

FALL 2025

BREAKTHROUGH

New state-of-the-art PET/CT
provides patients peace of mind:

CARMEN'S STORY



IN THIS ISSUE

Closer-to-home care in
Surrey, Kamloops and Nanaimo

Canada's national men's soccer head coach
Jesse Marsch teams up with BC Cancer

AI is advancing early lung
cancer detection + more

CONTENTS

- | | | | |
|----------|--|-----------|--|
| 4 | Carmen Hou: A patient's point of view on the game-changing Next Gen PET/CT | 10 | New BC Cancer centre in Kamloops realizes a dream of Dr. Keith Donaldson |
| 5 | Continuing Gerry Ladret's legacy in support of a new BC Cancer centre in Surrey | 12 | Facing the winds in Iceland's Westfjords to fuel ovarian cancer research |
| 6 | Two BC Cancer teams are using AI to transform cancer research and care | 14 | A Nanaimo's family's mission to bring cancer care closer to home |
| | | 15 | Canada's national men's soccer head coach Jesse Marsch teams up against breast cancer |

ABOUT THE BC CANCER FOUNDATION

The BC Cancer Foundation is the fundraising partner of BC Cancer. A world free from cancer is closer than ever before. Together, we will make it a reality.

Provincial Office: 150-686 West Broadway, Vancouver, BC V5Z 1G1
604.877.6040, Toll Free 1.888.906.2873
Charitable Business Number: 11881 8434 RR0001



FOLLOW US



BCCancerFoundation



bccancerfdn

OPENING REMARKS

If there's one thing I've learned during my soon-to-be decade at the BC Cancer Foundation, it's this: your donation changes everything.

Because of your generosity, BC Cancer researchers are pushing the boundaries of what's possible — like the recent AI-assisted endometrial cancer discovery that's set to revolutionize treatment for high-risk patients (pg. 6).

Your investment attracts and empowers the clinicians who want the very best for their patients. For example, a \$5 million campaign to equip the new BC Cancer centre in Kamloops with radiation technology is realizing the vision of Dr. Keith Donaldson (pg. 10) — who long dreamed of close to home care for his community.

The difference you make doesn't stop at our provincial borders. While your support directly impacts the 80,000 families facing cancer in B.C. each year, it extends even further — to people like Jesse Marsch, head coach of Canada's national men's soccer team, whose wife may have benefited from B.C.'s world-leading breast cancer research (pg. 15).

Cancer will touch the lives of every British Columbian. One in two people can expect to face a diagnosis in their lifetime. And as our population grows and ages, the demand for cancer care in B.C. is expected to rise by 60% over the next decade.

But together, we have the power to meet this challenge. We can bring cutting-edge scanning technology to BC

Cancer so patients like Carmen Hou gain the peace of mind that comes with earlier, more accurate detection (pg. 4), while also increasing imaging capacity for patients across B.C.

We can ensure families like the Manzinis (pg. 14) will soon receive treatment at home in Nanaimo, surrounded by the support of friends and family. And we can identify lung cancer at an earlier, more treatable stage in people who aren't typically screened (pg. 8).

We can take control in a disease that impacts all of us, and **it all starts with your donation.**



Sarah Roth
President & CEO
BC Cancer Foundation

CUTTING-EDGE SCAN TECHNOLOGY IN ACTION



Carmen Hou with her husband, Daniel, and their daughter, Evelyn.

"Lucky number 8," says Carmen Hou, who recently marked eight years since she was diagnosed with Stage 4 breast cancer. "Eight years in metastatic cancer land is a miracle in itself," she says, as only one third of patients with metastatic breast cancer survive five years past diagnosis.

The milestone was even more sweet as Carmen's most recent scan was stable and performed on BC Cancer's new Next Gen PET/CT — a state-of-the-art technology acquired thanks to donor support.

Reducing scan times from 40 minutes to just two, it offers improved image quality, enhanced diagnostic accuracy and exposes patients to less radiation.

For Carmen, who receives a scan every six months, the advanced technology brings peace of mind — "If I do have cancer, even a small amount, this new machine will pick it up earlier."

Diagnosed in 2017, when her daughter Evelyn was only a year old, Carmen

underwent a mastectomy, chemotherapy and radiation. She also participated in a clinical trial for a drug she's still on.

