Radiology Elective

Case Presentation

Rebecca Zhu

Yale SCHOOL OF MEDICINE

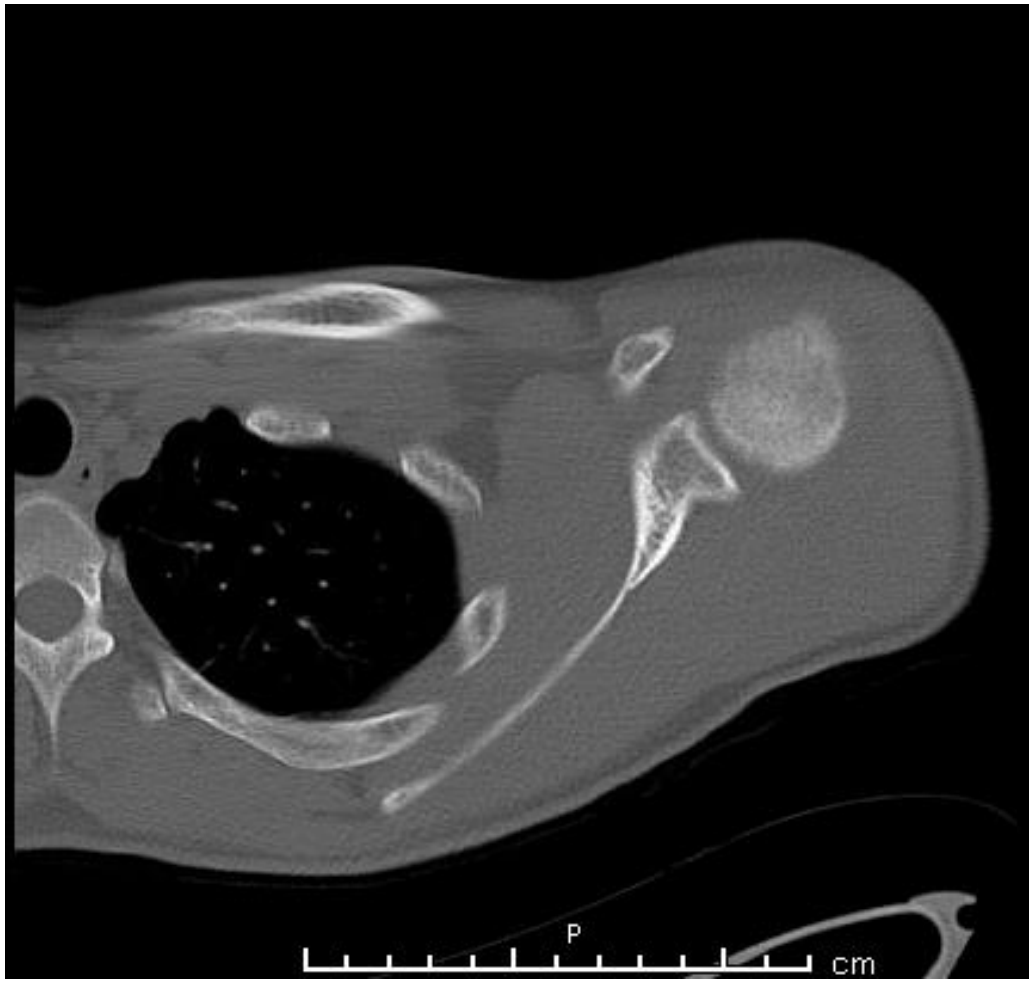
Patient JS

- 20 yo male (PMH asthma, PSH appendectomy)
- CC: 4-5 months of left shoulder pain and weakness
- HPI:
  - 9/2017: Started power lifting
  - 10/2017: Developed left shoulder discomfort and achiness. No trauma. Given ibuprofen by PCP.
  - 1/2018: Follow-up PCP, developed weakness, difficulty sleeping.

- PE (2/2018):
  - Visible fullness of proximal left arm
  - Active ROM restricted to no more than 90 degrees of combined abduction
  - Distal neurovascular LE grossly intact
- Labs
  - Alk phos 1241
  - LDH 517

