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Office of
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Emory Technology Included in Varian's Edge Radiosurgery Suite

Image-guidance quality assurance technology designed by two Emory physicists has been included in Varian's recently launched Edge™ radiosurgery suite, a dedicated radiosurgery system for treating cancer with sub-millimeter accuracy using innovative real-time tumor tracking and motion management technologies.

The Emory software has been licensed to Vision RT, a company based in the UK. Vision RT's primary product is a video based imaging system, AlignRT™, that assists the technician in establishing the proper positioning of the patient by 3-D surface imaging technology during set up and treatment.

Varian Medical Systems, the leading manufacturer of radiation therapy products in the world, contracted with Vision RT for the ability to resell AlignRT™ with Varian's products, including Varian's Edge™ radiosurgery suite.

"We invented it to help automate quality assurance for image-guided radiation therapy," says Tim Fox, PhD, director of medical physics for Emory's Department of Radiation Oncology, who collaborated with Eduard Schreibmann, PhD, assistant professor of radiation oncology at Emory.

"Because a patient's body moves when they breathe, there are anatomical changes that can affect the precision of a treatment. This motion must be managed to minimize the impact on nearby healthy tissue," says Fox. "High quality and high precision tracking helps physicians deliver a treatment that sends radiation to the intended area."

Since radiosurgery often targets a very small spot with high intensity over a small number of treatments, accuracy is even more important than would be the case with conventional forms of radiotherapy.

Fox and Schreibmann's quality assurance technology has been adapted by VisionRT to allow the direct calibration of AlignRT™ to the focal point of the treatment beam and is included in VisionRT's optical guidance solution.

The technology developed by the Emory team consists of a software program that plugs into the Align RT™ device, which checks that the information displayed on the screen will accurately reflect the position of the patient.

"We wrote the software to work with a phantom cube, similar to a person," Schreibmann says. "It takes measurements to show that the software is running properly and taking accurate measurements with the lasers."

“We are delighted to have the opportunity to partner with Varian in providing our technology to supplement their market leading radiation delivery portfolio,” says Norman Smith, CEO of Vision RT. “We believe that our customers will be able to benefit from this collaboration.”

Emory’s Office of Technology Transfer (OTT) helps bring technology developed through research performed at Emory to industry partners, such as VisionRT, for commercialization. “We are proud to work with creative and impactful people such as Drs. Fox and Schreibmann,” says Philip Semprevio II, OTT licensing associate. “We are always excited to see Emory technology helping to make a positive impact on patients’ and physicians’ lives.”

Dr. Fox, Dr. Schreibmann, and Emory University have financial interests in the licensed technology. The terms of this arrangement have been reviewed and approved by Emory University in accordance with its conflict of interest policies.