The Next Gen PET/CT will also allow patients to spend less time worrying, she says. During a traditional 40-minute scan, "You're just sitting there with your thoughts, and sometimes they go to a dark place. I pray the whole time, 'Please let it be stable. Please, if there is any cancer let it be found.'"

BC Cancer's busy PET/CT program serves 70 patients per day. Carmen is excited about the Next Gen's potential to increase capacity across B.C.

"Hopefully one day everyone will have access to these faster scans which will catch cancer sooner and give people more years with their family."

To support BC Cancer's Technology Transformation, a suite of best-in-class imaging, diagnostics and high-precision radiation technology — including the Next Gen PET/CT — please contact Rhea Siu at 604.675.4108 or rhea.siu@bccancer.bc.ca

Supporting Close to Home Cancer Care in Surrey

With over 30 years in construction, Gerry Ladret was dedicated to creating spaces that serve, protect and connect communities.

Through an annual donation in his memory to support cancer research and care in the Fraser region — including a new, second BC Cancer centre in Surrey — Gerry's wife Sharon is ensuring his legacy of building more than just structures — but futures — will live on.

Diagnosed with prostate cancer in 2007, multiple myeloma in 2021 and rectal cancer in 2023, Sharon credits BC Cancer for giving Gerry 17 added years with his family before he passed away in 2025.

Seventeen years in which he was able to spend quality time with his 11 grandchildren, launch his own successful construction business, and travel extensively with Sharon.

Gerry's many projects included the iconic colosseum-inspired Vancouver Public Library and the Alex Fraser Bridge, the longest cable-stayed bridge in the world at the time. One of his greatest achievements, however, was a rental suite he built in the Ladret family home.

"He was quite proud of it because each of our children lived down there before they branched out as adults," says Sharon. "Once our kids were gone, I opened a daycare in the space — he even built a playground in the yard."

To support the new BC Cancer centre in Surrey contact Scott MacDonald at 778.874.6017 or scott.macdonald@bccancer.bc.ca



Gerry with Sharon and their children, Lisa, Ryan and Jeremy.

Gerry stayed strong and positive while facing cancer due to close-to-home care supported by his family, says Sharon. Through his and Sharon's generosity, a new, second cancer centre in Surrey will afford other patients the same opportunity.

OPENING IN 2030, THE NEW BC CANCER CENTRE IN SURREY WILL:

- Feature two new PET/CT scanners to diagnose cancers earlier and bring cutting-edge clinical trials to the Fraser Valley — saving thousands of patients from having to travel to Vancouver to receive scans.
- Support the growing community with 105,000 ambulatory oncology care visits, 50,000 radiation therapy visits and 22,000 chemotherapy visits each year.
- Offer supportive care services, outdoor gardens and a spiritual space.



AI IN ACTION

Dr. Jessica McAlpine.

BC Cancer is harnessing artificial intelligence (AI) to uncover new insights and improve outcomes across multiple cancers, with multidisciplinary teams of clinicians, researchers and computational scientists driving innovations that place B.C. at the forefront of global precision oncology. Meet two BC Cancer teams using AI to transform diagnosis and treatment, turning research into real-world impact for patients.

Cracking the Code on Gynecological Cancers

The Gynecological Cancer Initiative (GCI) brings together the brilliant minds of BC Cancer and other leading B.C.-based research institutions to accelerate transformative research on prevention, detection, treatment, and survivorship of gynecologic cancers.

The PROMISE Test

One of their most transformative breakthroughs is the PROMISE molecular

test, which has revolutionized care for patients with endometrial cancer. Before PROMISE, pathologists relied primarily on visual assessments of tumours. This method had inconsistent results — meaning a patient's cancer may be interpreted differently by two expert pathologists resulting in very different treatment recommendations.

Patients could possibly be overtreated or undertreated, possibly missing an opportunity for a cure. Another consequence of this challenge was that clinical trials for new treatments lacked consistency in crucial data.

That all changed when molecular classification became the global standard of care in 2020.

"Today, you will not get an endometrial cancer diagnosis in a cancer centre without knowing your molecular subtype," says Dr. Jessica McAlpine, BC Cancer gynecological oncologist and GCI investigator. "It's changed everything — from how we operate, to what

"This was AI uncovering new knowledge — a new subtype we didn't know existed. That's the untapped potential of AI in cancer care."



