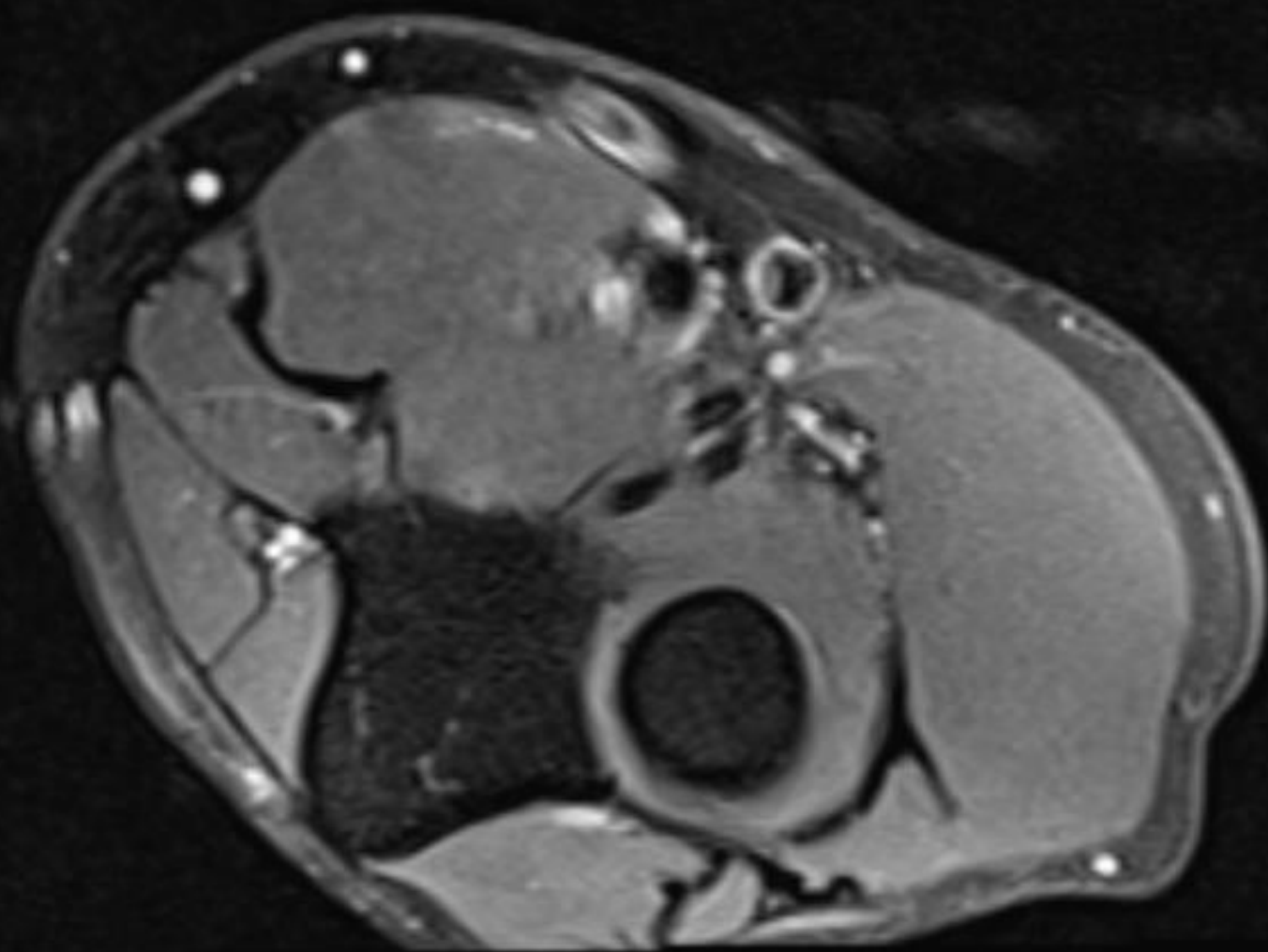
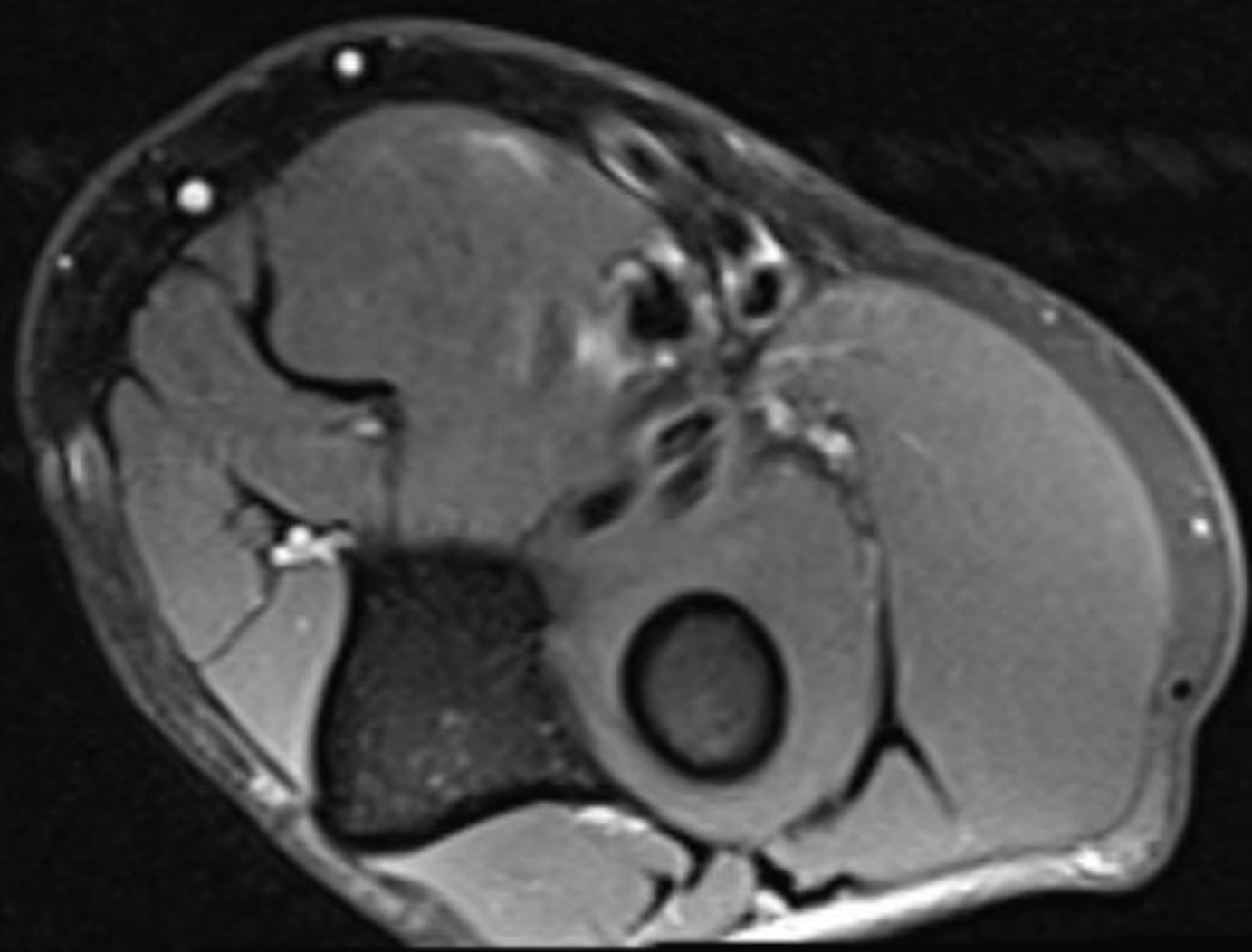
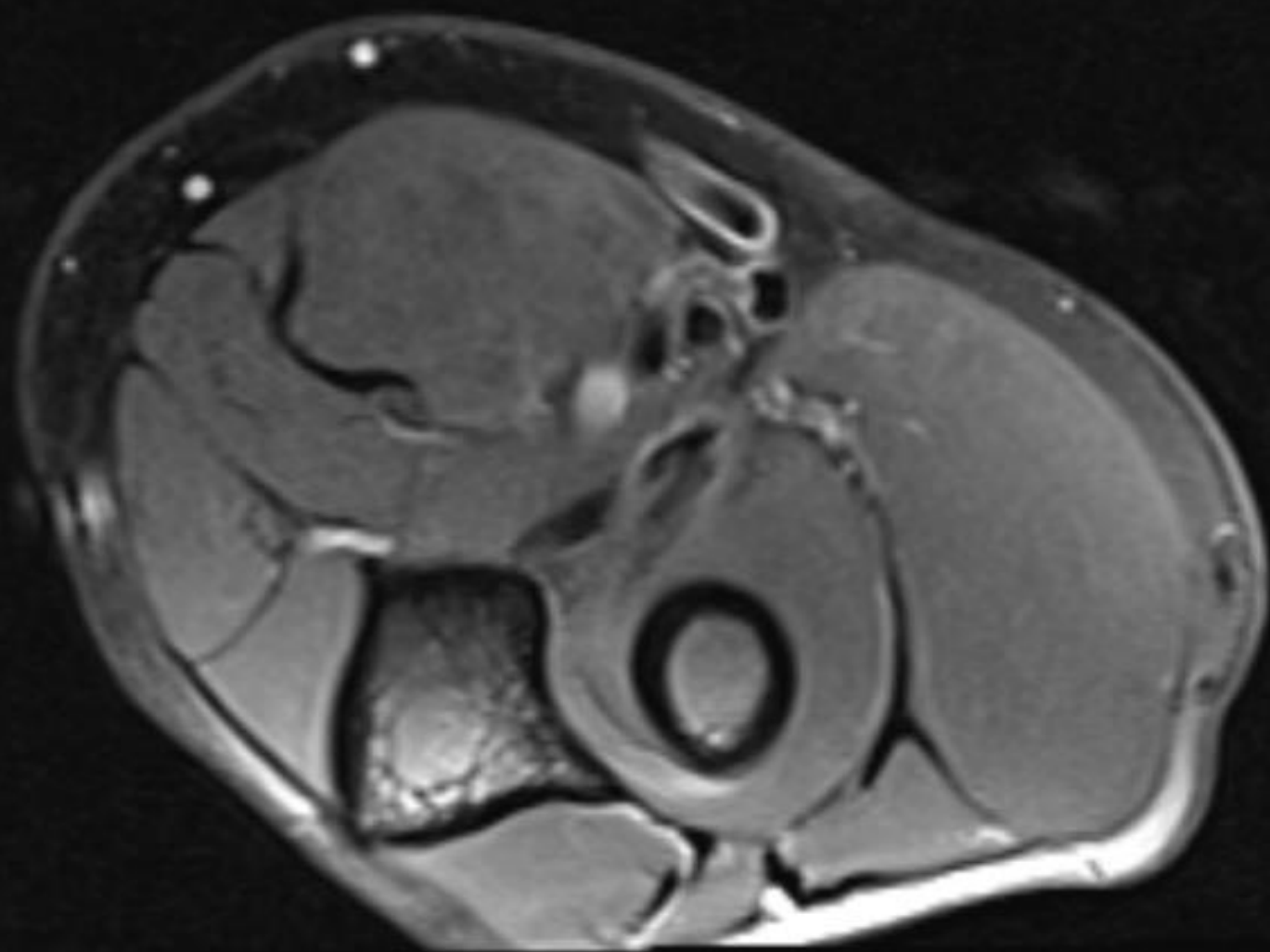
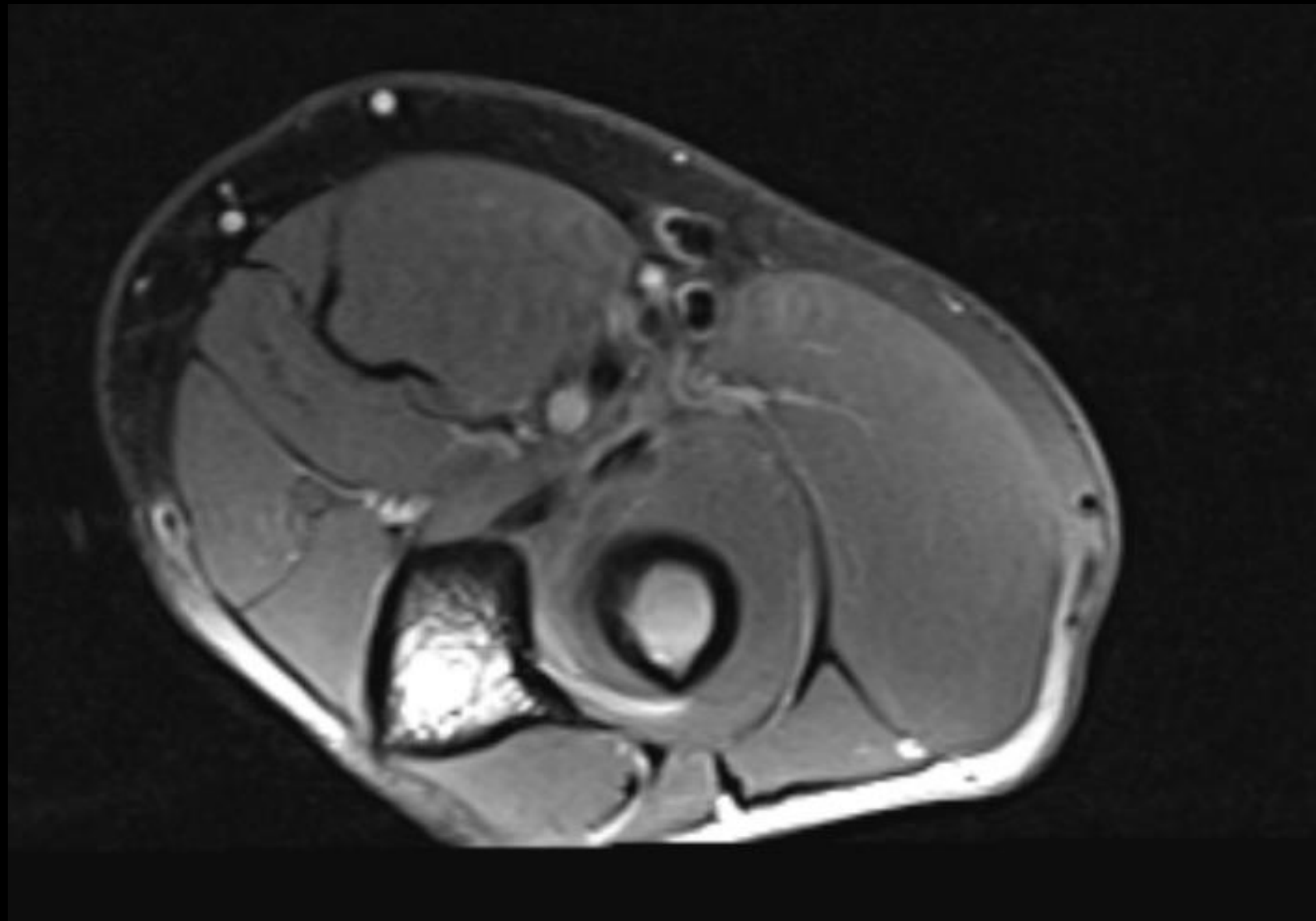


