AMSER Case of the Month May 2026

56 y/o male with open left extremity fracture after falling from a ladder

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Patient Presentation

- HPI: 56-year-old male presented to the ER with open L ankle fracture after falling approximately 8 feet from a ladder and landing on his L ankle. No head strike or loss of consciousness. Patient reported numbness in L foot.
- PMH: None reported (brought in by emergency medical services)
- PSH: None
- Vitals: BP 137/72, pulse 85, height 5’3, weight 145.5lbs
- Physical Exam: Obvious deformity of the left ankle and there is exposed bone.
- Labs: None ordered

What Imaging Should We Order?

ACR Appropriateness Criteria

Variant: 1 Adult or child 5 years of age or older. Acute trauma to the ankle or acute trauma to the ankle with persistent pain for more than 1 week but less than 3 weeks. No exclusionary criteria present. Initial imaging. Patient meets the requirements for evaluation by the Ottawa Ankle Rules which are positive: 1. Inability to bear weight immediately after the injury, OR 2. Point tenderness over the medial malleolus, the posterior edge or inferior tip of the lateral malleolus, talus, or calcaneus, OR 3. Inability to ambulate for 4 steps in the emergency department.

Procedure	Appropriateness Category	Relative Radiation Level
Radiography ankle	Usually Appropriate	☢
US ankle	Usually Not Appropriate	O
MRI ankle without and with IV contrast	Usually Not Appropriate	O
MRI ankle without IV contrast	Usually Not Appropriate	O
CT ankle with IV contrast	Usually Not Appropriate	☢
CT ankle without and with IV contrast	Usually Not Appropriate	☢
CT ankle without IV contrast	Usually Not Appropriate	☢
Bone scan ankle	Usually Not Appropriate	☢☢☢

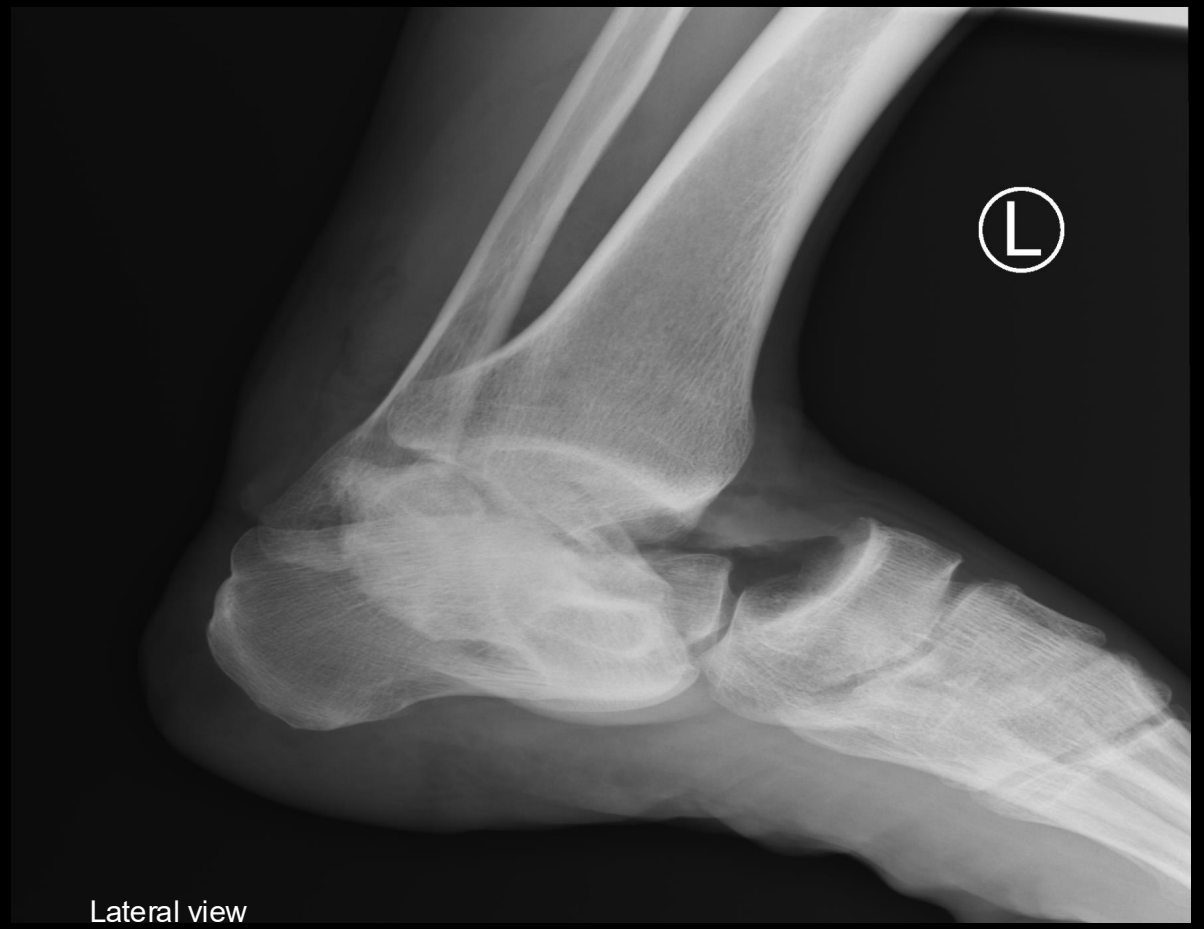
This imaging modality was ordered by the ER physician