Shoulder XR

CT



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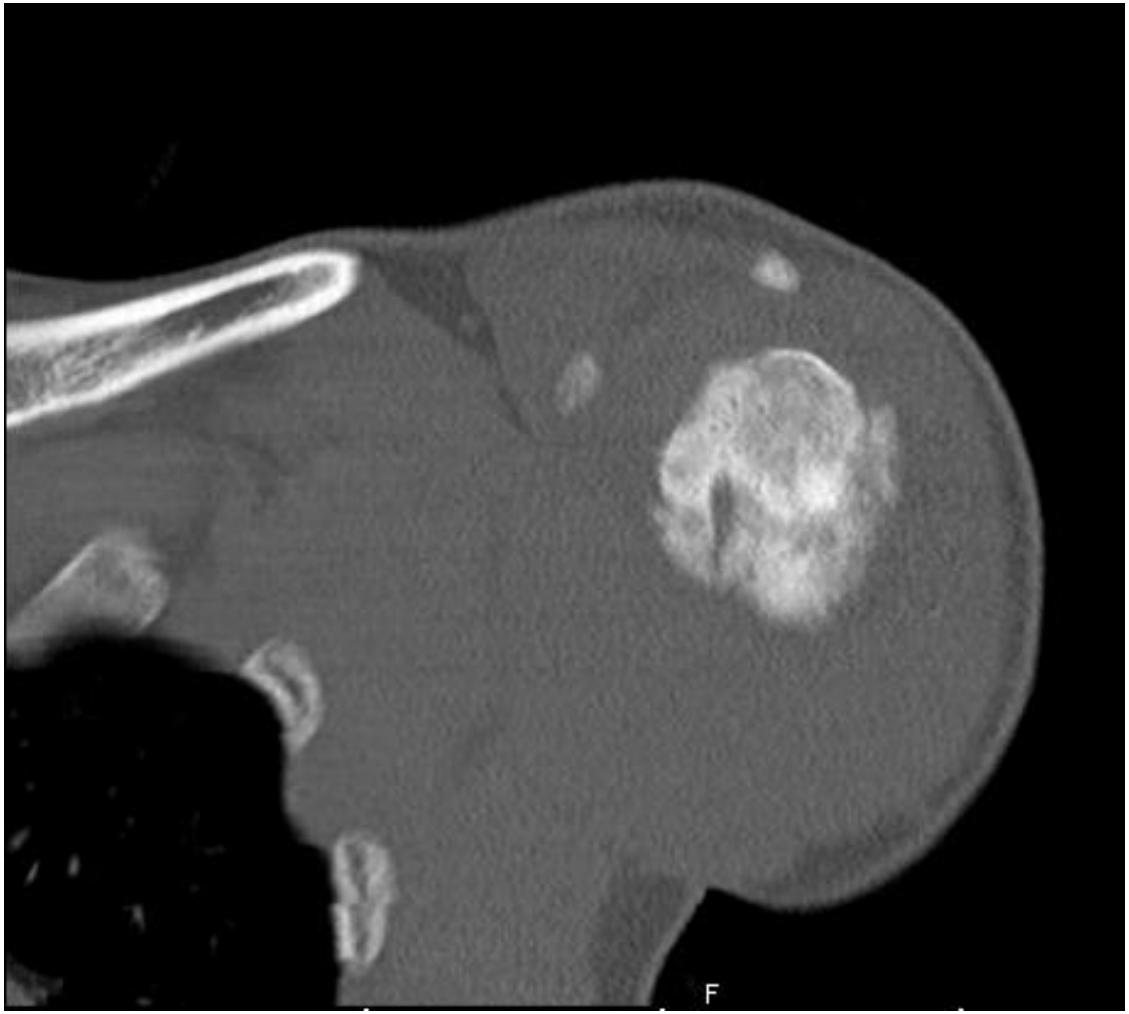