Dr. Ali Bashashati.

treatments we offer, to whether a patient can be spared treatment altogether."

Solving the NSMP Puzzle

But even with PROMISE, one subtype — NSMP (No Specific Molecular Profile) — remained a challenge. NSMP makes up about half of all endometrial cancer cases and includes both patients whose cancers are at low and high risk of recurring or spreading. That's where artificial intelligence came in.

"We asked: can AI see something in these pathology images that we can't?" says Dr. McAlpine. "And the answer was yes."

Working in close collaboration, Dr. McAlpine and Dr. Ali Bashashati, a computational scientist with the GCI, developed an AI to model identify a previously unknown high-risk subgroup within NSMP. This discovery will help inform how patients are treated and how their prognosis is understood.

"This isn't just AI helping pathologists in their work," explains Dr. Bashashati. "This is AI uncovering new knowledge — a new subtype we didn't know existed. That's the untapped potential of AI in cancer care."

The team is now preparing to launch a

pilot program to test how the AI-powered NSMP subgroup diagnostic tool can be integrated into real-world clinical workflows across the province.

B.C.'s Leadership in AI Innovation

Beyond endometrial cancer, the GCI is expanding its modular, "plug-and-play" AI approach across more than 10 cancer types, positioning B.C. as a leader in AI-driven cancer research in Canada and on the global stage.

"We've built a system where AI components can be reused across different cancers," says Dr. Bashashati. "By building smarter — designing modular AI components like Lego blocks — we can quickly adapt them for new applications, accelerating development and scaling across projects without needing impractical levels of new staffing, infrastructure or financial resources."

"We're not just thinking about what's possible," adds Dr. McAlpine. "We're thinking about how to implement it and how to make it real for patients."

This research is more urgent than ever with incidences and mortality rates in some gynecological cancers, such as uterine cancer, on the rise, especially among certain populations.

Pioneering Early Lung Cancer Detection

At the forefront of lung cancer research, BC Cancer is redefining early detection through a powerful blend of AI, advanced imaging and collaborative innovation. With a focus on precision medicine, their work is not only saving lives, it's setting the global standard.

A Provincial Model for Screening

Dr. Calum MacAulay, a distinguished scientist at the BC Cancer Research Institute, has spent his career developing technologies for use in clinical practice. "My motivation is creating new tools that improve patient care," he says. His work spans biomedical optics, radiology, radiomics and deep learning to detect cancer early, when it's most treatable.

Dr. Ren Yuan is a radiologist and translational scientist who was part of the research team that laid the foundation to create B.C.'s provincial lung cancer screening program using low-dose CT scans. Launched in 2022 with \$2 million in BC Cancer Foundation donor support, it was the first of its kind in Canada.



Dr. Ren Yuan.

The program has been a remarkable success, screening over 15,000 British Columbians with 70% of cases detected at Stages 1 and 2. Prior to the screening program, only 30% of cases would be caught in those early stages.

Now, the team is building on the success of the program to further improve outcomes. New questions have emerged, such as how often follow-up screening is needed and how to better predict who will respond to certain treatments, explains Dr. Yuan.

AI and Next-Generation Imaging

"AI is helping us go beyond what the human eye can see," says Dr. MacAulay of their work developing an AI model to analyze subtle patterns in the screening program's CT scans to predict which lung nodules are likely to become cancerous. The goal is more personalized care — catching aggressive cancers earlier and reducing unnecessary scans for lower-risk patients.

Another exciting development is BC Cancer's new Photon Counting CT scanner — a revolutionary advancement in medical imaging that represents a significant leap forward in diagnostic precision and patient safety.

This technology produces sharper, more detailed images, while also significantly reducing radiation exposure to patients, says Dr. Yuan. This makes it especially valuable for cancer screening where minimizing radiation dose is crucial.

Dr. MacAulay likens the improvement to "upgrading from a black-and-white camera to a colour one," emphasizing how this next-generation system provides richer information about tissue composition and potentially disease characteristics. The application of AI to the images from the scanner is a new exciting opportunity.

