Precise Treatment System™
Clinically Flexible Digital Linear Accelerator

Personalized radiotherapy solutions for everyday treatment care
Can you offer personalized cancer care?

As more and more people require radiotherapy as an integral part of their cancer treatment, there is a need for a flexible solution to deliver safe and accurate care quickly. With all patients requiring tailored treatments, it is essential to have a solution that is easily adapted to provide patient-specific treatments without increasing clinical workflows. This way, just as each patient is unique so is the treatment they receive.

The Precise Treatment System (Precise Digital Accelerator) from Elekta has been designed specifically to meet this need. With its integrated digital control system, it is capable of delivering clinical flexibility whether delivering treatment with photons or electrons, simple static delivery, IGRT or VMAT. With this choice in treatment options, the Precise Treatment Solution is ideal to ensure that each patient receives the best treatment for their needs.
Why Precise Treatment System™?

- Simple, intelligent digital coordination of multiple linac functions
- Largest gantry isocenter clearance in the market for non-coplanar techniques
- Intuitive IGRT solution for accurate positional verification
- Fast and effective treatment solution with VMAT delivery
- Complete package with easy to use software for planning and information management
- Multiple photon and electron energies for clinical flexibility
- Upgradable solution to support future growth and latest developments
Elekta Precise Treatment System

In radiation dose delivery, it is essential to have constant high speed monitoring and precise control in order to have confidence in the performance of the radiation delivery. With its integrated digital control, the Precise Treatment System provides this confidence. It ensures that the dose rate is prescribed, monitored and managed as it is being delivered through real time communication with additional independent verification at regular intervals against the treatment prescription.

Through its single integrated digital control it provides control and monitoring across over 100,000 different variables including the MLC. Unlike other non-digital systems, the Elekta solution permits real-time communication of information allowing Elekta’s Precise Treatment System to be faster and more accurate than other non-digital systems. Accuracy is further enhanced with Elekta’s three tiers of safety, which is an integral part of the Precise Treatment System.

- Delivers photon and electron treatments
- Selection of three different photon energies and up to nine electron energies
- Anti-collision protection for enhanced safety
- Largest clearance around the isocenter for flexibility
- Assisted set-up (ASU) and remote table movements for rapid setup
Delivery Techniques

The precise treatment system supports a range of pre-configured or optional delivery techniques providing the physician with the flexibility to tailor the treatment to suit the needs of each individual patient. Whether it is a simple static delivery or something more complex like IMRT or VMAT, the Precise Treatment System ensures improved dose conformity to target structures while reducing delivery times, allowing more patients to be treated.

- Static delivery
- Wedged delivery
- Arc delivery
- PreciseBeam™ Segmental
- PreciseBeam™ Dynamic
- PreciseBeam™ Dynamic Arc
- PreciseBeam™ VMAT
On-Board Imaging

iViewGT™ is Elekta’s MV electronic portal imaging solution which provides real-time, high quality images using the treatment beam for image acquisition. Through simple and flexible image review tools, it allows patient position verification and correction with efficient workflows. The unique advantage of utilizing the treatment beam is that during the treatment session, images of the treatment fields can be captured for verification of dose placement, providing a powerful tool for IMRT quality assurance and dosimetry.

- High quality, low dose images
- Single, double and multiple image acquisition modes
- Movie loop playback
- Image display and manipulation
- On and off-line workflows with MOSAIQ Image Management
Integrated Beam Shaping

The desire to deliver high doses to the target is finely balanced against the growing need to minimize dose to healthy tissue outside of the target volume. The MLCi2 Multileaf Collimator on the Precise Treatment System helps you achieve this fine balance through its innovative and integrated design. Supported by active leakage reduction, you can trust this design to provide the lowest integral dose on the market even when using advanced delivery techniques.

• Average leakage with back-up diaphragms of 0.1%
• Interdigitation capability for plan efficiency
• Accuracy through integrated digital control
• Unique optical readout technology for leaf position
• Ideal for dynamic treatments with no need for split fields
Elekta’s human-centric software creates an efficient clinical environment in which all activities related to patient care - from diagnosis, treatment planning and follow-up - are as streamlined as possible, giving clinicians more time to focus on patients. Elekta’s open systems and vendor-neutral connectivity ensure cross-platform flexibility to integrate the most advanced and useful tools.

- Reduce planning time and increase clinical efficiency with the most advanced suite of planning functionality
  - XiO® and Monaco® offer easy and clinically reliable planning
  - Highly accurate Monte Carlo XVMC dose engine calculation for VMAT planning
- MOSAIQ® is a comprehensive image-enabled Electronic Medical Record (EMR) for radiation oncology
- MOSAIQ® Data Director enables archiving, retrieval and management of data to support advanced IGRT techniques
Service

Powered by Elekta IntelliMax™ technology, Service Engineers can remotely access, monitor or troubleshoot Treatment Delivery System suites across the internet. Servicing and problem solving become more efficient, thereby increasing clinical availability. True preventative maintenance becomes a reality.

Precise Treatment System customers can easily upgrade equipment as clinical practice changes over time, providing access to the latest digital platforms and techniques such as VMAT to increase patient throughput.

Designed around customer needs, Elekta Training and Education programs ensure clinics realize the full value of investments and advanced clinical practice.

• Advanced service packages increase clinical availability
• Elekta IntelliMax™ Remote Access increases service efficiency
• Wide range of upgrade options to support changing clinical practice
• Blended learning programs enhance skills and clinical practice
• Financing options available to simplify acquisition
Workflow

The Elekta Precise Treatment System has been designed in collaboration with clinical partners to ensure a clinical workflow - a workflow that can be optimized for each clinic’s setup and their process. This makes the Precise Treatment System ideal for a fast workflow with easy set up and delivery for patient treatment. The workflow below highlights the ease of accurate patient set up to facilitate VMAT delivery, which protects organs at risk while increasing dose conformance to the tumor.

Steps for an online patient treatment

- Diagnostic imaging for planning
- Treatment planning
- Initial patient set up
- Imaging
Image review and analysis
Remote patient re-positioning if needed
VMAT delivery
MOSAIQ for information management
A human care company, Elekta pioneers significant innovations and clinical solutions for treating cancer and brain disorders. Elekta provides intelligent and resource-efficient technologies that improve, prolong and save patient lives. We go beyond collaboration seeking long-term relationships built on trust with a shared vision, offering confidence to healthcare providers and their patients.