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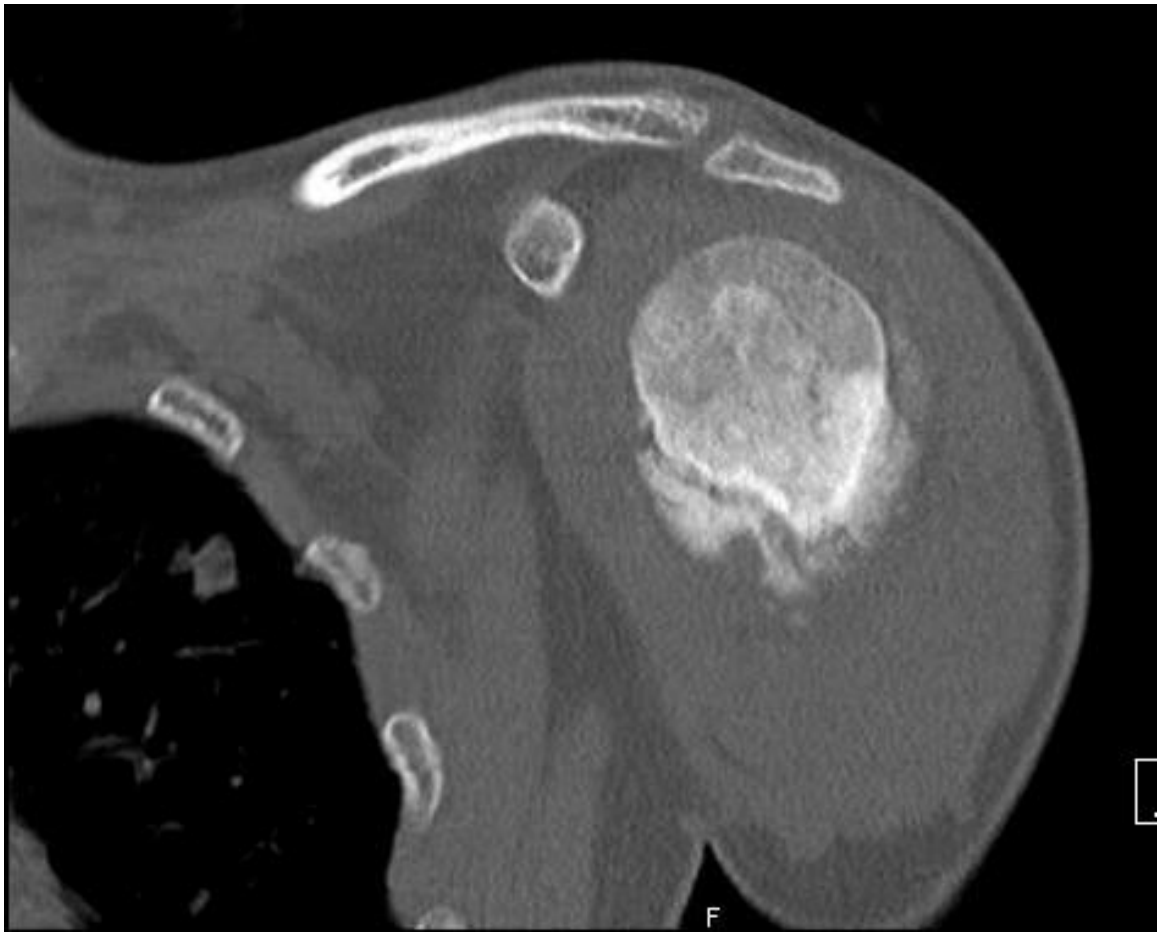

