

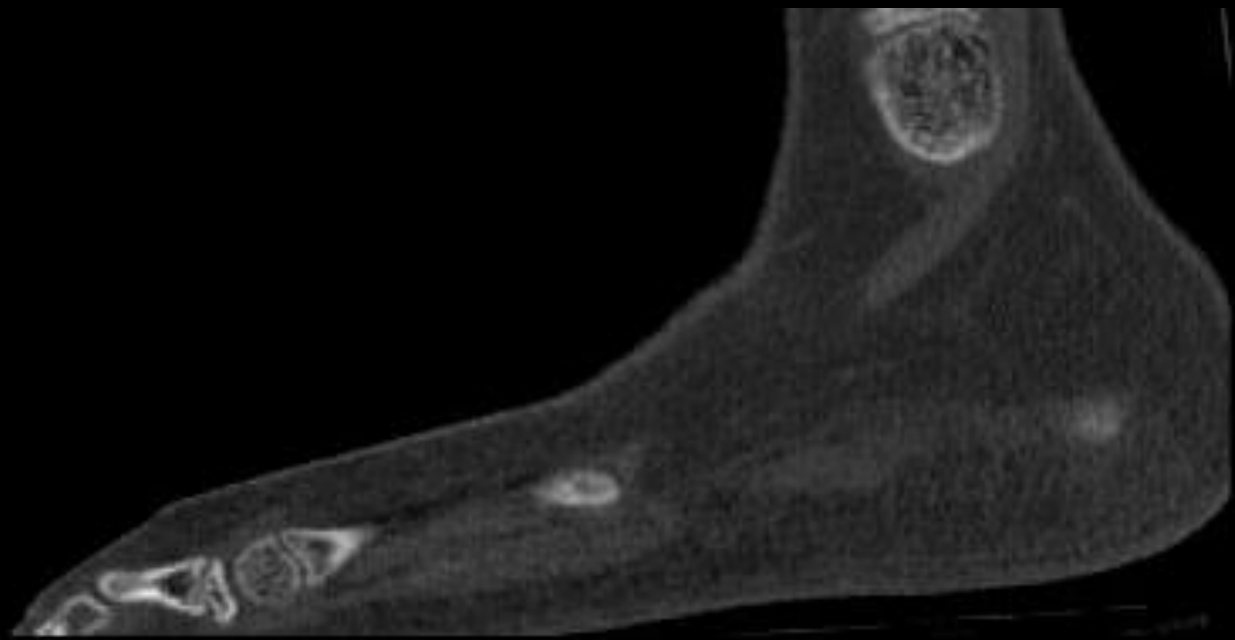
9F foot pain

STANDING

R  
GGG  
O









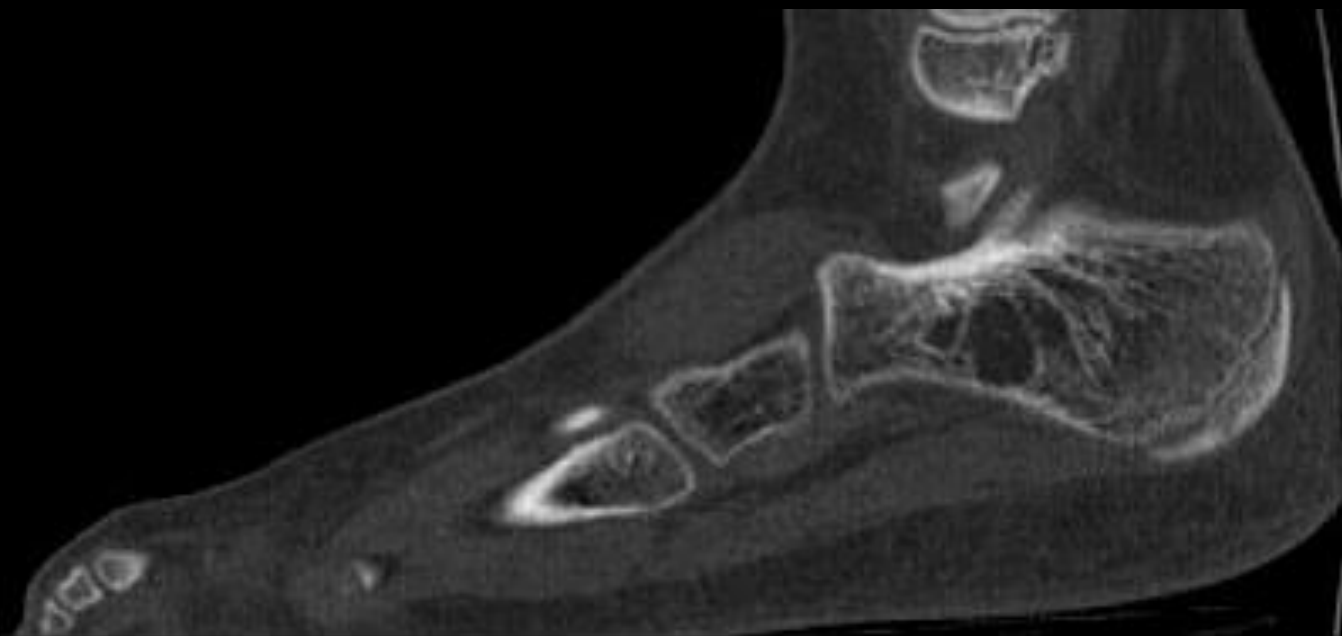






































