
PRESS RELEASE

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RAYSEARCH RELEASES RAYSTATION 5 WITH SUPPORT FOR CARBON ION RADIATION THERAPY AND FUNCTIONALITY THAT BRINGS A NEW PERSPECTIVE TO TREATMENT PLANNING

RaySearch Laboratories AB (publ) announces that version 5 of the RayStation® treatment planning system has been released for clinical use in the UK, Australia and New Zealand, and is scheduled to be released in most major markets during the first half of 2016. RayStation® 5 features carbon ion treatment planning, which represents the most advanced form of radiation therapy, and Plan Explorer, a treatment planning tool that allows clinics to maximize delivery efficiency and plan quality for every individual patient treatment.*

**Regulatory clearance needed in some markets.*

RayStation® 5 becomes the only commercially available system that provides support for carbon ion planning, the most advanced form of radiation therapy. Carbon ion therapy is a form of particle therapy that 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. An important part of the support for carbon ion treatment planning in RayStation® 5 is the precise modeling of RBE which has been developed in collaboration with the GSI Helmholtzzentrum für Schwerionenforschung in Darmstadt, Germany. RBE modeling is one of several examples of technologies that will be applicable also to other types of treatment planning in RayStation®. The first clinics to adopt this new planning technology are MedAustron in Austria and Centro Nazionale di Adroterapia Oncologica (CNAO) in Italy.

Plan Explorer is a tool that drastically changes the treatment planning process. It is based on the capability to automatically generate a large number of treatment plans for an individual patient that span defined combinations of treatment techniques and machines. It also provides efficient means to filter and browse among plan candidates to find the most desired one. This makes it possible to ensure that every radiation treatment is delivered with the highest possible efficiency, with an optimal combination of treatment technique and machine. It will enable clinics to save planning time and to maximize the use of their treatment machine resources.

RayStation® 5 also features many new additions such as robust optimization based on 4D-CT images and unlimited patient data storage. Robustness against uncertainties is key factor in order to utilize the higher precision of modern treatment techniques. The inclusion of 4D-CT 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. 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. This streamlines the upgrade process. RayStation® 5 also adds a rich palette of significant improvements within general planning and patient modeling, such as treatment case level, volume rendering, smart brush contouring, side-by-side contouring, improved 3D-CRT planning, improvements to plan printouts, plan protocols and scripting and the addition of a module for virtual simulation. As a final point, the graphical user interface has been reworked to further enhance the user experience.

“It feels very rewarding to release a new product with so many new features and improvements. RayStation® 5 takes giant leaps forward in many areas, such as carbon ion treatment planning and automated planning. But

this is only the beginning. We have so many exciting plans and ideas for future versions, so this high pace of development and innovation will continue for a long time”, says Johan Löf, CEO of RaySearch Laboratories.

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 has a graphical user interface offering state-of-the-art usability.

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

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