



]

Fall Sports Med Conference 2026
Steve Pennington, MD,

Ankle Sprains

45% of Athletic Injuries



Argentina 2022

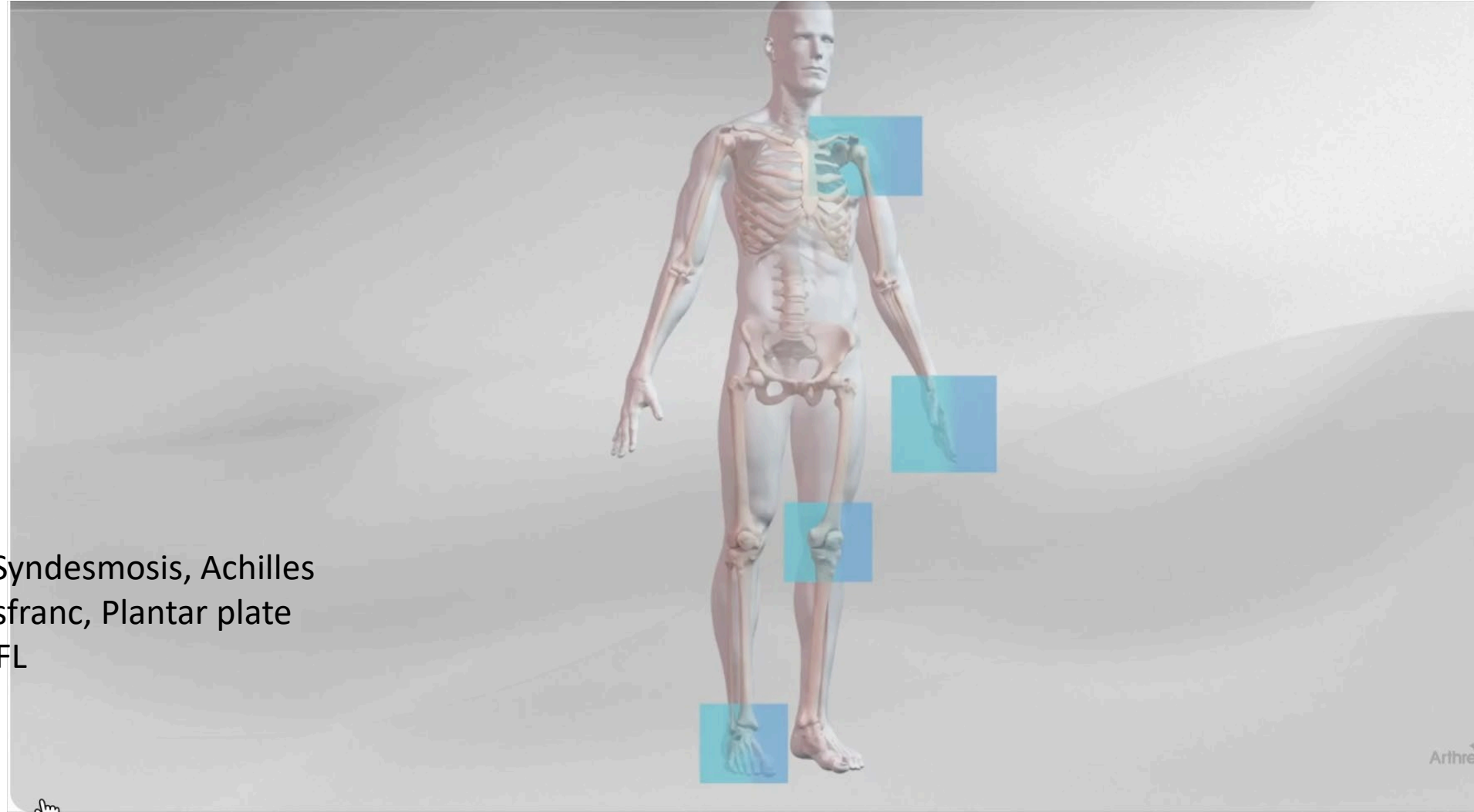


“Hay que
sufrir para
ganar”

