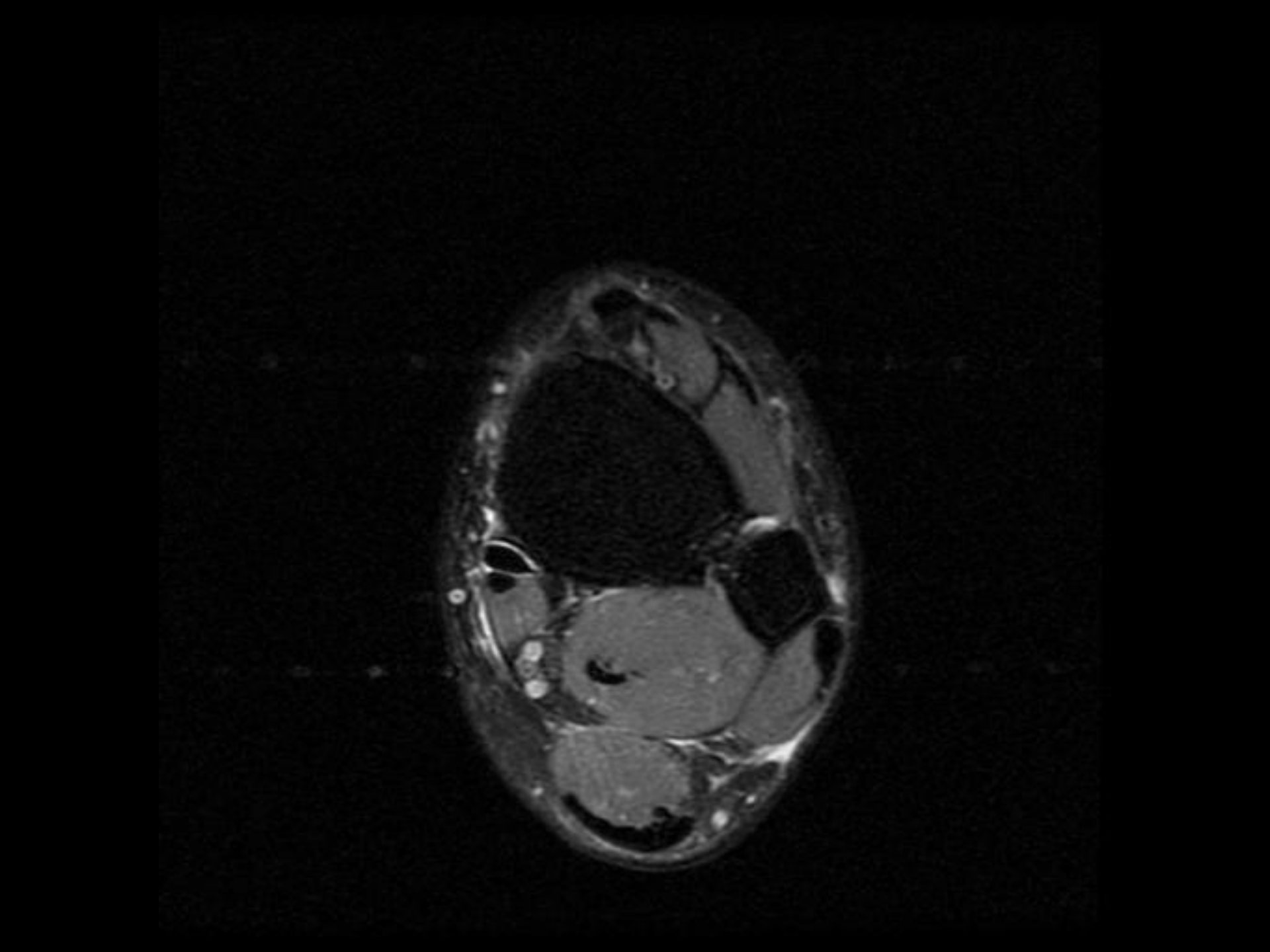
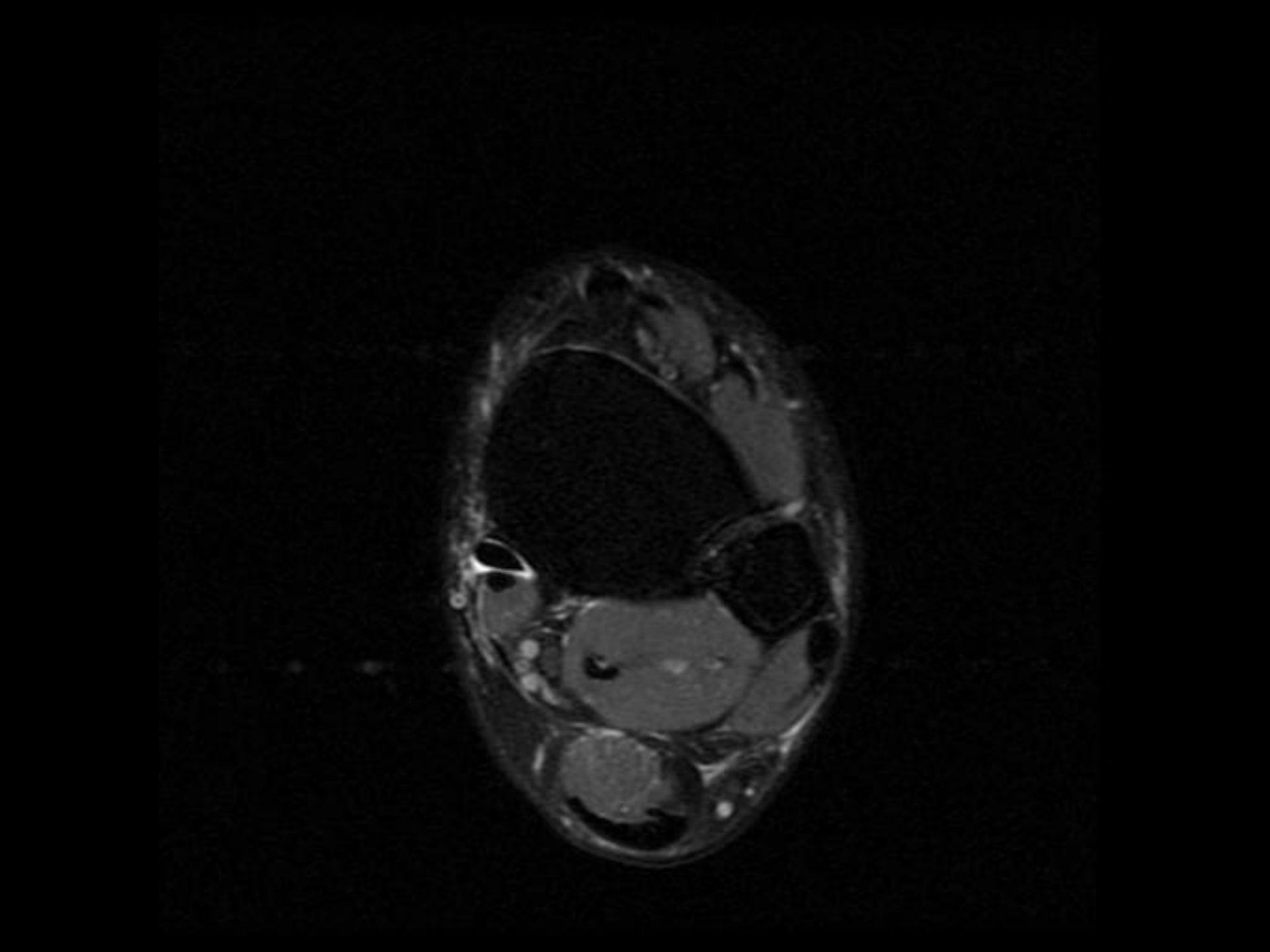
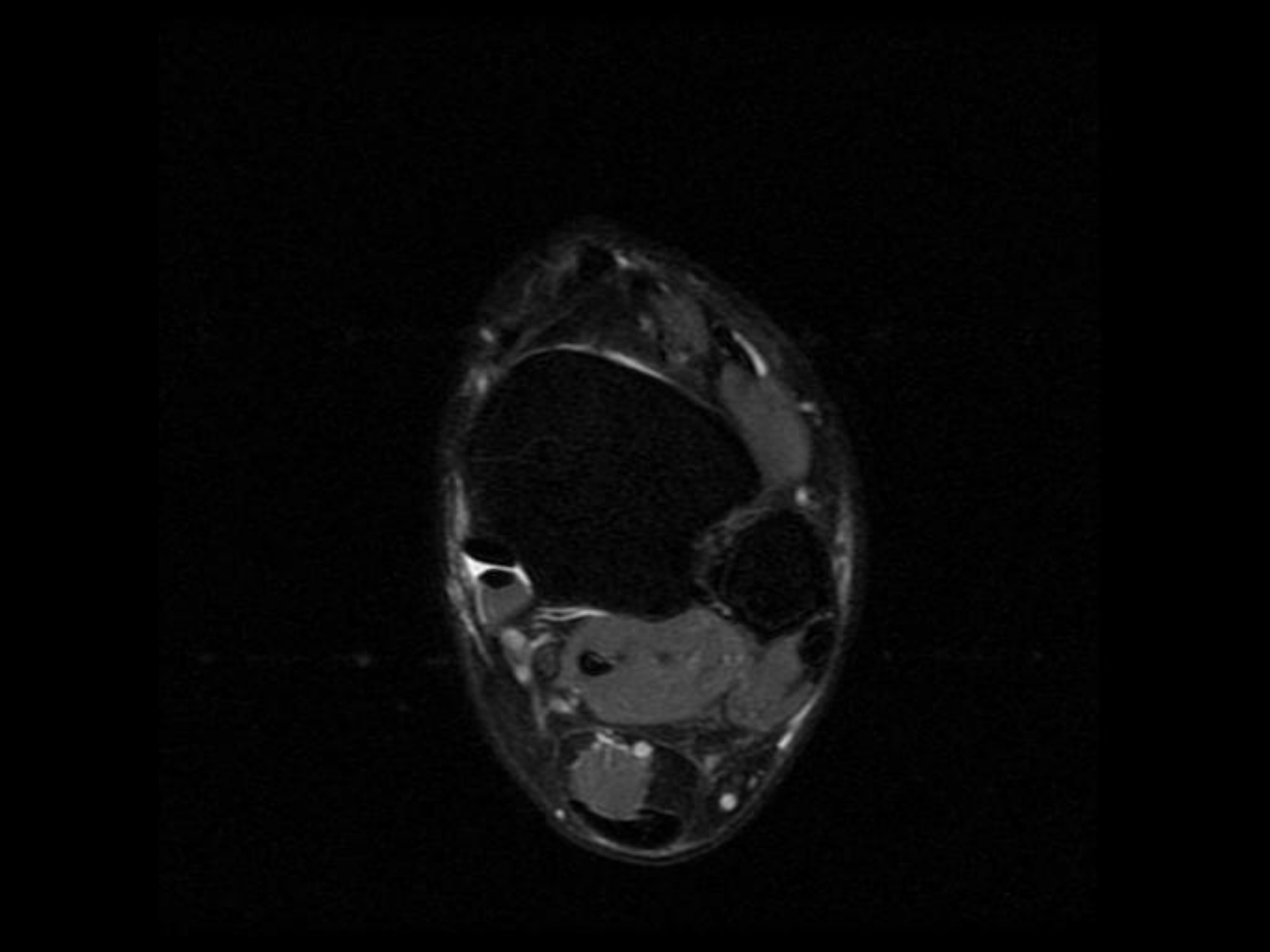
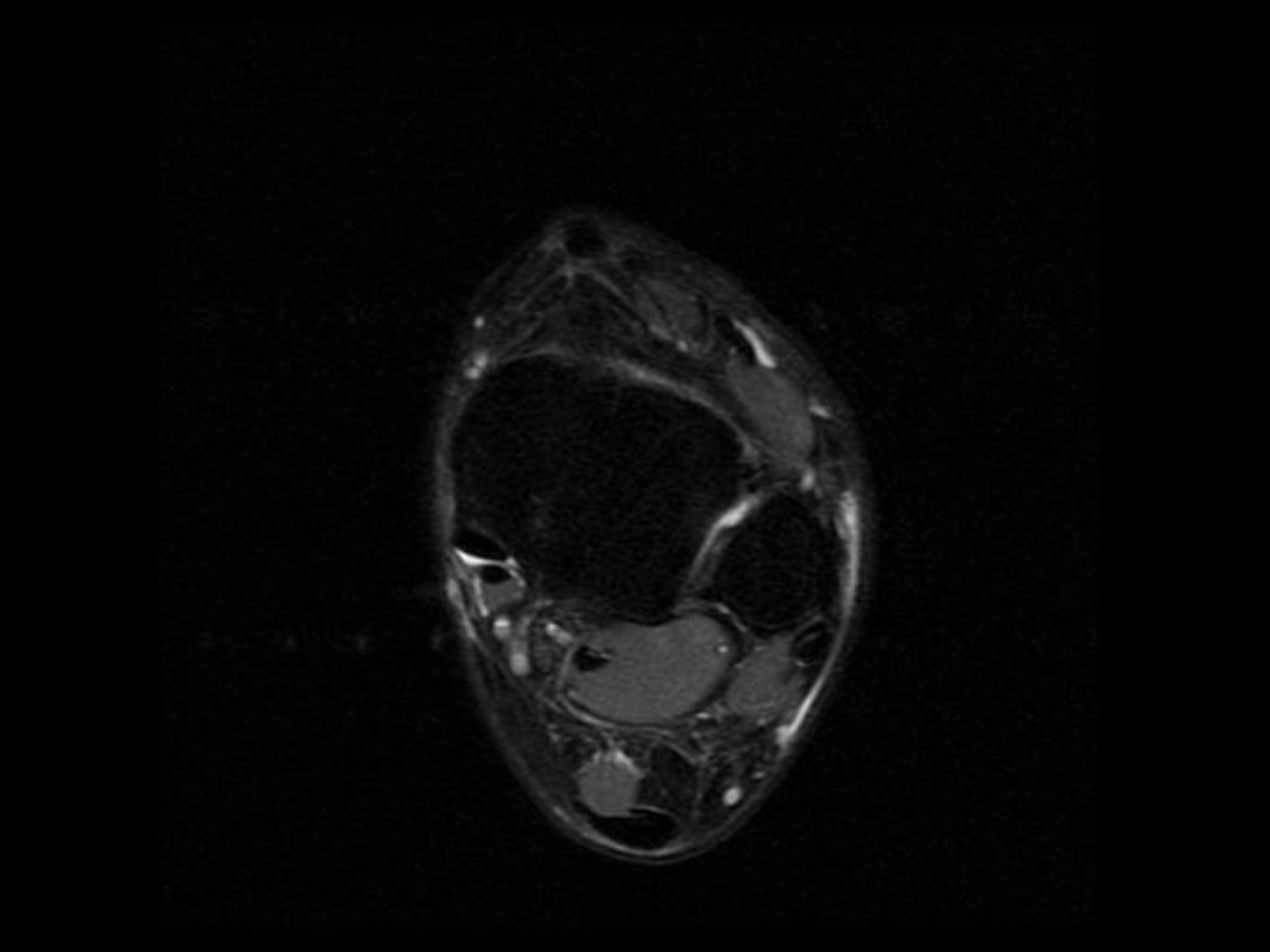
# 43 y/o F with lateral ankle pain and swelling x 2 months

