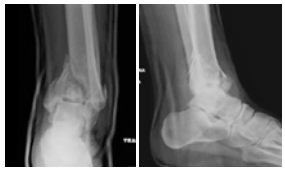
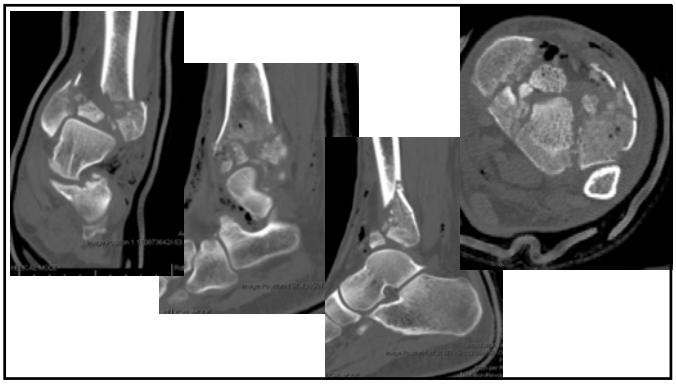
Case Studies for CSOT Miami 2016

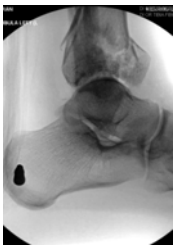
Foot and Ankle Trauma

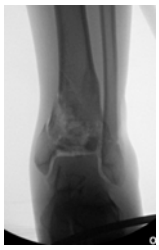
Steven Steinlauf, MD

- 25 yo man s/p MVA
- Grade 1 open pilon (small lateral poke hole)
- NV Intact

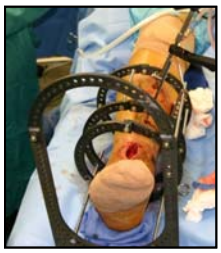


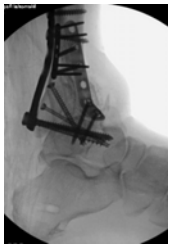


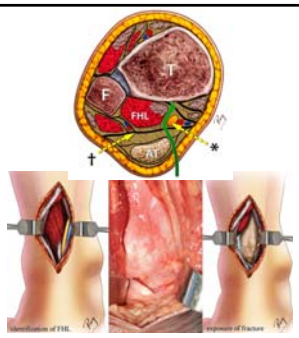




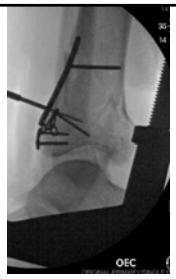
Options

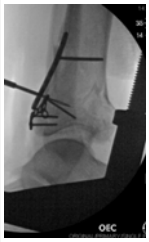


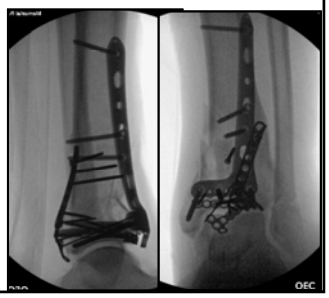




A Modified Posteromedial Approach Combined With Extensile Anterior for the Treatment of Complex Tibial Pilon Fractures (AO/OTA 43-C)

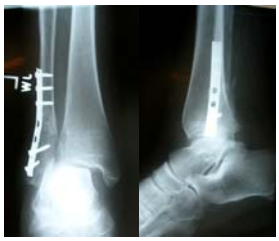




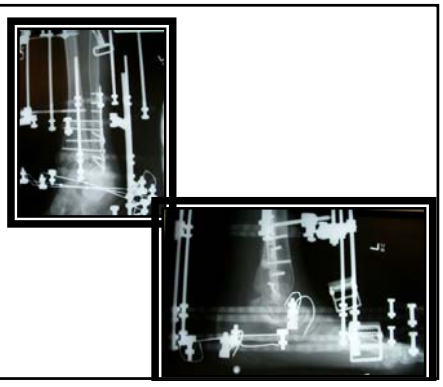
Case 1

- 62 y.o. woman s/p fall, H/O diabetes
- Standard treatment for an unstable ankle fracture
  - However fracture displaced
- Asensate!!!



Case 1

- Revision ORIF – Multiple syndesmotic screws
- Supplemental Ex-fix

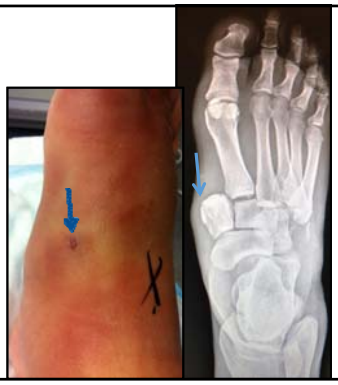


Case 1

- Healed with some valgus
- Functional
- Back to work as Mayor

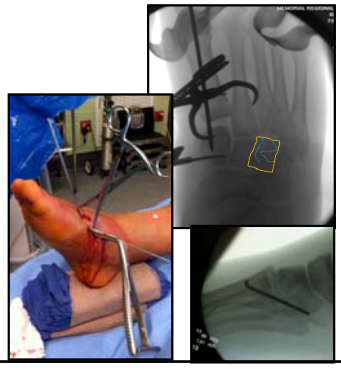
Case 2

- 50 y.o. man after car ran over his foot
- Impending skin necrosis from pressure of cunneiform



