

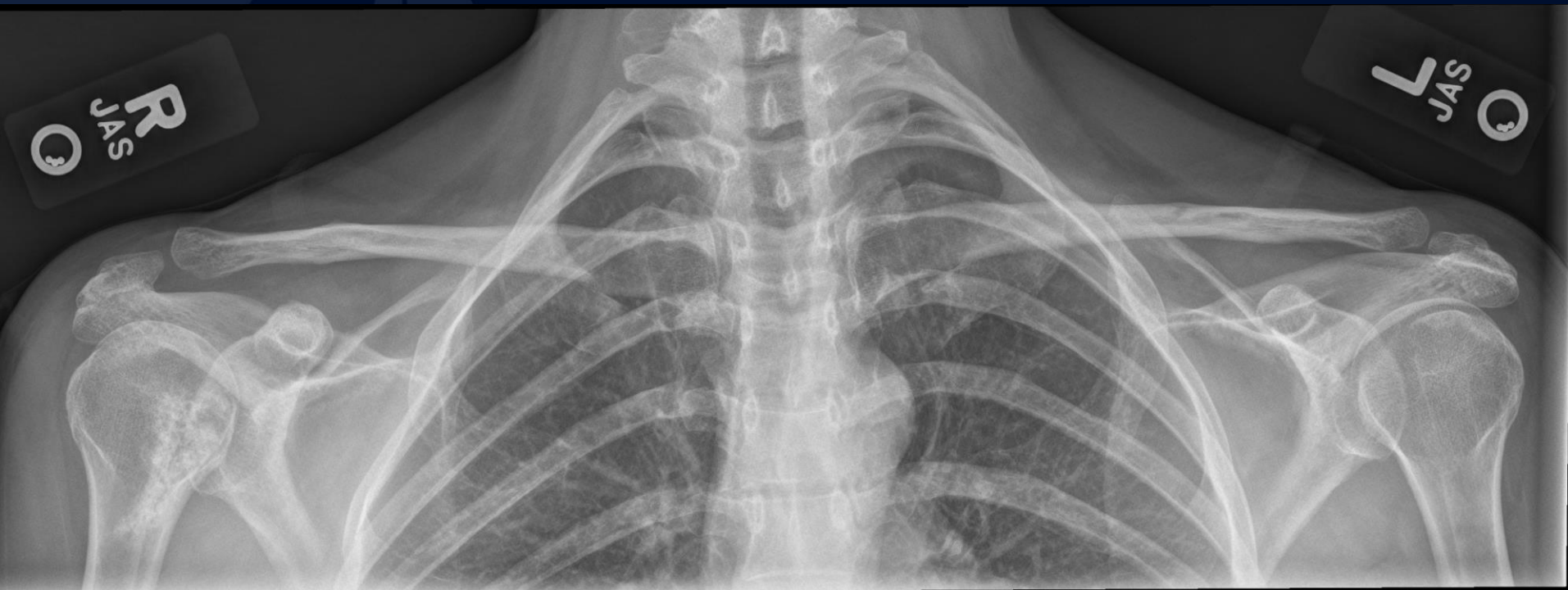
50F with chronic right shoulder pain

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2 years earlier





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Enchondroma

“Rings and arcs”
chondroid matrix

Well defined

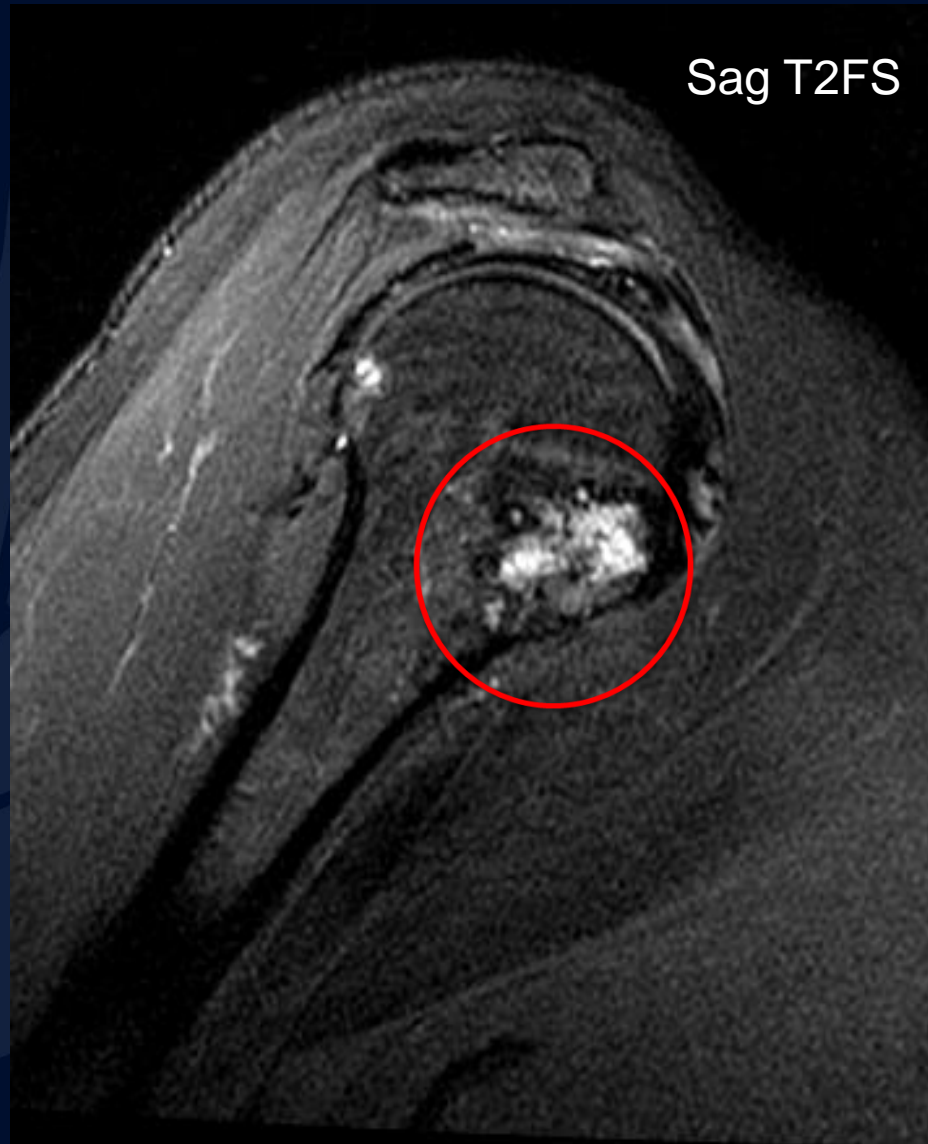
Intramedullary

No cortical
destruction

No periosteal
reaction



Lobulated
high fluid
signal typical
of benign
cartilage
lesions



Enchondroma

- Location: Metaphysis - prox humerus > prox/dist femur > prox tibia
- Chondroid matrix – “rings and arcs” classic, but can be variable...
 - dense, absent , very subtle, or punctate
- In larger bones – usually not big enough to cause expansion
 - Can cause mild scalloping of endosteal cortex
 - If >2/3 cortical thickness or >2/3 length of central lesion may be transformation to chondrosarcoma
- Usually <5cm length
- Look different in pediatrics:
 - Relatively large
 - Endosteal scalloping
 - Less chondroid matrix

Enchondroma

- Can change over time...
 - Increase size and increase matrix calcification
 - Think transformation to chondrosarcoma when:
 - new lytic destruction at edge of lesion W/O matrix
 - destruction of established chondroid matrix
- Differentiating enchondroma from low-grade CS - MR may be useful but often not diagnostic
- Differentiating from infarct on radiograph difficult: but infarct usually has more prominent sclerotic margin, serpiginous distribution, and multifocal.
 - Can distinguish on MR

Enchondroma

- Presentation: usually incidental bc asymptomatic BUT...
 - Can be painful
 - Cannot always distinguish from adjacent joint pain
 - Can have pathologic fracture
 - If malignant degeneration is usually painful
- Majority in 3rd-5th decade of life; M=F
- 2nd most common benign bone tumor
- Rx:
 - Small – most do nothing
 - Large – marginal(curettage+bone graft) or wide resection(if suggestion of chondrosarcoma this is curative)
 - If no chondrosarcoma on histology – no sarcoma follow up

References

1. <https://www.ncbi.nlm.nih.gov/pubmed/?term=24645839%5Bpmid%5D>
2. <https://www.ncbi.nlm.nih.gov/pubmed/?term=23771600%5Bpmid%5D>