

Varian Launches Game-Changing Treatment Platform to Answer the Global Cancer Challenge

Halcyon human-centered design revolutionizes clinical workflow; simplifies and enhances image-guided volumetric IMRT

PALO ALTO, Calif. and VIENNA, May 6, 2017 /PRNewswire/ -- Varian Medical Systems (NYSE: VAR) today is introducing the Halcyon™ system, an entirely new device for cancer treatment. Engineered to revolutionize clinical workflow, Halcyon simplifies and enhances virtually every aspect of image-guided volumetric intensity modulated radiotherapy (IMRT). This new treatment system is designed to expand the availability of high quality cancer care globally and help save the lives of millions more cancer patients.

Experience the interactive Multimedia News Release here:

<https://www.multivu.com/players/English/8065951-varian-medical-systems-halcyon-cancer-treatment/>

"The global cancer challenge is enormous," said Kolleen Kennedy, president of Varian's Oncology Systems business. "It is expected that there will be 24.6 million cancer cases diagnosed annually by 2030, and there is an acute shortage of equipment and trained clinicians. With the innovations in this new technology platform, the system will deliver high quality Halcyon treatments that empower clinicians to care for many more patients. At Varian we are very excited with the introduction of Halcyon to be taking another big step toward advancing cost-effective cancer care worldwide."

The driving focus of the human-centered, user-friendly design of Halcyon was to automate, streamline and simplify virtually every aspect of treatment. The result is an advanced system that is more comfortable for the patient while delivering ease of use for healthcare providers, accelerated installation timeframes, expedited commissioning, simplified training, and automated treatment. With its streamlined workflow, Halcyon only requires nine steps from the start to the end of treatment compared to up to more than 30 steps with older technologies nearing end of life. Halcyon is well suited to handle the majority of cancer patients, offering advanced treatments for prostate, breast, head & neck, and many other forms of cancer.

Featuring a 100cm gantry opening, which is larger than those on standard CT machines, Halcyon is capable of rotations 4x faster than c-arm gantries for rapid imaging and treatment. The system is also capable of fast and sharp volumetric imaging in as little as 15 seconds. With Halcyon treatments, a complex image guided IMRT plan is clinically accelerated compared to those delivered on traditional devices.

To support the gantry rotation speed, while also delivering the treatment dose precisely to the targeted area, Halcyon features a patented dual-layer multi-leaf collimator (MLC), an innovative new technology. Moving twice as fast as traditional MLCs, the Halcyon MLC has a "stacked and staggered" design that enables advanced treatment techniques. The unique capabilities of the system provide a pathway to adaptive radiotherapy as well as opportunities for research into new treatment protocols.

To assist in the reduction of time and construction costs from installation to first patient treatment, Halcyon comes pre-commissioned, requires less shielding than traditional systems, can fit in a vault as small as 5.9 meters (19.68 feet) x 5.539 meters (18.17 feet) x 2.743 meters (8.99 feet) high and can be installed in two weeks or less.

As part of its human-centered, user-friendly design, large touchscreens are installed on both sides of the machine to assist in easy patient set-up. For increased patient comfort, Halcyon is up to 2x quieter than other systems, has a low couch height for easy patient access, and soft indirect ambient lighting in the gantry

opening. To create a closer connection between patient and therapist during Halcyon treatment, the system includes an integrated couch-mounted camera for the therapist to watch over the patient during treatment, and an integrated sound system that makes it easy for patients to converse with the therapists.

What the global clinical community is saying about Halcyon

US

"The Halcyon system is not just an iterative improvement," said James M. Metz, Chairman, Department of Radiation Oncology, University of Pennsylvania Perelman Cancer Center. "The product simplifies treatment delivery while maintaining high quality plans delivered at significantly increased speed. This allows increased efficiency in the radiation oncology clinic while delivering exceptional treatments. I expect this will be the new standard for linear accelerators of the future."

"The technology of radiation oncology is evolving at an increasingly rapid rate," said Dr. Dwight E. Heron, Director of Radiation Services, UPMC Cancer Center and Director of Oncology, UPMC International. "New technology that integrates advanced adaptive treatment and imaging in a fully integrated form factor will enable innovative and consistent, high quality state-of-the-art radiation therapy for even the busiest clinics. As a global cancer care provider, we view such technological advances as a welcome tool in our fight against cancer worldwide."

APAC

"By simplifying the entire treatment process, the Halcyon system presents the ideal platform for training and upskilling healthcare workers in best practice delivery of radiation oncology," said Mark Middleton, CEO, Icon Group. "The Halcyon system will amplify our response to the global cancer challenge, by allowing us to support the emergence of a radiation oncology competent workforce in developing regions, who will be able to deliver cutting-edge treatments equal to those currently delivered in developed areas."

EMEA

"The unique and innovative design of the Halcyon system will allow clinicians to treat patients quickly and minimize intrafraction motion, which is extremely important when treating patients with pelvic tumors such as prostate cancer and cervical cancer," said professor Karin Haustermans, MD, chair of the department of radiation oncology, UZ Leuven. "The short Halcyon treatment times could also eliminate the need for breath holds traditionally required during breast, esophageal and lung cancer treatments. Additionally, the ultrafast imaging and simplified integrated workflow gives us a path to adaptive therapy."

The treatment planning for Halcyon is supported by Varian's Eclipse™ treatment planning software and is 510(k) pending. Halcyon has received CE mark and is currently 510(k) pending and not for sale in all markets.

For more information on Halcyon visit www.varian.com/halcyon.

About Varian Medical Systems

Varian Medical Systems focuses energy on saving lives and is the world's leading manufacturer of medical devices and software for treating and managing cancer. Headquartered in Palo Alto, California, Varian employs approximately 6,400 people around the world. For more information, visit <http://www.varian.com> and follow @VarianMedSys on Twitter.

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