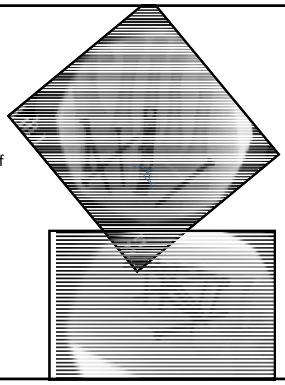
Case 2

- All Five joints are unstable
- Too swollen for definitive surgery day 1
- Percutaneus reduction and pinning
- Lateral Cunneiform Comminution



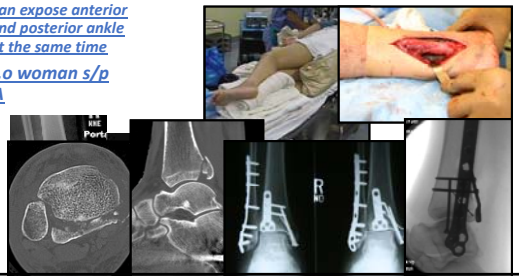
Case 2

- Fusion tarsal-metatarsal joints 1,2,3
  - Plate to span the comminution of lateral cunneiform
- Percutaneus fixation 5



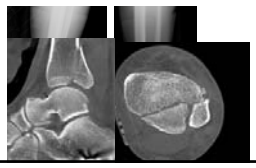
Case Study 3

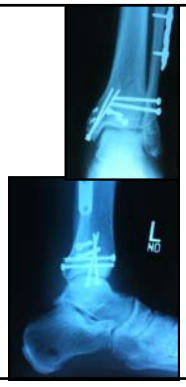
- ***Lateral Decubitus -***
  - ***Can expose anterior and posterior ankle at the same time***
- ***45 y.o woman s/p MVA***



Fixation – Screws Vs. Plates

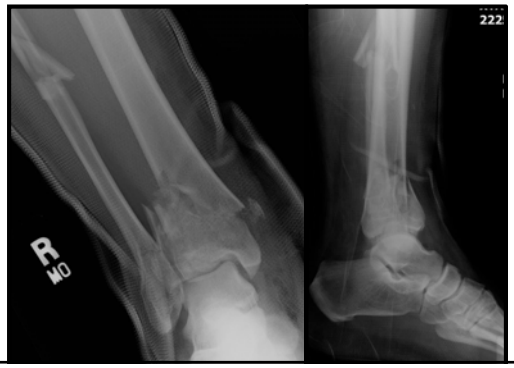
- Case 4
  - 50 y.o. maintenance worker s/p fall from ladder
  - Large open medial wound with posterior tibial tendon dislocation
  - Position?
  - Approach?



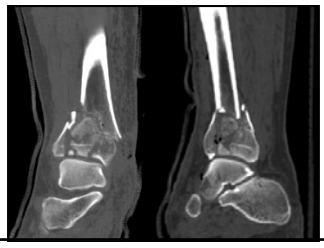


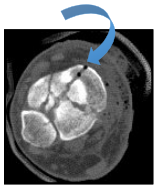
Case 5 -Tibial Pilon Fracture With Poor Quality Soft Tissues

- 54 y.o. man s/p fall from roof while chasing raccoon
- Bilateral Tibial Pilon Fractures
- Left closed
- Right open with significant medial soft tissue injury

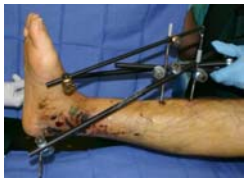
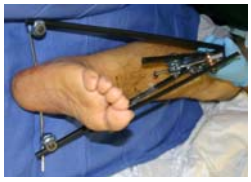


- Right - Significant Joint Comminution





Pilon Fracture with Poor Quality Soft Tissues

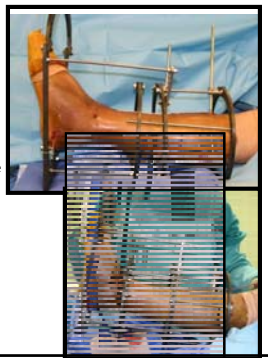



Optimal Treatment?

