

PRESS RELEASE

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RaySearch releases RayStation v2025

RaySearch Laboratories AB (publ) announces the launch of RayStation® v2025, the latest version of the company's innovative treatment planning system. The new version comes with fast automated treatment planning using machine learning** and using the ECHO algorithm, as well as extended support for planning of treatments for patients in an upright position.*

Fast automatic treatment planning simplifies the workflow to create personalized treatment plans and significantly reduces the time required compared to manual treatment planning. Further, it leads to more consistent and reproducible planning results, promoting a more standardized approach to patient care.

RayStation v2025 integrates the auto-planning algorithm ECHO. The ECHO algorithm optimizes the treatment plan based on pre-defined planning protocols designed for various clinical indications. The algorithm was originally developed by Memorial Sloan Kettering Cancer Center in New York, USA, and has already been used to plan treatments for thousands of patients using a scripting interface in their clinical treatment planning system. With the full integration in RayStation v2025 the time for plan generation is significantly reduced. The new release also includes three new models for deep learning planning**, one for brain tumor patients receiving proton radiotherapy and two for photon treatments: a locoregional model for breast cancer patients, including treatment of the lymph nodes, and an oropharynx model for head and neck patients.

The Plan Explorer module is based on the capability to automatically generate a large number of treatment plans for different trade-offs and combinations of treatment techniques and machines. It also provides efficient means to filter and browse among plan candidates to find the most suitable one. The automation made possible by the Plan Explorer makes it easy to explore more of the solution space to ensure that every radiation treatment is delivered with the highest possible efficiency and enables more time to evaluate the plans.

The new version of RayStation adds support for planning of treatments where the Leo Cancer Care upright patient positioning system is used. In upright treatments the patient is positioned in a standing or sitting posture during delivery of radiation therapy from a fixed direction, in contrast to conventional radiotherapy where the radiation source rotates around a recumbent patient. Upright treatments come with several benefits, e.g., reduction of the size of the treatment rooms and thus the cost of radiotherapy centers and higher patient comfort for some patient groups. The upright treatment position also results in slight changes of the positions of internal organs which may be beneficial. One such example is for lung cancer cases where the upright position provides an increased lung volume compared to the prone or supine positions.

The new application RayStation Ablation provides tools for liver ablation guidance, i.e. techniques used to accurately target and treat liver tumors or lesions with thermal ablation needles. The application guides the physician in delivering ablation therapy with a minimally invasive procedure. This is achieved through imaging before and after the treatment in combination with advanced algorithms to ensure precise targeting, minimizing damage to healthy liver tissue and improving treatment outcomes.

RayStation v2025 also comes with a large range of new deep-learning segmentation models, and the system now includes 201 different segmentation models. Other highlights in the new release are the numerous improvements for the brachy planning workflow, collision control for standard linear accelerators in integration with MapRT from Vision RT, and dose computation for MR linear accelerators.

Johan Löf, founder and CEO, RaySearch: "We remain committed to automate as much as possible of the treatment planning process. With the Plan Explorer module, we integrate the possibility to automatically create many candidate treatment plans to allow the physician to choose the most suitable treatment for a patient, given the available machines."

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 (TPS) and the oncology information system (OIS) RayCare®*. The most recent additions to the RaySearch product line are RayIntelligence® and RayCommand®*. RayIntelligence is an oncology analytics system (OAS) which enables cancer clinics to collect, structure and analyze data. RayCommand, a treatment control system (TCS), is designed to link the treatment machine and the treatment planning and oncology information systems.

RaySearch's software has been sold to over 1,100 clinics in 47 countries. The company was founded in 2000 as a spin-off from the Karolinska Institute in Stockholm and the share has been listed on Nasdaq Stockholm since 2003. More information is available at raysearchlabs.com.

About RayStation

RayStation®* is a flexible, innovative treatment planning system, chosen by many leading cancer centers worldwide. It combines unique features such as unmatched adaptive therapy capabilities, multi-criteria optimization, market-leading algorithms for treatment plan optimization for HDR brachytherapy and external beam therapy with photons, electrons, and protons, as well as helium and carbon ions. 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®*. By harmonizing the treatment planning, the care of cancer patients worldwide is improved.

* Subject to regulatory clearance in some markets.

** Subject to regulatory clearance in some markets. Not available for use or sale in the USA or Canada. Functionality available can differ depending on scope of regulatory clearance, refer to your local vendor for available functionality in your country.

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