Findings (unlabeled)

AP (Anteroposterior) view

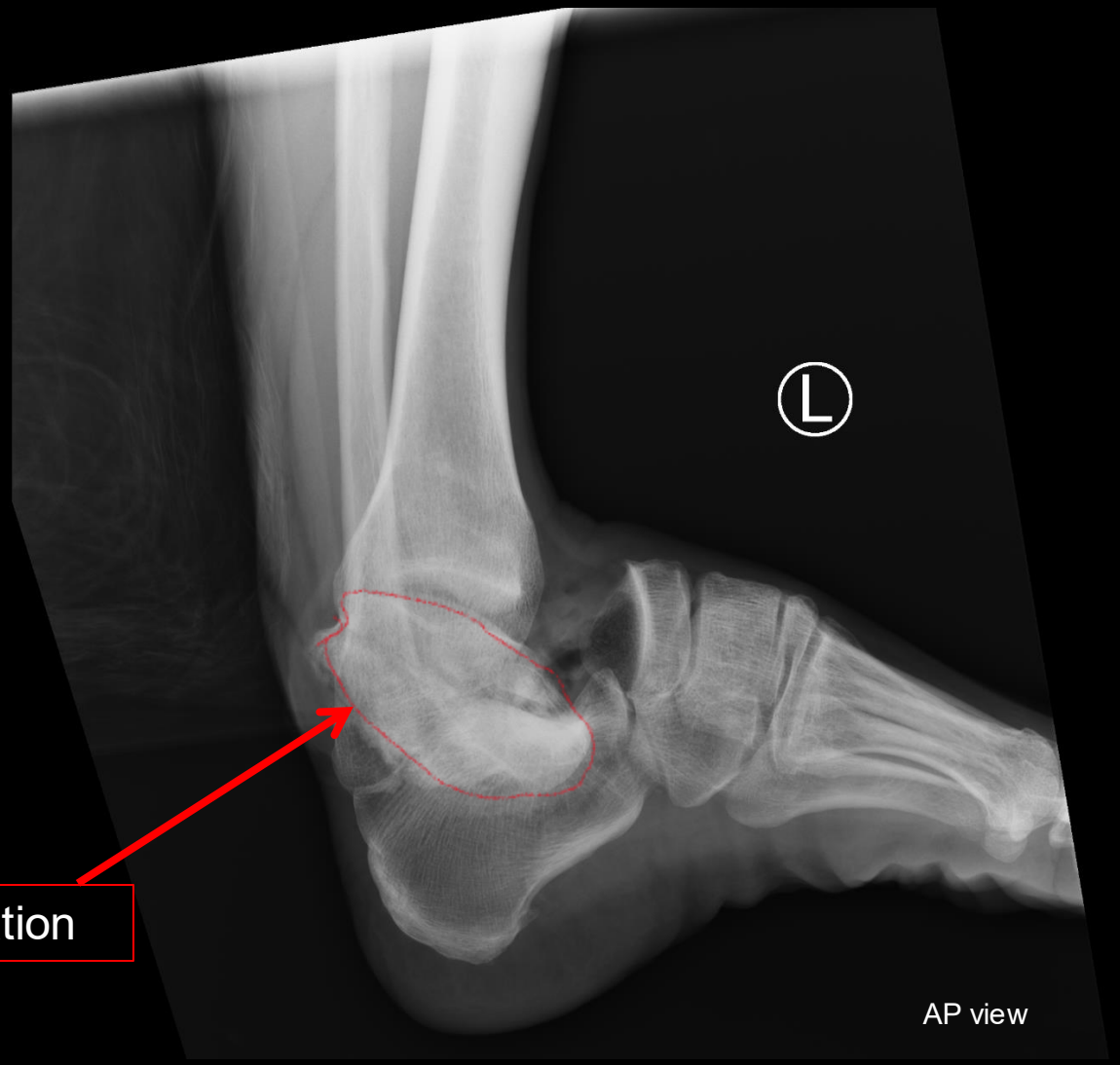
Findings (unlabeled)

