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Breakout Session # 1
Primary TKA: Simple to Complex

2021 AAHKS Spring Meeting

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64 year old female

- Big rig truck driver, very active
- Bilateral medial knee pain
- Failed non-operative modalities
- Cortisone injections in the past but no longer effective
- Pain predominantly with WB activity

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Exam

- Isolated palpation tenderness medial joint line bilateral knees
- Crepitus with ROM
- ROM 5-120 with pain at extremes
- Passively correctable varus deformities
- No ligamentous instability
- No pain with hip ROM
- BMI 29

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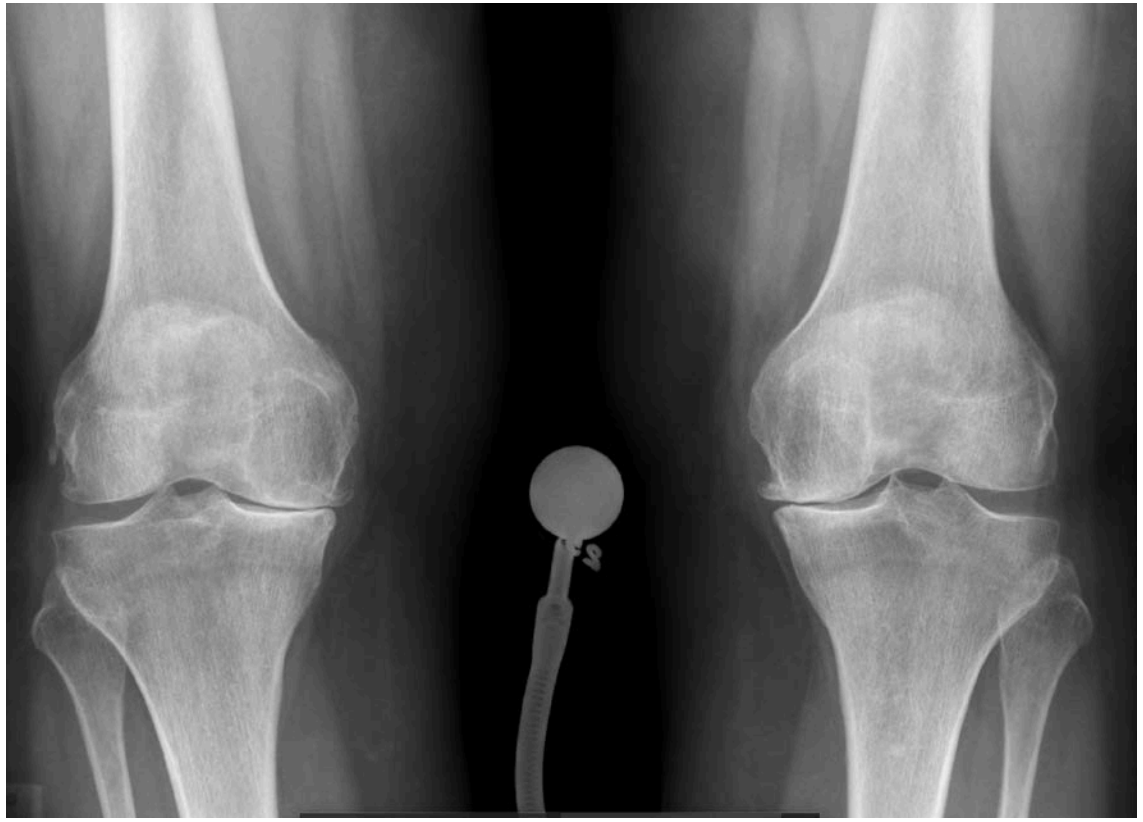
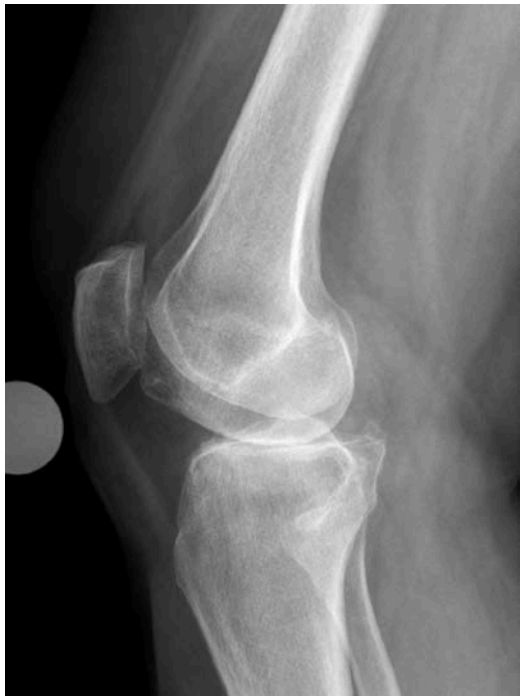
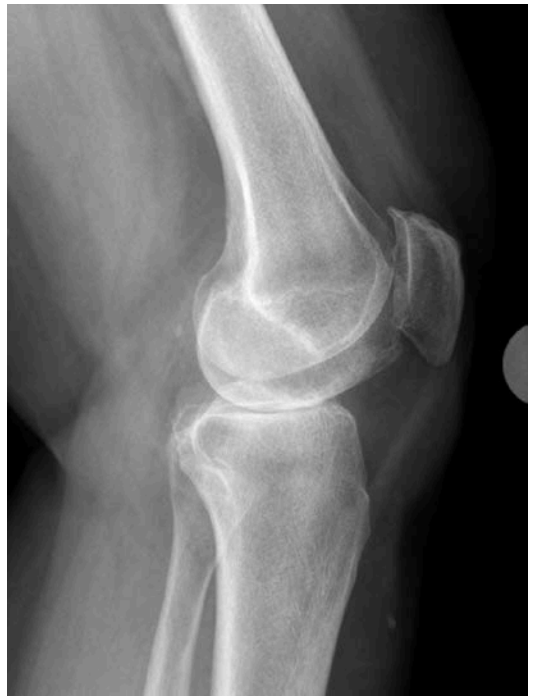
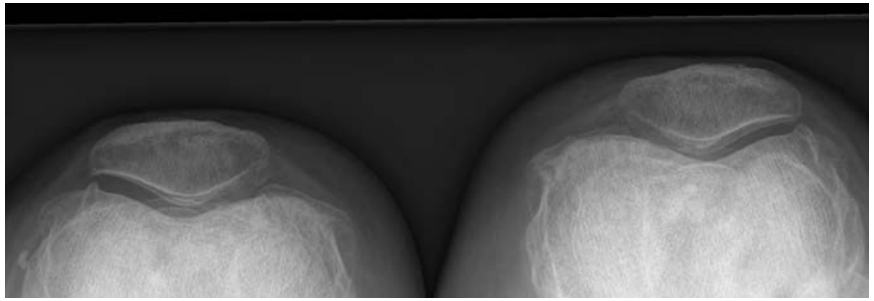
Radiographs









