Breakthrough cancer technology brings new hope to Alberta Radiosurgery Centre patients

Submitted by Trish Filevich

The first of its kind in Canada, the Alberta Radiosurgery Centre (ARC) is a unique program that offers dedicated stereotactic treatments for brain and extracranial sites. With two dedicated radiation oncologists, two dedicated neurosurgeons, and an additional neurosurgeon specializing in radiological neurosciences and AVMs, ARC offers treatment to patients with a variety of abnormalities in the brain, utilizing cutting edge technology and a collaborative approach between a variety of specialties. In the future, ARC will also treat sites elsewhere in the body.

In November 2004, ARC became the first site in Canada to offer Novalis?Shaped Beam Surgery to cancer patients. Fast and virtually painless, this new non-invasive technology will help better treat Albertans with cancerous and non-cancerous tumors in the brain, spine, prostate, liver and lung.

"This is a breakthrough in cancer treatment for our patients," explains Dr. Peter Craighead, Medical Director of the Alberta Radiosurgery Centre. "Use of the Novalis technology significantly reduces the risk of damaging areas that control important memory, emotion, speech and muscle movement. With this new tool, we can target the treatment of tumors in sensitive areas we couldn't reach before."

Novalis features image-guided radiosurgery for high precision treatment of body targets. Its X-ray-based localization technology allows physicians to localize tumors with sub-millimeter accuracy and to position patients automatically and with a higher degree of precision than previously possible. At the core of the system is a beam-shaping device with fine 3mm central leaves that allows Novalis to accurately mirror the contour of the tumor from any angle.
Unlike other radiosurgery systems that can only deliver radiation in a round beam - potentially damaging healthy tissue and causing debilitating side effects - the new shaped beam method delivers a precise, non-invasive dose of high-energy radiation to shrink or control the growth of a tumor by killing tumor cells or interfering with their ability to grow. This means the most advanced tumors located deep in the brain or body, which were previously considered inoperable, can now be treated effectively. The patient remains awake throughout the treatment and goes home the same day, which enables them to return to their daily routine faster, without the long recovery time usually required after traditional surgery - offering patients hope they never had before.

This is the first and only Novalis system in Canada and one of 55 in the world. Calgary is the only centre of excellence for Novalis in Canada, and one of five in North America. This acknowledges Calgary as a leading-edge centre for radiosurgical treatment. It is estimated 200 patients will receive treatment in the first year and approximately 600 patients per year by the third year of operation.

"We are all proud to have invested our time and money into bringing this important Novalis technology to Calgary," says Janet Umphrey, Vice President Northwest Community Portfolio, Calgary Health Region. "Its arrival is a direct result of the strong partnership between the Alberta Cancer Board, the Calgary Health Region, the Calgary Health Trust and the generosity of many local donors."

The Novalis technology was developed by BrainLAB Inc., a worldwide leading innovator of image-guided surgery and stereotactic radiosurgery systems.

"This new treatment technology will significantly expand the level of care we can provide to cancer patients we couldn't help before, says Dr. Tony Fields, Vice President, Medical Affairs and Community Oncology, Alberta Cancer Board. "Working together to put advanced cancer technology into the hands of our cancer care specialists is our number one priority."

To learn more about the Alberta Radiosurgery Centre, visit [www.albertaradiosurgery.ca](http://www.albertaradiosurgery.ca) or call (403) 521-3800.

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