



BACKGROUNDER: Varian Edge™ Stereotactic Body Radiation Therapy

November 2017

In November 2016, Health Sciences Centre Winnipeg deployed the Varian Edge, an advanced “stereotactic body radiation therapy” system. The system was officially unveiled to the media on November 7, 2017, at an event to honour Paul Albrechtsen, who funded the purchase of the machine.

What is stereotactic body radiation therapy?

Stereotactic body radiation therapy (SBRT) is a non-surgical, minimally invasive way of treating certain types of cancerous and benign tumours.

How does it work?

Beams of radiation are focused on the tumour from different positions around the body. The beams meet at the tumour, so the tumour itself receives a high dosage of radiation while the healthy tissue around the tumour is less affected. This technique allows for higher doses of radiation, greater precision, and fewer treatments.

What parts of the body can the Edge treat?

For now, HSC’s Edge – one of only a few in Canada – treats lung and spine lesions and tumours. Up to October 31, 84 patients had received a combined total of 358 treatments with the Edge. It is anticipated that HSC and CancerCare Manitoba will also use the Edge to treat liver and prostate lesions and tumours. It is expected that the Edge will be able to deliver over 600 treatments a year.

HSC has also been using the Gamma Knife to treat brain tumours since 2003. Its stereotactic radiosurgery (SRS) technology is similar to the Edge’s SBRT technology. About 3,300 patients have been treated with the Gamma Knife.

Who is involved?

The Edge program at HSC Winnipeg is a collaboration between the hospital’s Surgery Program and CancerCare Manitoba, supported by the Winnipeg Regional Health Authority and the provincial Ministry of Health, Seniors and Active Living.

The Edge is located in the Albrechtsen Centre for Image-Guided Radiosurgery on the lower floor of the Kleysen Institute for Advanced Medicine, 710 William Avenue.

How much did the Edge cost?

Mr. Albrechtsen’s \$5 million gift covered the purchase and installation of the Edge. The program receives more than \$1 million of annual operating funds from Manitoba Health, Seniors and Active Living via Winnipeg Regional Health Authority.

Is the Edge being used for research?

We are very close to launching an exciting new research project using Calypso, an “add-on” motion-tracking system that promises to deliver even more precise treatment to organs that move when the patient breathes. HSC and CancerCare MB physician researchers are working together to lead this research effort.