

# Interesting case meeting MSK

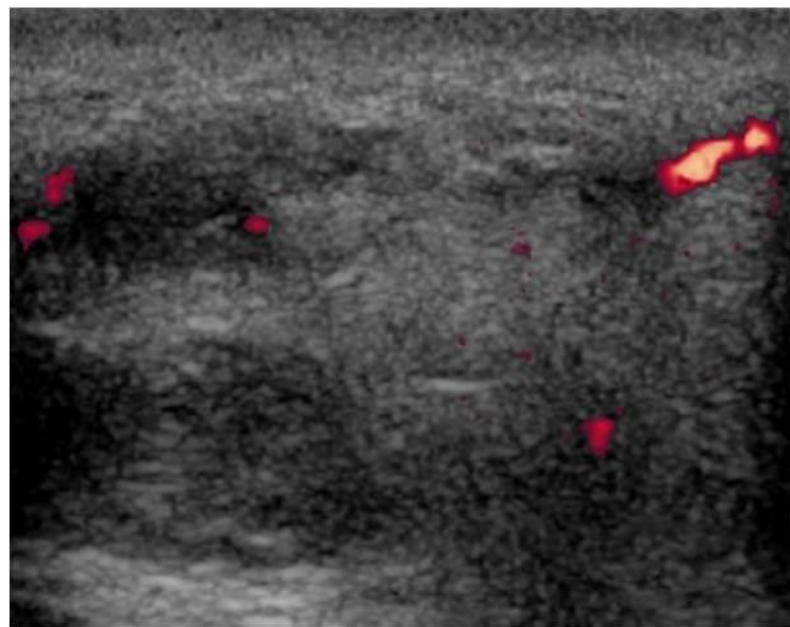
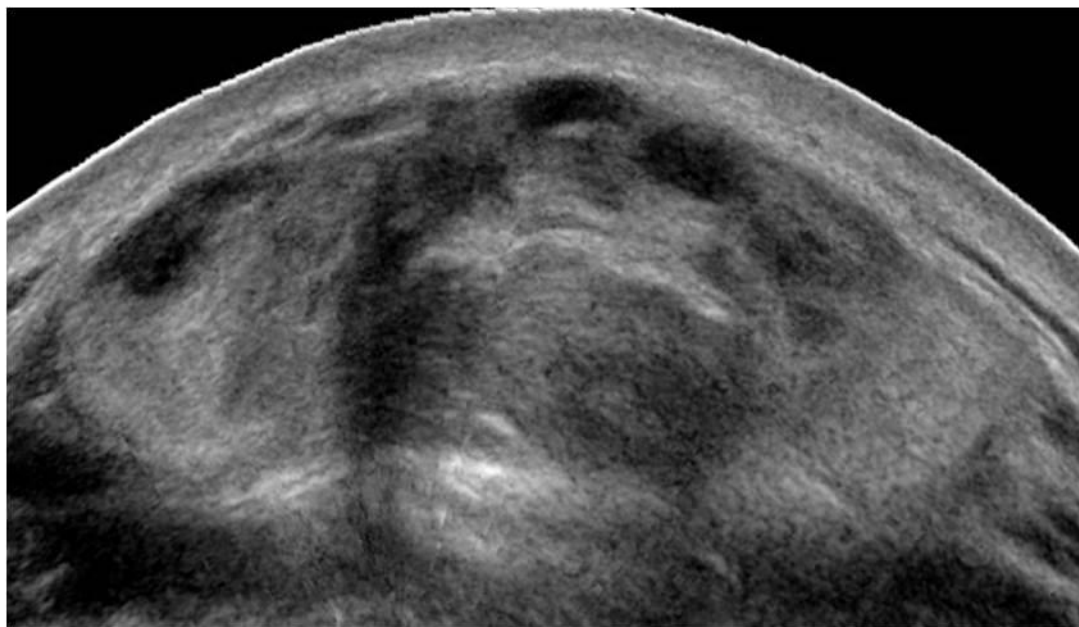
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2019.11.21

Eppie Chu

# Case 1

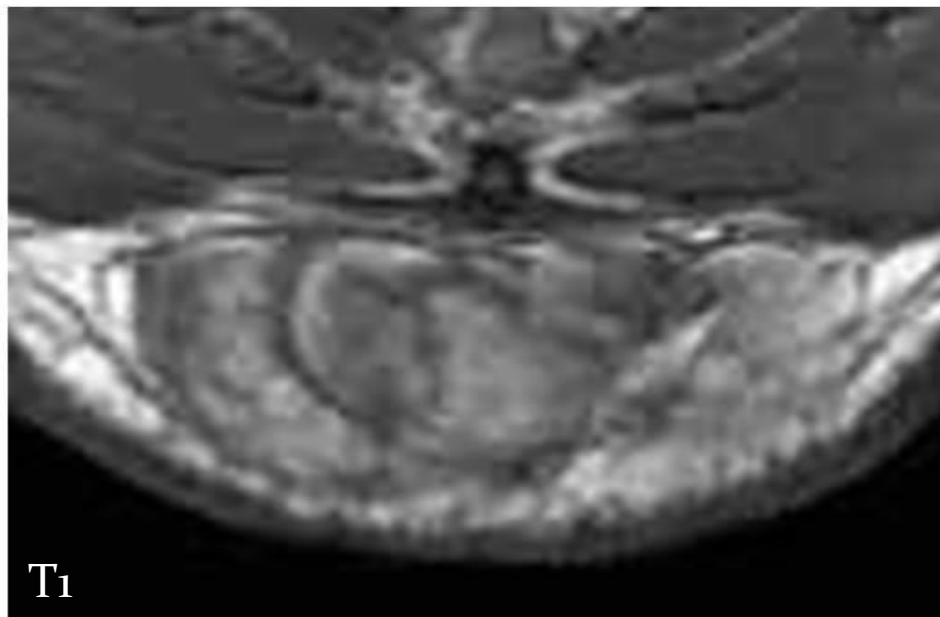
- 63/M
- 3 years history of painless palpable growing mass in the posterior neck region



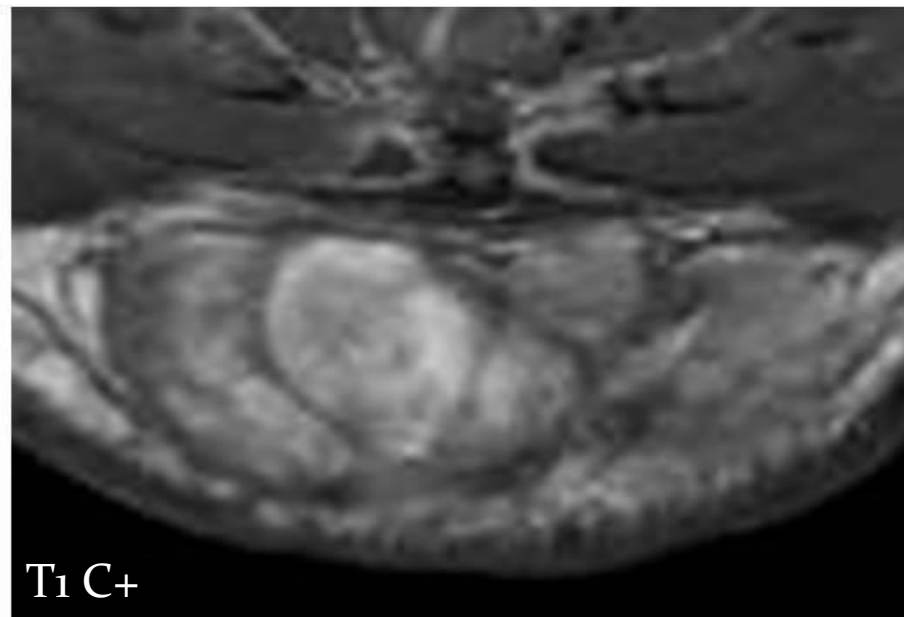
Sarcoma?

Size: 4.2cm x 2.0cm

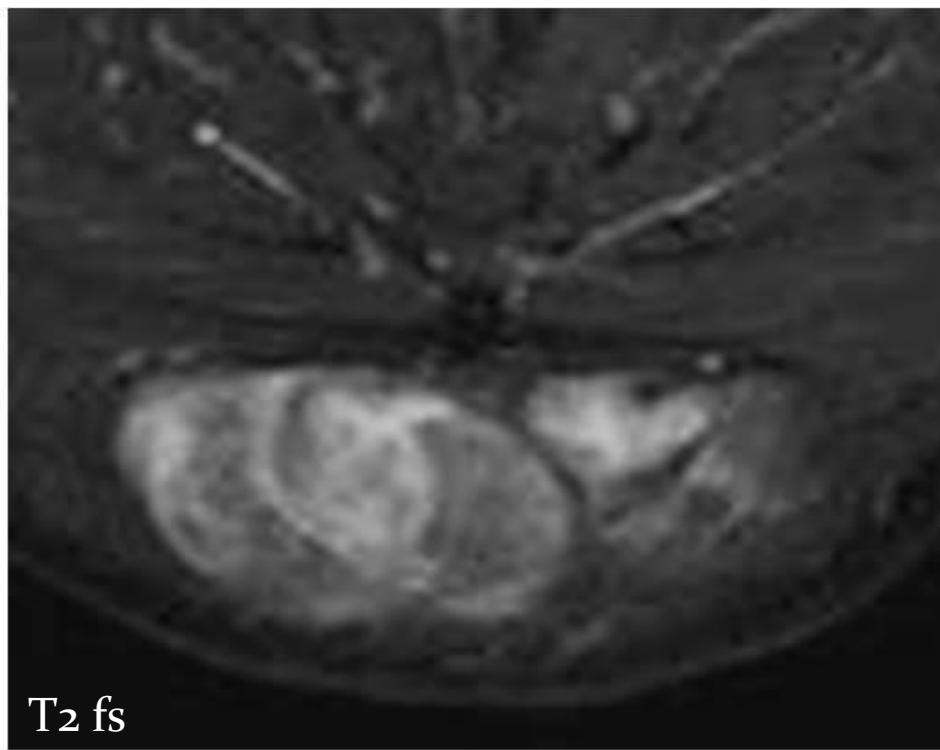




T<sub>1</sub>



T<sub>1</sub> C+



T<sub>2</sub> fs



Myxoid liposarcoma  
 Liposarcoma or other sarcoma  
 Complicated hemangioma  
 Angiolipoma

- Biopsy: Adipose lesion, favor spindle cell lipoma

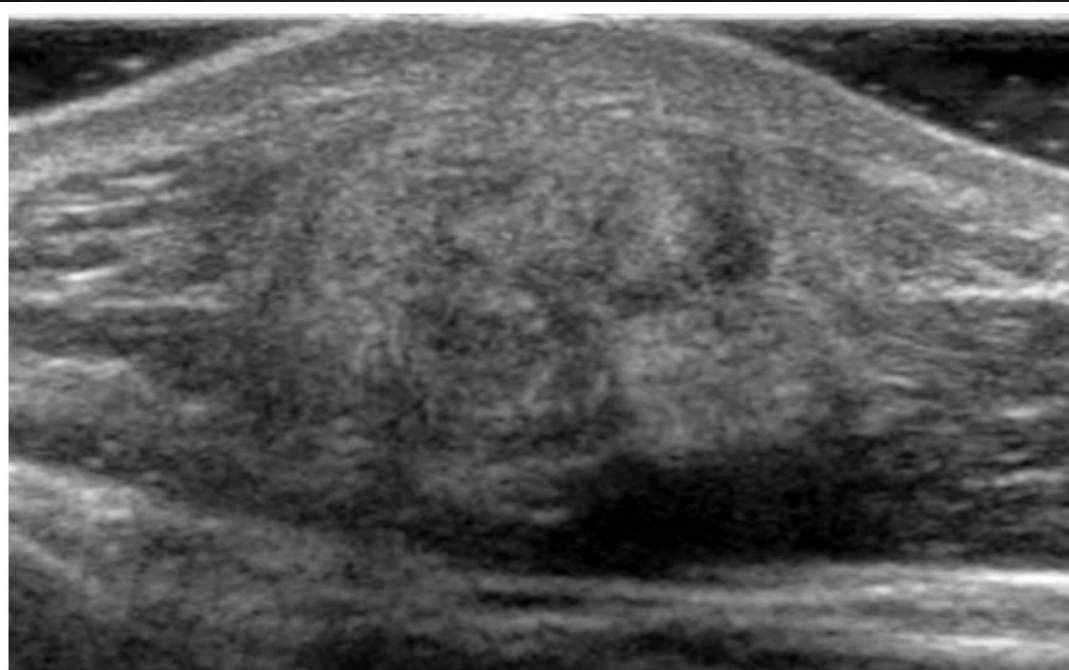
# Spindle cell lipoma

- Spindle cell lipoma was first described by Enzinger and Harvey in 1975 as a benign lesion in which mature fat is replaced by collagen-forming spindle cells
- Presents as a subcutaneous nodule in the neck, shoulder and back region of middle-aged and elderly men

