

VARIAN | trueBEAM[®]



THE TRUEBEAM SYSTEM

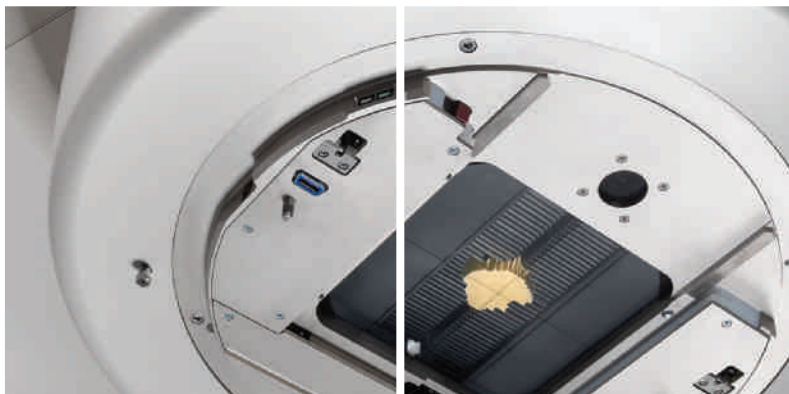




THE TRUEBEAM SYSTEM.
BUILT BY VARIAN,
INSPIRED BY OUR
CUSTOMERS.

The TrueBeam® system brings some of the most innovative thinking in cancer care into your clinic. This advanced technology offers a range of capabilities that turn leading research into integrated care. With these advances, you have more treatment options for patients and more opportunities for your clinic. TrueBeam and Varian Medical Systems can help position your clinic at the forefront of the global fight against cancer. Such versatility is why the TrueBeam system has been adopted by top clinics around the world.

PROVEN TECHNOLOGY.
ENDLESS POSSIBILITIES.

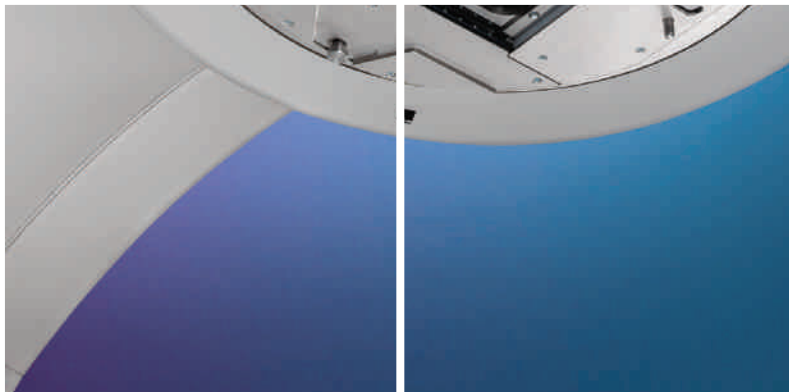


< **HIGH-DEFINITION
120 MULTI-LEAF
COLLIMATOR**

Precise focused dose
through fine 2.5 mm leaves

√ **PERFECTPITCH™
6 DEGREES OF
FREEDOM COUCH**

Patient positioning
in 6 degrees for
enhanced precision

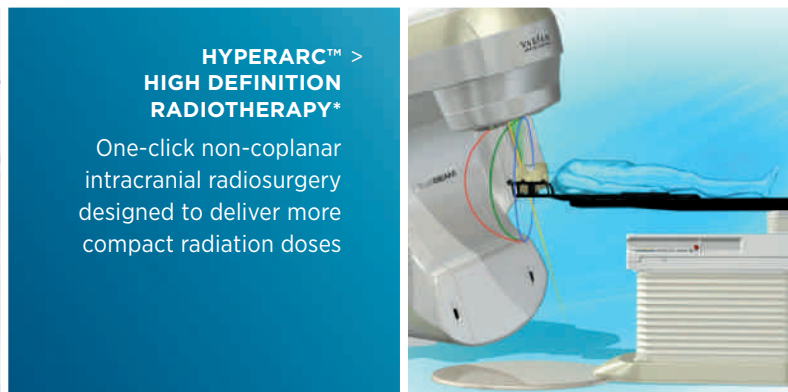


**IMAGING >
SYSTEM**

Quality images at
reduced dose

**HYPERARC™ >
HIGH DEFINITION
RADIOTHERAPY***

One-click non-coplanar
intracranial radiosurgery
designed to deliver more
compact radiation doses



*510(k) pending, not available for sale

Expand your capabilities with
a system built to help you grow.

The TrueBeam system is designed to address a diverse range of clinical cases such as those in the breast, prostate, lung, liver, head and neck, and more. TrueBeam integrates respiratory gating, real-time tracking, imaging, and treatment delivery to create a streamlined system. With this integration, you can take advantage of the latest treatment techniques, including stereotactic body radiation therapy (SBRT), stereotactic radiosurgery (SRS), RapidArc® radiotherapy technology, and Gated RapidArc®. HyperArc high definition radiotherapy (HDRT)* is a new technique designed to deliver high quality SRS treatments on the TrueBeam platform safely, efficiently and accurately.

