

EDGE



RADIOSURGERY WITH A NEW EDGE.

Precise, efficient and integrated.

Three words that embody the Varian Edge™ radiosurgery system. Combined they have the potential to provide unmatched clinical care to patients and can make radiosurgery an option for patients. And Edge is the only system that integrates the highest dose rate with non-ionizing, direct and real-time guidance for target location.

Edge signifies a new era

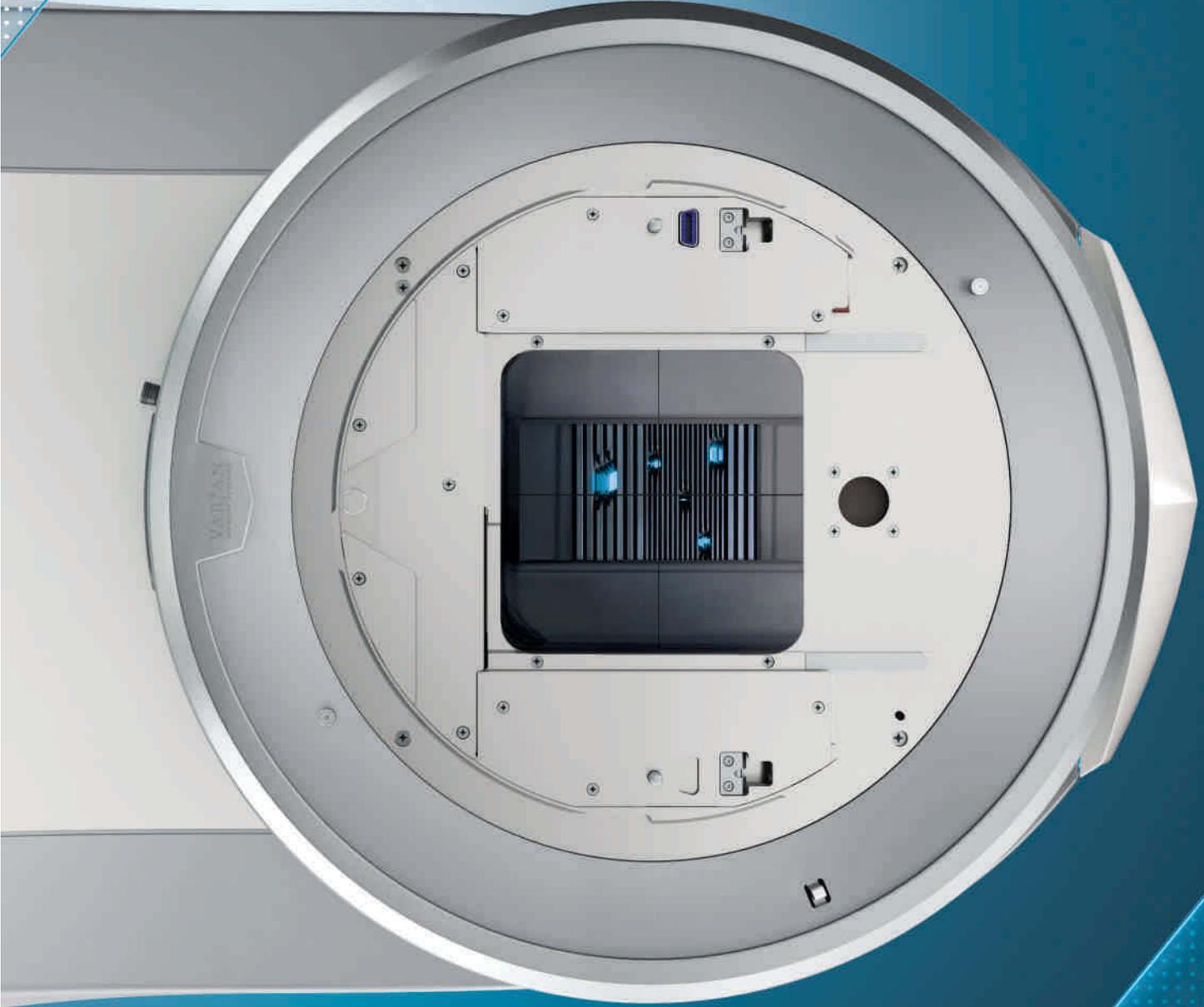
for radiosurgical procedures with extensive, real-time tracking capabilities. Fully equipped with powerful tools, this system puts enhanced treatment options in the hands of surgeons while expanding treatment possibilities for a range of conditions.