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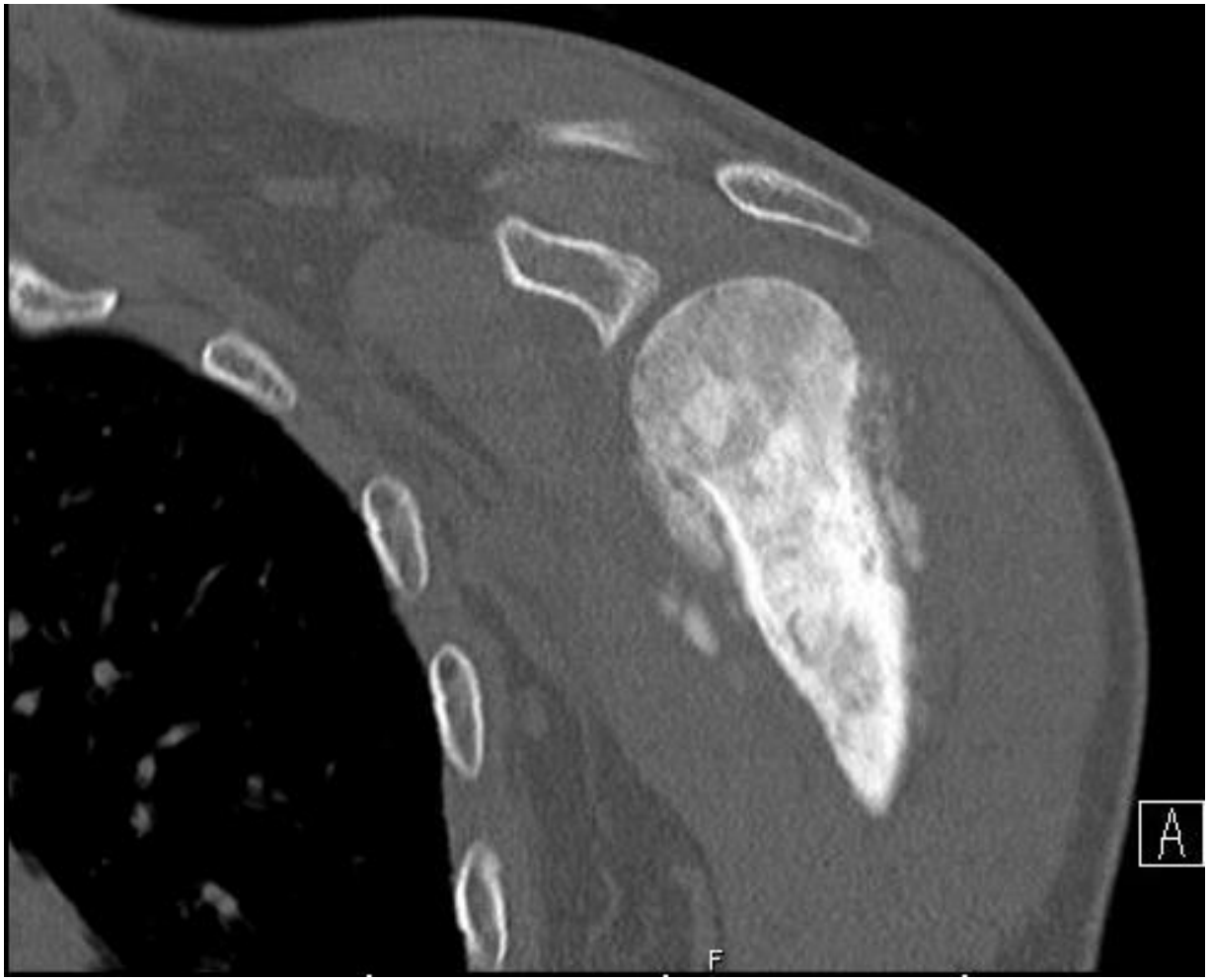