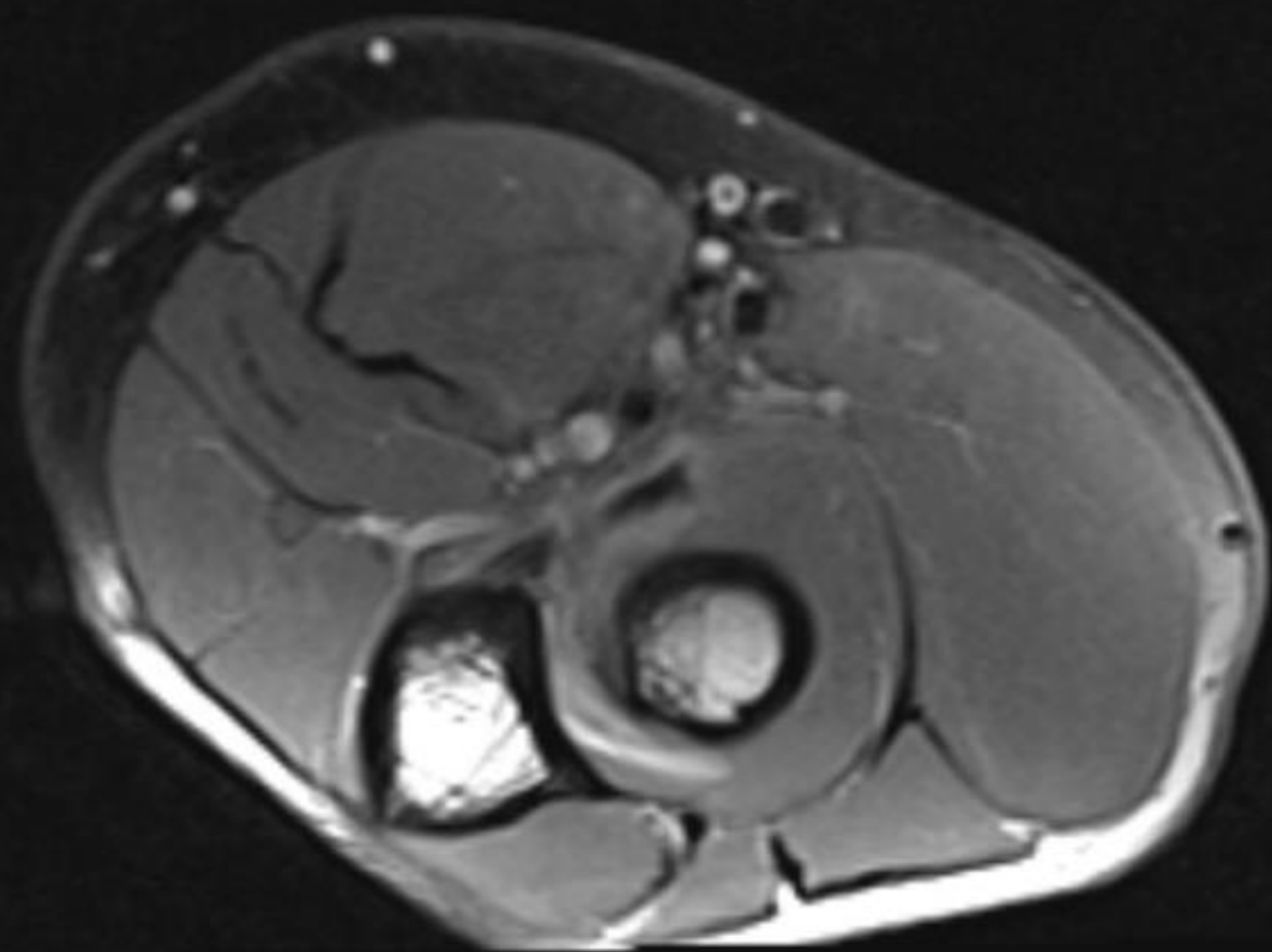
Male presenting with  
antecubital pain while weight lifting