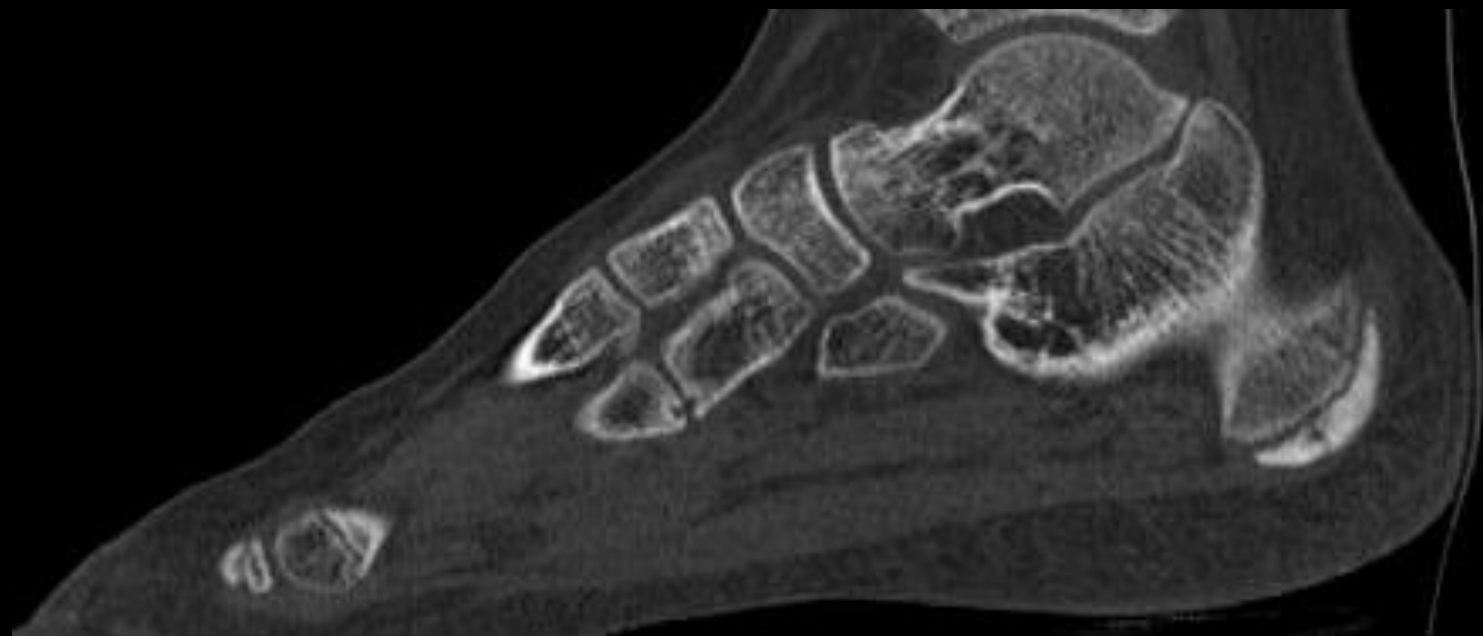




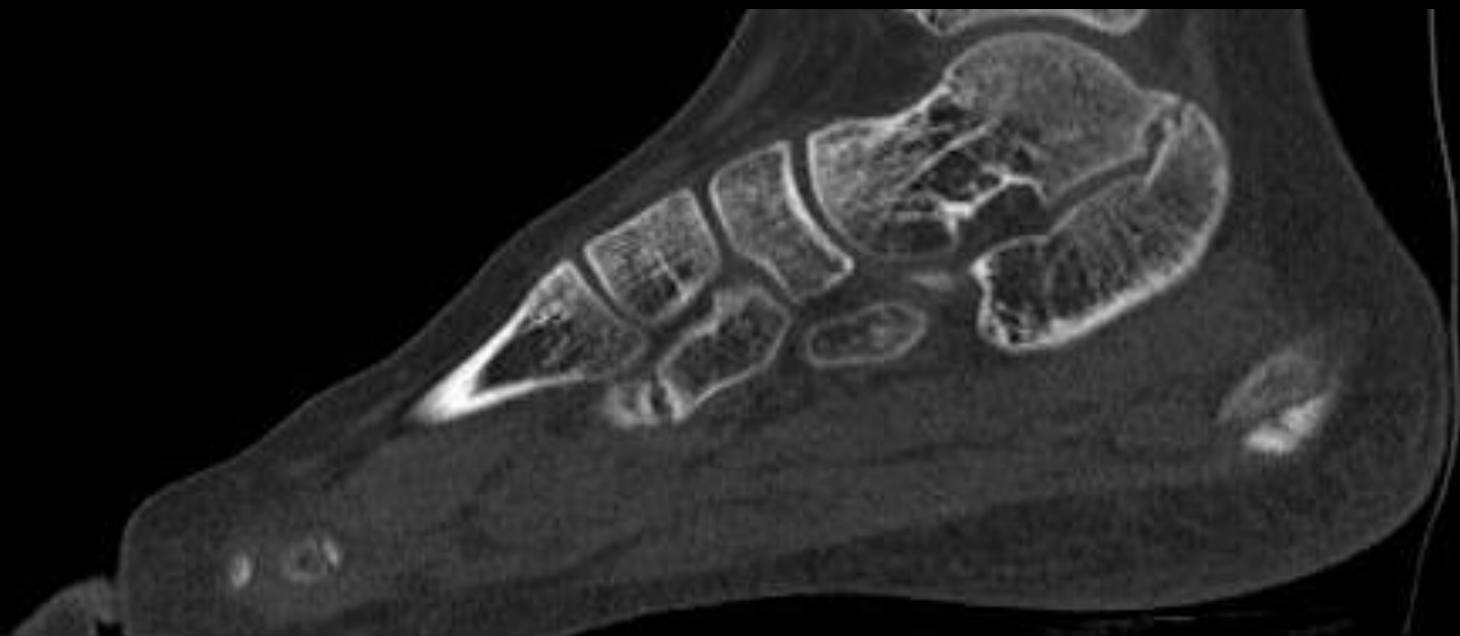










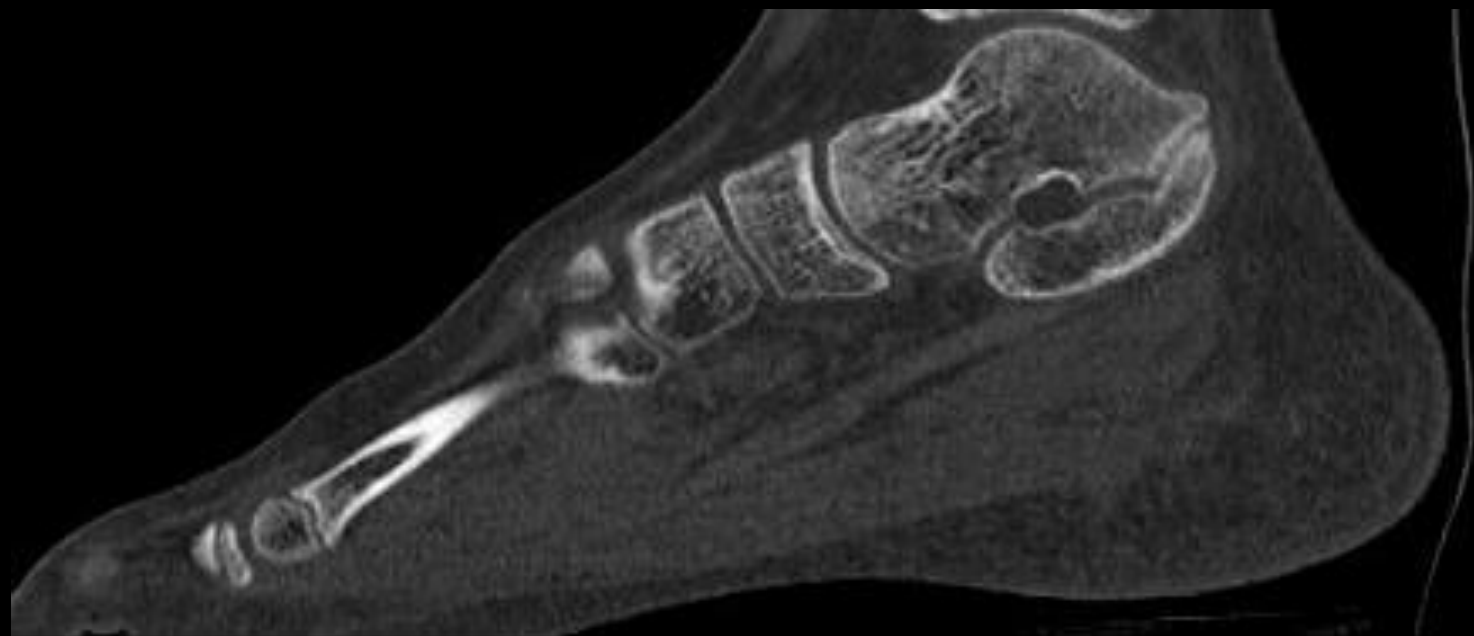




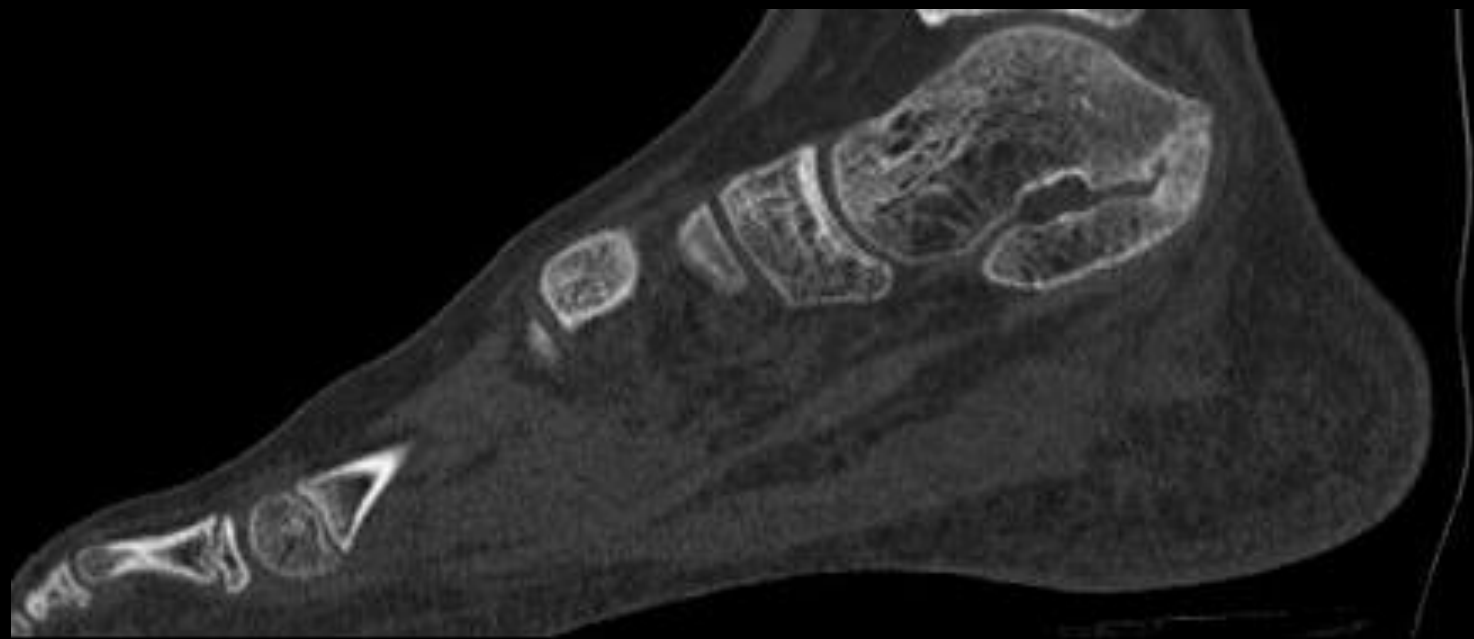




