
PRESS RELEASE

STOCKHOLM, NOVEMBER 20, 2023

Vejle Hospital becomes first center in the world to use RayStation for an online adaptive treatment with augmented CBCT

RaySearch Laboratories AB (publ) announces that University Hospital of Southern Denmark in Vejle, Denmark has developed a new and groundbreaking workflow for adapting a patient's treatment plan during the first treatment session. The improved workflow is enabled by the adaptive replanning capabilities of RayStation® and significantly saves time for the patient. The first patient was successfully treated on October 10.*

In this workflow a preliminary treatment plan is prepared on the already available diagnostic CT scan rather than acquiring an additional CT scan for the purpose of treatment planning, which is the standard method today. This marks a significant benefit to the patient that no longer needs to wait for the additional CT appointment. The plan prepared on the diagnostic CT scan cannot be used without modifications due to different patient positioning at image acquisition compared to treatment delivery. Thanks to the synthetic CT algorithm and fast adaptive replanning capabilities in RayStation, the CBCT of the first treatment fraction can be used for creating an adapted plan during the treatment session. In this workflow, the CBCT is augmented with use of the diagnostic CT, and a new plan is created, which is used in the first and any subsequent fractions.

The first patient – a 65-year-old man diagnosed with metastatic prostate cancer – was successfully treated on October 10. The patient was prescribed a 30 Gy regimen over 10 fractions. His treatment employed a VMAT (volumetric modulated arc therapy) arc on an Elekta C-arm linac.

In the current example, the online adaptation was motivated by differences in positioning at image acquisition and at treatment. The powerful tools in RayStation have the potential of also addressing other anatomical changes.

Rune S. Thing, medical physicist at Vejle Hospital, says: “We are dedicated to pushing the boundaries of innovation for improved patient care and operational excellence. Our goal with the new workflow is to significantly reduce the time that a patient undergoing short-course palliative radiotherapy has to stay in the hospital.”

Johan Löf, founder and CEO, RaySearch, says: “Online adaptive has been a key focus for RaySearch for many years and I am impressed by the work that is done at Vejle. RayStation has very advanced tools available for taking online adaptive into clinical routine and the work done by Vejle is showcasing what groundbreaking possibilities our users have to further advance cancer treatments.”

About the Department of Medical Physics, University Hospital of Southern Denmark, Vejle

The clinical work in the Department of Medical Physics and Radiotherapy is focused on treatment of patients with lung, breast, prostate, and anorectal cancers along with palliative radiotherapy. The ambition is to create a department known for a high degree of automated processes, where highly trained professional staff will be supported to deliver the best possible treatment and care for every individual patient. The department's clinical focus is on adaptive radiotherapy based on state-of-the-art treatment technology and clinical decision-making that occurs as close as possible to the point of care. The research mission is to learn from every treatment and every patient, so that the department can engage with future patients in a shared decision-making conversation and continuously improve treatment outcomes for each individual.

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 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 900 clinics in more than 40 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.*

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