
PRESS RELEASE

STOCKHOLM, DECEMBER 23, 2020

RAYSTATION 10B: BRACHYTHERAPY PLANNING AND A SPEED REVOLUTION IN PROTON MONTE CARLO DOSE COMPUTATION

RaySearch Laboratories AB (publ) has launched the latest release of its widely adopted treatment planning system. RayStation® 10B adds support for brachytherapy planning and a new GPU Monte Carlo algorithm, which typically cuts final dose computation times to less than five seconds.*

In line with the company's aim of integrating with as many treatment delivery systems as possible, the new release includes support for high-dose-rate (HDR) brachytherapy planning. RayStation 10B features automatic channel reconstruction in combination with powerful dwell-time optimization, enabling faster and more consistent creation of high-quality brachytherapy plans. The efficiency and possibilities of brachytherapy planning are further enhanced by tools for working with multiple image sets, image deformation and dose summation.

HDR brachytherapy is a radiation therapy technique in which a small radioactive source is placed at different positions inside the patient to obtain an advantageous dose distribution. High doses can be delivered to tumors while sparing organs at risk. The technique is used, for example, to treat gynecological, prostate, breast, head-and-neck and skin cancers.

Another notable addition in RayStation 10B is the multi-GPU Monte Carlo dose engine for proton planning. With typical final dose computation times of less than five seconds, the GPU Monte Carlo algorithm is expected to revolutionize planning workflows at proton clinics. The physics algorithms of the GPU proton Monte Carlo dose engine are identical to those in the now well-established RayStation CPU proton Monte Carlo dose engine, and dosimetric results are equally strong.

Machine learning capabilities were introduced in RayStation 8B and are being continuously improved with each successive release. In RayStation 10B, machine learning applications further increase efficiency and improve consistency for photon and robust proton planning, and deep-learning organ segmentation.

The robust optimization framework has been extended to take intra- and inter-fractional motion into account, with consideration for motion during the delivery of single fractions and changes over the entire treatment course. This framework supports improved plan quality, for example in cases with organ motion. 10B also introduces machine parameter improvements to utilize the full potential of the most common linacs. As a result, it is now possible to create treatment plans with more conformal dose distribution and lower dose to organs at risk.

Other enhancements include closer integration with the oncology information system RayCare®*. When running RayStation in a RayCare environment, the planning task list is now accessible in RayStation for improved workflow management.

Johan Löf, CEO of RaySearch, says: "Each release of RayStation takes clinical workflows to the next level. Brachytherapy is a highly accurate technique, and the capabilities of our advanced software will bring a new dimension to the treatment of several cancer types."

About RaySearch

RaySearch is a medical technology company that develops innovative software solutions to improve cancer care. The company markets worldwide its treatment planning system RayStation and next-generation oncology information system RayCare. Over 2,600 clinics in more than 65 countries use RaySearch software to improve life and outcomes for patients. The company was founded in 2000 and the share has been listed on Nasdaq Stockholm since 2003.

About RayStation

RayStation is a flexible, innovative treatment planning system, chosen by many of the leading cancer centers worldwide. It combines unique features such as unmatched adaptive therapy capabilities, multi-criteria optimization, market-leading algorithms for IMRT and VMAT optimization with highly accurate dose engines for photon, electron, proton and carbon ion therapy. RayStation supports a wide range of treatment machines, providing one control center for all treatment planning needs and ensuring centers get greater value from existing equipment. RayStation also seamlessly integrates with RayCare, the next-generation oncology information system. By harmonizing the treatment planning, we enable better care for cancer patients worldwide.

** Subject to regulatory clearance in some markets.*

More information about RaySearch is available at www.raysearchlabs.com

For further information, please contact:

Johan Löf, Founder and CEO, RaySearch Laboratories AB (publ)

Telephone: +46 (0)8-510 530 00

johan.lof@raysearchlabs.com

Peter Thysell, CFO, RaySearch Laboratories AB (publ)

Telephone: +46 (0)70 661 05 59

peter.thysell@raysearchlabs.com