# Case 2

- 35/M
- Right wrist ulnar mass x 2 years

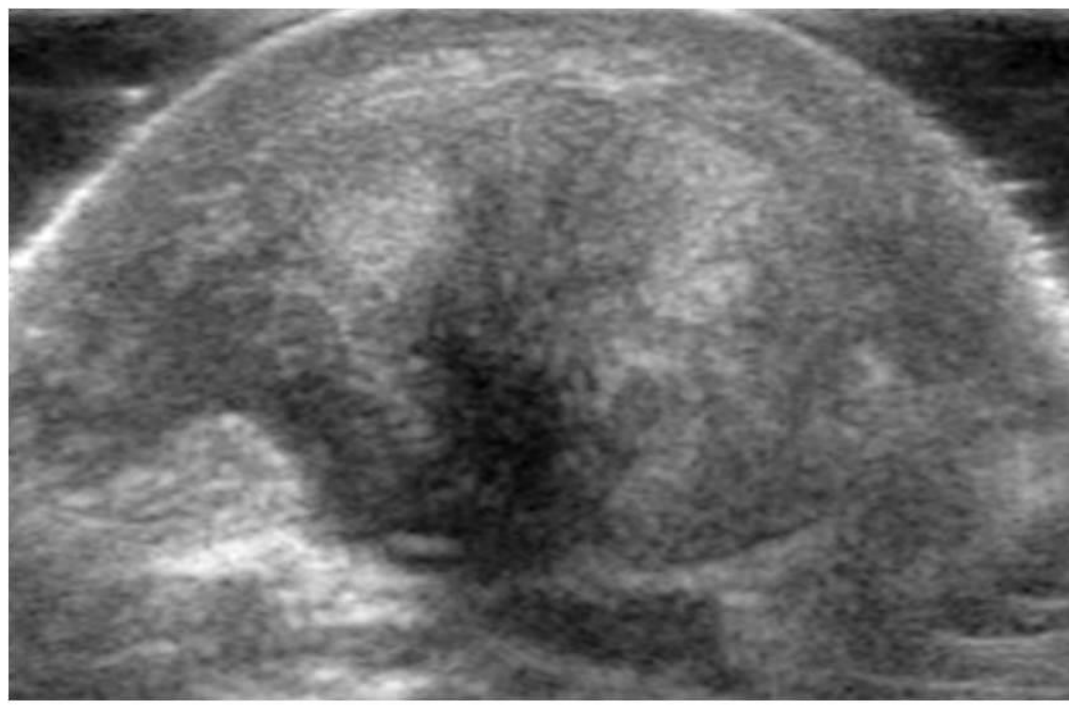




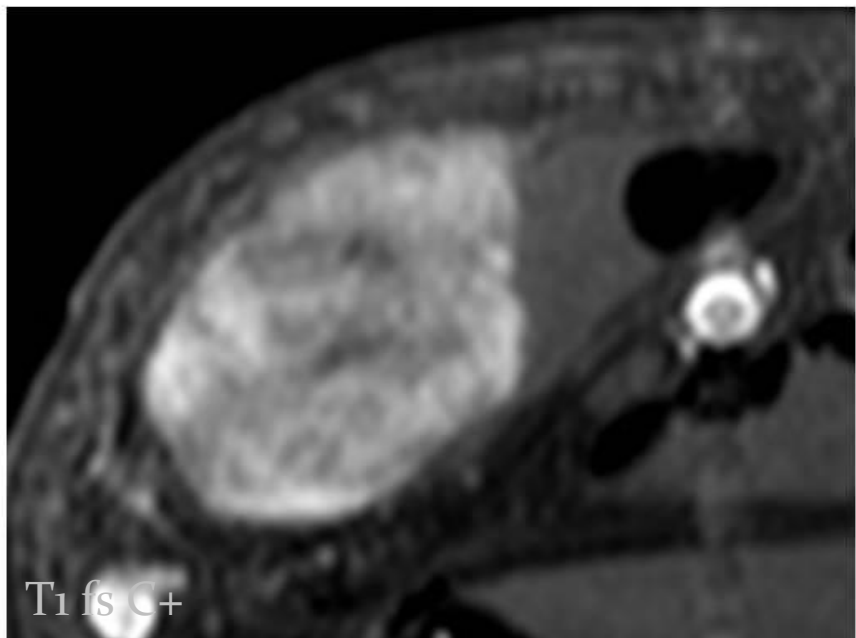
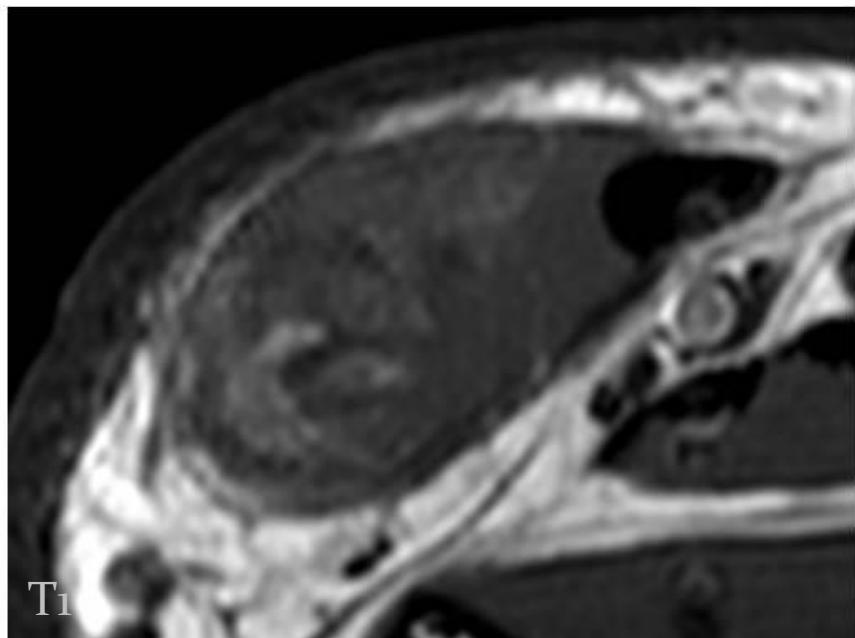
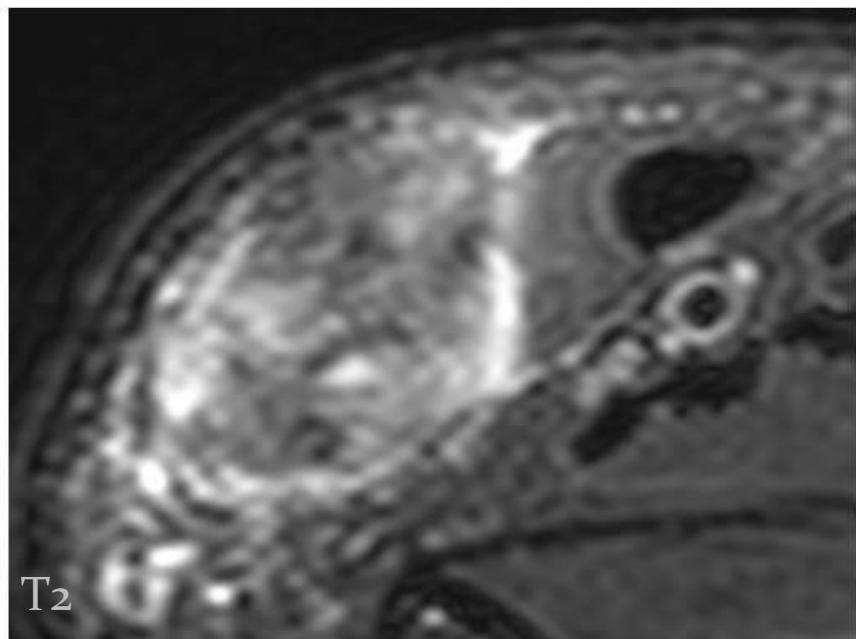
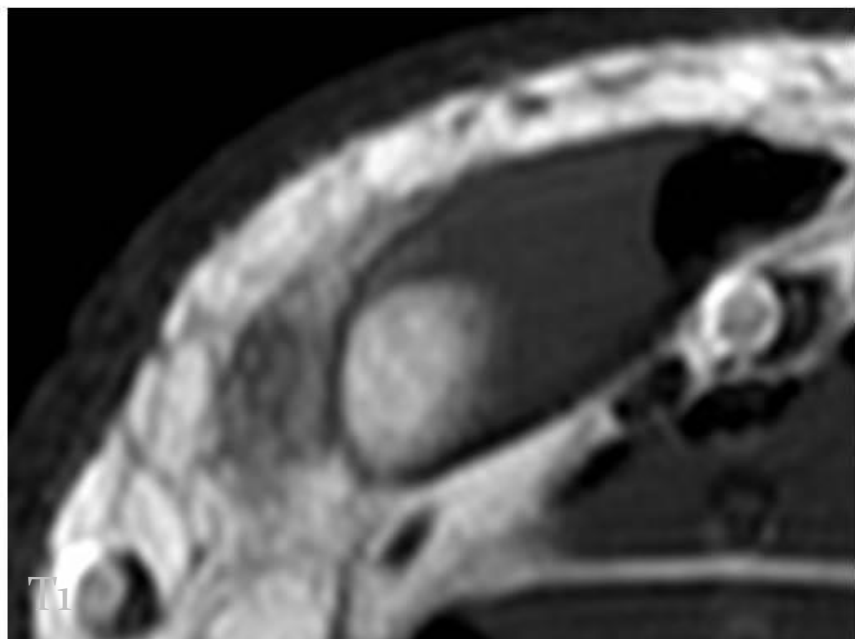
Subcutaneous and  
intramuscular lesion w/  
fatty component

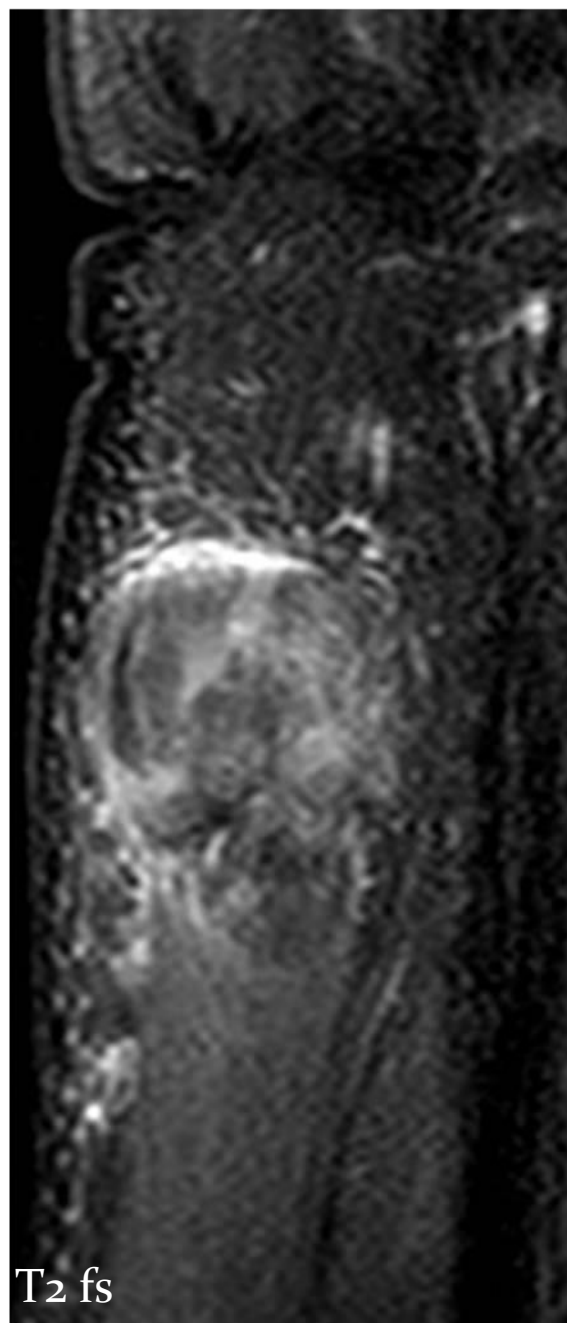
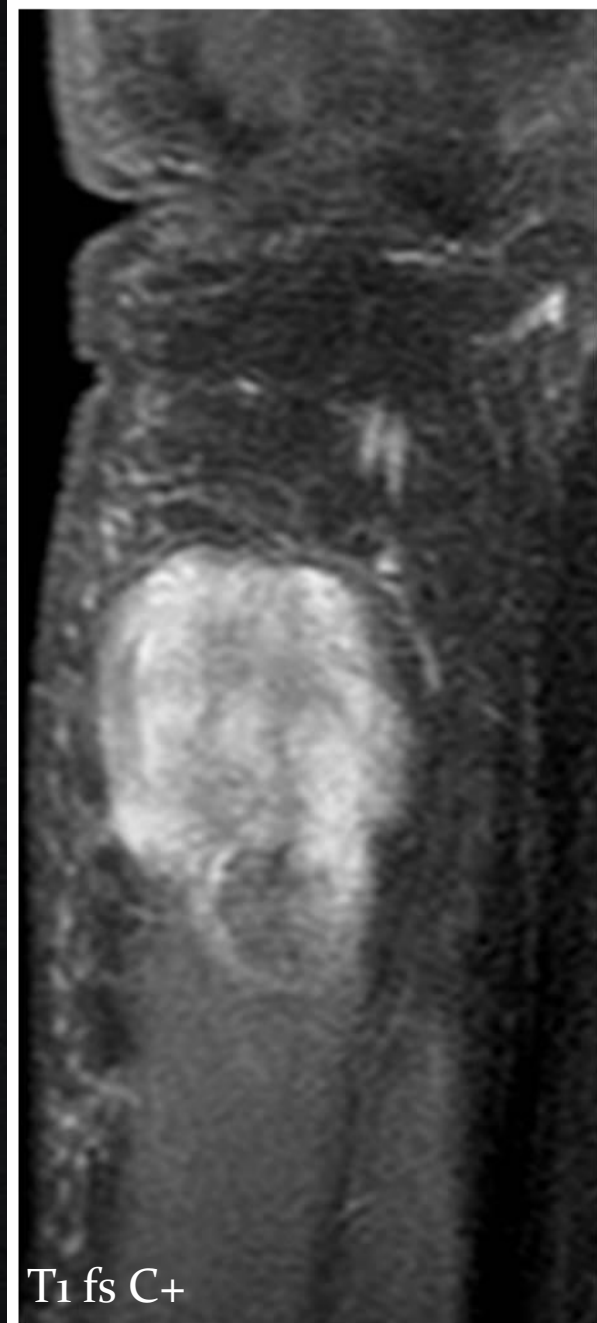
Non-specific and may  
represent atypical  
lipoma or liposarcoma

Size: 2.5cm x 1.3cm x 2.1cm









Possibility of  
liposarcoma

DDx:  
Atypical lipoma  
Lipoma with atypical  
appearances or vascular  
malformation

