The goal: to better understand how the cells behave and identify key factors in the cells and their environment that drive cancer spread.

Impact: This project will create new technologies to study tumour cells and uncover what triggers metastasis. By understanding how cancer spreads, researchers can identify weaknesses to target, paving the way for more effective treatments for people with hard-to-treat breast cancers.

How has working directly with people who have lived or living experience of cancer shaped your understanding of the issue or question you are addressing?
"Working directly with current patients and survivors of metastatic breast cancer enabled us to direct the project to the real needs and interests of people with lived experience of cancer, in particular the frustration associated with treatment resistance. Speaking with our patient partners helped us ground our perspectives on research in reality and reminded us of the true overall goal – improved treatment outcomes for people in our community and beyond."

Robert Kridel **$525,000**
Princess Margaret Cancer Centre - UHN **2026-2029**

Detecting lymphoma recurrence faster and more accurately

Problem: Although many people with lymphoma respond well to initial treatment, the disease often returns. Current monitoring tools do not always detect recurrence early and may produce false positives or miss very small amounts of cancer. Physicians need a more accurate way to monitor the disease after treatment without unnecessary biopsies or additional radiation exposure.

Solution: Dr Robert Kridel and his team are developing a highly sensitive blood test that can detect molecular residual disease (MRD) after treatment at levels far below the limits of current technologies. The test tracks specific genetic changes and analyzes unique DNA patterns that act as molecular fingerprints of cancer.

Impact: This project could help physicians identify people at higher risk of recurrence earlier and spare others unnecessary procedures. By providing a more complete and reliable picture of residual disease, the test could guide faster treatment decisions and improve long-term outcomes for people living with lymphoma.

Why is this project important and what does this funding mean to you?
"Even when lymphoma appears to be gone after treatment, tiny traces of the disease can remain and eventually lead to relapse. Our project aims to develop a highly sensitive blood test that can detect molecular signals of residual lymphoma in the bloodstream earlier and more accurately than current approaches, helping physicians make better-informed treatment decisions while reducing unnecessary procedures.
The Canadian Cancer Society funding comes at a critical juncture for our team, allowing us to build on years of progress and accelerate the translation of this research into a tool that could directly benefit patients. At a time when research costs continue to rise and funding is increasingly competitive, we are especially grateful for the support of the Canadian Cancer Society and the generosity of its donors. Their commitment to cancer research makes ambitious projects like this possible and gives us the opportunity to improve care and outcomes for people living with lymphoma."

Janice Kwon **$522,404**
BC Cancer, part of the Provincial Health Services Authority **2026-2029**

Expanded genetic testing to prevent ovarian cancer

Problem: High-grade serous ovarian cancer (HGSOC), the most common type of ovarian cancer, is often diagnosed after it has already spread, making it very hard to treat. One of the main ways to prevent it is by testing for inherited *BRCA* gene mutations. People who have harmful mutations can then have surgery to remove the ovaries and fallopian tubes if needed. However, *BRCA* testing is usually only offered to people with a known family history or a personal history of ovarian cancer, at which time it is too late for cancer prevention.

Solution: Dr Janice Kwon and her team have identified 15 new gene mutations that may increase the risk of HGSOC. They will analyze large genetic databases to confirm the link between these mutations and ovarian cancer and use gene-editing technologies to better understand how each mutation contributes to cancer risk.

Impact: This research could broaden genetic testing to include the newly identified mutations, helping identify more people at risk of ovarian cancer. Earlier and broader genetic screening could help more people access preventive surgery, leading to better outcomes and ultimately saving lives.

How has working directly with people who have lived or living experience of cancer shaped your understanding of the issue or question you are addressing?
"As a clinician who has helped treat hundreds of individuals with ovarian cancer, I have all too many times witnessed the physical stress and emotional burden that this cancer has on patients and their families. In the absence of an effective screening test for ovarian cancer, preventing is the best strategy."