Interface with multiple technologies for imaging and disease-specific solutions on the TrueBeam system's flexible open architecture. Integrate with the ARIA® oncology information system and the Eclipse™ treatment planning system to simplify planning and manage treatment workflows. Save time and condense tasks with automated, customizable sequences.

REMOTE > OPERATION

Advanced
capabilities with
a simple interface



VARIAN > CALYPSO® SYSTEM

Real-time tracking
to enhance tumor
targeting
during radiation treatment



< SAFETY AND SPEED

Built-in layers of safety
throughout the system,
including touch guards,
capacitive collision
detection system, machine
motion model, and zone
rules that prevent
hardware collisions



< VISUAL COACHING DEVICE*

Wireless battery-operated
couch-mounted display that
provides visual indications
to the patient that the
magnitude of their breathing
is within the desired range

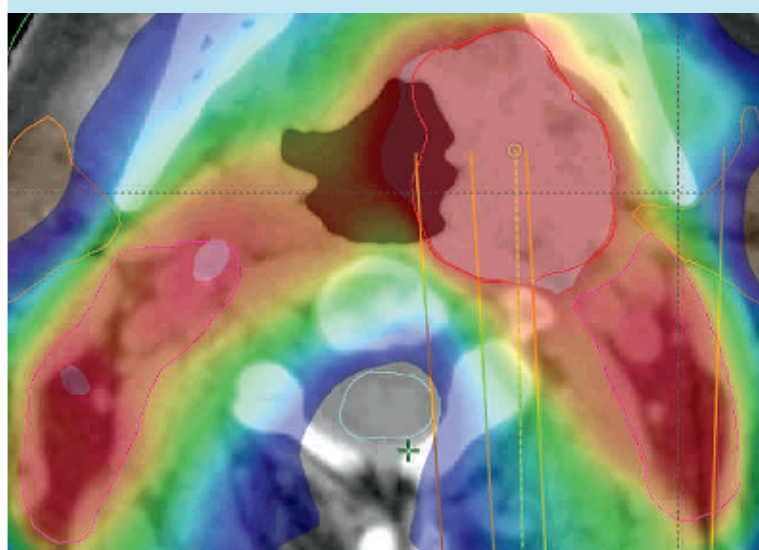
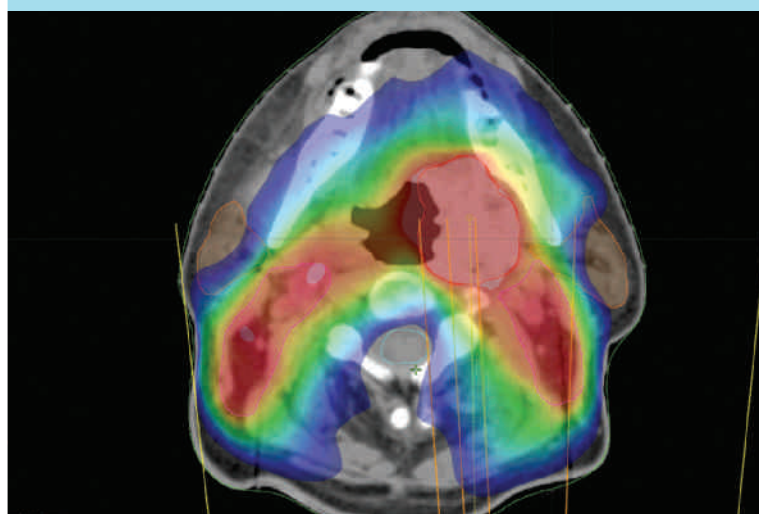
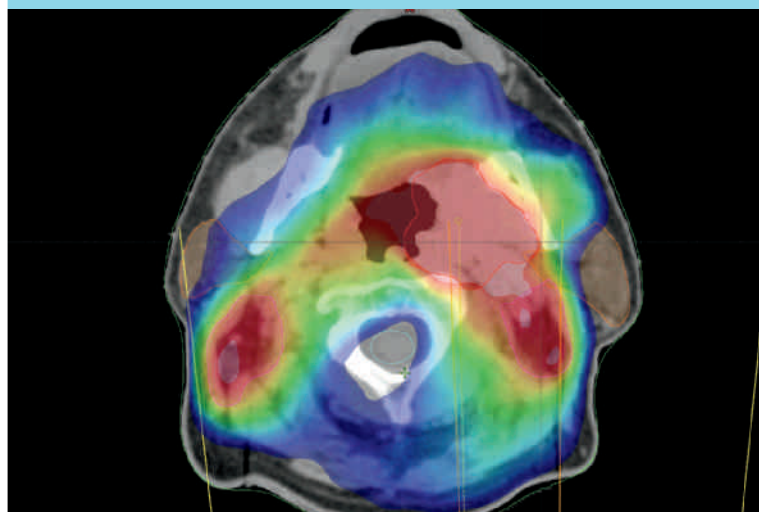
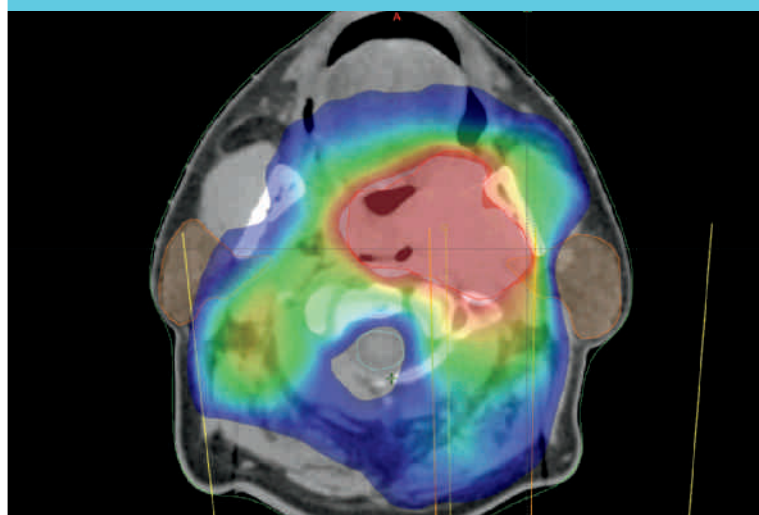
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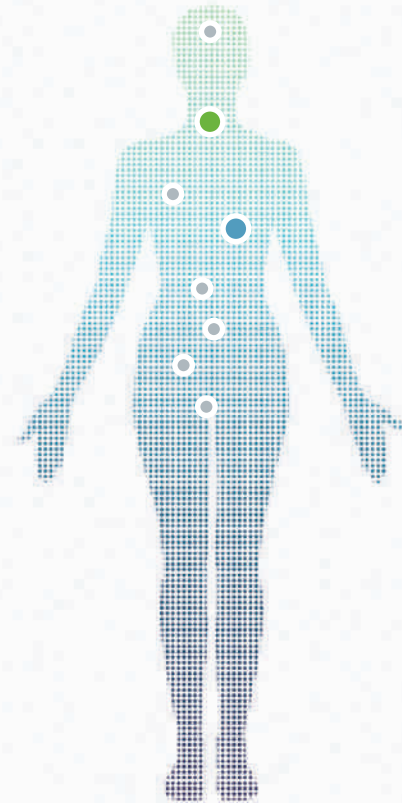
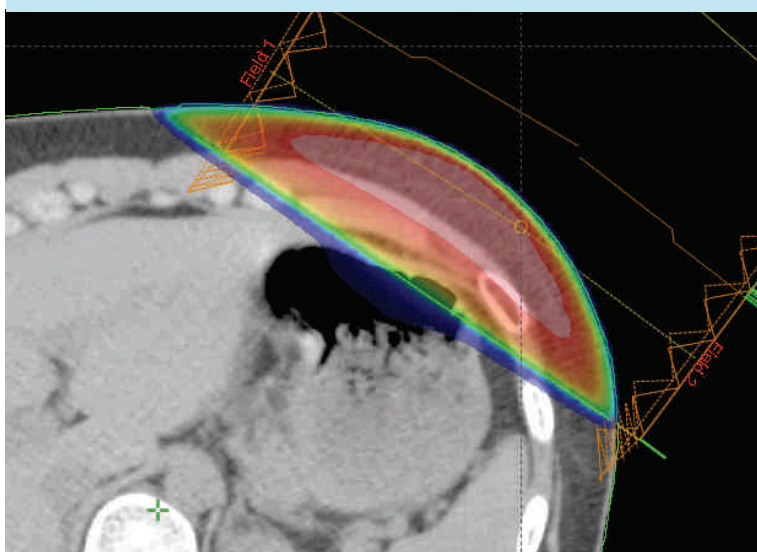
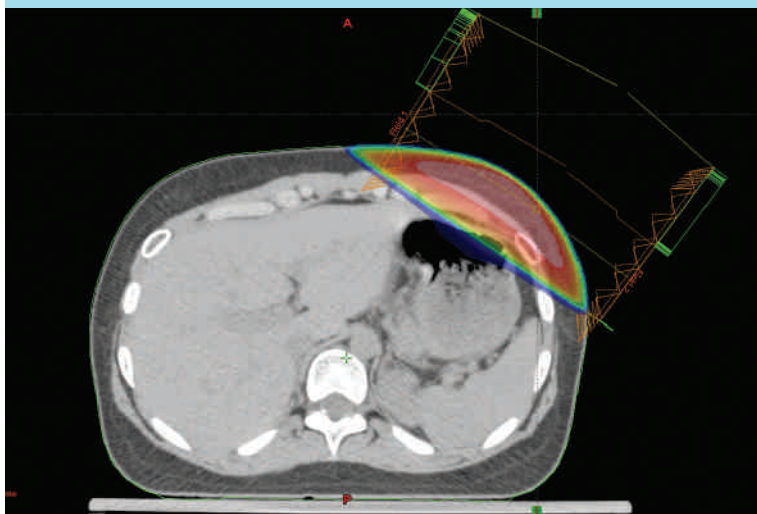
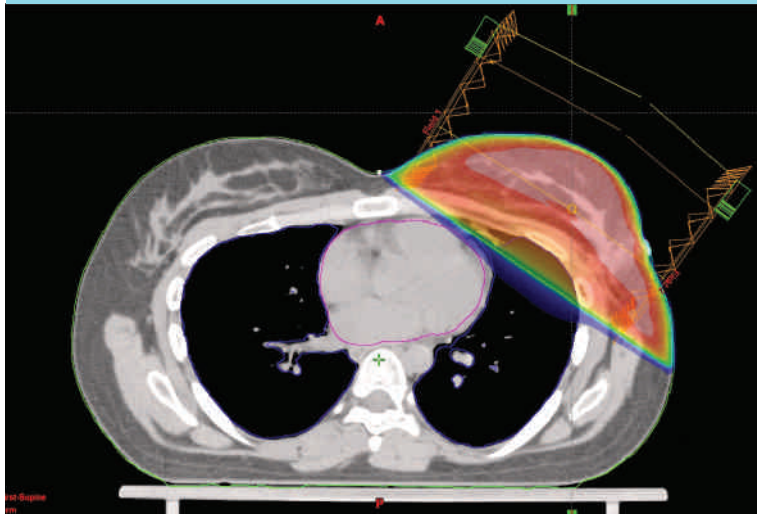
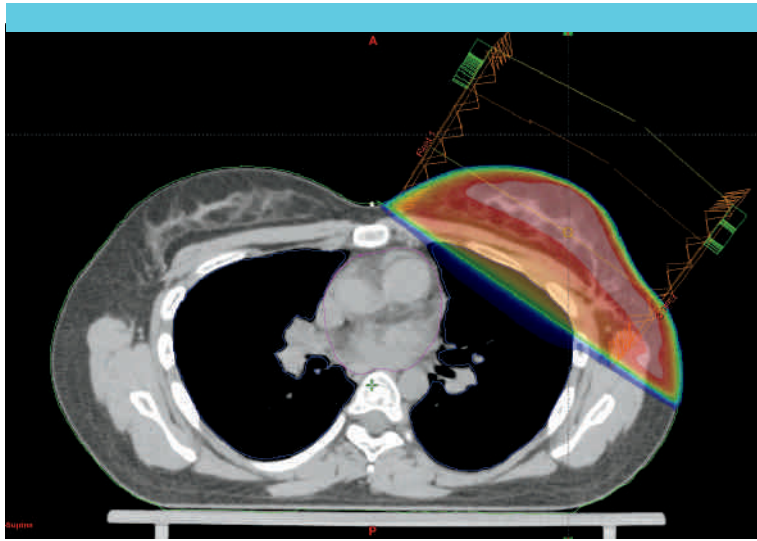
MORE OPTIONS FOR A WIDE VARIETY OF CANCER CASES.