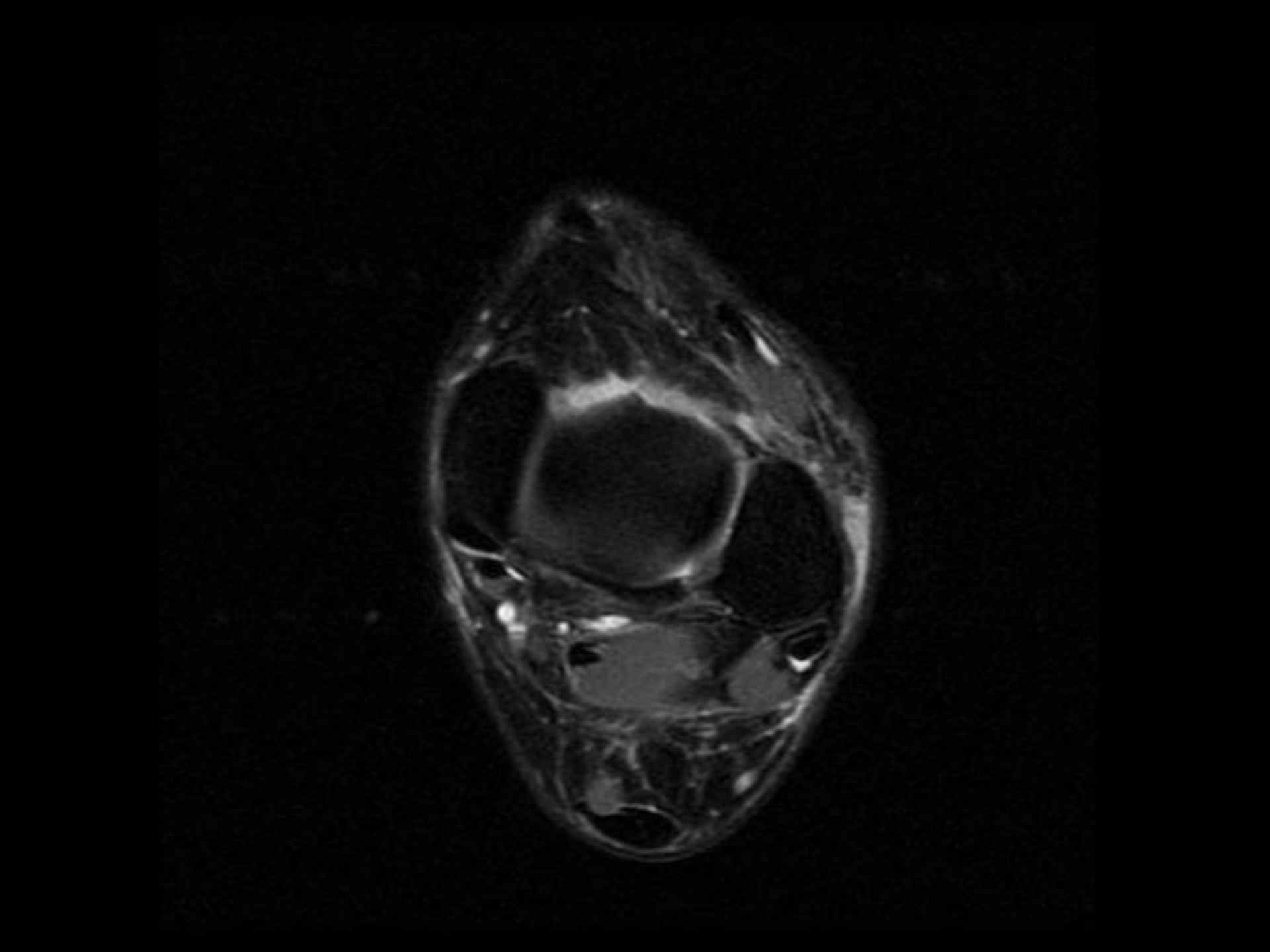
Nimesh Patel

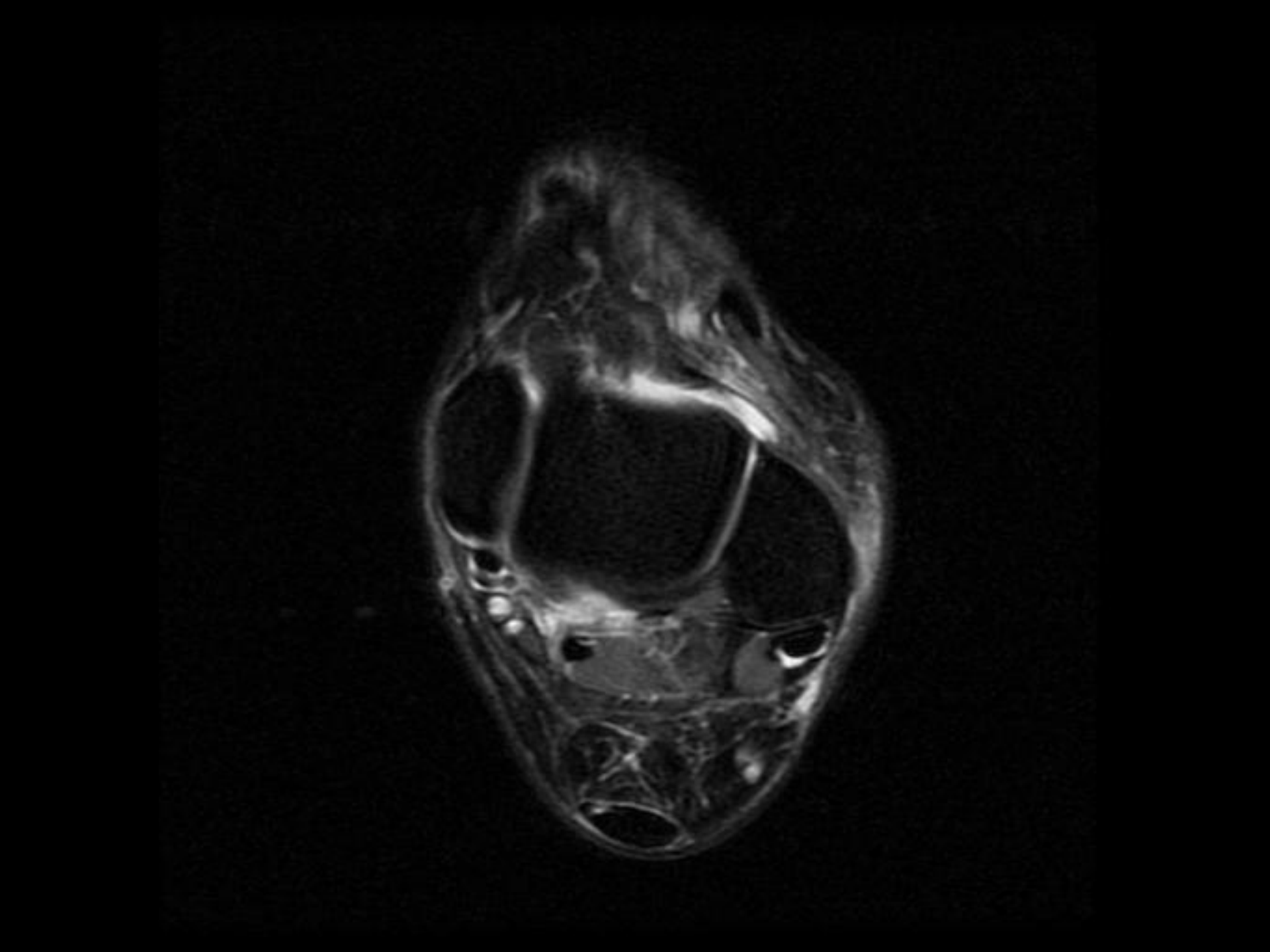


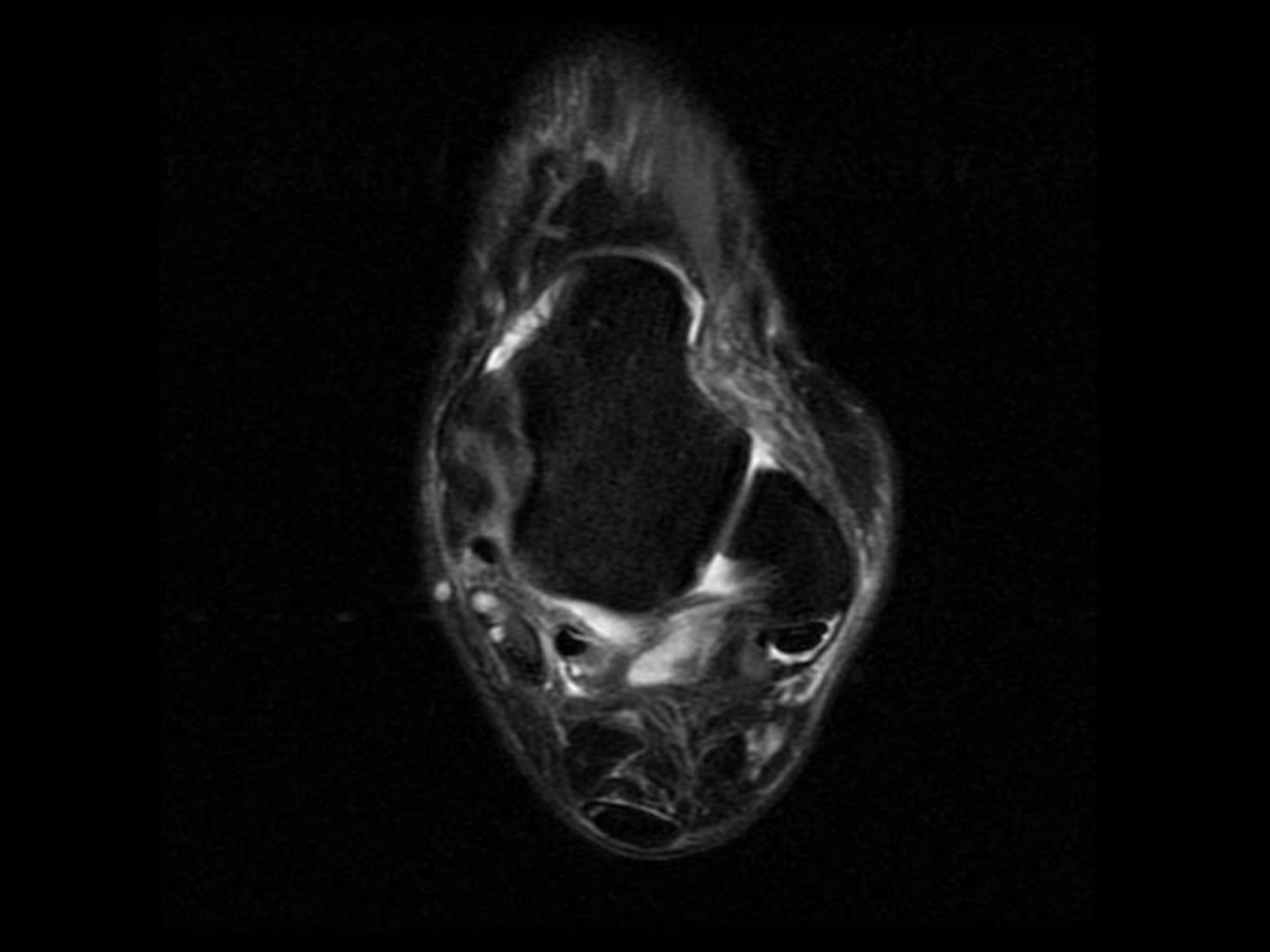


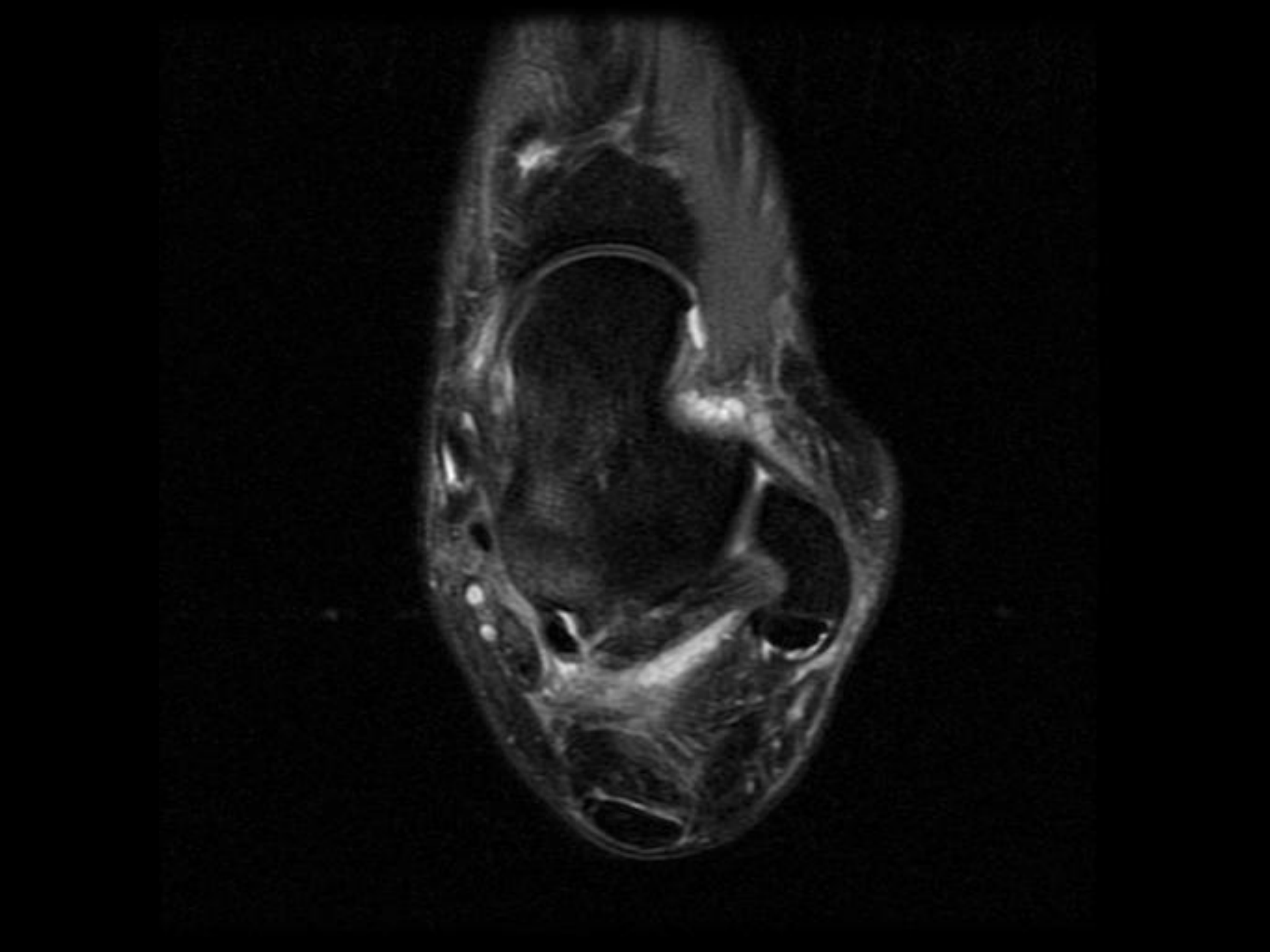


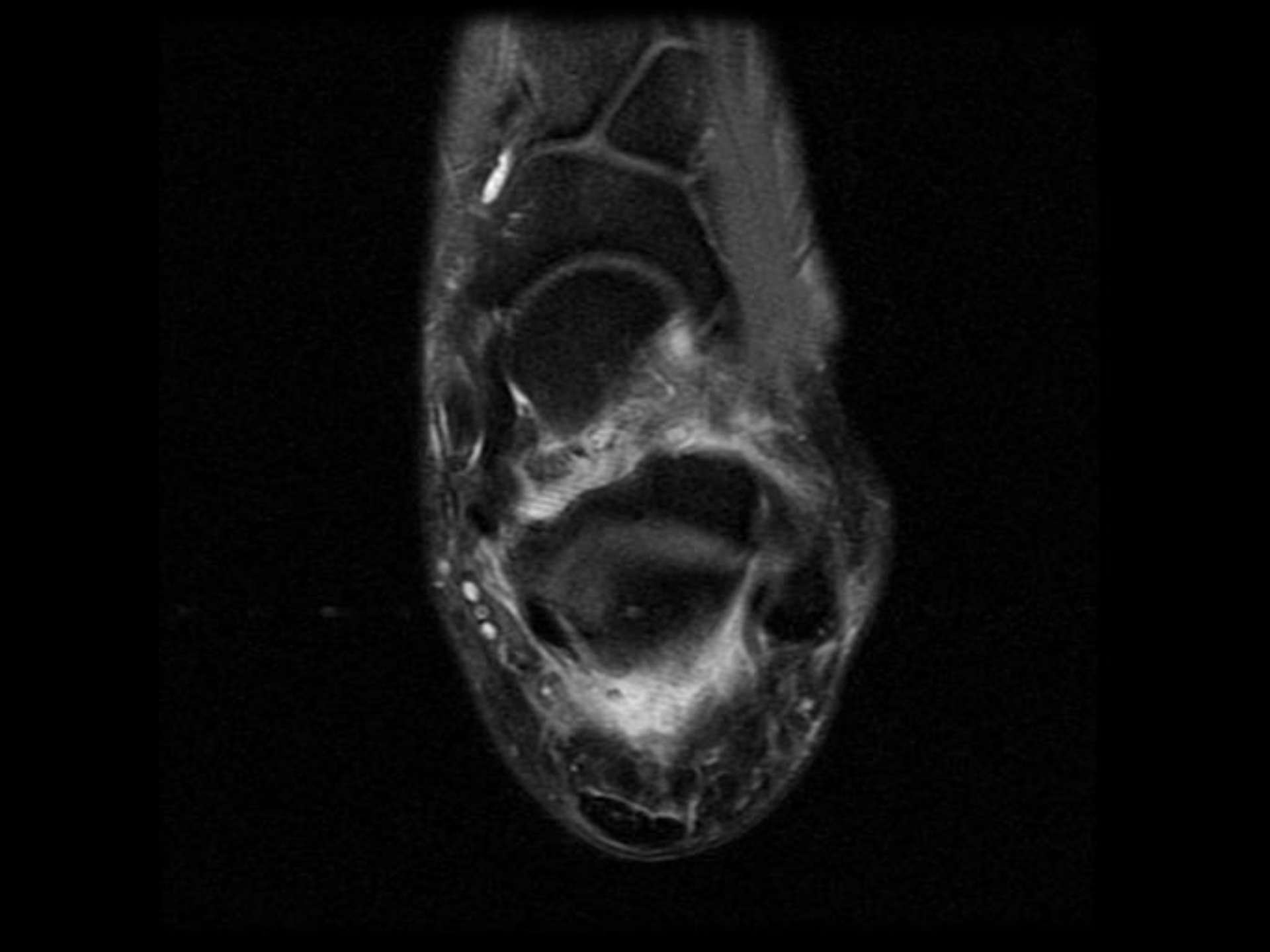


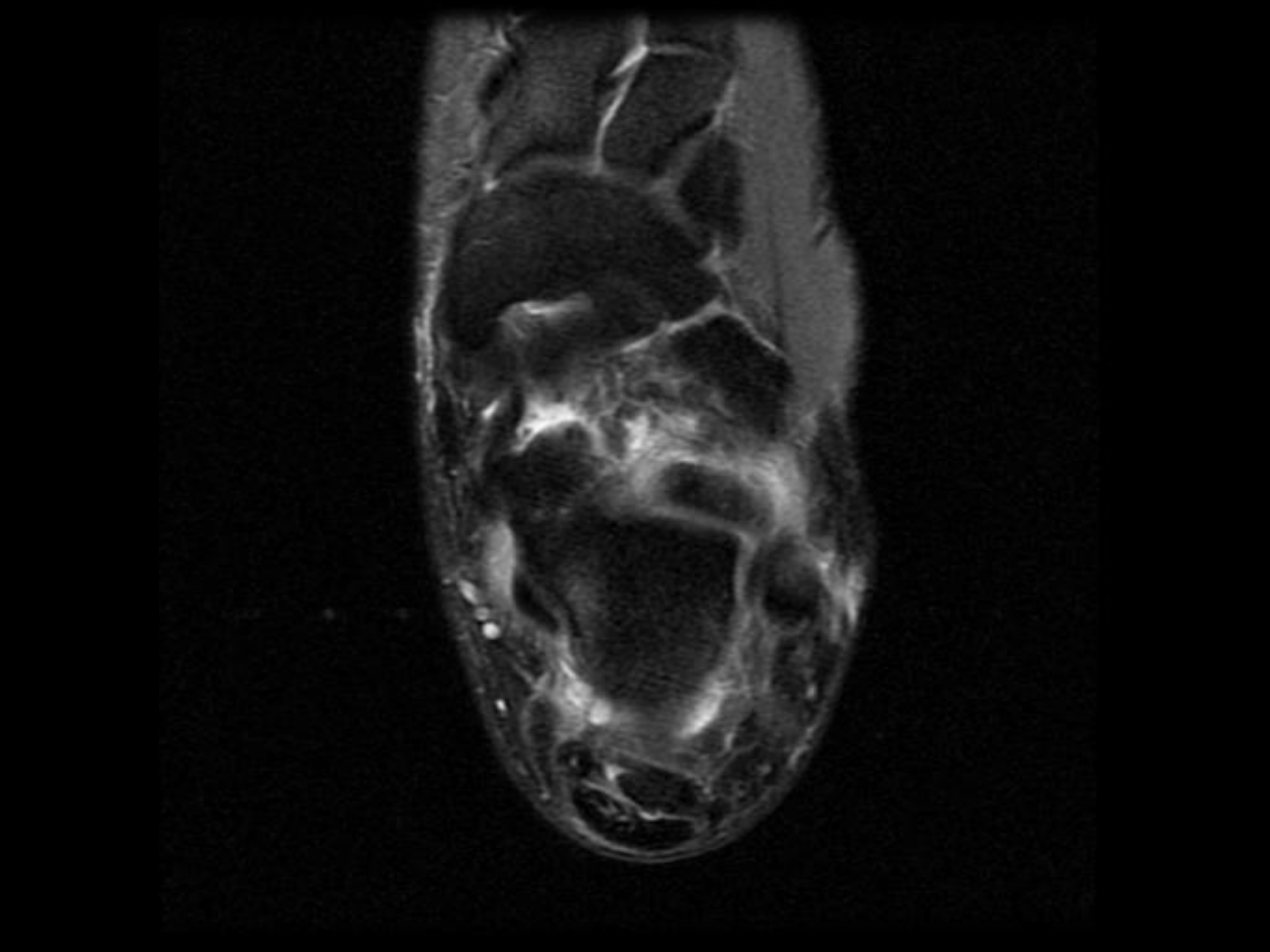


