

A NEW ERA FOR RAYSEARCH AS RAYCARE ENTERS CLINICAL USE

In 19 years, RaySearch has gone from an idea to a company that creates some of the world's most advanced cancer treatment software. That includes the RayStation treatment planning system, the RayCare oncology information system and now RayCommand, an advanced treatment control system. Today these systems are sold to leading cancer centers worldwide, some of which now only use RaySearch software.

The business idea that RaySearch founder and CEO Johan Löf wrote for the Scandinavian entrepreneurship competition Venture Cup in 1999 was built on the findings of his PhD research into optimization of radiation therapy at the Royal Institute of Technology in Stockholm. He wanted to make a difference in cancer treatment and realized that software was the future. In 2000, following extensive work to develop algorithms and software, Johan Löf registered a company: RaySearch Laboratories AB.

THE EARLY DAYS

Developing advanced software at a high pace demands sufficient funding. But the most important factor from the start was to keep control of the company's direction, without interference from investors. The key was to establish successful commercial partnerships that would support further development. Just two months after registration of the company, RaySearch had its first partnership.

RAYSTATION COMES TO LIFE

For several years, RaySearch developed modules for treatment planning and distributed them to other vendors. But the idea of building its own treatment planning system took root within the

company. Some said the task of building a completely new treatment planning system was almost impossible – but the RaySearch team was determined to prove them wrong. The development started in 2008, and the determination paid off as proton therapy center WPE in Essen, Germany, became the first customer in 2009. The first patient treatment using RayStation was conducted in 2011.

THE FOUNDING OF RAYCARE

With RayStation established worldwide, the idea of a new oncology information system started to take shape. Such a system would be the key to driving adaptive therapy on a larger scale. It would also enable better follow-up on patient care and create significant efficiency gains. Development started in 2012, with the goal of creating a pioneering system that would transform the duopolydriven market.

THE FUTURE OF THE OIS

Starting from scratch gave RaySearch the freedom to create a system precisely tailored to the needs of modern oncology and ready for developments to come. Like RayStation, it needed to combine the highest standards of quality and speed with a user-friendly interface. Naturally, it should integrate seamlessly with RayStation and also be compatible with a wide range of treatment machines and clinical systems.

RAYCARE IN CLINICAL USE

The first version of RayCare was released in December 2017. After just two months, Iridium Cancer Network in Belgium became the first center to use RayCare clinically. Around the same time, Provision CARES Proton Therapy Nashville became the first clinic to select RayCare as its sole oncology information system, and the clinic started treating patients during the fall of 2018. It was the ultimate proof of the need for a new approach to oncology information systems, and a change to the market status quo.

THE NEXT INNOVATION: RAYCOMMAND

In December 2018, RaySearch announced the decision to begin development of another new system—a treatment control system called RayCommand. The move resulted from a request by Advanced Oncotherapy plc (AVO) for its first proton therapy facility in the UK.

RayCommand will be the link between the treatment planning system, the oncology information system and the treatment machine. It will coordinate and orchestrate the different systems involved in the treatment, which is essential to achieve safe and efficient patient treatments.

FINANCIAL CONTROL IS KEY FOR INNOVATION

Throughout its 19 years, RaySearch has combined innovation with independence. By funding new innovations from within the company, RaySearch has been able to steer its own direction, with the needs of patients and clinicians always in focus. Today's goal is the same as it has always been—to develop the best possible software to conquer cancer. We're not done until cancer is.