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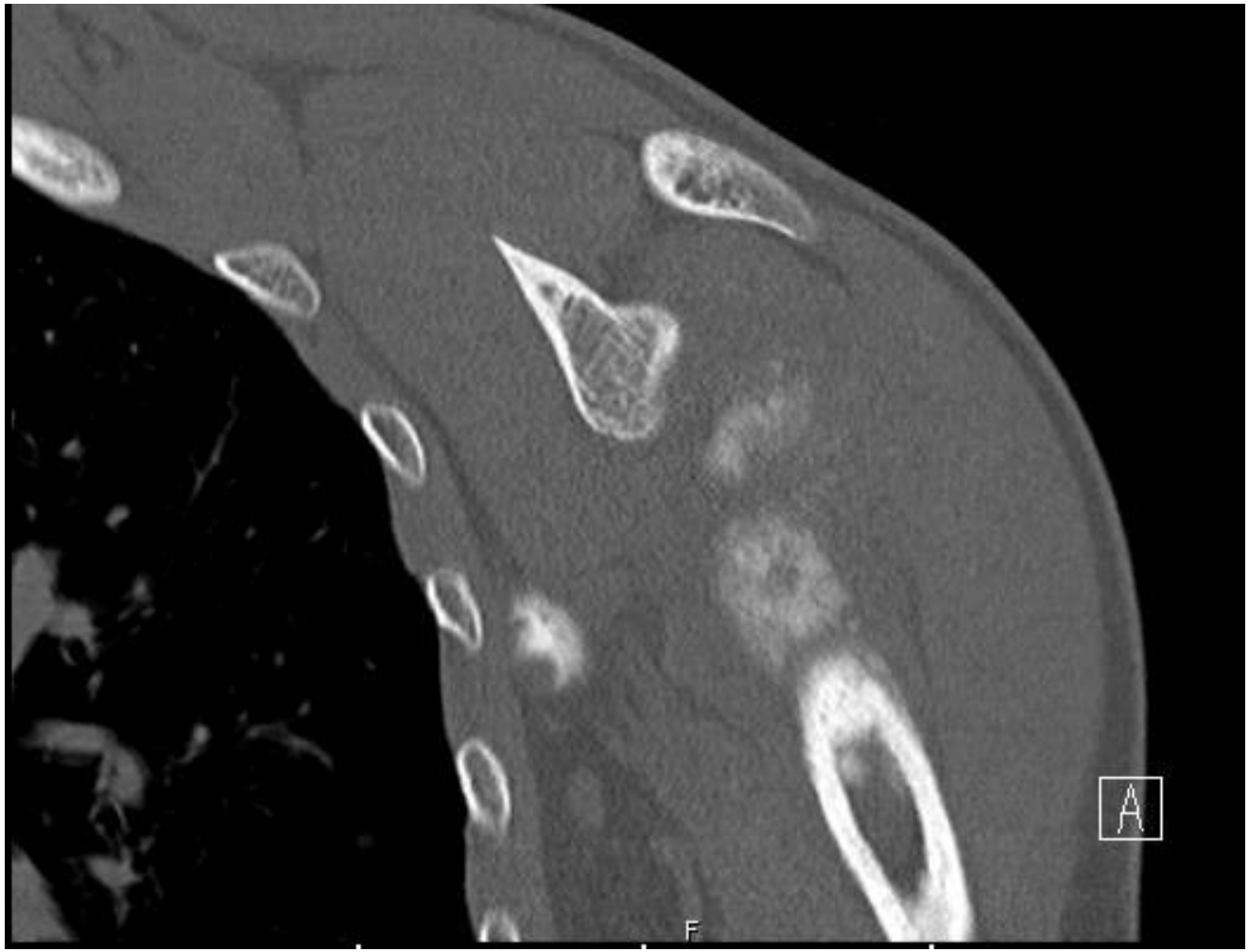