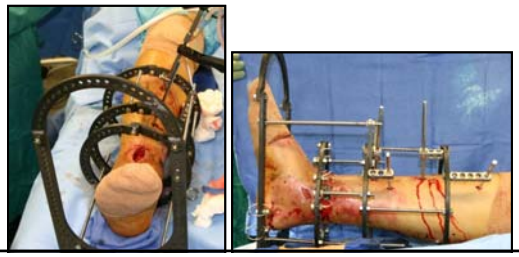
1. Wait for soft tissues to improve and use ORIF (plates and scews)
2. Limited ORIF and circular external fixation
3. Closed reduction and percutaneous screws with supplemental circular ex-fix
4. ORIF with an “old fashion” hybrid ex-fix (pin to bar combined with circular)

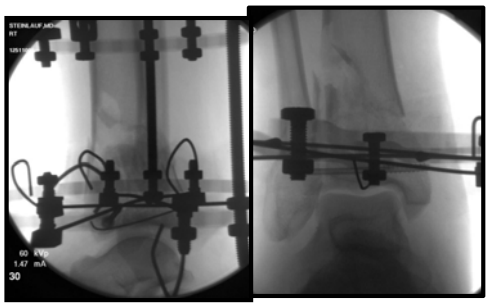
Reduction Frame

1) Stable base (3 or 4 - 6mm HA pins)
    1) Orthogonal (Reference rod)
    2) Adequate skin clearance
2) Foot frame
    1) 2 heel pins (counterposed olive wires)
    2) No midfoot wire
3) Traction (ligamentotaxis)
4) Incision for ORIF
5) Close
6) Floating ring (3 or 4 wires)
7) Blue shoe to prevent equinus



Reduction Frame

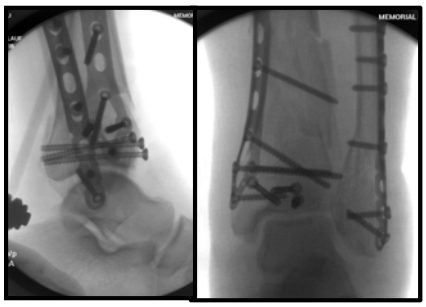




- Left
- Joint fracture 3 large pieces with shaft extension
- Adequate soft tissues

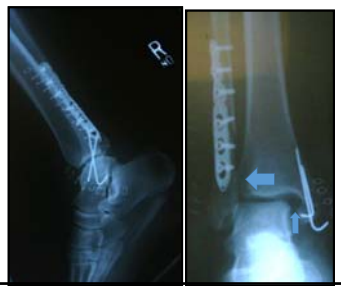
Optimal Treatment?

1. ORIF (plates and scews)
2. Limited ORIF and circular external fixation
3. Closed reduction and percutaneous screws with supplemental circular ex-fix
4. ORIF with an “old fashion” hybrid ex-fix (pin to bar combined with circular)
5. IM nail and independent screws



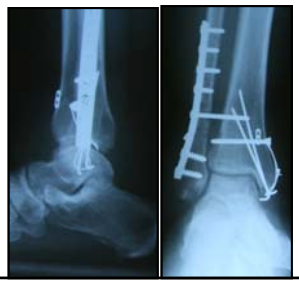
Case Study – Missed syndesmotic injury

- 30 y.o. woman s/p slip and fall
- Wide syndesmosis discovered at first post-op visit



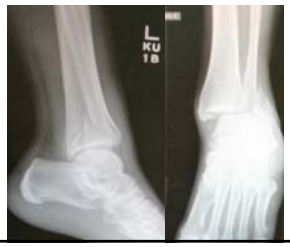
Case Study

- Still had syndesmotic widening after 1 endobutton
- Options:
  - Second endobutton?
    - $$$$$$$
  - A three cortex screw
    - $ but will it lead to malreduction



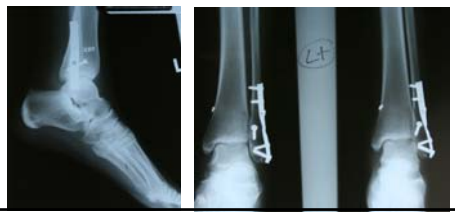
Case Study – Pre-op

- 35 y.o. woman s/p trip and fall at work



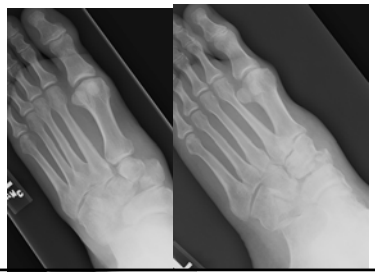
Case Study – post-op

- Able to return to work full duty



Diagnosis?

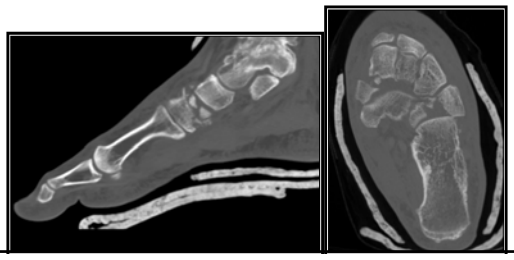
- 43 year old man
- Fall from height



Treatment Plan?

- Further Imaging?

Midfoot Crush with Cuboid Fracture



Midfoot Crush with Cuboid Fracture