



HDR Real-time Prostate Solution

Truly integrated, fully dedicated.

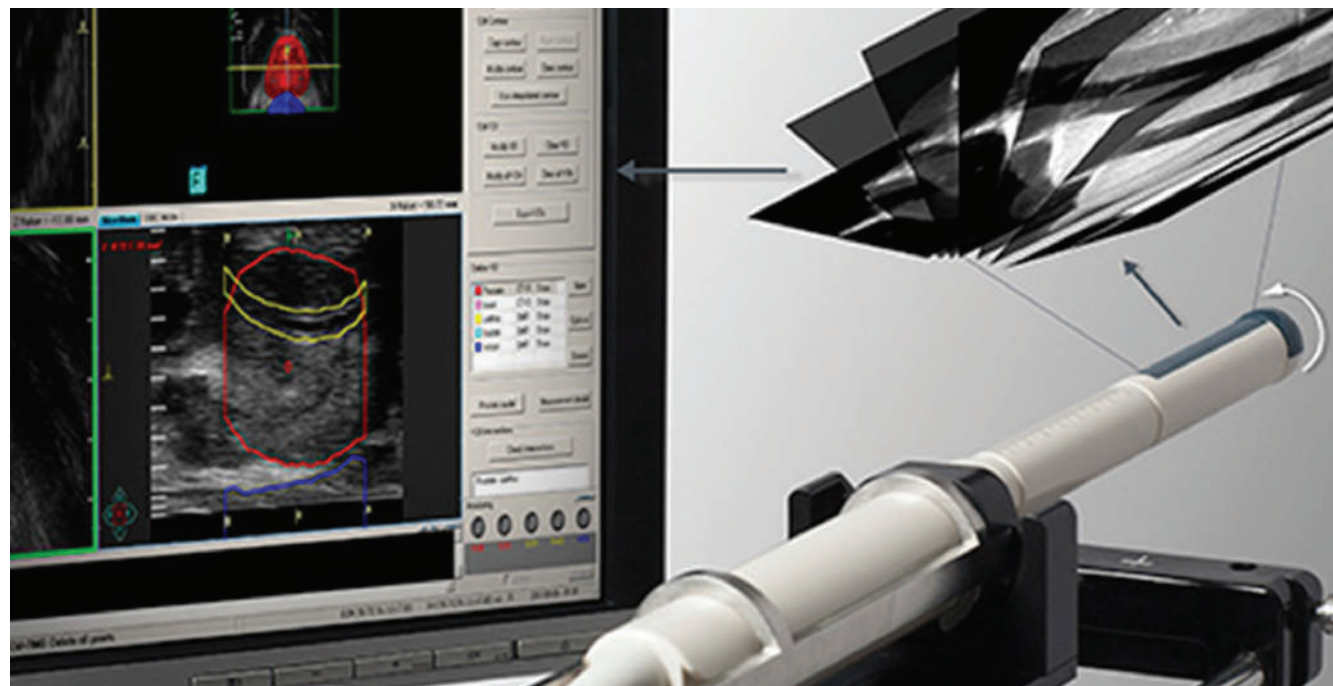
Dedicated and
efficient HDR
brachytherapy

HDR Real-time Prostate Solution

High dose rate (HDR) brachytherapy is a widely accepted, minimally invasive procedure for treating prostate cancer. It provides effective dose escalation with the advantages of minimized toxicity and favorable quality-of-life outcomes.¹⁻³ Delivering a high radiation dose in a single or a few fractions requires the highest possible accuracy and precision to provide safe and effective treatments.

Why HDR Real-time Prostate Solution?

- Single nonstop procedure avoids patient movement and minimizes implant shifts
- Seamless integration of imaging, treatment planning and treatment delivery offers genuine real-time workflow
- Instant sagittal imaging ensures optimal view of the target area at all times
- Powerful adaptive planning and 'Traffic light' evaluation facilitate fast creation of highly conformal plans
- Procedure guidance by Oncentra Prostate
- Solution expedites treatments and ensures easy adoption



HDR Real-time Prostate Solution is based on the philosophy that brachytherapy should be performed in one place to avoid patient movement and minimize shifting of the implant and targets during the procedure. Accordingly, the solution offers the user a powerful tool to deliver the highest possible quality treatment planning, needle implantation and treatment delivery in a single session.