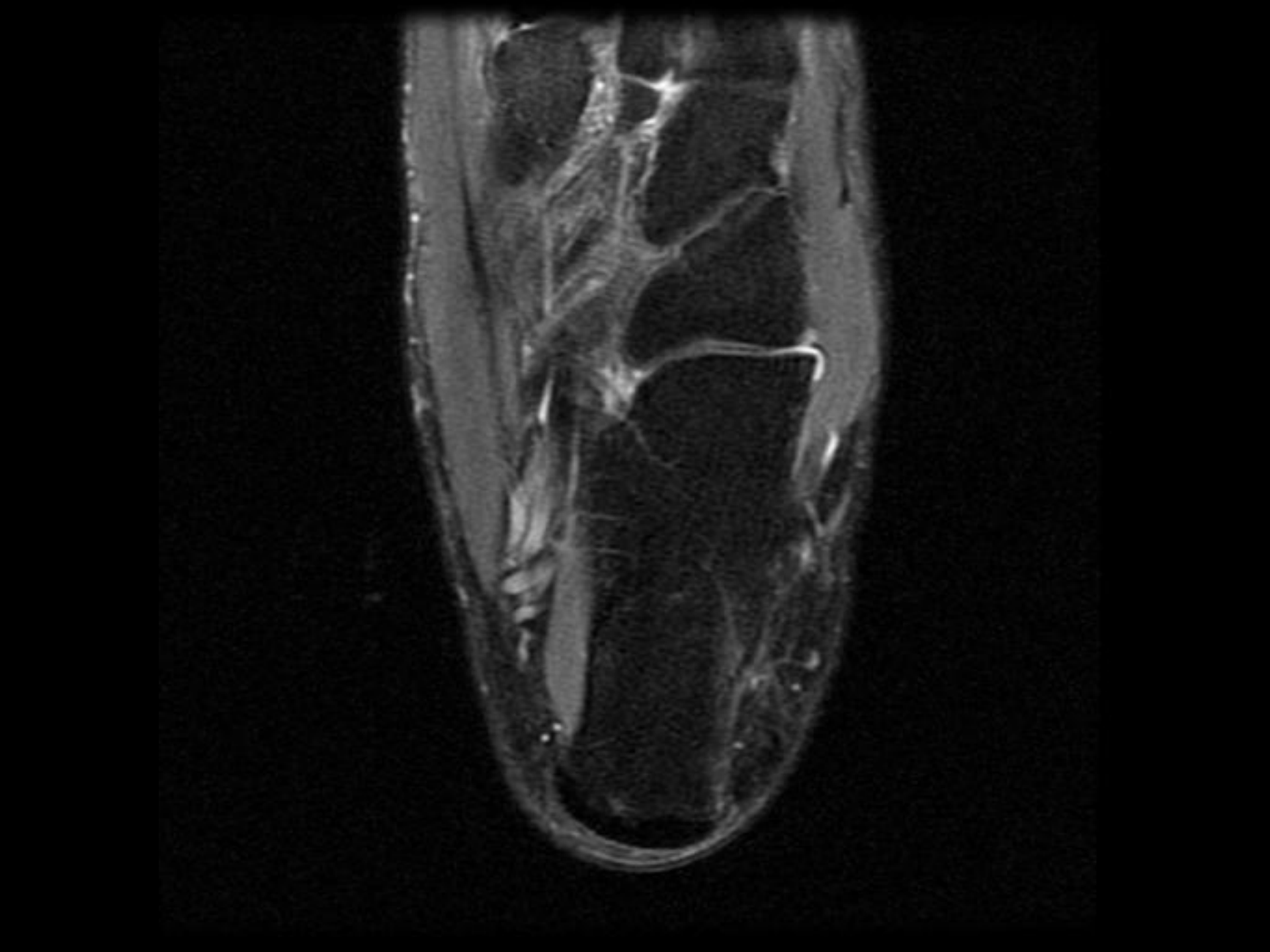


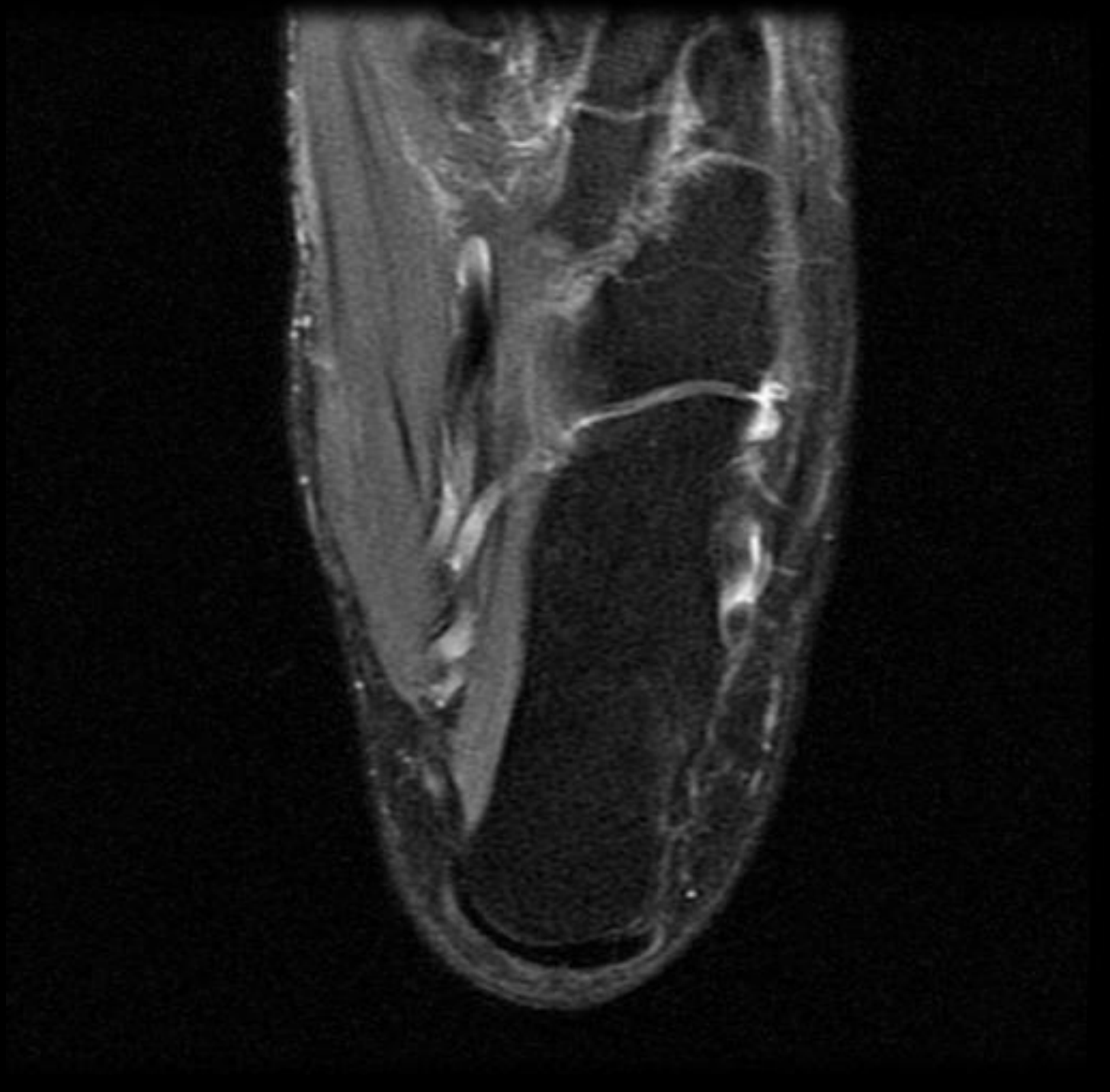


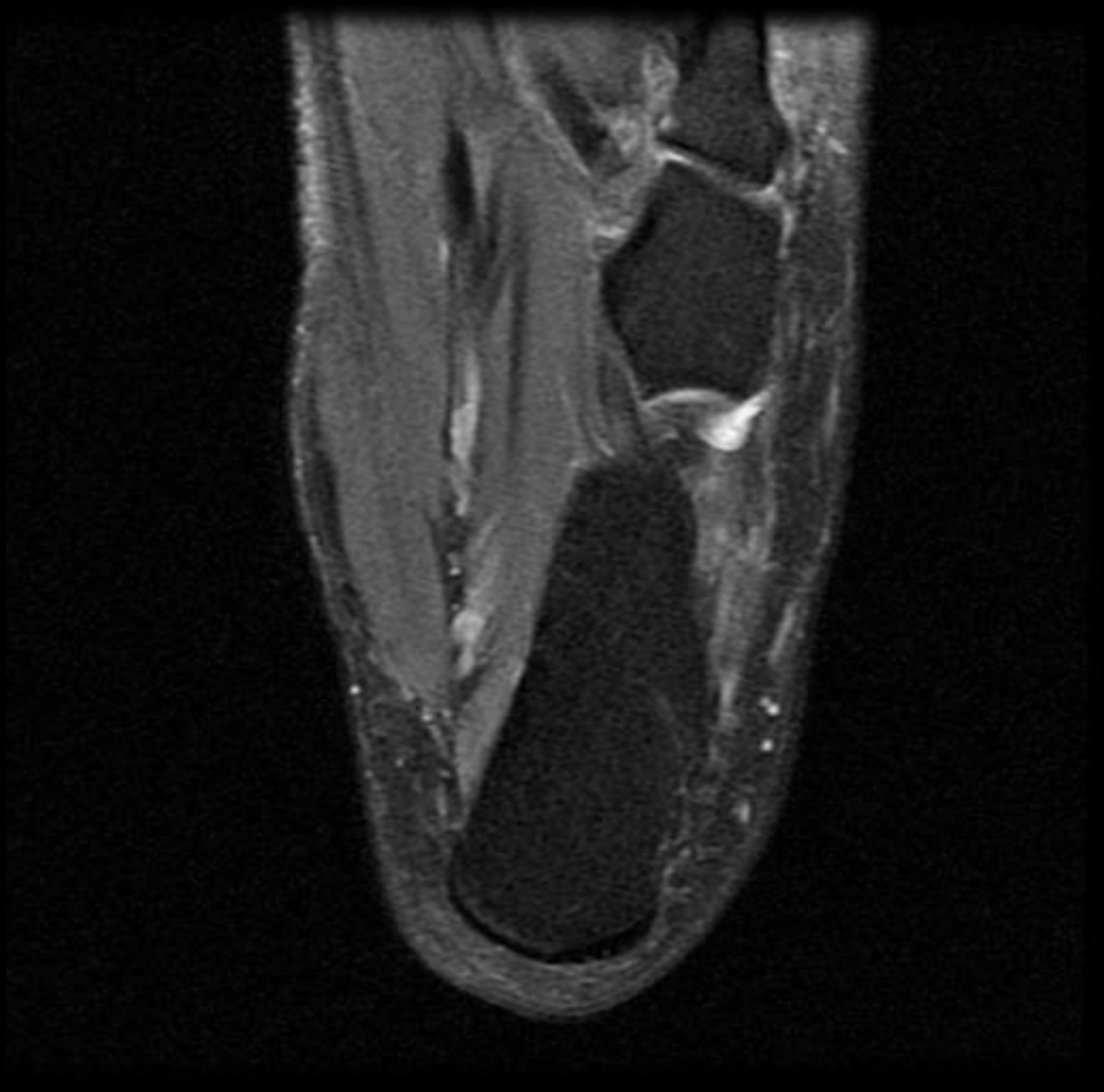


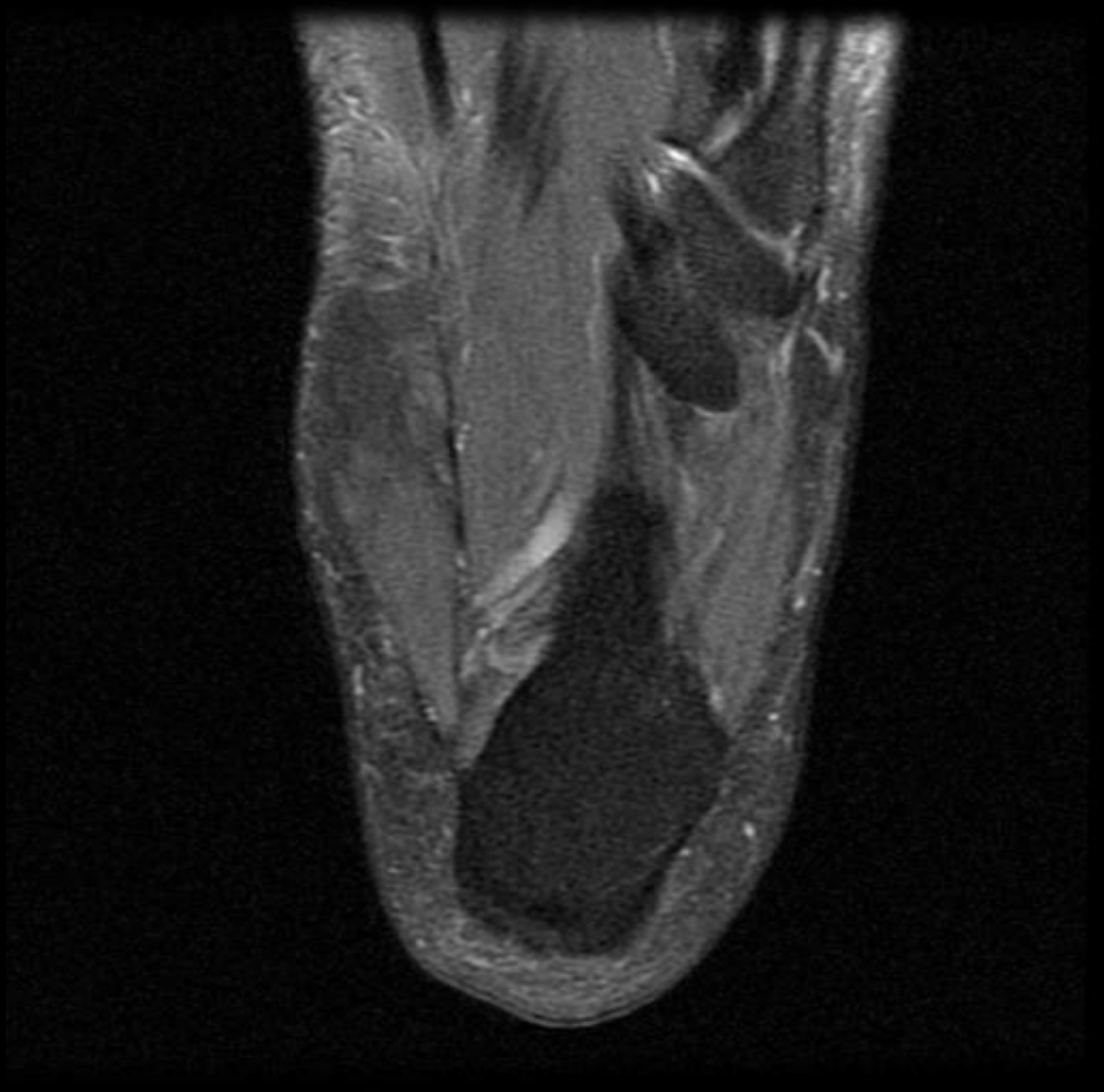


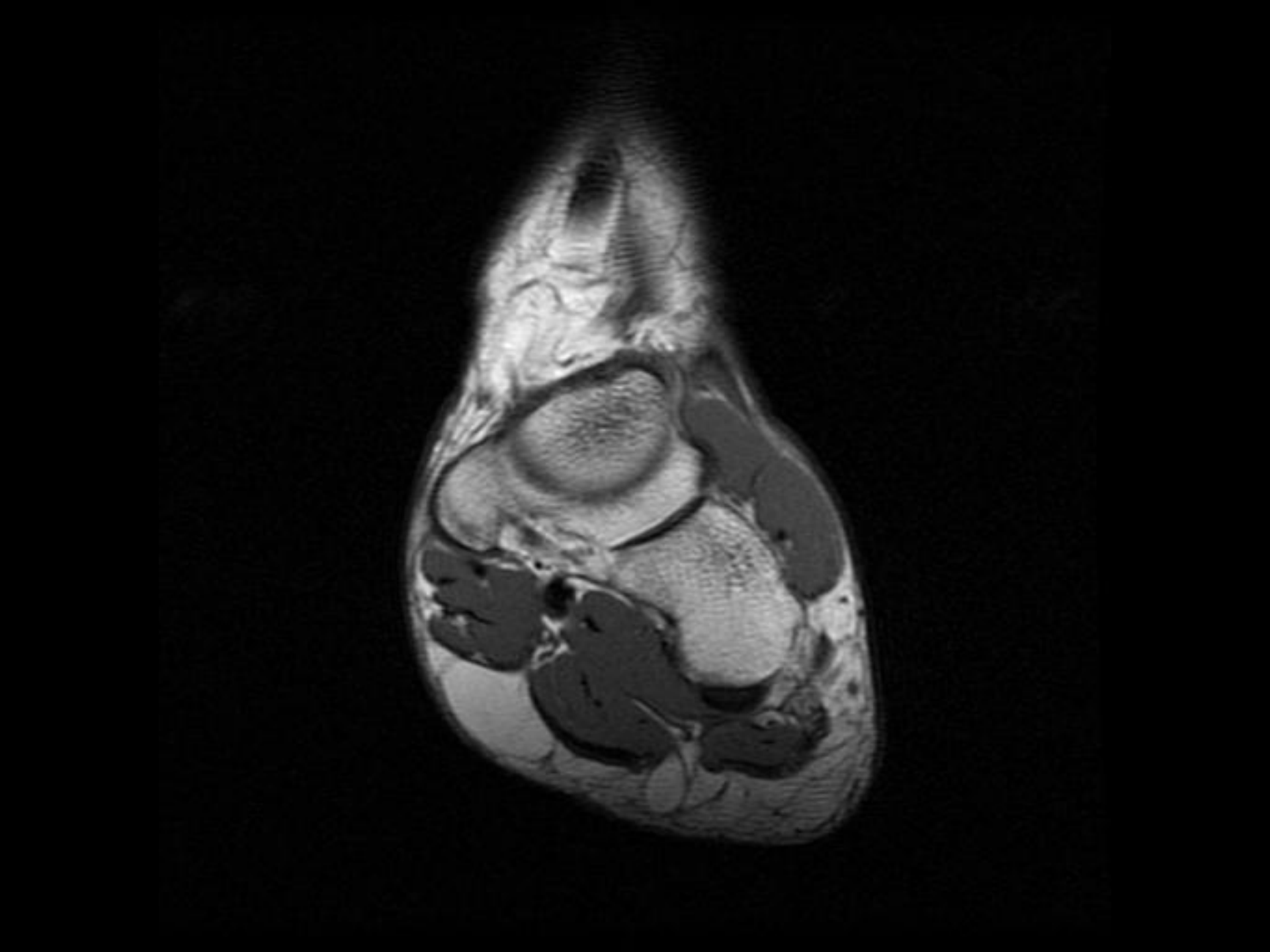


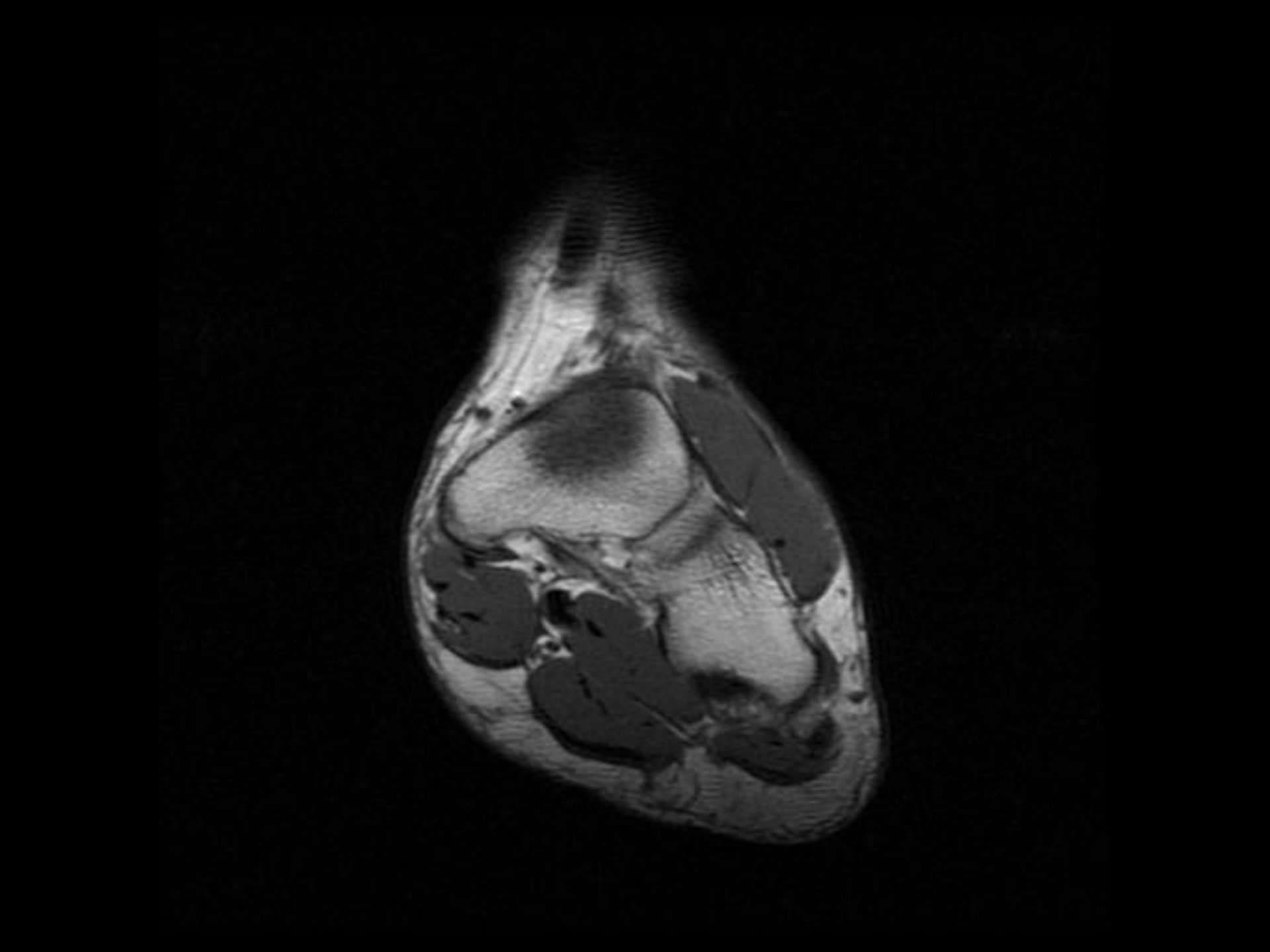