Address a diverse range of cancer cases with the TrueBeam system. Areas in close proximity to critical structures or significant changes in anatomy during the course of treatment can make difficult targets for clinicians; TrueBeam system allows you to surmount such technical challenges.

MULTIPLE BRAIN METASTASES

- > Multiple arcs, partial arcs or a combination can be planned and seamlessly delivered using RapidArc radiotherapy technology.
- > Metastases may be treated with one or more isocenters.
- > A range of diagnostic imaging studies can be introduced in treatment planning to assist in accurate contouring of the target.
- > The real-time control system synchronizes and choreographs all elements of delivery 100 times per second.
- > High-definition 120 MLC sculpts dose with more conformity for precise targeting.
- > Multi-arc, non-coplanar high-definition radiotherapy may deliver more compact radiation doses that fall off sharply, minimizing and potentially eliminating dose to organs requiring protection.





BREAST

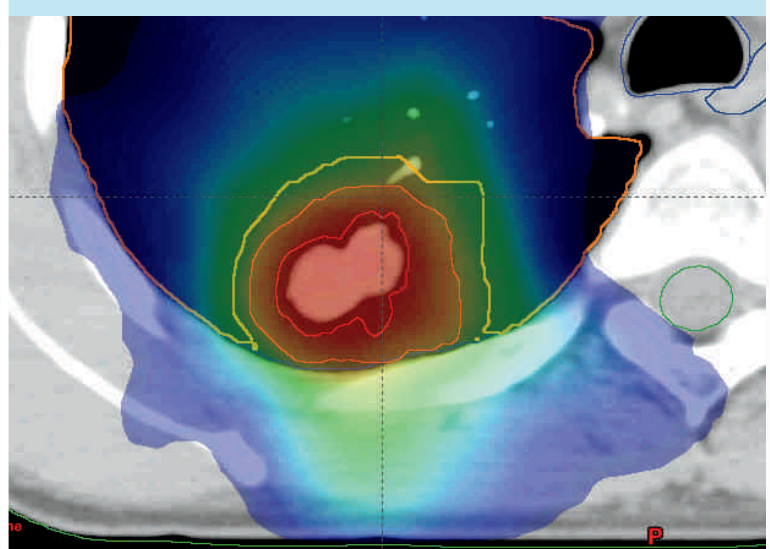
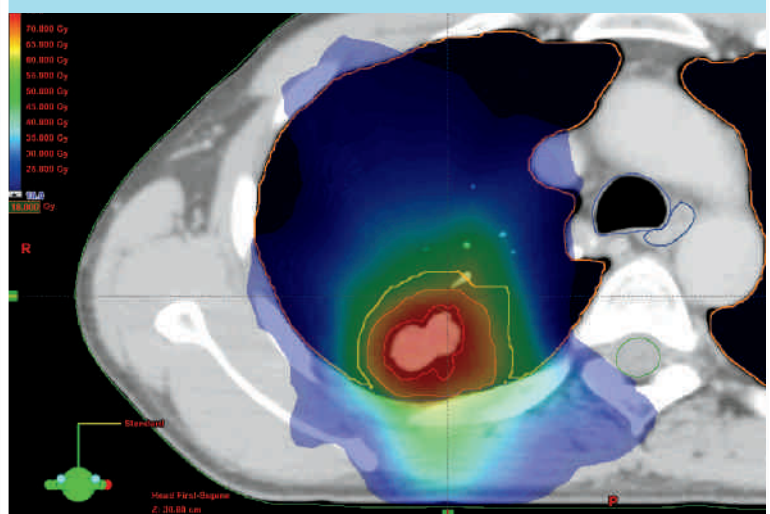
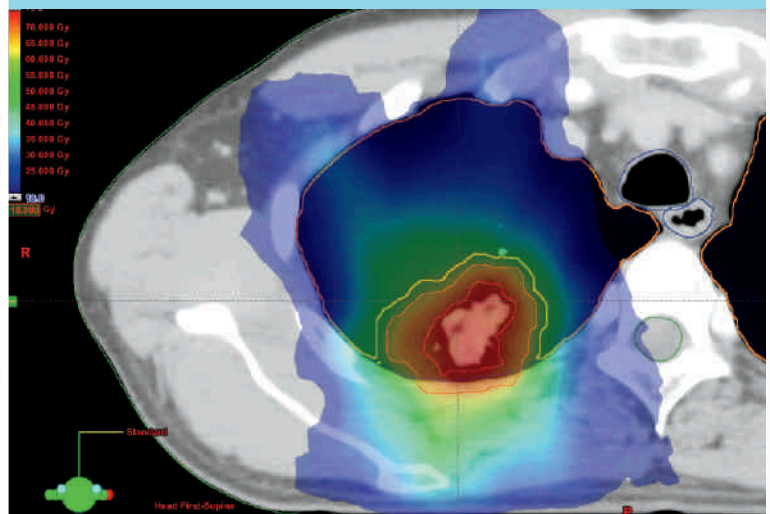
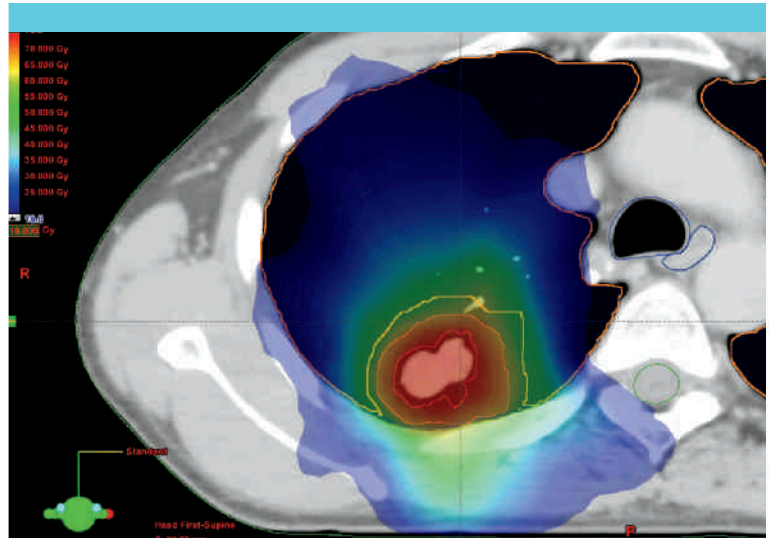
- > Intensity-modulated radiation therapy (IMRT) tools such as field-in-field help create treatment plans designed to minimize radiation exposure of the heart and healthy lung tissue.
- > Treat patients in the prone position using the Pivotal® treatment solution for prone breast care to help minimize dose to critical structures such as the heart and lung.
- > Use Varian Calypso technology and the Surface Beacon® transponder for real-time deep inspiration breath hold to help ensure accuracy.
- > Integration of technologies such as real-time beam gating on a respiratory trigger can allow the reduction of treatment margins when compared to a full ITV-based treatment.

