PRESS RELEASE

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Machine Learning and latest RayCare innovations on show at ESTRO 37

During 20–24 April, RaySearch will be exhibiting at the ESTRO 37 congress in Barcelona, Spain. In addition to the latest advances in machine learning technology and online adaptive therapy, RaySearch will demonstrate the latest innovations in the groundbreaking RayCare™* oncology information system, which has now been released. RaySearch will also show the new features available in the latest release of its treatment planning system, RayStation®. Attendees are welcome to visit RaySearch at booth #1000, and demonstrations can be booked now at: www.raysearchlabs.com.*

New features in RayStation 7*

New functionality and a wide range of general improvements will be on show. The latest RayStation release that will be demonstrated contains several enhancements to existing functionality that will contribute to improved workflows and planning efficiency, including integration with RayCare, the next-generation oncology information system. Major new functionality includes the addition of robust constraints in multi-criteria optimization (MCO), simulated organ motion for robust optimization and evaluation, multi-atlas-based segmentation and conformal arc planning for photons.

Significant additions on the proton side include support for Hyperscan™ pencil beam scanning technology from Mevion Medical Systems, and support for uniform scanning for proton therapy systems from Mitsubishi Electric. Other proton therapy improvements include snout rotation for passive proton techniques and MLC collimation for PBS and passive techniques.

RayCare: the next-generation oncology information system

RayCare 1 was launched in December 2017 and is already in clinical use at Iridium Cancer Network in Belgium. Iridium will present its first experiences with the system during the RaySearch lunch symposium on Saturday 21 April.

Development of upcoming versions of RayCare is going forward rapidly. RaySearch will demonstrate the latest improvements and features, including advanced workflow management tools and integrated planning workflow support for RayStation. RayCare active workflows are highly configurable and the task management features enable an integrated planning experience with RayStation, supporting automation of process steps and communication around planning tasks.

Other features on show include the built-in PACS system, which supports automation of imaging workflows, and the control room client for radiation therapy treatment management.

Machine Learning demonstrations

The Machine Learning department at RaySearch is developing solutions for automating workflows and supporting the user in RayStation and RayCare. At ESTRO 37, RaySearch will demonstrate two RayStation applications of machine learning: automated treatment planning and automated organ segmentation. The automated planning application uses machine learning algorithms to generate a set of treatment plans in minutes, based on clinical treatment data from Princess Margaret Cancer Centre and University Medical Centre Groningen. Automated organ segmentation uses deep neural networks to generate a set of 3D organ volumes within seconds.

RaySearch will also present the machine learning and analytics framework concept that will enable RayStation and RayCare to become learning systems.

Lunch symposium: Advancing Cancer Treatment Through Software Innovation

On Saturday April 21, 13:15 - 14:15, floor P1, room 11, RaySearch will hold a lunch symposium focused on how software is driving innovation in oncology.
Moderator: Rik Westendorp, Medical Physicist, Radiotherapiegroep, Deventer, Holland

Fight cancer with code
Johan Löf, Founder & CEO, RaySearch Laboratories (publ), Stockholm, Sweden

First clinical experience with RayCare 1 in a multi-institutional setting
Carole Mercier, Radiation Oncologist, Iridium Cancer Network, Belgium

Efficiency improvements with RayStation
Nick West, Lead Clinical Scientist, The Northern Centre for Cancer Care, Newcastle, UK

Questions and conclusion session
Rik Westendorp, Medical Physicist, Radiotherapiegroep, Deventer, Holland

About RayCare

RayCare represents the future of OIS technology, developed from the ground up by RaySearch to support the complex logistical challenges of modern, large-scale radiation therapy centers. RayCare will integrate the high-performance radiation therapy algorithms available in RayStation with advanced features for clinical resource optimization, workflow automation and adaptive radiation therapy.

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, proton and carbon ion therapy. The system is built on the latest software architecture and features a graphical user interface with state-of-the-art usability.

About RaySearch

RaySearch Laboratories AB (publ) is a medical technology company that develops innovative software solutions for improved cancer treatment. RaySearch markets the RayStation treatment planning system to clinics all over the world and distributes products through licensing agreements with leading medical technology companies. The company has now launched the next-generation oncology information system, RayCare, which comprises a new product area for RaySearch. RaySearch's software is used by over 2,600 clinics in more than 65 countries. The company was founded in 2000 as a spin-off from Karolinska Institute in Stockholm and the share has been listed on Nasdaq Stockholm since 2003.

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

* Subject to regulatory clearance in some markets.

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