
PRESS RELEASE

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FIRST PROTON THERAPY TREATMENTS WITH RAYSTATION IN ASIA

On March 21, 2016, the first patient was treated using the Sumitomo proton line scanning technique at Samsung Medical Center (SMC) in Seoul, South Korea. The clinical treatment plans were generated in RaySearch's advanced treatment planning system, RayStation®, and were delivered using medical devices from Sumitomo Heavy Industries (SHI). By the end of December 2015, SMC had already performed the first treatments with the Sumitomo wobbling proton technique and plans created in RayStation.

It is a significant achievement for RaySearch that Samsung Medical Center is now treating patients with RayStation. The center is the first in Asia to deliver proton therapy treatments with RayStation and the first to use it in conjunction with SHI delivery machines. This is the result of a long and fruitful collaboration between RaySearch, SMC and SHI that has enabled the first clinical treatment to be carried out on schedule.

Consequently, the latest RayStation 5 release provides support for all treatment delivery machines from SHI, including line scanning and wobbling.*

Both line scanning and wobbling are treatment techniques for proton therapy that offer the possibility to carefully control the radiation dose deposition, both laterally and in terms of depth. Line scanning is a special mode of pencil beam scanning (PBS), where the beam is delivered continuously with a constant beam current in each energy layer and the intensity modulation is achieved by varying the scan speed within the energy layer. This allows for faster delivery of the treatment plan. Wobbling is a broad beam technique, which provides a favorable combination of field size and efficacy, allowing large tumors to be treated in a short period and with a high degree of precision. Sumitomo wobbling delivers a combination of proton energies simultaneously, making the technique less sensitive to, for example, motion associated with breathing, compared with techniques that deliver one energy at a time.

Johan Löf, CEO and founder of RaySearch Laboratories, says: "This is an important milestone for RaySearch. SMC was the first Asian center to order RayStation in 2012 and we are proud that we could contribute to its first treatment on schedule. It is important for us to support a broad range of treatment machines and techniques. RayStation is already the treatment planning system in the world that supports the largest number of treatment techniques and machine types, and with our support for line scanning and wobbling we are now fortifying this position."

Youngyih Han, Ph.D, Samsung Medical Center, comments: "When we decided to use proton wobbling and line scanning as treatment techniques, we had already identified RayStation as the best treatment planning system to meet our needs. Today, we can conclude that the collaboration to achieve clinical implementation was extremely effective, and we have achieved a solution for treatment planning that matches our requirements and preferences."

** Wobbling is not available in the US. RayStation 5 is pending clearance in Canada.*

About Samsung Medical Center

Samsung Medical Center (SMC) was founded in 1994 and is a teaching hospital affiliated with Sungkyunkwan University's school of medicine. SMC has a large cancer center that treated more than 5,000 patients with radiation therapy in 2014. The center offers a wide range of advanced treatment options within radiation therapy and is also currently building a new facility for proton therapy. Proton therapy is the most sophisticated form of radiation therapy and offers even better precision than conventional radiation therapy with photons. It requires very advanced specialized equipment so it is only carried out in a small number of centers globally. The new proton center is equipped with an accelerator from Sumitomo Heavy Industries and went clinical at the end of 2015. SMC uses RayStation for planning of all of its proton treatments.

About RayStation®

RayStation® integrates all RaySearch's advanced treatment planning solutions into a flexible treatment planning system. It combines unique features such as multi-criteria optimization tools with full support for 4D adaptive radiation therapy. It also includes functionality such as RaySearch's market-leading algorithms for IMRT and VMAT optimization and highly accurate dose engines for photon, electron and proton and carbon ion therapy. The system is built on the latest software architecture and has a graphical user interface offering state-of-the-art usability.

About RaySearch

RaySearch Laboratories is a medical technology company that develops advanced software solutions for improved radiation therapy of cancer. RaySearch markets the RayStation® treatment planning system to clinics all over the world. In addition, RaySearch's products are distributed through licensing agreements with leading medical technology companies. RaySearch's software is used by over 2,600 clinics in more than 65 countries. RaySearch was founded in 2000 as a spin-off from the Karolinska Institute in Stockholm and the company is listed in the Mid Cap segment on NASDAQ OMX Stockholm.

For more information about RaySearch, visit www.raysearchlabs.com

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