

University of Louisville Health Implements Cardiac CT Technology and Expands Patient Eligibility

McKenna Bryant



When the University of Louisville Health – Heart Hospital at Jewish in Louisville, Kentucky, hired Dinesh Kalra, MD, FACC, FNLA, FSCCT, FSCMR to develop a world-class cardiac imaging program, Dr. Kalra turned to Canon Medical. He wanted Canon to be a part of the process of reshaping the cardiac imaging services the hospital offered.

The University of Louisville Health – Heart Hospital at Jewish is the region's only hospital dedicated exclusively to heart care. To elevate patient care at such a prestigious institution, Dr. Kalra acquired Canon's Aquilion ONE / PRISM Edition Computed Tomography (CT) scanning platform. This next-generation CT platform with wide-area detector leverages the artificial intelligence-based Precise IQ Engine (PIQE)¹, a super-resolution deep learning reconstruction

technology used to maximize spatial resolution in three-dimensions without reducing low-contrast detectability or increasing radiation dose. The result: exceptional cardiac CT image quality for all patients.

"This technology essentially allows us to get super high-resolution images in difficult cases," said Dr. Kalra, the hospital's chief of cardiology and cardiac imaging. "With PIQE, I'm able to better see the same segments that were difficult to see with older generation scanners. The image sharpness, resolution, and low-contrast detection rates have all improved."

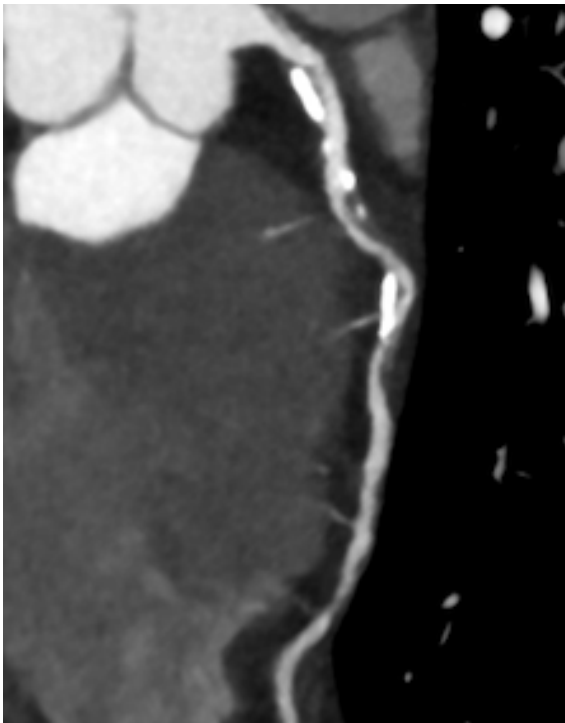
When it comes to protecting his community and improving quality of care, Dr. Kalra appreciates that higher resolution images are readily available without higher radiation doses. "There's no trade-off, so you don't have to give up resolution for radiation dose. You can have low radiation dose, less noise and superb image quality. And that's increased our diagnostic confidence in our interpretations," Dr Kalra said.

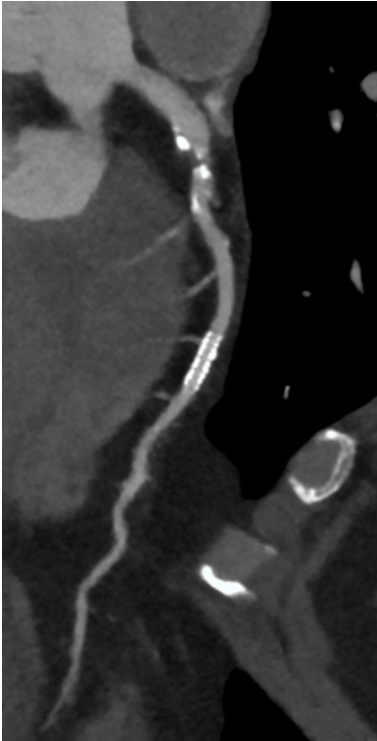
Increasing the Patient Referral Base

The Aquilion ONE / PRISM Edition has helped the hospital to expand patient eligibility for cardiac CT. Contraindications such as atrial fibrillation, obesity, high calcium scores and renal dysfunction previously made patient selection for cardiac CT challenging. The new system permits imaging of a much wider population of patients, even those in atrial fibrillation at the time of scanning.

"In the past, I had to say 'no' to patients referred for cardiac CTs at least once a week. Now, I can't remember the last time I said 'no.' Even patients with stents and complex anatomies are being scanned – all with no penalty in radiation dose," he said.

The system also delivers fast results, allowing for greater efficiencies and cost savings. "You get near-instantaneous results, and





you can make a diagnosis while you're reading that scan. That improves workflow and throughput," Dr. Kalra said.

"Having this technology for our patients improves care, not just in cardiac imaging, but it extends to all fields of cardiology, including valvular heart disease, cardiomyopathies and electrophysiology," he explained.

A Big Win for Clinicians and Patients

Another advantage of the Aquilion ONE / PRISM Edition are the automated workflows for cardiac and other advanced CT imaging that are easy for radiologists and technologists to learn. "The learning curve was very quick, and technologists love it," said Dr. Kalra. "The scanner is easy to work through, and the preloaded protocols make a lot of sense. Plus, a lot of the imaging is automated."

The scanner's ^{SURE}Cardio automated workflow incorporates intelligent arrhythmia rejection and the ability to automatically choose scanning based on the patient's heart rate, making it easier to scan difficult patients, while delivering improved and consistent results. Furthermore, the system walks technologists through the cardiac scanning process, which Dr. Kalra said the techs appreciate.

From Dr. Kalra's perspective, the Aquilion ONE / PRISM Edition with PIQE DLR has improved CT cardiac imaging at University of Louisville Health – Heart Hospital at Jewish. "All around, it's been a big win for not just our imaging section, but for the hospital, physicians, patients and everyone in our system."



For more information about Canon and their imaging products visit:

[Cardiac Excellence | Computed Tomography – CT Scanners | Canon Medical Systems USA](#)