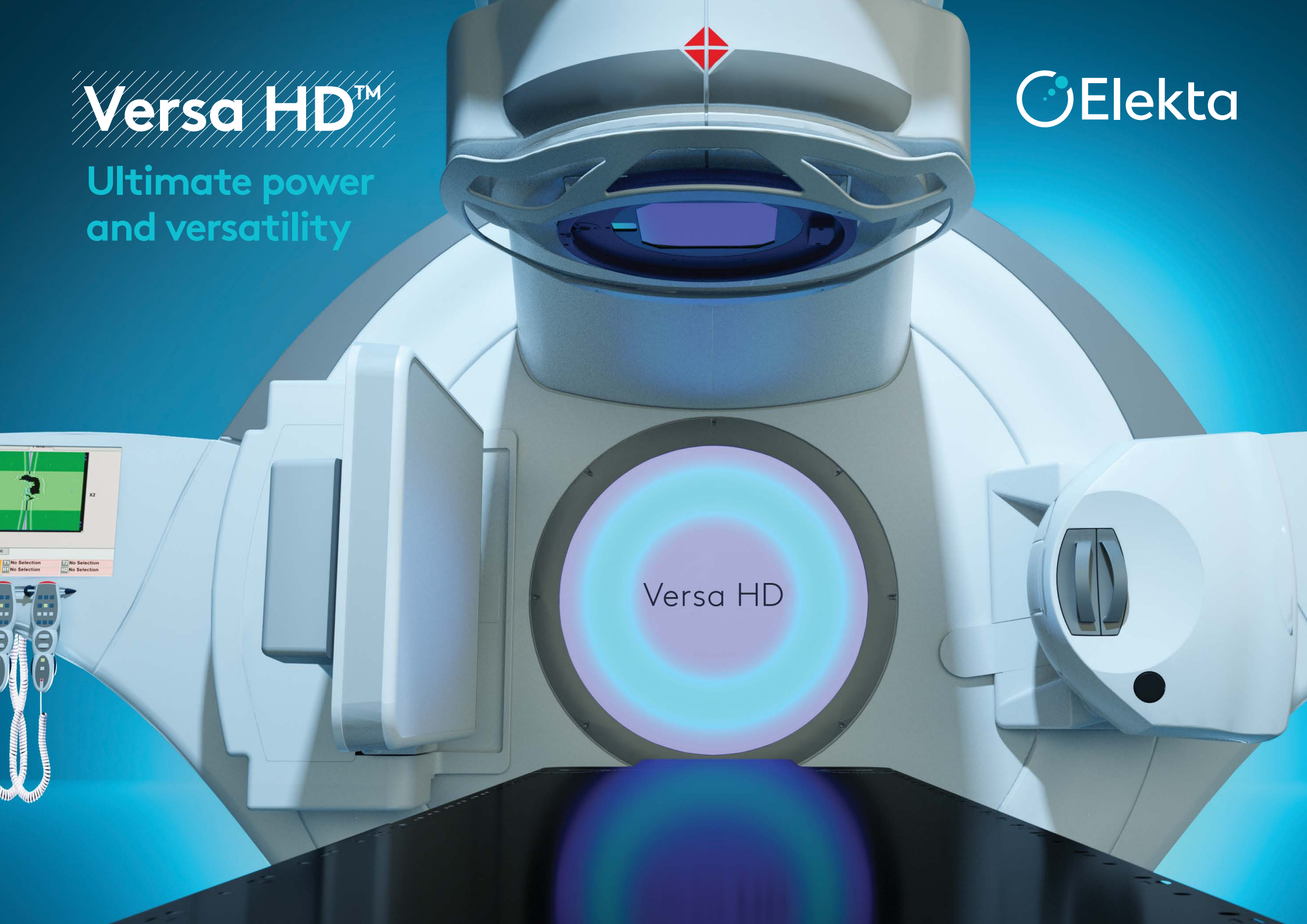
Versa HD™

Ultimate power and versatility

Elekta