Oblique/Ankle mortise view



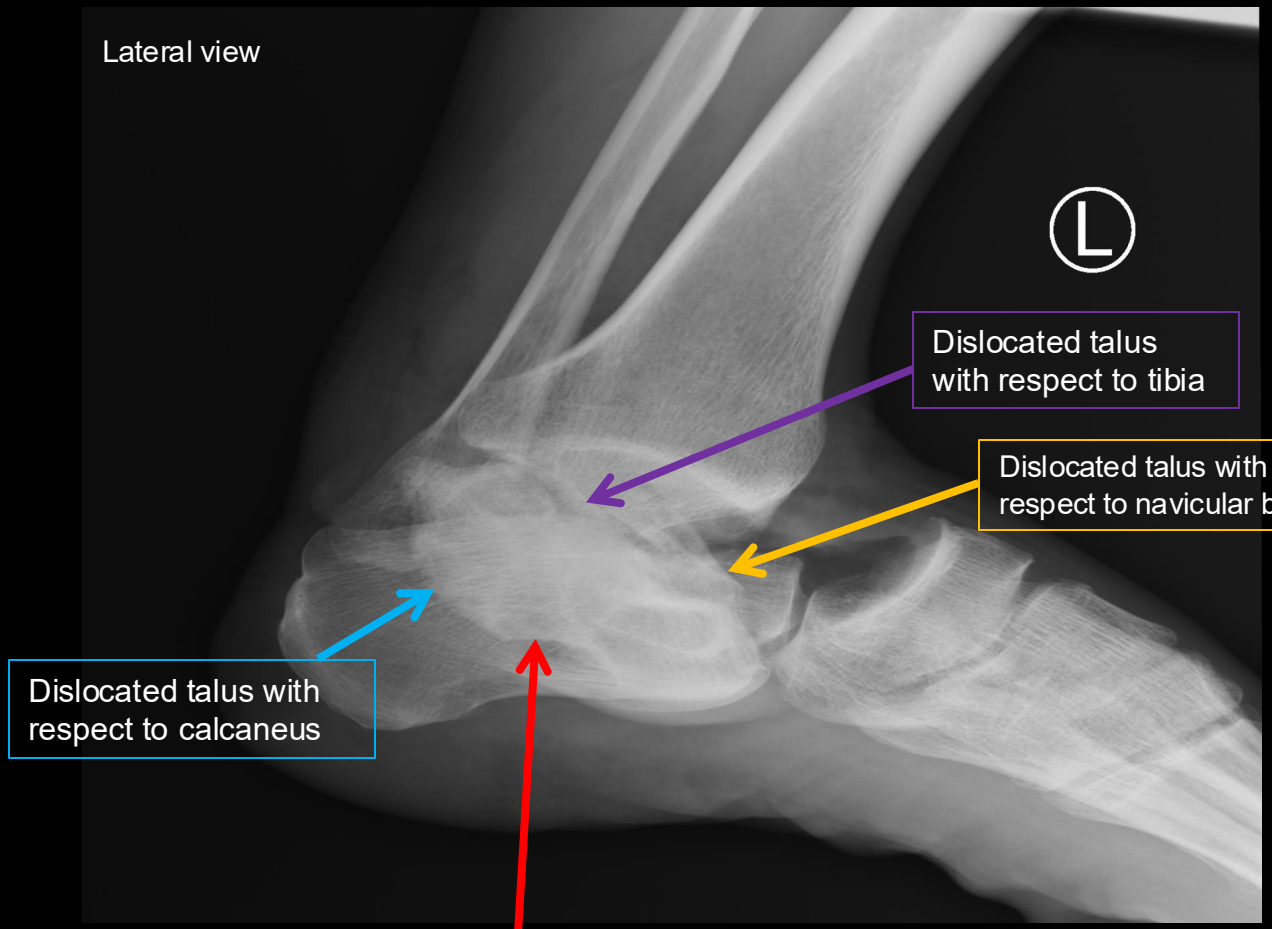
Lateral view

Findings (labeled)

