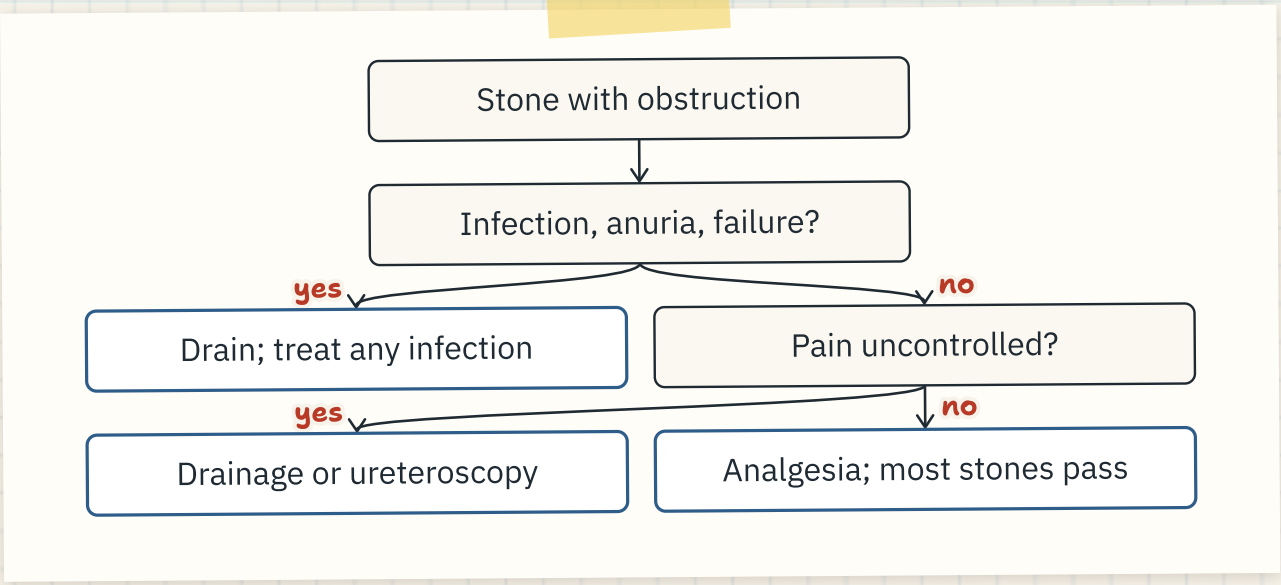
Kidney stones: scan and urgency

Pick the imaging, spot who cannot wait



Step by step

1. Image: CT without contrast; ultrasound in pregnancy and children
2. Pain: NSAID first, opioid second
3. Most small stones pass (about 75% under 5 mm)
4. Urgent: infection, anuria or kidney failure, uncontrolled pain
5. Infection: antibiotics at once, drain, remove the stone later

Patient	Imaging
Typical adult	CT abdomen and pelvis, no contrast
Pregnant	Ultrasound; then MRI without gadolinium; low-dose CT last
Child	Ultrasound first
Fever or single kidney	Image at once (same test as above)
Contrast CT, IV urography	Usually not appropriate

First imaging by patient group, and what to avoid

Two questions

Which scan?

Who cannot wait?

Stent or nephrostomy: equally effective

Exam traps

- ! Do not give an infected, obstructed kidney antibiotics alone: drain it.
- ! Stone removal waits until the infection has cleared.
- ! Contrast CT and intravenous urography are not the first test.

Kidney stones: which scan, and who needs urgent drainage

Video, written lesson, practice question and sources: medservatory.com/usmle-step-2-ck/nephrology-electrolytes/kidney-stones-imaging-urgent-decompression

For exam study only, not medical advice. Follow local guidelines and your lab's ranges.
© 2026 Medservatory, a project of ADMR Solutions Ltd.
Free to print and share for personal study.