

**Distal Femur Fractures**  
**2016 OTA NP/PA Course**  
**October 4-5, 2016**

- I. Objectives
  - a. Anatomy
  - b. Fracture Patterns
  - c. Treatment
  
- II. Anatomy
  - a. Osteology – extraarticular /intraarticular areas
  - b. Trapezoidal in axial plane
    - i. 10 degrees lateral
    - ii. 25 degrees medial
  - c. Notch seen on lateral view behind Blumensaat's line
  - d. Superficial femoral artery to popliteal artery at Hunter's canal
  - e. Sciatic nerve lateral to popliteal vessels
  
- III. Classification
  - a. Extraarticular: AO/OTA type 33-A
  - b. Partial Articular: AO/OTA type 33-B
  - c. Complete Articular: AO/OTA type 33-C
  - d. Hoffa fragment – best seen on sagittal CT scan
    - i. Can be an isolated fracture a fragment of a C-type injury
    - ii. Present in 33% of AO/OTA 33-C injuries
    - iii. Lateral femoral condyle (75%) > medial femoral condyle (25%)
  
- IV. Treatment
  - a. Emergency Department
    - i. Assess pulses
    - ii. Long leg splint / knee immobilizer / skeletal traction
    - iii. IV antibiotics / tetanus for open fractures
    - iv. Emergencies
      - 1. Distal neurovascular compromise
      - 2. Compartment syndrome
  - b. Operating Room
    - i. Anatomic articular reduction and absolute stability
    - ii. Functional (length, alignment, rotation) of metaphysis with relative or absolute stability
  - c. Postoperative
    - i. Range of motion within 1-2 weeks
    - ii. Quadriceps strengthening
    - iii. NWB 8-12 weeks for articular injuries
    - iv. NWB 4-6 weeks for extraarticular injuries