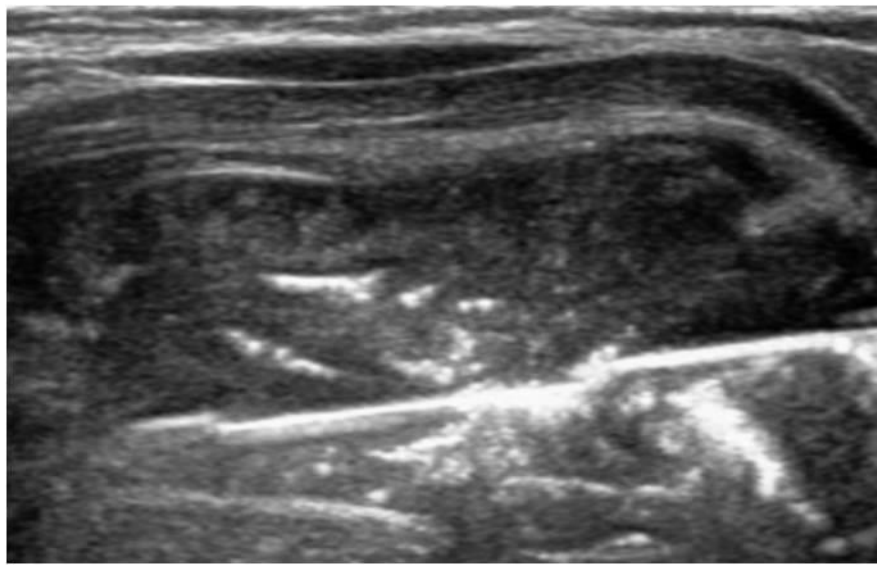
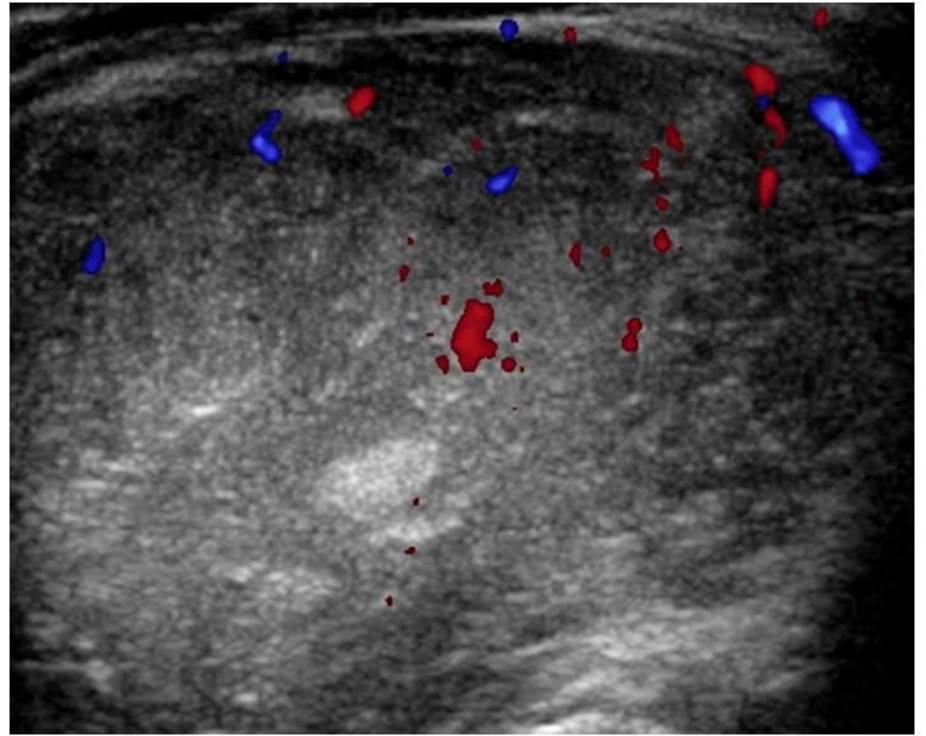
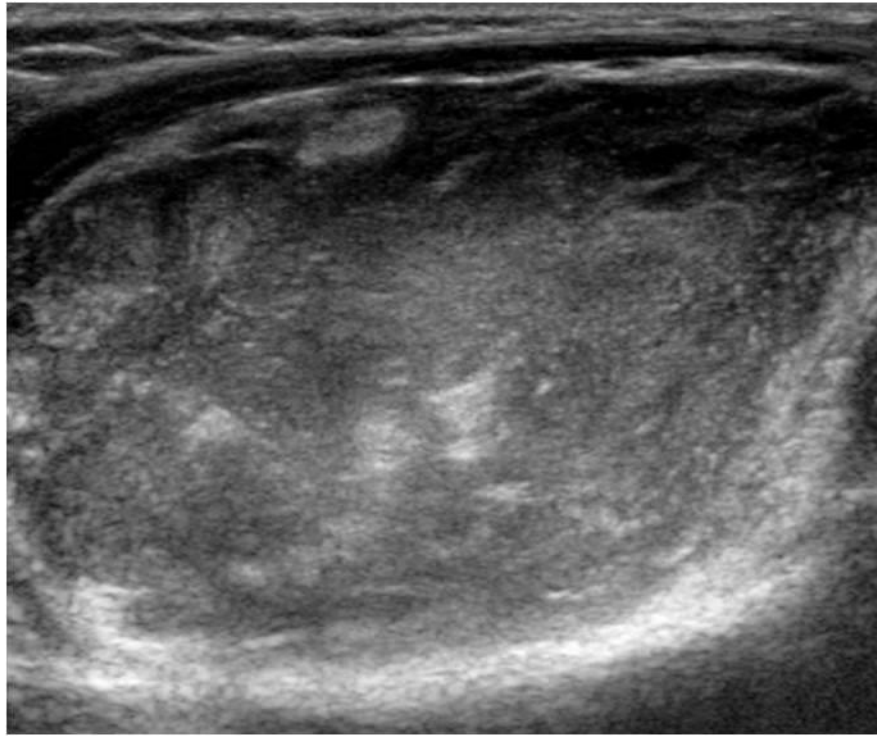
- Biopsy: Lipomatous lesion, consistent with a spindle cell lipoma

# Case 3

- 27 months / F
- Right knee popliteal fossa mass x 1 month

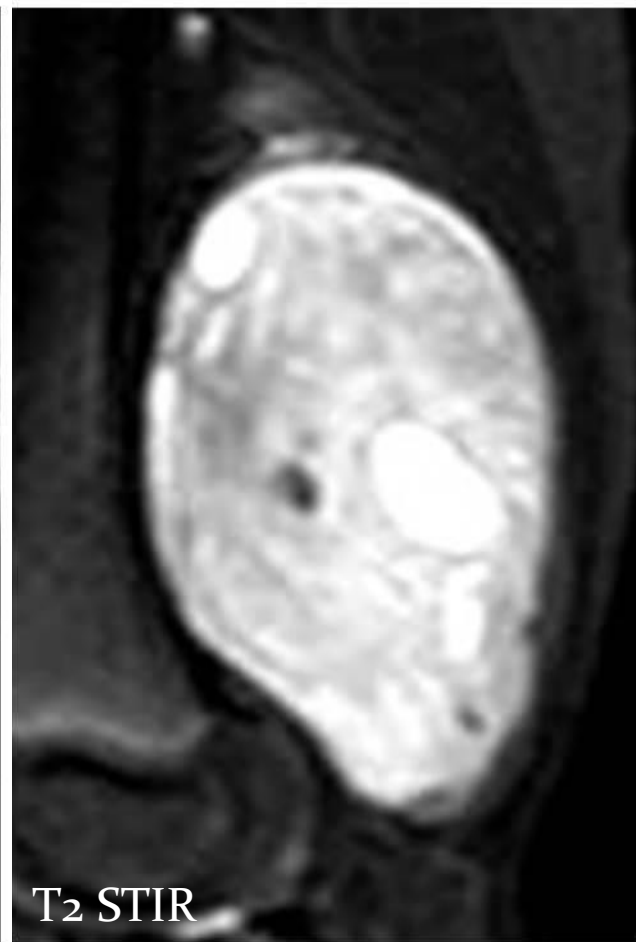
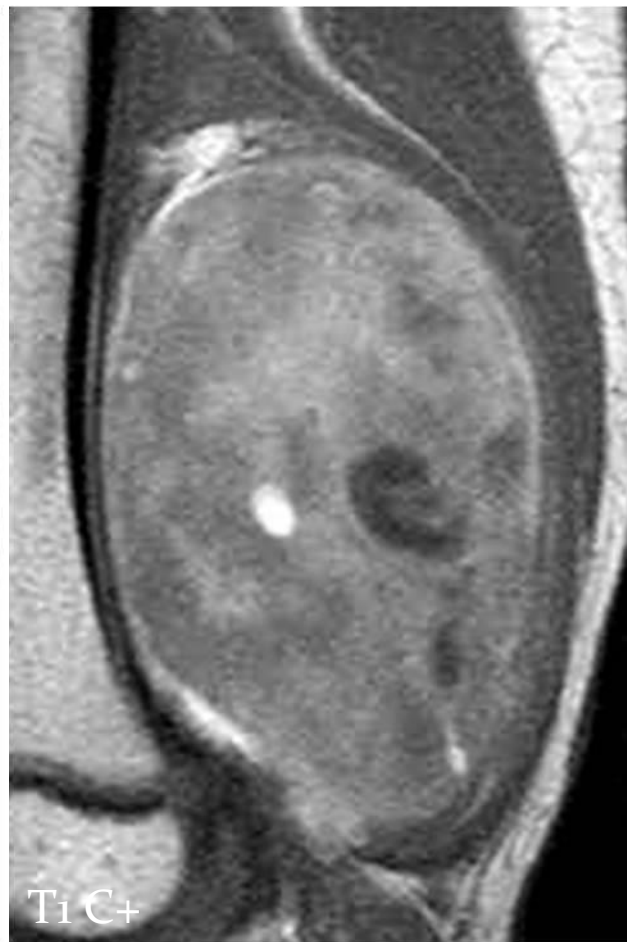
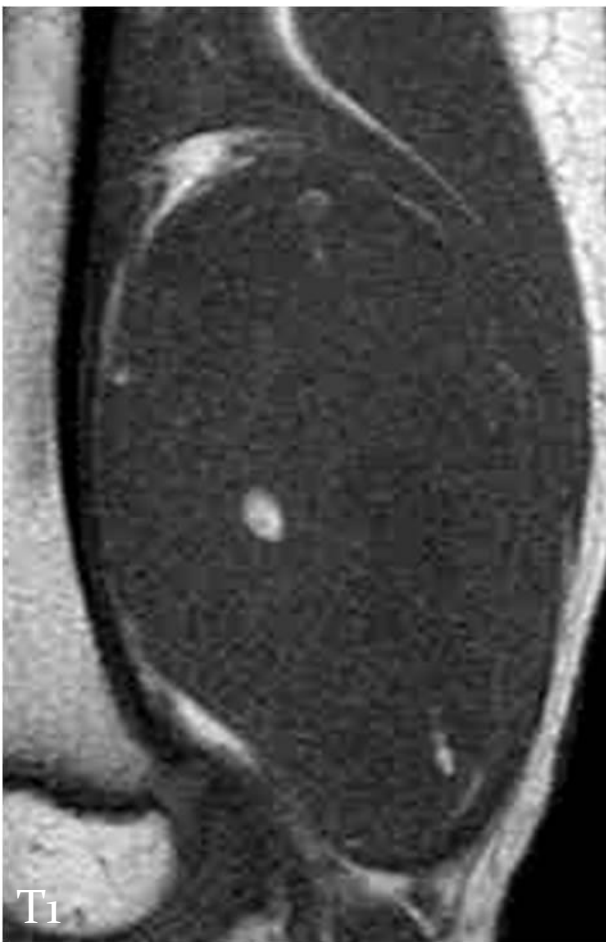






Neoplastic change?

Size: 4.4cm x 2.6cm x 5.4cm



DDx of intramuscular soft tissue mass with fat-containing and cystic components include lipoblastoma (especially with non-lipomatous myxoid component) or liposarcoma



- Biopsy: Lipoblastoma

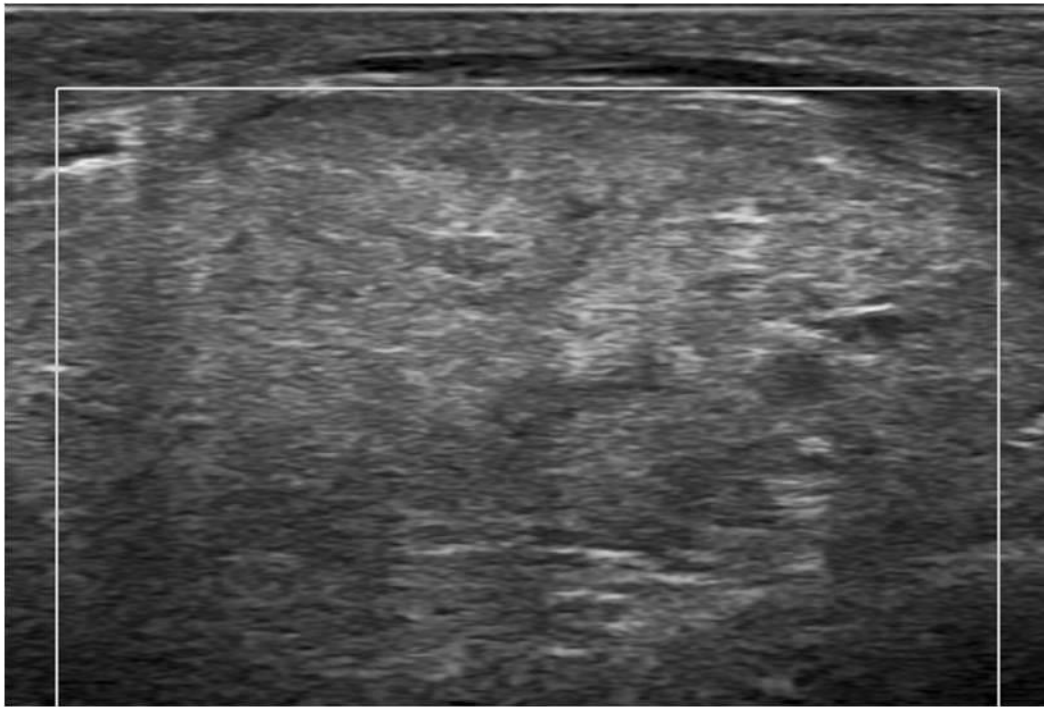
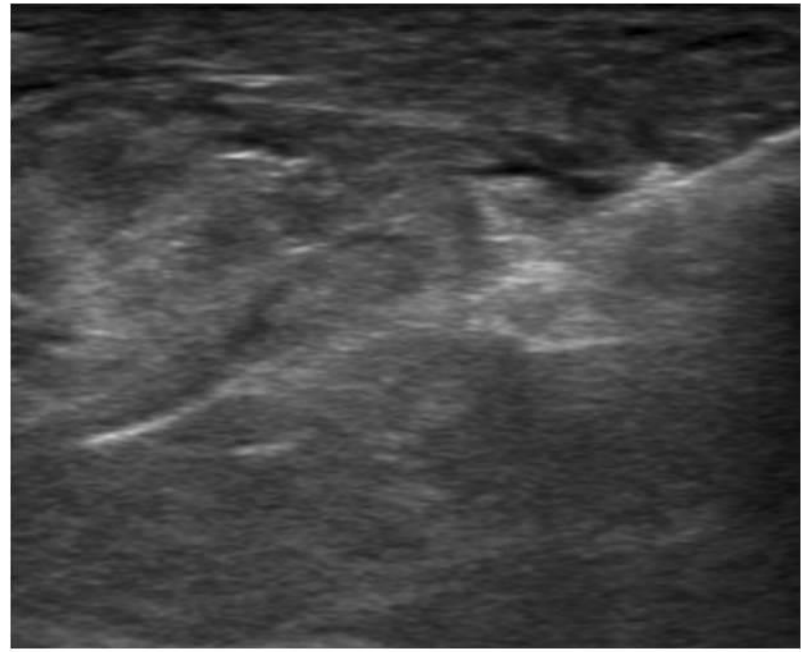
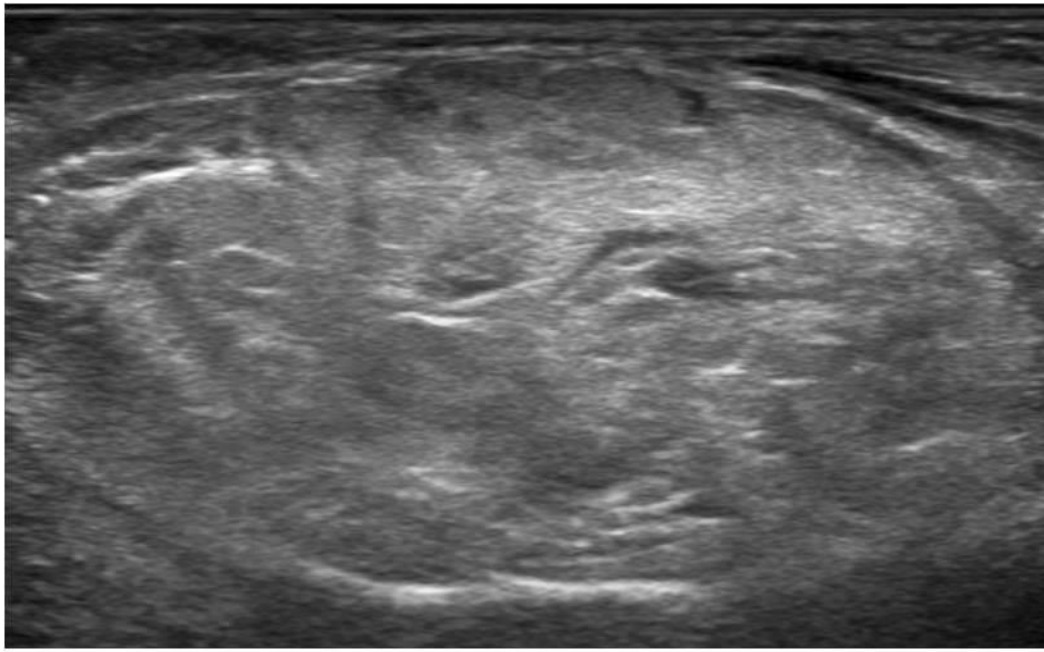