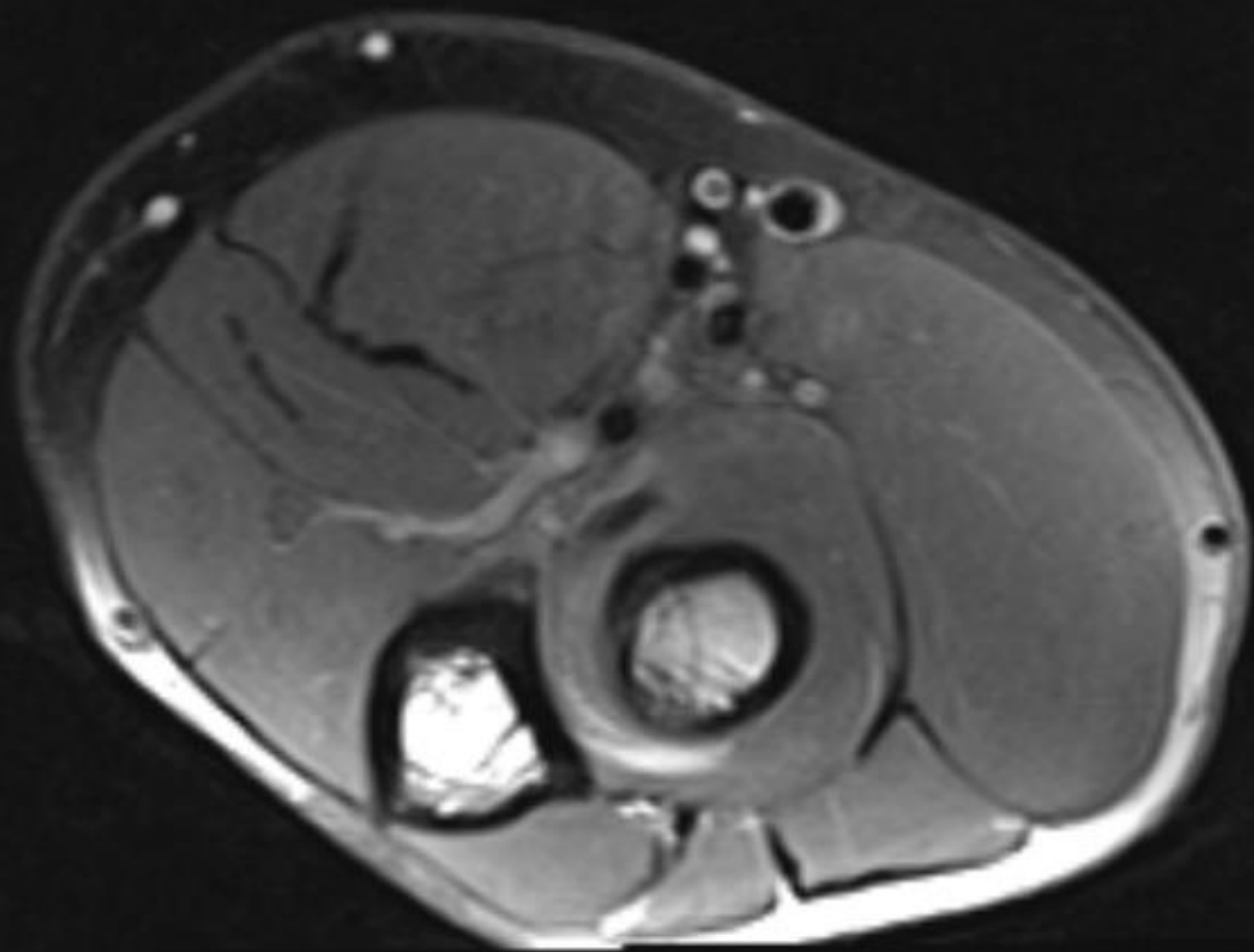


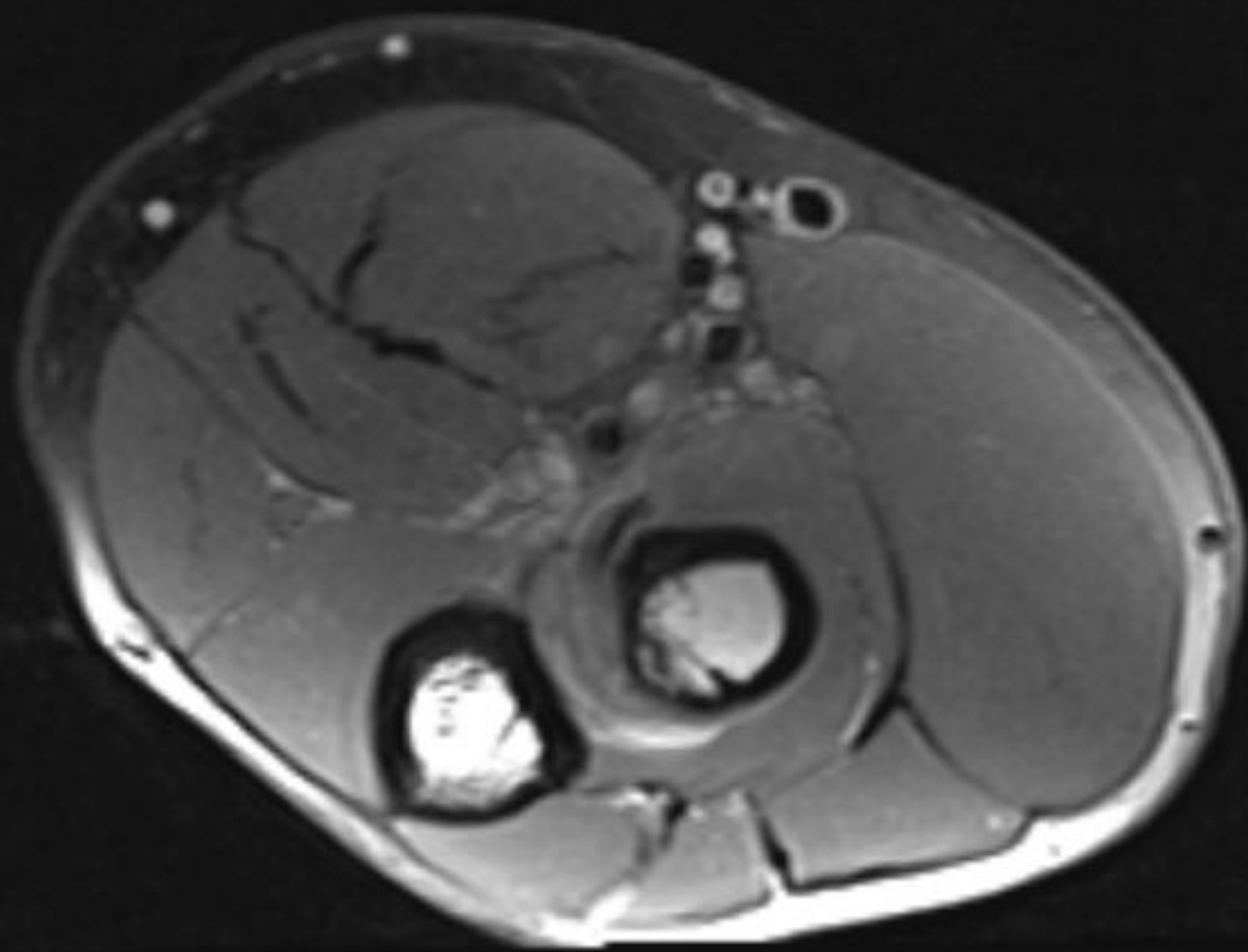




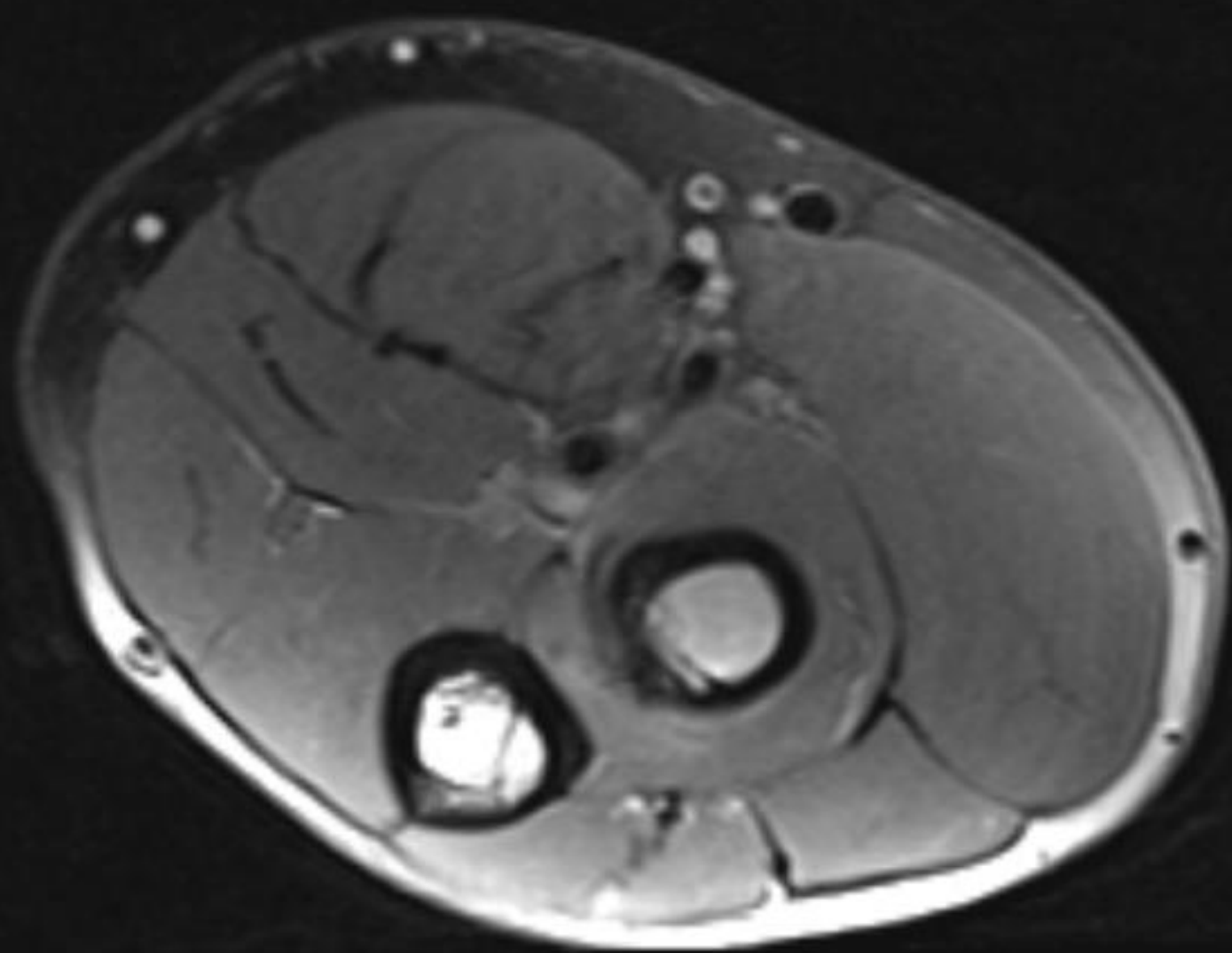


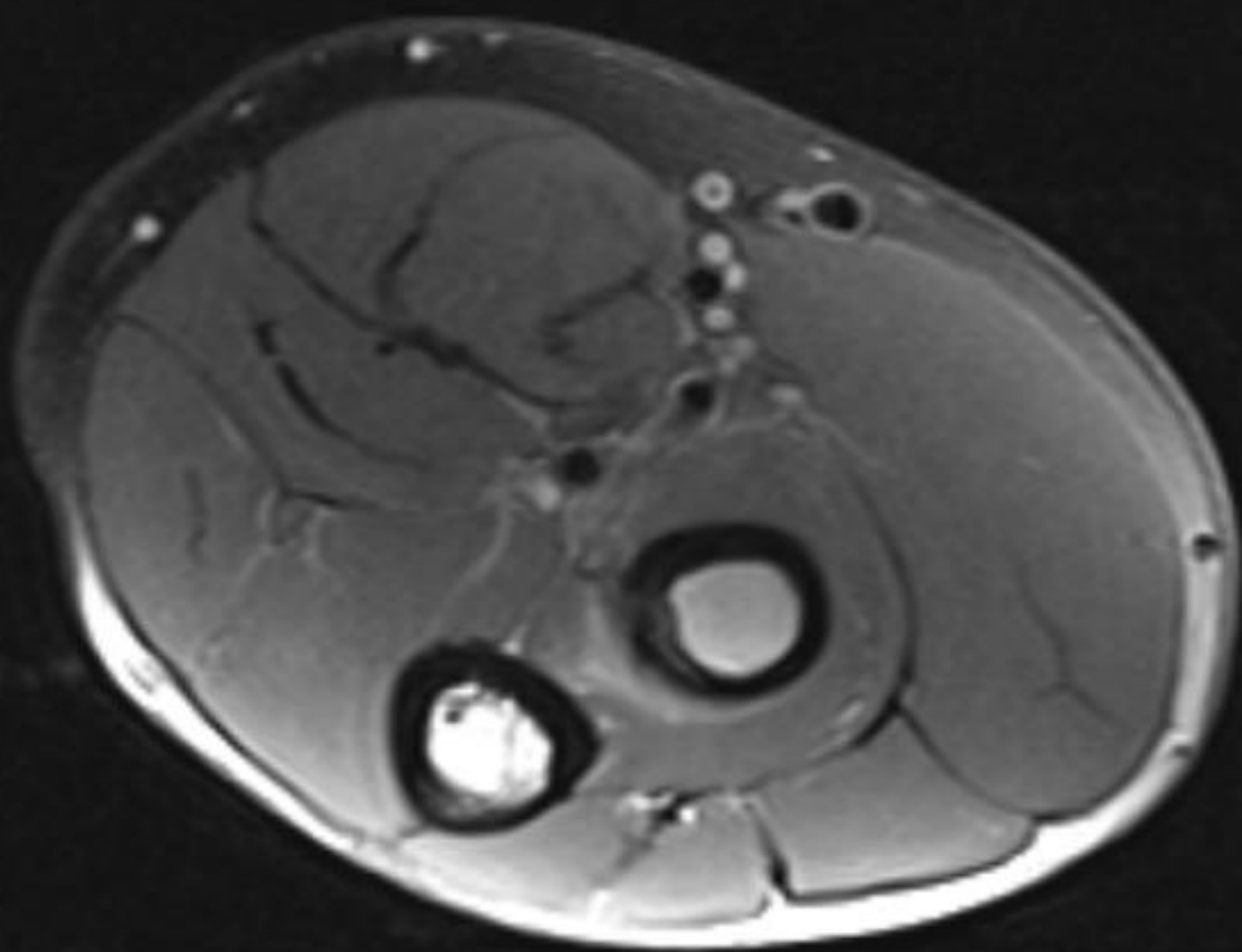


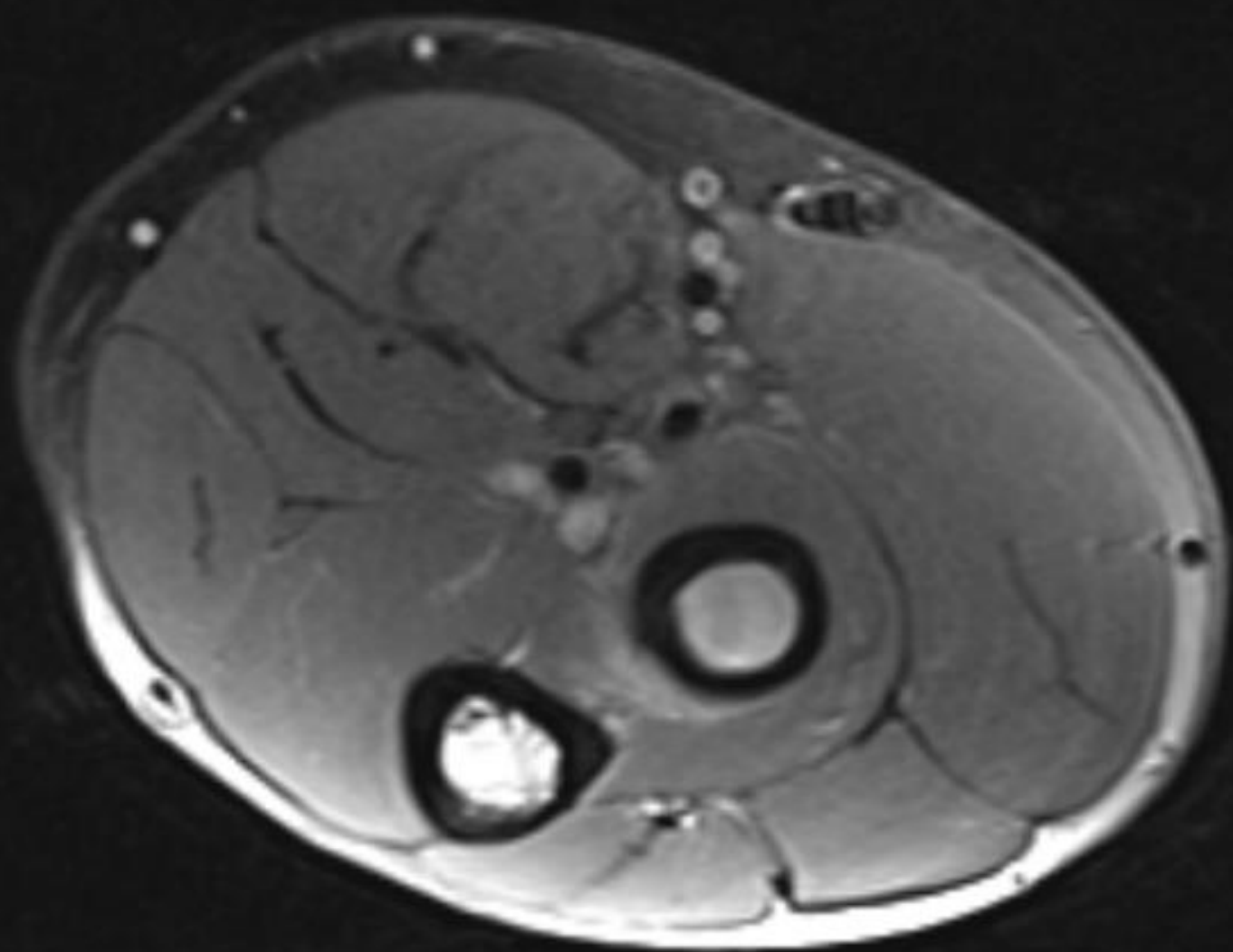


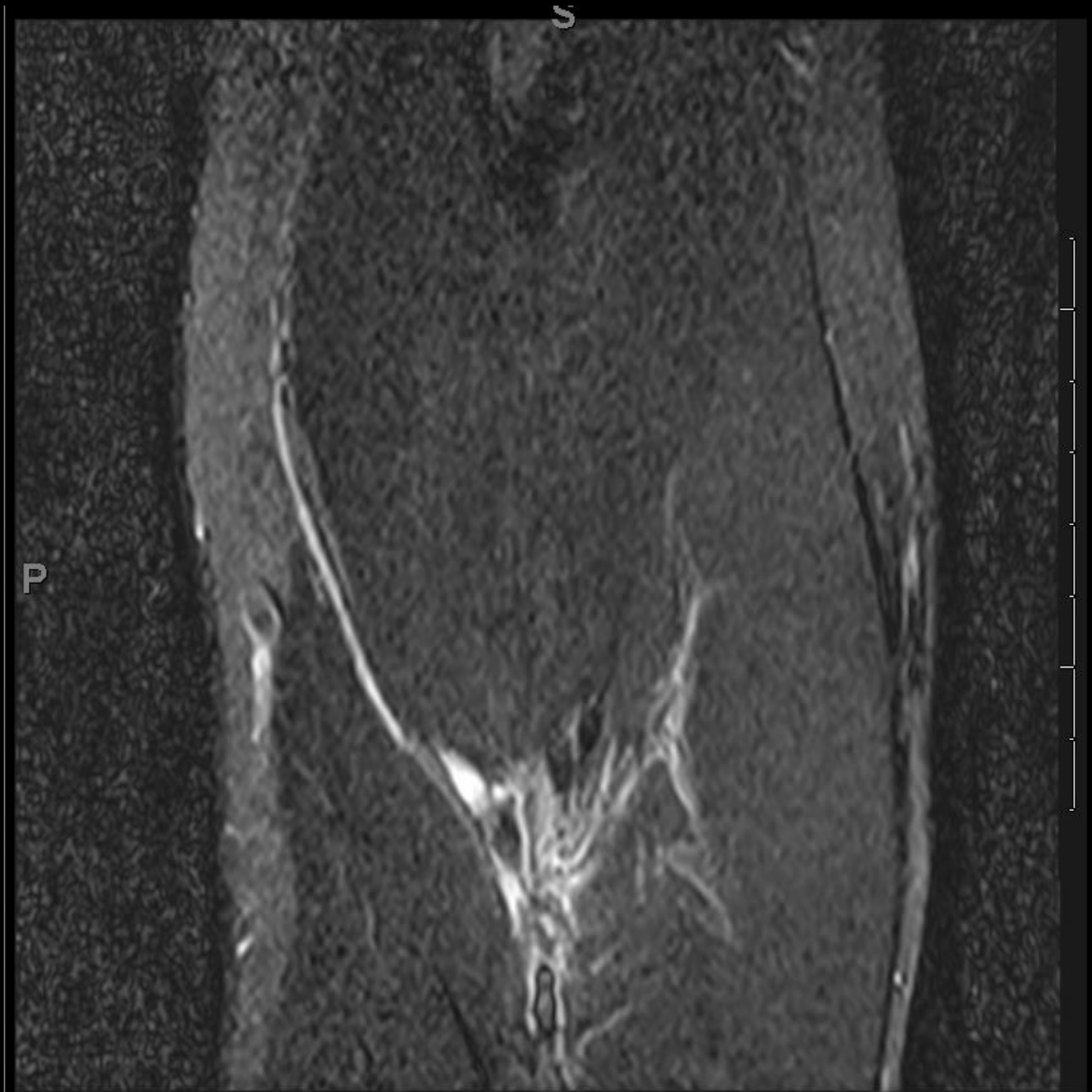




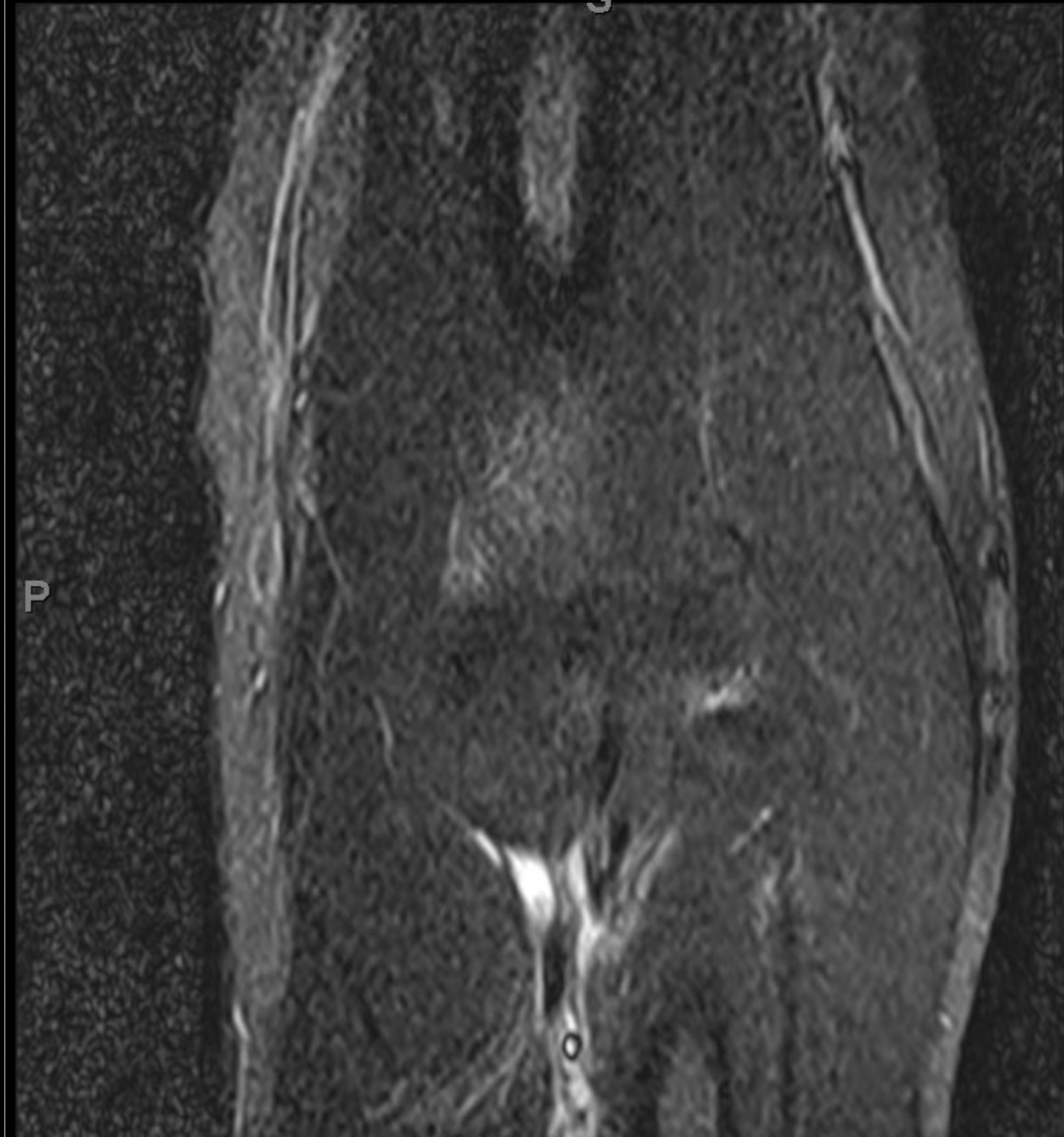


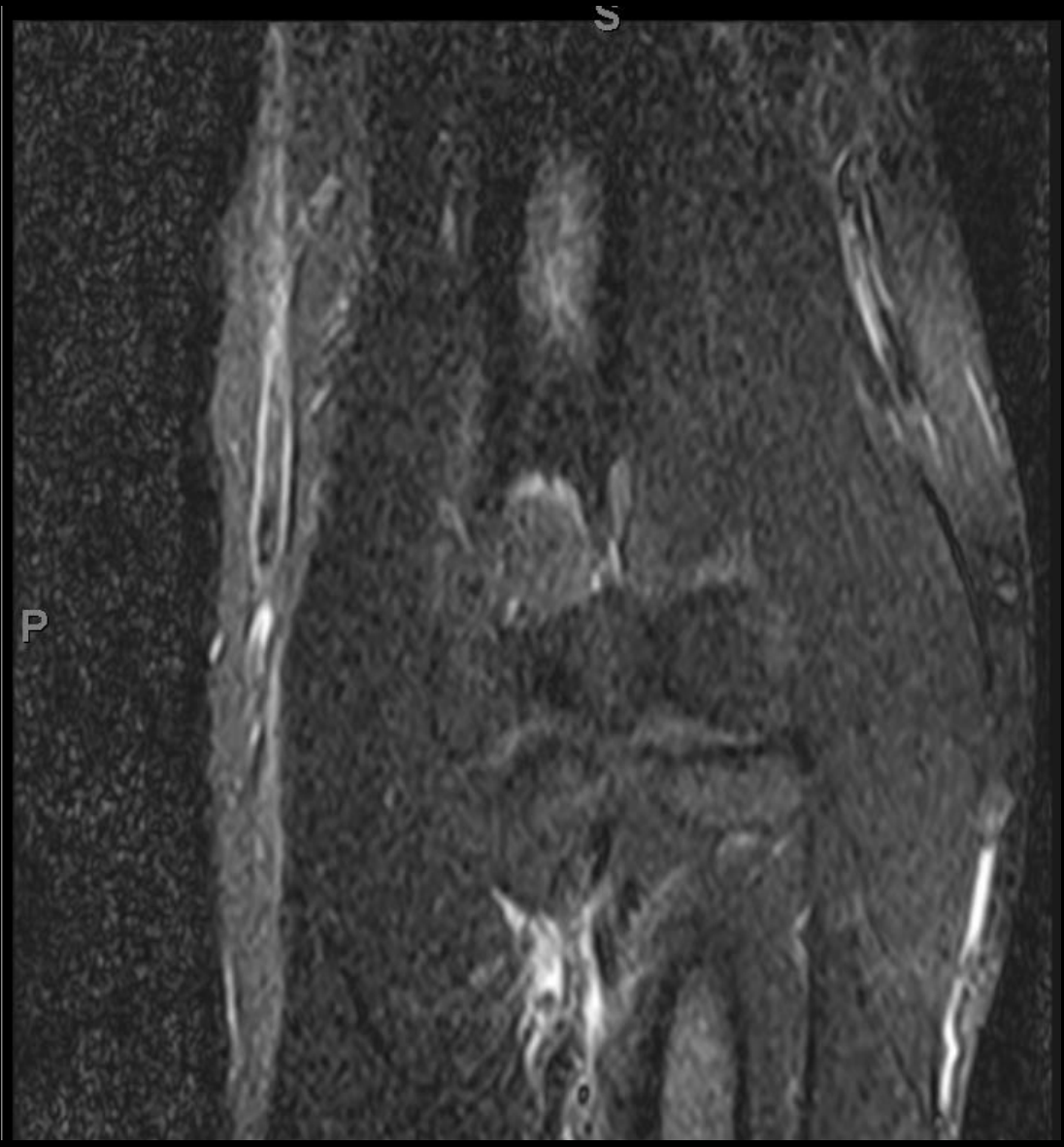


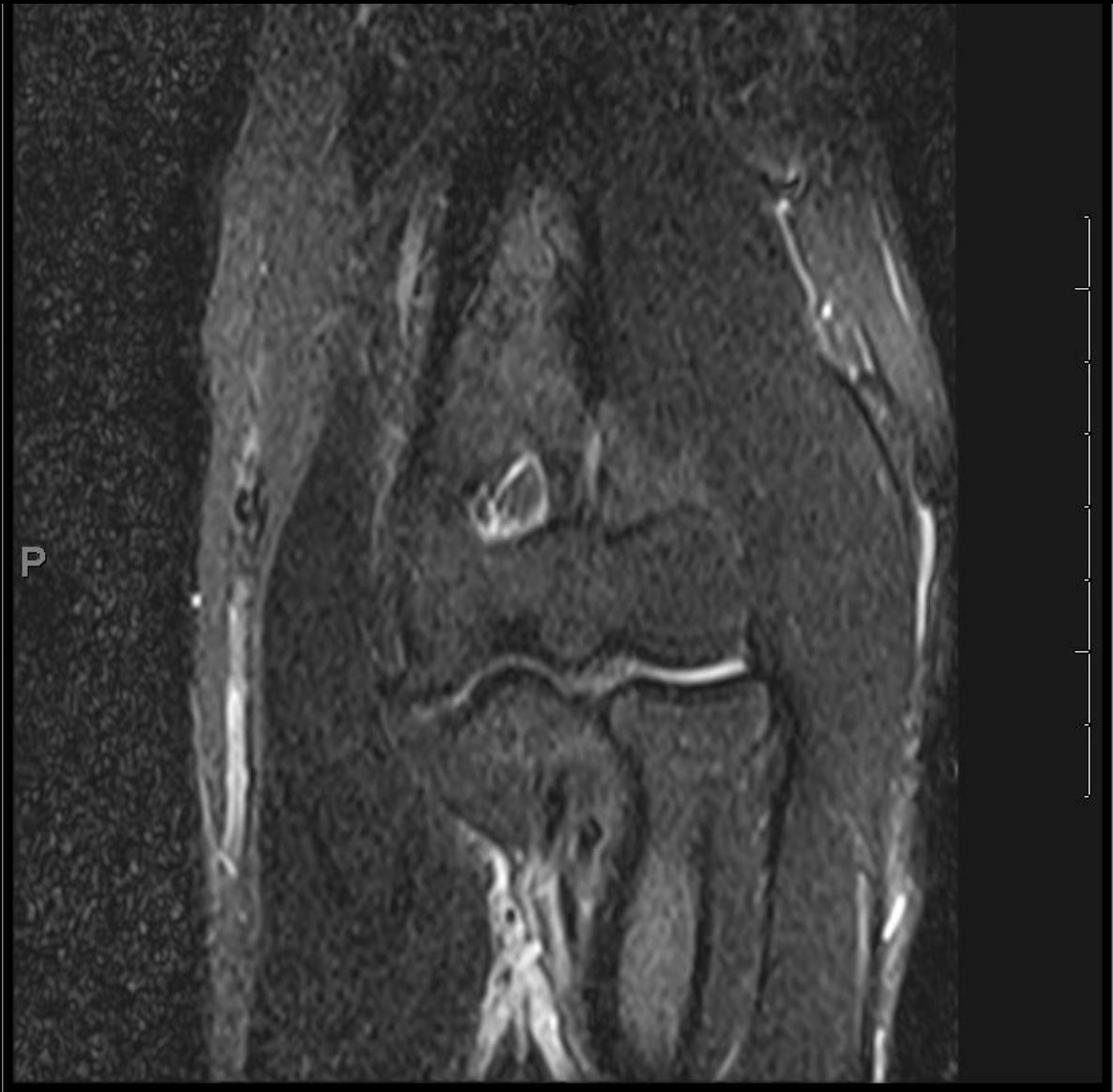




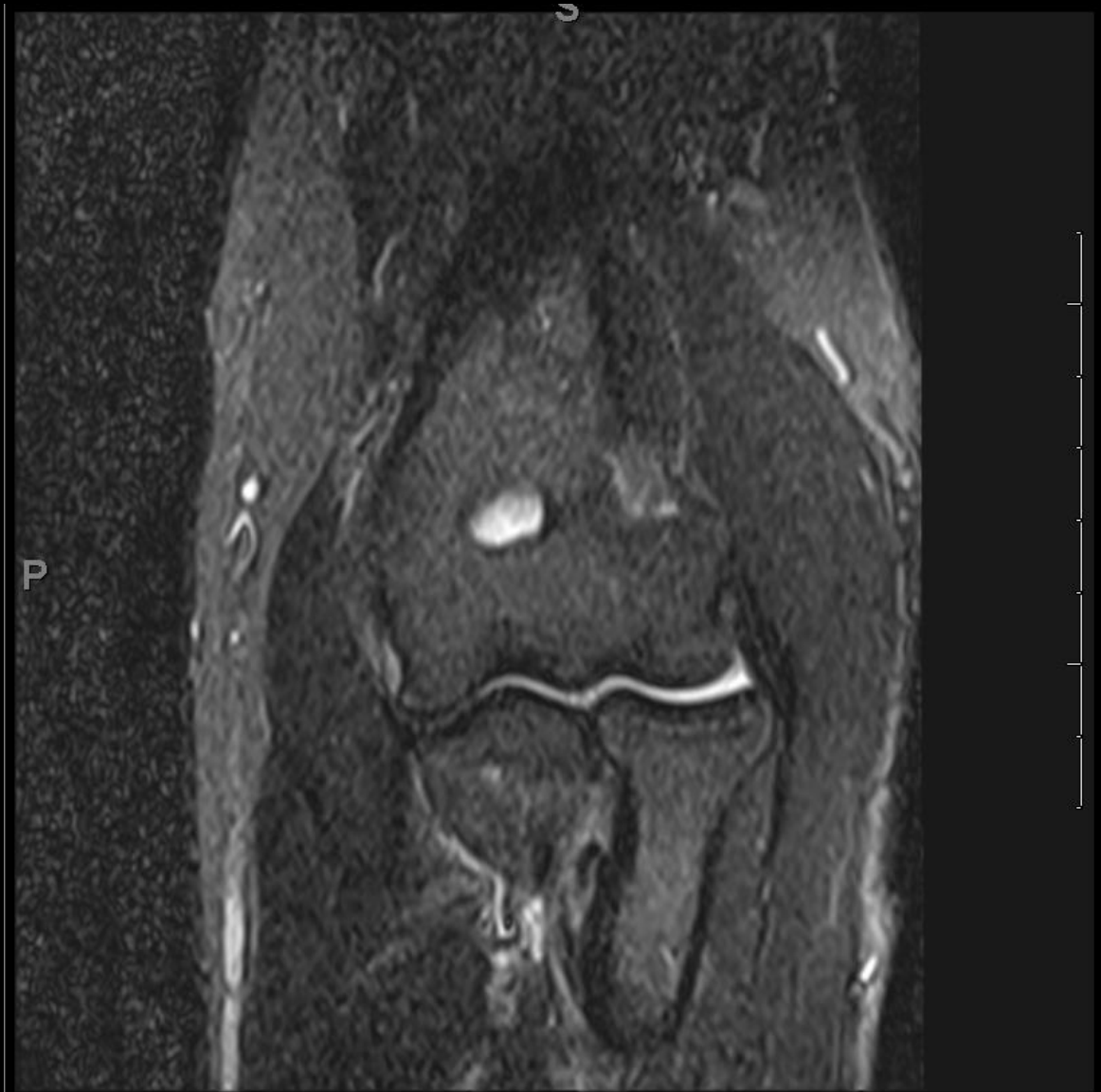


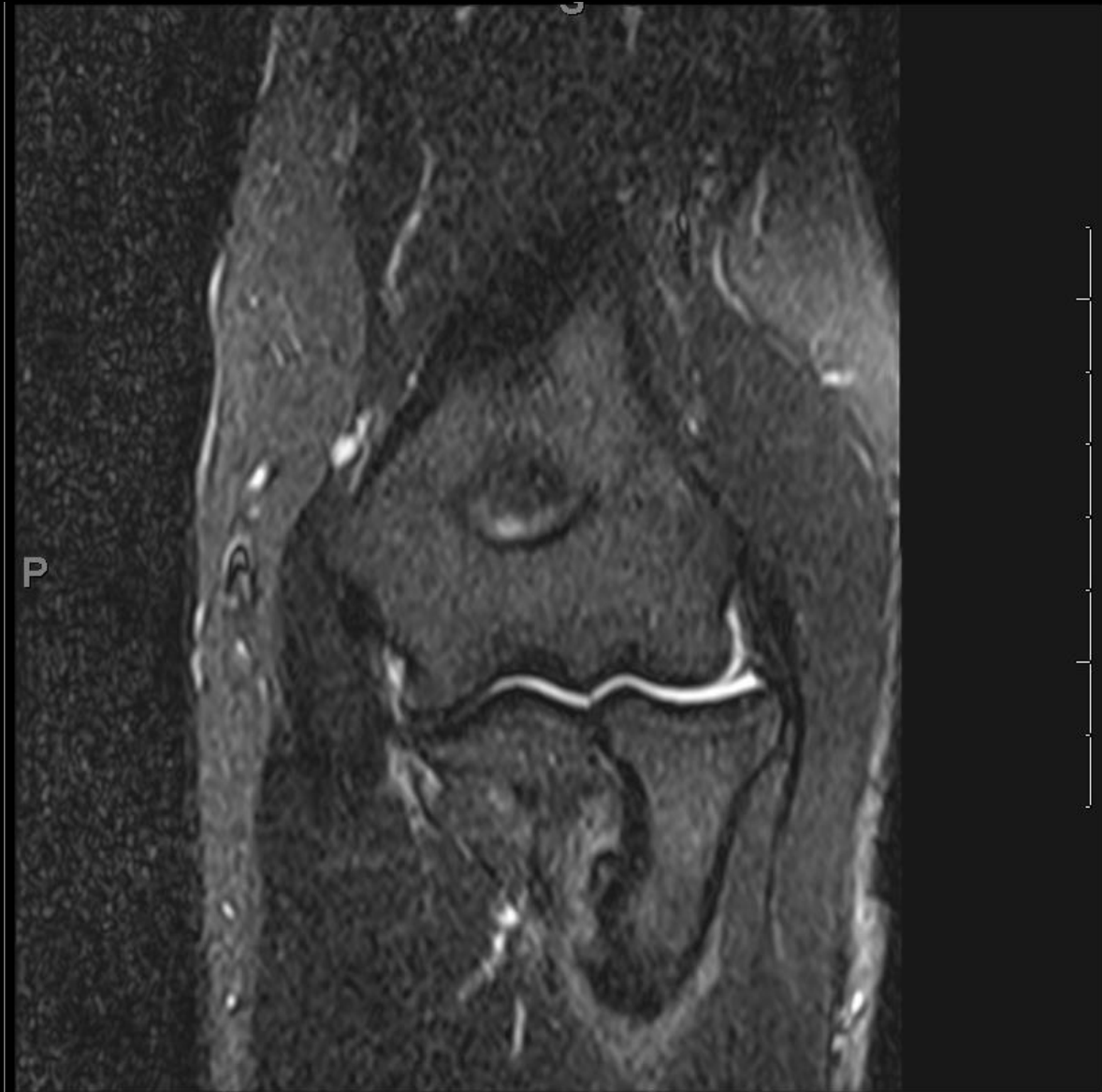


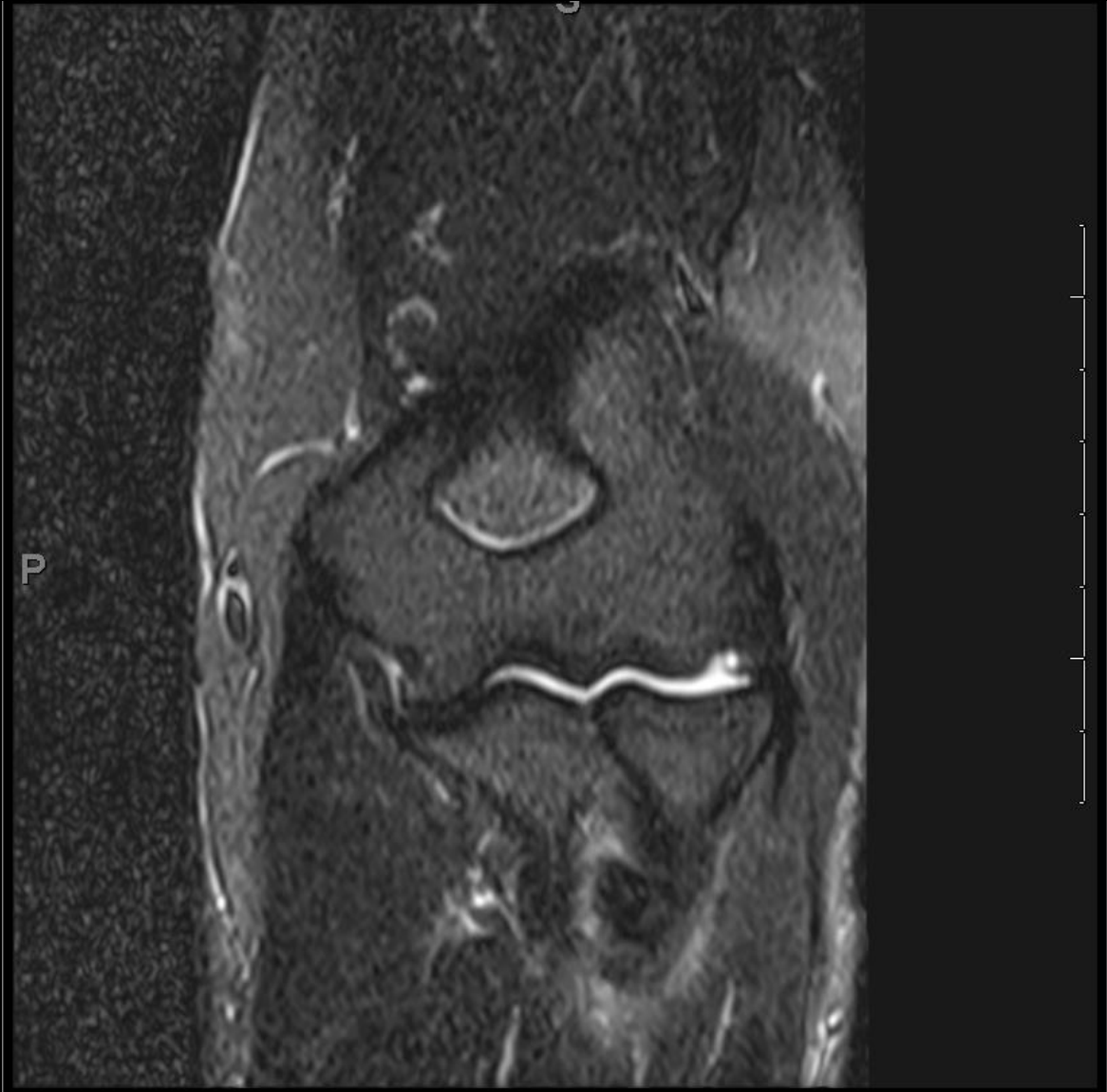
