• Internal Brace

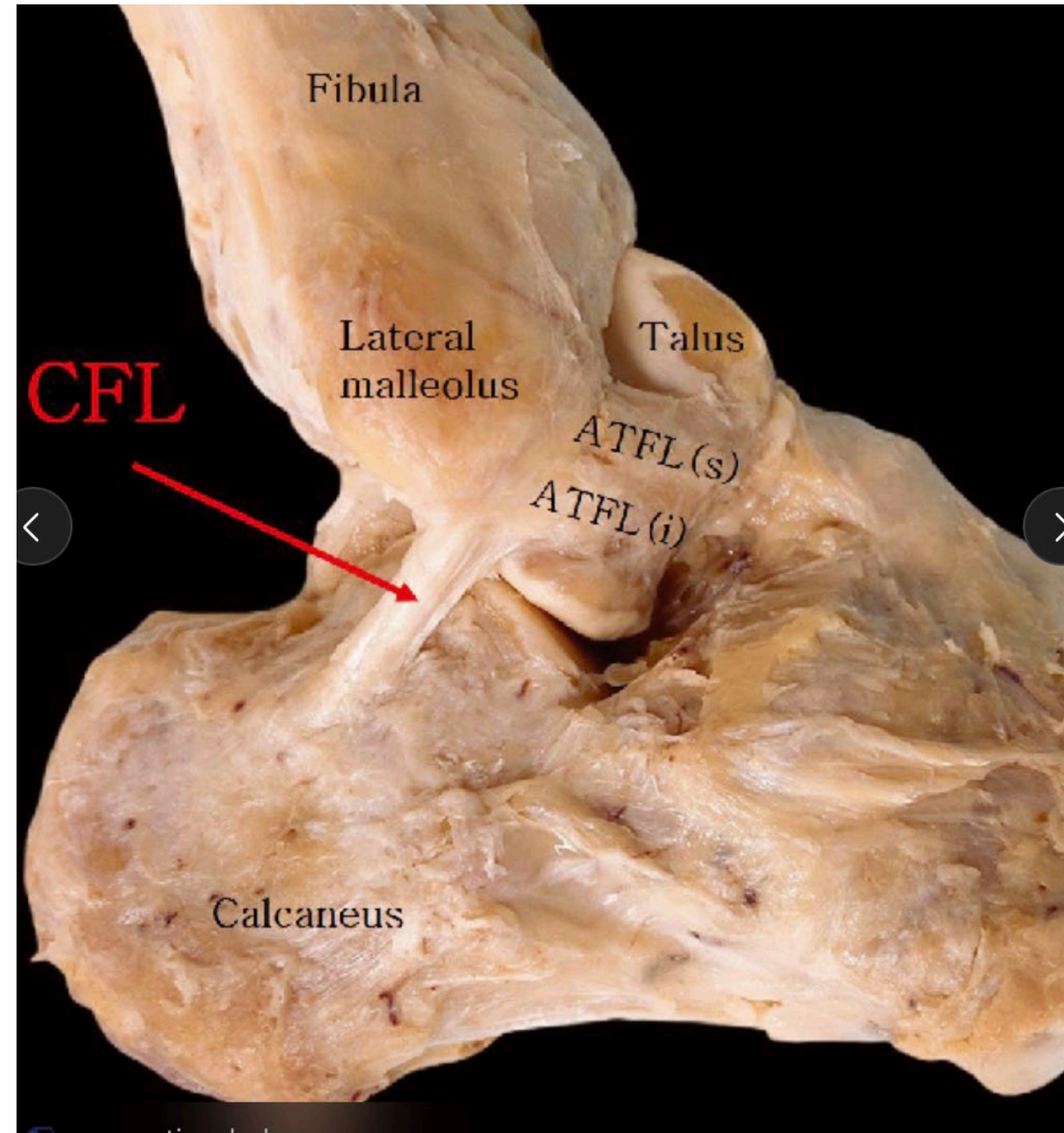
“High strength suture tape placed alongside or across a repaired or reconstructed ligament or tendon to provide load sharing while biologic healing occurs”

Ankle-	Lateral Ligament, Syndesmosis, Achilles
Foot-	Spring ligament, Lisfranc, Plantar plate
Knee-	ACL, MCL, LCL, MPFL
Hand-	UCL, Scapholunate
Elbow-	UCL



