Health Care Professional Information:

Gadolinium Based Contrast Agents (GBCA) and Retention

The FDA is requiring a new class warning and a patient information sheet for all gadolinium-based contrast agents (GBCAs) used in Magnetic Resonance Imaging (MRI).

Gadolinium is the ingredient in MR contrast agents that allows improved visualization of most pathologies on scans, Hundreds of millions of patients have safely received GBCAs for MRI exams since FDA approval in 1988.

After intravenous administration, minute (often microscopic) amounts of gadolinium from the GBCA is now known to be retained in many tissues of the body, including the brain. So far, studies have not found harmful effects in patients with normal kidneys, but this is an ongoing area of research.

There are many different brands/classes of GBCAs. The agents which appear less chemically stable (called linear agents) tend to have higher retention than agents that are more chemically stable (called macrocyclic agents).

Yale New Haven Health Systems does not use any of the chemically weaker linear gadolinium agents associated with higher rates of brain retention visible on MRI.

Gadolinium retention in the brain is not the same as NSF (nephrogenic system fibrosis). Gadolinium retention happens with all GBCA contrast agents but in different amounts and in different forms. NSF has not been associated with the GBCA primarily used at Yale-New Haven Health System Radiology sites (including those patients with chronic kidney disease or on dialysis).

Based on the best available current evidence, Yale New Haven Health System Radiology Departments do not recommend any change in current practice pattern. MRI exams that require contrast to answer the clinical question prompting the MRI can be performed as usual.

In the interest of our patients' safety, we are carefully monitoring the situation and will notify you if there are any new developments.

For more information, please see official statement by the American College of Radiology:

https://www.acr.org/-/media/ACR/FilesClinical-Resources/Contrast_Media.pdf#page=82