# Lipoblastoma

- Almost all found during infancy and early childhood
- Best diagnostic clue
  - Fatty mass with varying complexity, septa, and nodularity in very young patient
- Location
  - ~ 2/3 in extremities
  - Subcutaneous fat (lipoblastoma) or subcutaneous fat and muscle (lipoblastomatosis)
- Size
  - Most are 2-5 cm in size (Some very large)
- MR is best imaging tool to define content of soft tissue mass
  - Complex fatty mass
    - Fat component
    - Septa and nodules isointense to muscle
  - Masses in very young patients more likely to have predominantly myxoid composition with little fat

# Case 4

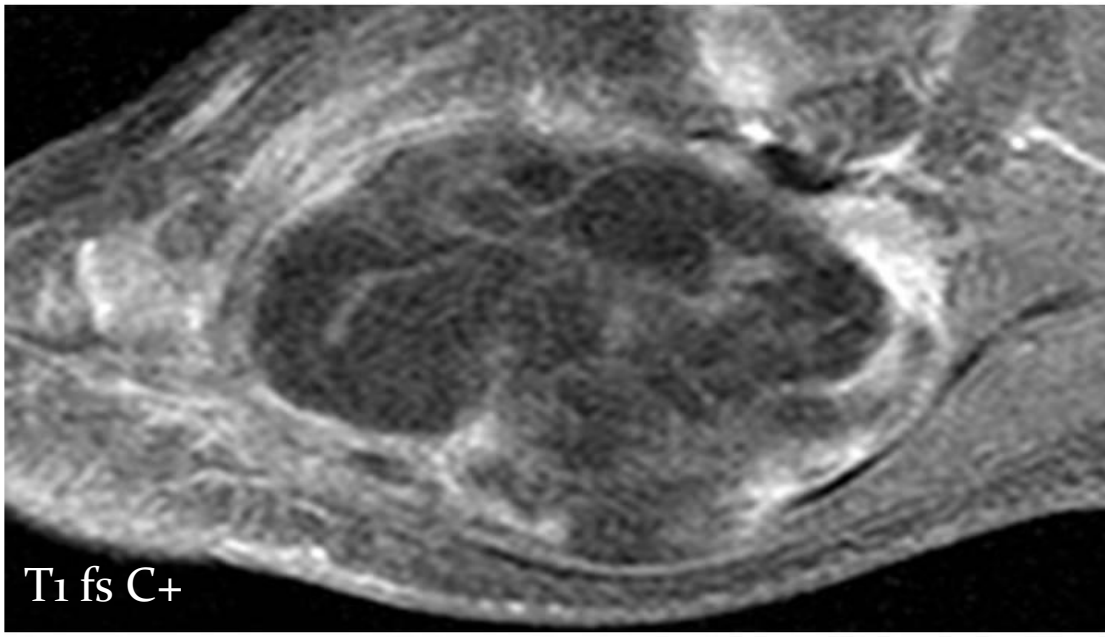
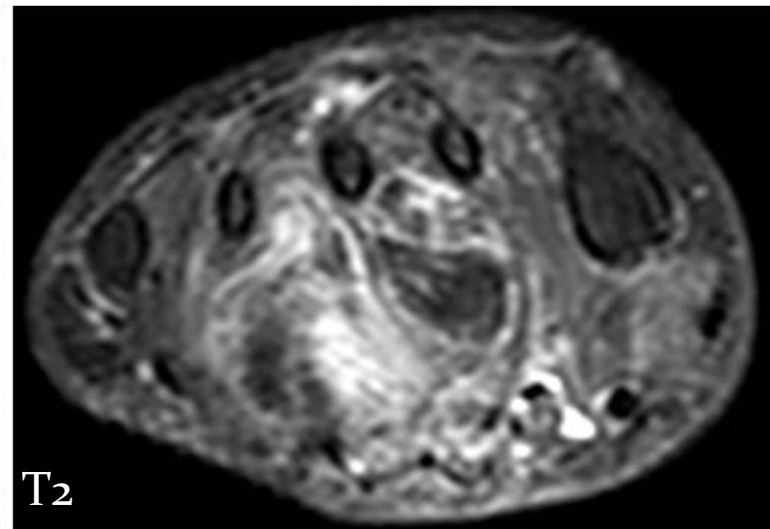
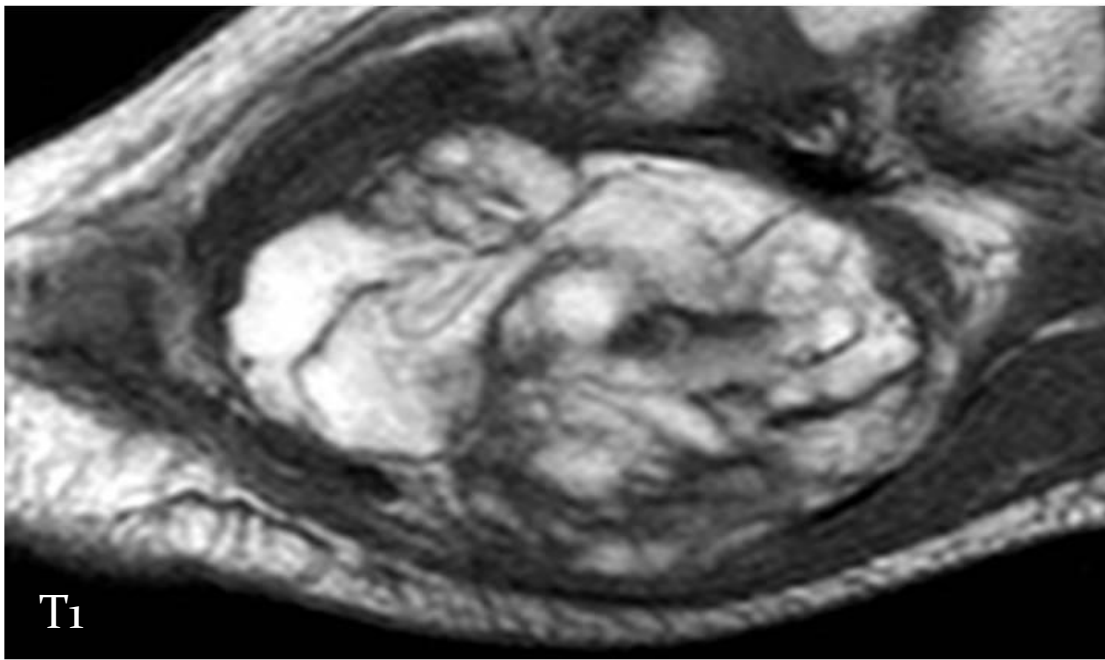
- 3/F
- Right foot mass for 2 months
- Private US report liposarcoma?



Lipomatous plantar mass  
probably a lipoblastoma

Size: 4.8cm x 2.5cm





Lipomatous tumour  
Favour a lipoblastoma

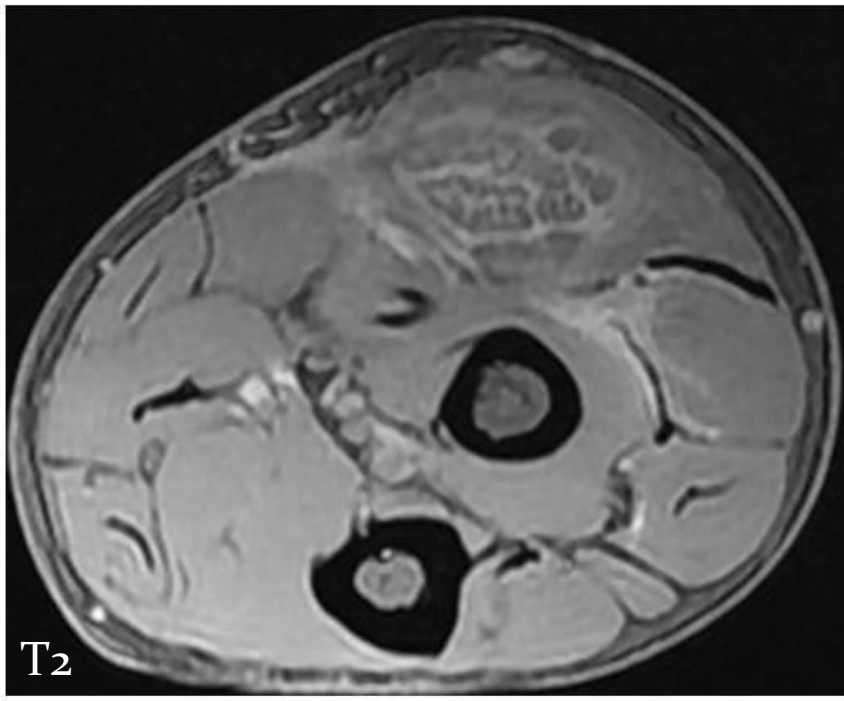
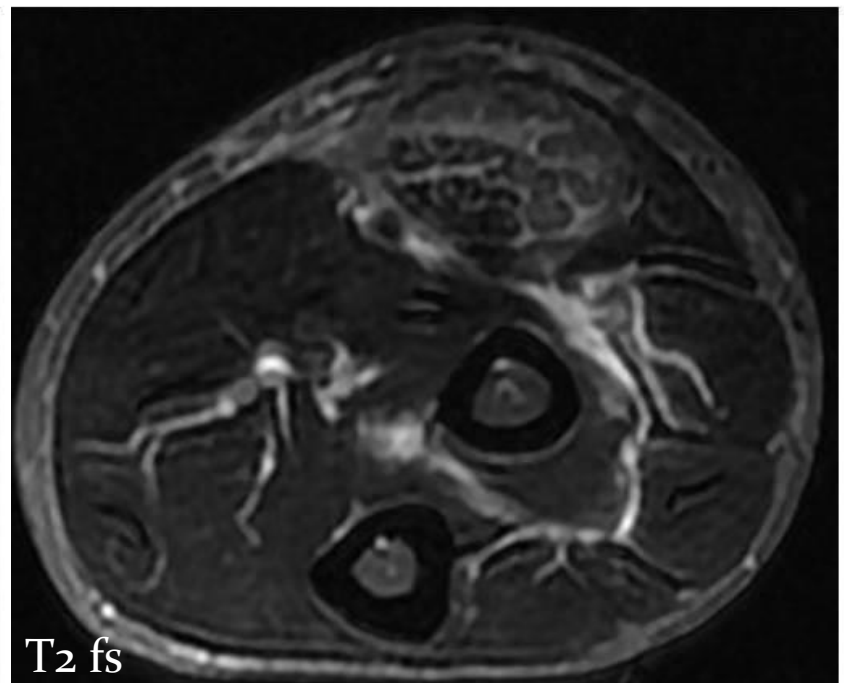
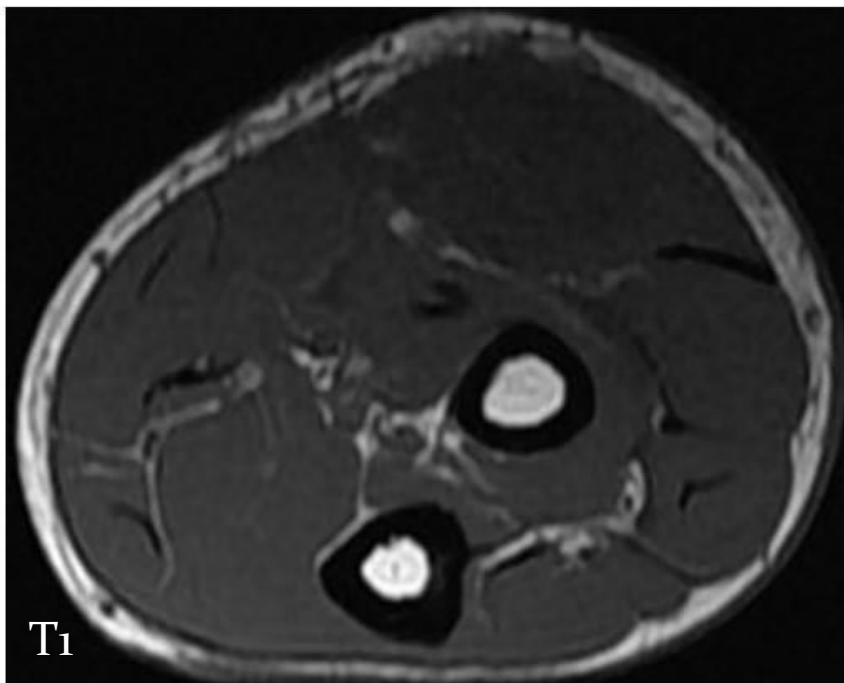
Less likely such as  
spindle cell lipoma,  
atypical lipoma,  
pleomorphic lipoma  
and angiolipoma.



