
PRESS RELEASE

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RAYSTATION IN CLINICAL USE AT YAMAGATA CARBON ION THERAPY CENTER

RaySearch Laboratories AB (publ) announces that the new carbon ion therapy center at Yamagata University Hospital in Northern Japan, has treated its first patients using the RayStation® treatment planning system in combination with Toshiba's treatment delivery system. The center opened this year, and the first treatments were carried out in February 2021.*

The first treatment – a prostate cancer case treated in the horizontal fixed beam treatment room – was successfully carried out on February 25. The number of cases has steadily increased, and 12 prostate cancer patients had started treatment by March 18. In the next few months, treatments will commence for other tumor sites, using the rotating gantry port.

Carbon ion therapy is an advanced form of radiation therapy that targets cancer cells with high precision and favorable dose distribution compared to photon and proton beams, providing a higher tumor control probability while minimizing the dose for the surrounding normal tissues. Yamagata is the first carbon ion therapy center in Japan to use RayStation, and the first facility in the world to be directly accessible from a general hospital. Since the center can use the hospital's facilities and infrastructure, it can provide carbon ion therapy safely and smoothly for very elderly patients and patients with pre-existing conditions that were previously challenging to treat.

Yamagata University Hospital and Toshiba jointly selected RayStation, based on its outstanding functionality and comprehensive support for this cutting-edge treatment technique. The RayStation installation features carbon pencil beam scanning with robust biological optimization using the microdosimetric kinetic model (MKM), and Yamagata is the first center to use MKM clinically with RayStation. Other functionality includes deformable registration, dose tracking and adaptive therapy.

Dr. Takayuki Kanai, Medical Physicist says, "The commissioning process involves many time-consuming tasks, such as creating QA plans and verifying dose distributions. The sophisticated scripting capability and fast dose calculation of RayStation have greatly helped us to achieve these tasks. RayStation is also providing us a very smooth clinical workflow, since many functionalities, such as contour delineation, dose calculation, deformable registration, and robust optimization, are integrated in a single platform, that is difficult to realize with other treatment planning systems in carbon ion therapy."

Johan Löf, CEO of RaySearch, says: "We are very pleased to see the first treatments with MKM in RayStation taking place at this highly advanced center. Cutting-edge techniques such as carbon ion therapy offer excellent potential for hard-to-treat cancers, and we look forward to supporting Yamagata University Hospital in bringing the benefits to many more patients."

About Yamagata University Hospital

Yamagata University Hospital is a major general hospital located in Yamagata prefecture, northern Japan. Established in 1976, the hospital offers a wide range of medical specialties, including oncology. The hospital's clinical cancer center was established in 2007. Yamagata University Hospital works to pursue its philosophy of “deeply humane and reliable medical care.”

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 other stand-alone software products for comprehensive cancer care. 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. 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

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