By integrating imaging, adaptive planning and implantation in space and time, a real-time adaptive procedure becomes reality, enabling clinicians to optimize therapy to the greatest possible extent.⁴

**Oncentra® Prostate allows
you to get the most out of
your scheduled OR time**

Truly integrated procedure

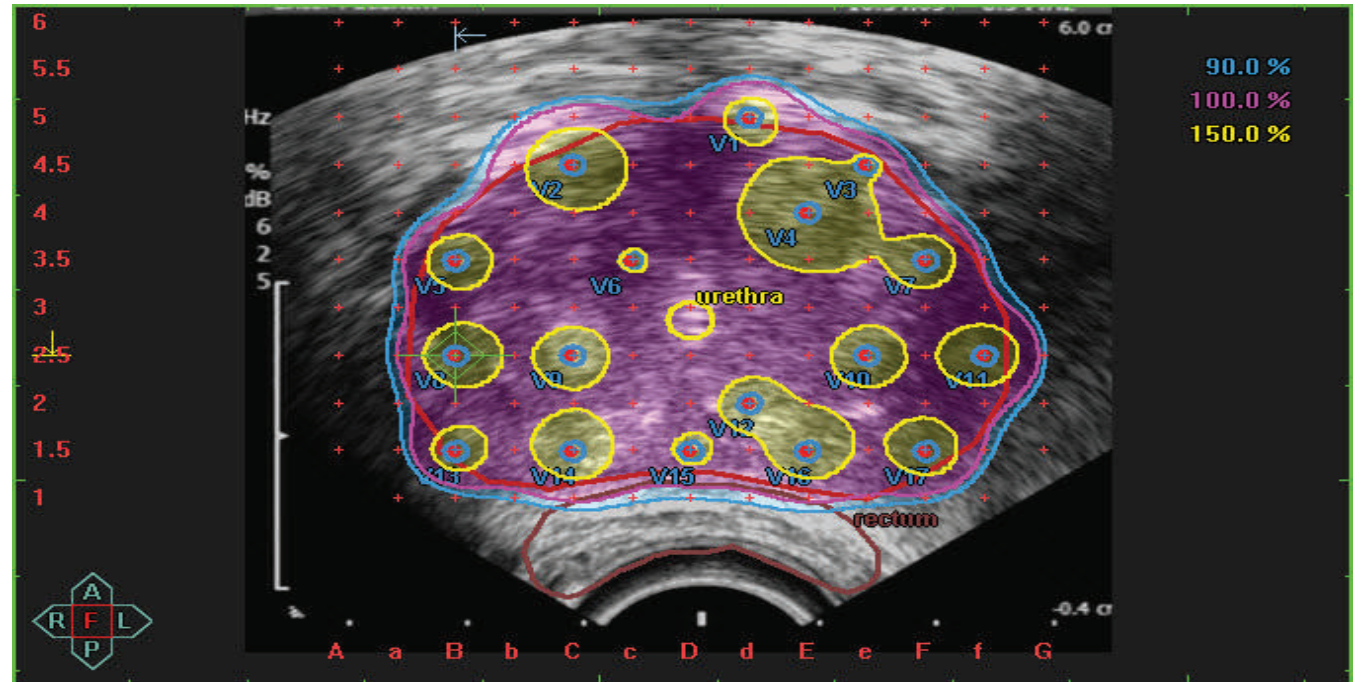
HDR Real-time Prostate Solution seamlessly integrates all components required for prostate brachytherapy, for a highly streamlined workflow.

Oncentra Prostate

This prostate brachytherapy-dedicated treatment planning system can be used with a compatible ultrasound system.

Endo-Cavity Rotational Mover (ECRM)

A device unique to HDR Real-time Prostate Solution, ECRM enables automated rotational movement of the ultrasound probe and is directly controlled by Oncentra Prostate.