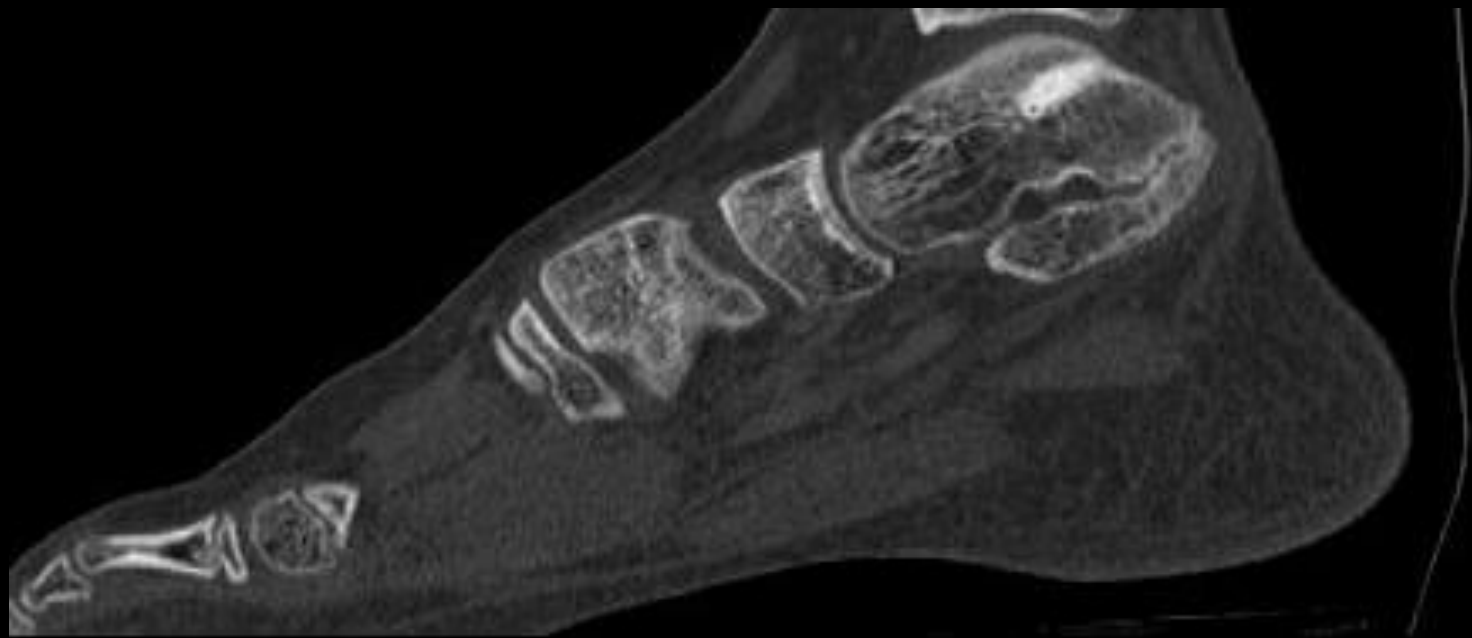


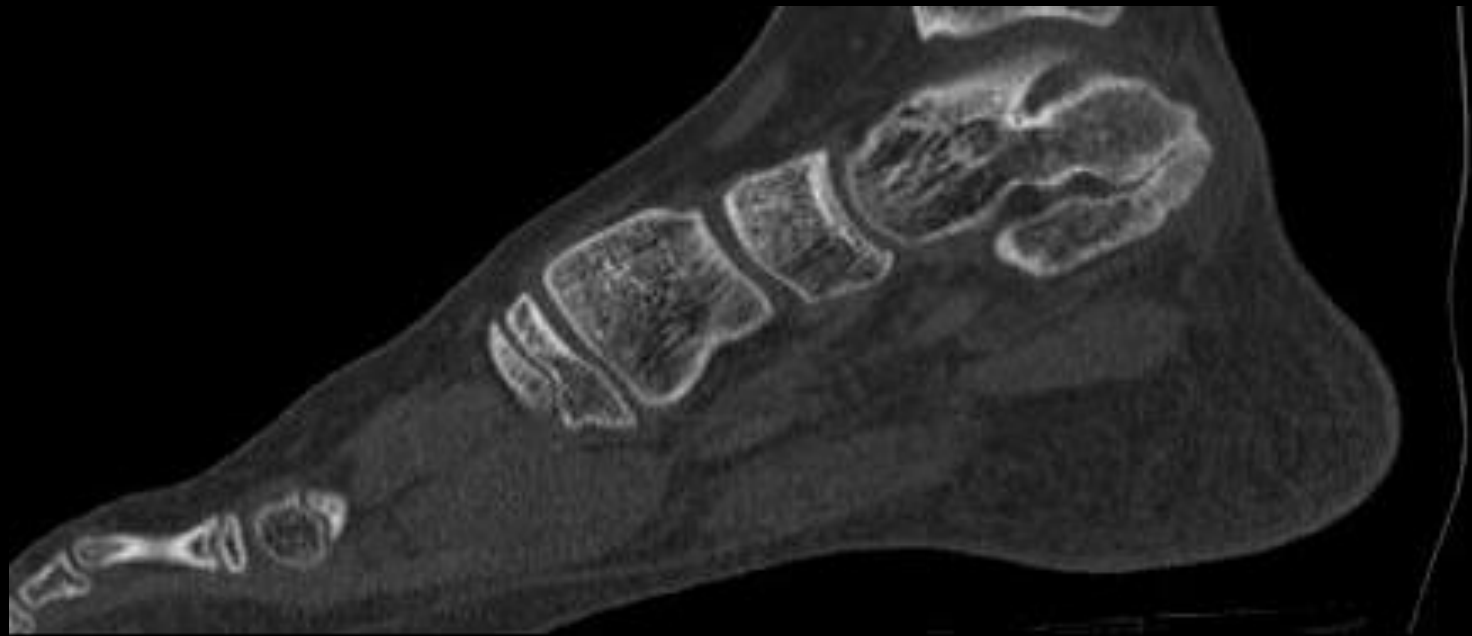










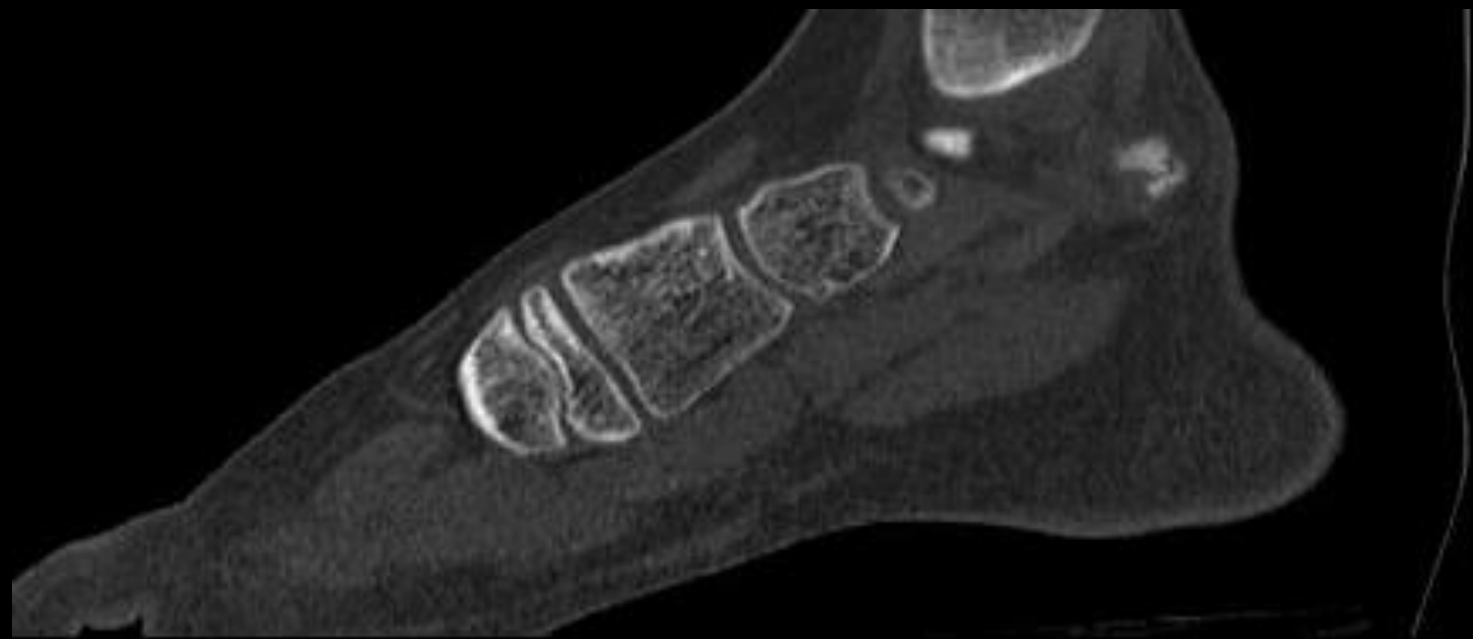




































# Tarsal Coalition

- Overall 1% of population