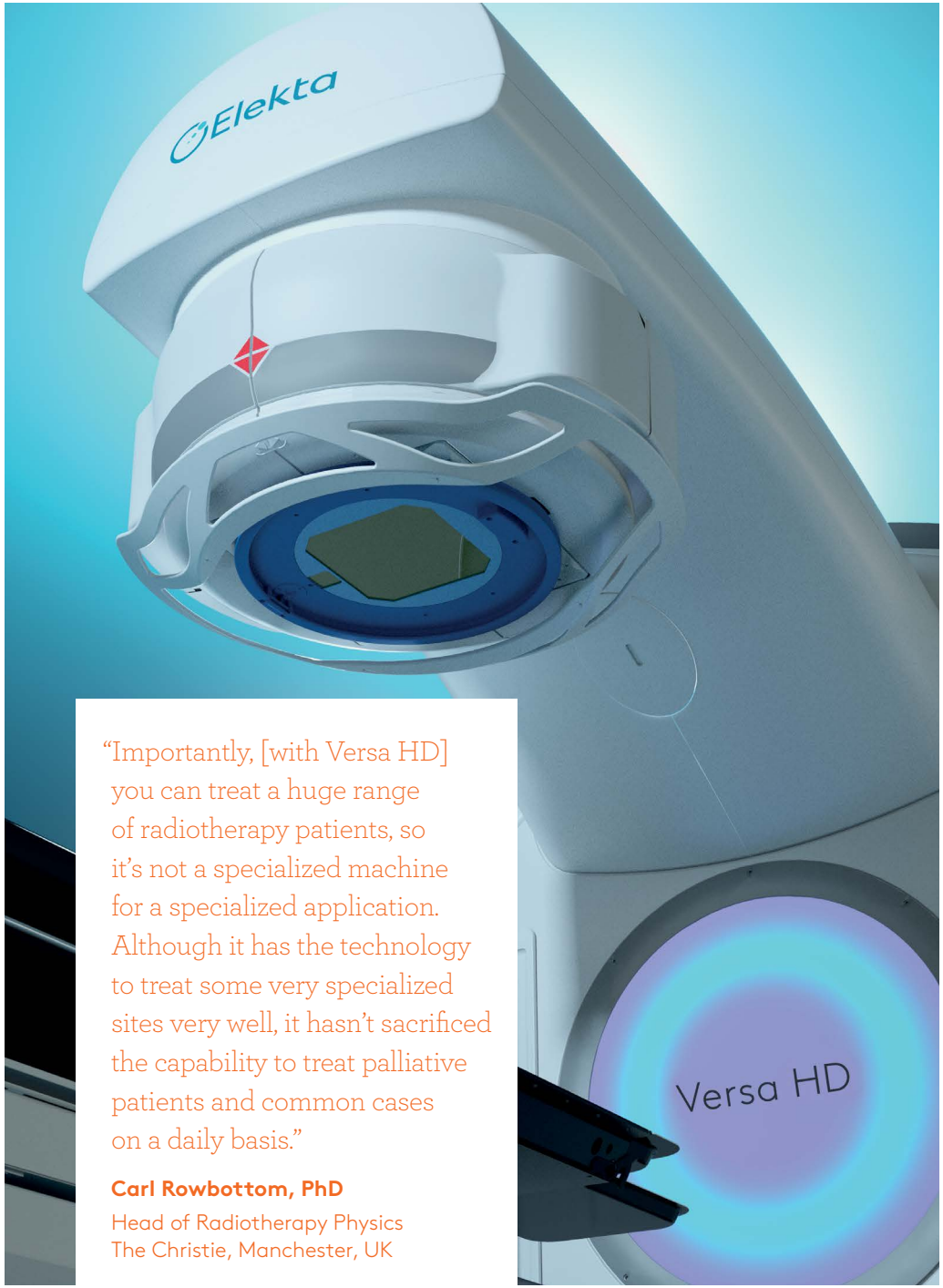
Helping clinicians
improve patients' lives.

