

EDGE

A PATIENT'S
GUIDE TO EDGE™
RADIOSURGERY
TECHNOLOGY

WMCC
West Michigan Cancer Center

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INTRODUCTION

When you or someone you know has cancer, you have many important questions about doctors, hospitals and treatments. This guide will give you an overview of an advanced treatment option known as Edge radiosurgery.

Edge radiosurgery uses non-invasive tumor-destroying radiation to treat cancer anywhere in the body where radiation is indicated while minimizing effects on surrounding healthy tissue. Developed by Varian Medical Systems, a world-leader in radiation oncology solutions, this powerful advanced technology is very precise, accurate and fast. In fact, most treatments take less than 15 minutes. Perhaps more importantly, the Edge system is dedicated to radiosurgery and is being used with patients who previously were not good candidates for surgery.

As you read this guide, we hope that you'll gain a better understanding of this new technology and how it may be able to help you. Of course, your doctor will be your best resource going forward and will help determine if the Edge radiosurgery system is right for you.

WHAT IS RADIOSURGERY AND HOW DOES IT WORK?

As technical as it is, the underlying idea of radiosurgery is really pretty simple: high-intensity beams of radiation are used with great precision and accuracy to destroy cancer cells within 1-5 treatment sessions as opposed to several weeks with radiotherapy. When you undergo an Edge™ radiosurgery treatment, these beams damage cancerous cells while minimizing exposure to nearby healthy cells. When the cancerous cells are hit by the very precise beams, their ability to reproduce is compromised and they eventually die, causing the tumor to shrink. However, when normal cells are exposed to radiation they typically have the ability to repair themselves.

Advances in technology, like the Edge radiosurgery system, have provided innovative treatments for people with cancer. Stereotactic body radiotherapy (also known as SBRT) and stereotactic radiosurgery (SRS) are two of the most important of these treatments.

It is important to know that radiosurgery, including Edge, is not appropriate for all types of cancer. Actual treatment times may vary, and treatment courses may be completed within a day or over the course of several days depending on your particular case. Serious side effects are typically treatment site specific and can include swelling at the treatment site, lymphedema and secondary cancer. Talk to your doctor about what you can expect from your treatment and to find out if treatment with the Edge radiosurgery system is right for you.





SO WHAT IS EDGE?

The Edge radiosurgery system from Varian Medical Systems is designed to effectively treat a wide range of cancer including those in the lung, brain and spine.

Through its progressive technology, the Edge radiosurgery system offers an alternative to traditional surgery for cancer patients. This aggressive procedure enables surgeons to deliver powerful, precise treatments to radiosurgery candidates—no incisions necessary. Advanced mobility enables surgeons to deliver these high-intensity treatments to tumors that are typically difficult to reach surgically. It also has very sophisticated respiratory monitoring systems that help compensate for breathing in order to help reduce the risk to surrounding healthy tissue. The ability to deliver higher doses of radiation at great speed allows most treatments to be given quickly and without compromising accuracy.

Modern cancer treatment

Varian's Edge radiosurgery system is modern cancer treatment technology that is minimally invasive to a patient's body and daily life.

This system offers cancer patients a fast, effective surgical option without an incision or the need to recover in a hospital room.

Fast, focused treatments

Edge's knifelike, high-intensity beam accurately targets and destroys tumors.

Edge may reduce the risk to surrounding healthy tissue with a real-time tracking system that enables surgeons to detect slight tumor movement—keeping treatment focused on the target.

Comfort and convenience

With each treatment often lasting less than 15 minutes, patients may be able to quickly get in and out of surgery and back to their lives thanks to this advanced, minimally invasive system.

Surgeons can rely on Edge to deliver fast and accurate cancer treatment so that patients can enter their procedure with confidence.

By enabling surgery without an incision, Edge radiosurgery can typically be used for outpatient procedures.

Yes, you are being treated with very powerful technology, but remember that you are also being treated by an experienced and caring group of medical professionals. These people put your care and comfort first, and the Edge system's ease of use and smooth operation allows them to focus on what matters most - you.



YOUR EDGE RADIOSURGERY TREATMENT

There are several steps to an Edge radiosurgery treatment: Tumor visualization, planning, treatment delivery, imaging during treatment and follow-up care.

Tumor Visualization

During this process, 3-D images are generated of your tumor. This allows your doctor to know the size, shape and location of the tumor. Knowing this, they can best determine the dose of radiation you'll need.

Planning

Once the specifics of the tumor are understood, a treatment plan is developed that specifies the correct dosage (in other words, how much dose is delivered), where it is delivered and a schedule for treatment. You'll work with highly trained medical specialists who will use sophisticated treatment planning software to develop a three-dimensional "picture" of the area of your tumor. They will then determine the amount of radiation the tumor should receive as well as from what angles.



Treatment

Treatment delivery is the implementation of the plan. A therapist will guide you into a treatment room and help position you on a treatment table (also known as a couch). Just prior to treatment, you will be imaged so that the therapist can verify the tumor location. Afterwards, the therapist will leave the room, and your treatment will begin. The machine that creates the beam will rotate 360 degrees around you. You'll be in constant contact with the therapist who is running the treatment. Sometimes the first Edge treatment will take a little longer than your following treatments since there may be some additional setup that is required.

Imaging (During Treatment)

Throughout treatment, advanced imaging technology enables your doctor to view your tumor from virtually every angle, noting its location at all times. The ability to do this enables Edge's high-dose treatments to be delivered with high precision.

Follow-up Care

After the procedure, you'll undergo follow-up care with your doctor. During this time, he or she will monitor your progress and recovery. This is another opportunity to ask your doctor any questions, raise concerns or inquire about your treatments and status of your health.



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Varian Medical Systems is a world-leading supplier of radiation oncology systems for treating cancer. Its integrated medical systems include linear accelerators, accessories and software for planning and delivering the most sophisticated radiosurgery treatments available.

For further information on Edge, visit [\[website\]](#).

This brochure is intended as a general guide to Edge radiosurgery. It does not replace a full discussion with your doctor and healthcare team. It is important to know that radiosurgery, including those performed on the Edge system, is not appropriate for all types of cancer. Treatment sessions may vary in complexity and time. Typical radiosurgery treatments can be delivered during one day or for a series of days depending on your particular case. Talk to your doctor about what you can expect from your treatment and to find out if treatment with the Edge system is right for you.

Intended Use Summary

Varian Medical Systems' linear accelerators are intended to provide stereotactic radiosurgery and precision radiotherapy for lesions, tumors, and conditions anywhere in the body where radiation treatment is indicated.

Safety

Radiation treatments may cause side effects that can vary depending on the part of the body being treated. The most frequent ones are typically temporary and may include, but are not limited to, irritation to the respiratory, digestive, urinary or reproductive systems, fatigue, nausea, skin irritation, and hair loss. In some patients, they can be severe. Treatment sessions may vary in complexity and time. Radiation treatment is not appropriate for all cancers.

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