

LDR Real-time Prostate Solution

For low dose rate seed brachytherapy



Truly integrated, **fully dedicated**

LDR Real-time

Prostate Solution

Low Dose Rate (LDR) brachytherapy is a widely accepted, minimally invasive procedure for treating prostate cancer. It provides a high radiation dose with the advantages of minimized toxicity and favorable quality of life outcomes. ¹⁻⁴ LDR brachytherapy is mostly performed as an outpatient procedure, in monotherapy for low and intermediate risk patients, or as a dose escalating boost for intermediate and high risk patients. ⁵

LDR Real-time Prostate Solution enables planning and seed implantation in the OR, without the patient having to move. This ensures that the target's location during preplanning exactly matches the actual situation at the time of implantation. High-quality treatment planning, seeds configuration and implantation are performed in one 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.⁶

WHY LDR REAL-TIME PROSTATE SOLUTION?

- Single nonstop procedure avoids target repositioning and increases implant precision
- 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 lights' evaluation facilitate fast creation of highly conformal plans
- Procedure guidance by Oncentra Seeds expedites treatments and ensures easy adoption
- Automated seedloader for safe seed handling and high implant quality

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

LDR Real-time Prostate Solution seamlessly integrates all components required for prostate seed brachytherapy

Oncentra® Seeds

Treatment planning system dedicated to prostate brachytherapy. It can be used with a compatible ultrasound system.

seedSelectron®

A highly advanced seedloader device for unique automated and safe seed/spacer configuration and delivery.

No preparation or pre-ordering of loaded needles is required, providing the user full control over the quality of the implant.

Endo-Cavity Rotational Mover (ECRM)

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

OncoSelect Stepper

Table- or floor-mounted stepper to hold the prostate template for needle guidance, and fix the ultrasound probe during the procedure.

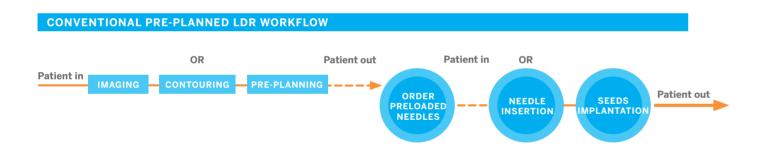
Genuine real-time workflow

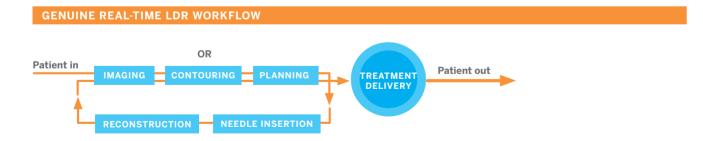
Central to the real-time workflow in LDR Real-time Prostate Solution is Oncentra® Seeds, the treatment planning system dedicated to permanent seed implant brachytherapy for prostate cancer. The ultrasound system and ECRM are controlled directly by Oncentra Seeds, ensuring that live ultrasound images are available at all times for needle implantation and seeds delivery.

With the unique 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 seeds, and quick adjustment of the base-plane during real-time delivery.

LDR Prostate

brachytherapy workflow





You are in **control**

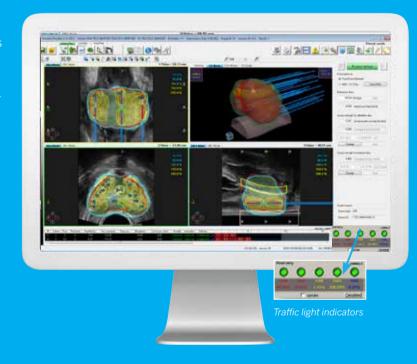
Live ultrasound imaging and powerful adaptive planning guide the user efficiently from a virtual plan to a highly conformal live plan.

Once the implant and live plan are finalized, the needles can be quickly connected to the seedSelectron®. With a single mouse click, the automated configuration and delivery of seeds and spacers per needle is initiated by the seedSelectron software.

Powerful adaptive planning

Adapting plans on the fly to the actual situation based on dosimetry objectives is integral to LDR Real-time Prostate Solution. Oncentra Seeds employs the exclusive Inverse Planning Simulated Annealing (IPSA) algorithm – a 3D anatomy-based optimization algorithm that proposes the virtual treatment plan for needle positions, number and position of seeds and spacers in typically 30 seconds. IPSA calculations are based on predefined dose constraints – 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 in the level of alignment of the presets with the planned dosimetry. Several options for final optimization can be used to create the highly conformal live plan.



The combination of presets, traffic lights and IPSA inverse planning and optimization leads to consistent quality in planning independent of the user's experience.

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 Seeds to your department and store it
- Comfortable use in the OR elegantly designed, ergonomic trolley

seedSelectron[®]

Seed delivery with robotic precision

seedSelectron provides automated delivery of radioactive seeds with robotic precision, ensuring implants that exactly match the planned treatment. Accurate and reproducible delivery of seeds with seedSelectron results in superior treatment





LDR Real-time Prostate Solution was developed with one goal in mind: offer a robust real-time workflow for prostate seeds brachytherapy. The integration of all components in one solution ensures a seamless interaction. 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.

Easily add HDR brachytherapy on the same platform

LDR Real-time Prostate Solution is part of Elekta's prostate brachytherapy solutions. The same platform is used for HDR Real-time Prostate Solution for high dose rate prostate brachytherapy, making it very easy to expand the 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 will always be a durable investment in quality and efficiency.



Elekta Care[™]

Integrated service for better patient care

Elekta Brachytherapy solutions will not be complete without Elekta Care, our integrated service and support package. With Elekta Care our service teams work together to help you make a real difference in patient care. With Elekta Care, customers benefit from:



ONE SERVICE AGREEMENT



ONE PHONE NUMBER



ONE POINT OF CONTACT

Elekta Care helps users of Elekta solutions access the appropriate Elekta representative faster and more easily. The goal of Elekta Care is to increase customer satisfaction and improve the patient experience by shortening care waiting times, transforming care routines and simplifying workflows.



- Technical Service
- O Software Support
- Application Support

ABOUT ELEKTA

technologies that improve, prolong and save patient lives. We go beyond collaboration, seeking long-term relationships built on trust with a shared vision, and inspiring confidence among healthcare providers and their patients.

Elekta brachytherapy solutions are part of Elekta's leading radiation therapy portfolio and encompass 40 years of

REFERENCES

- Koukoukaris G, ea. Adv Urol 2009, Article ID 327945 [1]
- [2] Ash D. Radiother Oncol 2007; 84(2):135-139
- [3] Malcolm JB ea. J Urol 2010; 183:1822-1829
- Ferrer M, ea. IJROBP 2008; 72(2) 421-432 [4]
- [5] Grimm ea. BJU International | 109, Supplement 1, 22 - 29
- [6] Hinnen K. IJROBP 2010; 76(5) 1433-38
- Hinnen ea. Radiother Oncol 2010; 96: 30-33 [7]







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