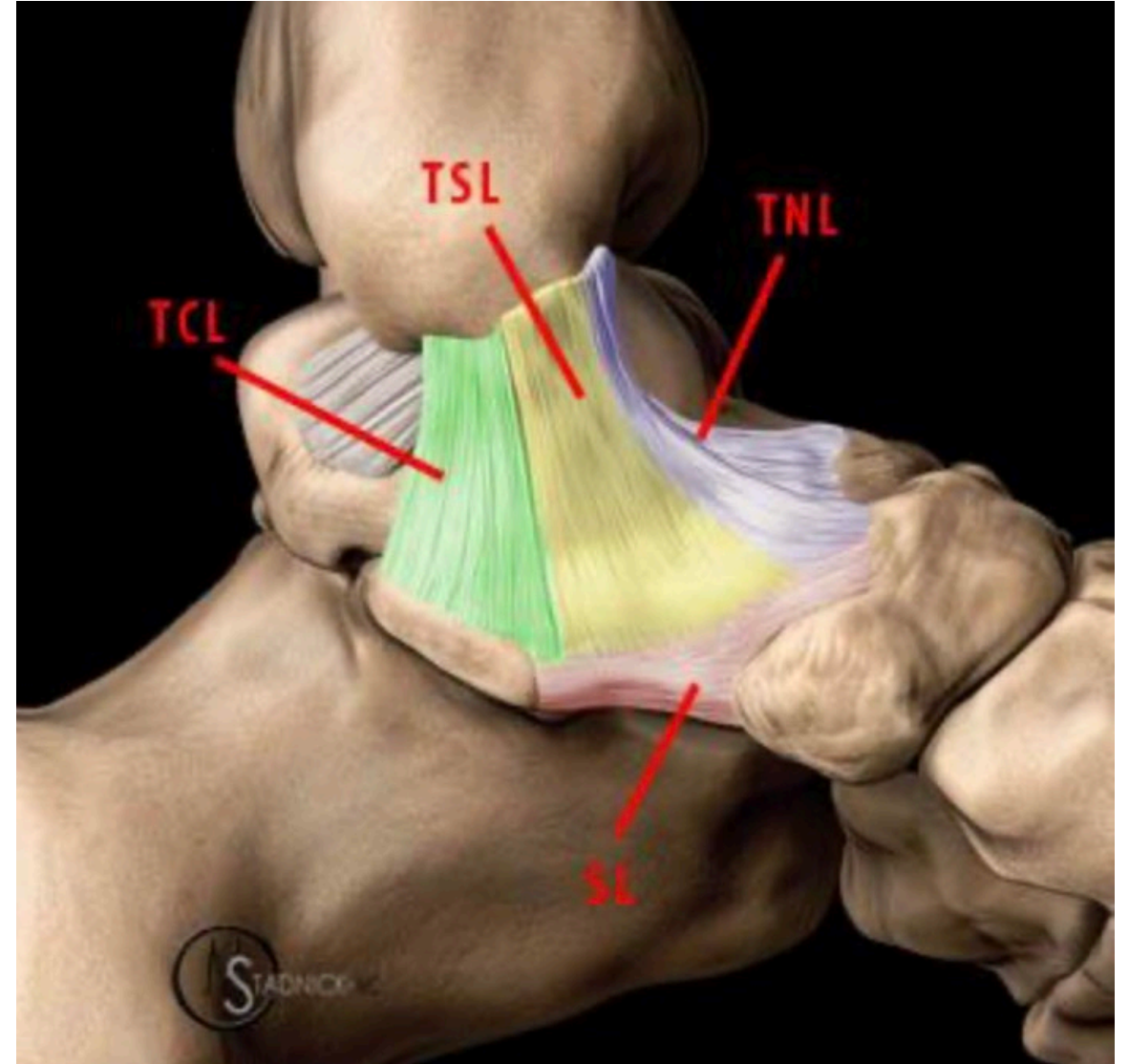
Lateral Ankle Sprain

- 65% of ankle injuries in NCAA
- **ATFL — anterior talofibular ligament:** runs from the anterior lateral malleolus to the talus; it is the **most commonly injured** in an inversion ankle sprain.
- **CFL — calcaneofibular ligament:** runs from the lateral malleolus down to the calcaneus.
- **PTFL — posterior talofibular ligament:** runs posteriorly from the fibula to the talus and is generally the strongest of the three.