OncoSelect® Stepper and templates

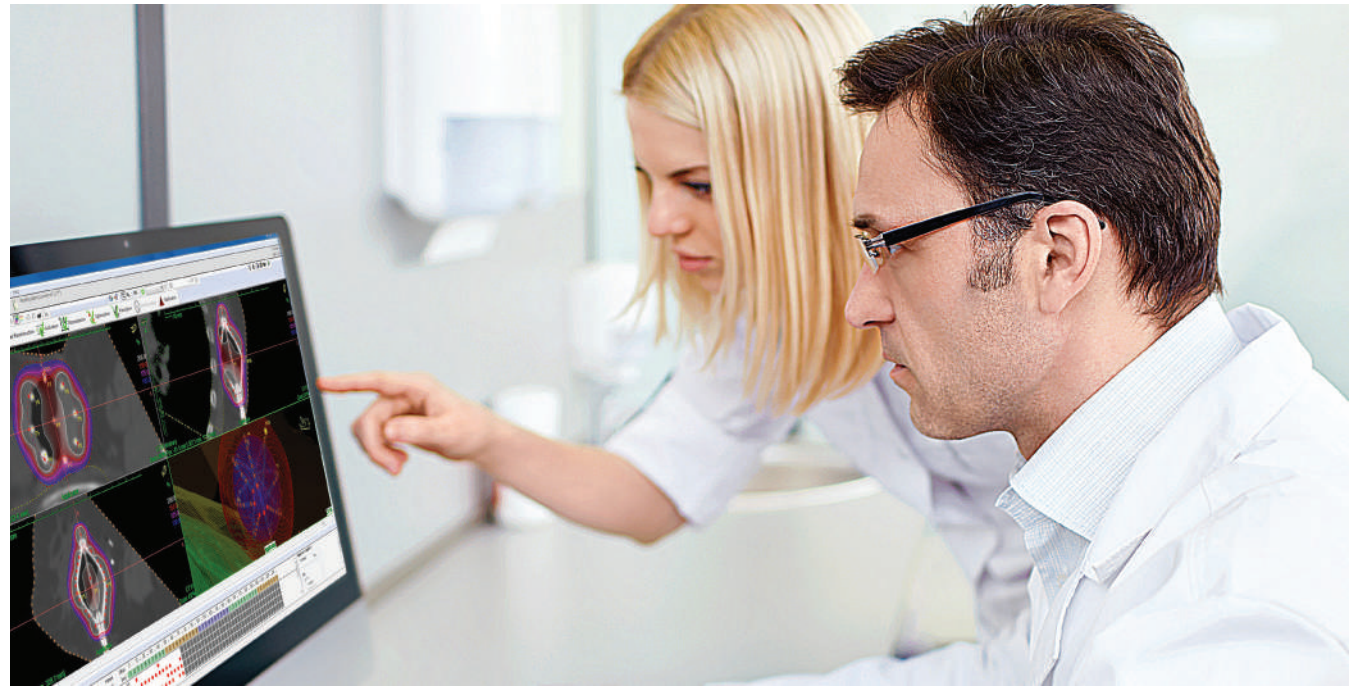
OncoSelect Stepper and several prostate templates are tailored to the user's needs and provide template and ultrasound probe fixation and needle guidance. A variety of interstitial needles complement the treatment delivery options.

Flexitron® afterloader

Elekta's advanced remote afterloading platform with unique forward stepping source technology offers complete, reliable delivery of HDR brachytherapy.

Genuine real-time workflow

Central to the real-time workflow in HDR Real-time Prostate Solution is Oncentra Prostate, the treatment planning system dedicated to HDR brachytherapy for prostate cancer. The ultrasound system and ECRM are controlled directly by Oncentra Prostate, ensuring that live ultrasound images are available at all times for contouring, planning, needle implantation and optimization.

