THE TRUEBEAM SYSTEM
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 options for patients and more opportunities for your clinic.

Such versatility is why the TrueBeam system has been adopted by top clinics around the world. With this rapid growth, TrueBeam and Varian Medical Systems can help position your clinic at the forefront of the global fight against cancer. We know where we’re headed. Join us on the journey.
MULTI-LEAF COLLIMATOR
High definition 120 MLC option for radiosurgery applications

IMAGING SYSTEM
Quality images at reduced dose

PERFECTPITCH™ 6 DEGREES OF FREEDOM COUCH
Patient positioning in 6-degrees for enhanced precision

PROVEN AS A TECHNOLOGY. POSSIBILITIES AS A RESULT.
Expand your offerings with the system built to help you grow.

The TrueBeam system is designed to address a diverse range of clinical cases such as those in the 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 SBRT, SRS, RapidArc® and gated RapidArc.

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. With this full spectrum of innovative tools, the TrueBeam system puts current advances in your hands.
MORE OPTIONS FOR A WIDE VARIETY OF CANCER CASES.

HEAD AND NECK

> Multiple arcs, partial arcs or a combination can be planned and seamlessly delivered using RapidArc radiotherapy technology

> 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 10 times per second

> Imaging hardware and software allow capture of high-quality cone-beam CT images with lower concomitant dose

> Integration of SmartAdapt™ deformable registration algorithms provide a convenient means for clinicians to account for anatomical changes during the course of treatment
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.

BREAST
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 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 approaches¹

- Fluoroscopic, KV, MV and CBCT, along with the capability to mix and match from the menu of imaging possibilities, allow clinicians to tailor treatment delivery

- Triggered imaging based on respiratory gating to visualize targets in real-time during treatment

- 2400 MU/minute, the highest dose rate in the industry, allows rapid delivery of large fractions²

¹ Data on file
² September, 2013
Using Smart Segmentation® knowledge-based contouring, physicians can take advantage of built-in expert cases or create their own cases to standardize treatment across the institution.

Deliver treatment with speed and accuracy using RapidArc radiotherapy technology and Eclipse treatment planning system.

Deliver fast hypofractionated prostate SBRT treatments using high intensity mode at 1400 MU/minute or 2400 MU/minute.

Track and correct, in real-time, prostate drift and sporadic motion with Varian Calypso system for prostate.
FIND MORE PATHS TO TREATMENT AND MORE PATHS TO GROWTH.

INNOVATIVE. INTELLIGENT. INTUITIVE.

Medicine does not advance on its own. We pursued innovative technology and the insights of our customers to arrive at this impressively intelligent solution. 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 or “nodes.” 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’s 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 stereotactic radiosurgery and hypofractionated stereotactic body radiotherapy 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. Generate quality images without compromise through lower dose imaging. Create customized imaging protocols to enable faster, easier imaging with intelligent automation. Gated RapidArc technology allows you to monitor patient breathing and compensate for tumor motion while quickly delivering dosage. The powerful imaging technologies in the TrueBeam system are an ideal complement to its integrated gating and motion-management system. With such a supportive system, you can image and treat with confidence.
**DEVELOPER MODE**

Turn possibilities into action

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 a Collision Avoidance function to help avoid problems. 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 CCT camera system. With these design improvements, the therapist can focus even more on the patient.

**EDGE TECHNOLOGY**

Access to full-body real-time tracking

The Edge™ radiosurgery system is a clinical turnkey system developed to aid clinicians in performing non-invasive ablative treatments throughout the body wherever radiation treatment is indicated. With its precision and speed, this system can potentially treat a wide range of conditions across a variety of specialties including urology, pulmonology and neurosurgery.

The Varian Edge intracranial SRS package is designed to provide real-time tracking and motion management solutions for radiosurgical lesions. The Varian Optical Surface Monitoring System tracks the motion of an intracranial target in real-time and without additional ionizing radiation dose. Even slight motion can potentially be assessed in real-time with the help of 3D surface mapping of the patient’s external surface.

The Edge Extracranial SABR Package provides accurate and precise target tracking to keep the radiation focused on the tumor, minimizing exposure to healthy tissue. Utilizing the Calypso system internal transponders, even a slight movement of the target can be detected, so you can keep the tumor in the path of the radiation beam. With Calypso, you can confidently treat with tighter margins, escalate dose or accelerate treatments with SABR, which can help reduce some potential side effects for patients.

**6 DEGREES OF FREEDOM COUCH**

Experience more freedom in patient setups

The new PerfectPitch 6 degrees of freedom couch is designed to advance patient positioning during radiotherapy and radiosurgery procedures by providing two additional rotational motion axes: pitch and roll. This patient positioning option may enable enhanced accurate target positioning and precise beam delivery and can reduce treatment margins in select clinical cases.
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 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.
## SELECTED SPECIFICATIONS

### OUTPUT ENERGIES

<table>
<thead>
<tr>
<th>X-ray (MV)</th>
<th>4, 6, 8, 10, 15, 18, 20</th>
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<tbody>
<tr>
<td>High intensity mode</td>
<td>6X, 10X</td>
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<tr>
<td>Maximum output dose rates</td>
<td>4 MV at 250 MU/min; all others at 600 MU/min; 6X HI at 1400 MU/min; 10X HI at 2400 MU/min</td>
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</table>

<table>
<thead>
<tr>
<th>Electron (MeV)</th>
<th>6, 9, 12, 15, 16, 18, 20, 22</th>
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</thead>
<tbody>
<tr>
<td>HDTSE</td>
<td>6 HDTSE, 9 HDTSE</td>
</tr>
<tr>
<td>Maximum output dose rates</td>
<td>1000 MU/min; HDTSE energies at 2500 MU/min</td>
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</table>

### MECHANICAL PERFORMANCE

<table>
<thead>
<tr>
<th>Gantry and collimator isocenter accuracy</th>
<th>≤ 0.5 mm radius</th>
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<tbody>
<tr>
<td>Gantry, collimator and couch isocenter accuracy</td>
<td>≤ 0.75 mm radius</td>
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<tr>
<td>Gantry rotational accuracy</td>
<td>≤ 0.3 degrees</td>
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### IMAGING OPTIONS

<table>
<thead>
<tr>
<th>kV range</th>
<th>40 – 140 kV</th>
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<tbody>
<tr>
<td>mAs range</td>
<td>0.1 – 1000 mAs</td>
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<tr>
<td>Modes</td>
<td>kV planar, kV CBCT, fluoroscopic imaging</td>
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<tr>
<td>Pixel matrix</td>
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<tr>
<td></td>
<td>1024 x 768</td>
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<table>
<thead>
<tr>
<th>CBCT</th>
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<tbody>
<tr>
<td>Field of view</td>
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<tr>
<td>Slice thickness</td>
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### MULTILEAF COLLIMATOR

<table>
<thead>
<tr>
<th>Millennium™ 120-leaf MLC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Center</td>
</tr>
<tr>
<td>Peripheral</td>
</tr>
<tr>
<td>Maximum static field size</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>High Definition 120™ multi leaf collimator</th>
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</thead>
<tbody>
<tr>
<td>Center</td>
</tr>
<tr>
<td>Peripheral</td>
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<tr>
<td>Maximum static field size</td>
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</tbody>
</table>

Varian Medical Systems as a medical device manufacturer cannot and does not recommend specific treatment approaches. Specifications subject to change without notice.
Disambiguation and Safety Statement

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.

Medical Advice Disclaimer
Varian as a medical device manufacturer cannot and does not recommend specific treatment approaches. Individual treatment results may vary.

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