A streamlined transition

from surgery, Edge offers surgeons the ability to pinpoint the target and deliver highly focused treatments, in fewer sessions, at a noticeably fast rate, while minimizing the dose received by surrounding healthy tissues.

Dedicated to radiosurgery,

Edge reduces the overall time and resources required for surgery when compared to traditional methods. This can lead to an increase in the volume of procedures performed and lower per procedure costs for the hospital.



TREATMENT AS SHARP AS A SCALPEL.

Accurate delivery of highly conformal dose distributions and steep gradients is the hallmark of the Edge radiosurgery system. Every step of the Edge treatment is characterized by maximum accuracy so treatments can be delivered with confidence. The use of Monte Carlo equivalent algorithms for dose calculations, extra-fine 2.5mm MLC leaves for beam shaping, real-time tracking anywhere in the body for direct target localization, and beam specifications that are amongst the tightest in the industry, all join together to put treatment with Edge in a category of its own.

The increasing trend towards radiosurgery with higher dose and fewer fractions means that monitoring motion throughout treatment becomes paramount. Edge is the only system that tracks the patient's target in real-time for intracranial and extracranial treatments, precisely calculates patient movement in all six-degrees of freedom, and monitors respiratory motion. Automation helps guide and maintain the accuracy of treatment delivery by continually

tracking patient movements and adapting treatments as the target moves during the procedure, thereby decreasing the risks of unwanted dose to adjacent organs and tissues. Real-time tracking can be implemented through internal transponders or a non-invasive, markerless patient setup and respiratory surface imaging technology. This provides exceptional speed and accuracy improving the efficiency and precision of radiation treatments.



FAST TREATMENTS, ACCELERATED PRODUCTIVITY.

Leveraging the highest dose rate in the industry, 2400MU/minute, Edge treatments allow for short treatment times, enhancing patient comfort. Using new workflow optimization tools, advances in accurate patient set up have the potential to reduce the treatment times even further. At the same time, included treatment planning modules provide treatment delivery decision support tools to help streamline decision-making in advance. As a result, clinical resources may be optimized on the day of treatment.

RapidArc Technology

RapidArc® radiosurgery technology makes it possible to use Edge radiosurgery to deliver SRS and SBRT treatments typically in a standard radiotherapy treatment slot. Clinicians may deliver precisely sculpted 3D dose distribution to single lesions or multiple mets for stereotactic ablation of inoperable and high-risk operable tumors. RapidArc radiosurgery, powered by the Eclipse™ treatment planning

system, enables planning specifically for radiosurgery treatments with automatic contouring tools that are easy to learn and use. As a result, fast treatment delivery can not only help improve patient comfort by reducing the amount of time a patient spends on the treatment couch, but may also result in a lower overall peripheral dose.



INTEGRATED FROM THE START.

The Edge is an end-to-end, clinical turnkey solution. The technological components have been specifically designed and chosen to ensure that the SRS requirements of a clinic are met. Working together in harmony, all facets of this advanced system allow for the delivery of safe and accurate treatments. With tightly integrated technology that puts the patient first, clinicians can design treatments based on clinical requirements rather than technology constraints. As a result, treatment can be tailored for each individual clinical case.

