
PRESS RELEASE

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Machine learning algorithm from RaySearch enhances workflow at Swedish radiation therapy clinic

RaySearch Laboratories AB (publ) has announced that by using a machine learning algorithm in treatment planning RayStation^{®}, Mälars Hospital in Eskilstuna, Sweden, has made significant time savings in dose planning for radiation therapy. The algorithm in question is a deep learning method for contouring the patients' organs. The decision to implement this advanced technology was made to save time, thereby alleviating the prevailing shortage of doctors specialized in radiation therapy at the hospital – which was also exacerbated by the COVID-19 situation.*

When creating a plan for radiation treatment of cancer, it is critical to carefully define the tumor volume. In order to avoid unwanted side-effects, it is also necessary to identify different organs in the tumor's environment, so-called organs at risk. This process is called contouring and is usually performed using manual or semi-automatic tools.

The deep learning contouring feature in RayStation uses machine learning models that have been trained and evaluated on previous clinical cases to create contours of the patient's organs automatically and quickly. Healthcare staff can review and, if necessary, adjust the contours. The final result is reached much faster than with other methods.

Andreas Johansson, physicist at Region Sörmland, which runs Mälars Hospital, says: "We used deep learning to contour the first patient on May 26 and the treatment was performed on June 9. From taking 45-60 minutes per patient, the contouring now only takes 10-15 minutes, which means a huge time saving."

Johan Löf, founder and CEO, RaySearch, says: "Mälars Hospital was very quick to implement RayStation in 2015 and now it has shown again how quickly new technology can be adopted and brought into clinical use. The fact that this helps to resolve a situation where hospital resources are unusually strained is of course also very positive."

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 next-generation oncology information system RayCare. 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. RayStation also seamlessly integrates with RayCare, the next-generation oncology information system. 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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