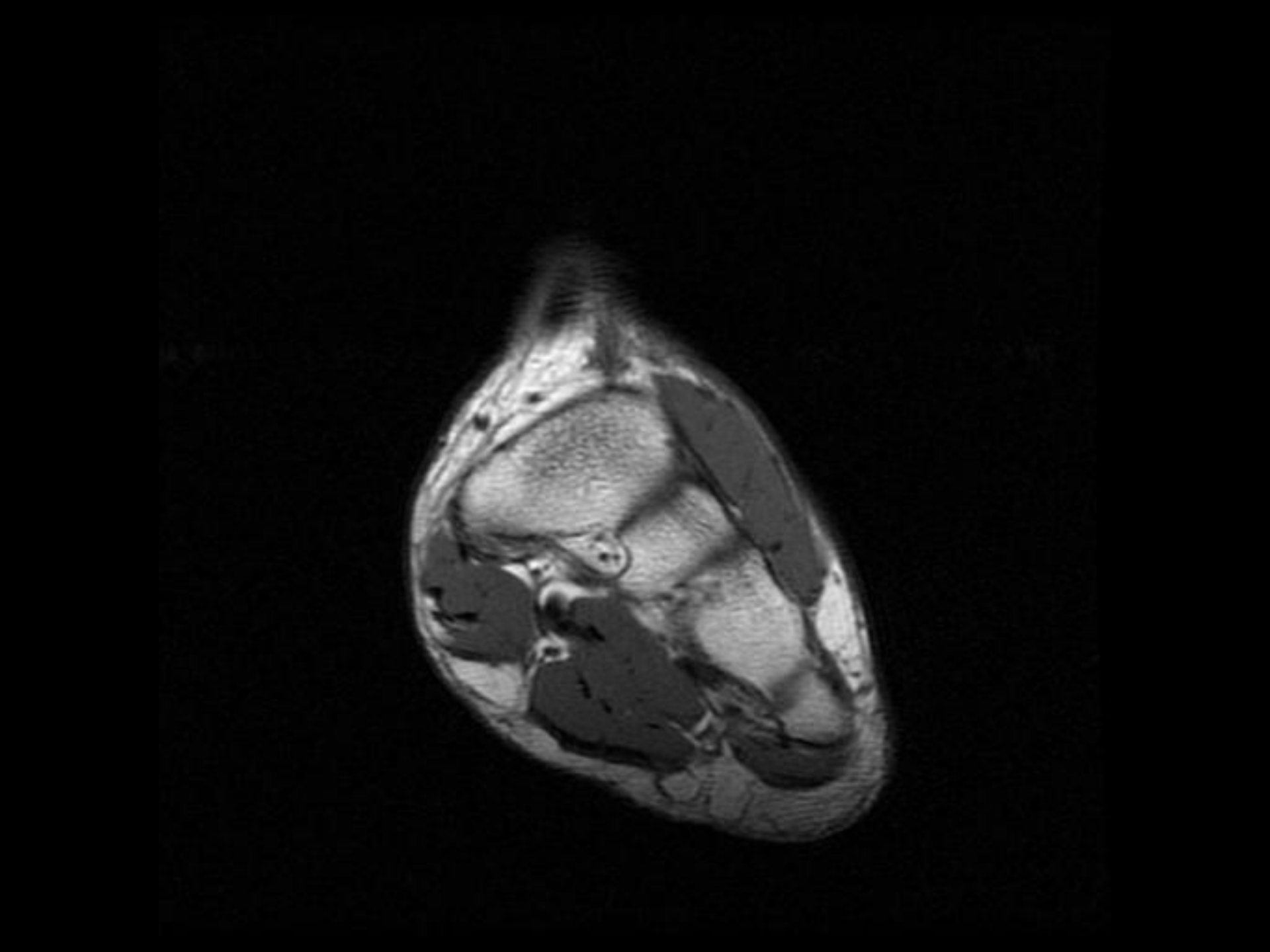


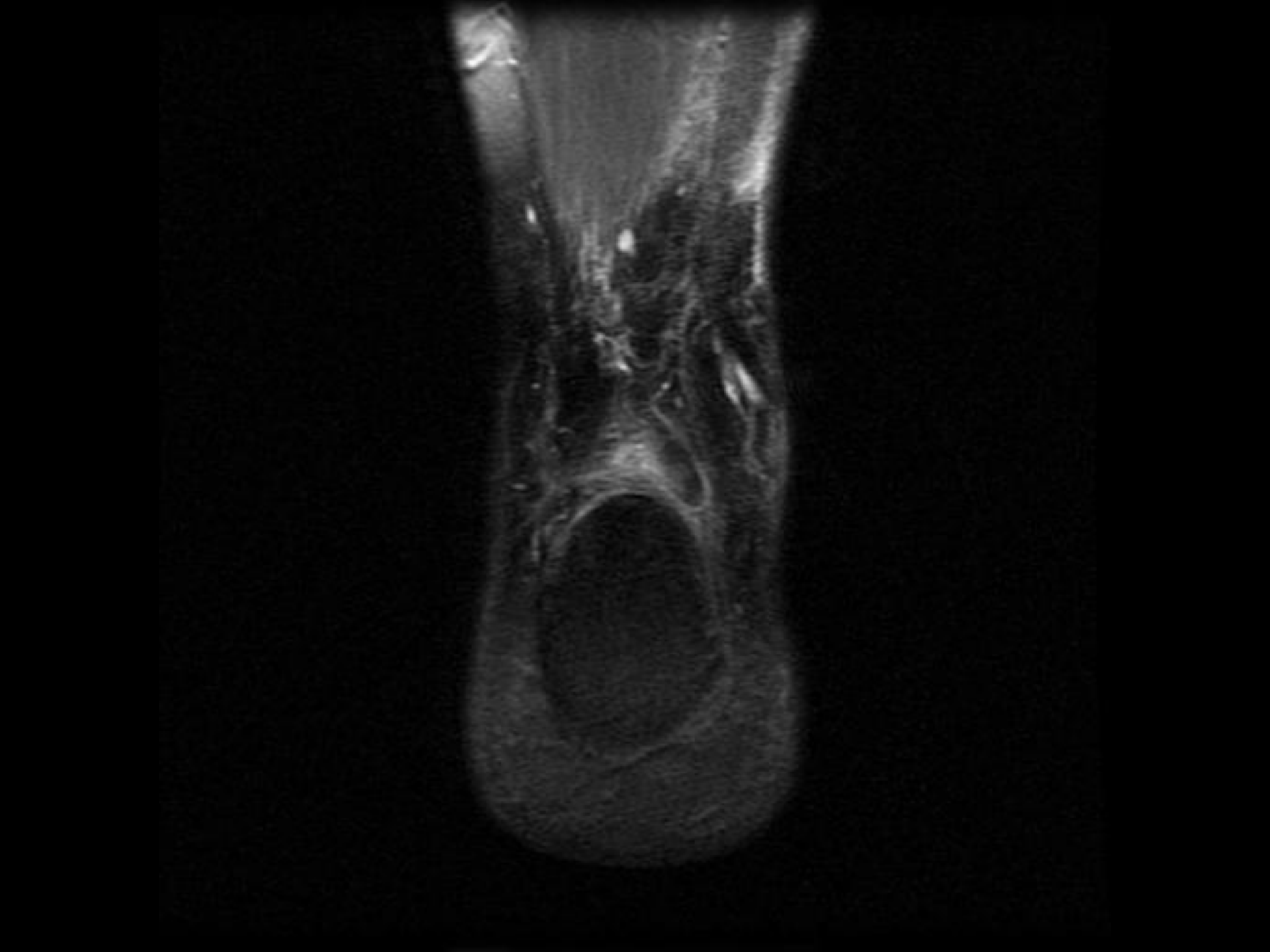


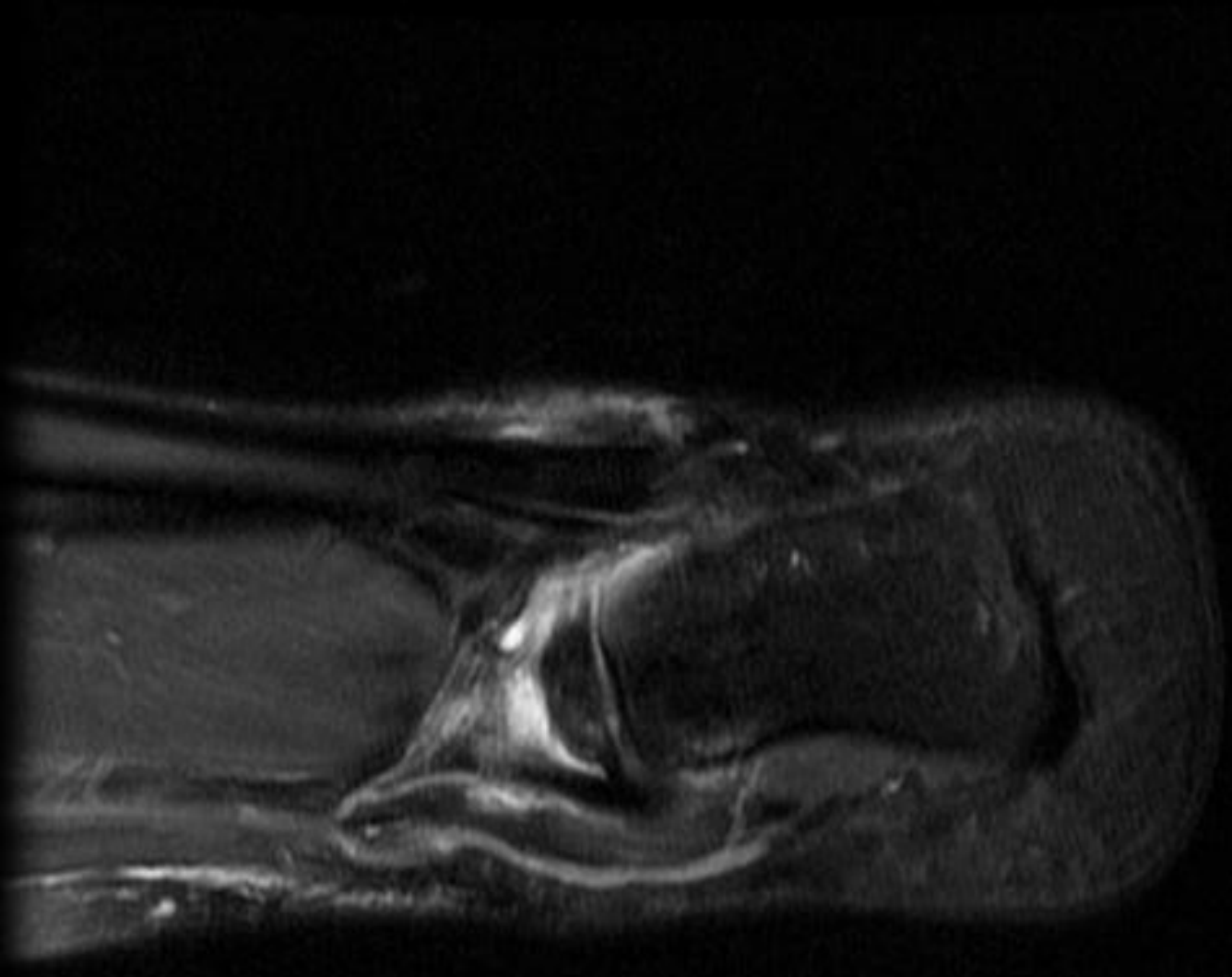


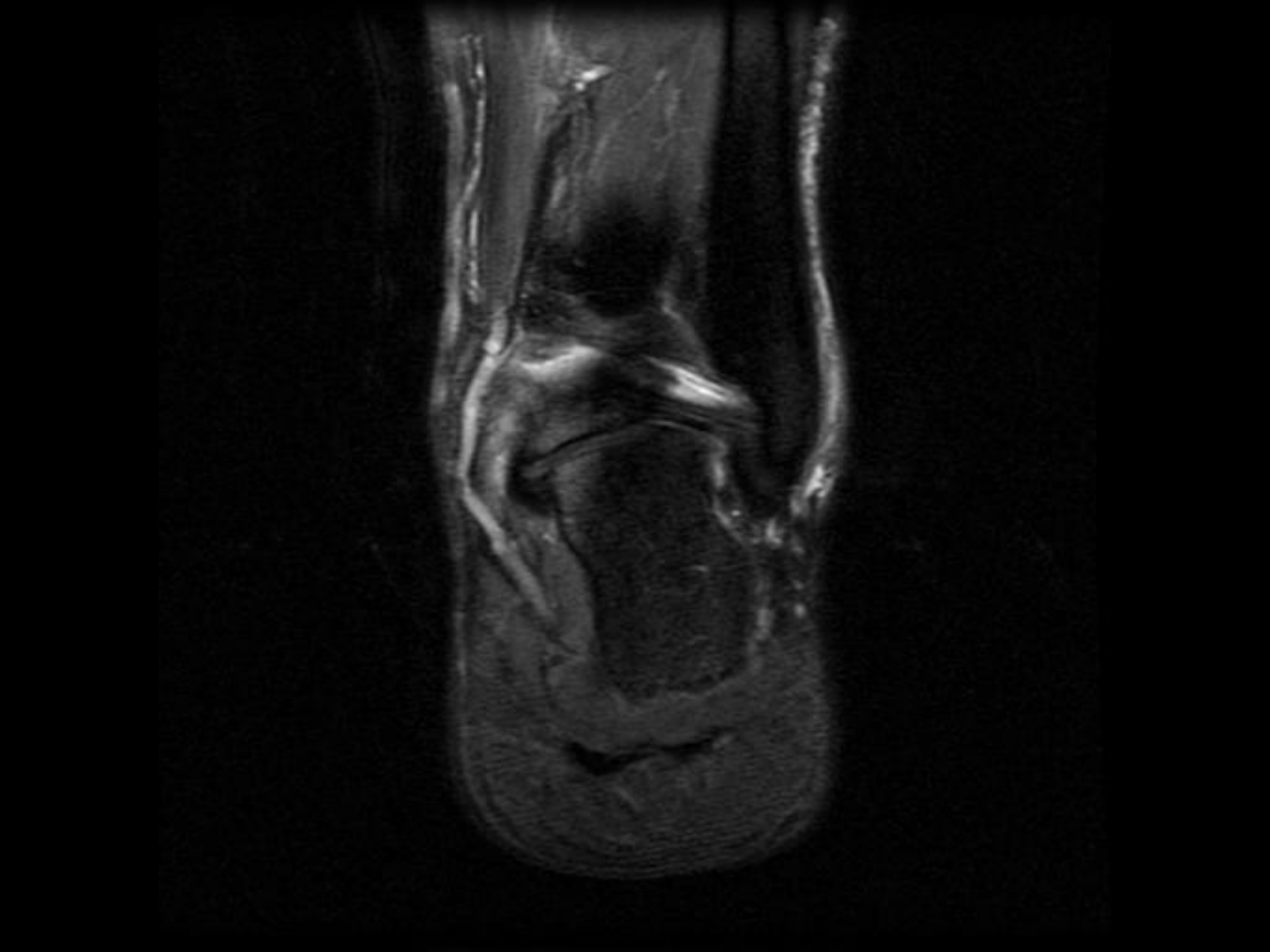


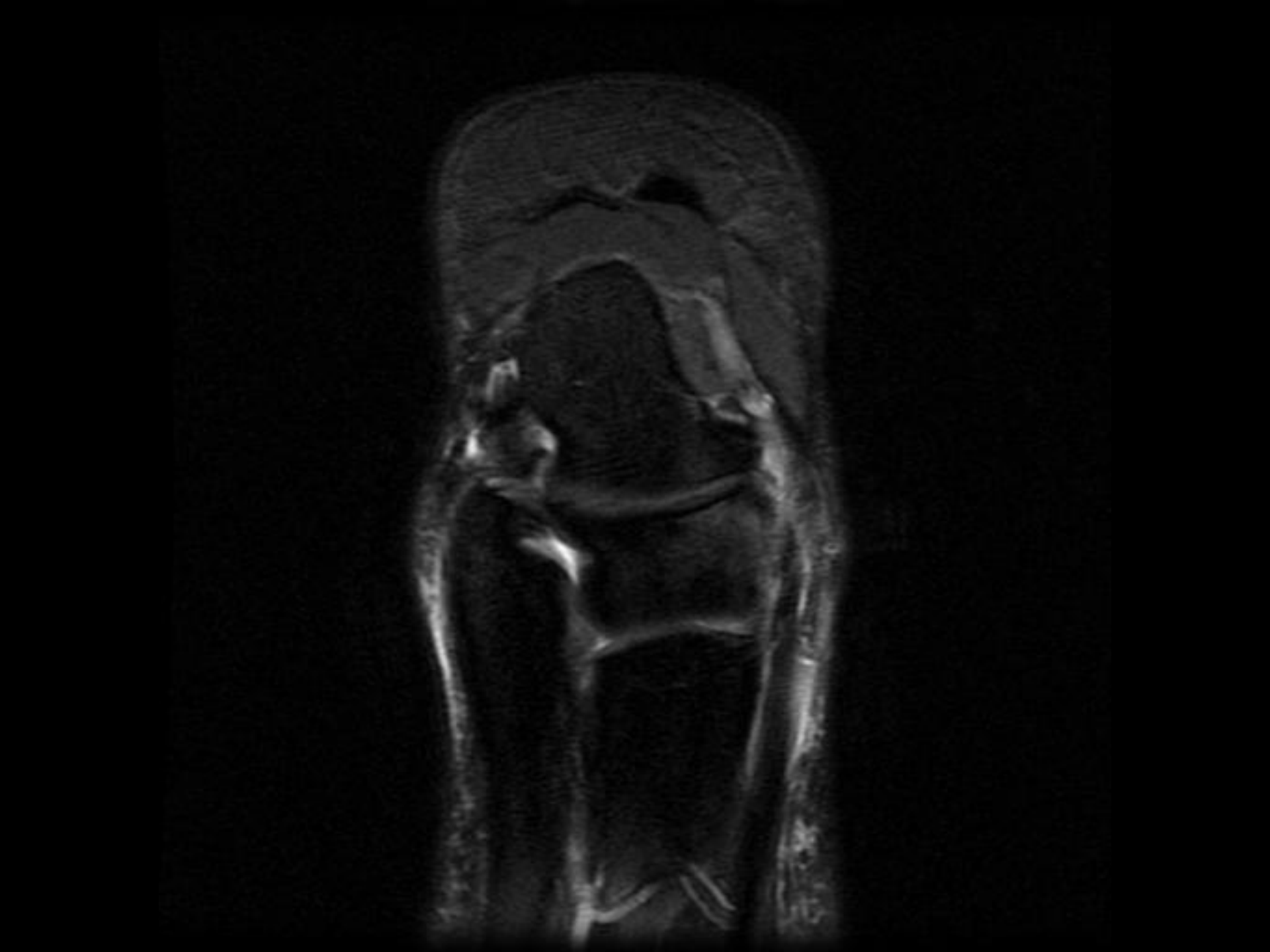


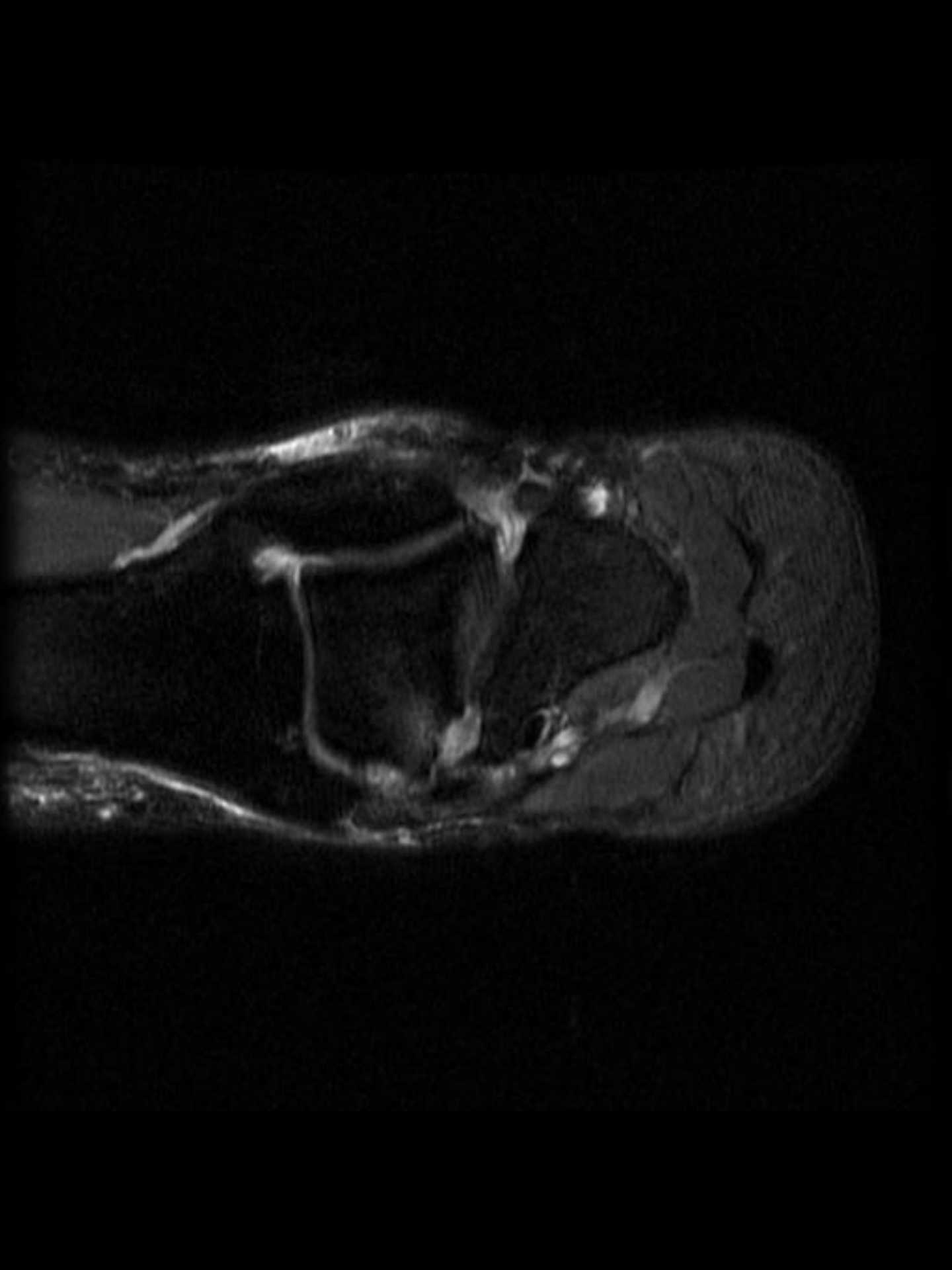


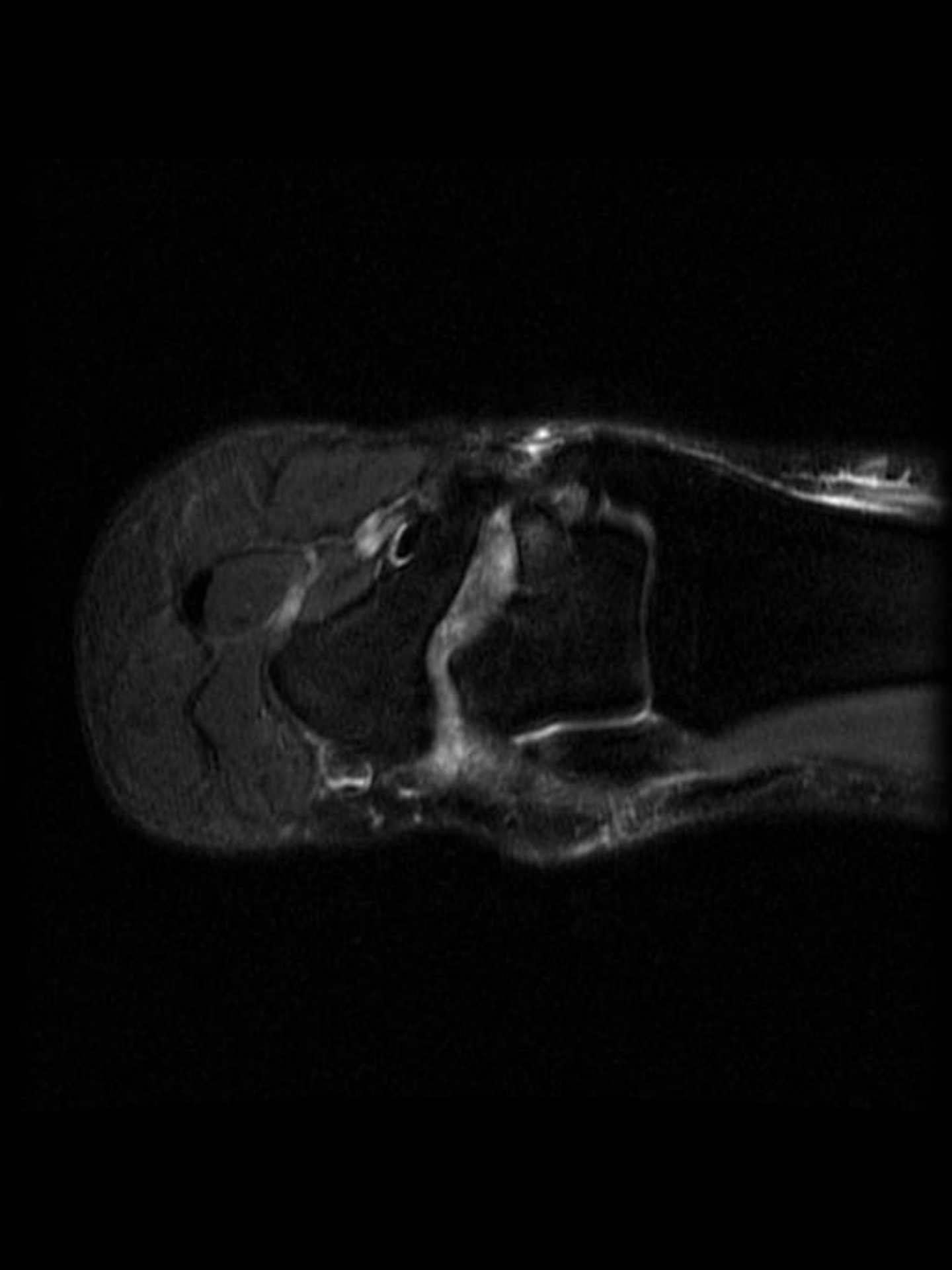


