



QR code for mobile view

Inclusion Criteria

- Age 1 year to 25 years
- Inpatient, outpatient, observation

Exclusion Criteria

- Emergent or Critical: **CT should not be delayed in critical situations**
- < 1 year of age
- Hospice care

Screening indicated if:

- History of AKI or CKD
- History of kidney surgery or ablation
- [Patient at risk for acute kidney injury](#)

High-risk nephrotoxic medications:

- ACE/ARBs
- Aminoglycosides
- Amphotericin
- Alendronate
- Diuretics
- Metformin
- Methotrexate
- NSAIDS
- Platin

Fluid Management

[Kidney Screening with MRI](#)

CT with contrast ordered

Kidney impairment screening indicated?

No
 Complete CT with contrast order

Yes
[Order or Calculate eGFR-Cr](#)

Withhold nonessential high-risk nephrotoxic medications 24-48 hours prior to CT scan

eGFR < 15 mL/min/1.73m²

Is patient currently on dialysis?

No

Relative contraindication:
 Do not withhold contrast based on kidney function if needed for potential life-threatening diagnosis

Yes

Does patient have residual urine output?

Yes

No

CT Scan

No initiation of or adjustment of maintenance dialysis schedule

eGFR 15 to < 30 mL/min/1.73m²

Prophylaxis with isotonic saline

Pre-hydrate: NS bolus 20 ml/kg over 60 minutes (max 1,000 ml)

CT scan

Post-hydration 6- 8 hours:
 < 30 kg: NS 3ml/kg/hr
 ≥ 30 kg: NS 2ml/kg/hr (max 150ml/hr)

Consider post-CT scan BMP in 48-72 hrs

CA-AKI?

No

After 48 hr, may resume high-risk nephrotoxic medications

Yes

Nephrology consultation

eGFR 30 to < 45 mL/min/1.73m²

If other high-risk features are present (recent AKI, highly variable eGFR, multiple nephrotoxic exposures), optional hydration prophylaxis at discretion of ordering physician

eGFR ≥ 45 mL/min/1.73m²

Complete CT with contrast order

Abbreviations:

- **ACE** = Angiotensin-converting enzyme inhibitors
- **ARBs** = Angiotensin receptor blockers
- **AKI** = Acute kidney injury
- **CA-AKI** = [Contrast-associated acute kidney injury](#)
- **PC-AKI** = Post-contrast acute kidney injury
- **eGFR** = Estimated Glomerular Filtration Rate
- **CKD** = Chronic Kidney Disease
- **NS** = Normal Saline
- **NSAIDS** = Non-steroidal anti-inflammatory drugs