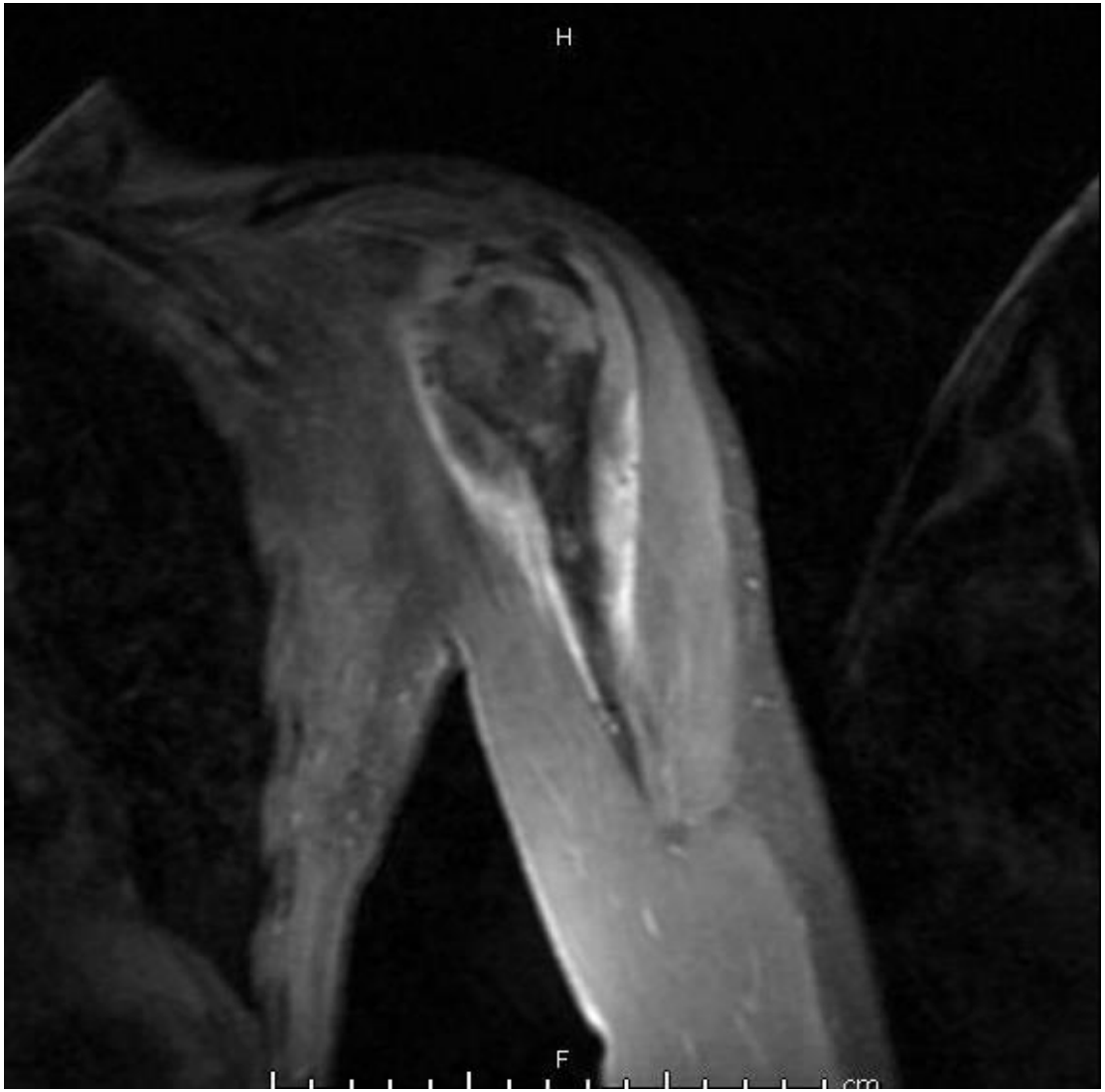
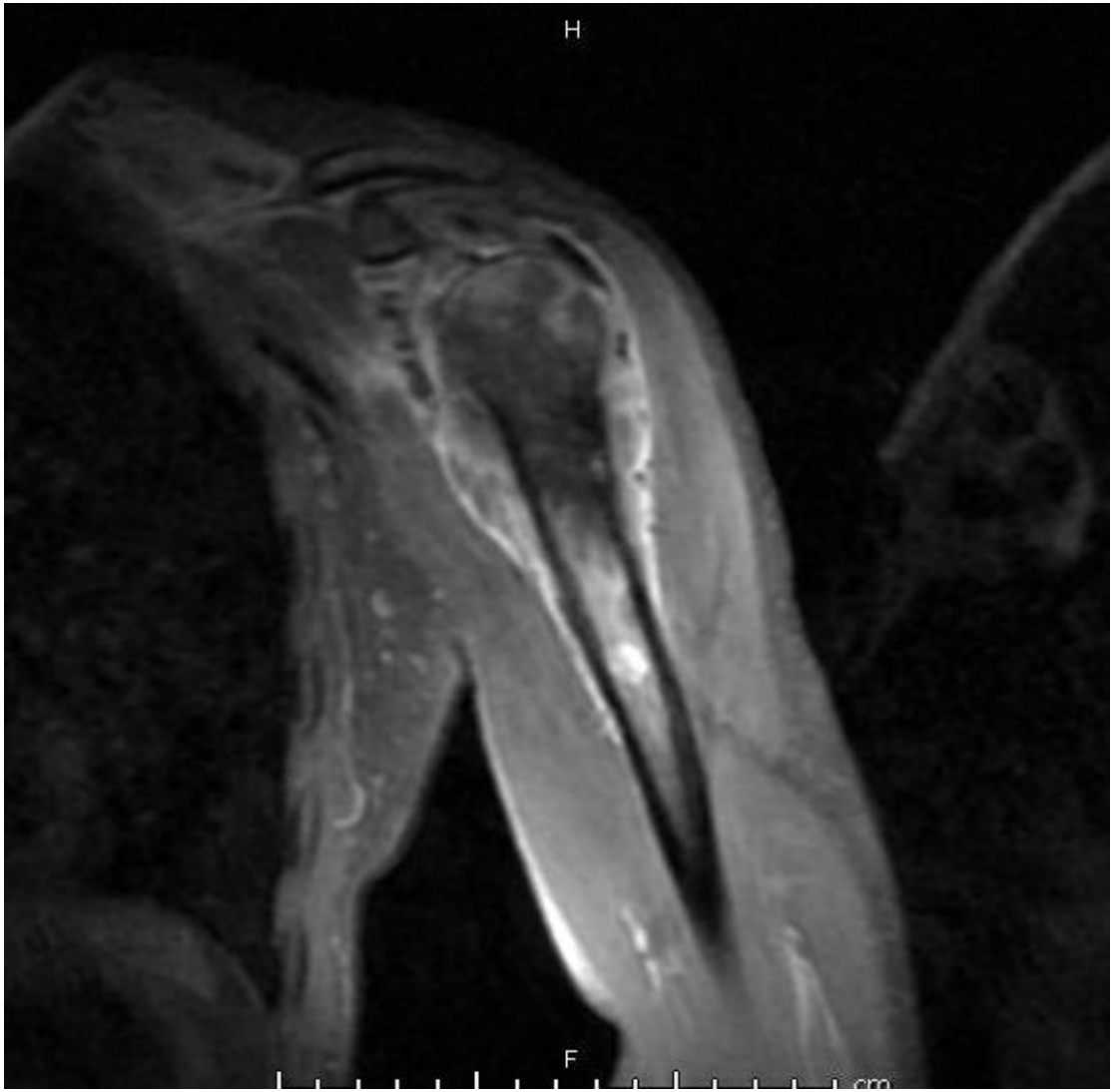