Nathan Lachowsky **$525,000**
University of Northern British Columbia **2026-2029**

Improving HPV-related cancer prevention for 2S/LGBTQ+ people

Problem: HPV infections are the leading cause of anal, cervical, penile, vaginal and vulvar cancers. Among 2S/LGBTQ+ people – particularly in northern, remote or rural areas – many do not get HPV vaccinations or HPV-related cancer screenings, leading to more cases of these cancers. For more equitable access to cancer prevention, it's important to understand who doesn't get screened or vaccinated and why.

Solution: Dr Nathan Lachowsky and the Community-Based Research Centre are working with 2S/LGBTQ+ organizations and communities at risk of HPV-related cancers to improve access to vaccination and screening. The researchers plan to evaluate existing Canada-wide survey data, work with healthcare providers and use new screening tools like self-sampling to improve preventive care for these communities.

Impact: This study will increase access to important HPV-related cancer prevention across various 2S/LGBTQ+ communities – helping to stop these common cancers before they start. Understanding systemic barriers and working with these communities will inform culturally sensitive policies and healthcare interventions with lasting impact.

Why is this project important and what does this funding mean to you?
"The Canadian Cancer Society is enabling our unique population-specific approach to advance life-saving prevention among 2S/LGBTQ+ communities who are often underserved in healthcare, especially in some northern, rural, and remote areas."

Claudie Laprise **$77,559**
Centre de recherche du CHUM **2026-2029**

Better cancer prevention for people who have had organ transplants

Problem: People who have had an organ transplant have twice the risk of cancer compared with people who have not. Despite this, cancer prevention often gets less attention than managing rejection risk and other post-transplant priorities. As a result, opportunities for cancer screening and prevention may be missed.

Solution: Dr Claudie Laprise and her team will interview people who received organ transplants to explore how they perceive cancer risk, their experiences with cancer prevention and screening and any unmet needs they have for information or support.

Impact: Building on these findings, the researchers will develop tools that integrate cancer prevention into the realities of post-transplant care: improved strategies for communicating cancer risk, identifying people's information needs and embedding cancer prevention counselling in transplant clinics alongside rejection management.

How has working directly with people who have lived or living experience of cancer shaped your understanding of the issue or question you are addressing?
"Every conversation with a transplant recipient reminds us that they're not ignoring cancer risk; they just haven't had the chance to talk about it in a way that fits their situation. This project starts there: translating their lived experience into evidence that can inform care."

Julian Lum **$525,000**
BC Cancer, part of the Provincial Health Services Authority **2026-2029**

Intermittent fasting to boost cancer immunotherapy

Problem: Research suggests a link between nutrition, the gut microbiome and immunity. An evidence-based approach to nutrition could increase the benefits of immunotherapy for cancer but, so far, no research has been done into how people should eat to boost their immune systems and maximize the effectiveness of their cancer treatment.

Solution: Dr Julian Lum's team has trialed intermittent fasting in 15 people with leukemia. They found these people showed slower cancer progression and less immune suppression. Now, they will trial intermittent fasting in people receiving immunotherapy for multiple myeloma to find out how the immune system changes and whether this helps control the cancer.

Impact: If intermittent fasting can boost immunotherapy's effectiveness against cancer, it will offer a low-cost, widely accessible way to improve outcomes. It also offers people a way to be involved in their own cancer care, empowering them and enhancing their quality of life during cancer treatment.

Why is this project important and what does this funding mean to you?
"For years, patients have asked a simple question: 'What can I do to help my immune system during treatment?' The Canadian Cancer Society believed in a bold idea – that nutrition could become a powerful ally in supporting their immune system to fight cancer."

Scott McComb
National Research Council Canada
Michael Ong
The Ottawa Hospital Research Institute

$525,000
2026-2029

Creating new made-in-Canada prostate cancer treatments

Problem: When prostate cancer spreads into the body, it usually cannot be cured. More effective treatments are urgently needed. Immunotherapy – a type of treatment that uses the immune system to attack cancer cells – has been a game-changer for other cancers, but so far antibody-based treatments have not worked well for advanced prostate cancer.