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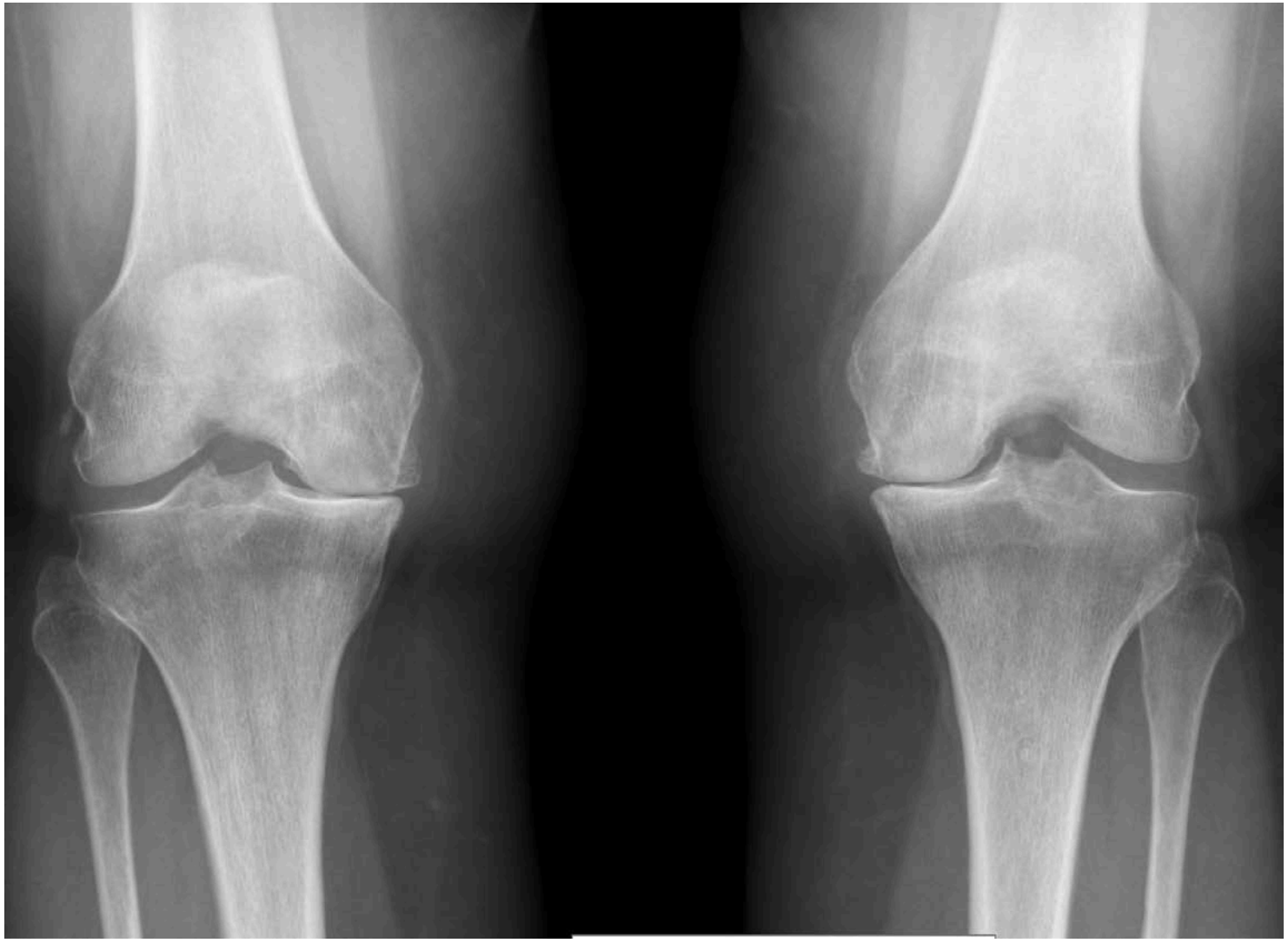
Flexion Weight-Bearing