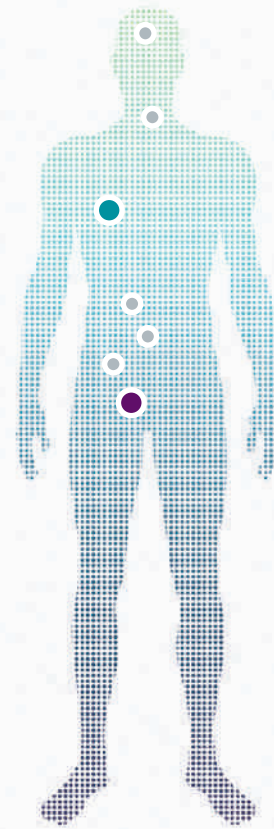
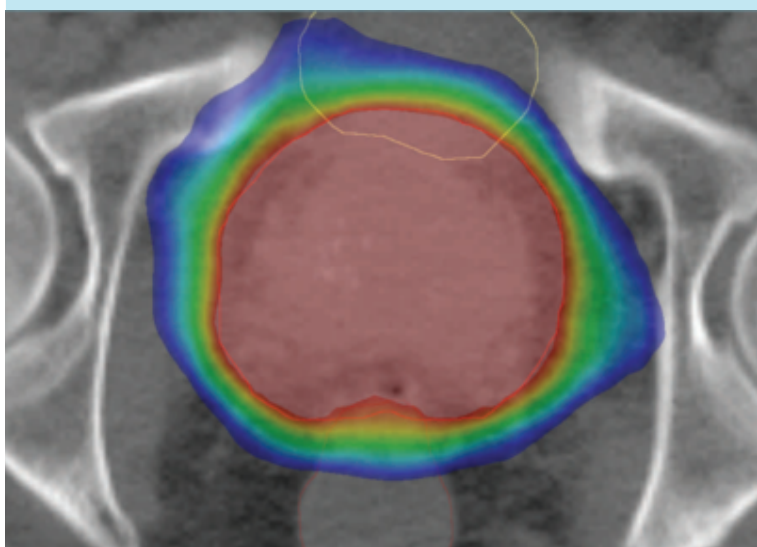
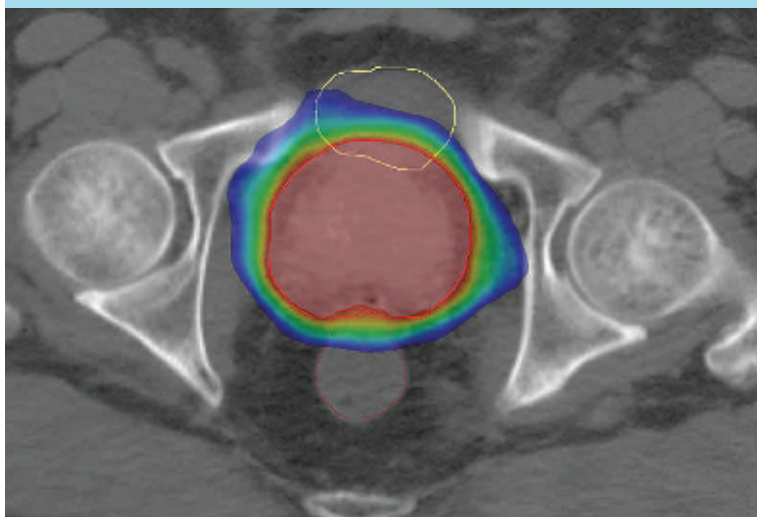
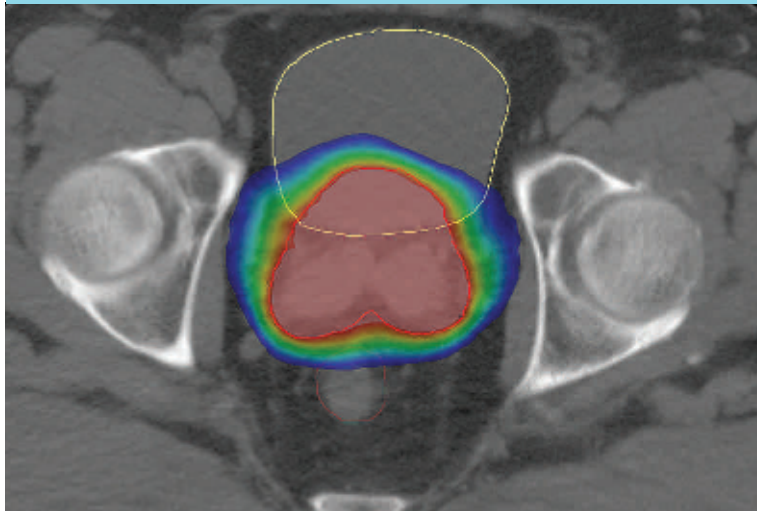
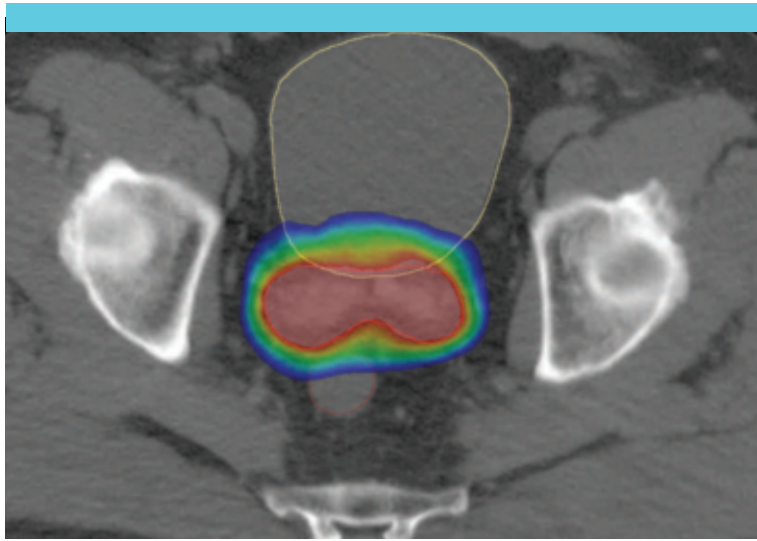
VERSATILE TECHNOLOGIES FOR VERSATILE TREATMENTS.