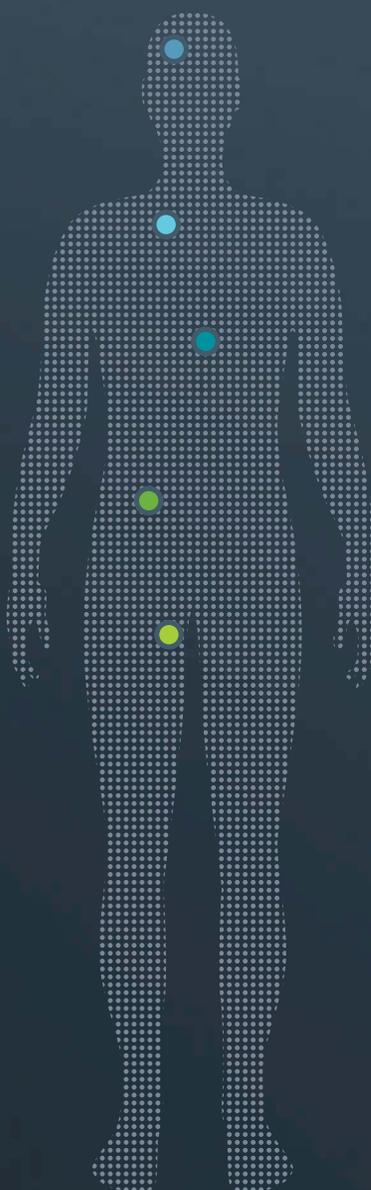
An Innovative Gateway to the Future

As an all-Varian integrated radiosurgery system, it keeps you in control of and connected to your technology and resources. Every application, every feature, and every piece of technology reflects performance that drives productivity. The Edge system is the perfect fusion of form and function

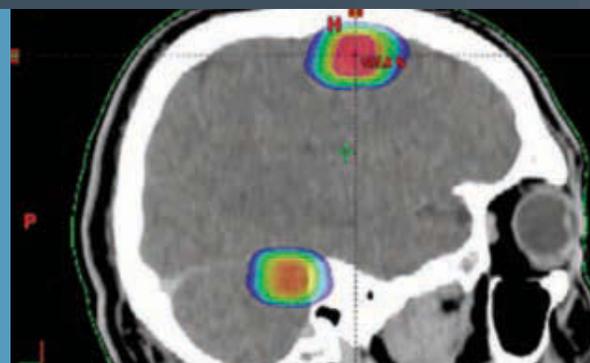
that's designed to fit into your existing high-energy vaults without the need for additional retrofitting. With the power and speed found throughout this system, Edge enables clinicians to navigate the complexities of cancer care with confidence.

Clinical Cases

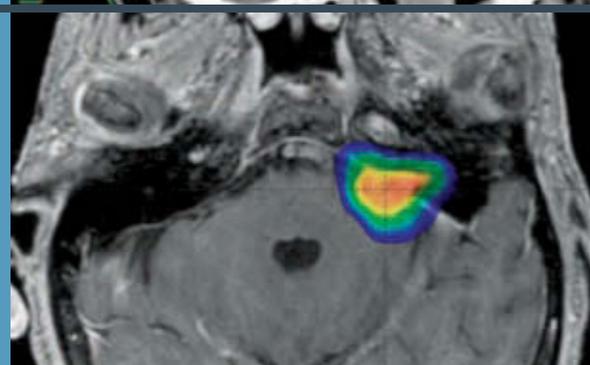
Case examples are examples of targets that can be treated using the Edge radiosurgery system with RapidArc Radiosurgery.



