

May 27, 2024

FOR IMMEDIATE RELEASE

Ground-breaking pilot project poised to transform breast cancer surgery in Alberta

An innovative magnetic localization project will dramatically improve cancer surgery and the patient experience across the province.

CALGARY, AB – **Calgary Health Foundation and Alberta Cancer Foundation announce \$5.7M toward an innovative breast cancer surgery pilot project.** The Sentimag Project, made possible through the support of Calgary Health Foundation donors and a significant gift from Alberta Cancer Foundation, and because of the determination of one Calgary-based oncologist, is poised to revolutionize the way Albertans experience breast-preserving cancer surgery.

In stark contrast to hook wires, a magnetic seed called Magseed can be inserted at the tumour site and sit safely in the breast indefinitely without risk of dislodging or pain, allowing for less urgent and complicated scheduling, and fewer imaging appointments and invasive procedures. Painful radioactive injections, often quoted as being worse than the surgery itself, are eliminated by mapping the lymph nodes during the surgery while under anesthetic.

“We are proud to be funding the Sentimag Project with the support of our donors and Alberta Cancer Foundation. Our donors repeatedly tell us they value funding advancements that will make a tangible difference on the patient experience; the pilot project fulfills this wish.” Murray Sigler, CEO & President, Calgary Health Foundation

The funding of breakthroughs in surgery and surgical care is one of Calgary Health Foundation’s top priorities which made backing the project an easy choice.

“The initiative will change the way Alberta women experience cancer surgery. We hope that by funding surgery innovation, tangible improvements will be made to the patient experience, making breast cancer care as comfortable and effective as possible.” Rebecca Bowman, Vice President, Philanthropy & Chief Development Officer

Close to half of the funding for the pilot is thanks to Alberta Cancer Foundation, an investment which, in the words of their Board Vice Chair, was an easy one to make.

“We are thrilled to support the Sentimag Project, a revolutionary step forward in breast cancer treatment. Investments in innovative technologies like Magseed not only help advance the precision and effectiveness of cancer surgeries but also help ease the patient experience. This project truly aligns with the Foundation’s commitment to transforming cancer treatment and ensuring the best possible care for Albertans facing cancer.” Barbara Munroe, Board Vice Chair, Alberta Cancer Foundation.

“Marking the tumour for surgical excision with hook wires that protrude from the breast and injection of painful radioactive tracer prior to surgery have been standard practice for decades but are clearly not patient focused approaches. The good news is we now have other ways to identify these lesions with

fewer invasive procedures and much less stress than before. This technology allows us to be efficient with our healthcare resources to improve the patient experience. We are very excited about the thought of bringing it to Calgarians, develop workflows and evaluate its implementation to provide data supporting its use for all women in Alberta.” Dr. May Lynn Quan, Medical Director of the Calgary Breast Health Program, Scientific Director of SPHERE (Strategies for Precision Health in Breast Cancer)

“There have been amazing advancements in breast cancer care resulting in better outcomes with less invasive surgery and de-escalation of treatments like chemotherapy. The downside is that the patient journey is now more complex with many moving parts which can be daunting and stressful. Localizing the tumour and mapping lymph nodes is one piece of a complicated process for women which we can easily improve with new technology. By taking advantage of opportunities to use devices like the Sentimag system, we can enhance the patient experience and remove strain from the healthcare system.” Dr. Quan.

Future aims include reducing invasive procedures even further by leaving a Magseed in at the time biopsy, allowing patients to go directly to surgery or chemotherapy. Quan hopes the pilot will irrefutably prove the benefits of magnetic markers so they become the standard of care throughout the province.

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FAST FACTS

About Calgary Health Foundation

Calgary Health Foundation is a community-based charity raising funds to advance our city's healthcare. We find opportunities to invest in excellence across the entire healthcare system, all to enhance outcomes and improve lives. calgaryhealthfoundation.ca

About the Alberta Cancer Foundation

Creating more moments for Albertans facing cancer by inspiring our community to give to innovation in detection, treatment and care. Albertans helping Albertans is at the core of everything the Alberta Cancer Foundation does. As the official fundraising partner for every Alberta Health Services cancer centre in the province, our very purpose comes from our desire to create more moments for all Albertans facing cancer, no matter where they live or the type of cancer they are facing. From the mountains in Canmore to the canola fields in Lloydminster, we make life better for Albertans facing cancer by supporting world-class research and patient care, close to home. Learn more at albertacancer.ca.

Traditional hook wires versus novel magnetic markers

Pinpointing mammogram-detected tumours—too small to be located through manual examination alone—has been notoriously difficult when a patient’s wish is to preserve her breast. Traditional methods involve the patient visiting an imaging facility on the morning of surgery to have a radiologist insert a hook wire. The wire does its job to mark the tumour, but it protrudes from the breast making it uncomfortable, invasive, and at risk of dislodging. She also needs a painful radioactive liquid injected into the breast to map which lymph nodes to sample within 24 hours of surgery.

The patient must then travel to a surgical centre, sometimes across the city, within hours of the wire insertion to have the tumour removed, all without accidentally moving the wire. The process is logistically cumbersome, trying, and very uncomfortable. The pilot project aims to remove these stressors through a revolutionary alternative magnetic based system called Sentimag.

The wire is replaced with a seed the size of a grain of rice called Magseed, which can be inserted weeks or months in advance, even at the time of biopsy. Instead of painful needle injection with radioactive tracer to identify lymph nodes, a magnetic liquid called Magtrace can be injected during the operation while under anesthesia.

About Magseed®

Magseed® is a tiny metallic marker, or seed, resembling a grain of rice designed to mark breast cancer tumours. Made from surgical grade stainless steel, the marker allows surgeons to magnetically locate the tumour using a probe with less damage to breast tissue. Magseed is an innovation Endomag, a company founded in 2007 out of research conducted at the University College London (UCL) and the University of Houston. Endomag’s mandate is to develop technologies that allow physicians to offer woman a better standard of cancer care. endomag.com

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