

The incidence of NSF in patients with severe renal dysfunction (GFR <30) varies from 0.19–4%. Other risk factors for NSF include acute kidney injury, the use of nonmacrocytic agents, and repeated or high-dose exposure to gadolinium. The American College of Radiology Committee on Drugs and Contrast Media considers the risk of NSF among patients exposed to standard or lower doses of Group 2 gadolinium agents (macrocytic agents) to be sufficiently low or possibly nonexistent such that the assessment of renal function is optional prior to administration. Group 2 agents are strongly preferred in patients at risk for NSF. Renal function, dialysis status, or informed consent are not recommended prior to injection of Group 2 agents, but deference is made to local practice preferences. Patients receiving any Group 1 (linear) or 3 gadolinium-containing agent should be considered at risk of NSF if they are on dialysis (of any form); have severe or end-stage chronic renal disease (eGFR <30 mL/min per 1.73 m²) without dialysis; eGFR of 30–40 mL/min per 1.73 m² without dialysis (as the GFR may fluctuate); or have acute renal insufficiency. The use of gadolinium in young children and infants is discouraged due to the unknown risks and their immature renal systems.

■ COMPLICATIONS AND CONTRAINDICATIONS

From the patient's perspective, an MRI examination can be intimidating, and a higher level of cooperation is required than with CT. The patient lies on a table that is moved into a long, narrow gap within the magnet. Approximately 5% of the population experiences severe claustrophobia in the MR environment. This can be reduced by mild sedation but remains a problem for some. Movement of the patient during an MR examination may distort all of the images in sequence; therefore, uncooperative patients should either be sedated for the MR study or scanned with CT. Generally, children aged <8 years usually require conscious sedation in order to complete the MR examination without motion degradation.

MRI is considered safe for patients, even at very high field strengths. Serious injuries have been caused, however, by attraction of ferromagnetic objects into the magnet, which act as missiles if