Elekta

RS DBC0474E
Lea minuciosamente el manual de instrucciones de uso

High definition dynamic radiosurgery (HDRS) and conventional radiotherapy in a single solution

Versa HD has the versatility to deliver conventional radiotherapy and a variety of indications and treatment techniques. It's designed for the most challenging stereotactic treatments, enabling ultimate clinical flexibility and operational efficiency for reduced treatment times and increased patient volume.



"Importantly, [with Versa HD] you can treat a huge range of radiotherapy patients, so it's not a specialized machine for a specialized application. Although it has the technology to treat some very specialized sites very well, it hasn't sacrificed the capability to treat palliative patients and common cases on a daily basis."

Carl Rowbottom, PhD
Head of Radiotherapy Physics
The Christie, Manchester, UK

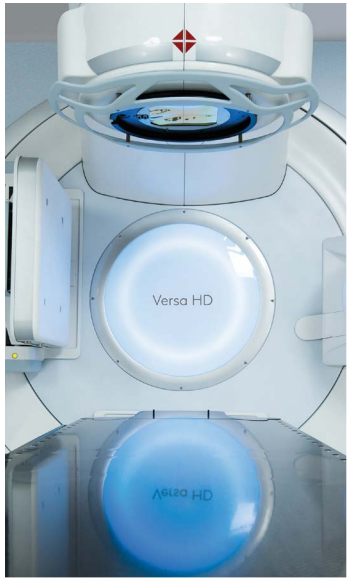
Versatility for more personalized treatment

The future of radiotherapy lies in more personalized treatment. Personalized radiotherapy treatment is essential to creating better outcomes for patients and depends, above all, on dose placement accuracy and treatment versatility. Passionately created by the inventors of Gamma Knife® surgery, Versa HD provides clinicians with more accuracy and precision to focus the right dose in the right place.

Enhanced accuracy brings many clinical and operational benefits that make Versa HD the ultimate versatile radiotherapy platform.

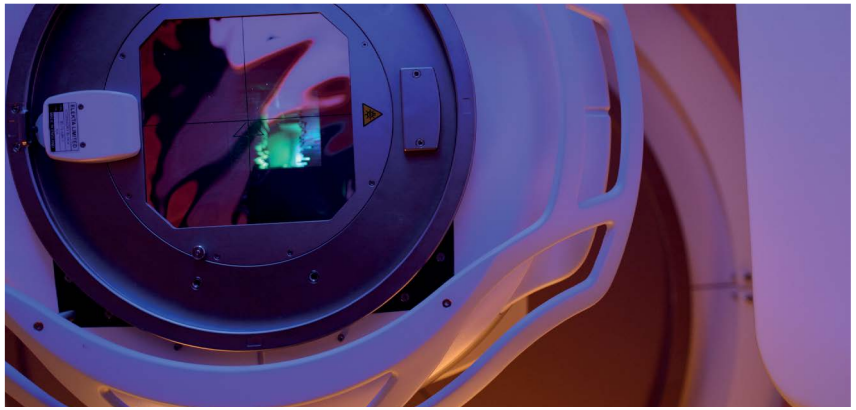
- Shorter delivery times when compared to previous Elekta linacs — 73 percent for brain mets, 62 percent for lung SBRT and 62 percent for liver SBRT reduction in delivery time
- The ability to start a stereotactic program offering new treatment options to patients, in addition to more common delivery techniques
- Expansion of established programs to reach more challenging targets, including lung, brain and spine, prostate and liver SBRT providing more relief to more patients

Versa HD is unsurpassed as a versatile platform, that enables clinics to build and expand a high-precision radiotherapy program, helping to meet and exceed clinical goals for every patient, every time.



Many complex corresponding elements are involved for dose placement to be accurate. The extraordinary end-to-end accuracy of Versa HD is achieved with submillimetric radiation, system and imaging accuracy.

