

# YOUR IMPACT



Thanks to the incredible outpouring of generosity in support and in memory of Gord Downie, Sunnybrook continues to make groundbreaking discoveries in two areas of great importance to Gord: brain oncology and Indigenous health. We are pleased to share this report on the ways in which the Gord Downie Fund is helping to change and save lives at Sunnybrook and around the world.

## Using technology to improve brain cancer care

Radiation oncologist Dr. Jay Detsky named second Gord Downie Fellow in Brain Oncology

A desire to learn from the best and brightest and help develop new treatment technologies inspired Dr. Jay Detsky to accept Sunnybrook's offer to become the second Gord Downie Fellow in Brain Oncology, supported by the Gord Downie Fund.

"The Gord Downie Fellowship gave me the opportunity to learn from leading experts in the field and to help develop new treatment technologies that have the power to completely change the paradigm of care for patients with brain tumours," he says.

### Unprecedented treatment technology

Named to the fellowship in July 2018 following a residency in radiation oncology at Sunnybrook's Odette Cancer Centre and Princess Margaret Cancer Centre, Dr. Detsky focused his one-year appointment on image-directed therapies.

Dr. Detsky was part of the Sunnybrook team charged with readying the Elekta Unity MR-Linac for patient trials. This machine is the first to combine radiation and high-resolution magnetic resonance imaging (MRI). The real-time guidance provided by the MRI allows doctors to target tumours and monitor their response to radiation with unprecedented precision – even as a tumour moves inside the body.

Sunnybrook helped develop this new radiation technology as one of seven founding health sciences centres of the international MR-Linac consortium. Sunnybrook is now the first Canadian centre to install the MR-Linac.

Dr. Detsky collaborated with Sunnybrook's radiation oncologists and neuro-oncologists to design and test the machine's imaging protocols. They assessed the MR-Linac's ability to accurately detect brain tumors in 10 patients.

The study's findings were used to optimize how the machine would be used moving forward.

"It was a big team effort to come up with the protocols and do trial runs to make sure we were using the MR-Linac to its full capabilities," Dr. Detsky explains.



"The Gord Downie Fellowship was the launch pad for what I hope will be a very impactful and rewarding career," says Dr. Jay Detsky.

## Protocols used to treat first patient

The team's hard work paid off in August 2019 when Sunnybrook used the protocols to deliver radiation to the first patient on the MR-Linac and launch the MOMENTUM clinical trial evaluating the treatment experience and impact (read more details on page 4). Focused initially on patients with glioblastoma followed by patients with prostate and pancreatic cancers, MOMENTUM will help inform future novel treatment approaches.

Having completed his fellowship in July 2019, Dr. Detsky is now a full-time member of the Sunnybrook radiation oncology team. He's helping to analyze the first cohort of patients with glioblastoma treated on the MR-Linac. In the coming months, he and his colleagues hope to publish the first peer-reviewed paper reporting on the accuracy of the MR-Linac treatment compared to traditional radiation. "I'm grateful to the Hip and the fans who made this opportunity possible for me," Dr. Detsky says. "The Gord Downie Fellowship was the launch pad for what I hope will be a very impactful and rewarding career."

## Recruitment underway

Sunnybrook is now actively recruiting the third Gord Downie Fellow in Brain Oncology. Awarded to a medical doctor who has completed a residency program in an area of specialty related to brain tumour care and research, the fellowship offers candidates the opportunity to become an expert in a field where more well-trained practitioners are urgently needed.



## Next steps for the first Gord Downie Fellow in Brain Oncology

"Gord was an inspiration to so many Canadians in the way he so bravely and publicly shared his journey with brain cancer," says Dr. Sarah Ironside, the inaugural Gord Downie Fellow in Brain Oncology.

She shared the following testimonial: "I'm starting out in my career and I hope by the time I retire we are managing this disease in a much different way, with better treatments and more options.

I think the Gord Downie Fellowship, and the money that's been raised by the generosity of so many Canadians, is an opportunity to make that happen.

One of the amazing things about this fellowship is that every year, it will give a lucky doctor the chance to study further in this important area. This will be ongoing and will hopefully make a huge difference for brain cancer treatment and research.

Personally, I'm in the process of deciding where I will go next. But wherever the next step takes me, I feel very well prepared thanks to the incredible training and mentorship I've had here at Sunnybrook."

# Establishing a critical mass of expertise in glioblastoma care

## Gord Downie Fund supporting imaging, research and recruitment

Thanks to the Gord Downie Fund, Sunnybrook is building a world-leading, personalized program for the treatment and management of glioblastoma.

“Donor funds have allowed us to hire two scientists, access the MR-Linac for personalized treatment and launch groundbreaking research assessing the effectiveness of the new technology,” explains Dr. Arjun Sahgal, a Sunnybrook radiation oncologist and director of the Cancer Ablation Therapy Program.

## Funding personalized treatment

Since August 2019, Dr. Sahgal and his Odette Cancer Centre colleagues have been using the MR-Linac to target brain tumours and monitor their response to radiation with unprecedented precision.