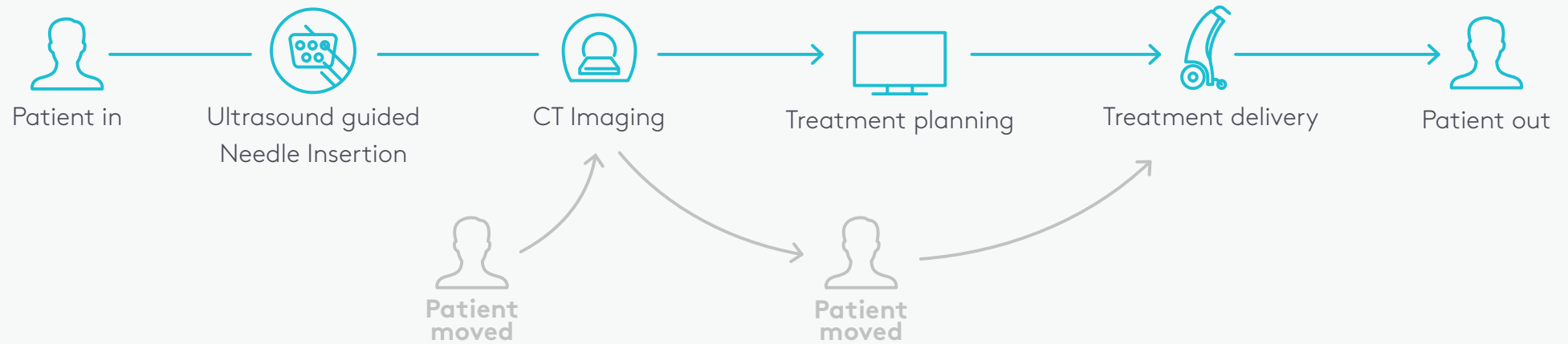


With the instantaneous capture of sagittal images, contouring and needle insertion is simplified. The exclusive Needle Navigation tool makes use of the sagittal plane that corresponds with the needle to be inserted.

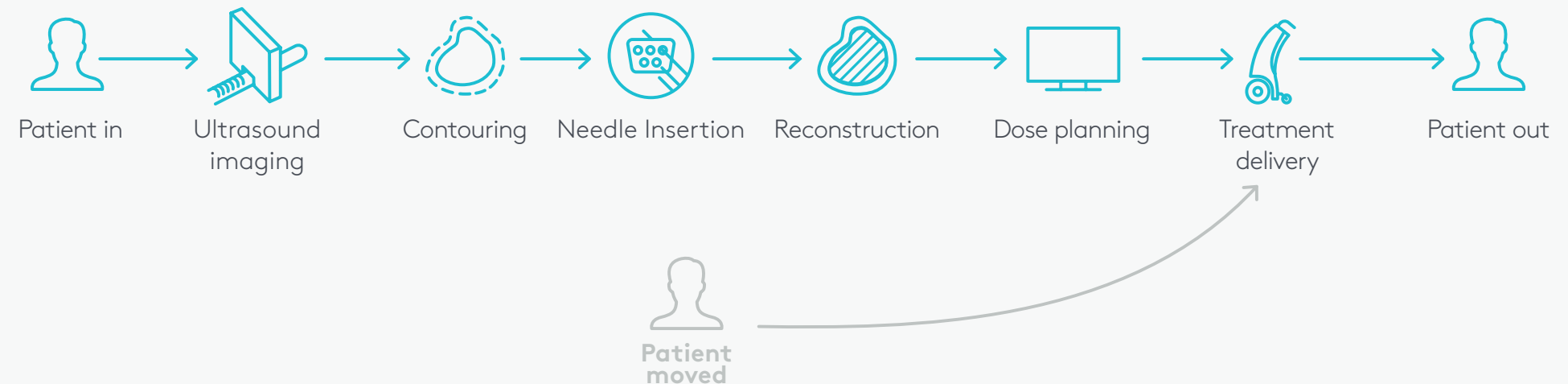
Placement of needles can be viewed live and promptly adjusted, leading to accurate needle insertion without operator dependence. The live sagittal imaging provides instant views of the implanted needles, and quick adjustment of the base-plane during real-time delivery.