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Considerations

- UKA versus TKA?
  - Indications for UKA
  - Contra-indications for UKA
  - Radiographic and clinical criteria
- Further info needed?
  - Stress views?

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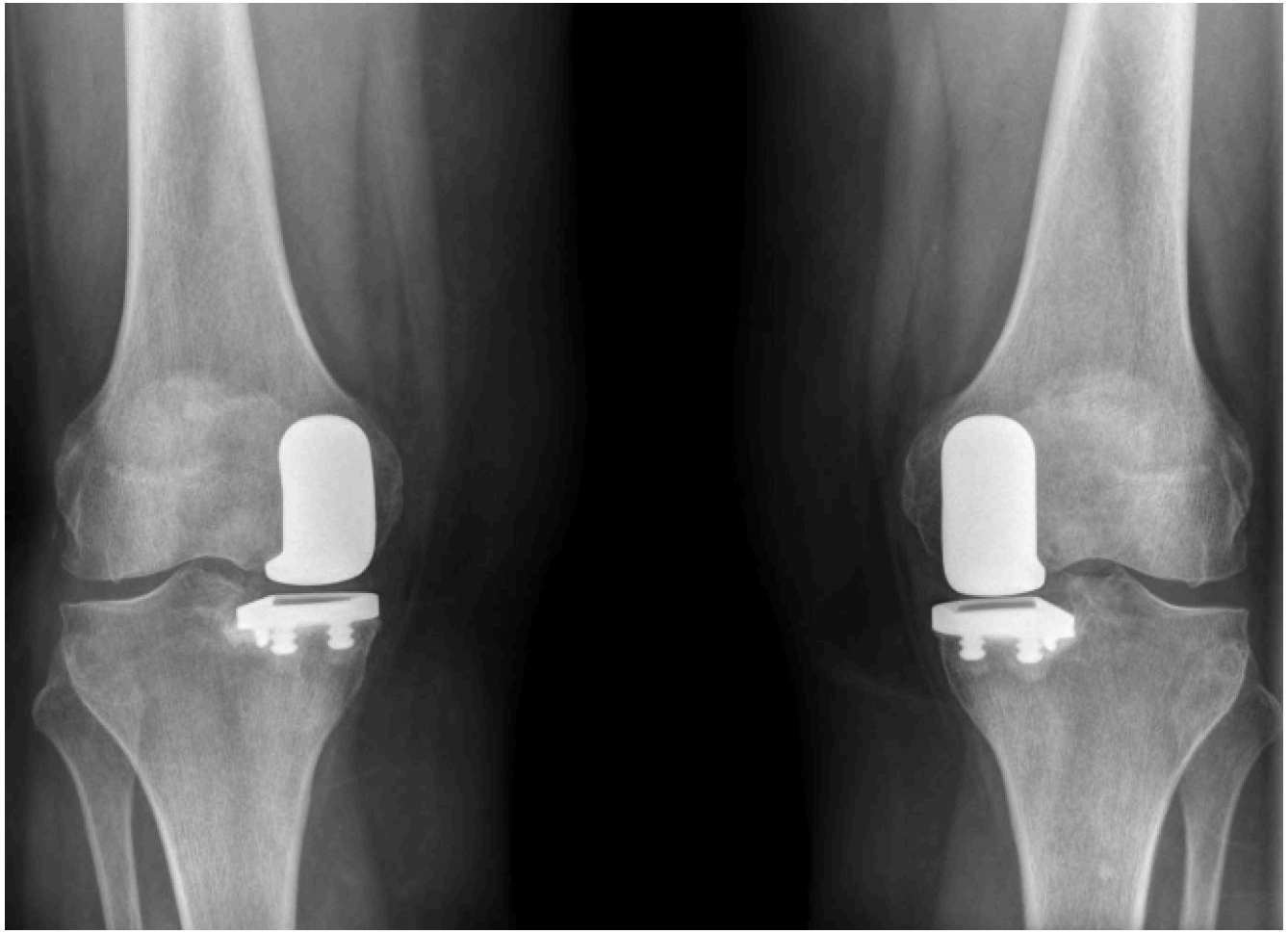
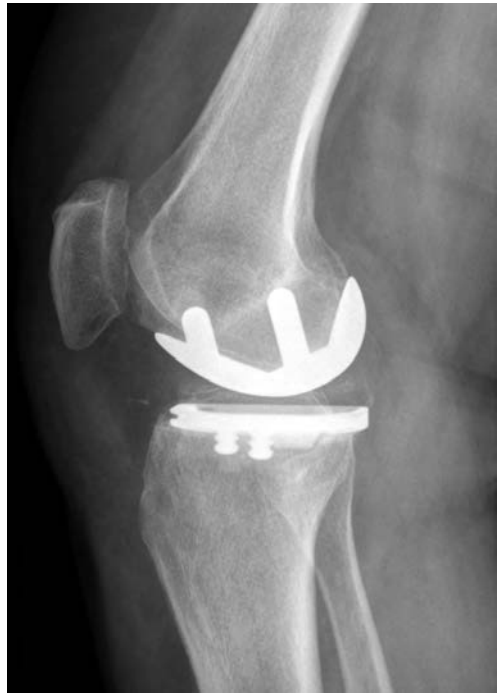
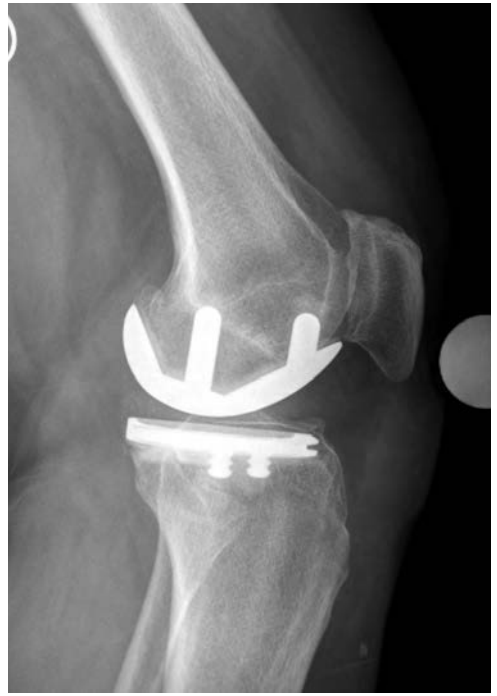
Post Op X rays