BC Cancer was the first in Canada to acquire this scanner, thanks to a \$3 million investment from the Leon Judah Blackmore Foundation via the BC Cancer Foundation. This technology opens new doors for research, especially in understudied populations like never-smokers.

Shaping the Future of Care

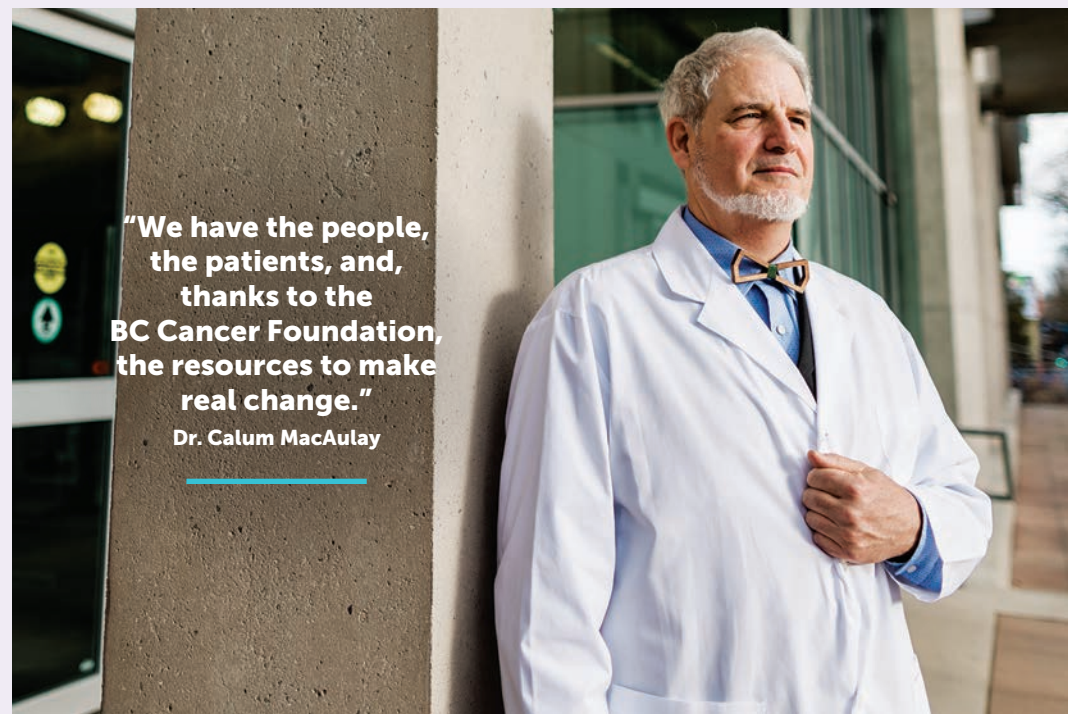
The lung cancer research team is a diverse group of scientists, graduate students, postdocs, computer scientists and engineers, all working to advance innovation. "It's a truly collaborative

environment," says Dr. MacAulay. "We're combining radiology, pathology, optics and AI to create tools that can be implemented in clinical practices."

BC Cancer's unique provincial model gives it an advantage in research. "We're not the biggest, but we're one of the most effective," he notes. "We have the people, the patients, and, thanks to the BC Cancer Foundation, the resources to make real change."

Looking ahead, the team hopes to launch pilot trials for never-smoker screening within five years and expand personalized treatment models. "Everything we do is about precision," says Dr. Yuan. "From screening intervals to therapy decisions, we're working toward a future where every patient's care is tailored to their unique profile."

To donate to help drive AI-supported innovation in lung and gynecological cancers please contact Elissa Morrisette at 604.707.5992 or elissa.morrisette@bccancer.bc.ca



**"We have the people,
the patients, and,
thanks to the
BC Cancer Foundation,
the resources to make
real change."**

Dr. Calum MacAulay

BC CANCER CENTRE IN KAMLOOPS A DREAM OF LOCAL ONCOLOGIST



Dr. Donaldson, with Gay and their daughters, at their beloved Shuswap Lake.

If you were treated for cancer in the Thompson-Cariboo-Shuswap region between the late 1970s and early 2000s, there's a good chance you were cared for by the late Dr. Keith Donaldson.