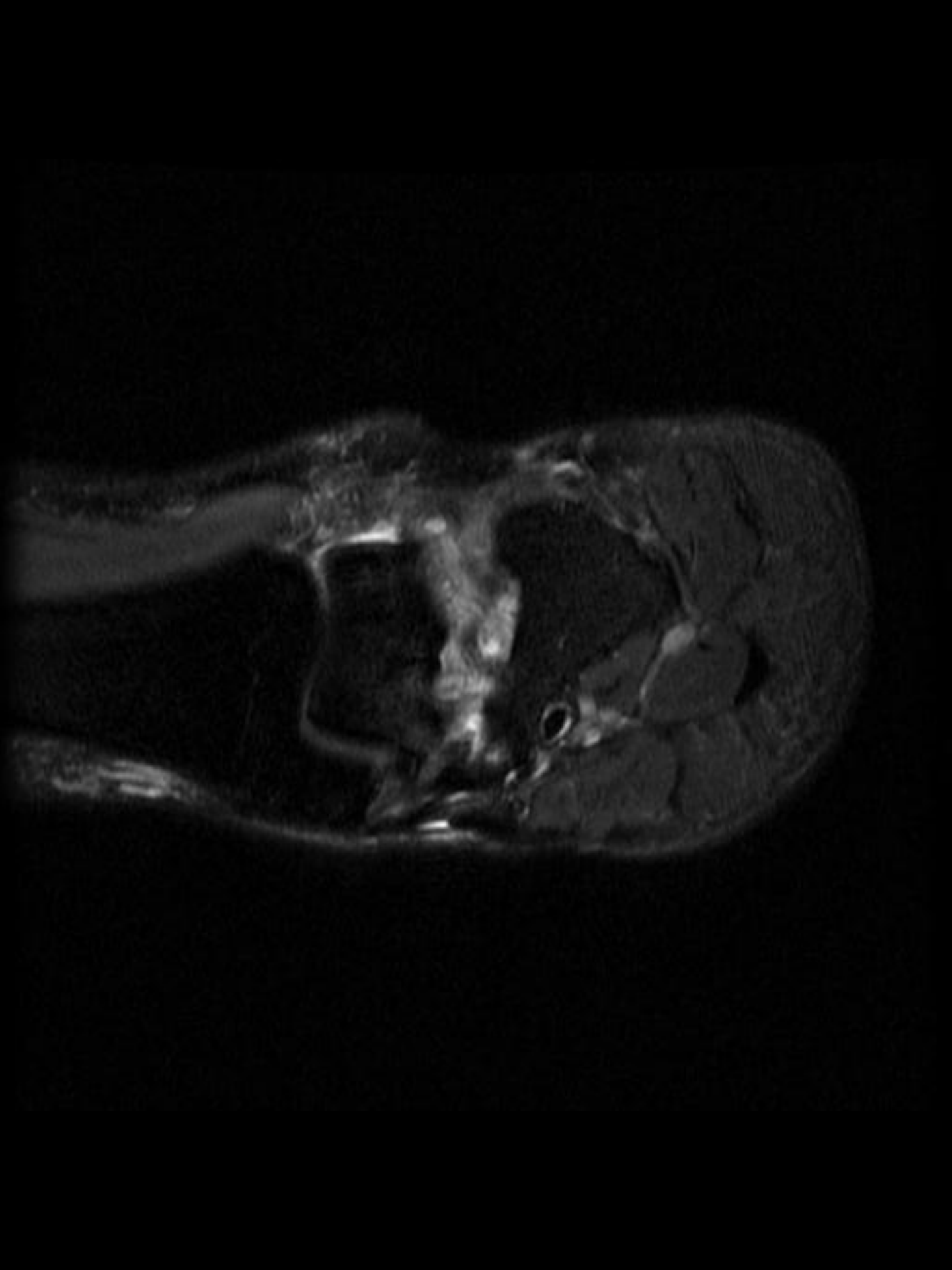


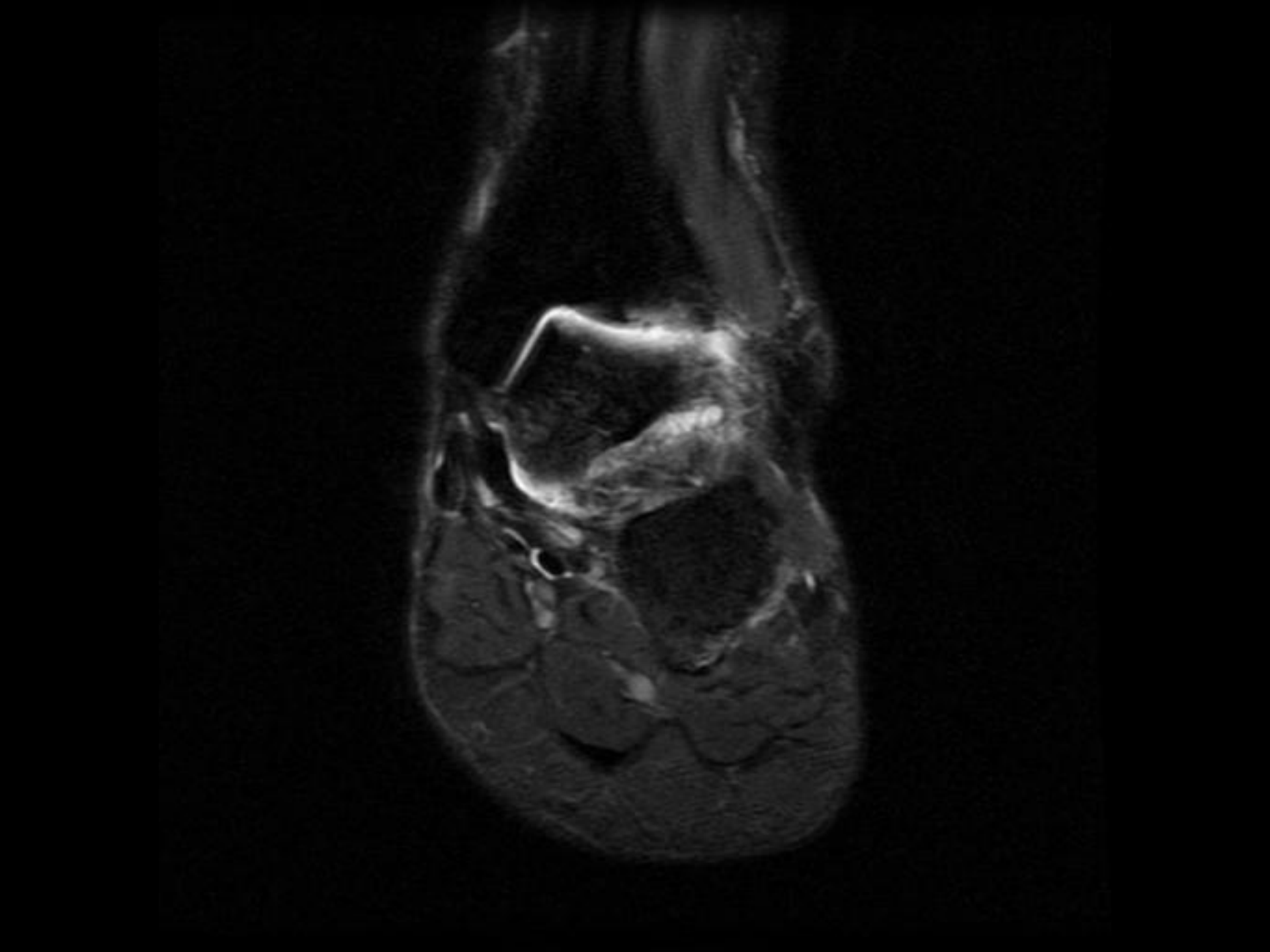


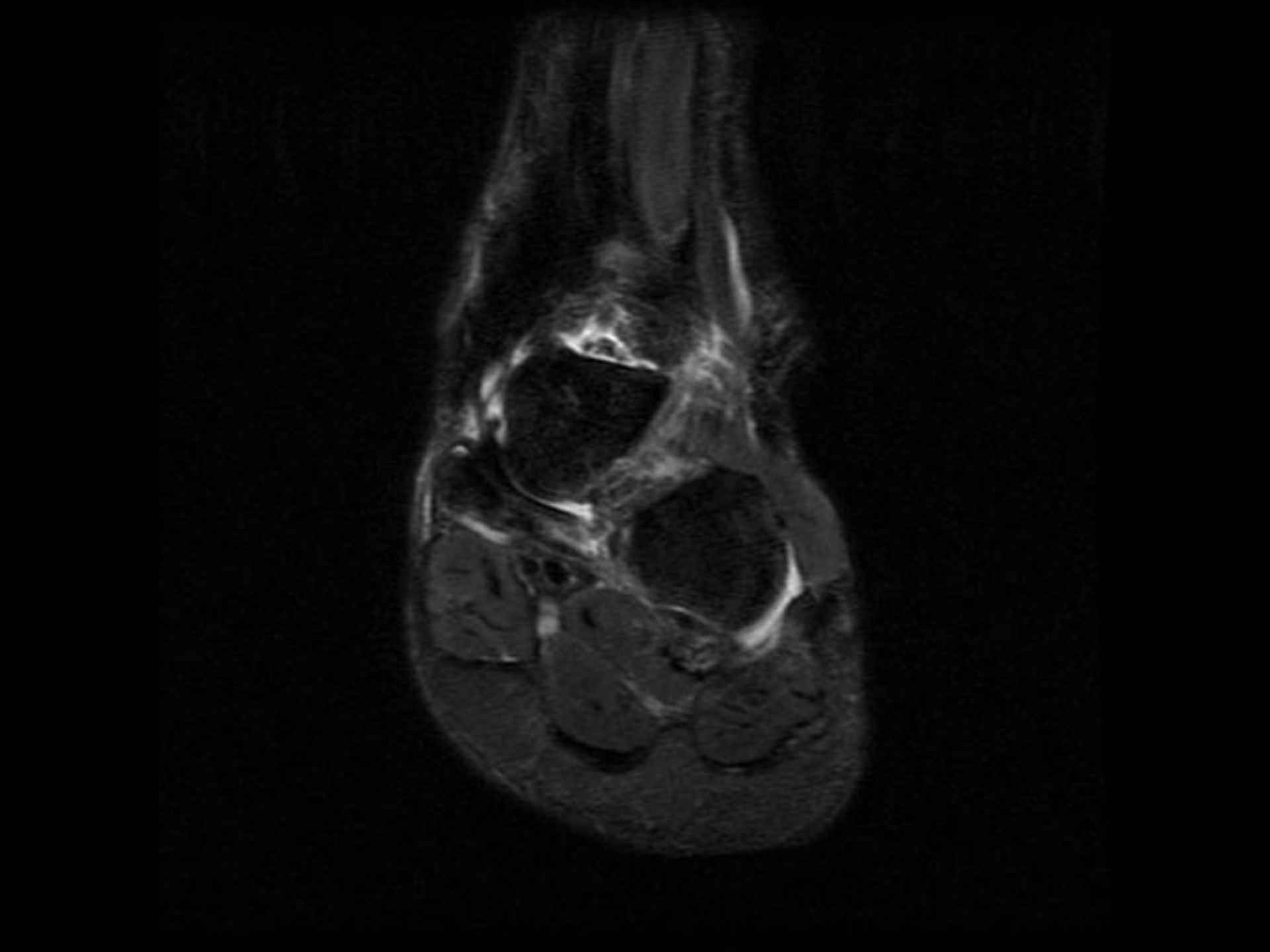


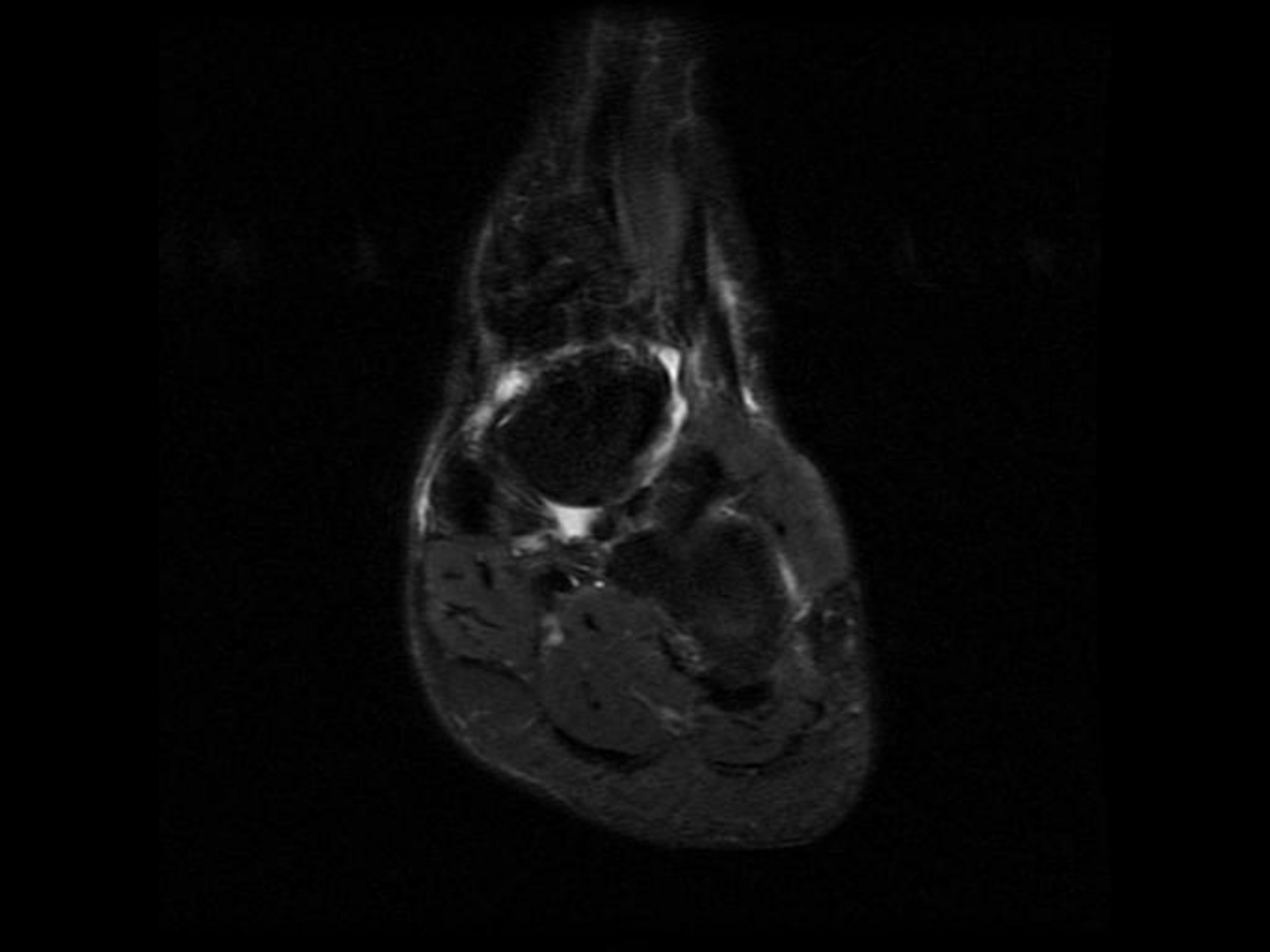


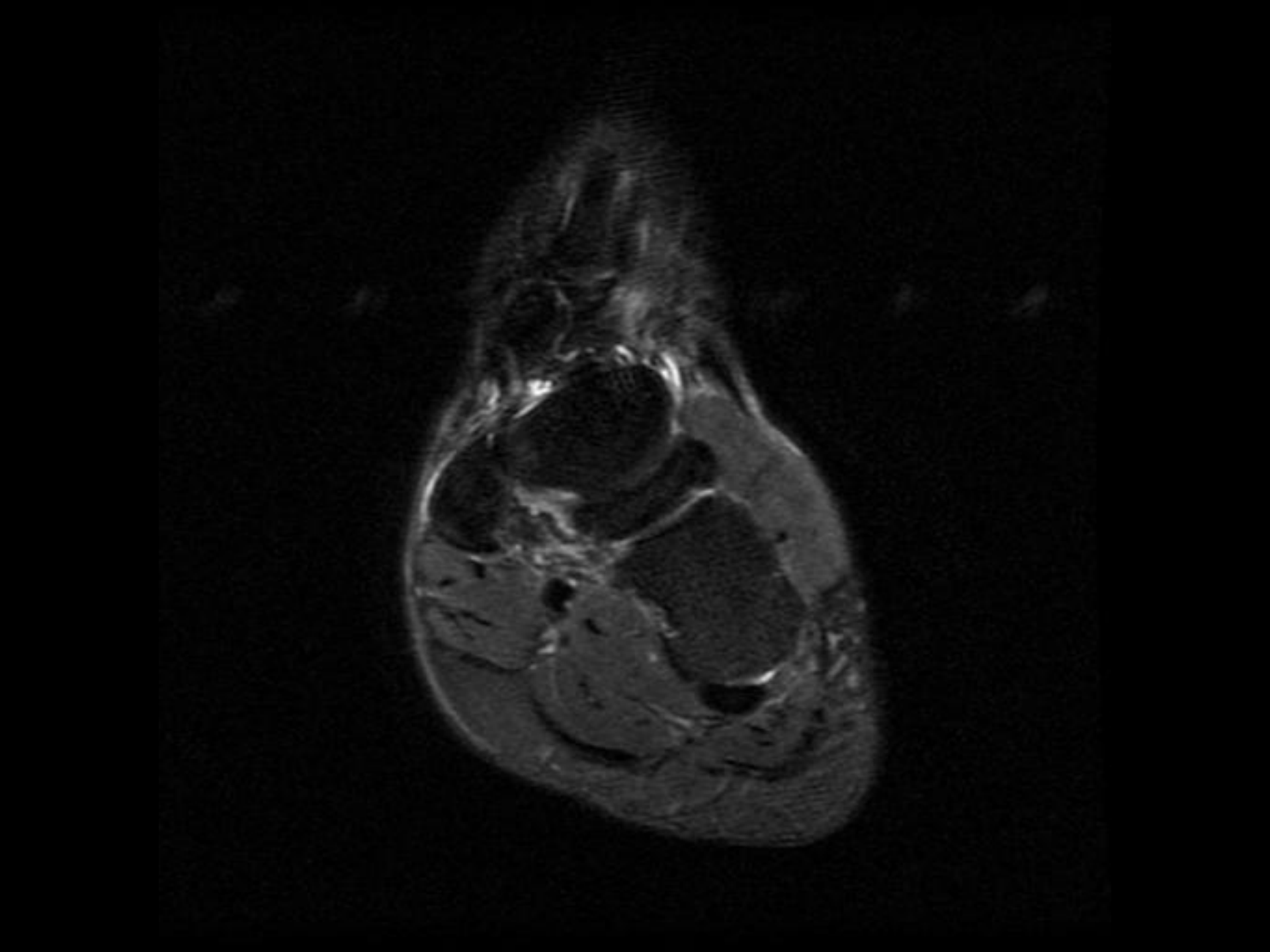


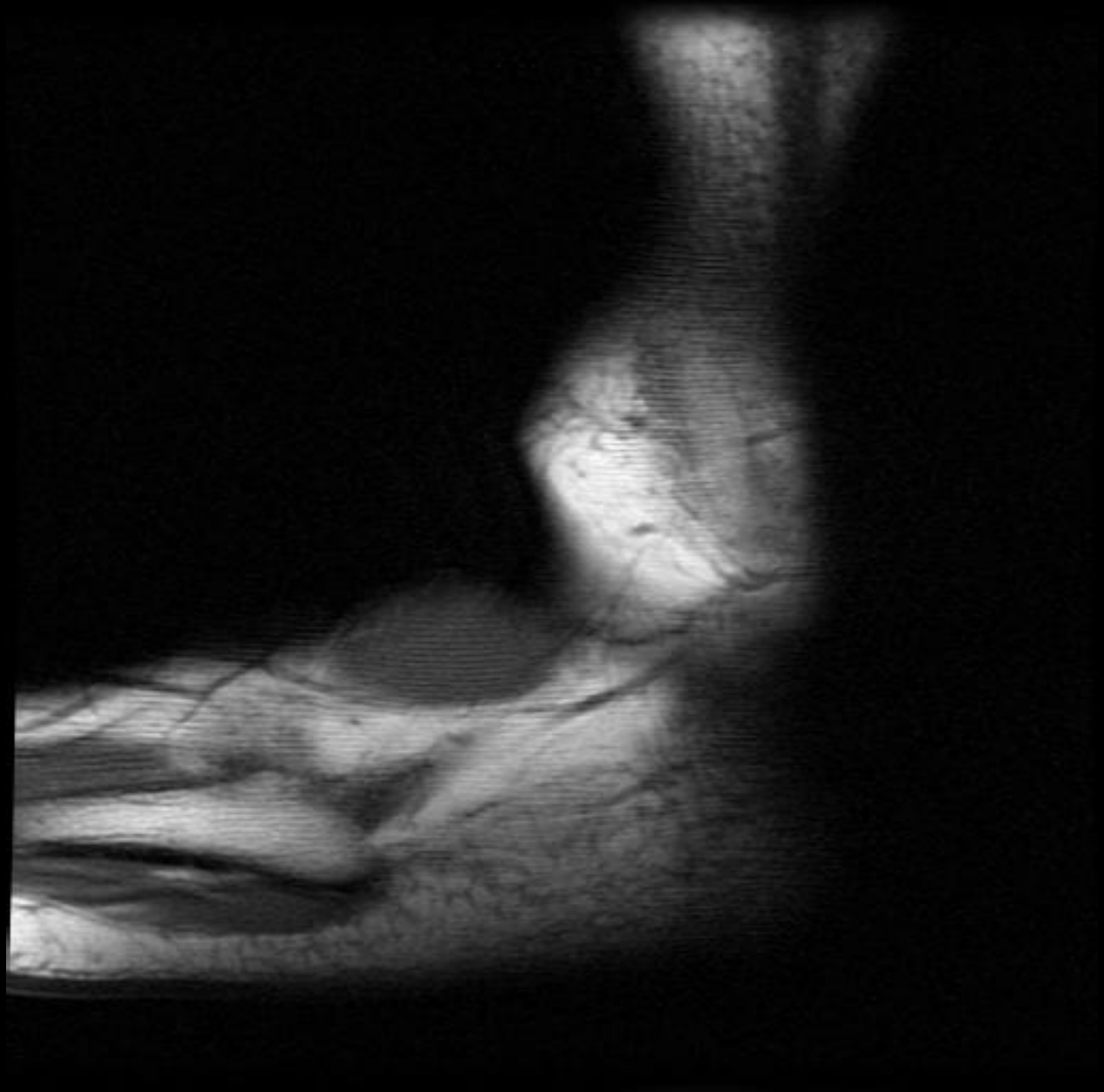