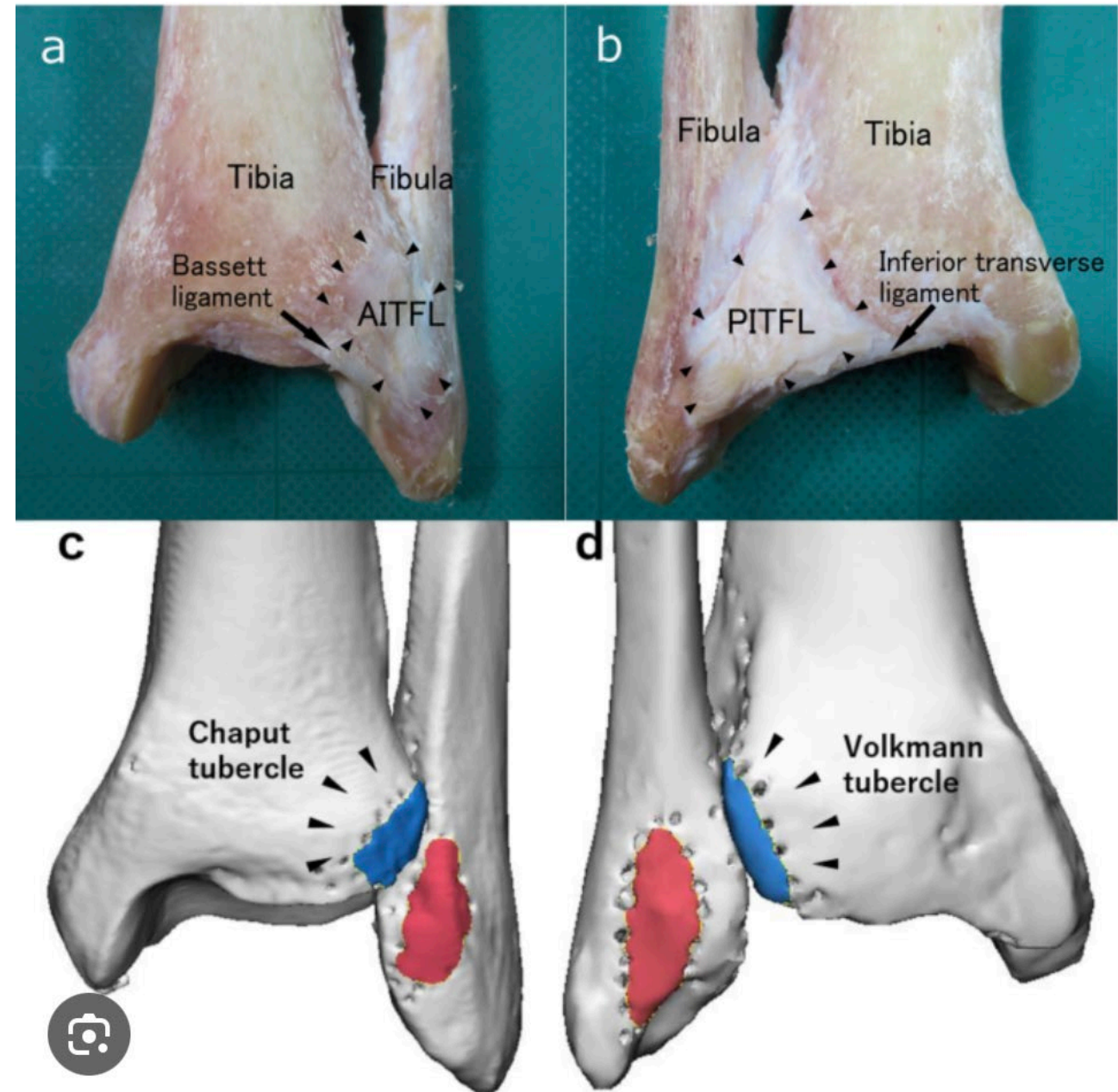
Medial (Deltoid)

