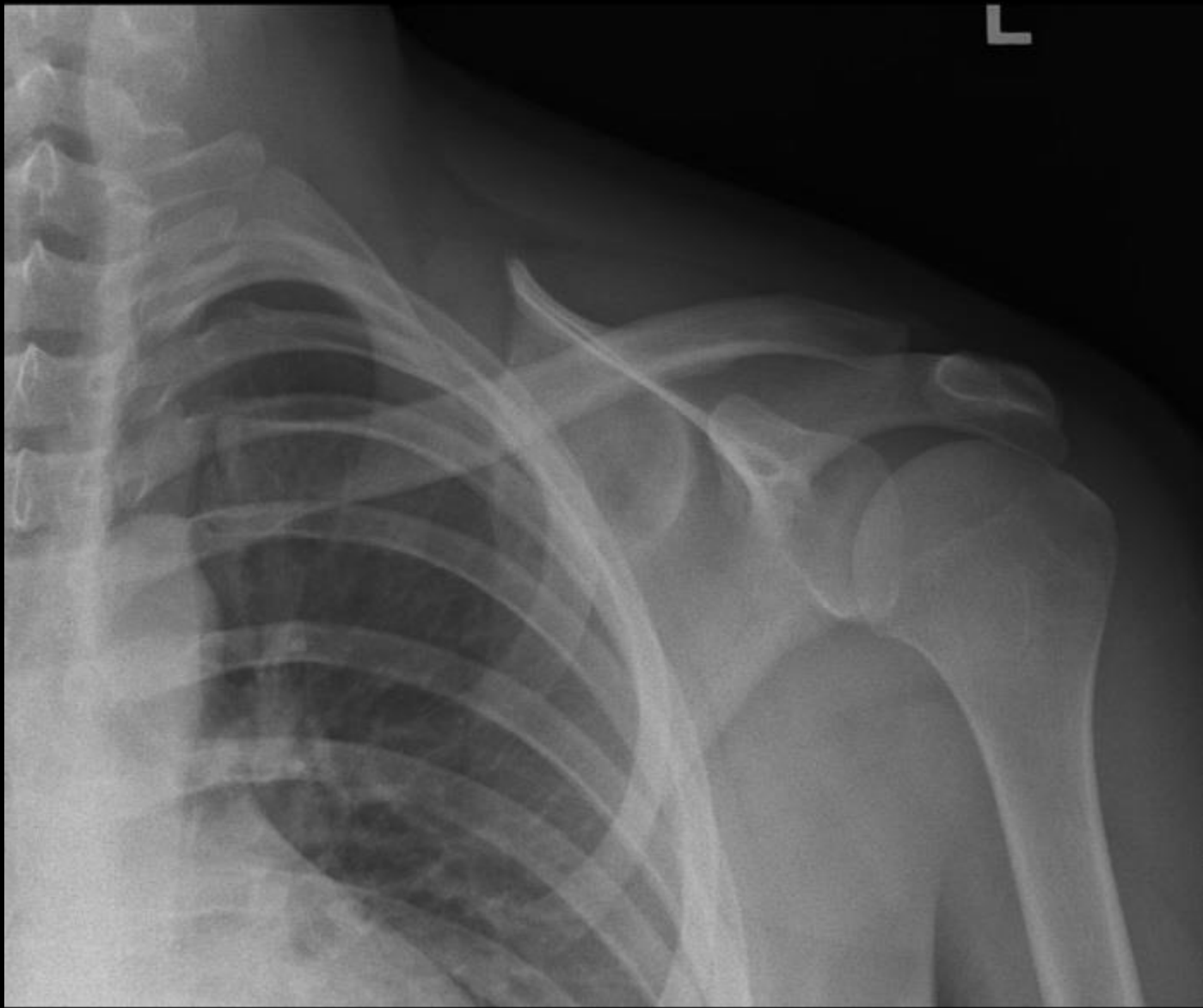


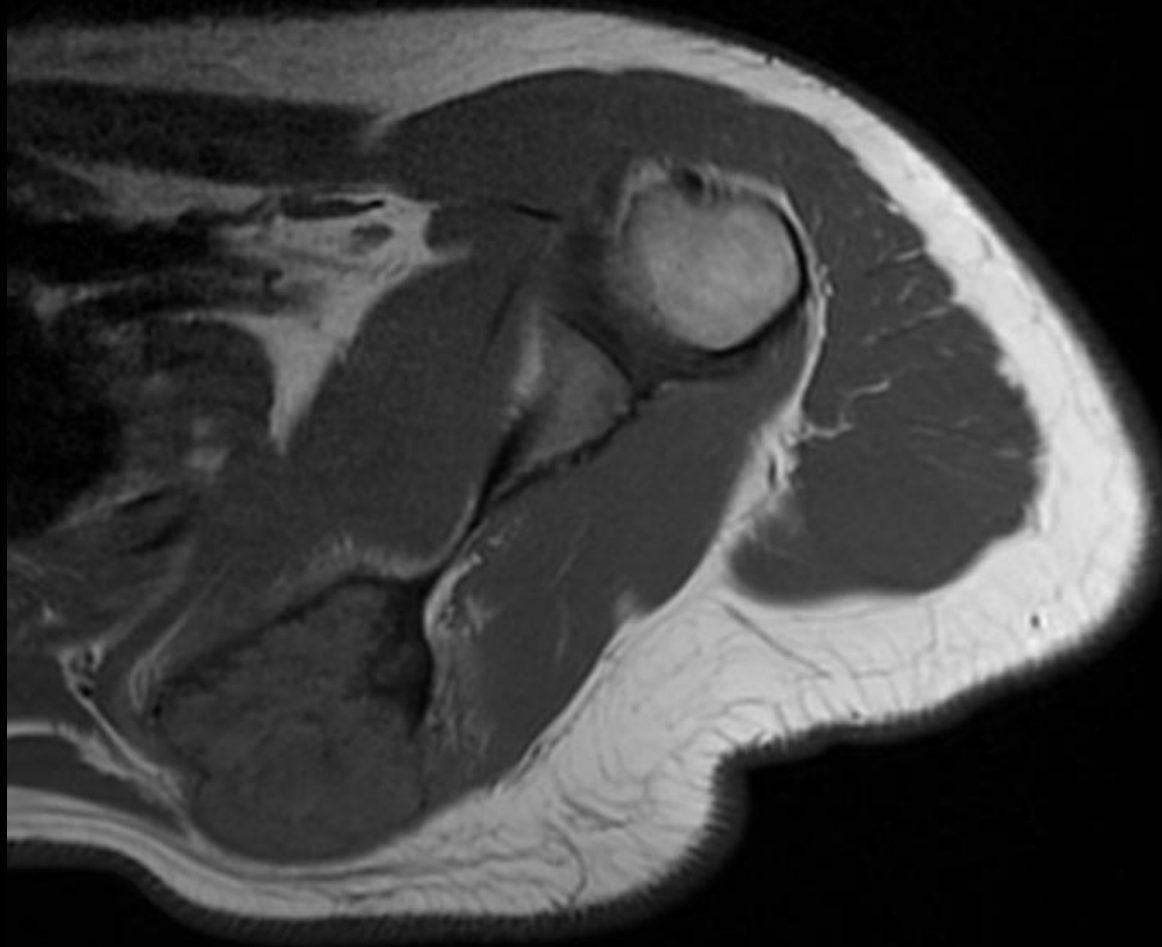


15 YR/M with