Conventional HDR workflow

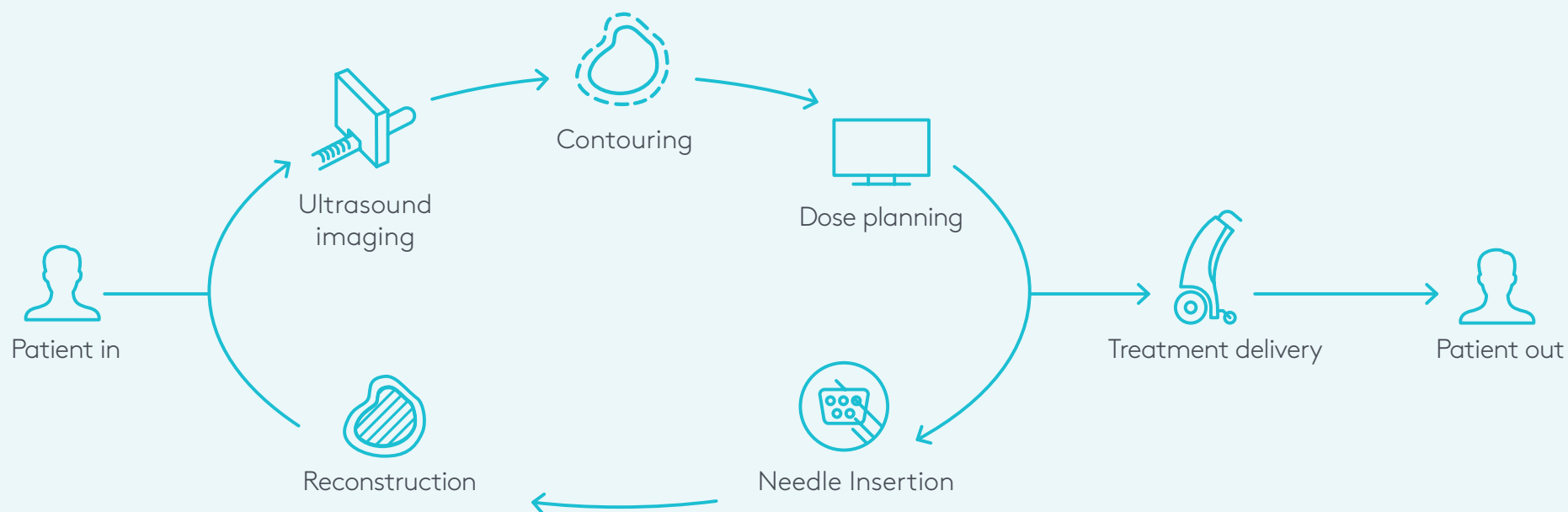


Semi real-time HDR workflow



Genuine real-time HDR workflow

An efficient solution | Enhanced patient experience



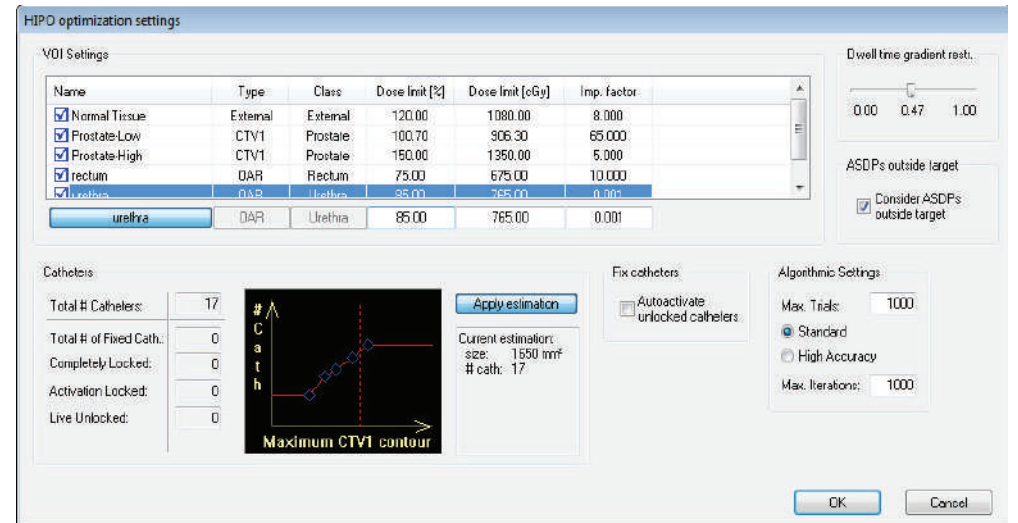
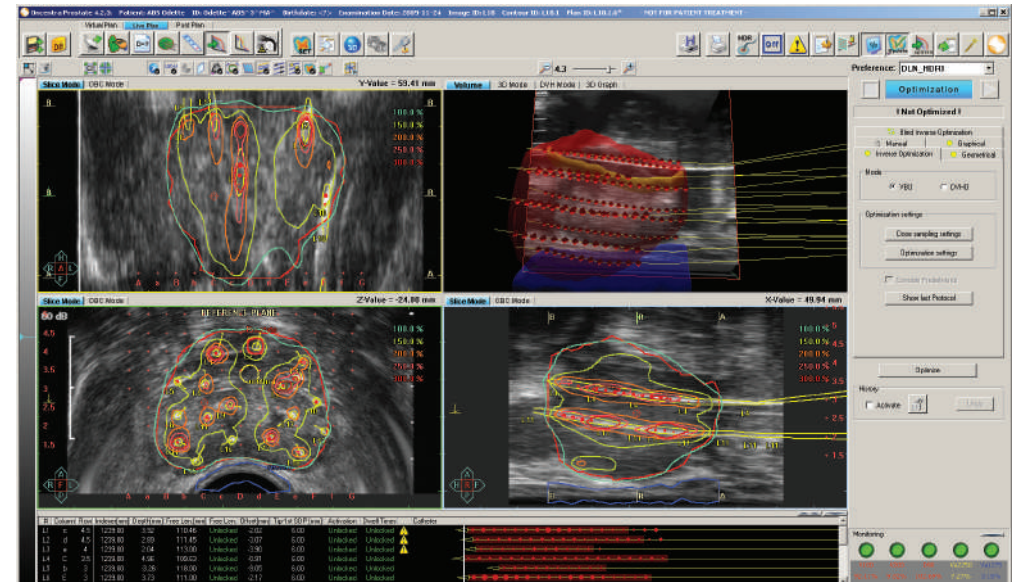
Patient in **one** location

You are in control

The combination of presets, traffic lights and HIPO inverse planning and optimization leads to highly conformal treatment plans

Live ultrasound imaging and powerful adaptive planning guide the user efficiently from a virtual plan to a highly conformal live plan. Oncentra Prostate automatically evaluates essential plan parameters and clearly indicates advised adjustments.

Once the implant and live plan are finalized, the needles can be quickly connected to the Flexitron afterloader in the same treatment room. With a single mouse click, the plan is exported from Oncentra Prostate to the afterloader and treatment delivery can start. The genuine real-time workflow removes the need for moving patients to and from the CT scanner and provides the user control over the full procedure.



Powerful adaptive planning

Adapting plans on the fly to the actual situation based on dosimetry objectives is integral to HDR Prostate Solution. Oncentra Prostate employs the exclusive Hybrid Inverse Planning & Optimization (HIPO) algorithm—a 3D anatomy based optimization algorithm, using simulated annealing. Typically in 30 seconds HIPO proposes the virtual treatment plan for needle positions, dwell times and dwell positions, using presets for each organ.

The Dynamic Needle Tracking function monitors the implanted needle configuration and calculates deviations between planned and actual needle positions. 'Traffic light' indicators provide quick visual insight into the level of alignment of the presets with the planned dosimetry. Several options for final optimization, such as DVH Shaper, can be used to create the highly conformal live plan.