- 5%
- Deltoid Ligament Complex



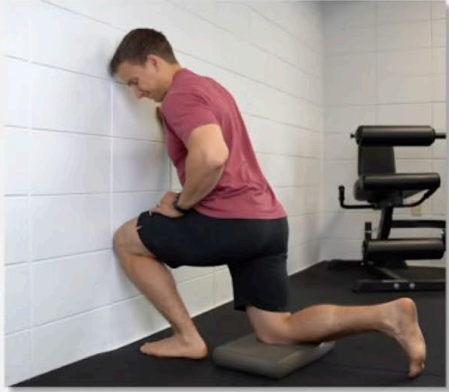
Syndesmosis (High)

- 11%- NCAA
- **AITFL** = anterior inferior tibiofibular ligament
- **PITFL** = posterior inferior tibiofibular ligament
- **Inferior transverse ligament**
- **Interosseous Ligament**



High Ankle- Syndesmosis





STAGE 1

PAIN WITH
DORSIFLEXION
LUNGE TEST

AITFL OR PITFL
TENDER WITH
PALPATION

NO

SYNDESMOTIC INJURY
UNLIKELY

YES

STAGE 2

YES

NO

SYNDESMOTIC INJURY
UNLIKELY

SQUEEZE TEST

NEGATIVE

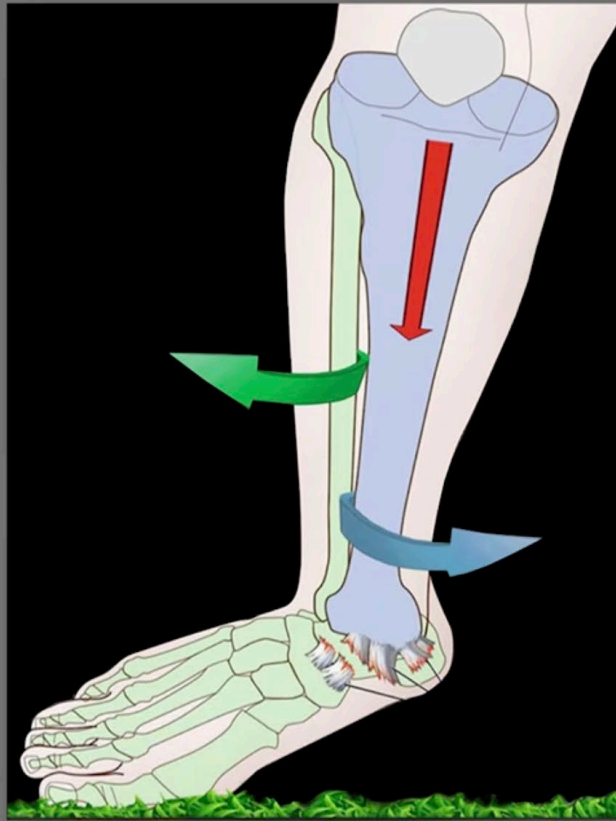
FALSE POSITIVE FROM STAGE 1

POSITIVE

SYNDESMOTIC INJURY **LIKELY**
IMAGING TO CONFIRM DIAGNOSIS



West Point Ankle Grading System



GRADE 1: Mild sprain or tear of the AITFL
No instability of the ankle

GRADE 2: Complete tear of the AITFL
Partial tear of the interosseous ligament
Stable or unstable

GRADE 3: Complete disruption of all the ligaments
Instability of the ankle

Minimal to no swelling

Dorsiflexion range of motion symmetrical and pain-free

No pain with the dorsiflexion-external rotation test

Near symmetrical strength and endurance of the ankles, calves, and thighs

Near symmetrical single leg hopping

Near symmetrical reaches during the star excursion balance test (SEBT)

Near symmetrical step balance with running

Brace vs Tape

- **“Ankle bracing and taping both reduce ankle sprain risk, but the evidence generally favors bracing over taping on functional and cost-effectiveness grounds, while direct head-to-head trials of treatment outcomes show largely equivalent results. The most recent guidance (2025 AAFP review)”**