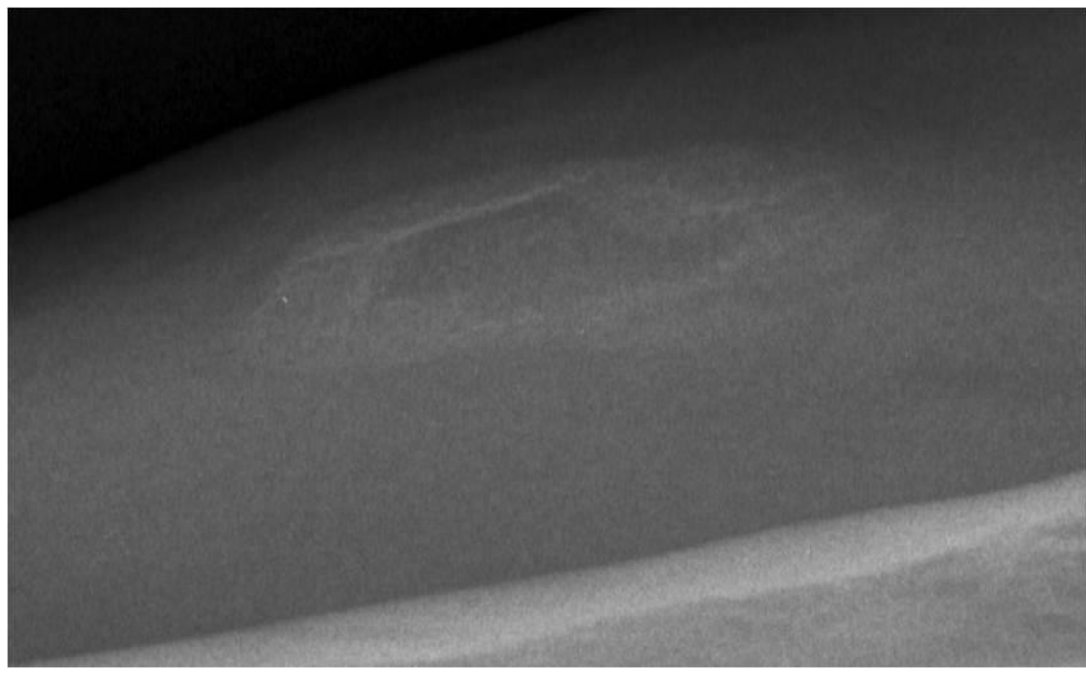
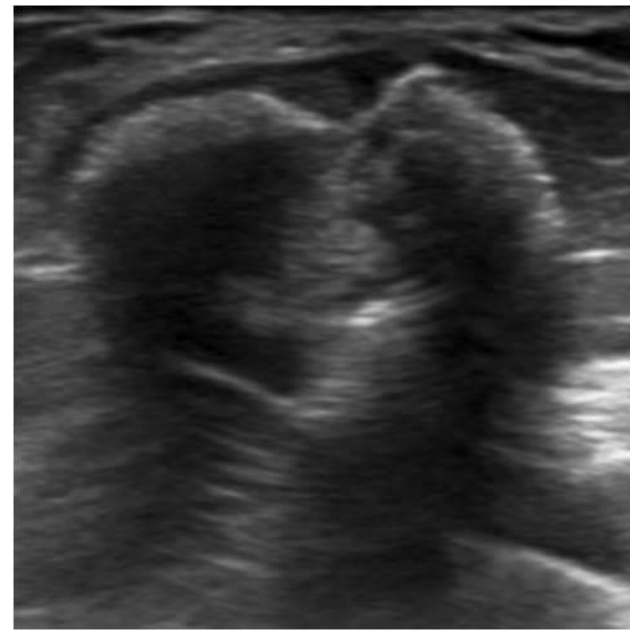
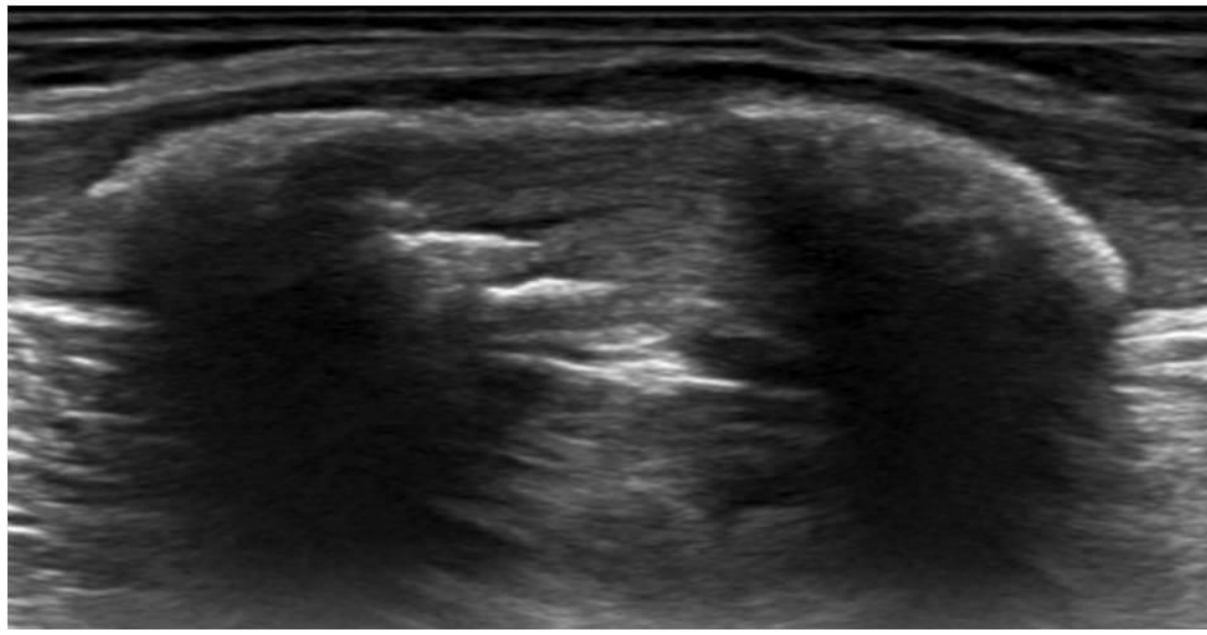
- Biopsy: Lipoblastoma
  - PLAG<sub>1</sub> translocation Positive
  - DDIT<sub>3</sub> translocation Negative

# Case 5

- 59/M
- Left proximal forearm progressive mass x 1 month
- MRI done in Private



Private MRI:  
Sarcoma?



1.5 month later

Calcified intramuscular mass  
Myositis / Myositis ossificans

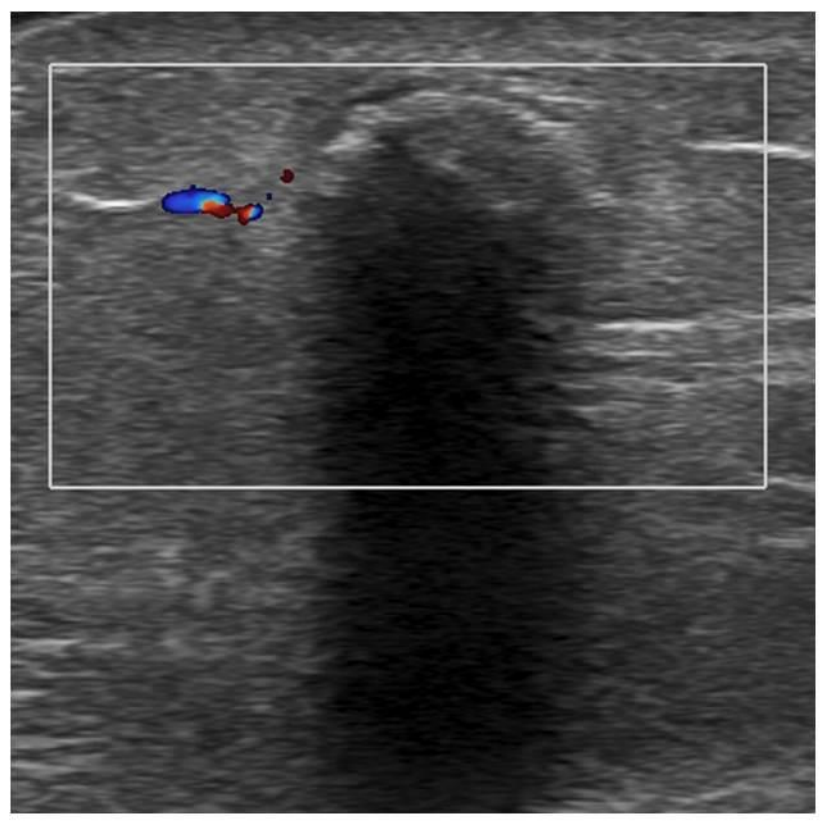
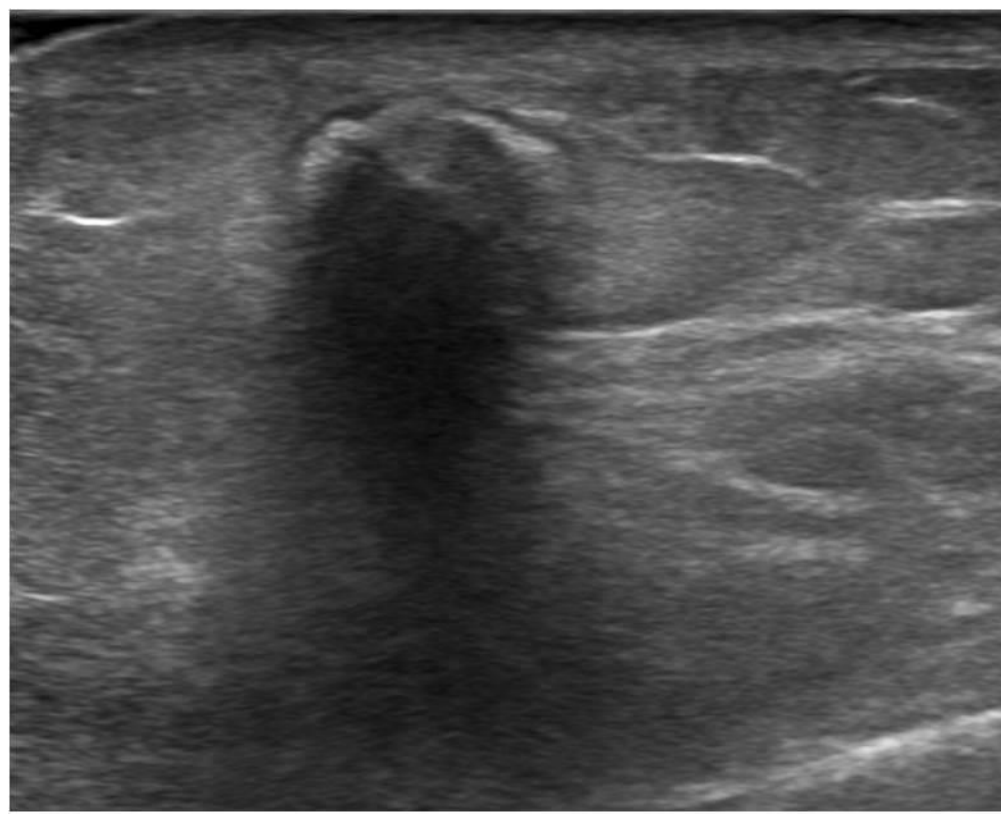
Size: 3.9cm x 1.7cm x 1.0cm



- Biopsy: Intramuscular fibro-osseous proliferation.  
Compatible with myositis ossificans.