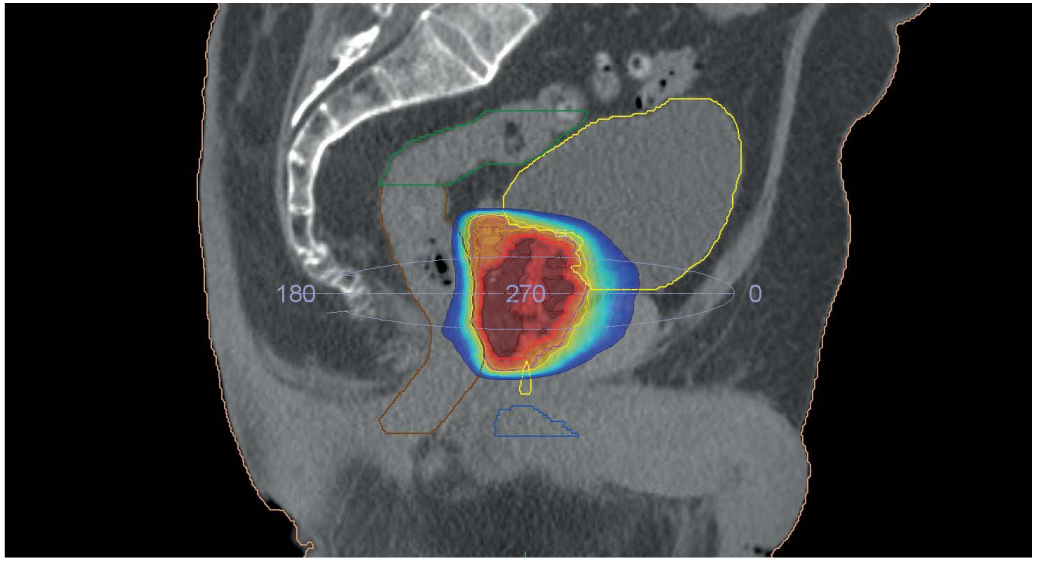
- Up to 8 percent more accurate when compared to other dose algorithms
- Accurate visualization of the target at the time of treatment
- Advanced motion management
- Delivery of a true High Dose Rate
- Confidence that the dose planned is the dose delivered



"Versa HD will enable even more conformal treatments that should significantly limit normal tissue exposure and decrease side effects. We can deliver these state-of-the-art techniques with Versa HD and do it in such a way that it not only manages their cancer, but also minimizes the impact of treatment on their quality of life."

Douglas Einstein, MD, PhD

Chairman of Radiation Oncology
Kettering Medical Center, Kettering, Ohio USA



6x

Modulate up to 6x more in a single arc (1024 dynamic control points) for compact dose wrapping around the tumor target

Faster

Enable highly conformal stereotactic treatments in fewer, single or partial arcs for faster treatment delivery without compromising treatment quality

Delivery

Deliver SRS and SBRT within standard treatment slots, regardless of complexity or anatomy

HDRS provides high definition modulation for faster, more precise stereotactic treatments

Versa HD seamlessly integrates with Elekta's intelligent treatment planning system, Monaco®. They work together to accurately and efficiently deliver higher doses to the target in less than 15-minute slots–regardless of complexity or anatomy, achieving lower critical structure and body doses with 4–5x lower leaf transmission. Used in combination, Versa HD and Monaco make HDRS techniques not only possible, but routine.

Clinician-led planning
The clinical team determines the goals for dosing the target and sparing critical structures. Monaco consistently achieves clinician-led criteria and minimizes QA trial and error.

High resolution through high modulation
Only Monaco unlocks the full capability of Versa HD, allowing for high modulation intensity only where it is needed.

Improved understanding of dose behavior
The best delivery system is only as accurate as the planning system. With radiobiological modeling, you can further personalize patient treatments. Monte Carlo modeling is the most accurate method for predicting how the dose will perform on its path to the tumor.