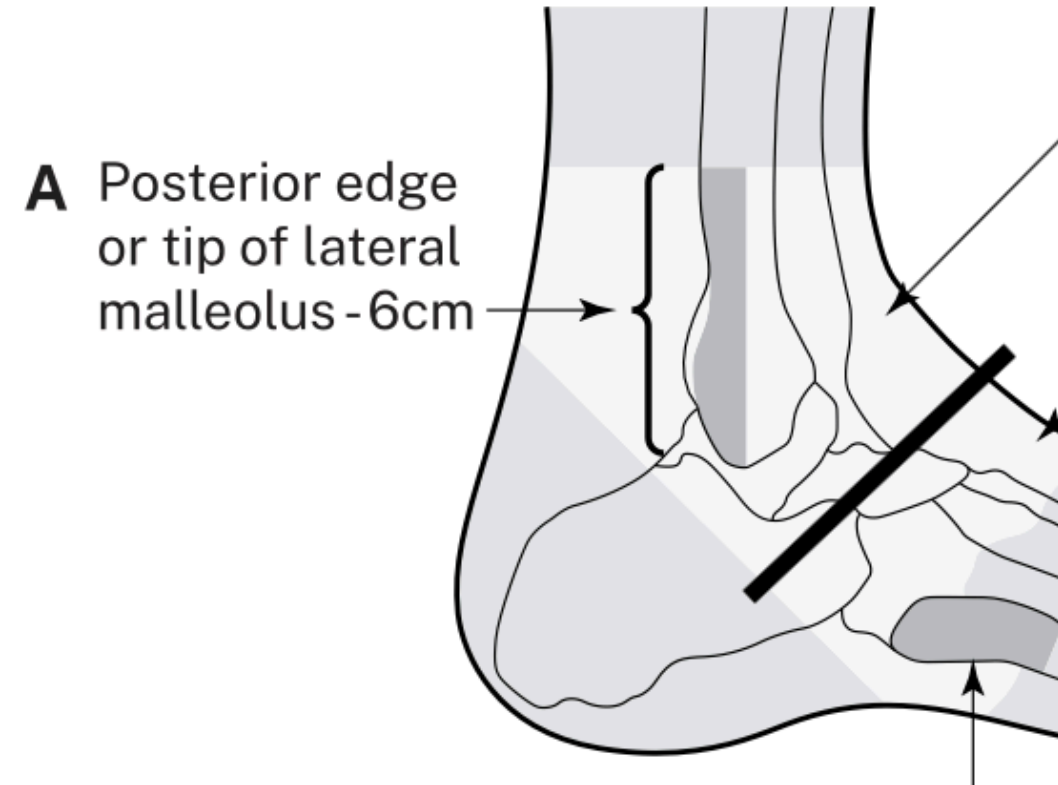


When to Xray?

• Ottawa Ankle Rules

- Request an x-ray for a patient with traumatic ankle pain if they have any of the following:
- (A) point tenderness at posterior edge (of distal 6 cm) or tip lateral malleolus
- (B) point tenderness at posterior edge (of distal 6 cm) or tip medial malleolus
- inability to weight bear (four steps) immediately after the injury and in the emergency department.

LATERAL VIEW



When to MRI?

- **MRI is not part of the routine acute ankle sprain workup.**
- **Persistent pain >1 week (but <3 weeks) with negative radiographs —**
- **Suspected significant ligamentous or syndesmotic (high ankle) injury —**
- **Radiographs showing or suggesting osteochondral/talar dome injury — A sprain not following the expected recovery course — evaluate for talar fractures, peroneal tendon injury, chronic instability, or osteochondral lesions.**

Return to Play

- **The PAASS framework (5 domains)**
- **Pain** — minimal/acceptable pain both during sport participation and over the preceding 24 hours (including after functional drills).
- **Ankle impairments** — restored range of motion (especially dorsiflexion) and muscle strength, endurance, and power.
- **Athlete perception** — perceived ankle confidence/reassurance and stability, plus psychological readiness. Perceived stability correlates with reduced reinjury.
- **Sensorimotor control** — proprioception and dynamic postural control/balance.
- **Sport/functional performance** — hopping, jumping, and agility; sport-specific drills; and ability to complete a full training session without setback.

Surgery

- Modified Brostrom
- Syndesmosis Repair
- Deltoid ligament Repair

Thank You

- Comments, Best practices, Questions