



U.K. Clinic Anticipating New Era of Radiotherapy Speed and Precision with Elekta's New Versa HD System

The Christie NHS Foundation Trust to harness new linear accelerator to improve therapy for patients with head-and-neck, lung and prostate cancers

MANCHESTER, England, April 10 – Featuring a revolutionary combination of speed and accuracy, Elekta's new Versa HD™ system will help clinicians at The Christie NHS Foundation Trust (Withington, Manchester) maximize the precision of therapeutic beams on the tumor target, while also accelerating radiation delivery to new levels. Christie clinicians – who expect Versa HD to benefit a wide spectrum of patients suffering from head-and-neck, prostate and lung cancers – predict the system will be ready to begin treating patients by late spring.

Unveiled by Elekta on March 1, Versa HD is designed to be the most sophisticated, high-versatility treatment system. The system offers clinicians the flexibility to deliver conventional therapies to treat a wide range of small and large tumors throughout the body, while also enabling treatment of highly complex cancers that require extreme targeting precision. Treatment of the most challenging cases is addressed by ultra-conformal beam shaping working in concert with an innovative High Dose Rate mode – a potent combination that delivers both high precision and high treatment speeds.

“Other linear accelerators have high dose rates, but only Versa HD combines High Dose Rate mode with a multileaf collimator [Agility™] that offers the industry's highest leaf speeds,” says Carl Rowbottom, Ph.D., head of radiotherapy physics at The Christie. “With high leaf speeds we will be able to modulate the field shape fast enough to achieve the required dose distribution, while also treating at the fastest delivery speed.”

With highly conformal, rapid beam shaping and the High Dose Rate mode of Versa HD, Dr. Rowbottom predicts significant increases in treatment speeds, improving the patient experience.

“Right now our VMAT technique for head-and-neck [squamous cell carcinoma] cases requires two arcs of about 90 seconds each,” he says. “With the high leaf speed and increased dose rate, we should be able to treat using just one arc of about 60 seconds.”

The very high doses per fraction in stereotactic body radiation therapy (SBRT) cases currently require the most beam delivery time compared to other techniques. The challenge in The Christie's lung SBRT cases has been keeping the patients still during the treatment session, Dr. Rowbottom adds.

“Patients often move partway through therapy, requiring us to stop treatment and repeat imaging steps, which lengthens treatment time significantly,” he says. “With high dose rate delivery, we will be able to shorten the treatment fraction to the point patients won't be struggling to remain still. If we can get the patient through the system quickly, we think it will be a really strong benefit for them.”



Taking weeks off prostate radiotherapy

Worldwide, many clinical centers have been exploring ways to shorten the course of prostate radiotherapy, typically a seven-week long process involving nearly 40 trips to the clinic. High dose prostate SBRT has the potential to shorten the treatment course to as few as five to seven fractions. The unique capabilities of Versa HD are tailor-made for the emergence of prostate SBRT, which The Christie will begin in about six months as part of a Swedish multi-center clinical trial, Dr. Rowbottom notes. While speed and field shaping precision are critical attributes of Versa HD, the system is much more than that, according to Dr. Rowbottom.

“With the final product it’s clear to me that Versa HD is more than just developing a certain capability – the whole package was looked at,” he says. “While it has High Dose Rate mode and high leaf speed, it also can treat a 40 X 40 cm field size, it has 5 mm leaves across the whole field, and new system ergonomics. The entire system was put together by thinking through all the different components and analyzing how they all work together in an integrated whole. Importantly, you can treat a huge range of radiotherapy patients, so it’s not a specialized machine for a specialized application. Although it has the technology to treat some very specialized sites very well, it hasn’t sacrificed the capability to treat palliative patients and common cases on a daily basis. Versa HD is a very well thought through linac.”

For more information, visit www.VersaHD.com.

Versa HD is not available for sale or distribution in all markets. Elements of Versa HD are pending FDA 510(k) clearance.

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About Elekta

Elekta is a human care company pioneering significant innovations and clinical solutions for treating cancer and brain disorders. The company develops sophisticated, state-of-the-art tools and treatment planning systems for radiation therapy, radiosurgery and brachytherapy, as well as workflow enhancing software systems across the spectrum of cancer care. Stretching the boundaries of science and technology, providing intelligent and resource-efficient solutions that offer confidence to both healthcare providers and patients, Elekta aims to improve, prolong and even save patient lives.



Today, Elekta solutions in oncology and neurosurgery are used in over 6,000 hospitals worldwide. Elekta employs around 3,400 employees globally. The corporate headquarters is located in Stockholm, Sweden, and the company is listed on the Nordic Exchange under the ticker EKTA. Website: www.elekta.com.