A breadth of technology provides versatility for treatments throughout the body.

LUNG

- > To reduce discrepancies between planned dose and delivered dose, Varian's Acuros® XB advanced dose calculation algorithm provides Monte Carlo equivalent dose calculations.
- > Contour propagation, intermediate dose calculation and a fine calculation grid all contribute to create an efficient and desired treatment plan.
- > Respiratory gating allows the reduction of irradiated volumes when compared with large ITV-based approaches.
- > Fluoroscopic, kV, MV, and CBCT images, along with the capability to mix and match imaging possibilities, allow clinicians to tailor treatment delivery.
- > Triggered imaging based on respiratory gating aids visualizing targets in real time during treatment.
- > The highest dose rate in the industry—2400 MU/minute—allows rapid delivery of large fractions.





PROSTATE

- > Physicians can take advantage of built-in expert cases or create their own cases to standardize treatment across the institution, using Smart Segmentation® knowledge-based contouring.
- > RapidArc radiotherapy technology and Eclipse treatment planning system combine to deliver treatments with speed and accuracy.
- > Fast hypofractionated prostate SBRT treatments are made possible with High Intensity Mode at 1400 MU/minute or 2400 MU/minute.
- > Prostate drift and sporadic motion can be tracked and corrected with Varian Calypso system.
- > Intrafraction motion management using triggered imaging that enables acquisition of images based on breathing motion of the patient, elapsed time, MU delivery or gantry angle.

TECHNOLOGY TO GROW WITH.

INNOVATIVE. INTELLIGENT. INTUITIVE.

With the TrueBeam system, your clinic now has the tools to initiate a wide spectrum of advanced treatment options for specific disease sites.

ARCHITECTURE & MAESTRO

Dynamic performance for speed and efficiency

Behind the scenes of the TrueBeam system's advanced performance lies Maestro— an innovative control system. Maestro conducts the TrueBeam system by directing, synchronizing, and monitoring all of the system's fully integrated, functional components. Maestro's sophisticated orchestration of dose, motion, and imaging reflects each of the system's moving parts, making treatment fast and efficient. Open up new possibilities for image-guided and motion-managed treatment techniques with this innovative architecture. The TrueBeam system's design also supports SmartConnect® technology, an on-demand remote support feature that allows your Varian service or helpdesk representative to provide immediate, real-time desktop sharing.

BEAM GENERATION

Exceptional performance and technology without compromise

At the heart of the TrueBeam system is a beam generation technology that is patented and unique. This beam generation system can be configured with zero to eight electron energies and up to seven photon energies, including two high-intensity modes for SRS and hypofractionated SBRT treatments. You can now better tailor radiation treatment programs with the advanced versatility found in the TrueBeam system.

IMAGING

A treatment range so generous, it includes space to breathe

The TrueBeam system opens the door to leading edge treatment with advanced positioning and real-time tracking solutions—including a full range of innovative and powerful imaging tools such as 2D/3D auto match, on demand imaging, triggered imaging, auto-beam hold, online 4D CBCT*, gated CBCT*, and short arc CBCT*. We are

continually driving forward the quality of imaging for motion management, with higher definition, tighter integration, and greater ease of use in the real-time treatment setting.

Monitor patient breathing and compensate for tumor motion while quickly delivering dosage with Gated RapidArc technology. Visualize gating thresholds and patient's current breathing more easily. With Gated CBCT acquire CBCT images synchronized with the breathing of the patient, only while the target is within the respiratory gating threshold. Short arc CBCT reduces the time of CBCT acquisition, making breath-hold CBCT more practical. With triggered imaging, you can acquire a single kV image based on triggers such as MU delivered, gantry angle, elapsed time and breathing motion of the patient. With the auto beam hold feature, the treatment beam is automatically paused if implanted fiducials are outside of allowed geometric tolerances.

With such a supportive system, you can image and treat with confidence.

DEVELOPER MODE

Endless research opportunities

The Developer Mode option allows a broad range of experimentation in a non-clinical environment. This expanded access is designed to give clinicians and physicists an efficient and effective means to innovate with new treatment and imaging techniques in a research mode. Advanced manipulation of mechanical and dose axes puts the dynamic beam, imaging and gating features of the TrueBeam system at your fingertips.**

** Developer Mode is not for use on humans. Treatment decisions should not be made based on data derived from Developer Mode.