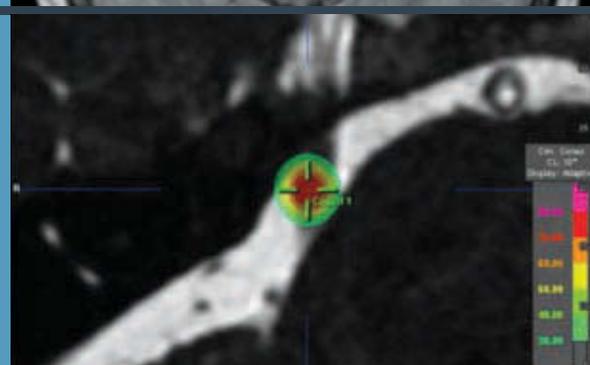
BRAIN
Multiple Metastases



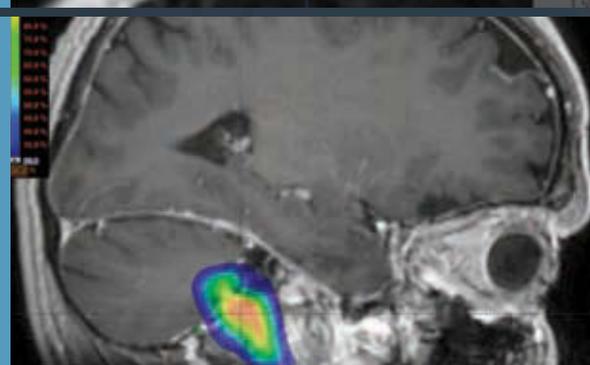
Acoustic Neuroma

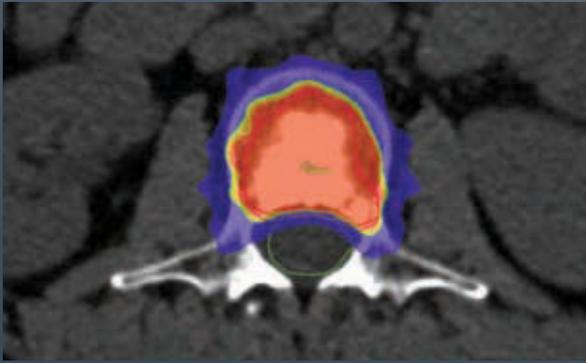


Trigeminal Neuralgia



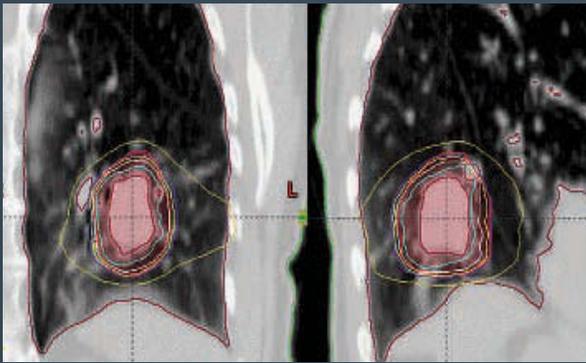
Glomus Jugulare





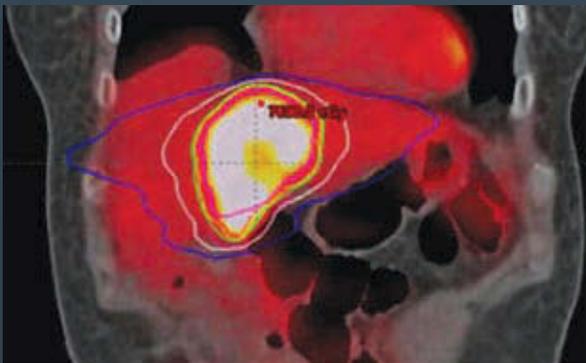
SPINE

