Soft Tissue Inflammatory Disease

- Multiple modalities
  - X-ray
  - Ultrasound
  - CT
  - MRI
  - Nuclear Medicine
Soft Tissue Inflammatory

• Multiple modalities
  – X-ray
    • Evaluate for mass
    • Evaluate for soft tissue air
    • Evaluate for bone involvement

Soft Tissue Inflammatory

• Multiple modalities
  – Ultrasound
    • Soft tissue changes
    • Fluid
    • Air with shadowing
  – CT
    • Soft tissue changes
    • Dirty fat (edema in fat)
    • Soft tissue air
Soft Tissue Inflammatory

- Multiple modalities
  - MRI
    - Likely best for imaging of soft tissue inflammatory changes
    - Evaluate for fluid collections
    - Evaluate for edema
  - Nuclear Medicine
    - Labeled white cells
    - Identify areas of active infection

Thumb Abscess

- Soft tissue swelling
- Central air collection
Soft Tissue Abscess

- Abscess quite similar to adjacent soft tissues
  Very hard to identify on standard radiographs
- US, CT and MRI most effective imaging technique
- Abscess lower signal on T1 images
- High signal on proton density and T2 images

Inflamed Lipoma

- Rim like zone on T1
- Fluid signal on Stir
- Ring enhancement on C+
Peri-anal Abscess

- MRI fluid sensitive sequence
- Peri-anal abscess
- Fistula tract

Brain Inflammatory Disease

- Encephalitis
- Brain abscess
**HIV Encephalitis**

- High signal areas involving white matter
- Multiple bilateral areas of involvement

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**Brain Abscess**

- Ring enhancement due to breakdown of blood brain barrier
- Ring enhancement may be thinner on side towards ventricles