A medical oncologist and the head of the Kamloops cancer clinic, Dr. Donaldson tirelessly advocated for a full-service cancer centre in Kamloops to increase local access to life-saving radiation therapy — treatment that requires highly specialized facilities only available at BC Cancer centres.

Now, with construction underway on a new BC Cancer centre in Kamloops, that vision is nearing reality.

Although Dr. Donaldson passed away in 2022, after facing prostate cancer himself, he never wavered in his conviction that cancer care should be accessible, meeting patients where they

live, surrounded by the support of their family.

For many years, this steadfast belief led him to make monthly road trips to Vernon, Kelowna and Penticton, which at the time lacked their own oncologists, to save his patients the trip.

But even with this busy schedule, he always put family first, according to his wife, Gay, and their daughters, Victoria, Sally and Jill. "He came back from one of his Okanagan trips with a really cool camper van — it was a total surprise to all of us," says Sally.

All the better to explore his beloved B.C. Having emigrated from Scotland in 1969, he and Gay and their girls fully embraced the Canadian lifestyle — with season tickets to the Kamloops Blazers, skiing at Sun Peaks and swimming and boating in Shuswap Lake.



Dr. Donaldson fully embraced B.C., from its natural beauty to championing cancer care for its communities.

Jill says growing up, her dad struck the perfect balance between being present at home and remaining deeply committed to his patients.

"I remember picking him up after work once, and a family was waiting outside his office to speak with him. Dad said, 'I'm sorry, I'm late for dinner but my number is listed. Can you give us an hour for a family dinner and give me a call later this evening?'"

The son of a former patient similarly credits Dr. Donaldson's blend of professional excellence and compassionate care for comforting him when his father was diagnosed and then giving them 19 years of more memories together, saying, "His name and work will always be remembered by those he saved and all of their loved ones."

With cancer cases in Kamloops and the surrounding region expected to increase by a third over the next 20 years, a new BC Cancer centre will deliver the close-to-home care Dr. Donaldson dedicated his career to providing his patients with.

SCHEDULED TO OPEN IN 2028, A NEW BC CANCER CENTRE IN KAMLOOPS WILL:

- Bring radiation therapy to Kamloops for the first time — providing approximately 16,500 treatments for up to 1,200 patients (and 7,500 consults and follow-up appointments) in the first year — reducing the need for patients to travel to Kelowna or the Lower Mainland for treatment.
- Offer a computerized tomography scan (CT) simulator — a diagnostic CT scanner combined with specialized planning software, and a laser marking system, to create precise radiation treatment plans that accurately define the tumour's location and shape while minimizing damage to surrounding healthy tissues.
- Include diagnostic magnetic resonance imaging (MRI) and an outpatient oncology ambulatory care unit.

To donate or learn more about the BC Cancer Foundation's \$5 million campaign to support cutting-edge technology and radiation therapy at the new BC Cancer centre in Kamloops please contact Mischa Mueller at 250.979.6652 or mischa.mueller@bccancer.bc.ca



Against the Wind to Improve Ovarian Cancer Outcomes

Christian and Matt tackled Iceland's extreme weather to raise funds for ovarian cancer.

BC Cancer “moved mountains” to ensure a breast cancer diagnosis didn’t stand in the way of Hannah and Christian Jones’ wedding. In gratitude, Christian tackled some challenging landscape of his own — a 925 km self-supported bikepacking expedition across Iceland’s Westfjords to raise funds for cancer research.

“Cancer has cast a long shadow over Hannah’s life, reaching back to her childhood. Her mother battled through two rounds of breast cancer, and she lost her grandmother to the disease,” says Christian Jones.