Advanced image guidance for ultimate control

The innovative imaging and motion management technology found in Versa HD gives clinicians the confidence to reduce margins and escalate doses to the target. It expands the scope for HDRS, reaching smaller targets in locations previously untreatable with radiation.

Imaging in more dimensions

The ability to visualize soft tissues has created new opportunities for precision delivery. Now, Versa HD's advanced image guidance solution elevates soft-tissue imaging beyond simple image capture, providing tools that guide treatment while the patient is on the table.

Versa HD provides imaging in 2D, 3D, and 4D to reveal the true picture. With the industry's largest field-of-view, clinicians can see more anatomy, and the movement of the tumor and surrounding organs can be captured from day to day, giving much more information. This allows clinicians to account for the tumor and surrounding critical structures and to make changes in positioning before treatment begins. Only Elekta offers real-time advanced registration tools for 2D, 3D, and 4D image guidance, so uncertainties can be resolved as the dose is being delivered.

A more accurate way to manage motion

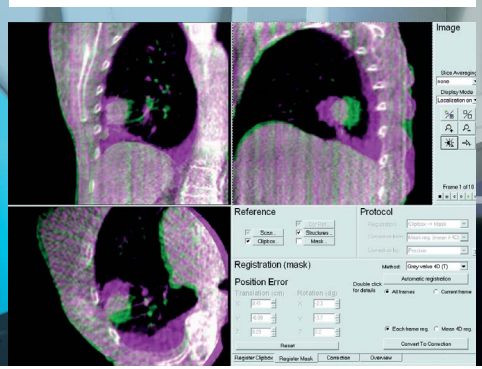
Precision radiotherapy is only possible if motion can be accurately monitored and managed. Versa HD enables motion management to be tailored to specific clinical goals, anatomical challenges and patient needs.

A variety of motion detection systems can be used with Versa HD via its open system beam-gating interface, allowing patient-specific motion management. Elekta's patented respiratory motion management solution can be used for an integrated, highly repeatable gated breath-hold delivery system. Or, ultrasound soft-tissue visualization can be used to overcome the limitations of methods that rely on surrogate markers for target motion. Non ionizing ultrasound eliminates extraneous dose.

"Advanced motion management technologies are critical to facilitate highly accurate and potent stereotactic radiation therapy for early stage, inoperable lung tumors. Versa HD integrates these technologies and other solutions—such as 4D image guidance and sophisticated patient immobilization and treatment planning—into a specialized package for lung cancer. For the patient, it will mean a higher therapeutic dose of radiation to the lung tumor, with reduced exposure to nearby healthy tissues."

Vivek Mehta, MD

Director, Center for Advanced Targeted Radiotherapies
Swedish Cancer Institute,
Seattle, Washington USA



Unique beam shaping creates new treatment possibilities

"If we are talking about treating lung cancer or liver metastases, the faster we can deliver therapy, the less chance for patient motion and, in turn, the more precise therapy will be. The High Dose Rate mode within Versa HD will facilitate that."

Oscar Matzinger, MD
Hôpital Riviera and CHUV
Rennaz and Lausanne, Switzerland

High precision beam shaping
Versa HD's Agility™ MLC enables high-precision beam shaping with 2x faster leaf speed, resulting in 60 percent faster treatment times. Agility combined with High Dose Rate mode enables Versa HD to rapidly deliver sophisticated therapies within standard radiotherapy treatment times.

Agility offers several advantages over other MLCs, with its submillimetric leaf accuracy and repeatability over the 40 cm x 40 cm field of view. Because Agility provides better shielding for surrounding healthy tissue, and up to 5x lower leaf transmission, the treatment planning system has more dose available where it's needed–especially important when escalating the dose.

New possibilities with a High Dose Rate
High Dose Rate beams create new possibilities for treatment techniques. Shortening beam-on time by increasing the dose rate makes more stereotactic treatments feasible. Faster delivery increases treatment accuracy by reducing the risk of intrafraction motion, and low scatter reduces the dose to surrounding tissue.