progressively worsening  
left shoulder pain

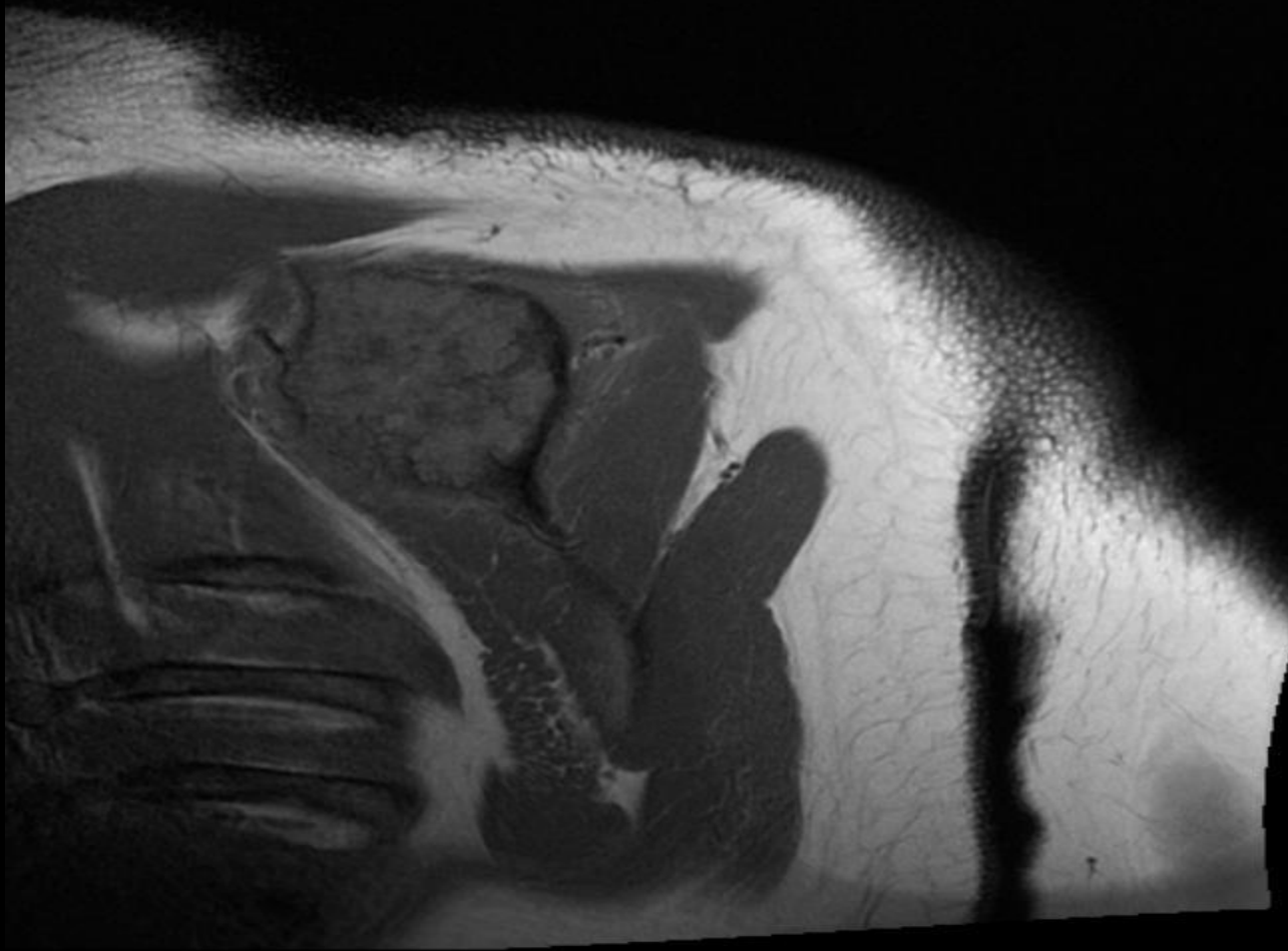
Amol Patil, MD.



