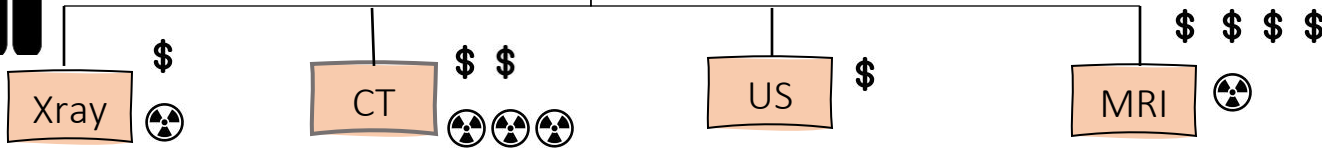




Imaging Unzipped



Typically for bones & air
Gold Std: fractures, screening CXR
Pro: old, low \$, low rads
Limitations: misses soft tissue or early dz, nothing radio-opaque
Types: fluoroscopy (caths, myelography, swallow study), KUB
Radio-opaque: metal, glass, stone, ?wood?



Typically detailed bones, solid organs, tumors, air
Gold Std: c spine, most bowel dz, cancer, bleeds
Pro: sees most things
Limitations: can't see inside fluid or soft tissues, metformin, 1CT = 200 CXR
Types: angiogram, PET, CTA, CT with, CT wo



Typically detecting fluid, moving tissue or fluid
Gold Std: OB/GYN, clots, testicles, gallbladder
Pro: real time imaging, low \$, no rads
Limitations: user dependent, body habitus, bowel gas
Types: cardiac echo, doppler/duplex, superficial soft tissue



Typically soft tissue, cartilage, connective tissue, swelling, muscle
Gold Std: spine tissue, neuro, joints, muscle
Pro: low radiation, special contrast
Limitations: magnetic, claustrophobic, loud noise, cost \$\$\$\$, time
Types: MRV, MRA , WWO

CONTRAST

Contrast = highlight areas of blood flow, ex. vessels, inflammation, fluid. Stays in blood stream for 24 hours

Administered in "phases" need to get timing right, be sure to know what you are looking for in the scan



Contrast Nephropathy
 - GFR less 43, causes AKI
 - controversial, watch for updates

Extravasation
 - contrast gets in the tissue = risk of compartment syndrome, tissue necrosis

Allergies
 - warm "peed-self" feeling, with hives
 - anaphylactoid = no antibodies, no mmry
 - myths: shellfish & iodine prep
 - protocol: 4hr emergency= steroids, Benadryl, IV
 - oral = no allergies cuz not absorbed

Prego Guidelines

MRI & US are the go-to
 MRI contrast = skin & autoimmune
 CT radiation=death, malform, CA
 consider VQ scan & lead covering
 risk vs benefit ratio, never risk mom life for health of fetus or both die



Standard CT imaging
 - Ct head WO
 - Ct cervical WO
 - Ct maxilla WO
 - Ct C/A/P W
 Stone protocol = CT CAP WO
 PE protocol = CT chest W

Incidental findings
 - Over ordering
 - Freak out pt
 - Higher cost
 - Over-referring
 - Over-prescribing
 pulm nodule clinic
 thyroid cyst clinic