- Slight male predominance
- Bilateral 50% of the time
- Often present 2<sup>nd</sup> decade of life, sometimes asymptomatic
- Usually Talocalcaneal or Calcaneonavicular
- Calcaneocuboid and Cubonavicular very rare

# Tarsal Coalition

- 45% Talocalcaneal

- “C-Sign”

- Bony bridge between talus and sustentaculum



- 45% Calcaneonavicular

- “Anteater Sign”

- Elongation of the anterior process of the calcaneus



# “Posterior” Talocalcaneal Coalition

- “Humpback sign”
  - Osseous protuberance at superior margin of calcaneal tuberosity

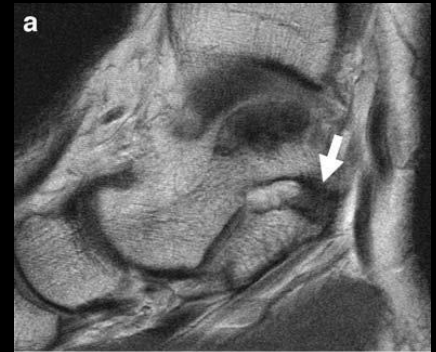




# “Posterior” Talocalcaneal Coalition

- “Extraarticular” Talocalcaneal Coalition
  - Coalition across the medial talocalcaneal ligament