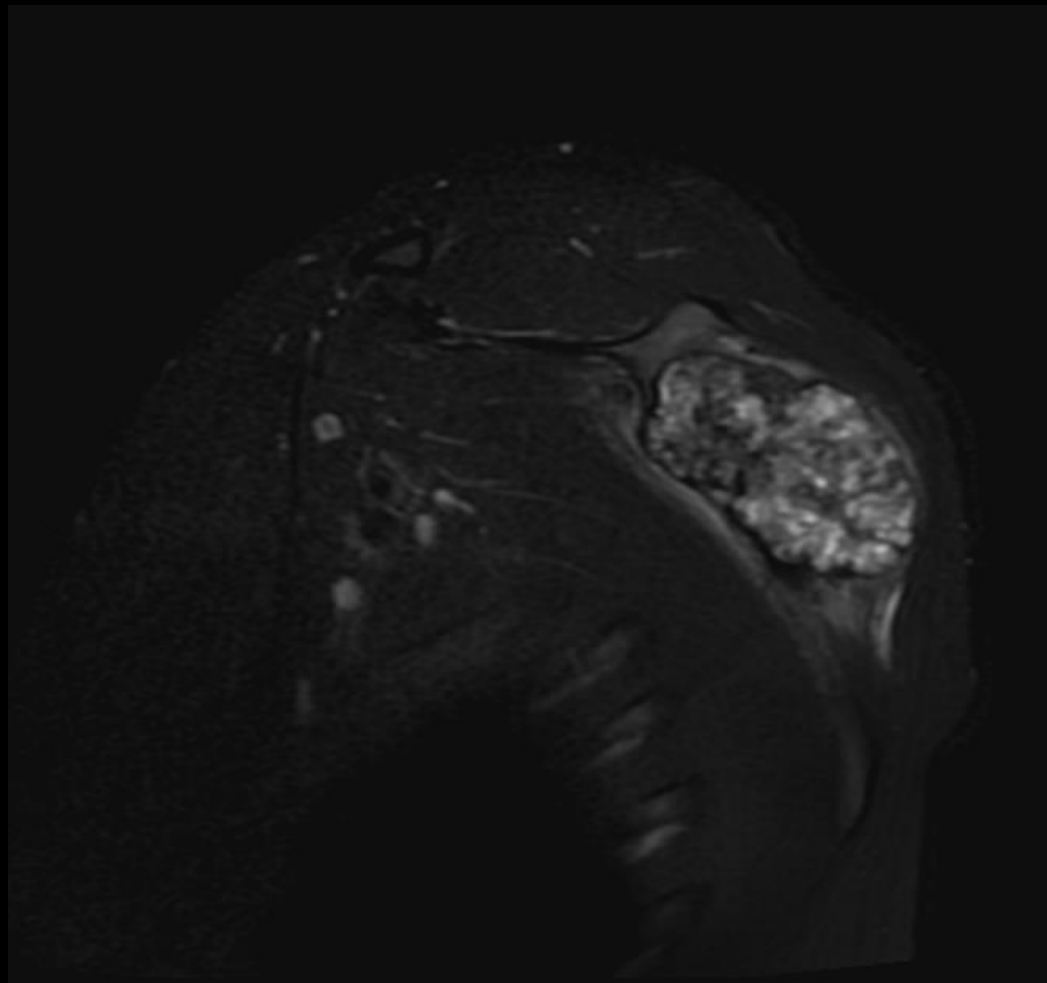
T1 FSE



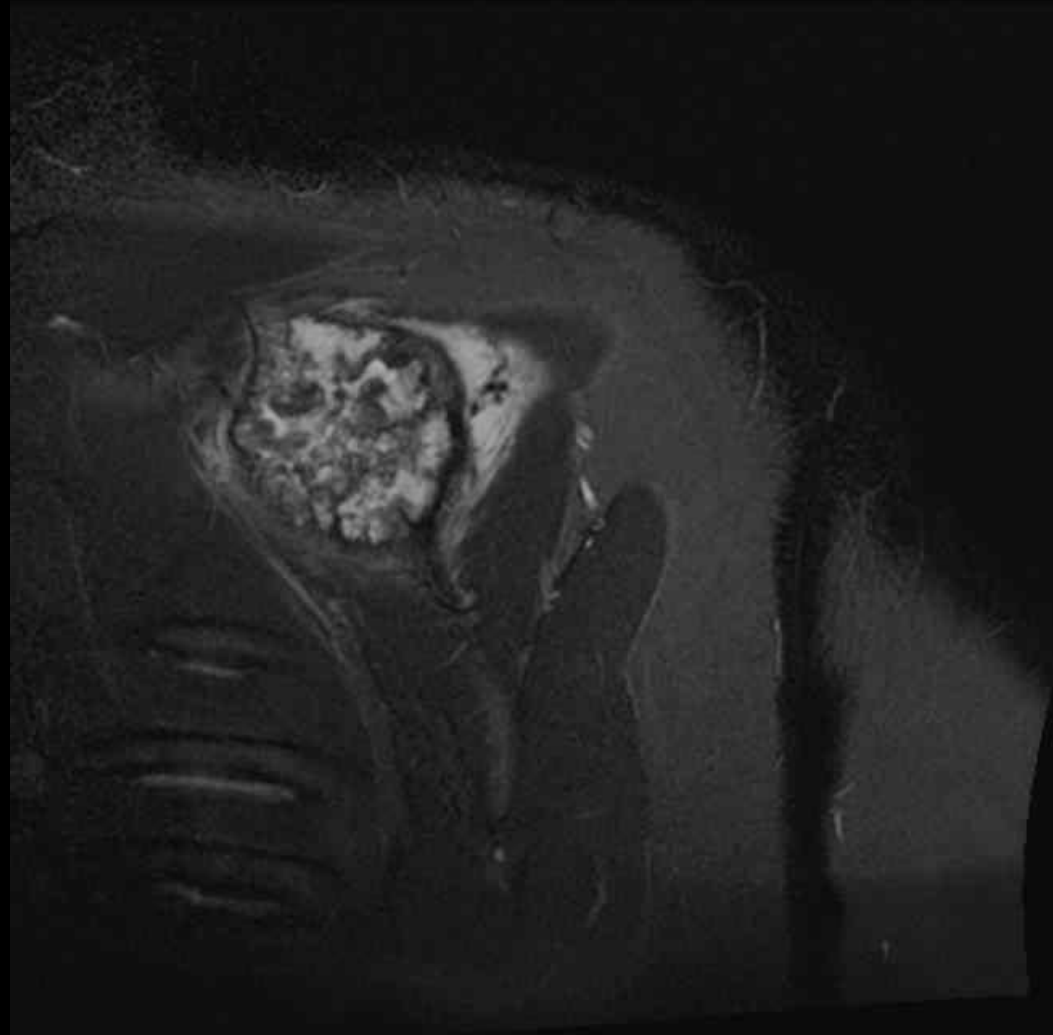
T1 FSE



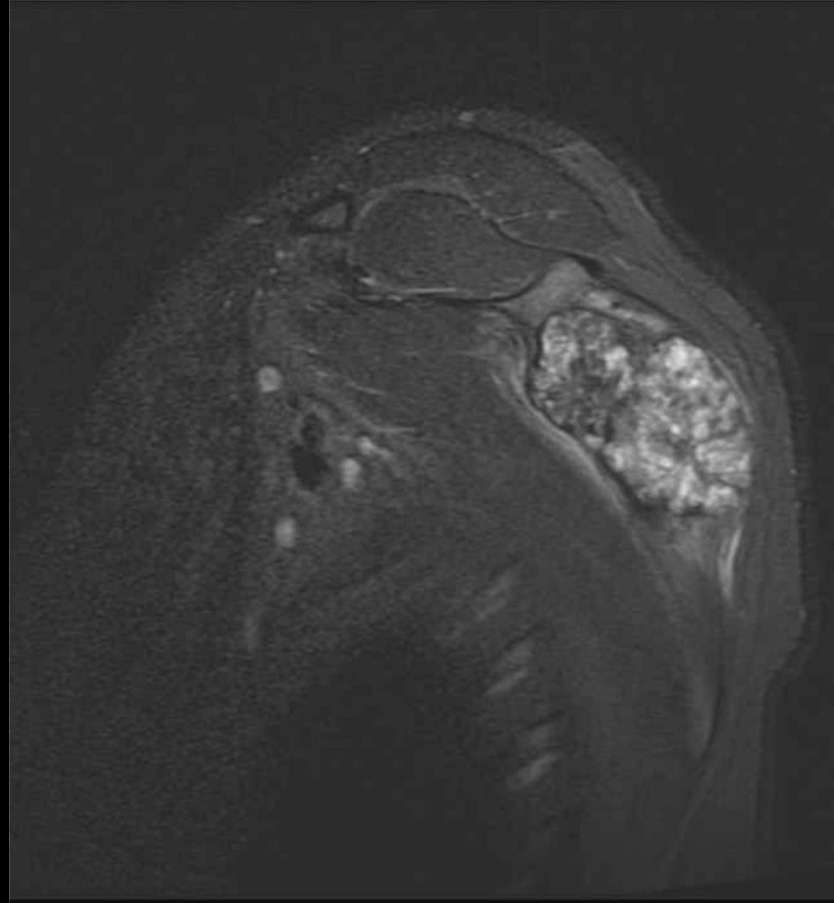
T2 FSE



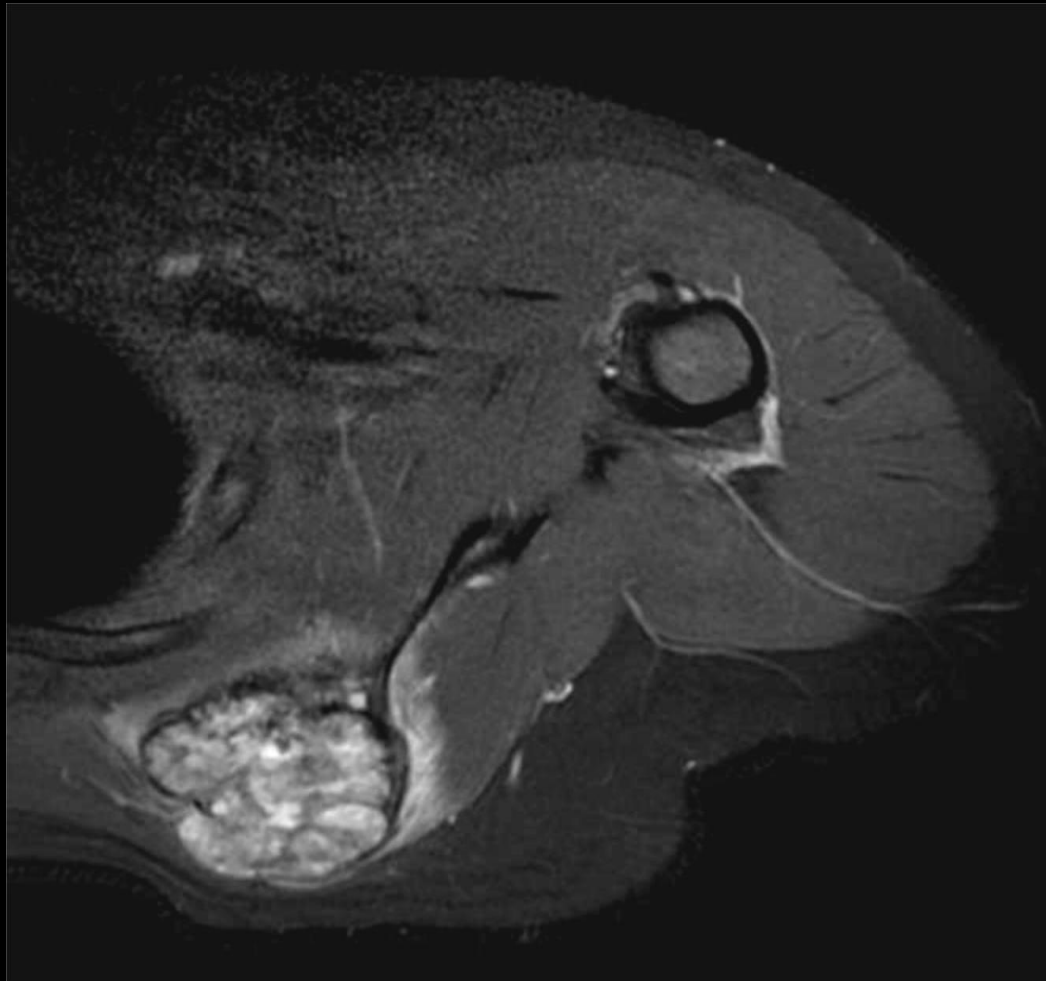
# COR STIR



# SAG STIR

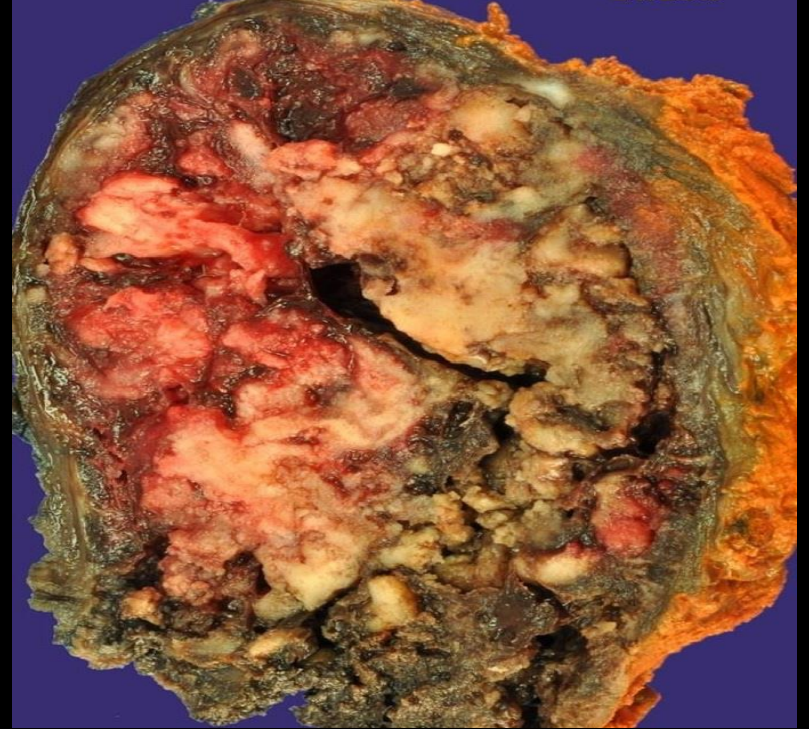
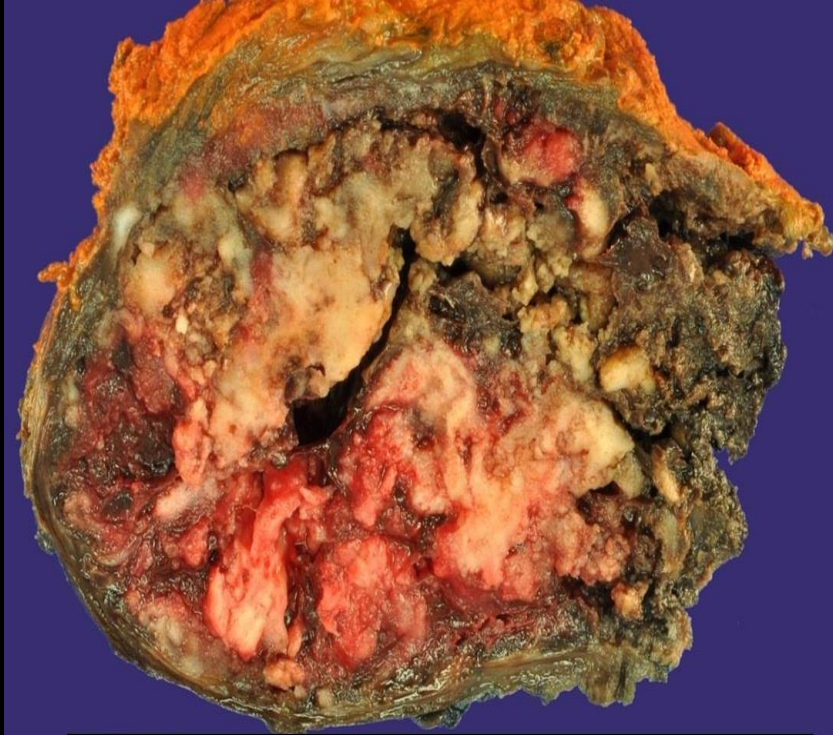