Spine Metastasis



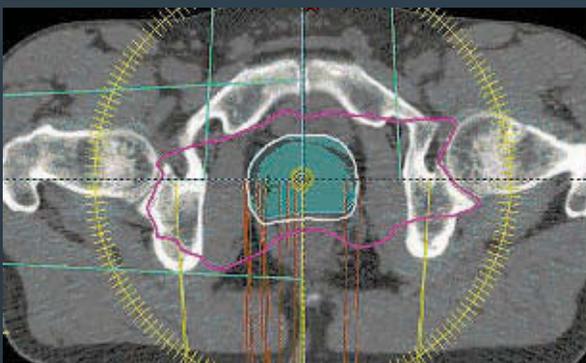
LUNG

Stage-I non-small cell Lung Cancer



LIVER

Hepatocellular Carcinoma



PROSTATE

Prostate Adenocarcinoma

EDGE



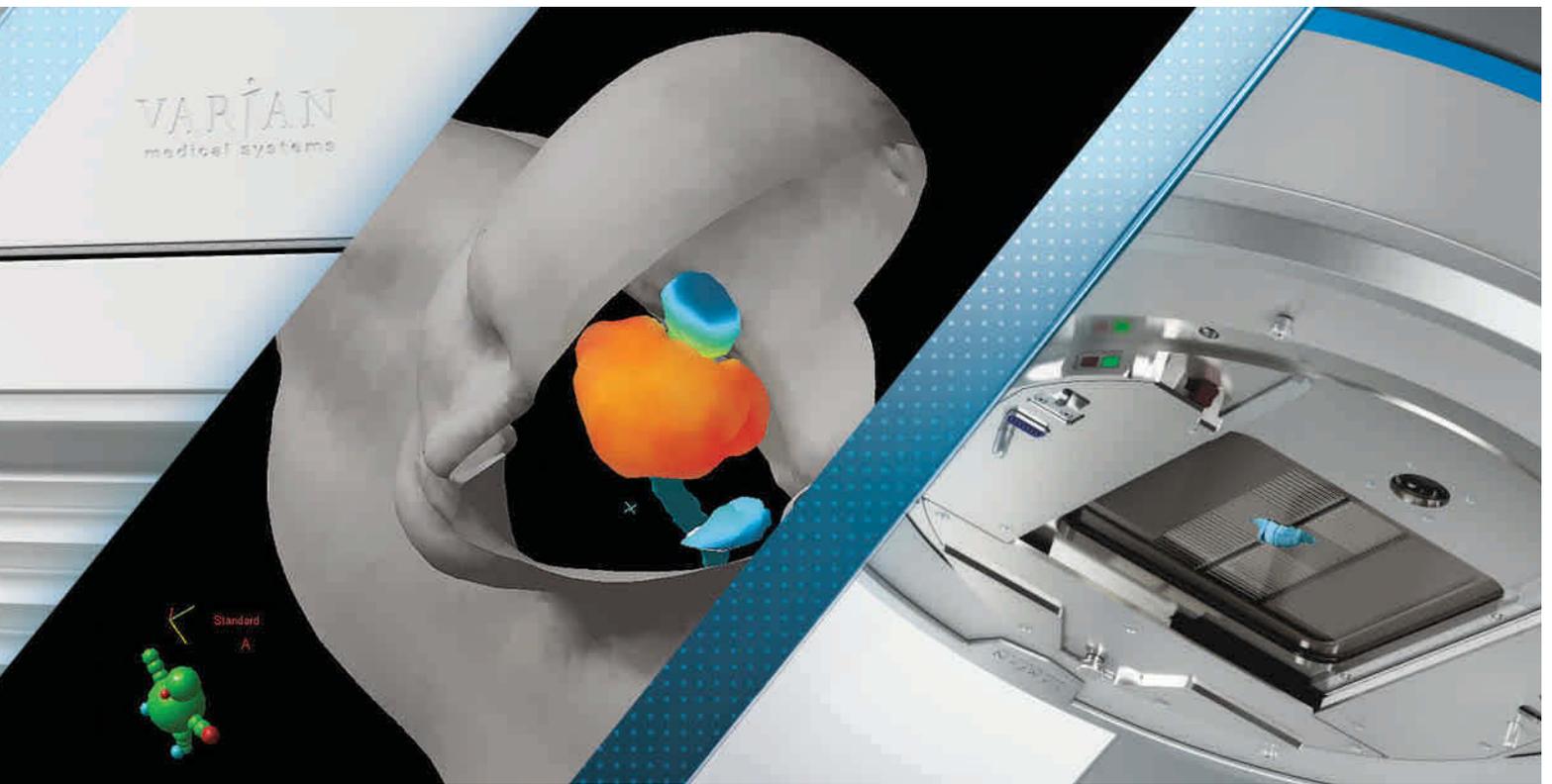


EXPANDING
THE EDGE OF
RADIOSURGERY.



EVERY DETAIL KEEPS YOUR SYSTEM DEDICATED TO RADIOSURGERY.