Solution: Llamas, camels and alpacas naturally produce a special type of antibody that is much smaller than a human antibody. These small antibodies, called nanobodies, could be especially useful to target prostate cancer cells. Dr. Scott McComb, Dr. Michael Ong and their team are developing prostate-cancer nanobodies. They are analyzing patient tissue samples to identify prostate cancer proteins that can be targeted by nanobodies. The team will then generate new nanobodies against these prostate cancer targets, and re-engineer them to create powerful immunotherapies that allow human immune cells to find and destroy prostate cancer cells.

Impact: This innovative research will advance cancer science and lay the groundwork for made-in-Canada prostate cancer immunotherapies. These new therapies aim to improve outcomes and decrease toxicity of treatment for advanced prostate cancer.

Why is this project important and what does this funding mean to you?
"We are excited to develop new llama antibodies against prostate cancer. These "nanobodies" will help create a next-generation of made-in-Canada immunotherapies for prostate cancer."

Sylvain Meloche
Université de Montréal

$525,000
2026-2029

A new treatment for aggressive nerve tumours

Problem: Neurofibromatosis type 1 (NF1) is a common genetic disorder that may lead to aggressive nerve tumours called malignant peripheral nerve sheath tumours (MPNST). The main treatment for these tumours is surgery – but if they can't be fully removed surgically, there is no other effective treatment and survival rates are low.

Solution: Dr Sylvain Meloche and his team discovered two proteins, YES and SRC, that help MPNST cells grow and survive. When YES and SRC are blocked, the cancer cells stop growing. They have now developed a drug that can block these proteins and plan to test how well it works and whether combining it with other treatments can make them more effective.

Impact: If the new drug successfully stops MPNST cells from growing and surviving in the lab, the researchers can proceed to human clinical trials. Eventually, it could become a new treatment option for this tough-to-treat cancer – either alone or alongside other drugs – saving lives and offering new hope for people with MPNST.

Why is this project important and what does this funding mean to you?
"This funding is crucial to advance our project. Despite progress in the treatment of many cancer types, there is no effective treatment for MPNST and survival is poor. My research team has identified a new and promising therapy that requires additional validation before testing in humans. The generous funding of the CCS in partnership with UHN will allow us to further refine our approach and move it closer to the clinic, offering hope to MPNST patients."

Funded in partnership with the University Health Network (UHN) and UHN Foundation through the ERASEnf fund

Janet Papadakos
The Institute for Education Research – UHN
Meredith Giuliani
Princess Margaret Cancer Centre

$442,138
2026-2029

Helping caregivers access and engage with support resources

Problem: More and more people in Canada are caring for someone with cancer. As cancer care becomes increasingly complex, care partners face growing demands and may feel unprepared, untrained and unsupported in their role. This is especially true if they face additional challenges like low health literacy, older age, geographic isolation or newcomer status. These caregivers urgently need education and support.

Solution: It can be difficult for care partners to find and engage with resources designed to teach and support them. Dr Janet Papadakos, Dr Meredith Giuliani and colleagues are developing and testing 3 different ways to engage caregivers with different needs: self-guided resource navigation, guidance from a trained peer or professional and AI-enabled navigation.

Impact: The knowledge from this study will be disseminated across the country and even internationally. It will be used to improve support for care partners by helping them access and engage with resources in the way that works best for them – improving their lives and the lives of those receiving care.

Why is this project important and what does this funding mean to you?
"This project is deeply meaningful to me because cancer has touched the lives of many of my family members and friends and I have seen firsthand the challenges that caregivers face. Throughout my career, I have worked with caregivers who are doing extraordinary things under very difficult circumstances. This funding allows us to build on what they have taught us and develop new ways to connect caregivers with education and support when they need it most. If we can help caregivers feel more prepared and confident and less alone, we can improve the cancer experience for entire families."