Using real-time MRI guidance, they watch while a beam of radiation hits a glioblastoma. Scientists then analyse the images to determine how the tumour is responding to treatment. They use this data to make recommendations on how clinicians can adjust the treatment for each individual patient.

Previously, radiation therapy patients would only receive an MRI at the start of treatment and then three months



Dr. Arjun Sahgal, Sunnybrook radiation oncologist and director of the Cancer Ablation Therapy Program.

following. “This new technology is improving our ability to tailor treatment to individual patients,” says Dr. Sahgal.

“We can make changes as needed and recognize when treatment is working and when it’s not.”

In Canada, the MR-Linac is Health Canada approved but still under evaluation, meaning that all patients treated on it are part of clinical trials.

The first trials involve patients with brain tumours, to be followed by patients with prostate and pancreatic cancers, says Dr. Sahgal. “The challenge will be to prove that treating with [this]

technology is better than our current standard of care,” he says.

## Two new scientists to analyze images

To make personalized treatment decisions possible, Sunnybrook recently recruited two top-flight specialists in MR imaging analysis, supported by the Gord Downie Fund.

Hatef Mehrabian, PhD, joined the team in late 2019. Angus Lau, PhD, was recruited in early 2020.

The two scientists use quantitative metrics to analyze each patient’s

daily brain images in order to better understand the progression of changes within the tumour's metabolism and structure as a result of radiation.

Their daily recommendations allow clinicians like Dr. Sahgal to adjust patient treatments in order to target their tumour more effectively.

## Research data informs new care approaches

The Gord Downie Fund is also powering glioblastoma research, including a study of 80 patients who received intensive imaging on the MR-Linac and the newly launched MOMENTUM trial (as referenced on page 2), which has recruited 30 patients to date.

Sunnybrook is one of seven health sciences centres worldwide involved in MOMENTUM, which will lead to procedures for adapting a patient's radiation treatment to changes in the tumour that may occur over time.

Patients enrolled in MOMENTUM will be asked if they are willing to share de-identified information about treatment experience, including their MR images and quality-of-life information.

Through MOMENTUM, we will collect and contribute to data that will help researchers and oncologists here and around the world come up with the best ways of ablating tumours using this technology.

This kind of work is so important for improving patient outcomes and experience.

Early data from a patient experience questionnaire revealed that more than

half of patients (52.6 per cent) report being very comfortable in the treatment position.

A majority (79 per cent) report not feeling claustrophobic during the treatment session. At least 68 per cent of patients feel very calm during their session as well.

Thus far, we have completed more than 80 hours of imaging, and counting, including investigation of novel MRI sequences.

We will also continue to serve as an invaluable source of expertise and teaching for cancer ablation specialists across the country.

It is because of your generous support in honour of Gord that we've been able to make these incredible advances and change the lives of patients.

Dr. Sahgal is also planning for a new clinical trial to start next year in which Sunnybrook clinicians will use the MR-Linac to monitor a daily tightening of the radiation field to reduce damage to the surrounding healthy tissue in select patients with glioblastoma.

Dr. Sahgal explains that this and other studies are particularly important for patients with brain tumours because there has been little advancement in treatment options in many years. "This is all giving us some hope."



Radiation therapists Mikki Campbell (right) and Anne Carty hug after witnessing the first patient receive treatment on the MR-Linac.

# Providing culturally supportive care for Indigenous patients

## Six-month pilot project now underway with Ontario's Indigenous Cancer Program

First Nations, Inuit and Métis people in Ontario are disproportionately affected by cancer. But they sometimes don't get the care they need because of challenges ranging from a lack of basic health services, to limited and culturally inappropriate care, to geographic barriers. Sunnybrook is committed to changing this with support from the Gord Downie Fund.

### At a glance: 2019 activities

As part of an Ontario-wide strategy to improve cancer care for Ontario's Indigenous peoples, Sunnybrook introduced a number of activities and workshops in 2019 to help raise staff awareness about Indigenous health and create a culturally safe care experience hospital-wide:

- In February 2019, a Sunnybrook working group met for the first time to develop a policy on smudging, an important Indigenous spiritual and healing practice that involves the burning of sacred medicines like sage, cedar or tobacco. The smudging policy is currently pending approval by senior leadership.
- In March 2019, an Indigenous elder opened the inaugural meeting of Sunnybrook's Indigenous Community Advisory Panel, a group of 26 Indigenous and non-Indigenous staff and

community leaders committed to guiding the hospital's Indigenous care efforts going forward.

- Sunnybrook's Indigenous patient navigation specialist Leonard Benoit led a workshop on smudging and its importance as a healing practice in June 2019. Attended by 30 Sunnybrook patients and staff, the event also included a review of the Truth and Reconciliation Commission of Canada's calls to action for health-care organizations and a personal story from residential school survivor and Indigenous Elder Westwind Evening.
- Also in June, 40 people attended a workshop on Indigenous relationships, culture and reconciliation, entitled

"Restoring Broken Relationships: Understanding the benevolent way of life of Indigenous people, how trust was broken and our role in its restoration." The workshop featured storytelling, honour drawing, traditional drumming and singing, cedar tea and bannock, and an Indigenous art project.