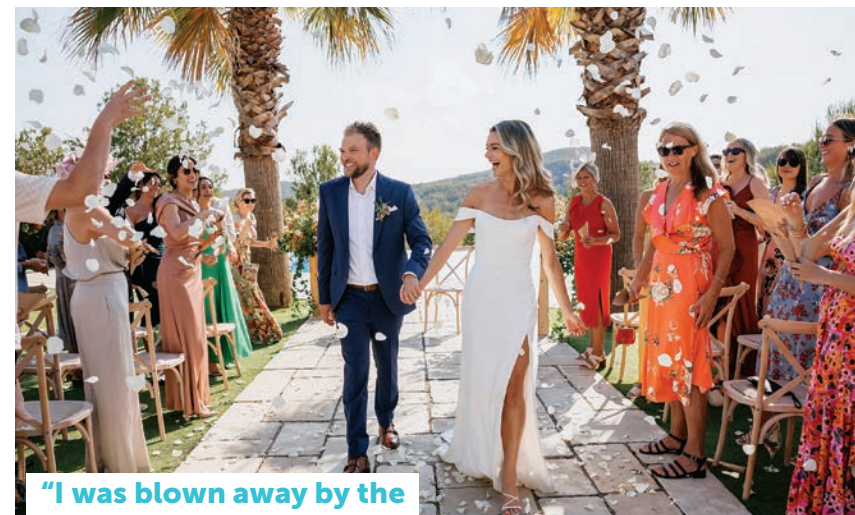
But nothing prepared the family for 2023, when Hannah, 29, and her sister Bethany, 25, were both diagnosed with breast

cancer. Both had tested positive for a BRCA gene mutation but even with the increased hereditary risk, their chances of developing breast cancer before age 30 was only 3%.

For Hannah and Christian, the diagnosis came just two months prior to their June nuptials in Spain.

“All of our guests had bought their plane tickets and accommodation. We’d paid all the vendors. Initially, we were too afraid to tell anyone,” recalls Christian.

Hannah’s oncologist “moved mountains” to ensure the wedding could take place, says Christian — scheduling Hannah for an immediate lumpectomy, which allowed her to heal in time to travel and safely delay more invasive treatment.



“I was blown away by the level of care and treatment that BC Cancer provided — it’s just one of the reasons I wanted to give back.”

Christian Jones

After Bethany was diagnosed in August, the sisters faced double mastectomies, chemotherapy and fertility preservation treatments together. Both are now cancer-free, but as BRCA carriers their risk of developing ovarian cancer is 50%.

“While breast cancer survival rates have improved thanks to research, ovarian cancer remains vastly underfunded with limited treatment options,” says Christian, and unfortunately seven in 10 women won’t live five years past diagnosis.

In August 2025, Christian and his friend, Matt Braun — who built their custom bikes — raised \$28,000 through the Westfjord Charity Ride to help fund advances in early detection and treatment so that future generations can live without the fear of ovarian cancer.

The nine-day grueling ride through one of Iceland’s most remote regions included traversing rough terrain, unpredictable weather and over 15,000 metres of elevation gain.

Hannah and Christian at their wedding in Spain.

“It’s a part of the country that even Icelandic people don’t really visit because it is so inhospitable and a challenge to get around,” says Christian.

The cycling duo became known as ‘the Crazy Canadians’ after battling flattening winds that at times reduced their speed to just 7 km an hour. Forced to seek shelter in a roadside ditch and push on for hours at a crawl, they finally rolled into town — only to be told by incredulous locals that the area was under a ‘code orange’ do-not-travel advisory.

But for Christian there’s a powerful metaphor in facing gale-force winds to honour his wife and sister-in-law’s strength and perseverance and to raise funds for life-saving B.C.-led cancer research and care.

“Both girls were absolute soldiers during the whole ordeal. And I was blown away by the level of care and treatment that BC Cancer provided — it’s just one of the reasons I wanted to give back.”

To support the 300 women each year in B.C. who are diagnosed with ovarian cancer please contact Becky Yost at 604.707.5926 or becky.yost@bccancer.bc.ca

New BC Cancer Centre in Nanaimo



BC Cancer – Nanaimo will save patients like Joe and Roberta the burden of travelling to Victoria for treatment.

"Joe goes through and all of a sudden this alarm goes off," laughs Roberta Manzini of the time her husband's brachytherapy — radioactive seeds implanted in the tumour to destroy cancer cells — set off a detector on the passenger ferry from Victoria to Seattle.

Despite the mishap, brachytherapy meant Joe's radiation therapy for prostate cancer was done in one treatment. Unlike Roberta, whose standard radiotherapy for esophageal cancer required her to travel from Nanaimo to Victoria for six weeks.

Roberta is grateful to friends and family who provided rides and a place to stay in Victoria. Since her treatments took place in June and July, they avoided dangerous winter driving conditions — though there was one unfortunate encounter with a deer.