Claude Perreault
Université de Montréal
Pierre Thibault
Institut de Recherche en Immunologie et cancérologie

$525,000
2026-2029

Making treatment-resistant cancers respond to immunotherapy

Problem: Most breast cancers are estrogen receptor-positive (ER+), meaning the cells use estrogen as a signal to grow. Immunotherapies, which are promising treatments for many cancers, they don't work well in ER+ breast cancers because these tumours have very low levels of protein fragments called antigens that help the immune system find and attack them.

Solution: Recently, Dr Claude Perreault, Dr Pierre Thibault and colleagues discovered that treating ER+ breast tumours with drugs called CDK4/6 inhibitors can make them display antigens that the immune system can recognize. They are now studying ER+ breast cancer cells to find out which antigens are cancer-specific so they can develop cancer vaccines and other treatments to target those antigens.

Impact: Having antigens display in immunotherapy-resistant cancers can make the cancer more vulnerable to treatment. Identifying and targeting cancer-specific antigens can lead to new treatment options that are more effective or have fewer side effects. This can improve outcomes and quality of life for people whose cancers are resistant to immunotherapy.

Why is this project important and what does this funding mean to you?
"CCS funding allows us to explore a truly innovative, high-reward project for treating the most common type of refractory breast cancer."

Michael Reedijk **$524,961**
Princess Margaret Cancer Centre - UHN **2026-2029**

Overcoming treatment resistance in aggressive breast cancer

Problem: Triple-negative breast cancer (TNBC) is aggressive and often resists treatment. These tumours can attract special cells called macrophages that protect them from the immune system. This makes immunotherapies that work well on other cancers less effective in TNBC, giving people with TNBC fewer treatment options.

Solution: Immune-suppressing treatments for autoimmune diseases like arthritis may be able to prevent macrophages from entering TNBC tumours, allowing the immune system to attack the tumours. Dr Michael Reedijk and his colleagues are conducting a clinical trial to see whether isunakinra, based on an existing anti-arthritic drug, can overcome TNBC treatment resistance.

Impact: Repurposing existing drugs to treat TNBC is faster and more affordable than developing entirely new drugs. If isunakinra works well against TNBC, it could offer life-saving new treatment options for people who previously had few or none.

How has working directly with people who have lived or living experience of cancer shaped your understanding of the issue or question you are addressing?
"Working with people with lived experience of cancer helped us design a trial that was relevant and valuable to patients and prioritized their needs rather than a trial that simply answered a clinical question."

Raymond Reilly
University of Toronto

$525,000
2026-2029

Gold nanoparticle-based radiation treatment for deadly brain cancers

Problem: Glioblastoma is the most common and deadly brain cancer in adults. Fewer than 1 in 10 people live longer than 5 years after diagnosis even when treated with surgery, radiation and chemotherapy. Right now, there are very few effective treatments for this type of cancer so the prognosis remains poor.

Solution: Dr Raymond Reilly and his colleagues are developing a new form of radiation that is infused into the tumour itself. To do this, they attach gold nanoparticles to radioisotopes – elements that emit strong radiation at a very short range. This allows the radiation to reach tumour cells without harming healthy tissue. The researchers will combine this new treatment with chemotherapy and immunotherapy.

Impact: If the treatment is successful in preclinical models of glioblastoma, it could lead to clinical trials in humans and eventually a new radiation nanomedicine treatment for glioblastoma. This could improve outcomes and quality of life for people living with glioblastoma.

How has working directly with people who have lived or living experience of cancer shaped your understanding of the issue or question you are addressing?
"Our research team includes a family caregiver whose brother died of glioblastoma. This team member has provided our team with great insight into the experience and important role of family members in caring for patients with cancer."