44 year old female

- Active, but progressive generalized left knee pain
- More medial based pain, but generalized with lateral pain
- Failed non-operative modalities
- Cortisone injection 6 months ago, relief for 3 weeks
- Pain predominantly with WB activity

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Exam

- Slight antalgic gait on left lower extremity
- Pain with palpation medial, lateral joint lines
- Crepitus with ROM
- ROM 5-120 with pain at extremes
- Passively correctable varus deformity
- No ligamentous instability
- No pain with hip ROM

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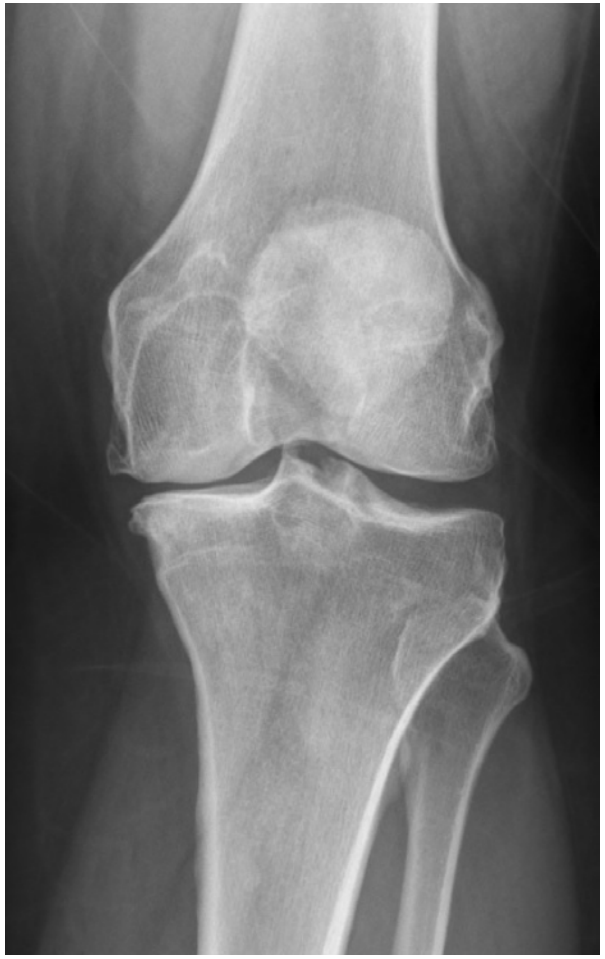
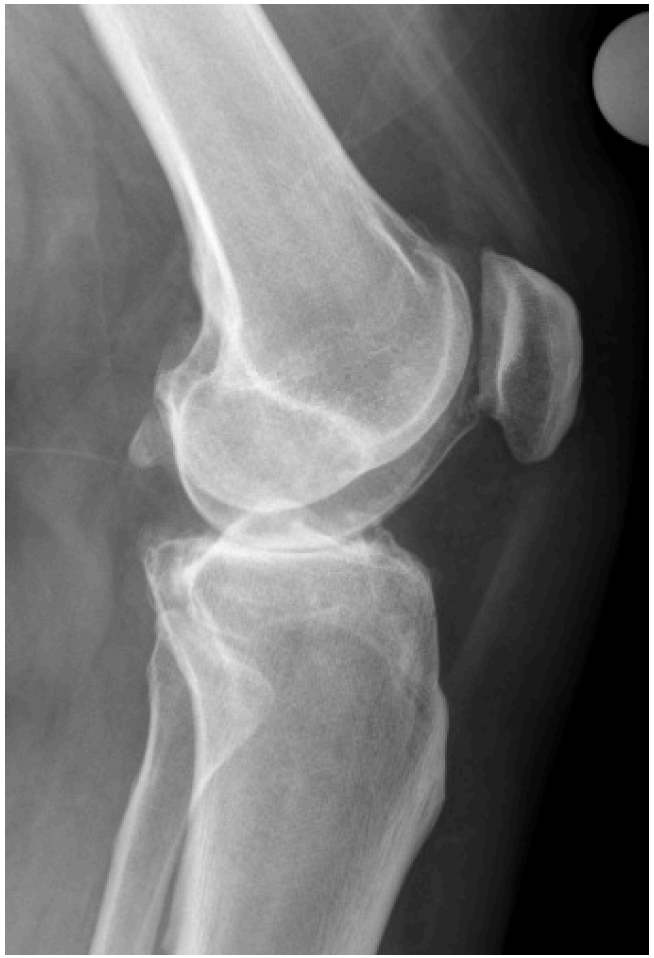
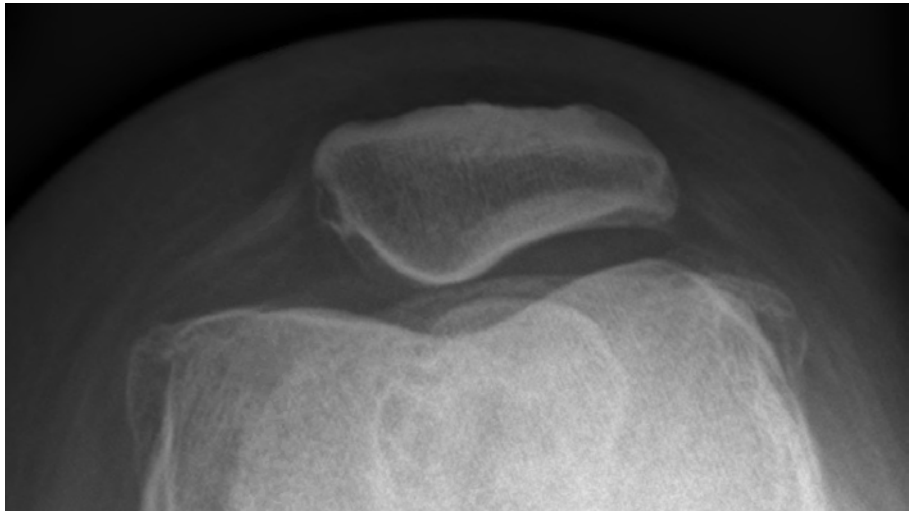
Radiographs







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Considerations

- Fixation
  - Cemented or cementless?
- Bearing Articulation
  - CR vs PS vs Congruent Kinematic Bearing?
- Patella Resurfacing
  - Yes or No?
- Tourniquet
  - Yes or No?

