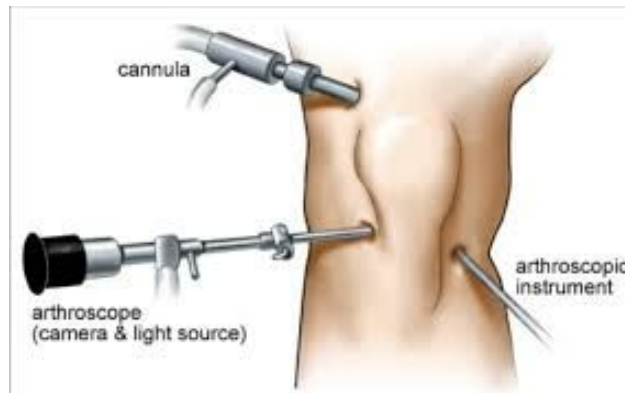




## Ep 13 ACL Injuries - Dr. Christopher Cooke Notes-



### History/Physical

- Pain and Swelling
- Effusion
- Gait
- ROM of the knee

#### Lachman Test

- Most clinically sensitive exam for a complete ACL rupture

#### Pivot shift Test

- Easily done w/ patient under anesthesia
- Most specific physical exam finding that correlates with return to play of the level 1 athlete

#### Anterior Drawer Test

Tests for Examination of the Knee. Dr. Nabil Ebraheim- <https://youtu.be/c3643PM0a2o>



Associated injuries:

Meniscus tears, osteochondral lesions, and collateral ligament injuries

60% - 75% associated with meniscus tears

46% have collateral ligament injuries

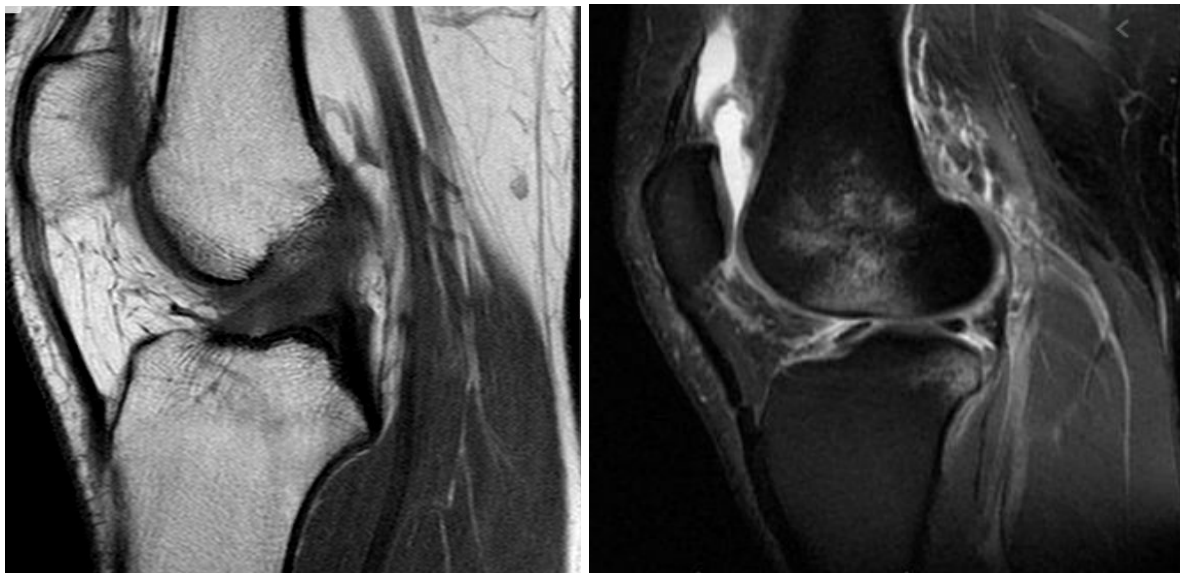
### **Imaging**

#### Plain Films

- Knee films (AP, Lateral, Tunnel, and sunrise views)
- Assess for fractures, evaluate knee alignment , determine skeletal maturity, identify degenerative changes

#### MRI

- Primary study used to diagnose ACL injury
- Sensitivity - 86% Specificity- 95%
- Assess meniscus injury, collateral ligament tears, and bone contusions





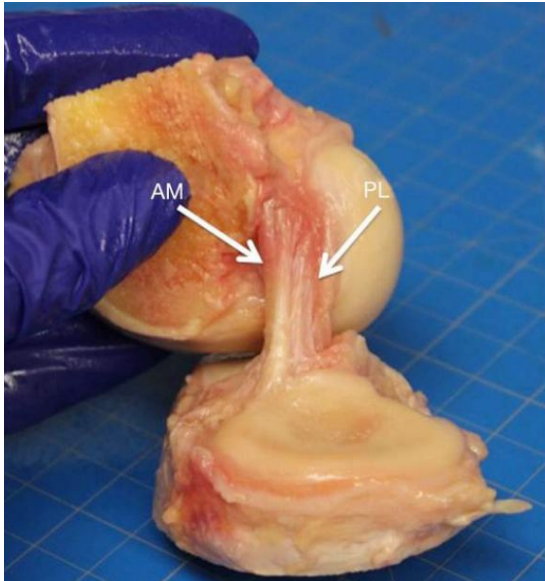
## **Anatomy**

### Anteromedial bundle

- Tightens in flexion
- Femoral origin is anteroproximal in the intercondylar notch and inserts anteriorly and medially within the anterior intercondylar area of the tibia

### Posterolateral bundle

- Tightens in extension, internal, or external tibial rotations
- Originated posteriorly in the notch and inserts posteriorly and laterally within the anterior intercondylar area of the tibia
- In extension, the bundles are oriented vertically and are parallel to one another. In flexion, the bundles are oriented horizontally and the bundles are crossed
- Lateral bifurcate ridge separates the origins of the anteromedial and posterolateral bundles and is found in 30% of patients



## Treatment

### Non-operative management

- Bracing
- Rehabilitation
- More sedentary low demand individuals who are not as active

### Operative Management

- Treated arthroscopically for Reconstruction of the ACL
- Autograft to Allograft
  - No risk of disease transmission
  - Lower retear rate
  - Heal and incorporates more quickly
  - Harvest site morbidity



### Tunnel Placement

- Position the femoral tunnel at either 2 o'clock or 10 o'clock positions; consistent with the anatomic ACL femoral footprint
- Avoid Too Vertical Tunnel Placement
- More rotational laxity with more Vertical tunnels

### Graft Selection

- No graft selection stands out as superior (No significant difference)
- No functional difference in Autograft or allograft have been demonstrated
- Graft choice must be individualized to the patient (Age, and desired level of activity)

### Autograft

- Lower risk of disease transmission
- Lower retear rate (<25 yo)
- Heal and incorporates quicker
- Harvest site morbidity

### Allograft

- Faster surgery
- Smaller incisions
- Risk for disease transmission

Bone-Patella Tendon-Bone  
Hamstring graft



Nailed It Ortho podcast episode

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#### References:

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