
PRESS RELEASE

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RAYSEARCH TO DEMONSTRATE LATEST VERSION OF RAYSTATION AT ESTRO 2016

Between April 29 and May 3, RaySearch Laboratories AB (publ) will be exhibiting at the ESTRO 35 congress in Turin, Italy. The company will demonstrate the new features included in version 5 of its proprietary treatment planning system RayStation®, notably Plan Explorer, a groundbreaking automated treatment planning tool that allows clinics to maximize delivery efficiency and plan quality for every patient, as well as many other exciting new features listed below. Attendees are welcome to visit RaySearch in booth #2000 and demonstrations can be booked already now at raysearchlabs.com*

About RayStation®

RayStation® integrates all RaySearch's advanced treatment planning solutions into a flexible treatment planning system. It combines unique features such as multi-criteria optimization tools with full support for 4D adaptive radiation therapy. It also includes functionality such as RaySearch's market-leading algorithms for IMRT and VMAT optimization and highly accurate dose engines for photon, electron and proton therapy. The system is built on the latest software architecture and has a graphical user interface offering state-of-the-art usability.

Highlights in RayStation 5

Plan Explorer brings a completely new perspective to treatment planning

Clinics now have the opportunity to identify the best treatment setup for a given patient as part of their everyday routine. Plan Explorer is based on automatic generation of treatment plans for specified clinical goals. It can be used to compute a large number of treatment plans for a wide variety of treatment techniques, setups and machines, enabling clinics to also optimize the utilization of their treatment resources. Through efficient tools for filtering and browsing among plan candidates, the user can focus on selecting and comparing plans instead of spending time on manual design. Computations are performed for each patient, and can be executed in parallel.

First TPS with carbon ion support commercially available

RayStation 5 is the first commercially available system to support carbon ion planning; the most advanced form of radiation therapy. Carbon ion therapy has several clinical advantages. As for other types of particle therapy, the depth of the dose deposition can be precisely controlled, which allows for improved sparing of healthy tissues. Additionally, carbon ions have an increased relative biological effectiveness (RBE) compared with other types of radiation. The first clinics to adopt this new planning technology are MedAustron in Austria and Centro Nazionale di Adroterapia Oncologica (CNAO) in Italy.

RayStation provides the tools for designing and optimizing actively scanned pencil-beam carbon treatments. The dose is computed by a pencil-beam dose engine and RBE weighted dose according to the local effect model (LEM). All plans are directly deliverable on synchrotrons after optimization since synchrotron-specific machine constraints are taken into account during optimization. LEM model parameters can be defined by the user for the tissue sets to be used for planning.

Robust optimization over multiple 4DCT images

Robustness against uncertainties is a key factor in order to utilize the higher precision of modern treatment techniques. The inclusion of 4DCT images in the robust optimization process addresses situations where there is significant relative motion of internal organs, such as in the thorax during free breathing.

- Optimization based on GTV with potential for margins reduction
- Patient movement accounted for across multiple images
- Optimized plan is robust with respect to all the CT images

Unlimited patient storage

In order to manage the ever-increasing data volumes associated with modern imaging techniques and high resolution calculations, RayStation 5 allows a more flexible configuration of multiple parallel databases and gradual archiving.

General planning news

Other new exciting features include:

- new graphical user interface (GUI) for enhanced user experience
- patient modeling: smart brush contouring, side-by-side contouring, volume rendering
- treatment case level
- module for virtual simulation
- improved 3D-CRT planning
- improvements in plan reporting, plan protocols and scripting

Lunch Symposium: Advancing Radiation Therapy through Software Innovation

On Saturday April 30, from 13:25 to 14:25, RaySearch will hold a lunch symposium on the theme of “Advancing Radiation Therapy through Software Innovation” in meeting room #4. The symposium will show how software is and will be the driving force of innovation in radiation therapy.

Moderator: *Oliver Jäkel, Head of Medical Physics in Radiation Oncology Department, German Cancer Research Center and Medical Physics Director of the Ion Beam Therapy Center, University Hospital Heidelberg, Germany.*

RayStation as a planning tool for proton therapy in clinical practice

Marco Schwarz, Head of Medical Physics, Protontherapy Department, Trento Hospital.

Using RayStation as a unified treatment planning system for precision medicine

Olivier Morin, Assistant Professor, Division of Physics, Department of Radiation Oncology, University of California San Francisco, USA.

Advancing radiation therapy through software innovation

Johan Löf, Founder & CEO, RaySearch Laboratories AB, Stockholm, Sweden

Work in progress: treatment planning for TomoTherapy® and CyberKnife® Systems in RayStation

RaySearch and Accuray have expanded on their existing relationship, which will lead to the integration of treatment planning support for the TomoTherapy® and CyberKnife® Systems in the RayStation® treatment planning system. For the first time, clinics will have access to an advanced, integrated treatment planning system for the precise, innovative Accuray delivery systems and conventional linear accelerators, obtaining unprecedented choice of radiation therapy planning and treatment delivery systems to best meet their patients' needs. Björn Hårdemark, Deputy CEO of RaySearch, will present a preview of the system in the Accuray booth on Sunday, May 1 from 15:40 to 16:00. Demonstrations can also be booked by visiting the RaySearch and Accuray booths.

About RaySearch

RaySearch Laboratories is a medical technology company that develops advanced software solutions for improved radiation therapy of cancer. RaySearch markets the RayStation® treatment planning system to clinics all over the world. In addition, RaySearch's products are distributed through licensing agreements with leading medical technology companies. RaySearch's software is used by over 2,600 clinics in more than 65 countries. RaySearch was founded in 2000 as a spin-off from the Karolinska Institute in Stockholm and the company is listed in the Mid Cap segment on NASDAQ OMX Stockholm.

For more information about RaySearch, visit www.raysearchlabs.com

For further information, please contact:

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

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

johan.lof@raysearchlabs.com

**Regulatory clearance needed in some markets.*