The ability to treat a number of clinical cases comes from each individual part of this leading-edge system. These innovative tools work together to create a streamlined workflow from treatment planning to real-time target tracking and precise dose delivery, giving clinicians confidence throughout the entire treatment cycle. Just like you, each piece plays an important role in the greater picture of delivering quality care.



Treatment Planning

The Eclipse treatment planning system simplifies and accelerates the development of complex radiation treatment plans for several types of treatment.

Smart Segmentation®

Knowledge-based contouring streamlines workflow and facilitates the definition of targets and organs at risk.

Acuros™

Dose calculation with Acuros provides Monte Carlo equivalent accuracy efficiently.

RapidArc

Advanced RapidArc technology uses a dynamic multileaf collimator that enables the delivery of modulated dose to tumors, while sparing surrounding healthy tissue.

Oncology Information System

ARIA® enables your treatment team to make informed, confident decisions for patients, and provides the tools required to effectively manage the administrative aspects of your department.

Treatment Delivery

Edge is designed to facilitate fast, accurate delivery of stereotactic radiosurgery to treat conditions amenable to this type of treatment. These include tumors of the lung, prostate, brain, spine, and other indications throughout the body.

High-definition 120 Multileaf Collimator (HD 120™ MLC)

Enables precise, focused dose through fine 2.5mm leaves that deliver treatments directly to the tumor while sparing surrounding healthy tissue.

2400MU/min

Industry leading dose rates of up to 2400 monitor units per minute are made possible through High-Intensity Mode.

Imaging Portfolio

Delivery using the image guidance feature encompasses two-, three-, and four-dimensional imaging.

Real-time Tracking

Accurate tracking of tumor movement during treatment ensures the delivery of precise dose amounts to the target quickly and efficiently, while potentially sparing healthy surrounding tissue.

Product Features:

Treatment Beam Shaping

Treatment Beam X-Ray Energies

High-Intensity Mode

Intracranial Real-time Tracking

Extracranial Real-time Tracking

kV Cone-beam CT (CBCT/kV Planar Imaging)

MV Imaging

Integrated Software Tools

PerfectPitch™ Couch



Selected Specifications

Output Energies

| | |
|---------------------------|---|
| X-ray (MV) | 6MV, 6X High-Intensity Mode, 10X High-Intensity Mode (optional) |
| Maximum output dose rates | 6 MV at 600 MU/min 6X HIM at 1400 MU/min; 10X HIM at 2400 MU/min |

Mechanical Performance

| | |
|---|-----------------------|
| Gantry and collimator isocenter accuracy | ≤ 0.5 mm radius |
| Gantry, collimator and couch isocenter accuracy | ≤ 0.75 mm radius |
| Gantry rotational accuracy | ≤ 0.3 degrees |

Imaging Options

| | |
|--------------|--|
| kV range | 40 – 140 kV |
| mAs range | 0.1 – 1000 mAs |
| Modes | kV planar, kV CBCT, fluoroscopic imaging |
| Pixel matrix | 2048 x 1536 (kV) 1280 x 1280 (MV) |

CBCT

| | |
|-----------------|--|
| Field of view | 0 – 25 cm (head scans); 0 – 46 cm (body scans) |
| Slice thickness | 1 mm – 5 mm in 0.5 mm increments; 10 mm |

Multileaf Collimator

High-definition 120 Multileaf Collimator

| | |
|---------------------------|-------------------------|
| Center | 2.5 mm width x 32 pairs |
| Peripheral | 5 mm width x 28 pairs |
| Maximum static field size | 40 cm x 22 cm |

EDGE RADIOSURGERY: YOUR NEW LINE OF DEFENSE IN THE FIGHT AGAINST CANCER.

Using technology designed for radiosurgical ablation, the Edge system represents an evolution in the way advanced radiosurgery is delivered. With Edge, clinics may be able to treat more patients because of the speed, precision and streamlined treatment planning developed in the system architecture. As radiosurgery becomes more common, the Edge radiosurgery system will help ensure unmatched clinical care and make radiosurgery an option for many patients.



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* Data on file. Devices and features presented in this brochure may not be available for sale in all markets.

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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