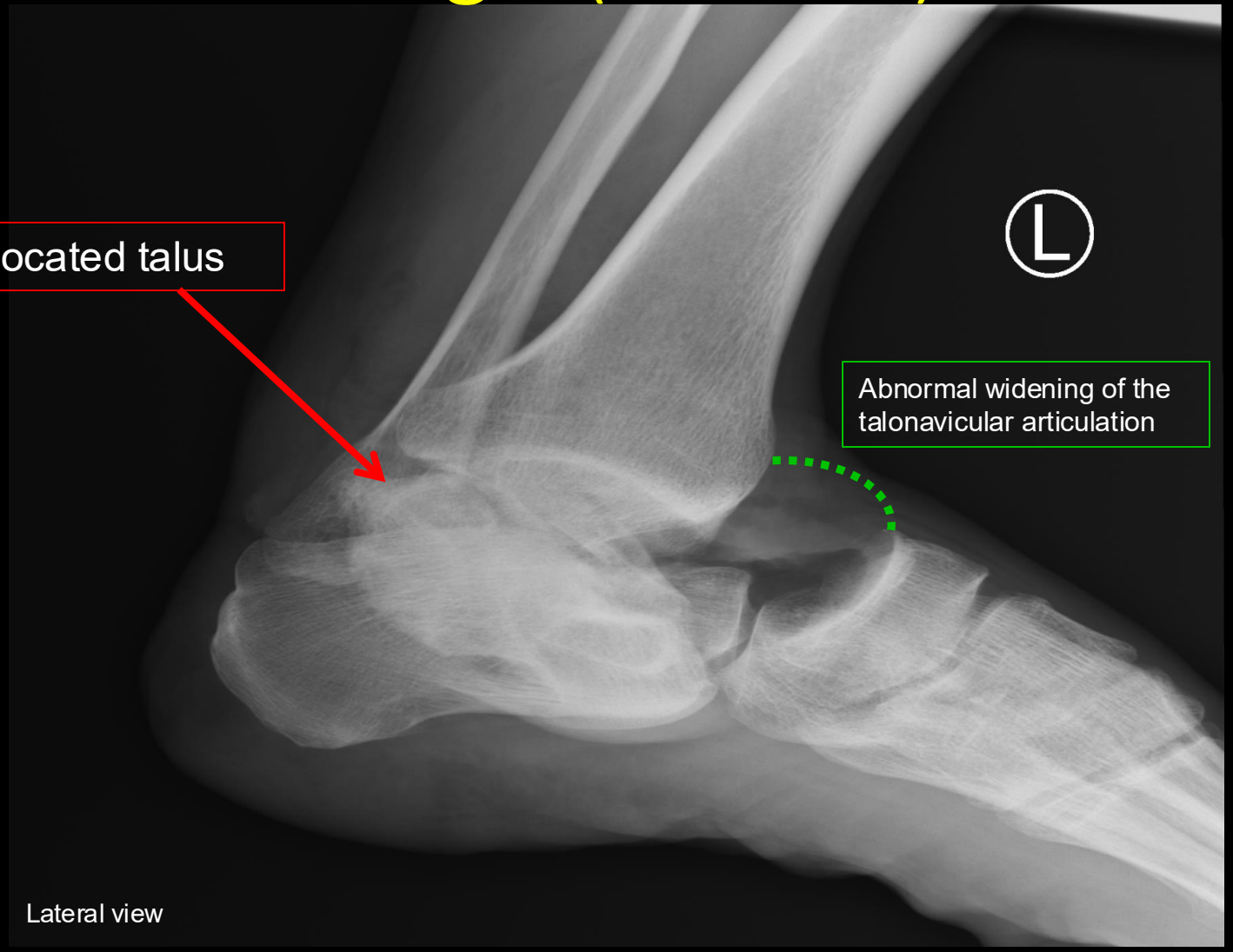


Pan-talar dislocation

Findings (labeled)



Findings: (labeled)



Final Dx:

Pan-talar Dislocation

Case Discussion

- **Definition** [1,2,3]
  - Pan-talar dislocation (luxatio tali totalis) is an extremely rare and disabling hindfoot injury involving the simultaneous dislocation of the talus from all three of its major ligamentous articulations: **tibiotalar** (ankle), **talocalcaneal** (subtalar), and **talonavicular** joints.
- **Etiology** [1,3,4]
  - Usually due to **high-energy trauma** such as motor vehicle accidents (MVAs) or falls from significant height. It involves forceful foot supination or pronation with plantarflexion.
- **Clinical Presentation**[4]
  - Severe pain and unable to bear weight
  - Visible malignment of the foot relative to ankle
  - Significant swelling and soft tissue injury

Case Discussion

Radiographic Features[3,5,6]

- Plain film X-Ray of the foot and ankle in the lateral, anteroposterior (AP), and mortise views. Key findings include:
  - Loss of tibiotalar joint articulation
  - Talus displaced relative to the calcaneus and mortis
  - Disruption of the talonavicular joint of the subtalar joint
- Computed tomography (CT) should be considered to assess for associated fractures and joint irregularities not seen on plain radiographs

Case Discussion

- Treatment[3,4,6]