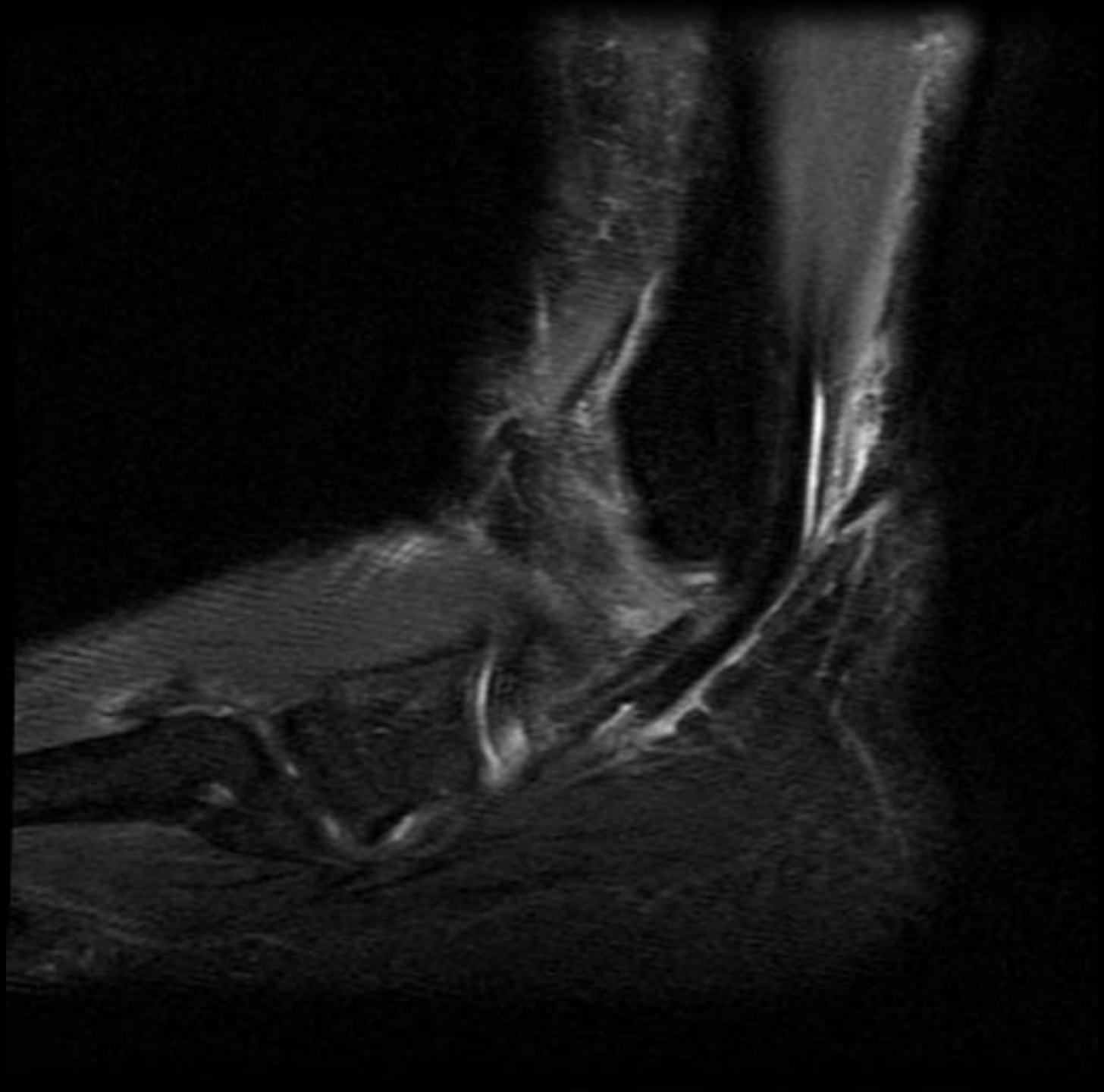


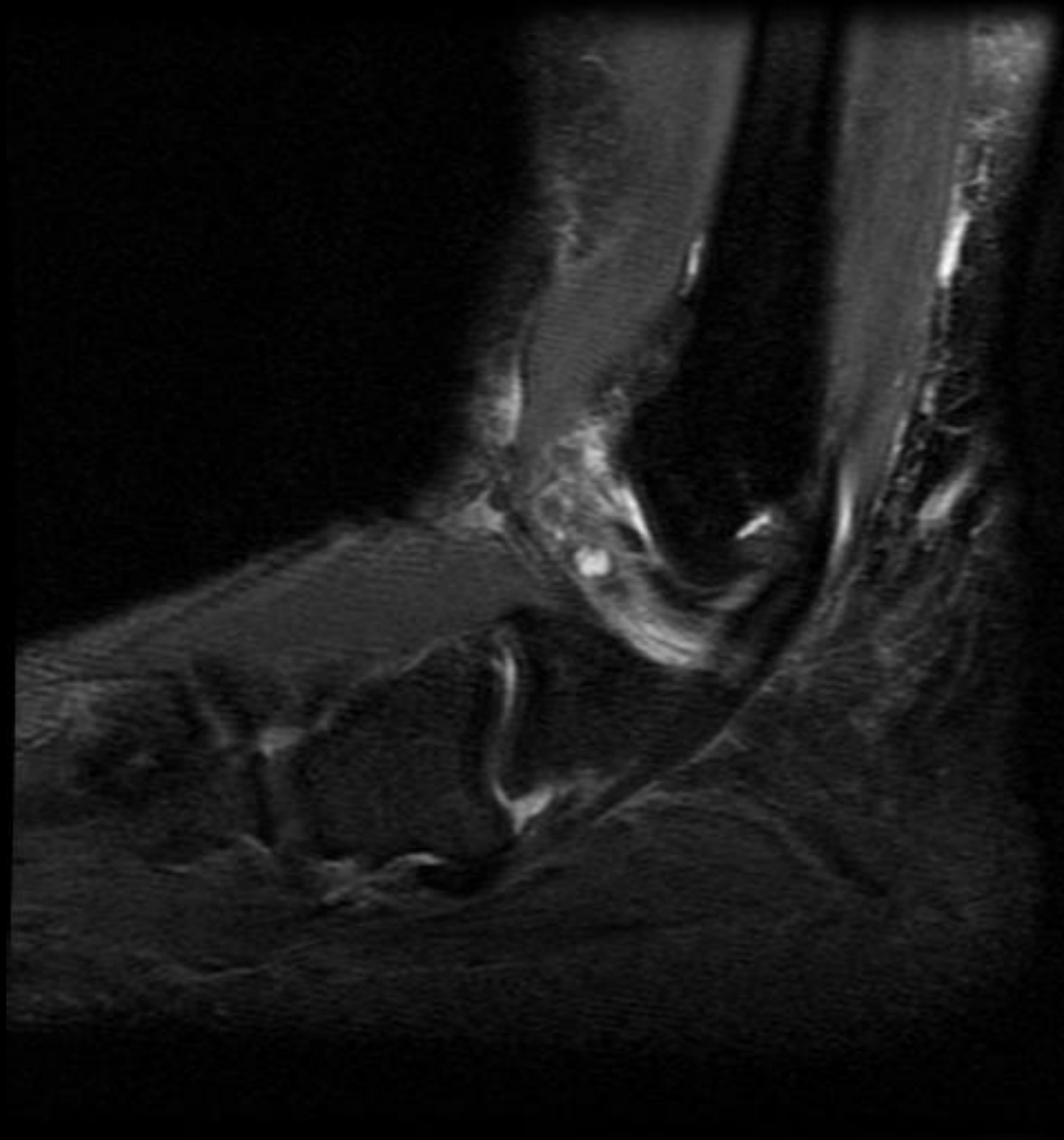


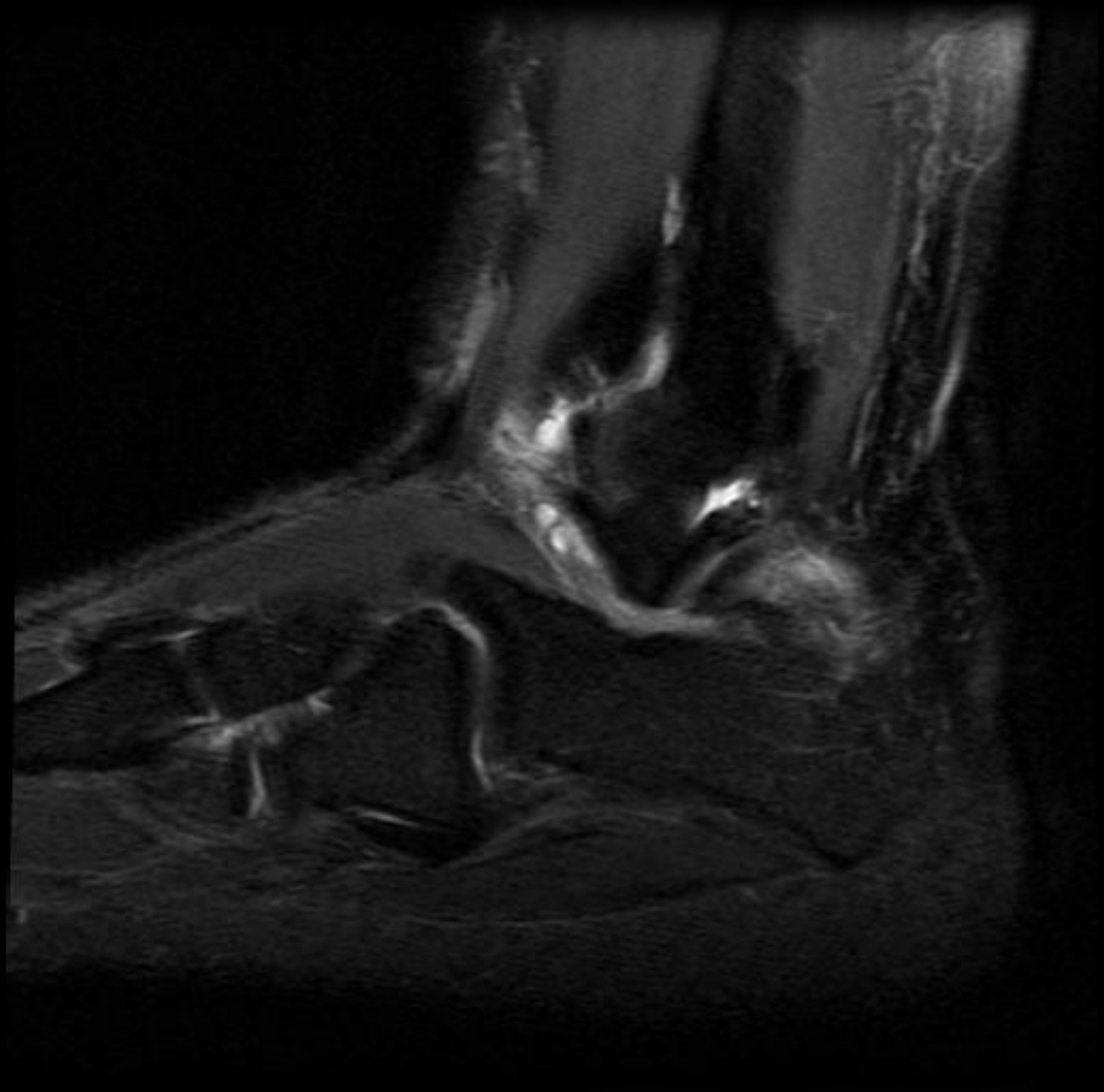


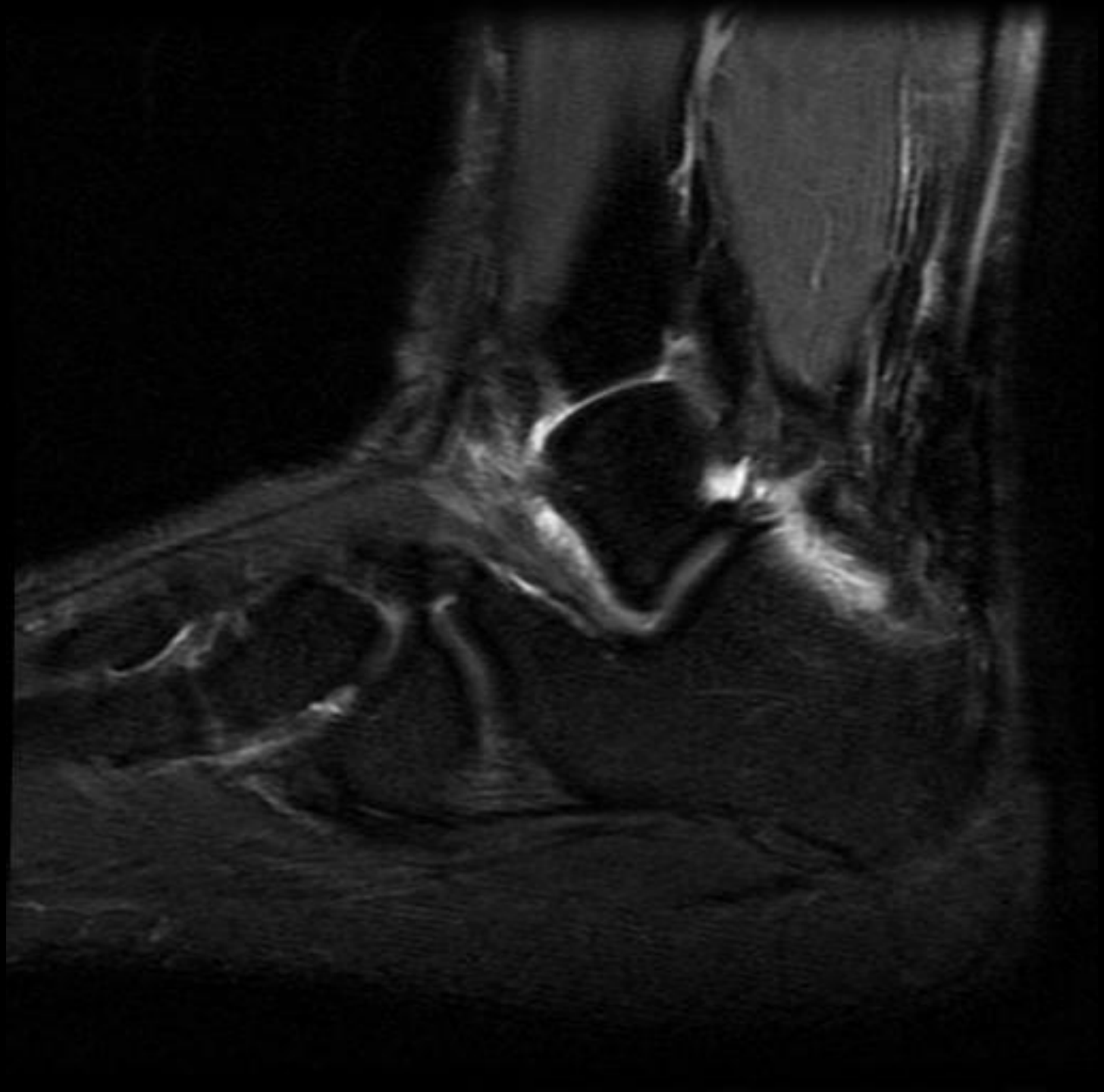


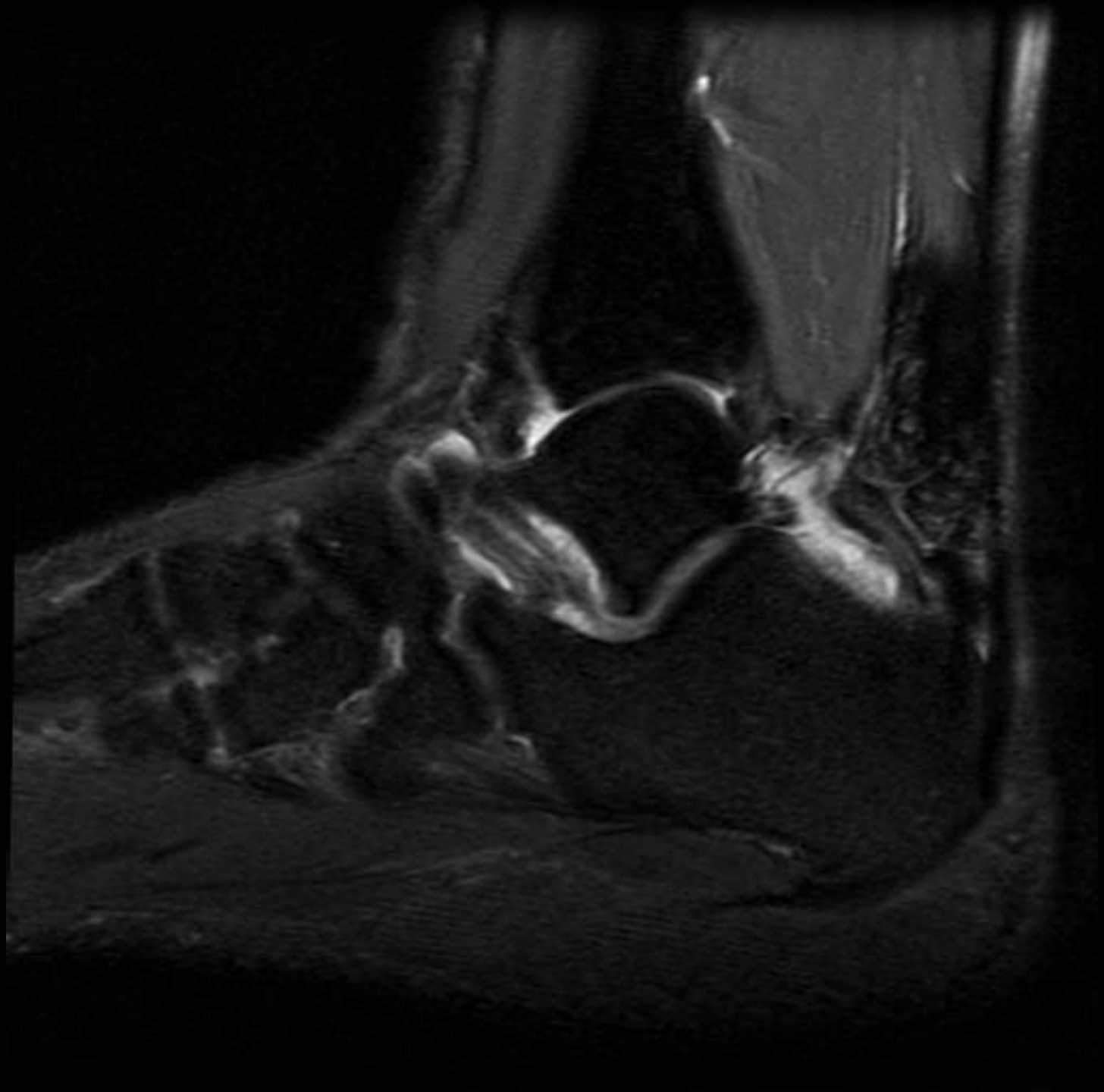


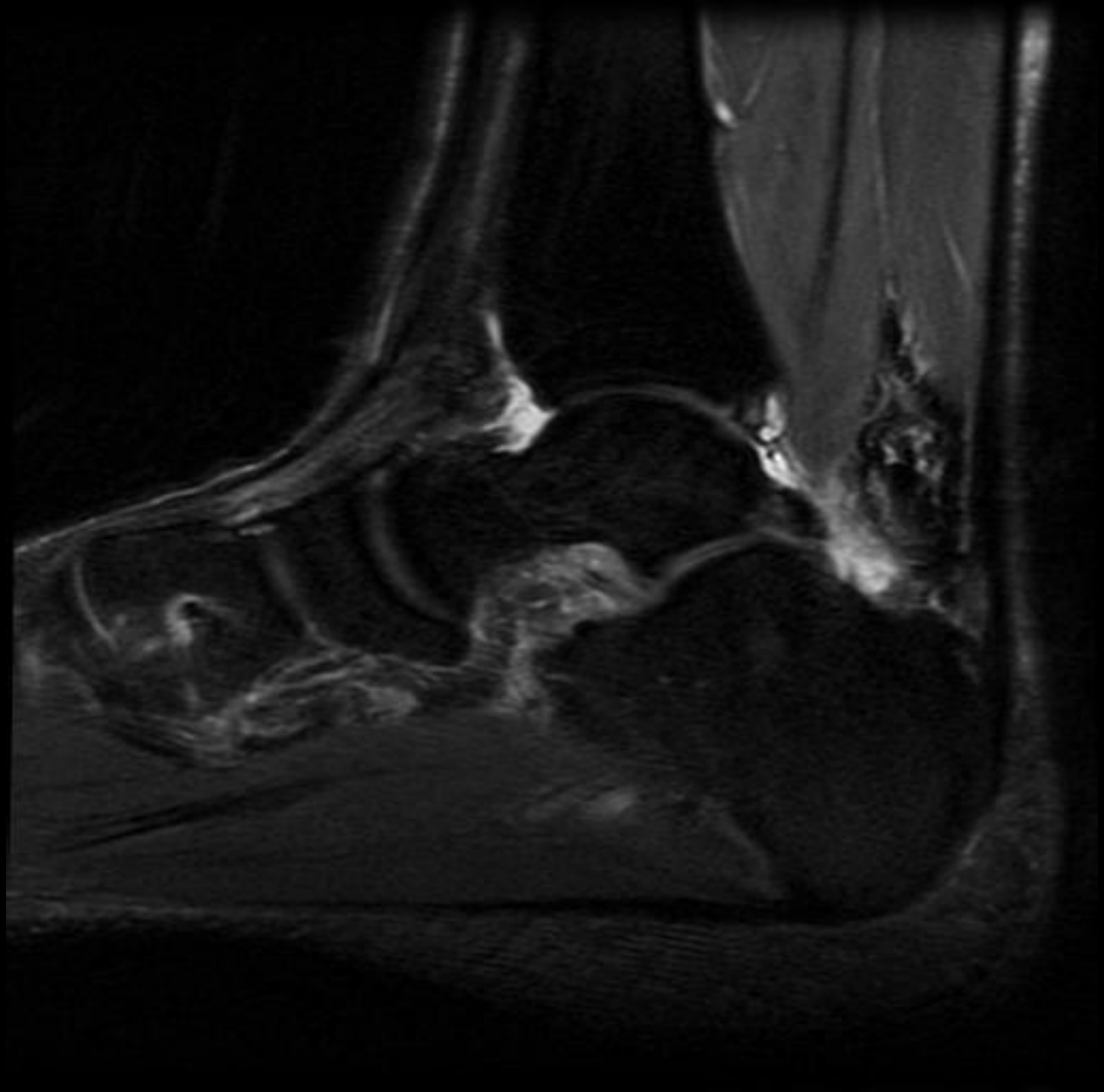


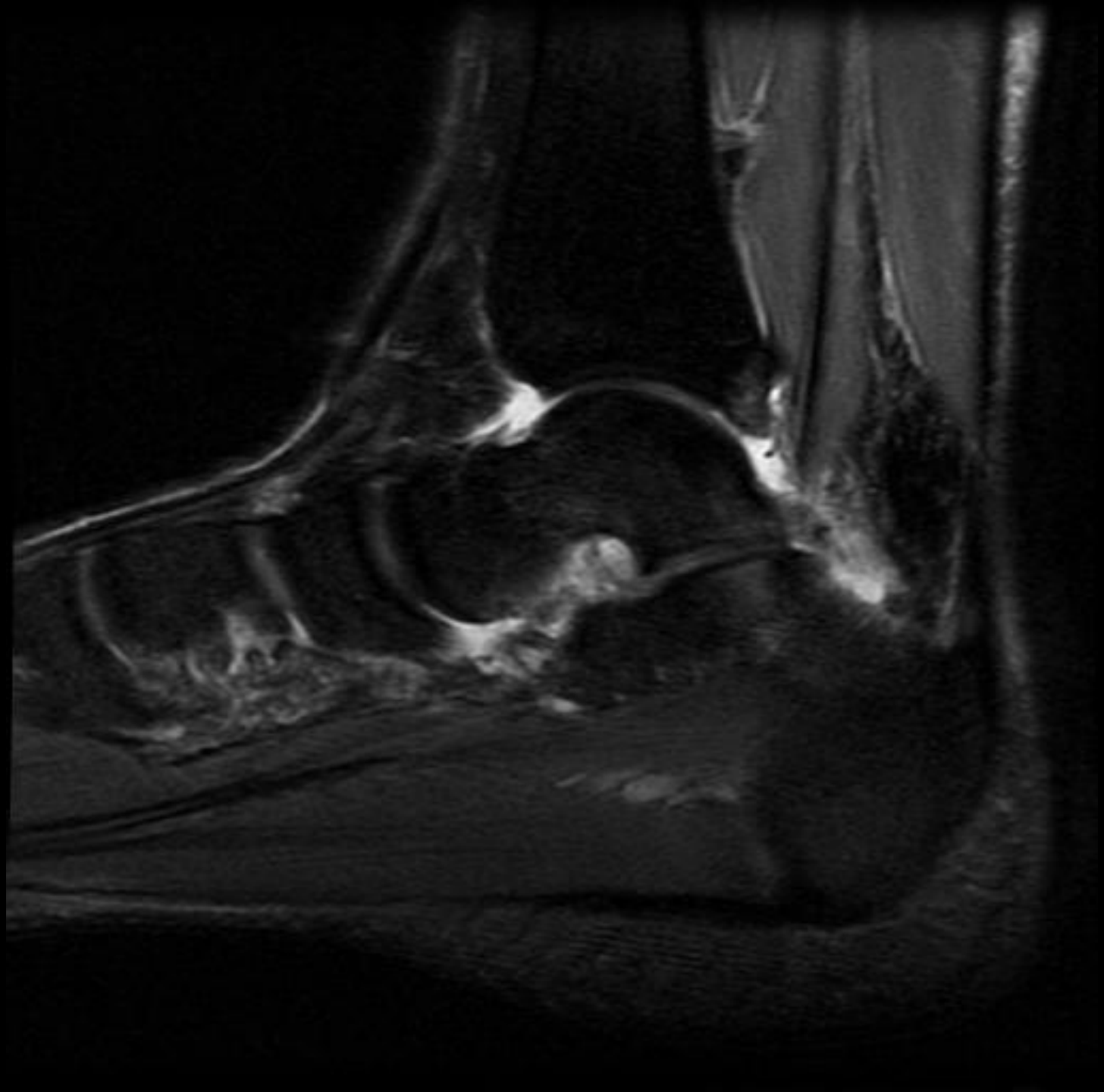