# Findings

- **Congenitally bifid appearance of the distal biceps** to its radial tuberosity attachment
  - Tendinosis of both heads
  - Low grade partial tearing of the short head of biceps tendon just proximal to the radial tuberosity
- High signal surrounding both heads of the distal biceps tendon, compatible with **cubital bursitis** including the bicipitoradial and interosseous bursae

# Bifurcated Distal Biceps...as a means to understand distal biceps tendon anatomy

## Terminal Bifurcation of the Biceps Brachii Muscle and Tendon: Anatomic Considerations and Clinical Implications

Berna Dirim<sup>1,2</sup>  
Sharon Sudarshan Brouha<sup>1</sup>  
Michael L. Pretterklieber<sup>3</sup>  
Klaus S. Wolff<sup>3</sup>  
Andreas Frank<sup>3</sup>  
Mini N. Pathria<sup>1</sup>  
Christine B. Chung<sup>1</sup>

**OBJECTIVE.** The objective of our study was to describe the anatomic variation of a bifurcated distal biceps tendon with MRI, histology, and dissection in cadavers and to report the MR appearance of superimposed lesions in a patient population with this anatomic variant.

**MATERIALS AND METHODS.** Visual and histologic examinations of the distal biceps brachii tendon in eight sectioned fresh-frozen elbow specimens were performed. Dissection of 17 elbow specimens was performed to describe the distal biceps brachii tendon. In addition, all elbow MRI reports over a 3-year period ( $n = 411$ ) were retrospectively reviewed to determine the presence of bifurcation of the distal biceps brachii tendon.

**RESULTS.** The distal biceps brachii tendon appeared bifurcated in 25% of the sectioned

AJR 2008; 191:W248-255

## Distal Biceps Tendon Anatomy: A Cadaveric Study

By M.H.A. Eames, MD, G.I. Bain, MD, Q.A. Fogg, MD, and R.P. van Riet, MD, PhD

*Investigation performed at Modbury Public Hospital, Modbury, South Australia, Australia*

**Background:** The anatomy of the distal biceps tendon and aponeurosis has not been studied in detail.

**Methods:** Seventeen cadaver elbows were dissected with loupe magnification to identify the details of the distal biceps tendon and the lacertus fibrosus.

