HexaPOD™ evo RT System

To the power of six
Achieving accuracy

One of the major obstacles to achieving accuracy in the delivery of radiation therapy is patient positioning and organ motion. The introduction of Elekta Synergy® and Elekta Axesse™ minimizes the uncertainties arising from target motion by providing 3D volume imaging at the time of treatment, highlighting any positional discrepancies before treatment begins. This allows clinicians to reduce margins with confidence, escalate dose and move towards hypofractionated treatment regimes. HexaPOD™ evo RT System completes the image guided radiation therapy (IGRT) localization chain by enabling accurate and remote geometric correction of any discrepancies observed and then detecting any table movement before treatment.
A unique patient positioning system

HexaPOD™ evo RT System is a unique fully robotic patient positioning system with six degrees of freedom to correct for any misalignments detected by X-ray volume imaging (XVI) or portal imaging, provided by the Elekta range of digital linear accelerators. The computer controlled robotic treatment couch allows six independent degrees of freedom: x, y, z, pitch, roll and yaw and is able to achieve submillimeter 6D conformal positioning accuracy.

HexaPOD evo RT System comprises the HexaPOD™ evo RT couch top, equipped with the new generation homogenous carbon fibre couch top – based on the iBEAM® evo couch top and iGUIDE® system – including the camera tracking system and control consoles, both inside and outside the treatment room.

Fast and flexible cost saving tool

HexaPOD evo RT System technology is compatible with a range of Elekta linear accelerators and, when integrated with the iGUIDE software, enables fast, flexible and automated patient set-up. This makes it a time and cost saving tool for any modern radiation therapy department.

Intuitive software

The intuitive user interface of the iGUIDE software uses clinical workflows to aid the user and supports accurate positioning of the HexaPOD evo RT couch top to the defined isocenter co-ordinates, relative table position or a new position based on correctional data received from XVI, using all six degrees of freedom. The iGUIDE software is accessible inside and outside the treatment room.

The graphical user interface is self explanatory and easy-to-use, providing 3D graphic animations of HexaPOD evo RT System on a screen to ensure ease-of-use, accuracy and safety.

HexaPOD evo RT System can also be controlled manually by using the handheld control when required.
Easy integration with Elekta image guidance systems

Select patient prescription on iGUIDE® software

The patient lies on the treatment couch in the BodyFIX® vacuum cushion

The Elekta reference frame is placed over the patient and the patient is aligned according to their tattoos

Once aligned to tattoos, the iGUIDE® software registers the patient and then the relative table movements are made

The kV panel and collimator are moved into position
HexaPOD™ evo RT System IGRT workflow

HexaPOD evo RT System can interface to the XVI where image registration is carried out, which provides the table correction vectors required to compensate for any observed organ, or patient movement. All table correction movements can be remotely performed by HexaPOD evo RT couch top and no additional table movements are required to correct for any misalignment.

An Elekta VolumeView™ image is acquired.

Elekta VolumeView™ image registration with reference CT scan to achieve translations and rotation required to correct the patient position.

iGUIDE® software automatically moves the HexaPOD™ evo RT couch top to the correct isocenter position as defined by the XVI system.

Patient receives treatment.

Operator selects UNLOAD which removes any rotations from the HexaPOD™ evo RT couch top and Precise table lowers for the patient to stand up.
HexaPOD™ evo carbon fiber couch top

An intelligent and versatile design

The new generation carbon fiber couch top, based on the iBEAM® evo couch top, is in perfect synergy with modern radiation therapy techniques such as IMRT, IGRT, VMAT and a range of imaging modalities. IGRT requires high quality kV or MV imaging to enable optimized image registration for misalignment detection and subsequent corrections.
Flexible patient positioning

The carbon fiber couch top is easy-to-use, facilitates quick patient set-up and enables replication of set-up throughout the planning, delivery and verification processes. The integrated interface to standard patient indexing minimizes patient set-up time, reduces the risk of set-up error and minimizes the risk of positioning device movements. Indexing bars enable positioning of a range of industry-standard accessories.

Versatile couch extensions

Flexible patient positioning is provided by a range of couch extensions which are ideal for treatment or imaging, of the upper body and are shaped to accommodate a range of clinical set-ups. These extensions are easy to attach and have a quick release mechanism to save time between patients.

Both the Elekta range of head frames and Elekta HeadFIX® non-invasive immobilization devices can be attached to this couch top. These devices provide repeatable positioning accuracy ideal for volumetric intensity modulated arc therapy (VMAT), intensity modulated radiation therapy (IMRT), IGRT and stereotactic applications. Voluntary and involuntary patient movement can be minimized by using BodyFIX®, a non-invasive dual vacuum activated immobilization and positioning system. This system is ideal for VMAT, IMRT, IGRT and stereotactic applications.

Designed with IGRT in mind

Specifically designed for IGRT, this tabletop is a rigid carbon fiber sandwich construction, which offers high radiotranslucency through its low-density homogeneous design. It minimizes artifacts providing brilliant image quality and clarity when using Elekta PlanarView™, MotionView™ or VolumeView™ imaging.