Introduction
- Uncommon injuries (0.2% of all fractures)
- Frequently missed (15-20%)
- High energy mechanism

Anatomy and Column Characteristics
- **Medial Column**
  - Mobility primarily at the talonavicular joint
  - Limited ROM at TMT joint
- **Middle Column**
  - Limited ROM at TMT and NC joints
- **Lateral Column**
  - Most mobile and critical for ambulation!

Lisfranc Ligament
- Medial cuneiform to 2nd MT base
- Critical for stability of midfoot arch

Mechanism of Injury
- Direct dorsal load
  - Crush injury
  - Beware compartment syndrome
- Indirect load
  - Hyper-plantar flexion
  - Dorsal to plantar ligament disruption

Initial Evaluation
- Plantar ecchymosis, diffuse foot swelling, midfoot tenderness

Radiographic Evaluation
- Know your radiographic relationships on AP, Oblique and lateral views!
- Stress exam – WB vs. Abduction Stress – look for dynamic instability
- Advanced imaging
  - CT – articular comminution, nondisplaced fractures, preop planning
  - MRI – confirm ligamentous injury, eval of plantar oblique ligament

Treatment Principles
- Restore length and alignment of columns; stable, plantigrade foot

Surgical Treatment Options
- ORIF – Joint preservation, challenging to address multiple fractures and fuse joint
- Arthrodesis – Restores rigidity of medial and middle columns reliably, challenging to convert failed ORIF to fusion, supported technique for pure ligamentous lisfranc injuries

Surgical Technique
- Transarticular screws – placed as position screws, 3.5 or 4.0 sized screws – solid or cannulated OK
- Spanning plates – 2.0, 2.4, 2.7 plates, helpful with comminution, maintaining length
- Wire fixation for flexible 4th and 5th TMT joints
- Arthrodesis – transarticular screws in lag mode, consider bone graft for fusion mass

Postoperative Management
- Restricted weightbearing 8-12 weeks
- K-wire removal at ~6 weeks