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# PRESS RELEASE

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## Heidelberg Ion Beam Therapy Center treats first patient using helium ion therapy with RayStation

*Heidelberg Ion Beam Therapy Center (HIT) has treated its first patient using helium ion therapy with RayStation®\* treatment planning system. The treatment is a world first for helium ion treatments with the spot scanning technique, also known as pencil-beam scanning.*

The use of helium ions for therapy was pioneered at Lawrence Berkeley Laboratory in the United States 1975-1993 by use of broad beams. The treatment at HIT, carried out in July 2021, is the first clinical application of helium beams since then and applied the state of art pencil-beam scanning technique performed in their treatment room with a horizontal beamline.

The procedure went smoothly, and the center will shortly start using their gantry beamline, as well as initiate a larger-scale clinical trial. The treatment planning was performed with RayStation, version 9B, that supports use of helium ions side by side with carbon ions and protons. This achievement marks the end of a busy two-year period for the physics and support teams at RaySearch, which have assisted in getting four carbon ion centers go clinical since May 2019. The same functionality supported for proton and carbon pencil-beam scanning, including robust optimization and evaluation, is also available for helium ions.

HIT is a leading German particle therapy facility and part of Heidelberg University Hospital. The center chose RayStation to replace its existing treatment planning systems in 2018 and began proton and carbon ion therapy treatments with RayStation in 2019. The hospital also treats patients using TomoTherapy, CyberKnife and conventional linacs, which is the focus of another cooperation between HIT and RaySearch. RayStation enables treatment planning for all these modalities with a single software platform.

Jürgen Debus, Professor and Medical Director, Department of Radiology, Heidelberg University Hospital, says: “We are very proud to announce a successful first patient treatment with helium ion therapy; everything went smoothly for the first and following fractions. RayStation handles helium plans effectively and exporting to the Siemens Fraction Sequences Planner works perfectly. I would like to convey a huge thanks to the team that has contributed to this success – we simply could not have done this without you.”

Johan Löf, founder and CEO, RaySearch, says: “We are very pleased to have helped Heidelberg University Hospital in achieving this success. RaySearch is dedicated to supporting advanced treatment techniques and approaches, and one of the aims with RayStation is to provide one treatment planning system for all radiation therapy modalities. We look forward to achieving new firsts together.”

### [About Heidelberg University Hospital](#)

Heidelberg University is the oldest university in Germany; its first medical lectures were held here in 1388. Today, it is one of the largest and most prestigious medical centers in Europe, with a reputation based on excellent patient care, research, and teaching. Heidelberg University Hospital offers inpatients and outpatients an innovative and effective diagnosis and therapy for all complex diseases. In modern buildings with state-of-the-art equipment specialized teams of physicians,

technicians, engineers, and physicists deliver medical care to the highest international standards. The proximity and interlinking of the specialist departments benefit the patient, with interdisciplinary cooperation ensuring optimal treatment.

#### 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 software is used by over 2,600 clinics in more than 65 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.

#### 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 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, we enable better care for cancer patients worldwide.

*\* Subject to regulatory clearance in some markets.*

More information about RaySearch is available at [raysearchlabs.com](http://raysearchlabs.com)

#### **For further information, please contact:**

Johan Löf, founder and CEO, RaySearch Laboratories AB (publ)  
Telephone: +46 (0)8-510 530 00  
[johan.lof@raysearchlabs.com](mailto:johan.lof@raysearchlabs.com)

Peter Thysell, CFO, RaySearch Laboratories AB (publ)  
Telephone: +46 (0)70 661 05 59  
[peter.thysell@raysearchlabs.com](mailto:peter.thysell@raysearchlabs.com)