- Originally developed for Inuit female survivors of family violence in Nunavut, the December workshop, "Healing Through Art: A Community Wall-Hanging" asked, "What does wellness mean to you?" Approximately 30 drop-in participants were provided with stencils and artistic materials representing internal strengths and asked to decorate a felt square for the wall-hanging.



Leonard Benoit is a nurse and community service worker. In his latest role as an Indigenous patient navigator, he supports First Nations, Inuit and Métis people through their cancer journey.

**“My goal is to create a culturally safe experience for my Indigenous brothers and sisters, and to help people through their journey. I believe that will help create the best possible outcomes for Indigenous people.”**

*Leonard Benoit,  
Indigenous patient navigator*



## A forward look: 2020

Building on the success of our 2019 activities and with continued support from the Gord Downie Fund, Sunnybrook partnered with the Indigenous Cancer Program, part of the Toronto Central Regional Cancer Program, on a six-month pilot project to improve the care and care experience for Indigenous patients with cancer.

- We hosted a series of “pop-up” smudging sessions throughout January and early February involving more than 150 staff and patients at the Holland Centre, the Sunnybrook Academic Family Health Team, the Schulich Heart Program, St. John’s Rehab and during grand rounds at the Odette Cancer Centre.
- At the pilot project launch on February 10, 2020, approximately 80 guests participated in a smudge and sharing circle with a cultural drummer/singer, traditional food from the Pow Wow Café and a special welcome from



Three sacred medicines: sweetgrass, sage and cedar (along with a feather) from the first Honouring the Journey of Well-Being: Smudge and Sharing Circle on February 10, 2020.

Sunnybrook CEO Dr. Andy Smith. A second smudge and sharing circle took place on March 10 with 50 people.

- While the pilot project events, including the smudge and sharing circles, have been postponed in light of COVID-19 restrictions, Sunnybrook remains wholly committed to re-launching the initiative as soon as possible. Our future plans include workshops on

“Stereotyping, Appropriation and Racism” and “Knowing the Land Beneath your Feet” by storyteller, writer, artist and educator Lorie Gallant. Sunnybrook’s Indigenous Community Advisory Panel is also exploring land acknowledgment signage and the introduction of hospital spaces that support the spiritual and cultural needs of Indigenous patients.



An updated rendering of the Garry Hurvitz Brain Sciences Centre shows the facility's cutting-edge design and physical space, including its expanded third floor.

## Building the future home of the Hurvitz Brain Sciences Program

The design stage of the Garry Hurvitz Brain Sciences Centre is nearing completion

Thanks to the generosity of our philanthropic community, which includes a portion of the funds raised through the Gord Downie Fund, as well as a commitment up to \$60 million from the provincial government announced in November 2019, we are moving steadily forward in our plans to construct the Garry Hurvitz Brain Sciences Centre.

Among its many features, this centre will be the largest youth mental health service in the province and a hub for adult inpatient mental health care. It will also be a global leader in neuromodulation and home to both the largest traumatic brain injury clinic in Ontario and one of the largest ALS clinics in Canada.

We have completed three of the five stages of approvals with the Ministry of Health and Long-Term Care, and are preparing for stage four, a critical step that we took earlier this year, with ground breaking anticipated this summer.

Ministry Stage		Action
<b>Pre-capital submission</b> ✓		<b>Pre-capital submission to Ministry completed, submitted and approved</b>
<b>Stage 1</b> ✓	<b>Proposal</b>	Documentation submitted to the Ministry in August 2017. Approved March 2018.
<b>Stage 2</b> ✓	<b>Functional program</b>	Documentation submitted to the Ministry in April 2018 outlining the functions, operations, staffing and spatial requirements of the building, including detailed drawings.
<b>Stage 3</b> ✓	<b>Schematic design and drawings</b>	Schematic design and detailed drawings completed by hospital and submitted for internal review. Revised design and drawings submitted to the Ministry.
<b>Stage 4</b>	<b>User review and working/tender drawings</b>	User feedback on design to be completed and detailed drawings refined for tender.
<b>Stage 5</b>	<b>Tender and final estimate</b>	Working drawings approved and tender to be issued following hospital sign-off. Final estimate completed shortly thereafter.



## Thank you



On behalf of Sunnybrook and our researchers and clinicians at the Hurvitz Brain Sciences Program, and in brain oncology and Indigenous health, we thank you for your support and continuing commitment to Gord’s legacy. Thanks to the Gord Downie Fund and inspired by his vision, passion and determination, we are transforming care and turning what was once impossible into “I’m possible.” Sunnybrook is privileged to honour Gord’s life through our work to invent the future of cancer care.