Funded in partnership with World Gold Council and Lundin Cancer Fund

WORLD GOLD COUNCIL

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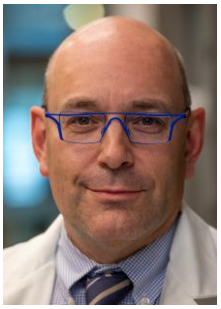
Funding the Very Best in Cancer Research

Aaron Schimmer
Princess Margaret Cancer Centre – UHN
Mohammad Mazhab Jafari
University Health Newtork
Siavash Vahidi
University of Guelph

$525,000
2026-2029



Treating aggressive leukemia without harsh side effects

Problem: Treatment for acute myeloid leukemia (AML), an aggressive blood cancer, is often harsh. Even so, it's not uncommon for AML to return after treatment. For people who have or had AML, finding new therapies that are more effective, less toxic and have fewer side effects is a top priority.

Solution: Dr Aaron Schimmer, Dr Mohammad Mazhab Jafari, Dr Siavash Vahidi and their team discovered that mitochondria – the part of a cell that creates energy – are abnormal in AML cells. They showed that blocking a protein called LONP1, which mitochondria need to function, can kill AML cells without harming healthy cells. Now the researchers are studying LONP1 to find new ways of targeting it with drugs. They are also testing LONP1 blockers with other drugs to find treatments that work well together against AML and other cancers.

Impact: By targeting LONP1, the researchers aim to find new drugs and combination therapies that can kill cancer while sparing healthy cells. This would offer powerful new treatments for AML and other cancers while reducing the side effects people experience with existing treatments.

Why is this project important and what does this funding mean to you?
"This project brings together a multidisciplinary group of scientists and clinicians to work together to develop new and better treatments for an aggressive blood cancer, acute myeloid leukemia."

Hsien Seow
McMaster University

$522,190
2026-2029

Improving care conversations for people living with incurable cancer

Problem: People living with incurable cancer often face serious physical, emotional, social and spiritual challenges. Research shows that effective serious illness communication can improve quality of life, but many healthcare providers lack the skills and training to have these conversations. As a result, important discussions may happen too late or not at all, leaving patients and families without the information and support they need.

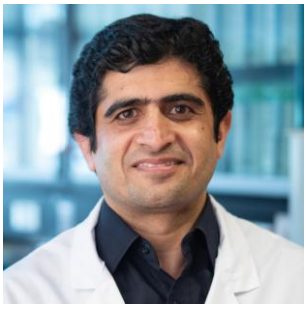
Solution: Dr Hsien Seow and his team developed All providers Better Communication Skills, an innovative training program that helps healthcare providers build practical skills for serious illness communication. Working alongside cancer patients, family partners and oncology professionals, the team will adapt and evaluate the program specifically for oncology providers across Canada, helping them communicate more effectively with people living with incurable cancer.

Impact: Better communication can help people living with incurable cancer understand their illness, ask questions and make informed choices about their care. By helping healthcare providers feel more confident having these important conversations, this project will support earlier access to a palliative care approach and ensure patients and families receive care that reflects their needs, values and wishes.

Why is this project important and what does this funding mean to you?
"People living with incurable cancer deserve clear, compassionate conversations that help them understand what lies ahead and make decisions that reflect their values and priorities. This funding allows us to work with oncology providers to strengthen those communication skills and improve quality of life throughout the cancer journey."

Tanveer Sharif
University of Manitoba

$525,000
2026-2029



Stopping childhood brain tumours from returning after treatment

Problem: Medulloblastoma is a common childhood brain tumour. Children with high-risk medulloblastoma often face tumour recurrence and spread even after chemotherapy and radiation. Currently, researchers don't fully understand how the tumours survive – so there are few treatment options for children whose cancer returns.

Solution: Recurrent tumours usually don't gain new genetic mutations. Instead, the cancer may survive by switching existing genes on and off. Dr Tanveer Sharif and his team are studying how treatment affects which genes are active in medulloblastoma cells and how they affect the cells' metabolism and survival.

Impact: Knowing which tumour cell genes are turned on and off after treatment could help researchers understand which genes the cells need to survive and spread. Then they can test people with medulloblastoma for those genes to understand their risk of recurrence. They can also look for new drug combinations to target those genes, preventing tumours from returning and improving survival in children with high-risk medulloblastoma.