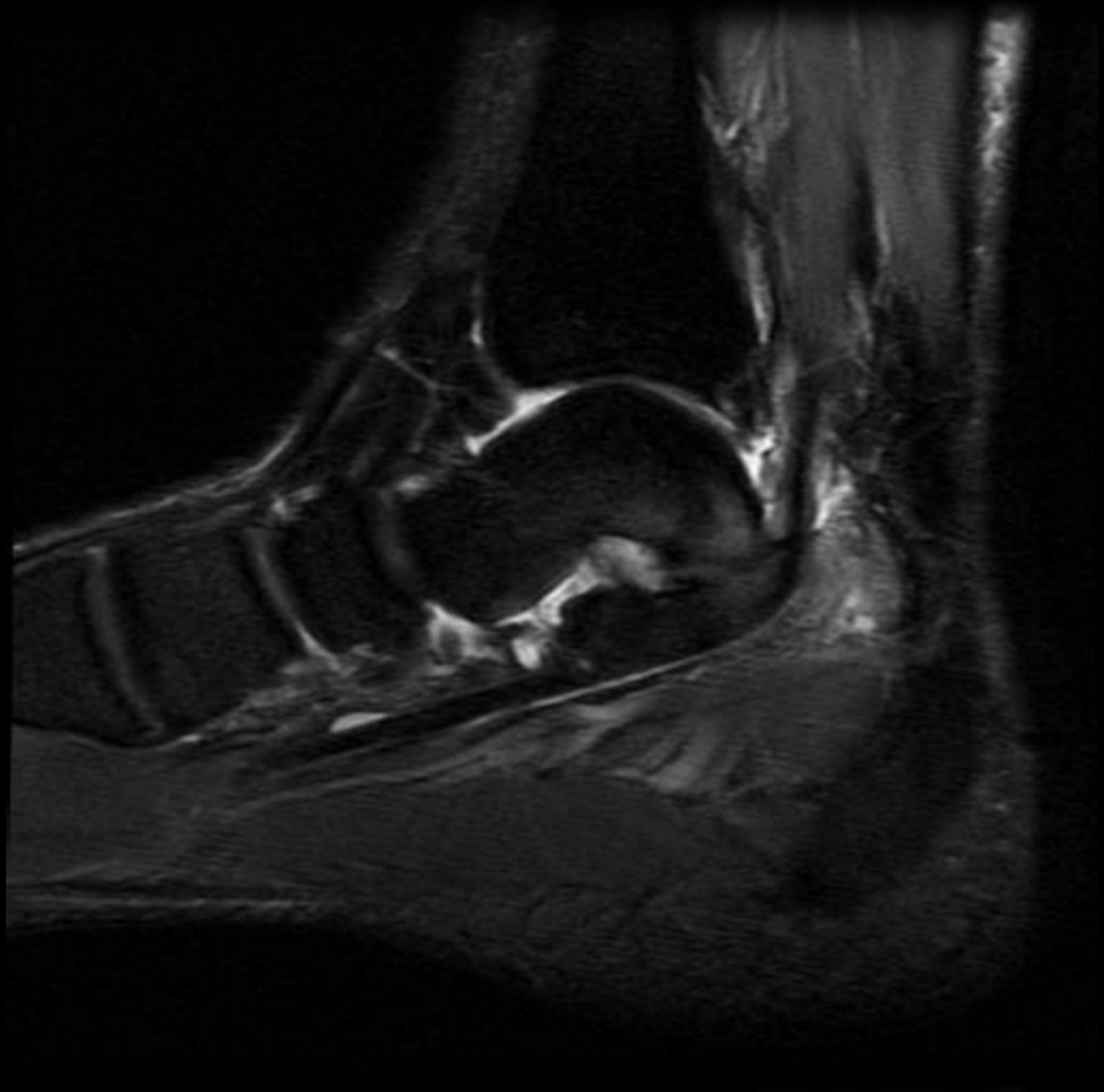


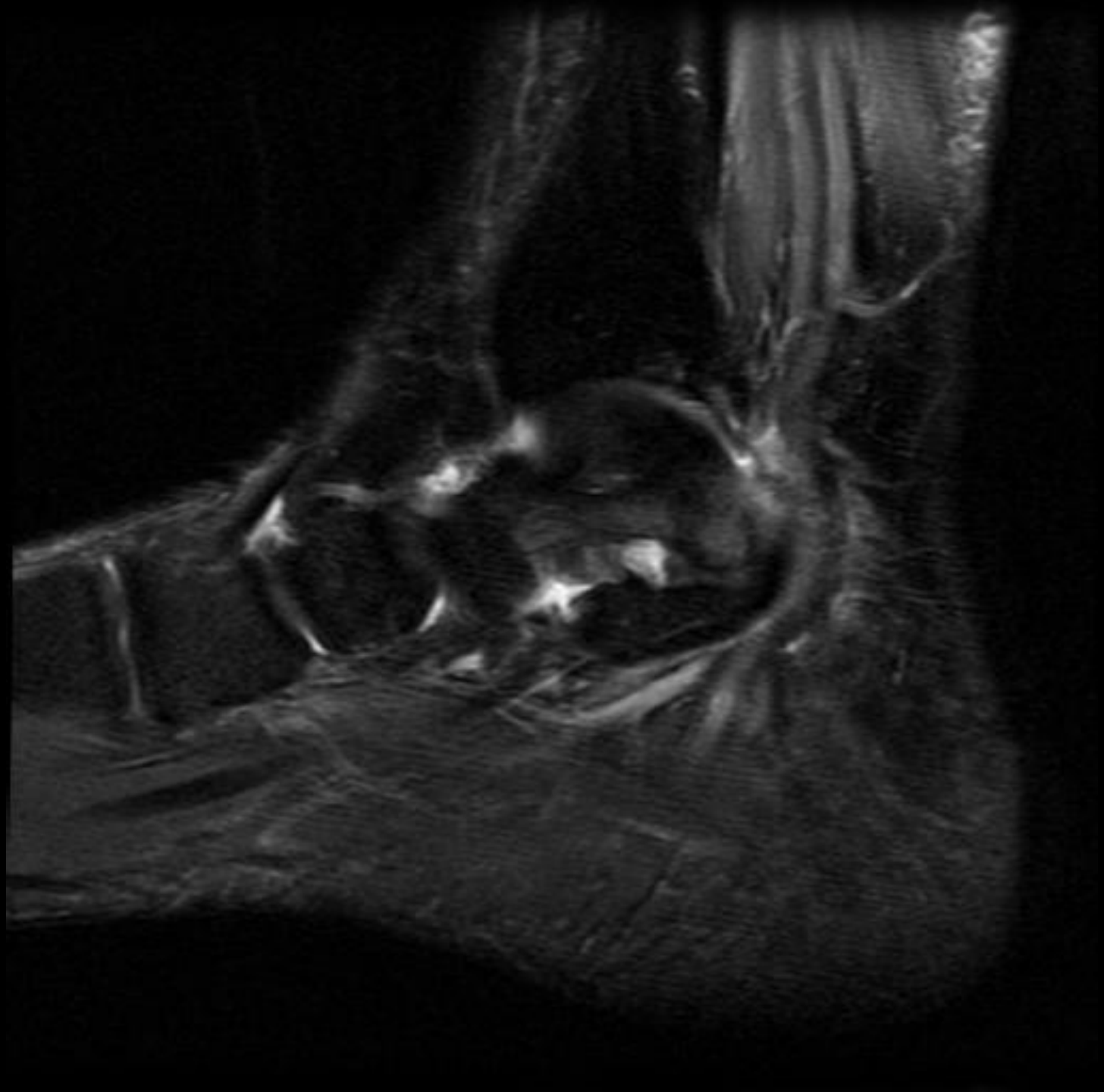


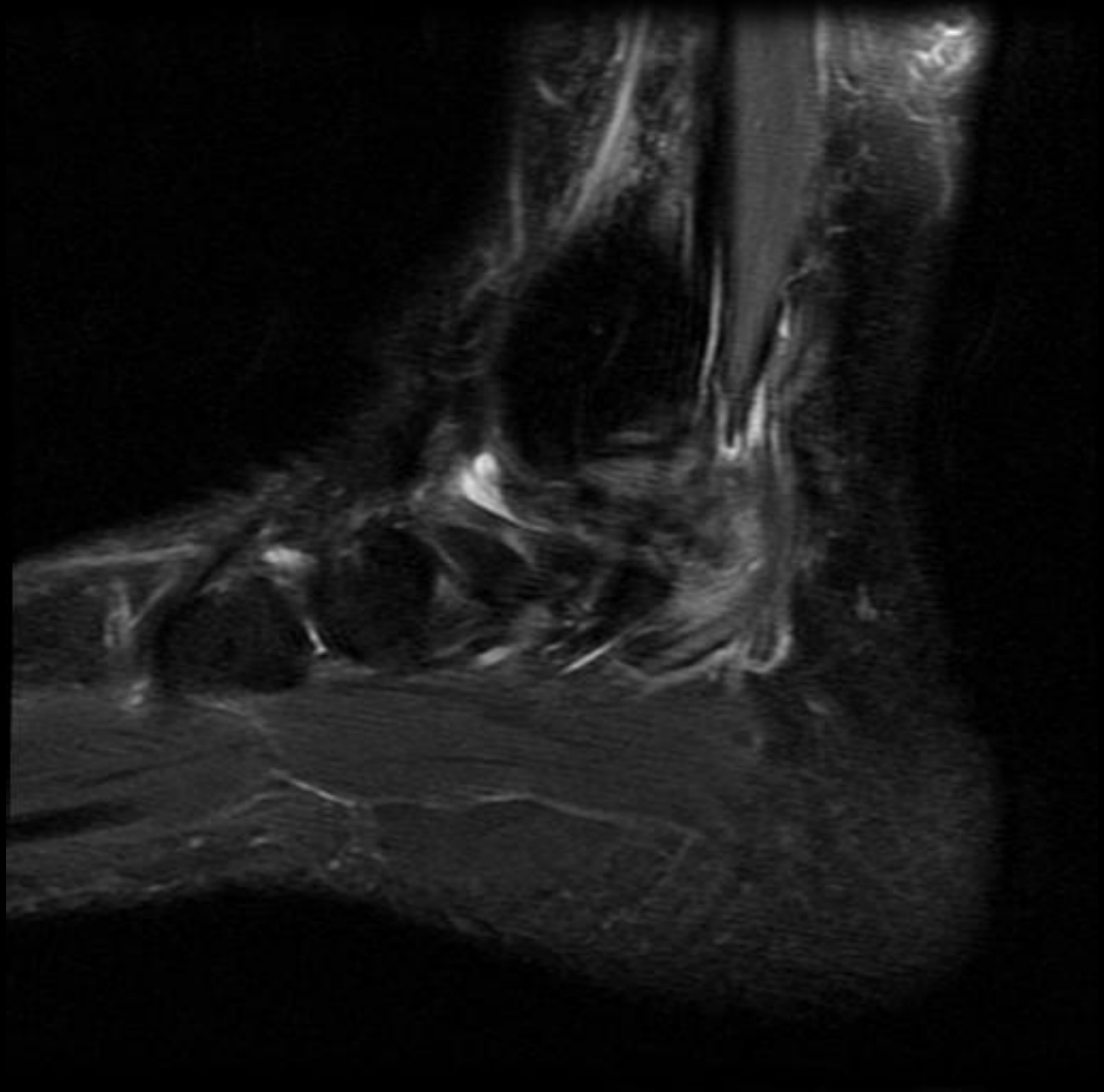


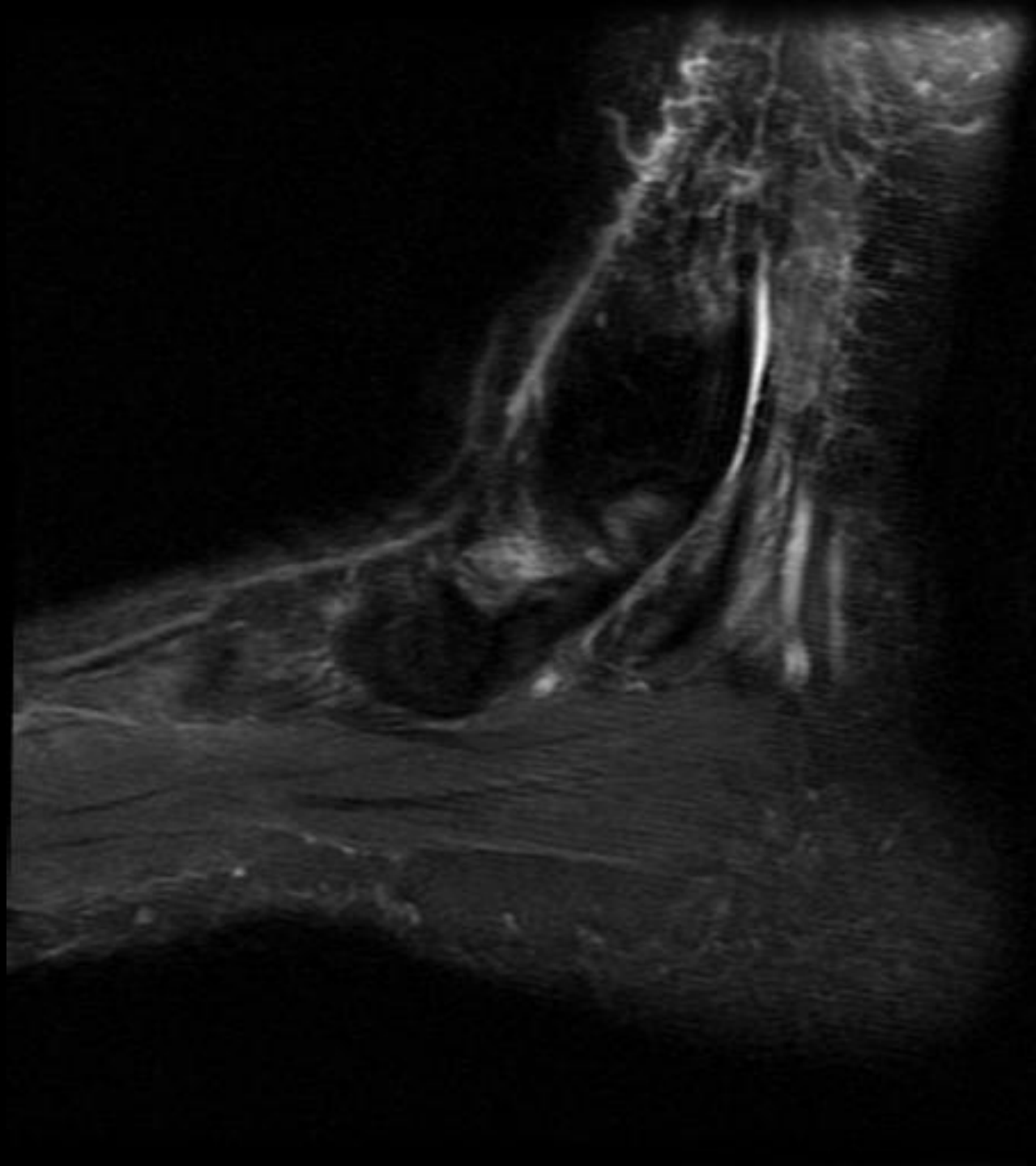


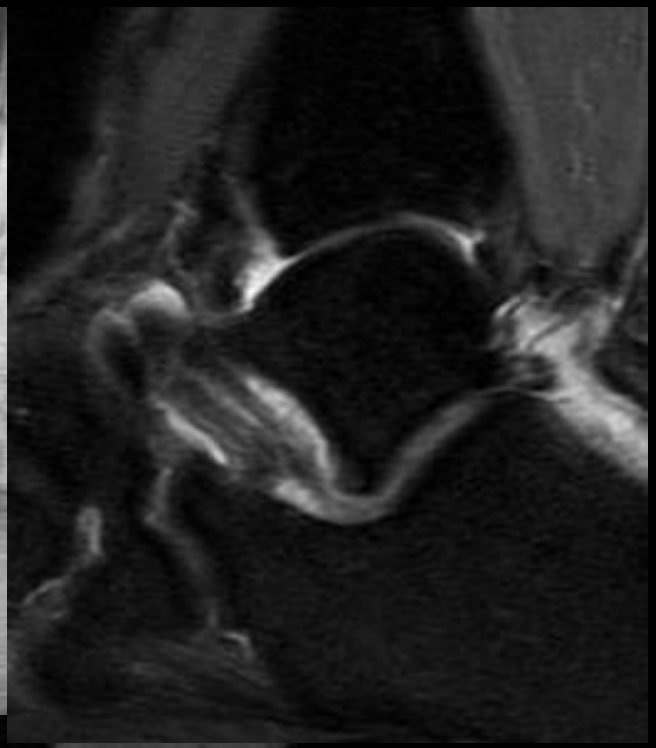
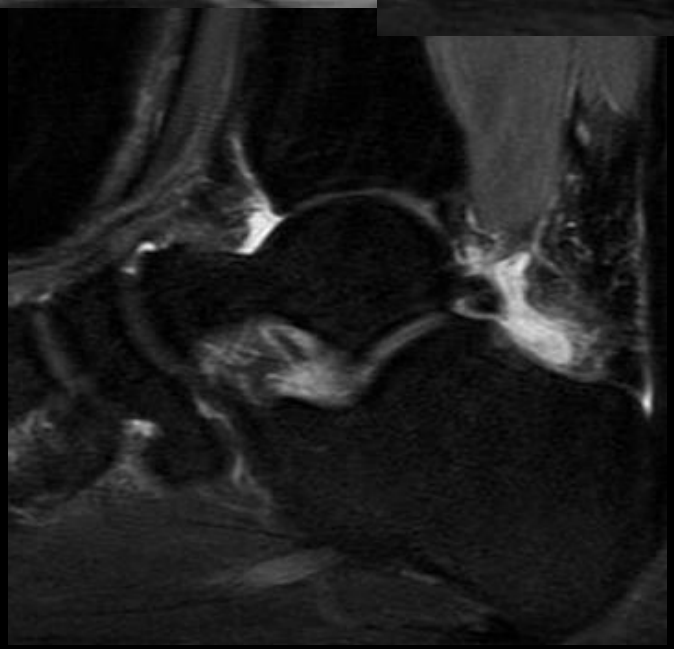