JBJS 2007; 89:1044-9

# Bifurcated Distal Biceps...as a means to understand distal biceps tendon anatomy

- Origin:
  - Long head: supraglenoid tubercle
  - Short head: coracoid process
- Decussation proximal to the elbow – “goose’s quill”
- Send contributions to lacertus fibrosis to ulnar aspect of elbow

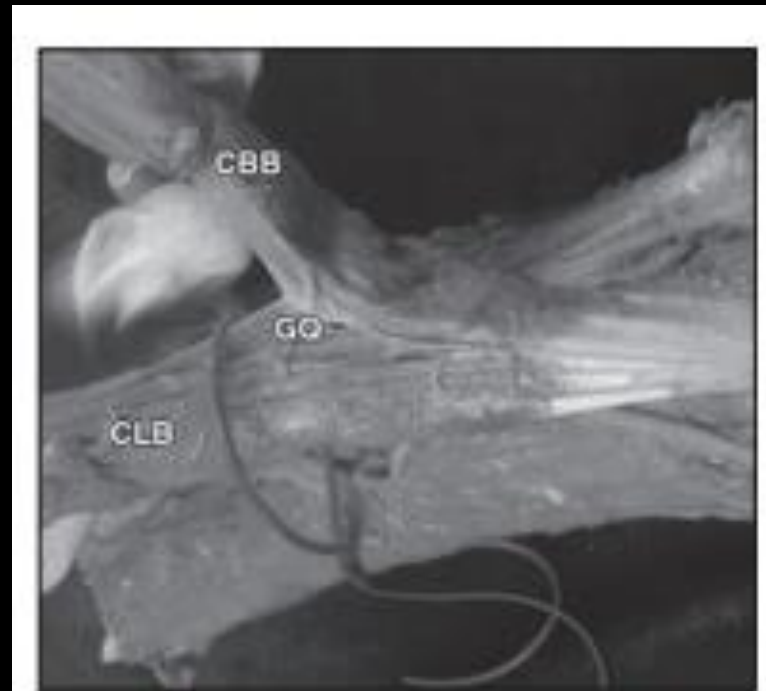
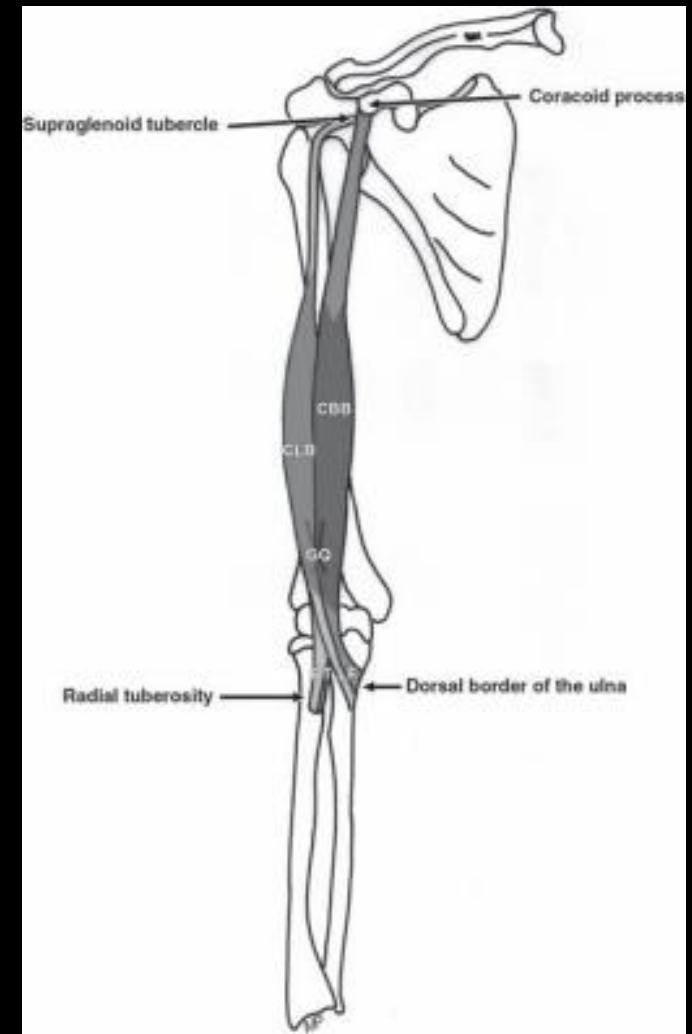


Fig. 1—Photograph of dissected cadaveric elbow shows area of decussation of fibers of both muscle bellies that we termed “goose quill” (GQ). CBB = caput breve musculi bicipitis brachii, CLB = caput longum musculi bicipitis brachii.



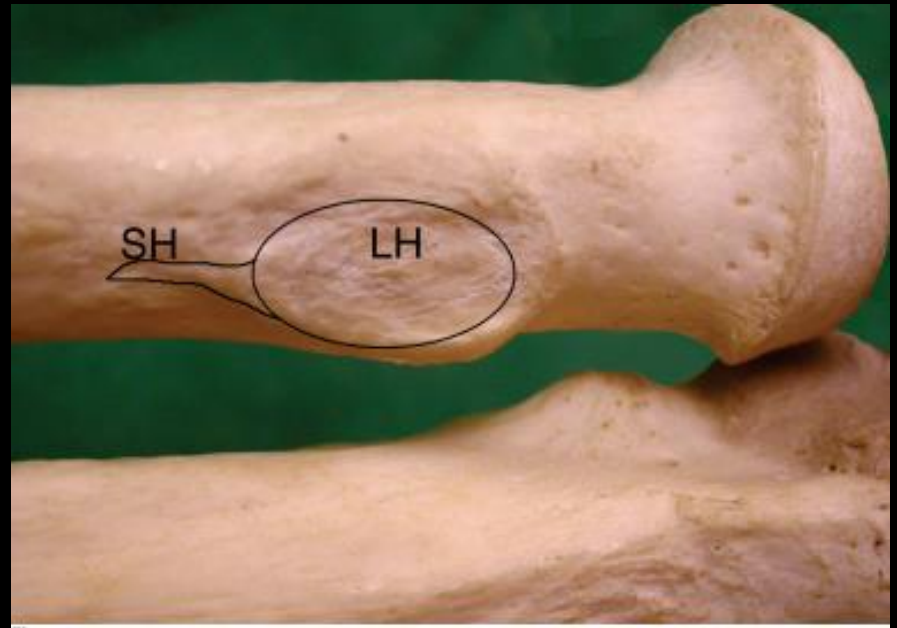
# Bifurcated Distal Biceps...as a means to understand distal biceps tendon anatomy

- Distal tendon descent
  - Even when common tendon, short and long head components were macroscopically identifiable
  - Long head – radial
  - Short head – ulnar
- Footprint
  - Long head – passes deep to short head tendon to insert proximally; ovoid; larger footprint
  - Short head – distal insertion; fan-like



# Bifurcated Distal Biceps...as a means to understand distal biceps tendon anatomy

- Distal tendon descent
  - Long head – radial
  - Short head – ulnar
- Footprint
  - Long head – passes deep to short head tendon to insert proximally (supination); ovoid; larger footprint
  - Short head – distal insertion (flexion); fan-like



JBJS 2007; 89:1044-9

*Going back to our case, can we  
reinforce this anatomy?*



Long head



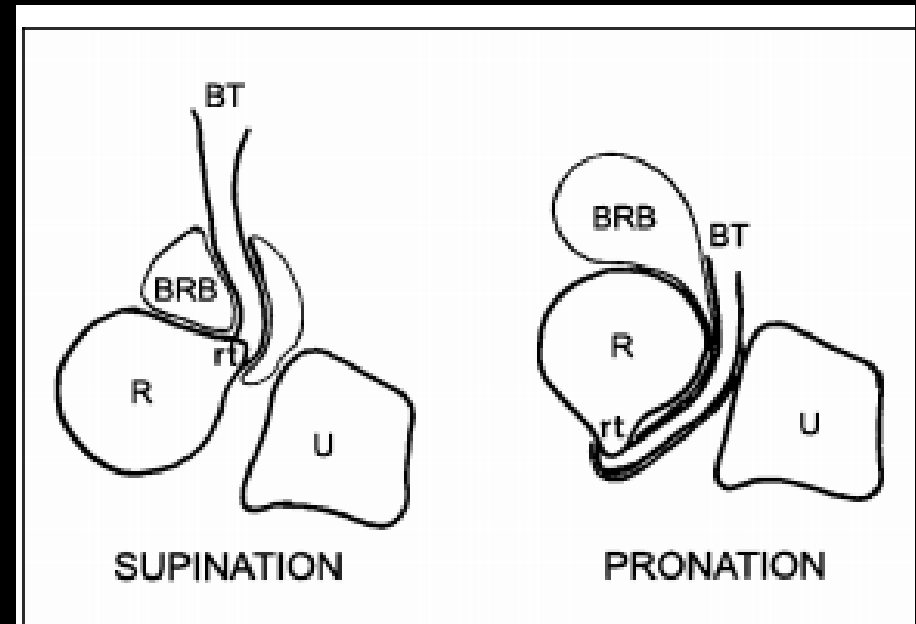
Short head

# Findings

- **Congenitally bifid appearance of the distal biceps** to its radial tuberosity attachment
  - Tendinosis of both heads
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- High signal surrounding both heads of the distal biceps tendon, compatible with **cubital bursitis** including the bicipitoradial and interosseous bursae

# Cubital Bursae

- Bicipitoradial bursa
  - Anterior to radial tuberosity
  - Intimate with biceps tendon insertion
  - Compressed with pronation
  - When large, can compress adjacent nerves (usu sup or deep br radial nerve)



- Interosseous bursa

# Cubital Bursae

- Bicipitoradial bursa
- Interosseous bursa
  - 20% of individuals
  - Medial aspect of antecubital fossa, adj to biceps tendon and along the brachialis muscle