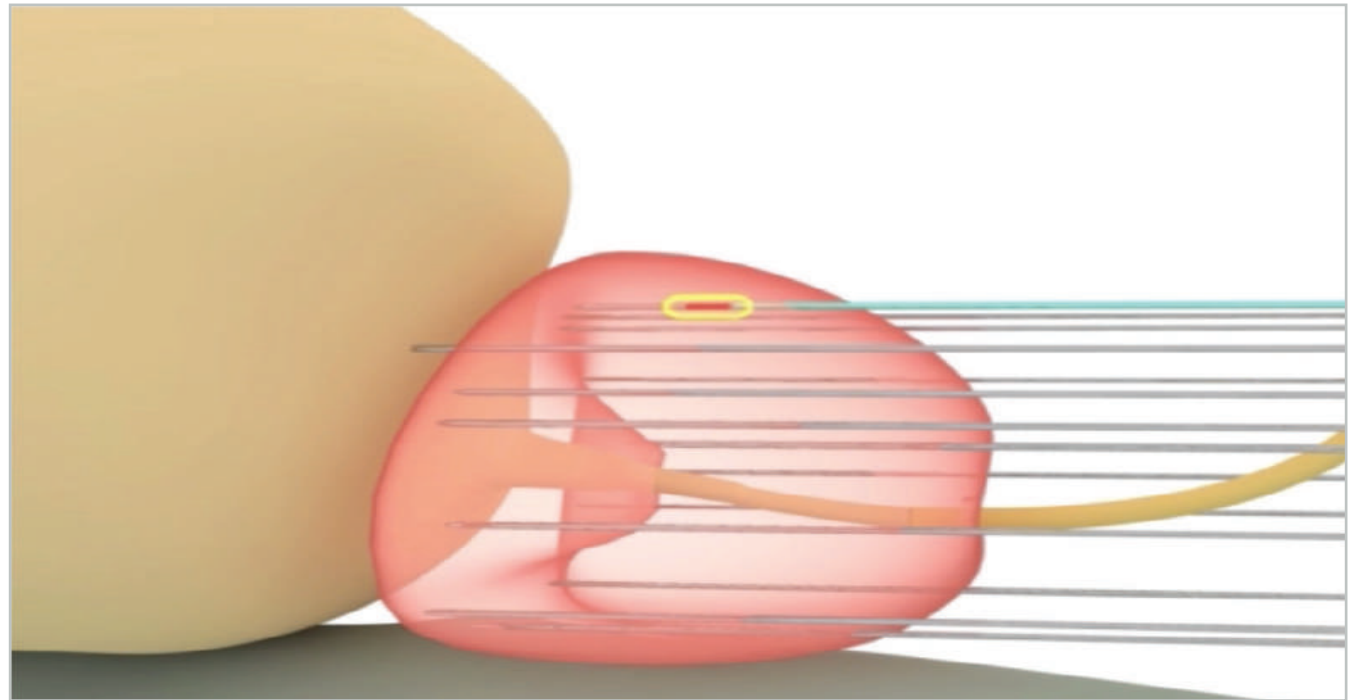


The combination of presets, traffic lights and HIPO inverse planning and optimization leads to highly conformal treatment plans. Independent of the user's experience consistent quality in planning can be achieved.

Typically in 30 seconds HIPO proposes the virtual treatment plan for needle positions, dwell times and dwell positions, using presets for each organ.

Truly integrated, fully dedicated

HDR Real-time Prostate Solution was developed with one goal in mind: offer a robust real-time workflow for HDR prostate brachytherapy. The integration of all components in one solution ensures that products interact seamlessly. With a design leading to highly conformal and uniform treatment plans, users can be sure that clinical objectives are met in the most efficient and dedicated way. HDR Real-time Prostate Solution is part of Elekta's prostate brachytherapy solutions.



Safe and secure infrastructure

- Security within your hospital IT network supported by the widely supported Windows® operating system platform
- Installed on a laptop for your convenience and safety—take Oncentra Prostate to your department and store it
- Comfortable use in the OR—elegantly designed, ergonomic trolley

Easily add LDR brachytherapy on the same platform

The same software platform is used for both HDR Real-time and LDR Real-time (permanent seed implant) procedures, making it very easy to expand your clinic's treatment options. With only a short learning curve required, and building on available technology and resources, investing in HDR and LDR Prostate Solutions offers a durable investment in quality and efficiency. Oncentra brachy supports any seed model for which consensus data is available.*

Elekta Care™

Get the most from your Elekta brachytherapy solution

Elekta Care is designed to help you maximize the use of your Elekta technology, so you can focus on your patients and your practice.

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.



References

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[4] Hinnen K, et al. IJROBP 2010; 76(5):1433-38

For almost five decades, Elekta has been a leader in precision radiation medicine.

Our nearly 4,000 employees worldwide are committed to ensuring everyone in the world with cancer has access to—and benefits from—more precise, personalized radiotherapy treatments.



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