Agility MLC overcomes previous limitations of leaf speed that have traditionally disrupted High Dose Rates. Agility leaves move quickly, supporting High Dose Rate delivery without compromising accuracy.

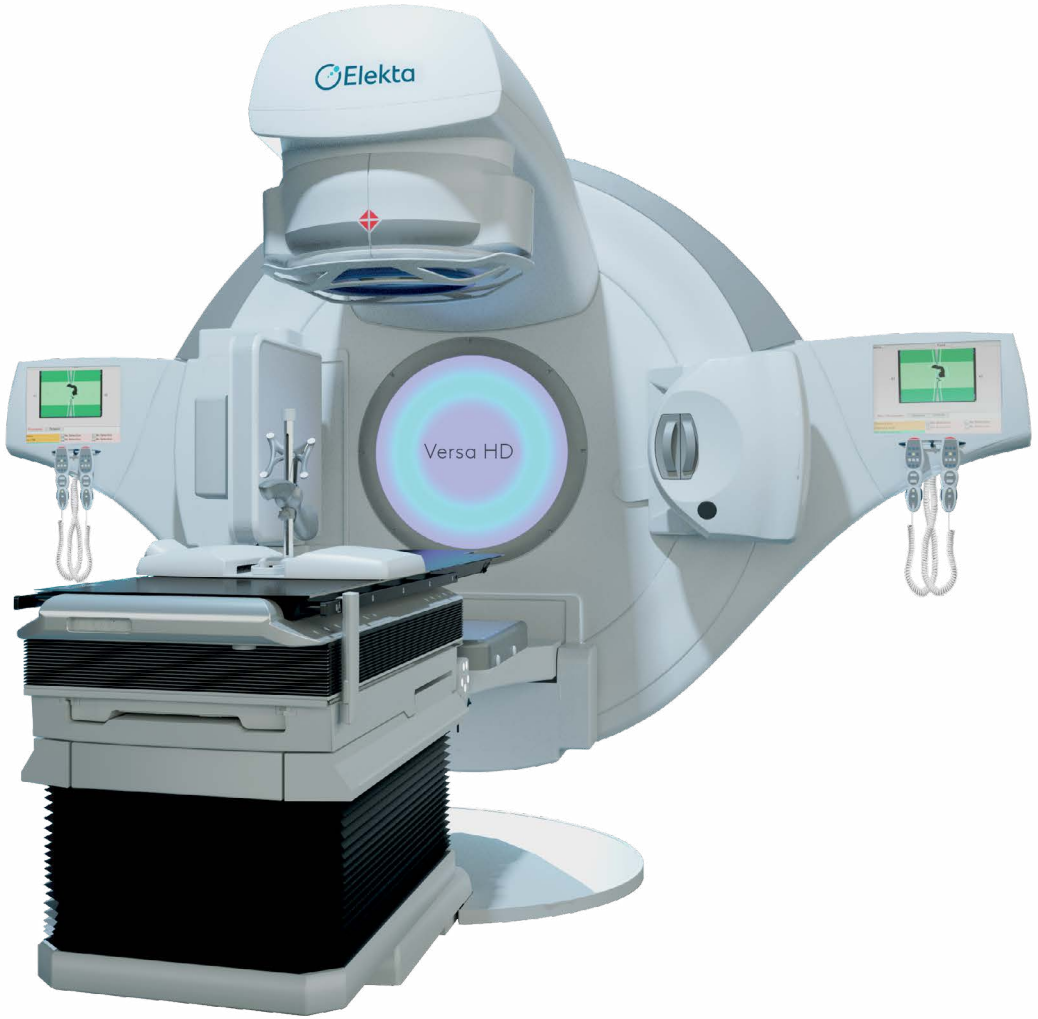
Greater confidence in dose escalation
The benefits of eliminating the beam-flattening filter include reduced scatter, simpler beam modeling and High Dose Rates. However, when the flattening filter is removed beams can lose energy and penetrative power. Elekta's Flattening Filter Free (FFF) beam generation technology ensures matching between beams with and without the flattening filter. With Versa HD, clinicians can be confident that the dose is consistently placed as they planned it.

