1. **Outpatients scheduled for contrast-enhanced MR examinations**

Before scheduling/injecting any outpatient where:

**1. Patients 70 and over**

**2. History of diabetes**

**3. Hypertension requiring medication**

**4. ANY problems with kidneys (such as transplant, single kidney, kidney cancer, kidney surgery, dialysis)**

Obtain creatinine.  Creatinine should be obtained within 3 months of the MR exam.

Time Saver: Technologist will only need to check estimated GFR (eGR)  if creatinine is 1.3 or higher. (Creatinine values less than 1.3 will result in an eGFR>40 ml/min using the MDRD calculator, so no need to check!)

Calculate eGFR. Use the calculator: <http://mdrd.com> or laboratory calculation based upon the MDRD method for calculating the eGFR.

Technologists will not administer contrast if eGFR is less than 30ml/min or if the patient has acute kidney injury without first consulting with the radiologist.

**Contrast Agents**

eGFR  40 and above     Multihance 0.07 mMol/kg

eGFR 30-40 Dotarem 0.1 mMol/kg

15>eGFR<30                  Peer-to-peer consult, informed consent, full dose Dotarem 0.1 mMol/kg

eGFR 15 or lower          Peer-to-peer consult, informed consent, nephrology consult for dialysis, full

 dose Dotarem 0.1 mMol/kg

Note: If patient has history of allergic-like reaction to Dotarem, replace with 70% single dose MultiHance

**Additional guidelines:**

These guidelines apply only to patients with chronic renal failure, and not to patients with acute kidney injury. No serum creatinine or eGFR threshold is adequate to stratify risk for patients with acute kidney injury because serum creatinine in this setting is unreliable.

1. **Inpatients scheduled for contrast-enhanced MR examinations**

Obtain creatinine for all inpatients. Creatinine should be obtained within 48 hours of MR exam.

Time Saver: Technologist will only need to check estimated GFR (eGR)  if creatinine is 1.3 or higher. (Creatinine values less than 1.3 will result in an eGFR>40 ml/min using the MDRD calculator, so no need to check!)

Calculate eGFR. Use the calculator: <http://mdrd.com> or laboratory calculation based upon the MDRD method for calculating the eGFR.

Technologists will not administer contrast if eGFR is less than 30ml/min or if the patient has acute kidney injury without first consulting with the radiologist.

**Contrast Agents**

eGFR  40 and above     Multihance 0.07 mMol/kg

eGFR 30-40 Dotarem 0.1 mMol/kg

15>eGFR<30                  Peer-to-peer consult, informed consent, full dose Dotarem 0.1 mMol/kg

eGFR 15 or lower          Peer-to-peer consult, informed consent, nephrology consult for dialysis, full

 dose Dotarem 0.1 mMol/kg

Note: If patient has history of allergic-like reaction to Dotarem, replace with 70% single dose MultiHance

**Additional guidelines:**

These guidelines apply only to patients with chronic renal failure, and not to patients with acute kidney injury. No serum creatinine or eGFR threshold is adequate to stratify risk for patients with acute kidney injury because serum creatinine in this setting is unreliable.

Extravasation guidelines for MRI

Gadolinium based contrast agents(GBCA) are less toxic to the skin and are typically administered at low volumes. Extravasation of GBCAs almost never leads to significant morbidity. Should extravasation occur, the technologist needs to document the extravasation. The radiologist does not need to be notified unless there is concern for progressive swelling or pain, skin breakdown or blistering, impairment of sensation and/or altered perfusion.