# Case 6

- 55/F
- Left breast cancer, Left mastectomy @ 23 yo. Chemo, RT done
- Left upper limb weakness x 1 year, palpated shoulder nodule x 2 days
- PE: 2-3cm mobile nodule



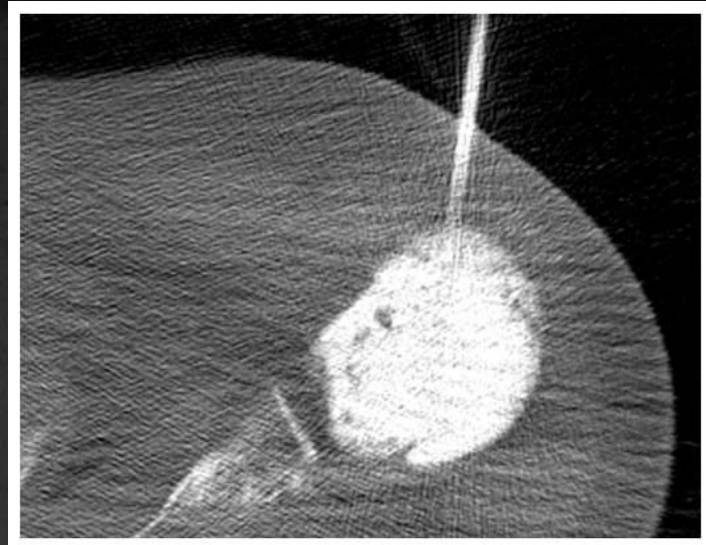
Subcutaneous calcified granuloma

Size: 1.1cm

The mass is continue growth

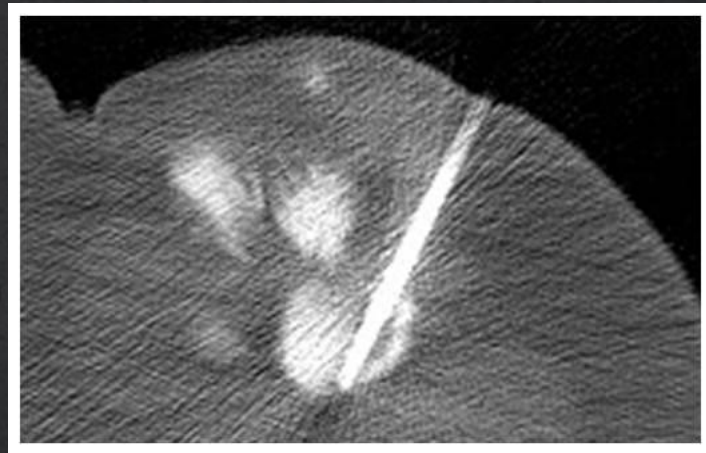


5 months later



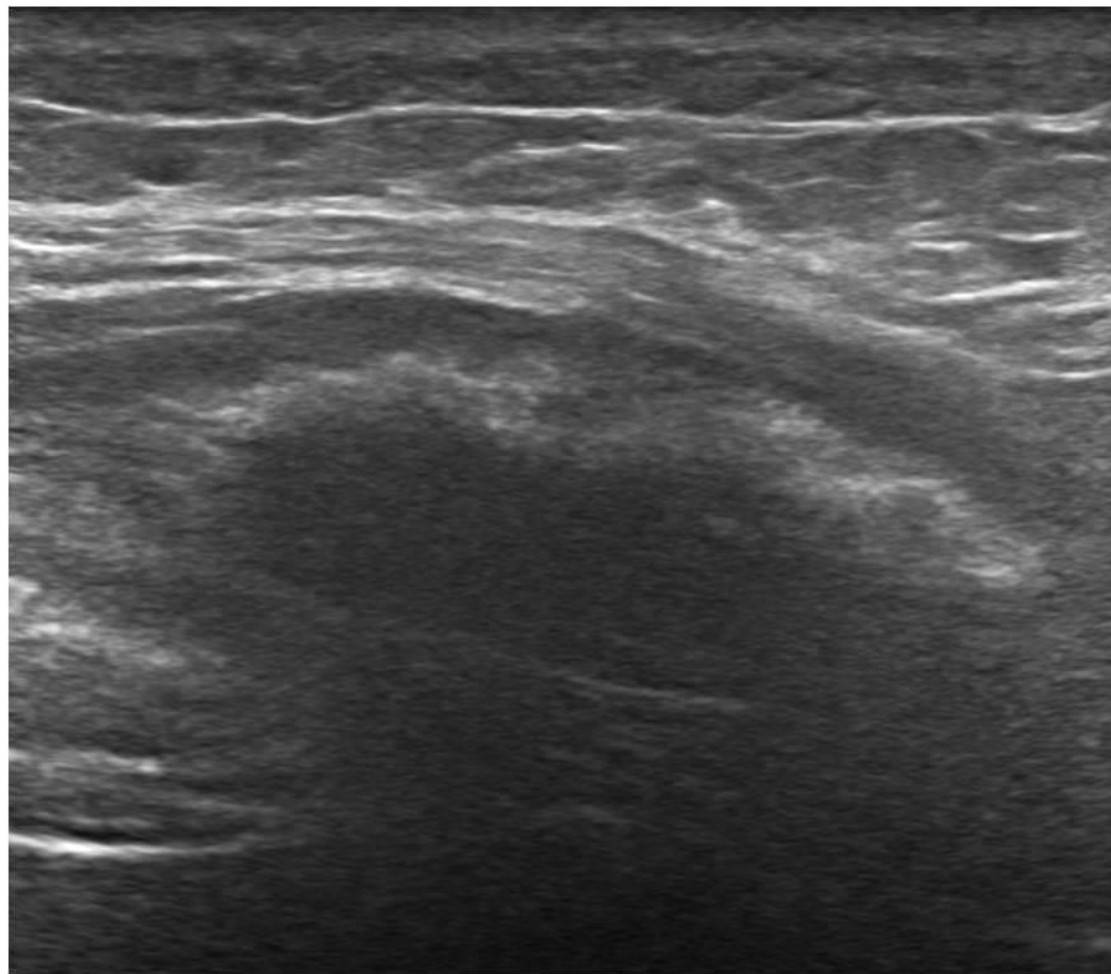
1<sup>st</sup> Biopsy

Necrotic bone. Negative for malignancy



2<sup>nd</sup> Biopsy

Osteoblastic osteosarcoma



FU in 1.5 yr

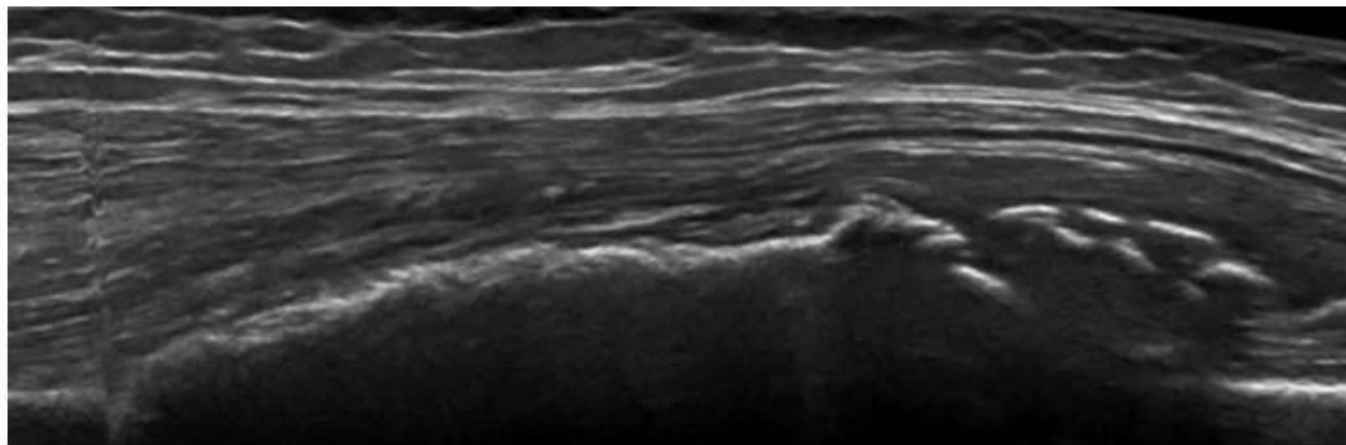
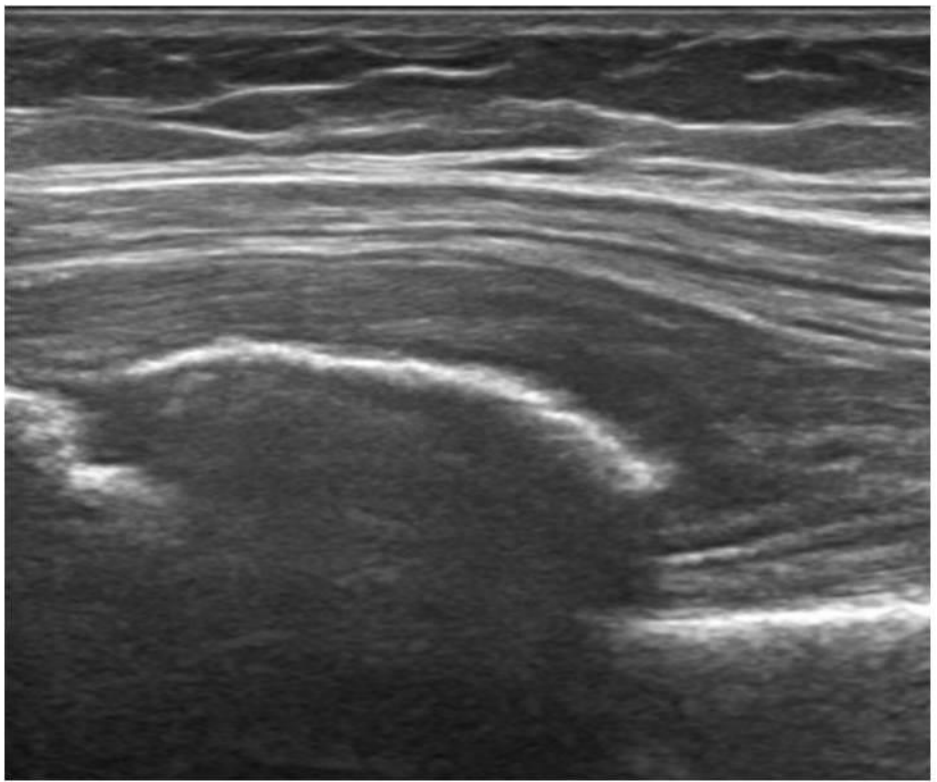
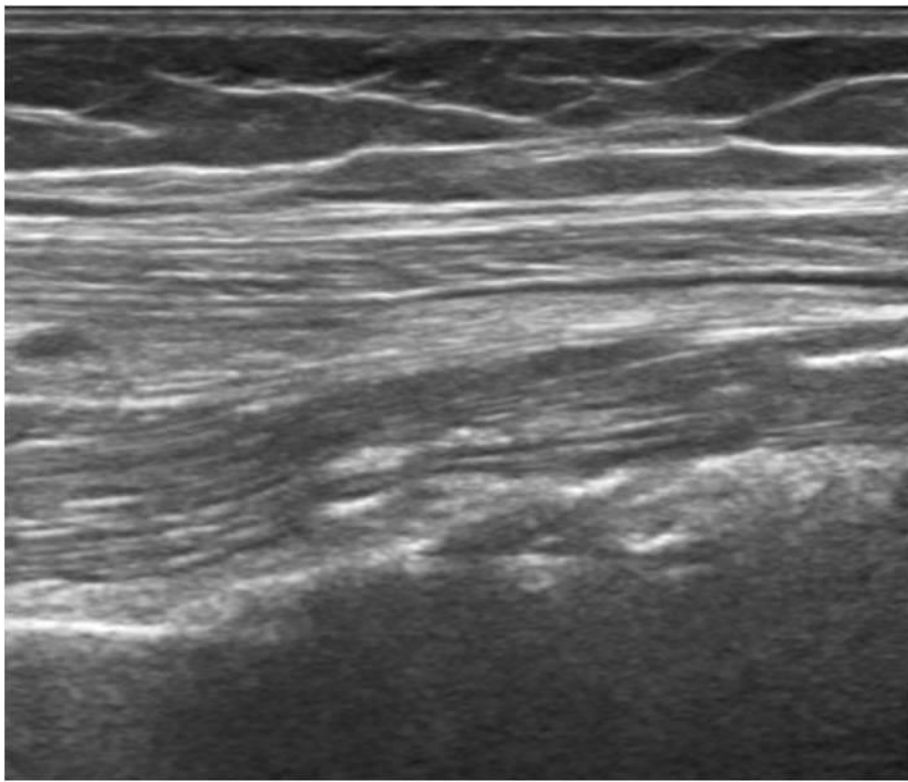
# Radiation-associated sarcoma

- In-field sarcoma risk is 30 years or longer
- Following RT for breast cancer, radiation-induced bone sarcomas are most commonly found in scapula (40 %), humerus (25 %), and other nearby bones (ribs, clavicle, sternum). Soft tissue sarcomas may occur over the anterior chest wall, parasternal area, or axilla



# Case 7

- 68/F
- Left thigh swelling x 5 weeks
- No trauma
- Alzheimer's disease. Epilepsy. Long-term bed-bound



X-Ray?

Size: 10cm x 1.9cm



18/06



04/10

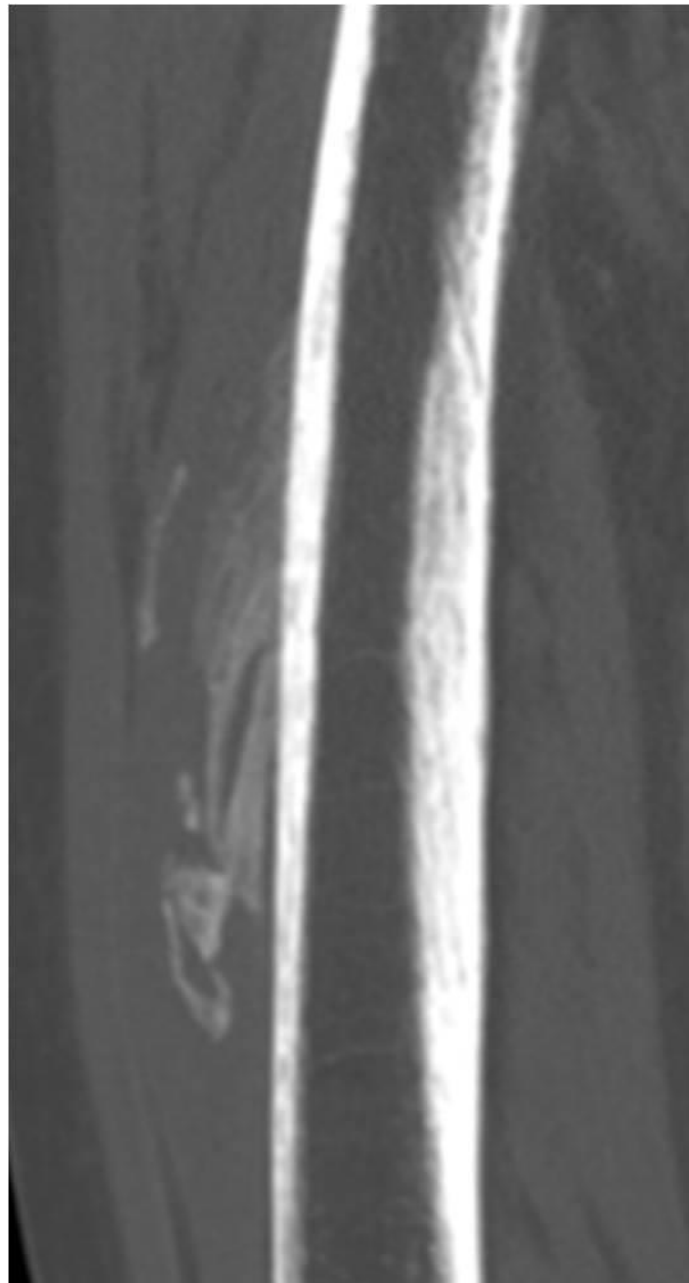
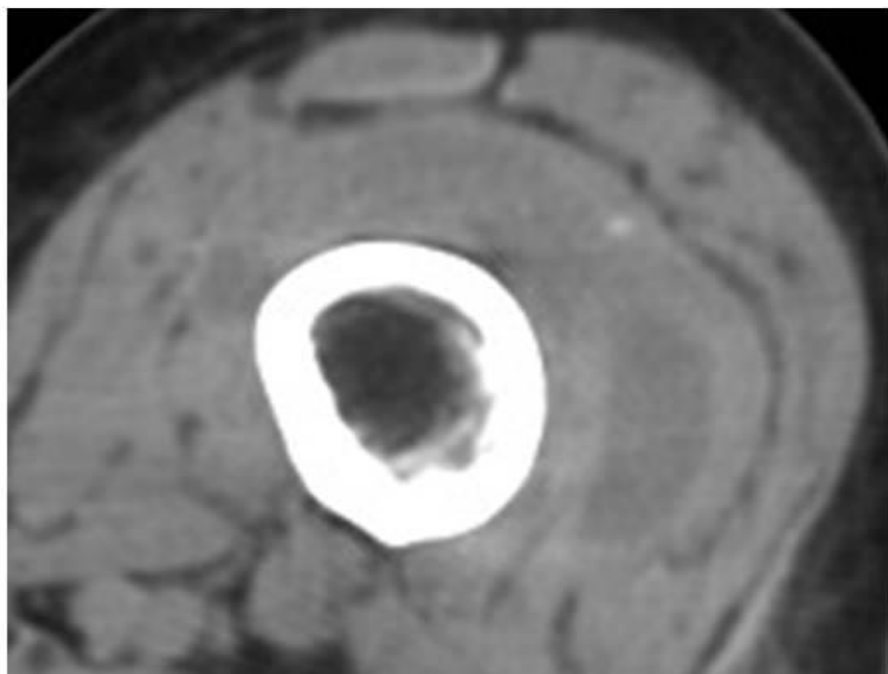
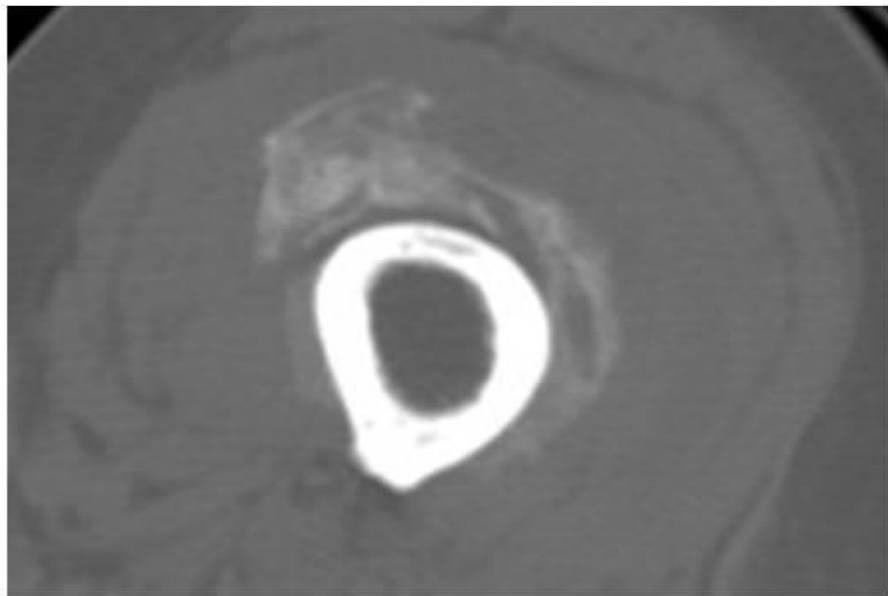