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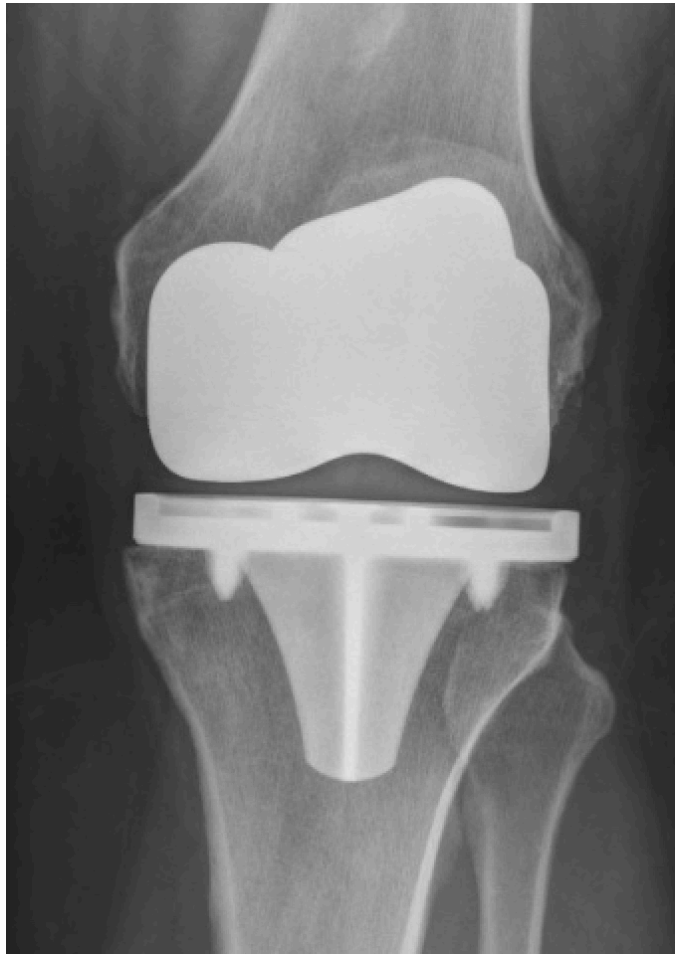
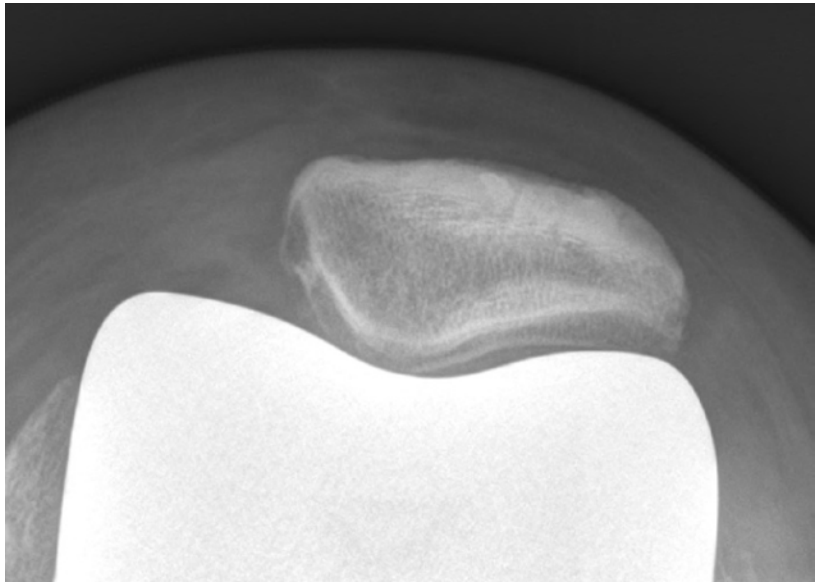
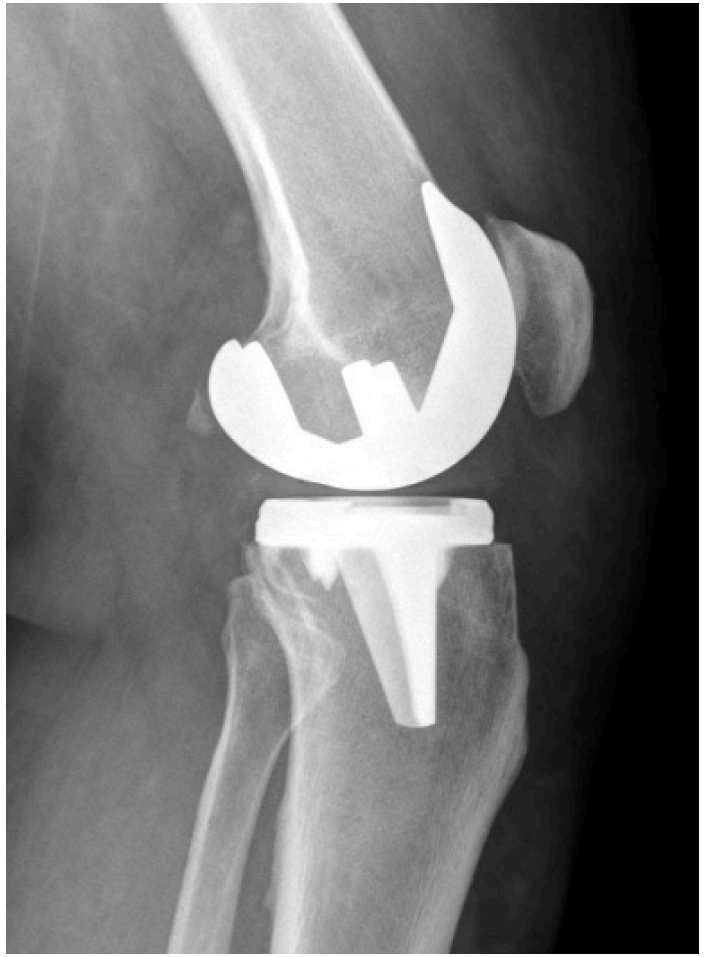
Post Op X rays