Versa HD delivers targeted high doses in a short period of time, enhancing the patient experience in terms of comfort and duration, with the lowest risk of secondary cancer.

The complete precision radiotherapy & radiosurgery solution

"Versa HD is a very well-thought-through linac. The entire system was put together by thinking through all the different components and analyzing how they all work together in an integrated whole."

Carl Rowbottom, PhD
Head of Radiotherapy Physics
The Christie, Manchester, UK



Target tracking during delivery

Clarity® Autoscan uses non ionizing ultrasound (rather than surrogates) to continuously monitor target anatomy, reducing intrafraction motion effects and supporting advanced hypofractionation techniques that require reduction in planning margin. Non-invasive soft-tissue visualization is safer, simpler and lower cost than implant procedures.

Accurate patient positioning

Integrated robotic 6D positioning enables submillimeter positioning accuracy plus six degrees of positioning for full translational (x, y, z) and rotational (roll, pitch and yaw) control.

Advanced treatment planning

Radiobiological modeling and Monte Carlo dose calculation is the most accurate method for predicting how dose will behave on its path to the tumor. Multicriteria optimization (MCO) means that doses to critical structures can be intelligently lowered without sacrificing target coverage.

Advanced motion management

Versa HD's open system beam-gating interface connects to a variety of motion management systems, allowing patient-specific motion management. For example, Elekta's patented respiratory motion management solution can be used for an integrated, highly repeatable gated breath-hold delivery system.

High-definition beam shaping

Agility MLC allows high-resolution beam shaping over a larger treatment field of 40 × 40 centimeters. Fast leaf speed and integrated digital control enable higher dose rates to be used for more effective modulation. Low leaf transmission of less than 0.5 percent reduces integral dose.

QA tools

As radiotherapy advances, verification processes become increasingly demanding. Versa HD comes with a comprehensive package of in vivo EPID-based patient QA and automated machine QA management, both of which are essential for confidence in accurate dose delivery.

Non-invasive 4D image guidance

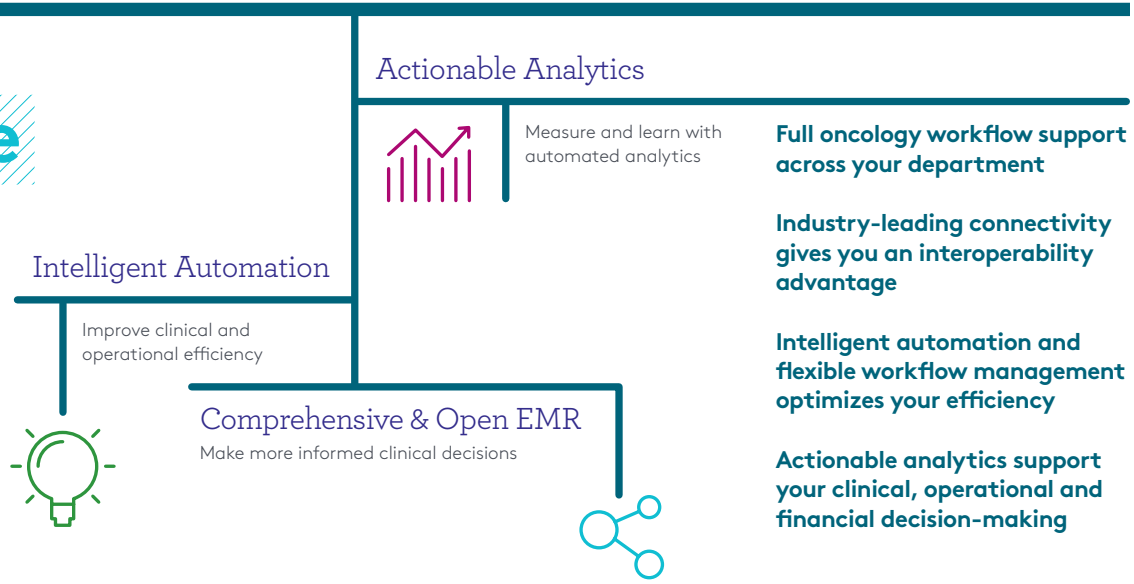
Anatomically guided 4D imaging enables accurate motion management without implants or surrogate markers. Treatment delivery is possible with only small margins needed during free breathing, making free-breathing techniques an option for patients with respiratory issues.