MRI



MRI

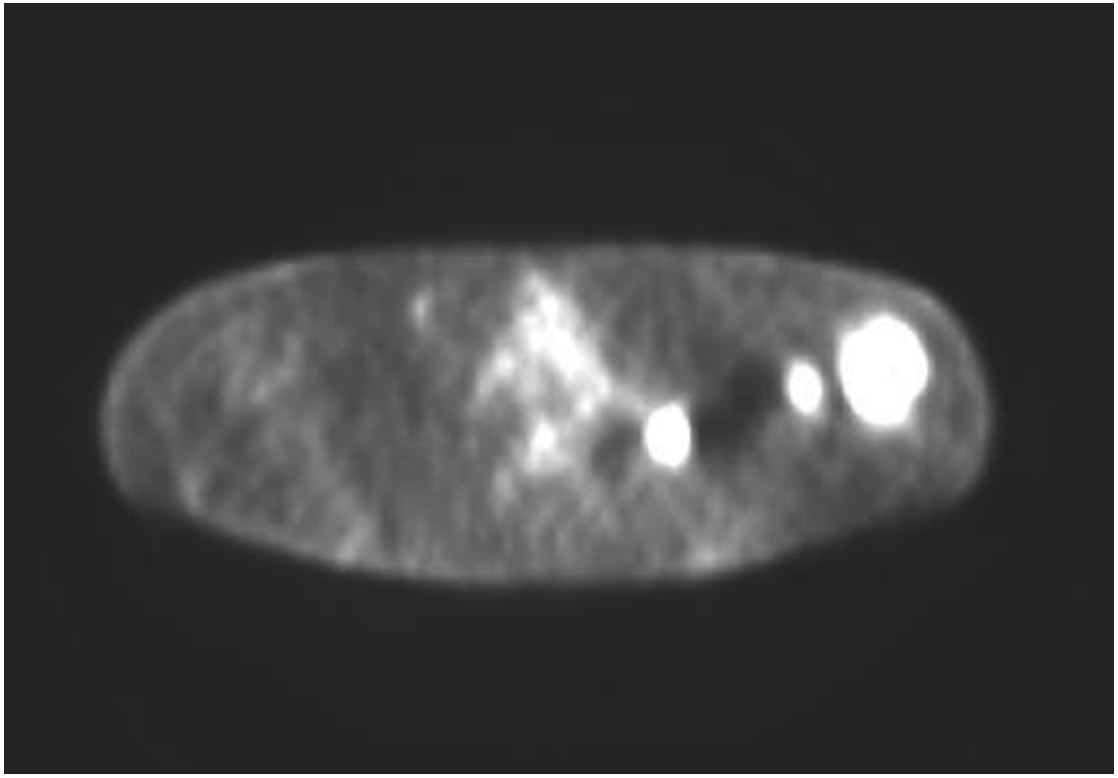


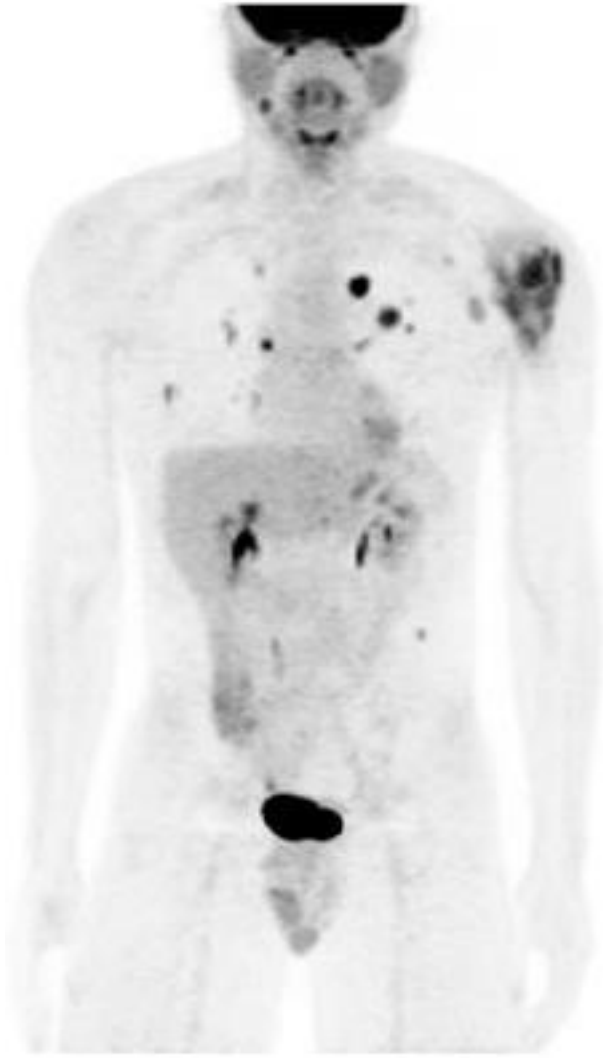
MRI

MRI

MRI

PET



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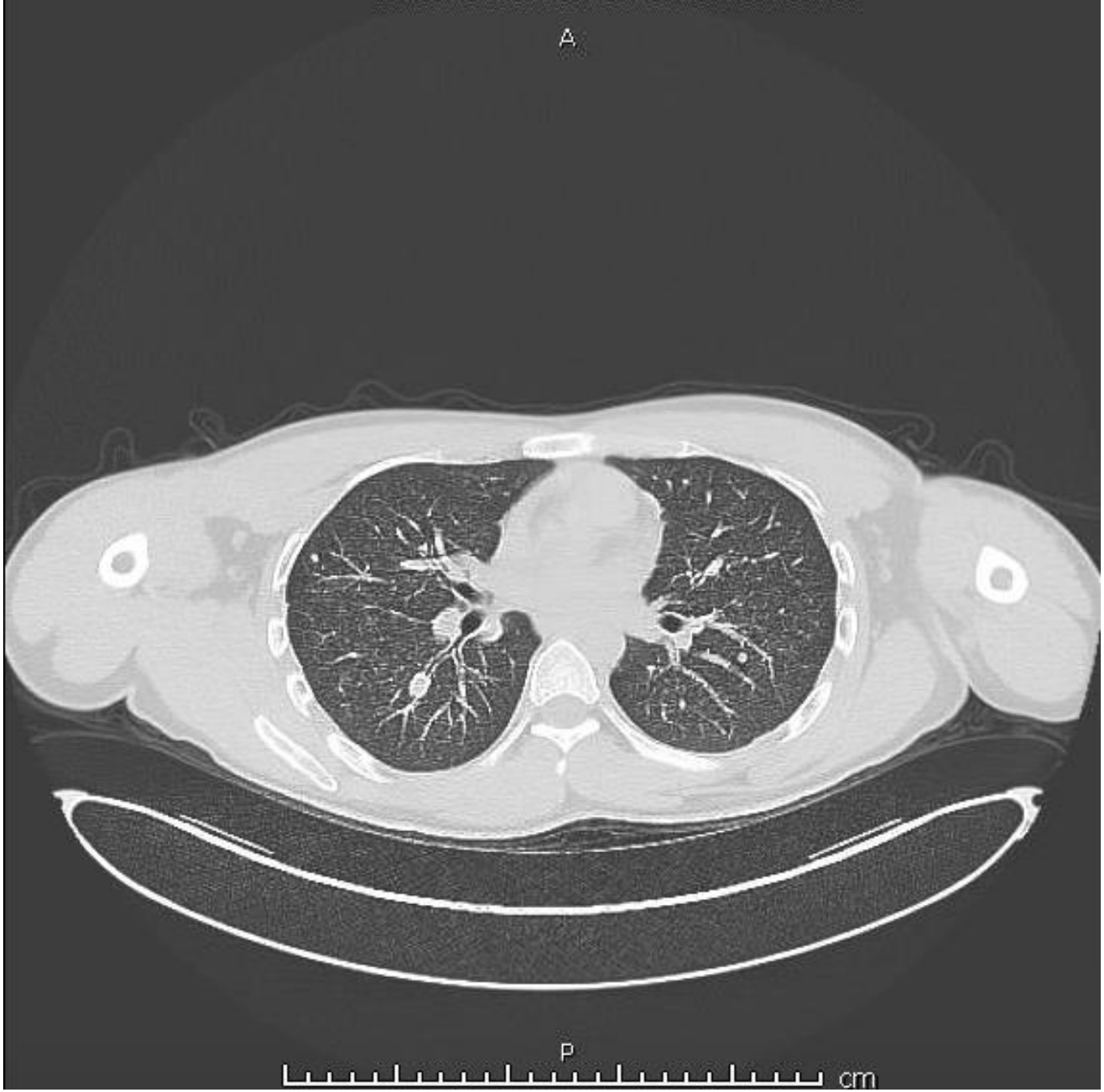
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Pathology

FINAL DIAGNOSIS

LEFT PROXIMAL HUMERUS, CORE BIOPSY:

- OSTEOSARCOMA (SEE NOTE)

NOTE: THE CORE SHOWS AN OSTEOBLASTIC OSTEOSARCOMA IN KEEPING WITH RADIOLOGICAL APPEARENCE

Metastatic Osteosarcoma

- 10-20% of patients have detectable pulmonary metastases at diagnosis
- 30-40% of patients with nonmetastatic osteosarcoma will develop pulmonary metastases later
- 10-50% long term survival with multimodality therapy

- Pulmonary-only metastases have a better chance of long term survival than bony metastases

- Pulmonary metastasectomy should be pursued
- Prognostic factors: tumor response to therapy (tumor necrosis), disease free interval, extent of metastases

References

- Geller DS, Gorlick R. Osteosarcoma: a review of diagnosis, management, and treatment strategies. Clin Adv Hematol Oncol. 2010 Oct;8(10):705-18. PubMed PMID: 21317869.
- Harting MT, Blakely ML, Jaffe N, Cox CS Jr, Hayes-Jordan A, et al. Long-term survival after aggressive resection of pulmonary metastases among children and adolescents with osteosarcoma. J Pediatr Surg. 2006 Jan;41(1):194-9. PubMed PMID: 16410132.