How has working directly with people who have lived or living experience of cancer shaped your understanding of the issue or question you are addressing?
"Working closely with our clinician collaborators has given us a deeper understanding of what families go through. They often describe the anxiety parents and children experience while waiting for follow-up MRI results, knowing that any sign of the tumour returning could change everything. For children with recurrent medulloblastoma, there are still very few effective treatment options. Hearing these experiences reminds us that our research is about much more than understanding cancer biology – it is about giving families hope. Their courage and resilience inspire our team every day and motivate us to develop new therapies that can prevent relapse and improve the future for children facing this devastating disease."

Lillian Sung
The Hospital for Sick Children
Adam Yan
The Hospital for Sick Children

$523,695
2026-2029

Preventing vomiting in children undergoing cancer treatment

Problem: Vomiting is common in children being treated for cancer. It can limit children's activities, prevent them from eating or drinking and negatively affect their health and quality of life. It's hard to predict which children are most likely to vomit, which makes it hard to reduce or prevent vomiting before it happens.

Solution: Using existing data, Dr Lillian Sung, Dr Adam Yan and colleagues have trained a machine learning model to predict a person's risk of vomiting in the next 4 days. Now, after successful preliminary testing, they are bringing their model into the clinic. After each child is admitted, the model will predict their risk of vomiting, allowing healthcare team members to provide preventive treatment if needed.

Impact: The model will help healthcare teams predict and prevent vomiting in children undergoing cancer treatment. This will reduce a distressing side effect of treatment, making children more comfortable and potentially more cooperative with treatment. It will also improve their overall health and quality of life.

Why is this project important and what does this funding mean to you?
"Vomiting is one of the most difficult side effects children face during cancer treatment. This funding will help us develop tools that identify which children are most likely to experience vomiting so we can prevent it before it starts. Our goal is to make cancer treatment more comfortable for children and their families while improving their overall quality of life."

Aline Talhouk
University of British Columbia
Laurence Bernard
McGill University
Andrea Neilson
University of British Columbia

$525,000
2026-2029

Stopping uterine cancers before they start

Problem: Uterine cancer is the most common – and most deadly – gynecological cancer. Most uterine cancers are driven by hormone imbalances. Although hormone therapy can treat uterine cancer and pre-cancer conditions, there is currently no good way to tell who might benefit from this treatment.

Solution: Dr Aline Talhouk, Dr Laurence Bernard, Dr Andrea Neilson and colleagues are evaluating a test called the progesterone challenge test (PCT) that can check whether a person's uterus has a hormone imbalance. Those who respond to the test – indicating that they will benefit from hormone therapy – will be given preventive treatment for 12 months; those who don't will be monitored for changes over the same time.

Impact: If the PCT successfully identifies people who will benefit from hormone therapy, it could be implemented widely to screen people at risk of uterine cancer. Those in need of hormone therapy could then be given preventive treatment earlier, saving lives by stopping uterine cancers before they start.

Why is this project important and what does this funding mean to you?
"As a gynecologic oncologist, I care for people whose lives have been changed by endometrial cancer. Too often, we meet them only after cancer has already developed. This project is so important because it focuses on preventing cancer before it starts. This funding allows us to move prevention from a one-size-fits-all approach toward more personalized care, bringing us closer to stopping endometrial cancer before it develops."

Dr Laurence Bernard
Assistant Professor and Gynecologic Oncologist
McGill University and McGill University Health Centre

Kednapa Thavorn
Ottawa Hospital Research Institute
Natasha Kekre
Ottawa Hospital Research Institute

$525,000
2026-2029

Helping expand access to Canadian-made CAR T cell therapy in Canada

Problem: CAR T cell therapy is a powerful treatment that engineers a person's own immune cells to fight blood cancer. However, most CAR T cells are currently produced in the United States through a complex process that can take weeks. People often face long waits and must travel to specialized treatment centres, adding stress and disruption during an already challenging time. Canada is investing in domestic CAR T cell production to increase access, but evidence is needed to understand how to best introduce these innovations into health systems for people affected by cancer.