High Dose Rate beam generation

FFF beams have the same penetrating power as equivalent-energy FF beams while reducing scatter, simplifying beam modeling, and increasing dose rate. In High Dose Rate mode, Versa HD delivers targeted high doses in a short period of time to ensure patients have the safest, most comfortable treatment.

Find out today how Versa HD can be the versatile answer for your clinic or network. Contact your local Elekta representative.

MOSAIQ® powers practice optimization through continuous learning



Full oncology workflow support across your department

Industry-leading connectivity gives you an interoperability advantage

Intelligent automation and flexible workflow management optimizes your efficiency

Actionable analytics support your clinical, operational and financial decision-making

In addition to greater confidence and accuracy in dose placement, Versa HD allows clinicians to take advantage of Elekta solutions for care and knowledge management. Clinical and business information can be shared and accessed when needed, and users can draw from the ever-growing pool of knowledge to better serve their patients and their practice.

MOSAIQ Oncology Informatics

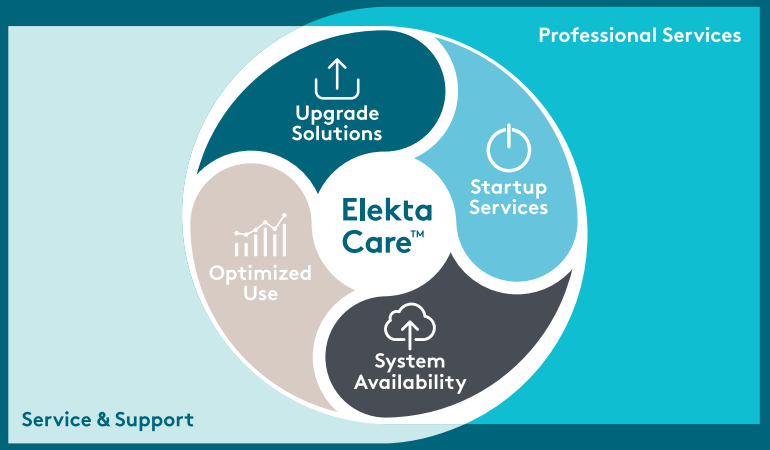
With MOSAIQ, Elekta's comprehensive oncology information management system, clinicians spend less time gathering information and more time assessing and planning treatment options.

Patient information is immediately available so work can flow smoothly, clinical teams can make fully informed decisions, and staff can manage day-to-day operations efficiently. An integrated information system is especially helpful for patients who are receiving chemotherapy as well as radiation therapy.

Just as Versa HD advances the accuracy of radiotherapy, Elekta software advances information-guided cancer care with decision-support functions for building and growing a precision radiotherapy practice.

MOSAIQ named the top-rated Oncology Information System for 2017 by KLAS

Elekta Care™ supports you from startup through your product's lifecycle with comprehensive options from education, training and upgrades to solutions allowing you the highest uptime and improved operational efficiency.



We are healthcare technology innovators, specializing in radiotherapy treatments for cancer and brain disorders.

We help clinicians to improve patients' lives through our forward-thinking treatment solutions and oncology informatics, creating focus where it matters to achieve better outcomes.

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