

The Technologist's Perspective: Empowered with Bracco's Contrast Management System



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As computed tomography (CT) technology advances and scanners become faster with shorter exam times, performance pressures are driving technologists to improve efficiencies. As such, leading radiology practices are using smart contrast injector platforms to streamline CT protocols updates and deliver improved patient care.

Northwest Radiology is a large private radiology group responsible for performing more than 850,000 exams annually for several hospitals and outpatient facilities in the Indianapolis area. The subspecialty practice offers imaging services at five outpatient facilities staffed by 55 radiologists and 47 technologists. Recently, the practice implemented Bracco Diagnostics, Inc.'s NEXO® Contrast Management System on their EmpowerCTA®+ Injector Systems, also manufactured by Bracco.

NEXO® is a centralized, server-based system that networks a facility's CT injectors, standardizes and tracks contrast usage, and documents performance to improve safety, streamline clinical workflow and increase productivity across multiple CT suites. Meanwhile, the EmpowerCTA®+ injectors offer many unique features that aid in the administration of contrast media during CT procedures.

"The SmartInject Solutions help us be better technologists by empowering us with the tools to control the amount of contrast that we are giving the patient and getting the best diagnostic image that we can," said Kim Kouns, RT(R)(CT), a technologist at Northwest Radiology.

Customizing protocols reduces contrast dose

NEXO® has significantly streamlined the process of updating Northwest Radiology's CT protocols to ensure high-quality and consistent output across the network. As the person in charge of maintaining protocols, Kouns said this consistency helps reduce operator error associated with protocol selection.

"Now we know that all of our offices are using the same CT protocols, so they have the same end result for better diagnostic value," she said, noting that Northwest Radiology will soon add a fifth imaging center.

Kouns particularly appreciates the Saline Jump capability, which allows for administration of saline immediately after contrast delivery and permits the use of less iodine without compromising imaging quality.

"As a tech, it allows me to have complete control of the contrast administration," Kouns said. "During a scan, when I see that the patient has reached their peak contrast enhancement, I can stop the amount of contrast that's being injected and use the Saline Jump to chase the contrast and maintain the peak opacity of the arteries while hydrating the kidneys."

She stressed the importance of standardized CT protocols, especially with respect to how and when to use Saline Jump.

"I think it's very important that every facility is doing the exact same protocol and knows how to use the NEXO Saline Jump

and when to select it," she said. "Any variant against the protocol could result in a non-diagnostic exam. Radiologists want to have confidence in their exams for the best diagnosis that they can give, so standardization is better for the radiologist and better for the patient."

Prior to Saline Jump, all chest CT angiography (CTA) exams at Northwest Radiology utilized approximately 100 mLs of contrast and 50 mLs of saline. Now, CTA protocols depend on each patient's size and cardiac output. For example, a patient weighing 120 lbs, who might have previously received 120mLs of contrast for a chest CTA, could now receive about 52mLs of contrast. Also in the past, an abdominal CTA required 100 mLs of contrast followed by 50 mLs of saline. Today, larger patients often receive just 80 mLs of contrast, plus saline.

"That's a huge savings to the patient's kidneys and huge savings for everybody across the board," said Kouns.

A seamless installation

Easy-to-use imaging equipment and software can reduce technologist and patient stress. "The very first patient that I scanned using the EmpowerCTA[®]+ Injector and the Saline Jump feature plus NEXO[®], I realized how the design of this system made it easy for us to achieve this task. There were no extra steps. It was simply the touch of a button, and it was all in my control," she said.

Kouns said Bracco made installation and application training go smoothly, with excellent communication and guidance from start to finish.

"It's extremely important that communication and training are top-notch during something like this, and that we know what we're doing because, in theory, these patients' lives are in our hands," said Kouns.

She recommends SmartInject Solutions to her peers without reservation. "Embrace the fact that we as technologists have this control to deliver optimal scans with less contrast and ultimately protect the patient," she advised.