Solution: Dr Kednapa Thavorn, Dr Natasha Kekre and their team will partner with people affected by cancer, hospital leaders and policymakers to find out what treatment features matter most to patients and caregivers, understand how to make local CAR T production practical and explore what hospitals and health systems need to support wider access across Canada.

Impact: The project will provide evidence to support decisions about how Canadian-made CAR T cell therapies can be introduced into routine cancer care. The findings will help healthcare organizations and policymakers improve access, reduce barriers to treatment and ensure that future CAR T therapies reflect the needs of patients, families, healthcare providers and the Canadian healthcare system.

Why is this project important and what does this funding mean to you?
"This funding gives us an opportunity to answer an important question: how can we make CAR T therapy more accessible for Canadians? We want to ensure that Canadian-made CAR T therapies are introduced in ways that reflect patients' priorities, support healthcare providers and are practical for our healthcare system."

Anastasia Tikhonova **$525,000**
Princess Margaret Cancer Centre – UHN **2026-2029**

How early bone marrow changes contribute to cancer risk

Problem: As people age, some blood stem cells develop genetic changes that give them a growth advantage over healthy cells. This process, called clonal hematopoiesis (CHIP), can increase the risk of blood cancer and other age-related diseases. Although scientists have extensively studied the mutated stem cells, far less is understood about whether the surrounding bone marrow environment also changes in ways the promote their growth.

Solution: Dr Anastasia Tikhonova and her team study the bone marrow – the tissue where blood stem cells live and grow. Healthy bone marrow contains specialized support cells that help blood stem cells function properly. The researchers have discovered that, in CHIP, these support cells begin to change long before cancer develops. They are investigating how these early changes may quietly create conditions that allow future blood cancers to emerge.

Impact: Understanding how the bone marrow changes during CHIP could reveal new ways to identify people at increased risk of developing blood cancer. The research may also lead to preventive strategies that preserve or restore a healthy bone marrow environment, helping to stop cancer before it starts.

Why is this project important and what does this funding mean to you?
"We often think of cancer as something that appears suddenly, but it can take years to develop. Our goal is to understand the silent changes that happen long before cancer is diagnosed, creating opportunities to identify people at risk and intervene before disease begins."

Eric Turcotte
Université de Sherbrooke

$525,000
2026-2029

Better detection and diagnosis for metastatic breast cancer

Problem: When breast cancer returns or spreads, the metastases can have different characteristics than the original tumour. Although the initial tumour is usually biopsied, it's not possible or practical to biopsy every metastatic site in the body to capture these changes.

Solution: Dr Eric Turcotte and his team have developed imaging methods to see where metastases are in the body and how they behave. They will evaluate these tools to better understand how metastases differ from the original tumour.

Impact: This research could lead to less painful and invasive detection and diagnosis of breast cancer. It could also help determine whether the cancer has progressed and where it has spread, supporting more informed treatment decisions for people with breast cancer.

How has working directly with people who have lived or living experience of cancer shaped your understanding of the issue or question you are addressing?
"Our patient partners are much more than observers; they are at the heart of our team. Their experiences and needs have directly guided our research questions and will continue to inform our work throughout the project."

Barbara Vanderhyden **$525,000**
Ottawa Hospital Research Institute **2026-2029**

A preventive treatment to reduce ovarian cancer risk

Problem: Ovarian cancer is the deadliest gynecological cancer, with a 5-year survival rate of only 45%. Preventing ovulation, for instance by using birth control medication, can reduce ovarian cancer risk – but it's not yet known how this works.

Solution: Dr Barbara Vanderhyden and her colleagues discovered that people at higher genetic risk of ovarian cancer had more tissue fibrosis (stiffening) than people at average risk – and that people on a drug called metformin had less fibrosis than others. They are now studying how fibrosis forms, how genetic risk factors contribute and how metformin prevents it.