09/10



11/11





# Myositis ossificans (MO)

- Benign reactive ossifying soft tissue mass
- Clear history of trauma in 60-75% of cases
- Exact etiology unclear but not due to primary muscle inflammation
- DDx
  - Osteosarcoma
  - Soft tissue sarcoma
  - Hematoma
  - Abscess
- Synonyms
  - Heterotopic ossification (HO), myositis ossificans circumscripta, myositis ossificans traumatica, pseudomalignant myositis ossificans, pseudomalignant osseous tumor of soft tissue, extraosseous localized nonneoplastic bone & cartilage formation

## Stages of Myositis Ossificans

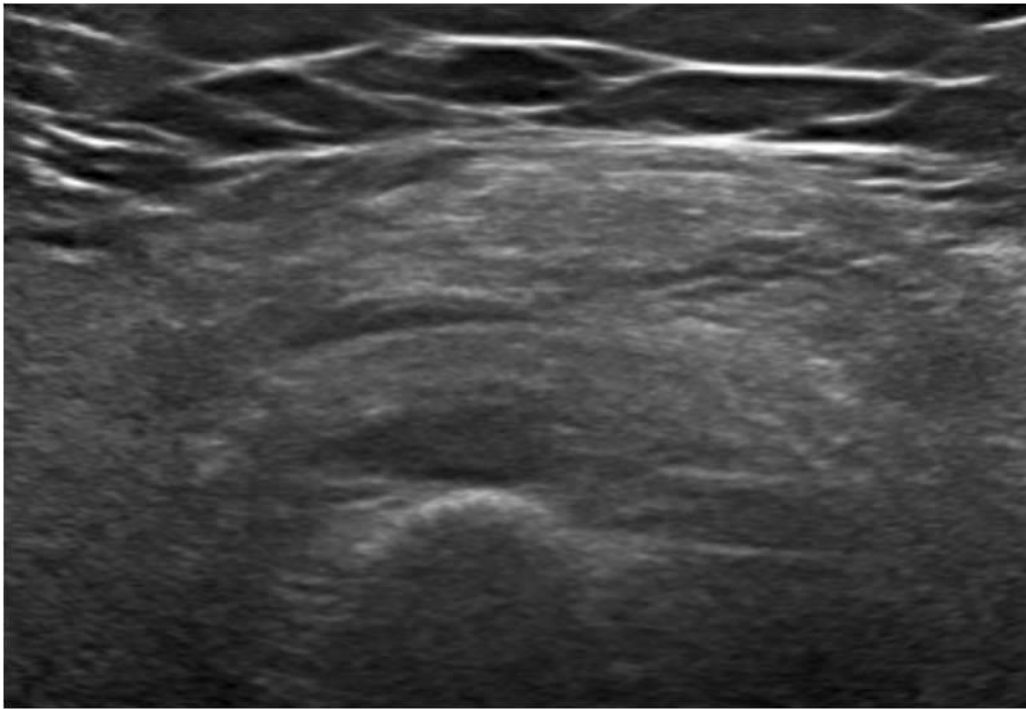
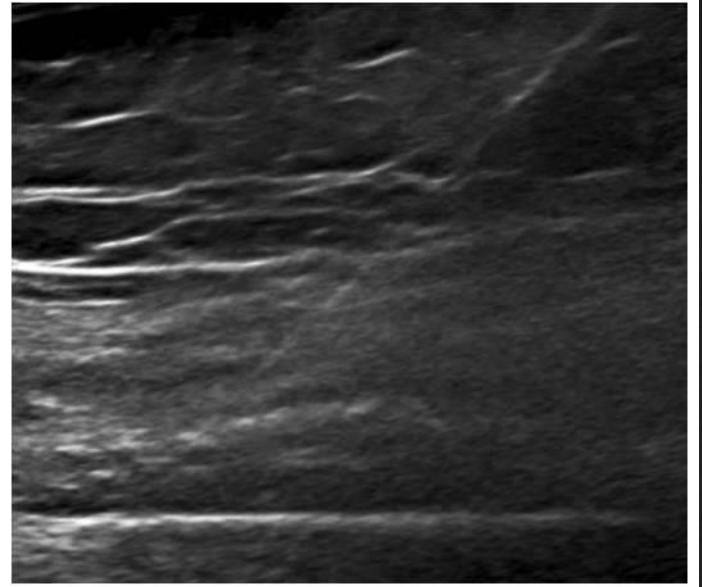
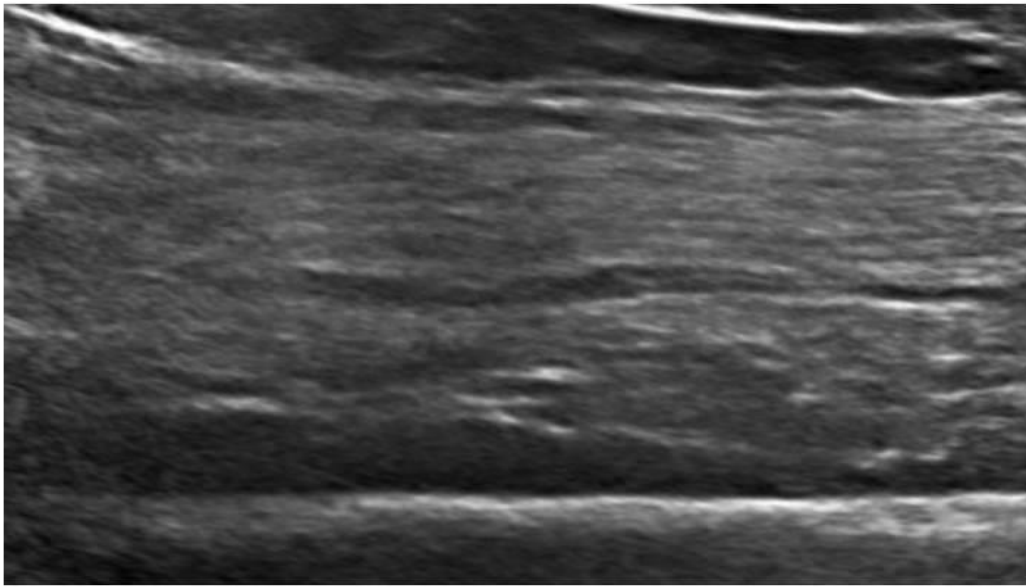
Stage	Early ≤4 weeks	Intermediate 4-8 weeks	Mature ≥8 weeks
Radiographic	Negative for calcifications	Calcified peripheral rim with lucent center	Densely calcified soft-tissue mass

- Best diagnostic clue: Heterogeneous intramuscular mass occurring after trauma with evolving imaging appearance
  - Early: Mild peripheral mineralization & marked surrounding edema
  - Late: Mature peripheral ossification
- Radiographic findings
  - 0-2 weeks: Nonspecific soft tissue swelling/mass
  - 2-6 weeks: Faint but increasing peripheral  $\text{Ca}^{2+}$
  - 6-8 weeks: Sharply circumscribed osseous mass
  - 5-6 months: Ossified mass with ↑ maturity, ↓ size
- CT: Rim of mineralization by 4 weeks; cortical & trabecular bone ± fatty marrow within months
- Heterogeneous solid intramuscular mass in teenager/young adult with marked surrounding muscle edema: Strongly consider MO, especially after trauma. Recommend short-term follow-up with CT rather than immediate biopsy



# Case 8

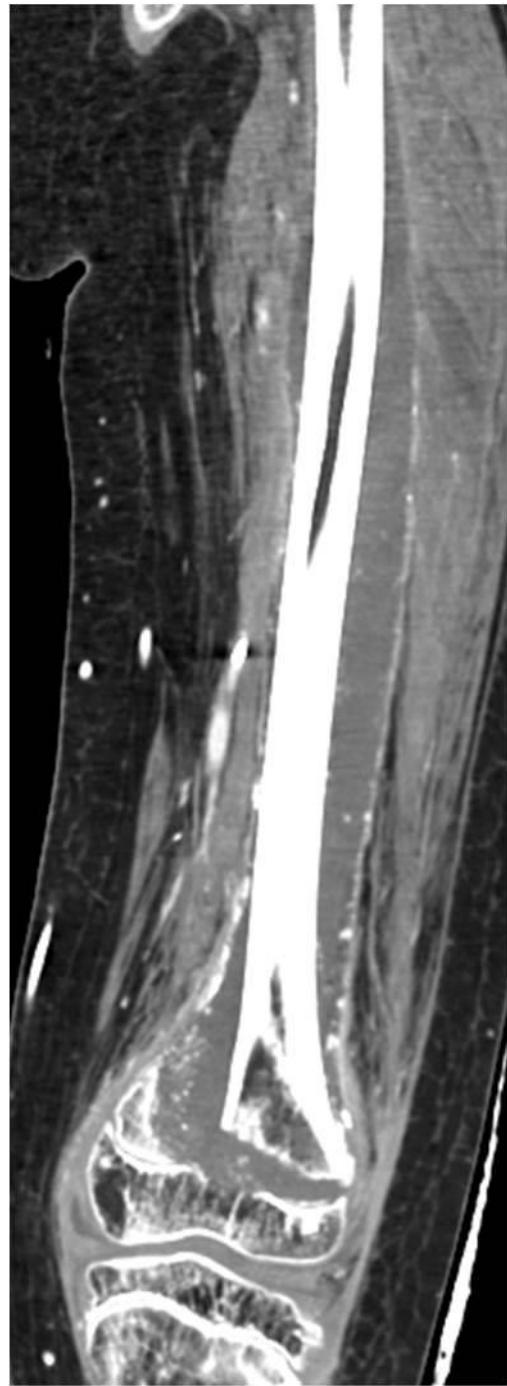
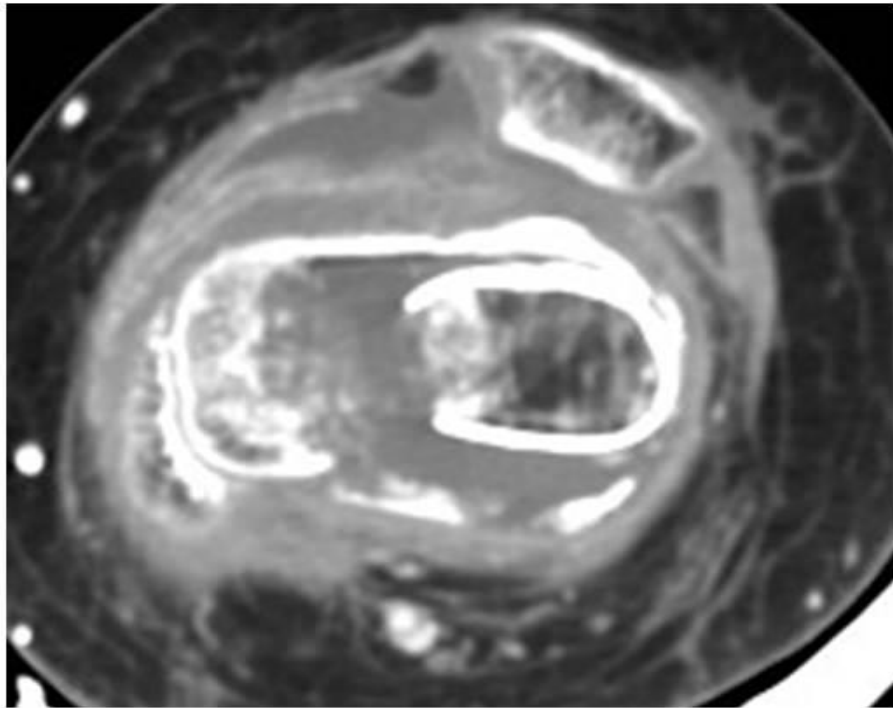
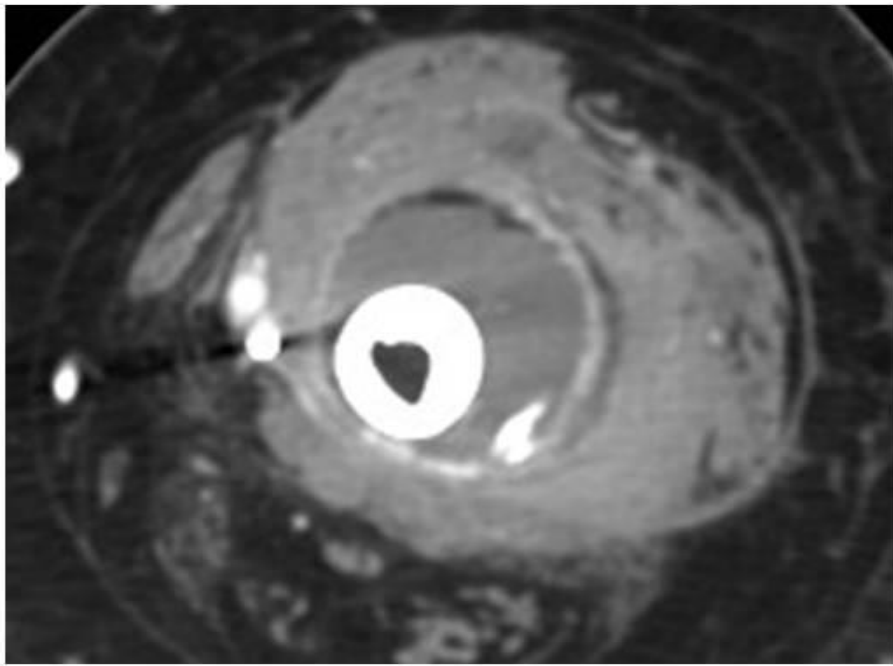
- 15/M, CP
- Left thigh painful swelling with erythema x 1 week
- WBC, CRP elevated