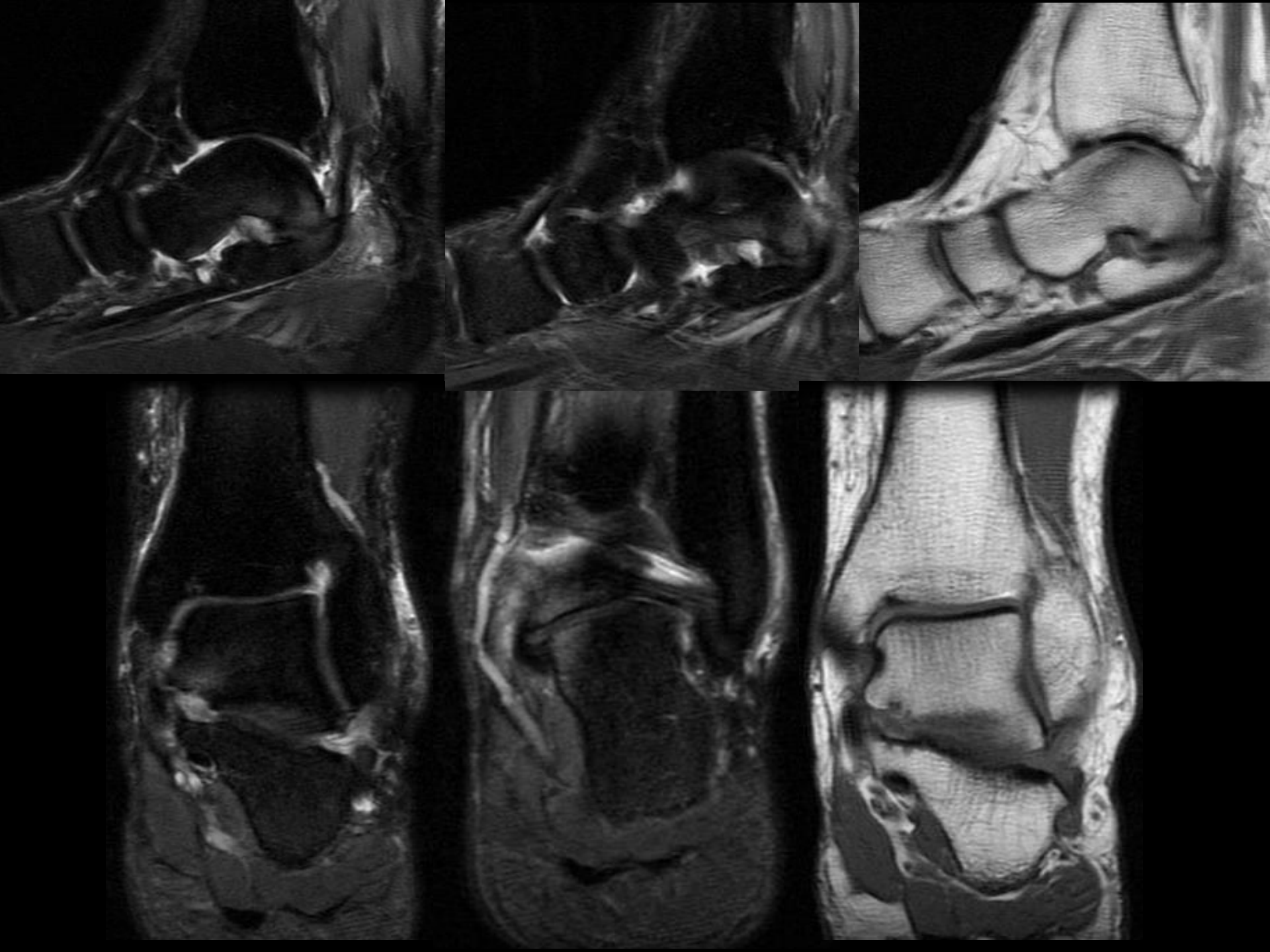








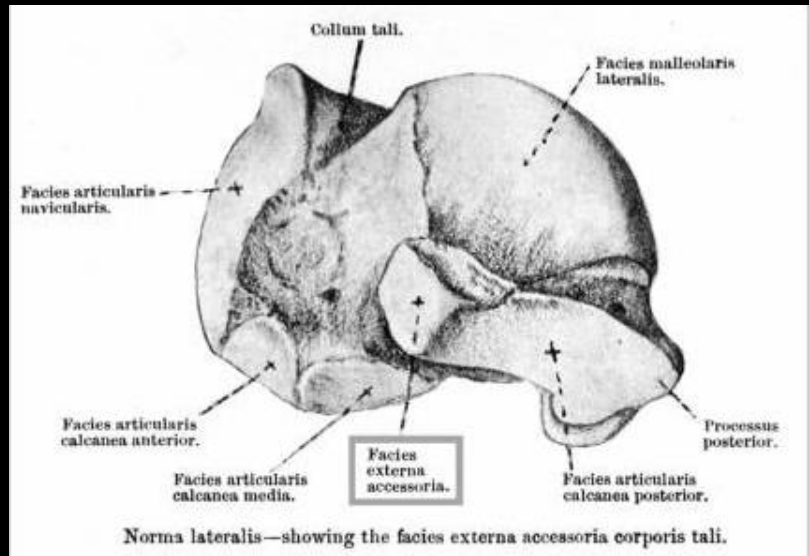


# Findings

- 1) Accessory Anterolateral Talar Facet (AATF) w/ adjacent edema in sinus tarsi, likely representing impingement.
- 2) Fibrocartilaginous extra-articular coalition b/w posteromedial talus and calcaneus, with reactive marrow edema.

# Accessory Anterolateral Talar Facet

- Anterior/distal extension of the lateral talar process, art. w/ extended ant. Calcaneal facet
- First described by Sewell (1904) as *facies externa accessoria corpuris talus*
  - 1006 Egyptian tali – 10.2%
- Sarrafian(1993) – 100 tali, large AATF 4%, variable sized 34%
- Associated with TC impingement, rigid flatfoot



Norma lateralis—showing the facies externa accessoria corporis tali.

# Accessory Anterolateral Facet of the Pediatric Talus

## An Anatomic Study

Jeffrey E. Martus, MD; John E. Femino, MD; Michelle S. Caird, MD; Richard E. Hughes, PhD; Richard H. Browne, PhD; Frances A. Farley, MD

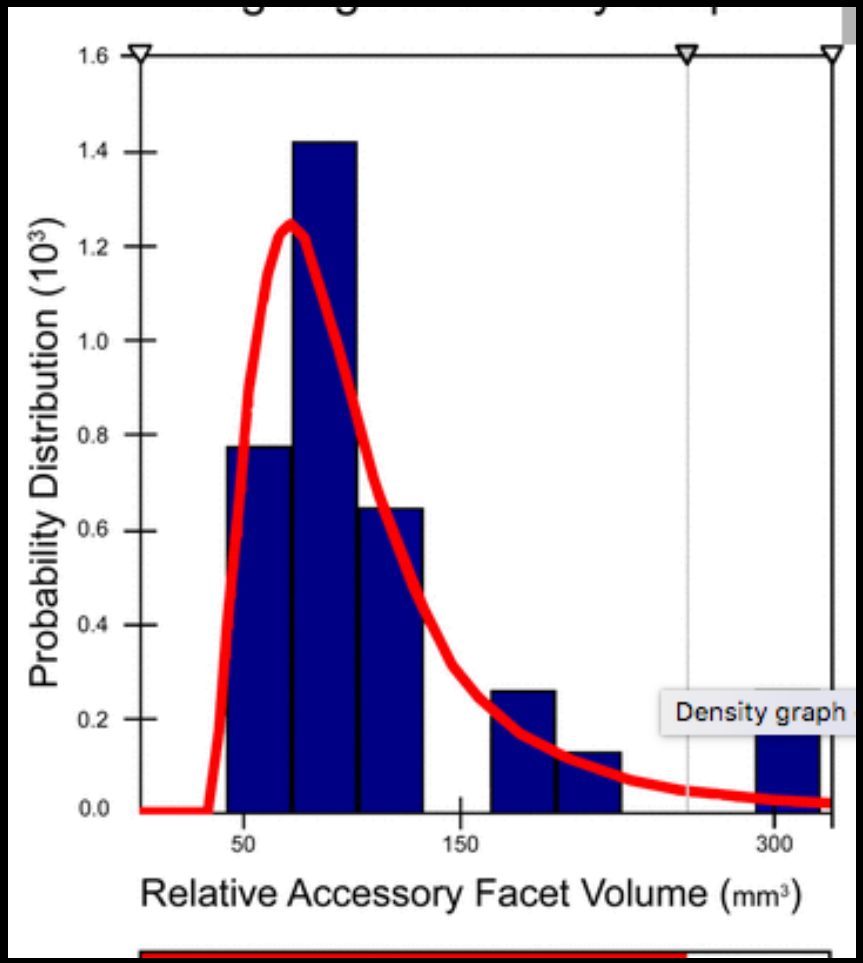
*J Bone Joint Surg Am*, 2008 Nov 01; 90 (11): 2452 -2459 . http://dx.doi.org/10.2106/JBJS.G.01230

| No. of specimens/no. of cadavers | 79/43 |
|---|---|
| Average age at time of death *(yr)* | 13.4 |
| Skeletal maturity *(no. of specimens)* | |
| Open iliac apophysis | 63 (80%) |
| Closed iliac apophysis | 16 (20%) |
| Sex *(no. of specimens)* | |
| Male | 37 (47%) |
| Female | 42 (53%) |
| Ethnicity *(no. of specimens)* | |
| White | 17 (22%) |
| Black | 62 (78%) |
| Laterality *(no. of specimens)* | |
| Left | 41 (52%) |
| Right | 38 (48%) |

Each specimen inspected for AATF, ant extension of calc neck, dorsal talar beaking

- 27 AATF out of 79 specimens – 34%
- Of 36 paired skeletons, 15 had AATF, in which 10 were b/l
- AATF : 29% talar beak

| | Accessory Facet | No Accessory Facet | P Value |
|---|---|---|---|
| Age* *(yr)* | 16.7 | 10.9 | <0.0001† |
| Skeletal maturity *(no. of skeletons)* | | | 0.23 |
| Open iliac apophysis | 12 | 23 | |
| Closed iliac apophysis | 5 | 3 | |
| Sex *(no. of skeletons)* | | | 0.011† |
| Male | 12 | 7 | |
| Female | 5 | 19 | |
| Ethnicity *(no. of skeletons)* | | | 1.00 |
| White | 3 | 6 | |
| Black | 14 | 20 | |
| Laterality *(no. of specimens)* | | | 0.64 |
| Left | 13 | 28 | |
| Right | 14 | 24 | |
| Talocalcaneal facet pattern *(no. of skeletons)* | | | 0.75 |
| A | 5 | 9 | |
| B | 12 | 17 | |
| C | 0 | 0 | |
| Dorsal talar beaking *(no. of skeletons)* | | | 0.028† |
| Beak | 5 | 1 | |
| No beak | 12 | 25 | |
| Anterior calcaneal neck extension facet *(no. of skeletons)* | | | 0.055 |
| Extension facet | 3 | 0 | |
| No extension facet | 14 | 26 | |
| Angle of Gissane* *(deg)* | 116.2 | 122.2 | 0.018† |
| Posterior facet inclination* *(deg)* | 63.9 | 64.3 | 0.88 |
| Relative calcaneal posterior facet length* *(mm)* | 25.7 | 25.6 | 0.83 |
| Relative calcaneal neck length* *(mm)* | 20.7 | 21.4 | 0.23 |




- Conclusions
  - AATF corr. w/ Male sex, talar beaking, dec. angle of Gissane
  - Facet vol has no corr. w/ talar beaking, angle of Gissane
  - Narrow facet volume may signify a nl anatomic variant of AATF
  - Similar prevalence of AATF to prior studies, AATF is not adult acquired deformity or degen. Condition. Facet may dev w/ growth or be cartilagenous anlage in younger specimens

# Tarsal Coalitions

- 1% of population
- 50-60% bilateral when present
- M>F
- 90% Talocalcaneal or Calcaneonavicular
    - 10% - Talonavicular, Calcaneocuboid, Cubonavicular, Naviculocuneiform
- Cartilagenous, fibrous, osseous
  - Continuum

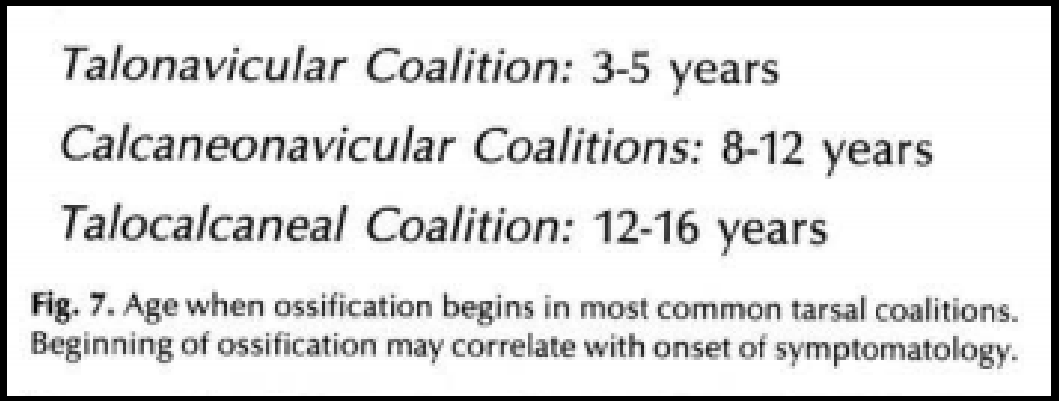



**Fig. 7.** Age when ossification begins in most common tarsal coalitions. Beginning of ossification may correlate with onset of symptomatology.

# Etiology

- Congenital
  - Auto dominant ?
  - Pfitzner (1896) – incorporation of ossicles into nl tarsal bones
  - Leboucq (1890) – abn segmen of mesenchymal tissue
- Acquired
  - Post-traumatic, arthritis, infection, neoplasm

# Clinical Presentation

- 2nd decade of life
- Asymptomatic vs. Hindfoot/tarsal pain
- Rigid hindfoot
- Decreased subtalar motion
- Peroneal spasm → hindft valgus + flat foot

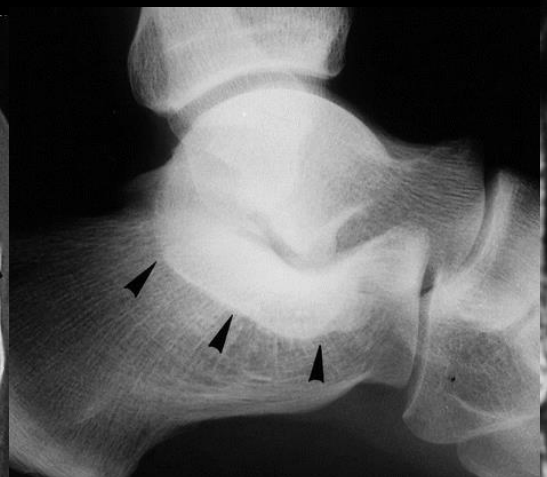
# Imaging findings

## Calcaneonavicular

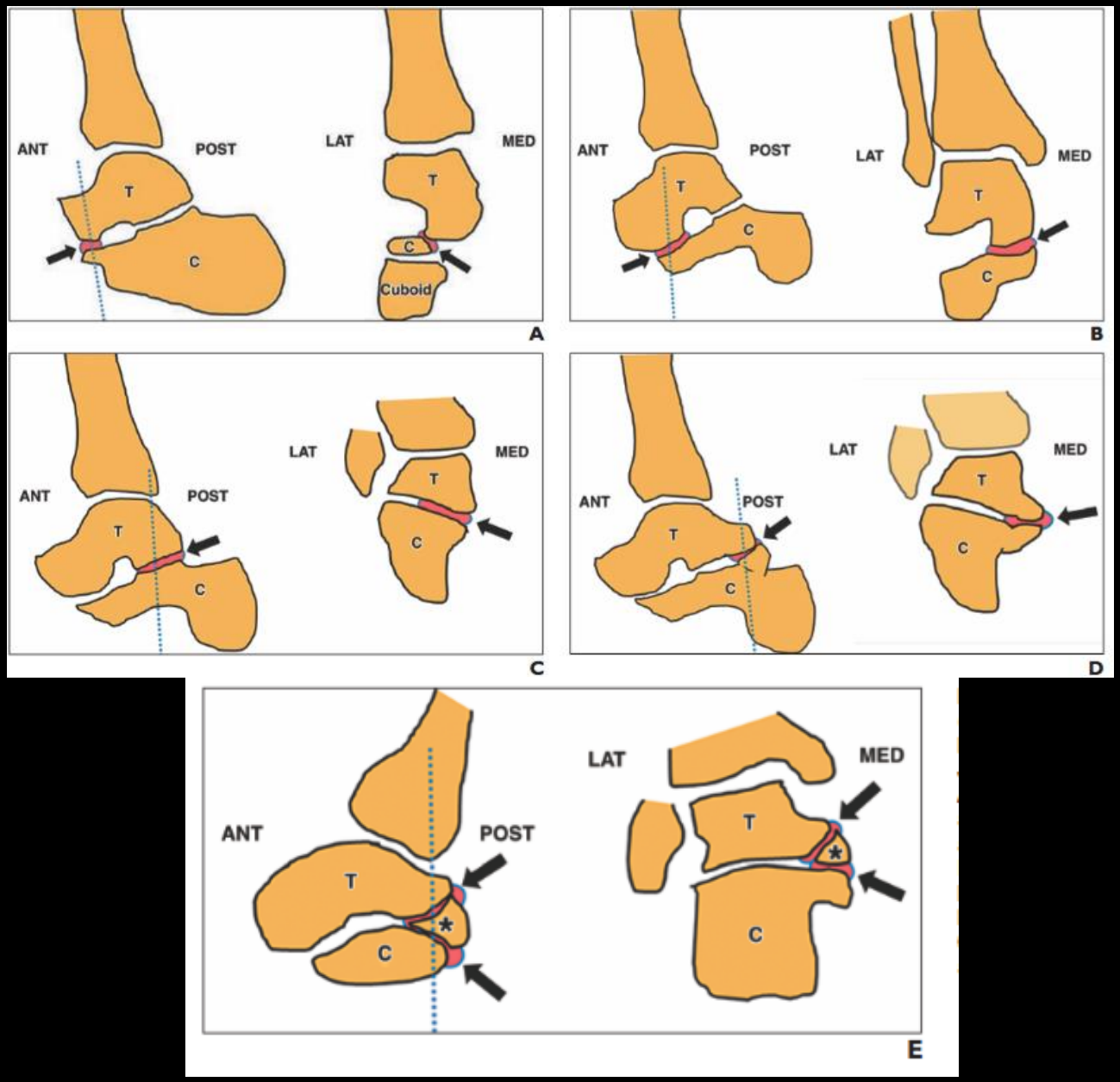
- Osseous –
  - bony bar "Anteater sign"
- Navicular - broadened medial, laterally tapered
- Nonosseous
  - Proximity of Calc and navicular
  - Irreg articular surfaces
  - Degen changes
- Talar hypoplasia
- Talar beak

## Talocalcaneal

- Loss of middle facet
- Talar beak
- Downward slope of sust tali
- Narrowed post subtalar jt
- C sign
- Hypertrophy, reactive cystic changes

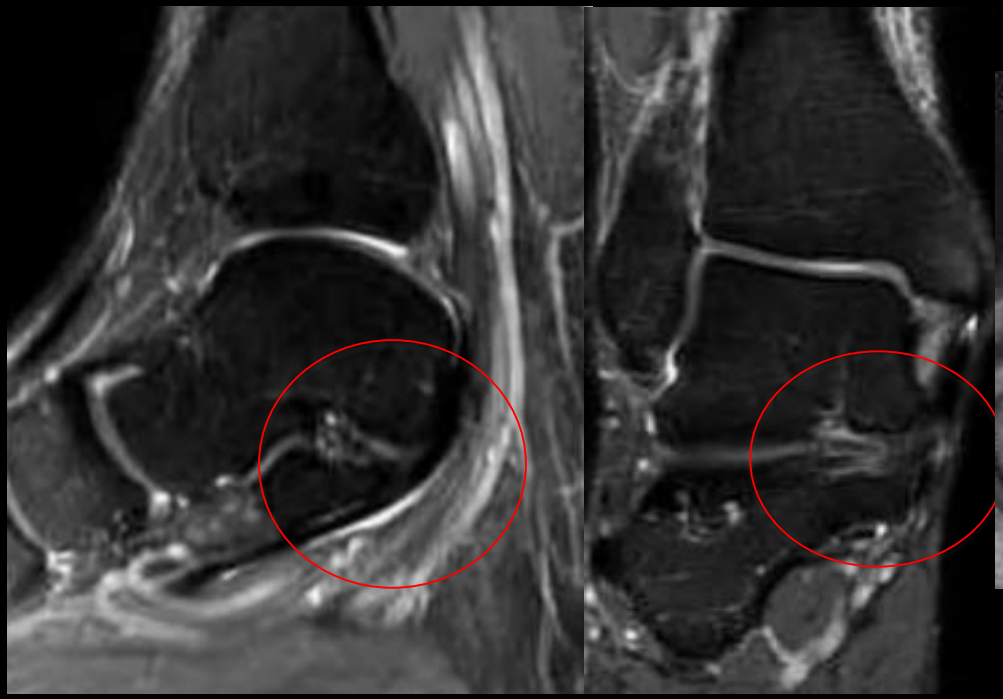


# Types of Talocalcaneal Coalitions



# Extra-articular posteromedial TC coalition

- Pseudoarthrosis b/w posteromedial talus and sustentaculum tali
  - Typically spares the middle/posterior subtalar joints, but coexisting coalitions do occur
  - No cartilage on the sustentaculum tali, coalition across the medial talocalcaneal ligament



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