"It took the back bumper off. We went to a gas station and Joe got somebody to put a screw in and they taped the car up, and I still made my 10 a.m. appointment."

Over 6,000 people are newly diagnosed with cancer each year on Vancouver Island. For half that can mean up to eight weeks of daily travel to Victoria to receive radiotherapy as the

treatment requires highly specialized facilities only available at BC Cancer.

Joe and Roberta are thrilled BC Cancer – Nanaimo will help ease the journey for local patients. After all, the adventurous pair, in their 80s and 90s, prefer to save their energy for more pleasurable trips with their grandchildren — Roberta was ziplining in Switzerland just prior to her diagnosis and now that she's doing well, they have plans for an African Safari.

SCHEDULED TO OPEN IN 2028, BC CANCER – NANAIMO WILL:

- Offer radiation therapy, a PET/CT scanner, a CT simulator and an oncology ambulatory care unit.
- Complete 20,000 radiation treatments annually, saving over 1,000 patients a year from the Nanaimo area from having to travel to Victoria for treatment.

To help expand access to cancer care on Vancouver Island by bringing state-of-the-art equipment to BC Cancer – Nanaimo please contact William Litchfield at 250.667.8690 or william.litchfield@bccancer.bc.ca

Supporting the Home Team

When Canada's national men's soccer team takes the field in Vancouver during the FIFA World Cup in 2026, patriotic spirit will soar. But head coach Jesse Marsch believes there's another team British Columbians can stand behind with equal pride — BC Cancer.

After his wife was diagnosed with breast cancer in 2021, Jesse knows the importance of supporting cancer research and care. He recently discussed BC Cancer's new cutting-edge imaging technology and world-leading work with Dr. Nathalie Levasseur.

Jesse: *Catching my wife Kim's breast cancer early was crucial to her recovery. How is BC Cancer enhancing early detection for patients?*

Dr. Levasseur: Mammograms are critical in early detection, however, small tumours can be hidden or masked in the 43% of women who have dense breast tissue.

BC Cancer's new donor-supported contrast enhanced mammography (CEM) unit captures two images: one similar to a conventional mammogram and another that highlights blood flow, a crucial indicator of cancer, making it significantly more adept in detecting cancers that might otherwise be missed in women with dense breast tissue.

Not only will CEM expand and improve imaging for people with dense breasts, it will also increase overall breast imaging capacity in B.C.

Jesse: *How are you supporting an increase in young people diagnosed with breast cancer?*

Dr. Levasseur: We launched an Adolescent and Young Adult (AYA) program to offer young people more



Dr. Nathalie Levasseur and Jesse Marsch.

personalized supportive resources as they face unique challenges. AYA supports include fertility preservation and hereditary counselling to screen for hereditary mutations, which can increase a patient's risk of other cancers and require decisions around preventative surgeries such as mastectomy and oophorectomy (ovary removal).

Jesse: *How is BC Cancer research redefining the world's understanding of breast cancer?*

Dr. Levasseur: Our team's groundbreaking discovery of early changes in healthy breast cells is providing critical insight into the origins of breast cancer, laying the foundation for more accurate early detection and prevention strategies.

B.C. is also at the forefront of tackling some of the most challenging forms of the disease, such as a study I'm leading in triple-negative breast cancer (TNBC), one of the most aggressive and deadly subtypes. My research could help personalize care for patients, saving lives here in B.C. and globally.

To support breast cancer research and technology at BC Cancer, please contact Rhea Siu at 604.675.4108 or rhea.siu@bccancer.bc.ca

A photograph of an elderly man with a white beard and a woman with dark hair sitting at a white table. They are both looking at a laptop screen. The man is on the left, wearing a light blue button-down shirt. The woman is on the right, wearing a beige button-down shirt. In the background, there is a window with a shelf holding some small figurines, and a framed picture of two people on the wall.

Richard Hewitt
Legacy Donor

Sara Pedlow
Legal Advisor

HOPE LIVES ON THROUGH YOU.

Make a lasting impact on cancer care
in B.C. with a planned gift in your will.



Scan here to learn more
bccancerfoundation.com

**BC
CAN
CER** FOUNDATION