1.2cm thick

Chronic subperiosteal  
hematoma

Aspirated ~100ml non-  
purulent old blood



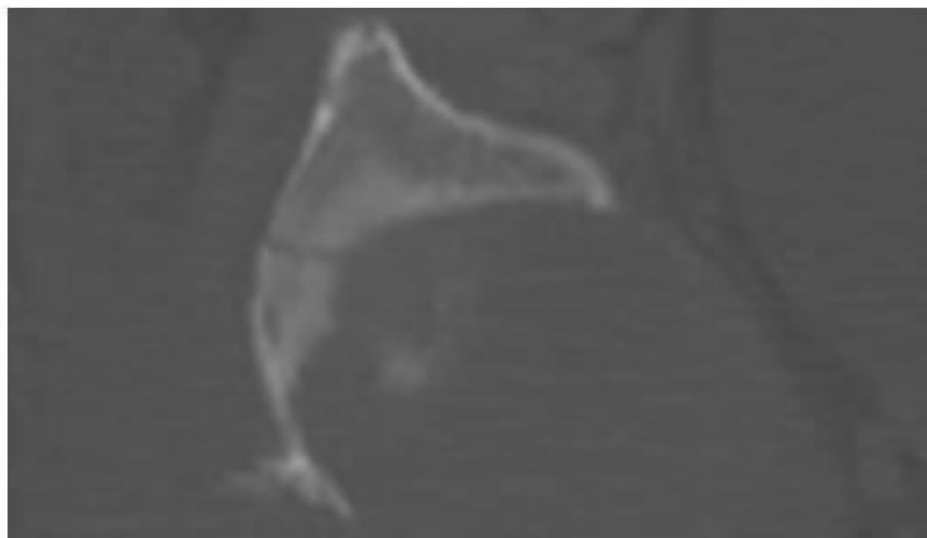
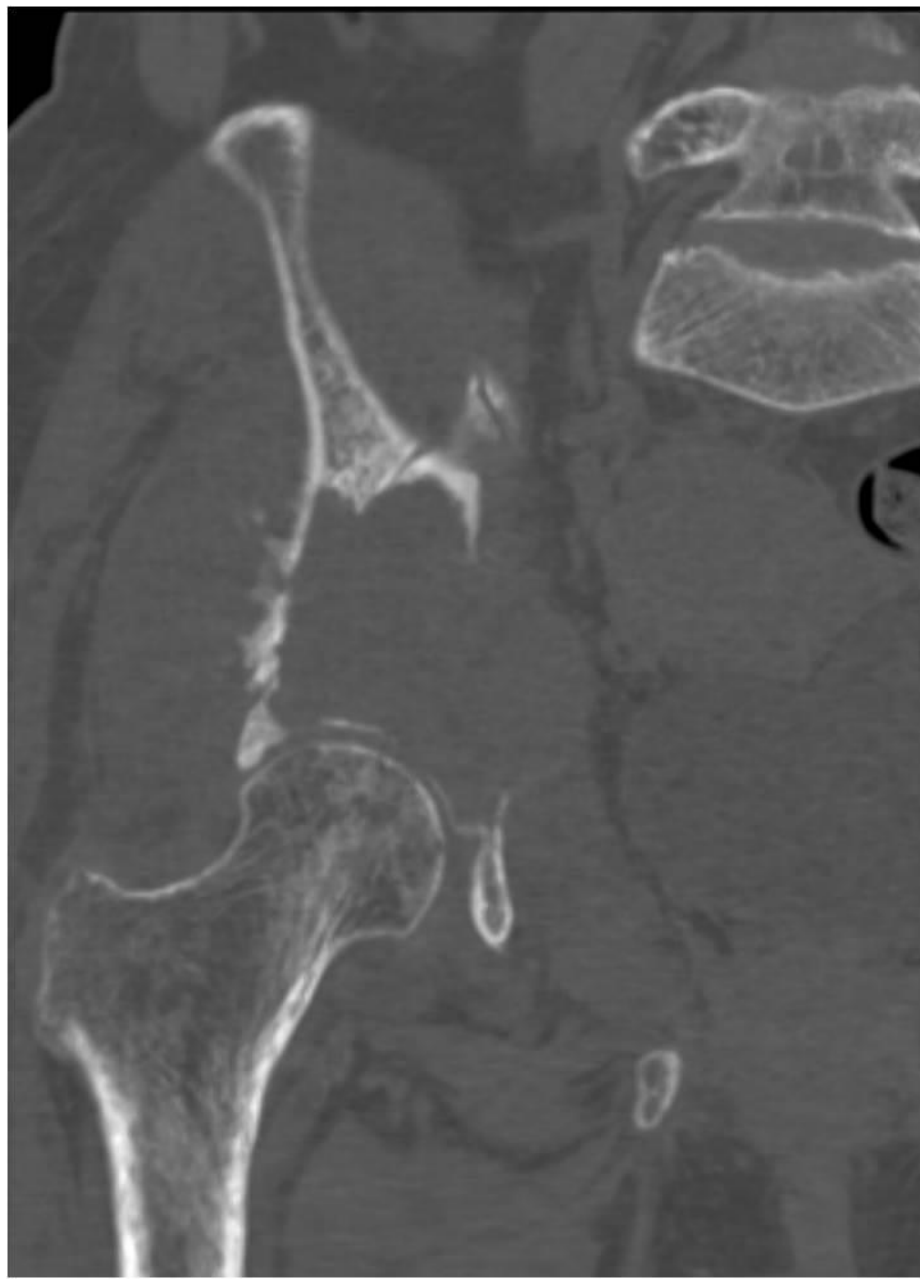
# Case 9

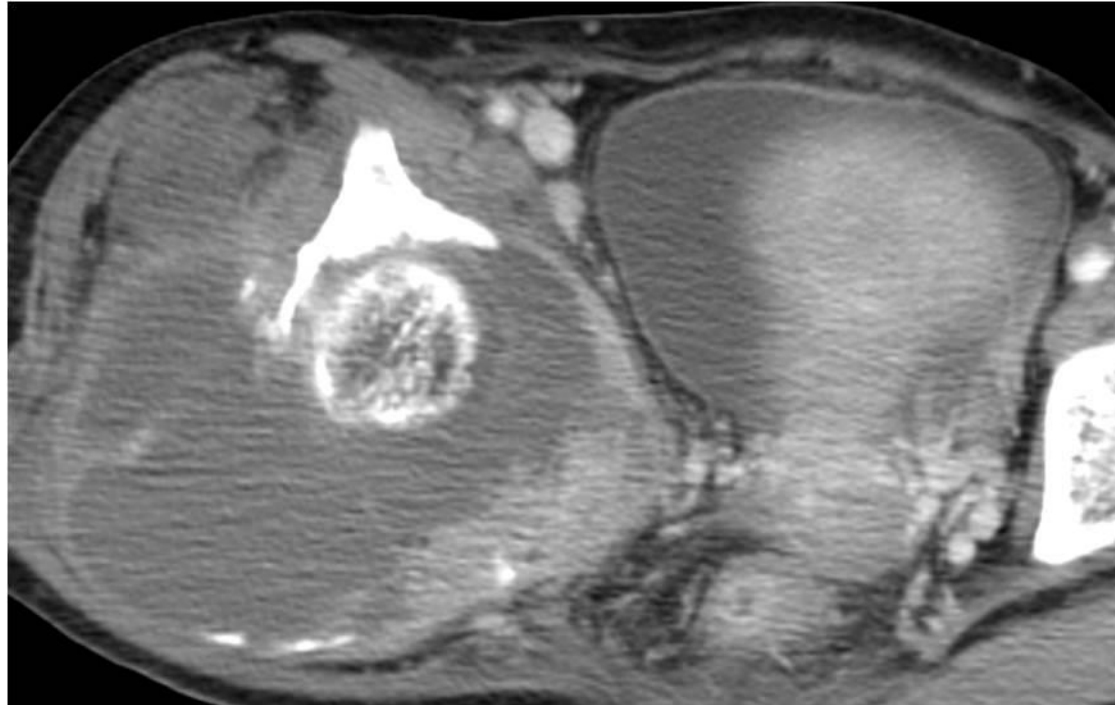
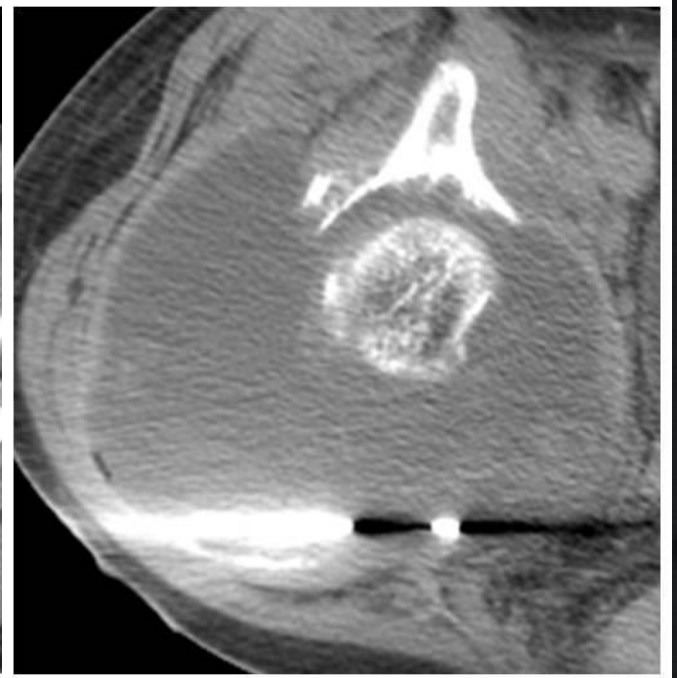
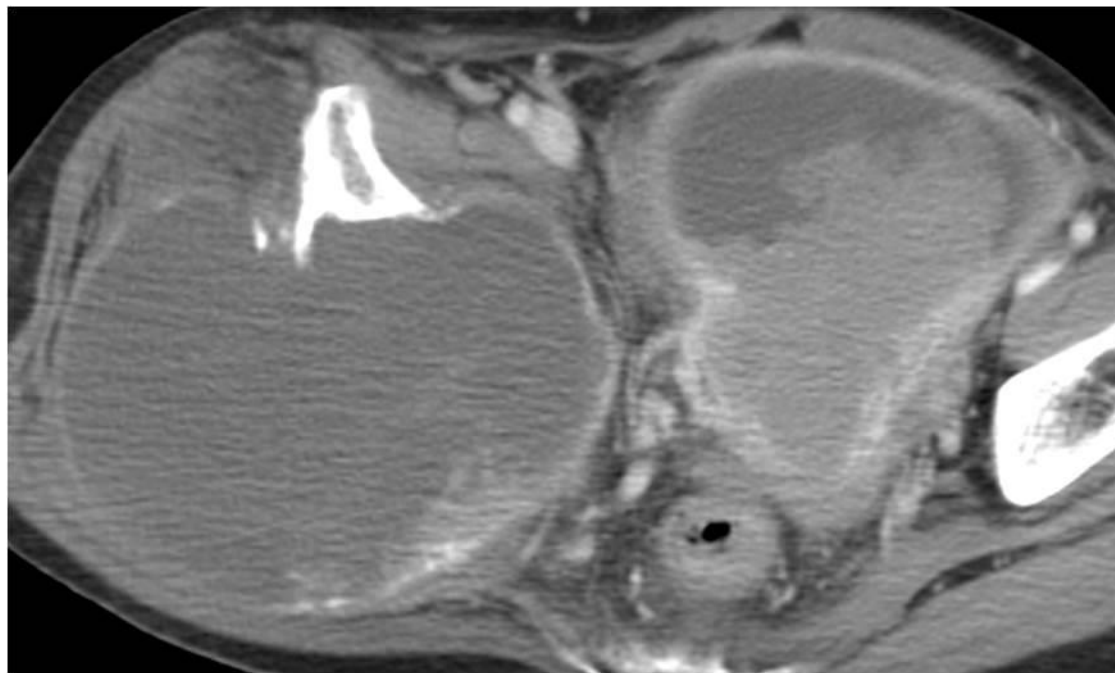
- 60/F
- Consult A&E due to Right hip pain with swelling x 2 months
- No trauma



R







Biopsy:  
Metastatic  
Endometrioid  
carcinoma



Thanks!

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