MRI Contrast

Excerpts taken from the ACR Manual on Contrast Media 2024:

TABLE 1. ACR Manual Classification of Gadolinium-Based Agents Relative to Nephrogenic Systemic Fibrosis

Group I: Agents associated with the greatest number of NSF cases:
• Gadodiamide (Omniscan® – GE Healthcare)
• Gadopentetate dimeglumine (Magnevist® – Bayer HealthCare Pharmaceuticals)
• Gadoversetamide (OptiMARK® – Guerbet)
Group II: Agents associated with few, if any, unconfounded cases of NSF:
• Gadobenate dimeglumine (MultiHance® – Bracco Diagnostics)
• Gadobutrol (Gadavist® – Bayer HealthCare Pharmaceuticals; Gadovist in many countries)
• Gadoteric acid (Dotarem® – Guerbet, Clariscan – GE Healthcare)
• Gadoteridol (ProHance® – Bracco Diagnostics)
• Gadopiclenol* (Elucirem® – Guerbet, Vueway® – Bracco Diagnostics)
• Gadoxetate disodium (Eovist – Bayer HealthCare Pharmaceuticals; Primovist in many countries)
Group III: Agents for which data remains limited regarding NSF risk, but for which few, if any unconfounded cases of NSF have been reported:
• No agents currently in this category (as of April 2024)

Based on the most recent scientific and clinical evidence the ACR Committee on Drugs and Contrast considers the risk of NSF among patients exposed to standard or lower than standard doses of group II gadolinium-based contrast agents is sufficiently lower or possibly nonexistent such that assessment of renal function with a questionnaire or laboratory testing is OPTIONAL prior to intravenous administration.
As in all instances, group II GBCAs should only be administered if they are deemed necessary by the supervising radiologist, and the lowest dose needed for diagnosis should be used as deemed necessary by the supervising radiologist.

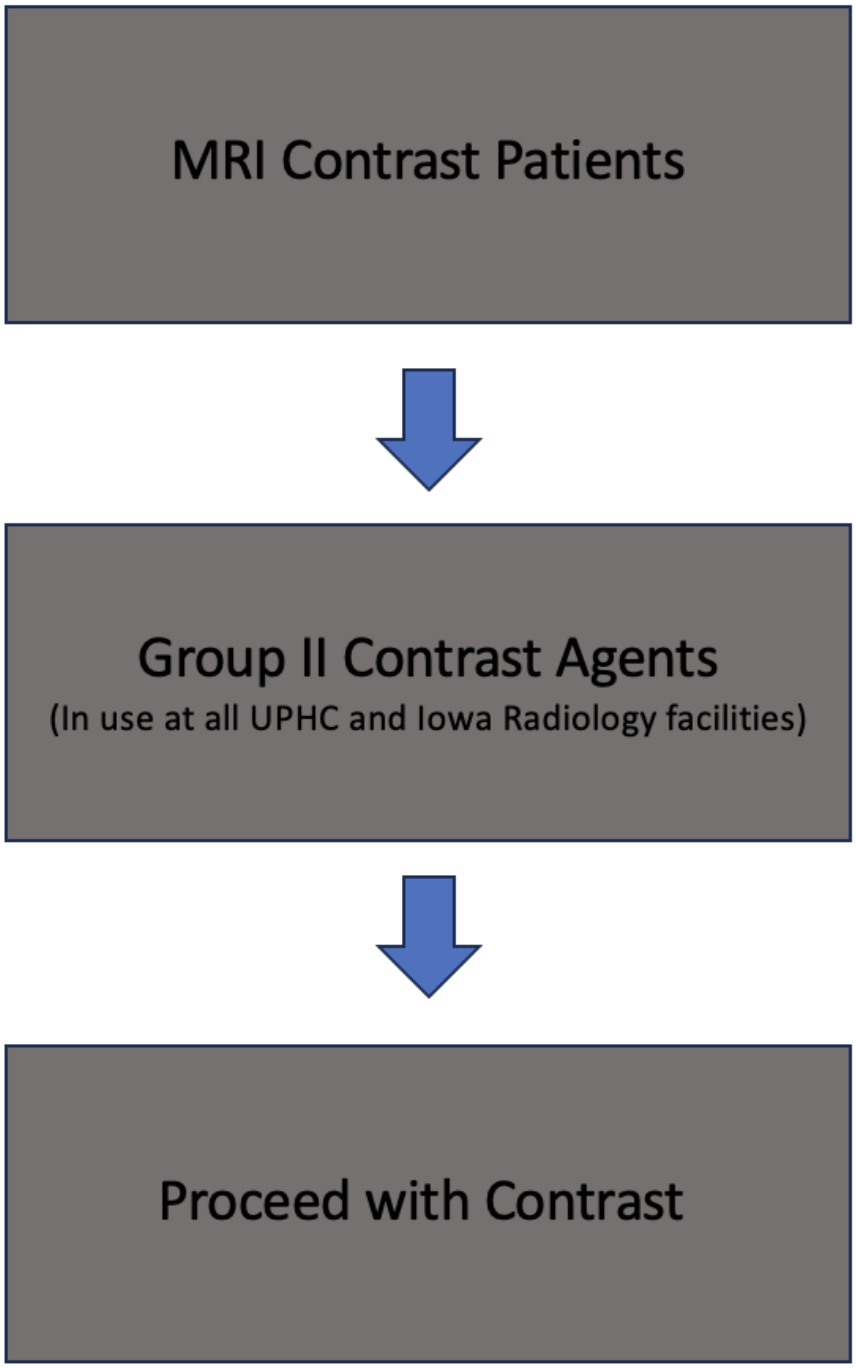
The ACR Committee on Drugs and Contrast Media recognizes that the U.S. Food and Drug Administration guidelines and drug labeling for GBCA have the same recommendations for each GBCA with respect to assessing renal function prior to GBCA administration. Nevertheless, the committee authoring the ACR Manual on Contrast Media 2024 has reviewed the evidence and believes that the prevailing weight of clinical evidence on this matter allows less stringent yet safe patient management which should reduce patient cost and inconvenience.

Given the very low, if any, risk of NSF development with group II agents, regardless of renal function or dialysis status, informed consent is NOT recommended prior to GBCA group II injection.

The ACR Committee on Drugs and Contrast Media and National Kidney Foundation recommend that elective GBCA-enhanced MRI examinations be performed as closely before a regularly scheduled hemodialysis as is possible, as dialysis can improve GBCM clearance. However, dialysis should not be initiated or altered.

Subject to change at the discretion of the radiologist due to clinical circumstances.

GBCA Workflow



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