Impact: Right now, there is no way to prevent ovarian cancer other than by surgically removing the ovaries and fallopian tubes – a procedure that induces menopause and has other risks and side effects. If metformin and similar drugs can prevent fibrosis, people who are at higher risk of ovarian cancer will have a new, easier way to reduce their risk of this deadly disease.

Why is this project important and what does this funding mean to you?
"This project is based on a discovery in my lab that we have been eager to explore further because it has the potential to identify ways to reduce the risk of ovarian cancer. We are grateful to the Canadian Cancer Society for giving us this opportunity to test our ideas for the benefit of those at high risk of this often-fatal disease."

Anita Villani
The Hospital for Sick Children
Andrea Doria
The Hospital for Sick Children

$524,144
2026-2029

Easier cancer screening for children with hereditary cancer predisposition

Problem: Children with genetic conditions that put them at risk of cancer often receive regular imaging, such as full-body MRI scans, for cancer screening. These scans are intended to detect cancer at its earliest stages when it is easiest to treat. However, the scans can be stressful, inconvenient or difficult to access and may lead to unnecessary extra testing.

Solution: Dr Anita Villani, Dr Andrea Doria and their team are trialing a new testing option for children with Li-Fraumeni syndrome, a genetic cancer predisposition syndrome. Alongside regular MRI scans, 80 children will receive a blood test that looks for tiny pieces of cancer DNA in the blood. The researchers aim to find out how well the blood test performs compared with MRI scans.

Impact: If the blood test detects cancer at least as well as MRI scans, it could be offered to children with cancer predisposition as a complementary screening test. This could help make regular screening less stressful and more accessible without impacting its performance, especially for families who live far from specialized hospitals.

Why is this project important and what does this funding mean to you?
"We want children with cancer predisposition syndromes (CPS) to benefit as well. Children and families with CPS face incredible challenges associated with surveillance – they must undergo frequent imaging, some of which may require sedation; they might go through extra scans and tests to follow-up on unclear findings; they feel 'scanxiety' leading up to each scan; they need to tolerate many absences from school and work. We hope to change their care in a way that provides the essential close monitoring to detect cancers early, but using an advanced approach that we hope will be as effective, more specific and less burdensome than traditional protocols. This research would simply not be possible without the generous funding from the CCS and we are incredibly grateful to be able to move forward with this project for our patients and families!"

Ian Watson
McGill University
Daniela D'Agostino
McGill University Health Center (MUHC)

$525,000
2026-2029

Bringing immunotherapy to aggressive NF1-related cancers

Problem: Neurofibromatosis type 1 (NF1) is a common inherited condition that often causes non-cancerous tumours to grow on nerves. In some cases, these tumours can develop into an aggressive cancer called malignant peripheral nerve sheath tumour (MPNST). Although the tumours can be removed surgically, they often return and there are few other treatment options.

Solution: The same gene that is mutated in NF1 is mutated in some melanoma skin cancers. These melanomas respond well to immunotherapy. Dr Ian Watson, Dr Daniela D'Agostino and their team are studying whether these immune-related changes also affect MPNSTs to find out which people with MPNST might benefit from immunotherapy.

Impact: Currently, there are not many effective treatments for NF1-related MPNST, especially if the cancer returns after surgery. By improving our understanding of immune-related changes in these tumours using innovative single-cell imaging approaches, this research could open the door to new immunotherapy strategies and help match people to the treatments most likely to work for them – giving people with MPNST more life-saving treatment options.

Why is this project important and what does this funding mean to you?
"Funding opportunities for NF1 research are rare, making this award especially meaningful. It will allow us to pursue innovative ideas that could lead to new treatment options for people living with NF1-related cancers."

Dr Daniela D'Agostino
Assistant Professor and Medical Geneticist
McGill University and McGill University Health Center

Funded in partnership with the University Health Network (UHN) and UHN Foundation through the ERASEnf fund