  - Management is largely debated. Most common approach is open reduction percutaneous pinning with external fixation. Rehab is important for restoring function post-surgery.
- Prognosis[5,6]
  - High complication risk including chronic pain and functional limitations, osteonecrosis, avascular necrosis, arthritis, and osteomyelitis.

References:

1. Heylen S, De Baets T, Verstraete P. Closed total talus dislocation: a case report. *Acta Orthop Belg*. 2011;77(6):838-842.
2. Khan MJ, Asif N, Aziz MH. Pantalar dislocation: a rare presentation with review of treatment methods. *Int J Burns Trauma*. 2022;12(4):180-184. Published 2022 Aug 15.
3. Al-Khudairi R, Khurram R, Maris A, Vasiliadis A. A rare case of closed total talar dislocation on a background of ankle instability. Radiol Case Rep. 2025;20(11):5427-5431. Published 2025 Aug 8. doi:10.1016/j.radcr.2025.07.038
4. Dell'Agli E, Sapienza M, Castiglione MD, et al. Pantalar Intact Dislocation: A Systematic Review. *J Funct Morphol Kinesiol*. 2025;10(1):55. Published 2025 Feb 3. doi:10.3390/jfmk10010055
5. Goel A, Bell D, Asad Ullah M, et al. Total talar dislocation. *Radiopaedia*. Updated 2025. https://doi.org/10.53347/rID-35127.
6. Brown JR, Hill ZP, Peabody T, Taylor BC. Open and closed pantalar dislocations: A systematic review. *Foot & Ankle Surgery: Techniques, Reports & Cases*. 2024;4(4):100435. doi:https://doi.org/10.1016/j.fastrc.2024.100435