# POST CONTRAST





# GROSS PATHOLOGY



# OSTEOBLASTOMA

- Rare primary benign bone tumor (1-3 %).
- Can be locally aggressive, typically involves the axial skeleton.
- Insidious onset of dull pain, worse at night with poor response to analgesics vs Osteoid Osteoma.

# IMAGING

**Plain films :** Predominantly lytic with well defined thin sclerotic margin.

Expansile with internal calcification.

Associated soft tissue mass.

**CT :** Concordance with Plain film imaging findings , better depiction of internal matrix mineralization.

**MRI :**

T1: typically hypo to isointense on T1 with areas of decreased intensity that correspond to foci of calcification

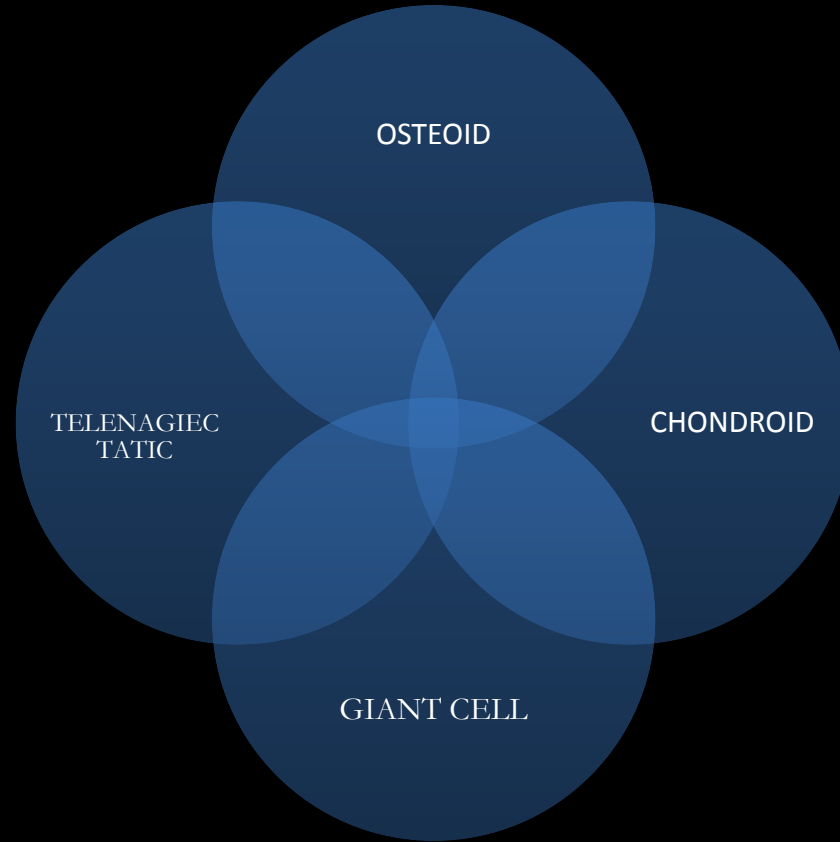
T2: typically isointense to hypointense on T2 with foci of decreased intensity corresponding to the foci of calcification high signal may be seen in surrounding bone marrow and soft tissues due to edema .