A: normal ligament

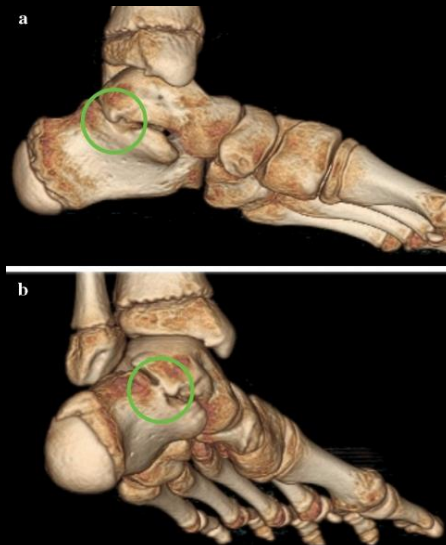


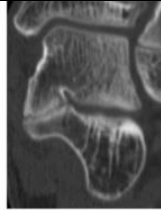

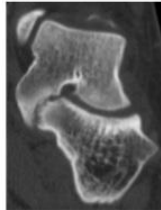
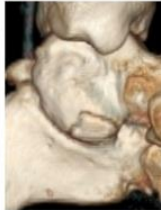


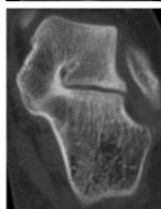

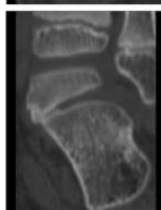

B: Fibrous Extraarticular Coalition



# “Posterior” Talocalcaneal Coalition

- Type I: Linear
- Type II: Linear with Hook
- Type III: Shingled
- Type IV: Complete Osseous
- Type V: Posterior



|   |   |   |
|---|---|---|
| Type 1<br>Linear<br>22 feet (40.7%)                     |    |    |
| Type 2<br>Linear<br>w/ Posterior Hook<br>9 feet (16.7%) |    |    |
| Type 3<br>Shingled<br>8 feet (14.8%)                    |    |    |
| Type 4<br>Complete Osseous<br>6 feet (11.1%)            |   |   |
| Type 5<br>Posterior<br>9 feet (16.7%)                   |  |  |















# References

1. Newman JS, Newburg, AH. *Congenital Tarsal Coalition: Multimodality Evaluation with Emphasis on CT and MR Imaging*. Radiographics March 2000; Volume 2, Issue 20.
2. Moe MC, Choi JJ, Davis KW. *Posterior Subtalar Facet Coalition with Calcaneal Stress Fracture*. American Journal of Roentgenology 2006, 186:1, 259-264
3. Staser J, Karmazyn B, Lubicky J. *Radiographic Diagnosis of Posterior Facet Talocalcaneal coalition*. Pediatric Radiology (2007) 37: 79-81
4. Resnick D. *Talar ridges, osteophytes, and beaks: a radiologic commentary*. Radiology 1984; 151:329-332.
5. Crim JR, Kjeldsberg KM. *Radiographic Diagnosis of Tarsal Coalition*. American Journal of Roentgenology 182, February 2004.
6. Linklater J., et al. *Anatomy of the Subtalar Joint and Imaging of Talocalcaneal Coalition*. Skeletal Radiology (2009) 38:437-449;
7. Rozansky A., et al. *A radiologic classification of talocalcaneal coalitions based on 3-D reconstruction*. Journal of Children's Orthopedics. April 2010: 4 (2):129-135).





# Tarsal Coalition

- Type fibrous, cartilaginous, and bony
  - Continuum: progressive osseous bridging with age and various histologic components coexist
- Symptoms more pronounced with further ossification
- Associated signs
  - Talar beak
    - Can also be seen in DISH, rheumatoid arthritis, and acromegaly

