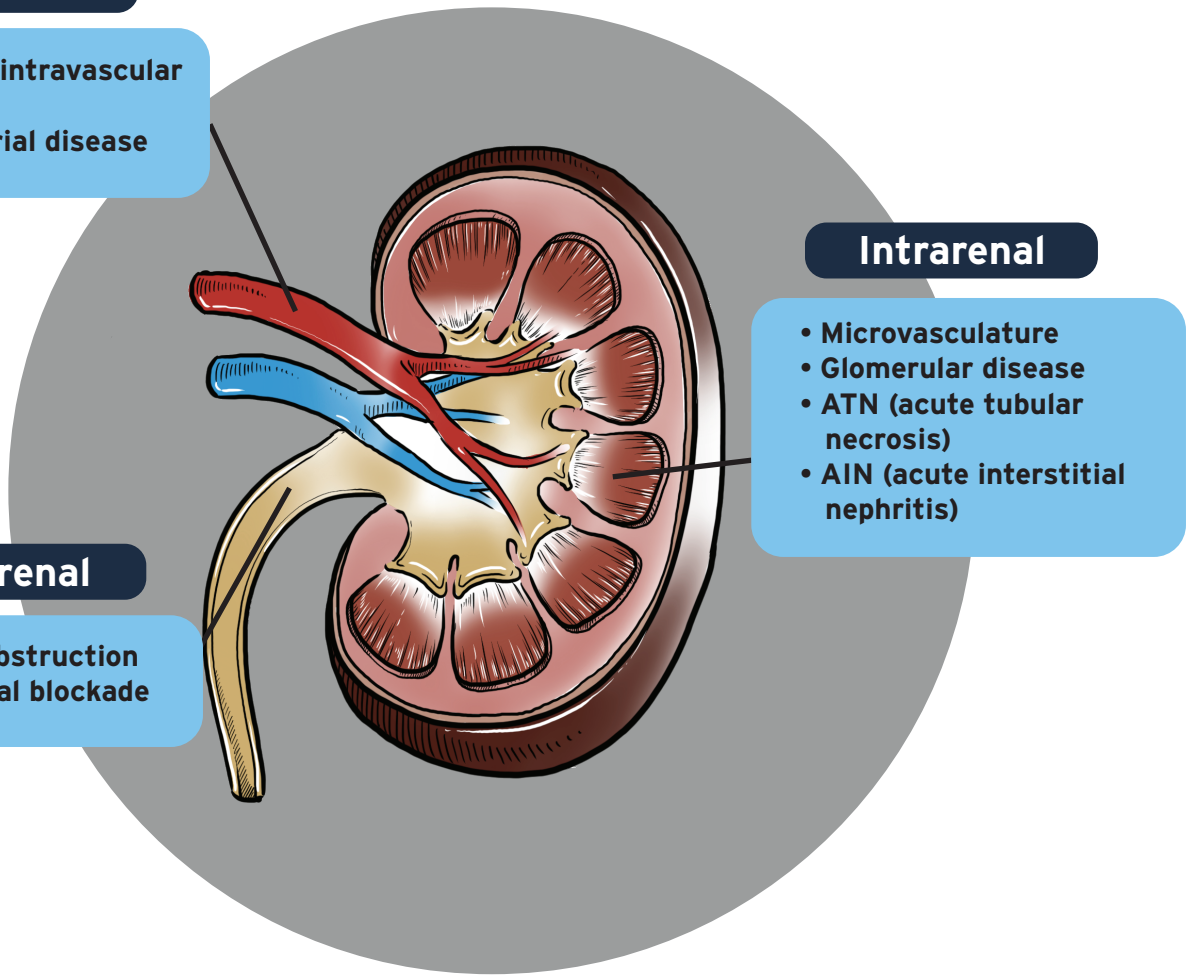
AKI

Definition

Serum creatinine 1.5X baseline or absolute increase of 0.3 mg/dL
Schwartz formula: GFR = 0.413 x ht cm/SCr
! Remember that GFR is dynamic in the setting of AKI!

Prerenal

- **Decreased intravascular volume**
- **Renal arterial disease**



Intrarenal

- **Microvasculature**
- **Glomerular disease**
- **ATN (acute tubular necrosis)**
- **AIN (acute interstitial nephritis)**

Postrenal

- **Tubular obstruction**
- **Mechanical blockade**

Initial workup

- **UA with microscopy**
  - Muddy brown casts - ATN
  - Hematuria with RBC casts - GN
  - Urine eos - AIN
  - Heavy proteinuria - nephrotic
- **Chem 10**
- **CBC/diff**
- **C3/C4 if concern for GN**
- **CK**
- **Renal ultrasound (r/o hydronephrosis, scarring)**
- **Urine Na and Cr to calculate FeNa:**

$$(U_{Na} \times P_{Cr}) / (P_{Na} \times U_{Cr})$$

! Interpret with caution, useful only if sent prior to fluids

<1%: suggests appropriate sodium-avid state (prerenal)

>2%: suggests tubular dysfunction (intrinsic)

Complications/indications for dialysis

A cidosis

E lectrolyte derangements (K, NH_3)

I ngestions (Li)

O verload refractory to diuretics

U remia