C+ (Gd): avidly enhances, with associated enhancement of the surrounding soft tissues.

# OSTEOSARCOMA

- Second most common primary bone tumor.
- Primary vs. secondary
- Types :
  - Conventional
  - Telangiectatic
  - Small cell
  - Osteoblastic / Osteoblastoma like
  - Chondroblastic
  - Fibrohistiocytic
  - Surface
  - Extra skeletal

# IMAGING APPEARANCE



## Plain film:

Medullary and cortical bone destruction

Wide zone of transition, permeative or moth-eaten appearance

Aggressive periosteal reaction

Tumor matrix ossification/calcification

CT: Assisting biopsy and staging

MRI : Predominantly lytic lesions may be in apparent on both plain film and MRI

Soft tissue non-mineralized component: intermediate signal intensity on T1 /T2

Mineralized/ossified components: low signal intensity on T1/ T2

Peri-tumoral edema: intermediate signal intensity on T1 / high signal intensity T2

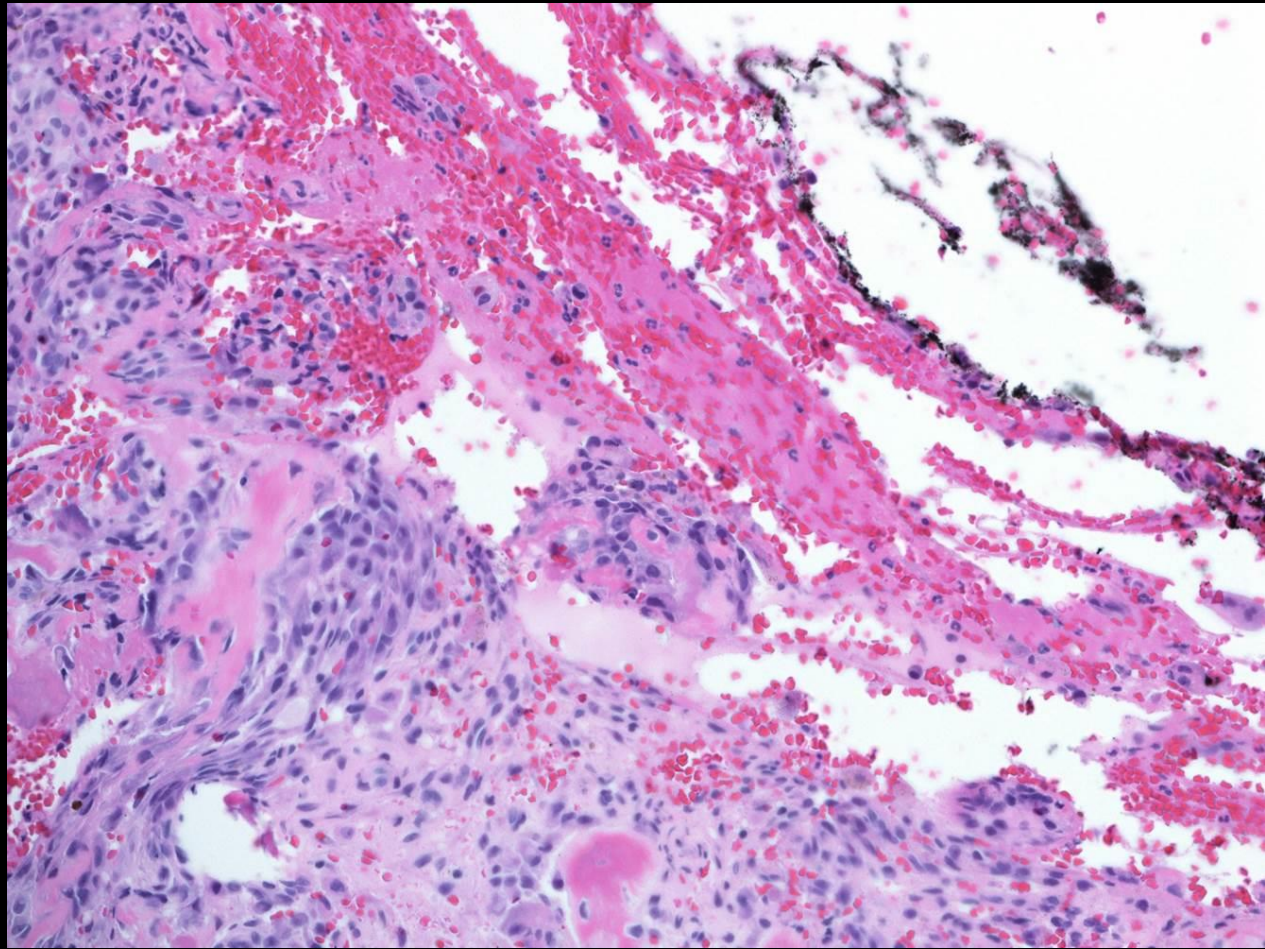
Scattered regions of hemorrhage

Enhancement

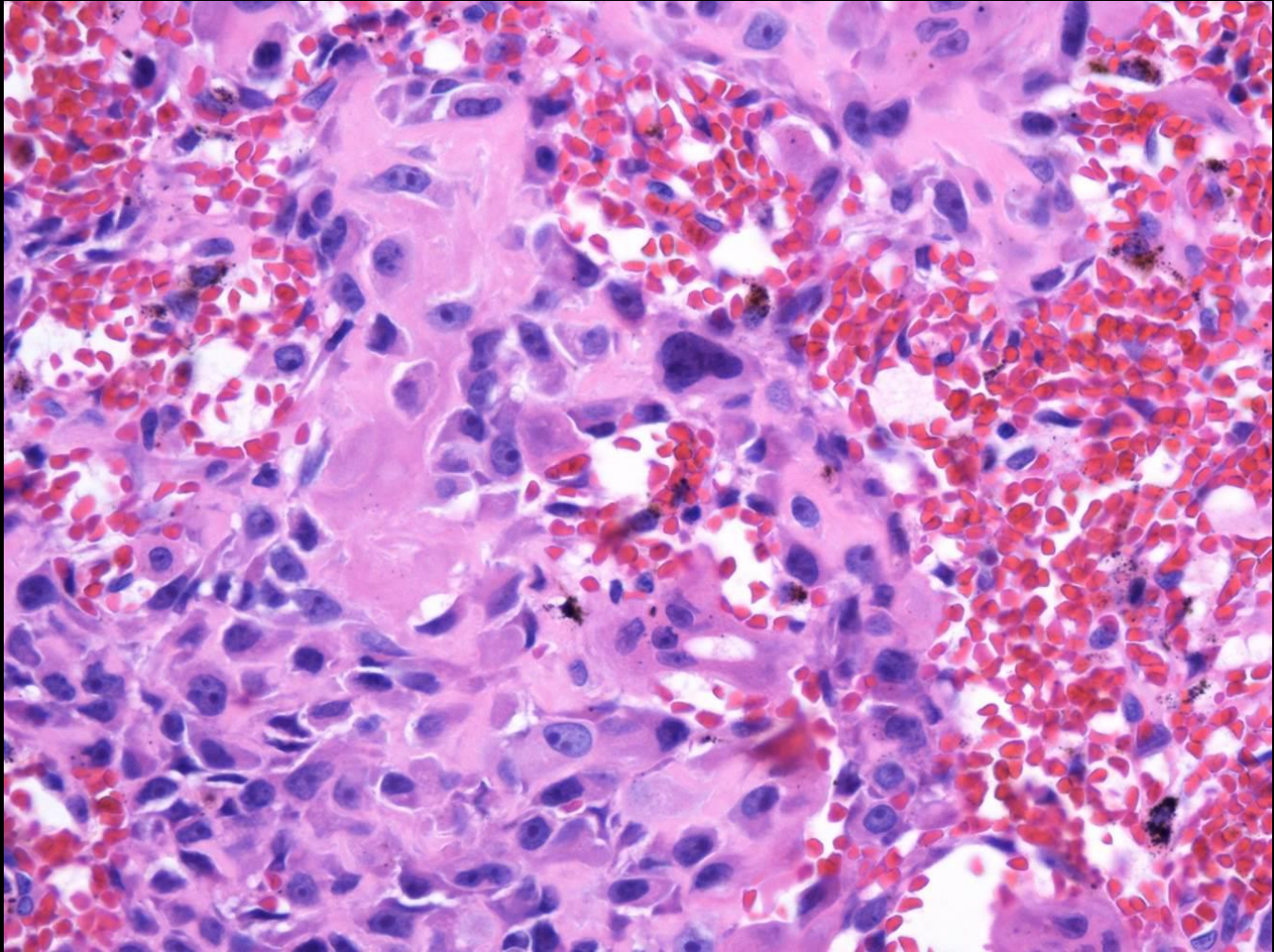
## OSTEOBLASTOMA LIKE OSTEOSARCOMA / AGGRESSIVE ATYPICAL OSTEOPLASTOMA

- Poor prognosis with propensity for local spread, recurrence and metastasis.
- No defining radiologic appearance ;
  - Look for increasing size
  - Cortical destruction
  - Soft tissue invasion
- Similar histologically to benign matrix producing tumors.
  - Exuberant osteoid encasing atypical osteoblasts (mitotic figures)









# REFERENCES

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