SAFETY AND SPEED

Simple automated operation

Visual cues built into the TrueBeam system provide an intuitive operating environment and can help to enhance safety and reduce operation times. For instance, buttons on the controls light up in the correct order to guide the operator through each step. Built-in layers of safety have been added throughout the system, including touch guards, capacitive collision detection system, machine motion model and zone rules that are motion restriction safeguards that

*510(k) pending, not available for sale

prevent hardware collisions. As an added safeguard, the system automatically performs accuracy checks every ten milliseconds, throughout the entire treatment. And at the control console, you can visually monitor your patient using Safewatch, the CCTV camera system. With these design improvements, the therapist can focus even more on the patient.

CALYPSO SYSTEM AND BEACON TRANSPONDERS Exquisitely accurate target tracking

The Calypso system provides accurate and precise target tracking to keep the radiation focused on the tumor, minimizing exposure to healthy tissue. Using GPS for the Body[®] technology, Calypso detects even slight movement of the target, so you can keep it in the path of Varian's precise radiation beam. Tighter treatment margins can help you reduce potential side effects and improve the quality of life for your patients, escalate dose to improve disease control, or accelerate treatments with SBRT. The smaller 17G Beacon transponder, which can be used for tracking of soft tissue during treatment delivery, can provide confidence that the prescribed dose is delivered to the planning target volume.

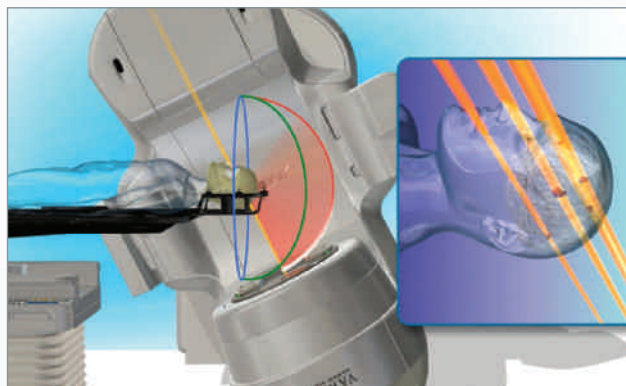
OPTICAL SURFACE MONITORING SYSTEM Non-invasive real-time 3D surface tracking system during beam delivery

The Optical Surface Monitoring System uses non-ionizing surface tracking technology to monitor alignment and patient motion during initial setup and treatment. Real-time and accurate assessment of patient position during beam delivery is combined with the instantaneous beam gating capability of the TrueBeam system. This combination can allow clinicians to potentially improve workflow efficiencies while reducing uncertainty margins, which is critical when delivering treatment to a wide range of targets in the body.

HYPERARC HIGH DEFINITION RADIOTHERAPY* Deliver high quality SRS treatments safely, efficiently and accurately

HyperArc HDRT is designed to make non-coplanar SRS delivery easy by automating and simplifying many of the operations. HyperArc HDRT addresses concerns about the complexity of SRS by introducing key technology and reproducible workflow to deliver non-coplanar intracranial treatments. A defined workflow, including simulation

guidelines, patient immobilization for imaging and treatment delivery, treatment setup, intra-fraction imaging and a pre-determined delivery sequence, enables a one-click delivery of non-coplanar SRS.



Designed to deliver one-click non-coplanar SRS

VISUAL COACHING DEVICE* Stabilize patient respiration and achieve a reproducible breathing pattern faster

The visual coaching device is capable of presenting visual feedback to the patient during gated imaging and gated treatment to help the patient breathe more regularly and/or to hold their breath reproducibly. The device, which is a wireless, battery-operated, couch-mounted display, can provide visual indications to the patient that the magnitude of their breathing and their breathing rate is within desired range.

6 DEGREES OF FREEDOM COUCH Experience more freedom in patient setups

The PerfectPitch 6 degrees of freedom (6DoF) couch advances patient positioning during radiotherapy and radiosurgery procedures by providing two additional rotational motion axes: pitch and roll. The 6DoF couch adjusts seamlessly on six axes, facilitating isocenter-focused shifts. CBCT image-guided target location, isocenter correction, treatment review, treatment delivery, and axes recording can all be accomplished without re-entering the treatment room or changing the control console. With this enhanced control, it may be possible to treat more patients with a higher degree of accuracy and reduce treatment margins in selected clinical cases.

**510(k) pending, not available for sale*

BROADEN YOUR FUTURE IN CANCER CARE.

You can have improved workflow and clinical processes, plus the technology to enable precise treatments that take only minutes. Take a step forward to prepare for the future in cancer care.

With TrueBeam, your clinic is ready for tomorrow and beyond.



**IMAGINE A WORLD WITHOUT THE
FEAR OF CANCER.**

Varian Medical Systems has been a pioneer in the field of oncology for over 60 years. During this time, we introduced innovative treatment techniques, equipment and software that have been used to treat tens of thousands of cancer patients worldwide. Today we offer products and services to advance the entire treatment process. Our work creates a community for those affected by cancer, so we can unite around our common goal to fight this disease.



THE TRUEBEAM SYSTEM.
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INSPIRED BY OUR CUSTOMERS.



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Varian Medical Systems as a medical device manufacturer cannot and does not recommend specific treatment approaches.

Specifications subject to change without notice.

Not all features or products are available in all markets and are subject to change.

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.

Important Safety Information

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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