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72 yo female

- Bilateral knee pain for years
- Generalized pain
- Pain with weight bearing predominantly
- Wakes patient up at night
- Past cortisone injections no longer working
- Medically treated and controlled SLE (Lupus)

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Exam

- Bilateral genu valgum in stance
- Bilateral crepitus
- 15 degree flexion contractures, valgus alignment
- Further flexion to 90 degrees bilaterally
- Soft endpoint with valgus stress, only partially correctable
- No pain with hip ROM

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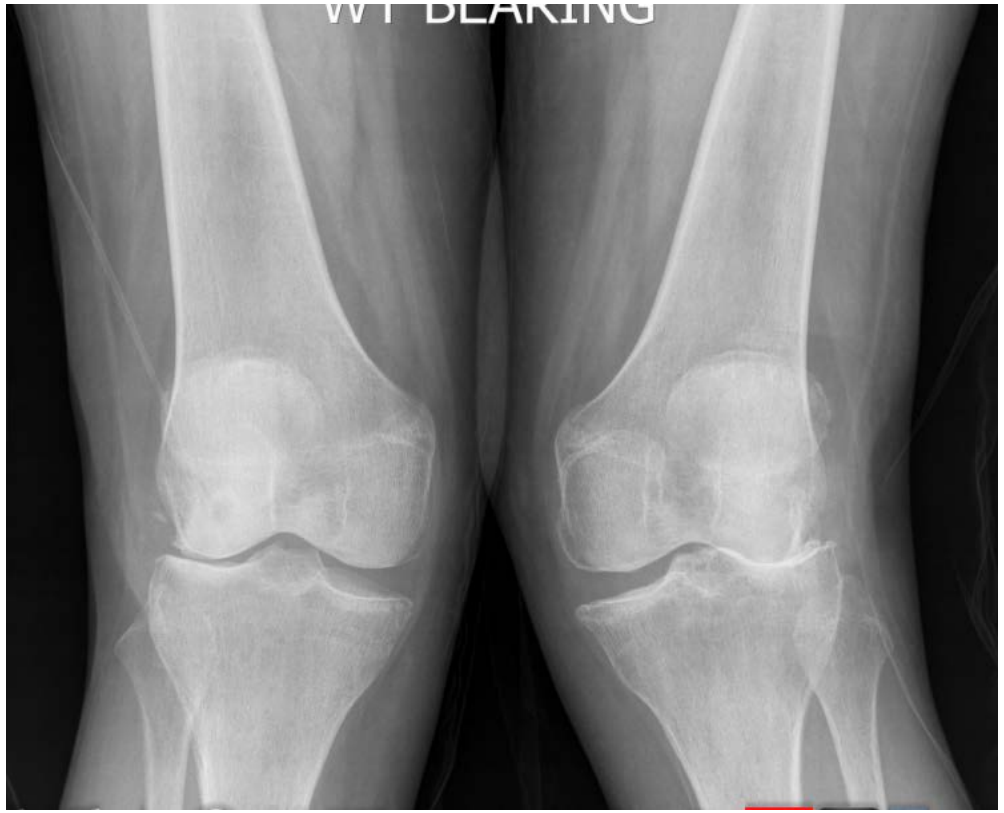
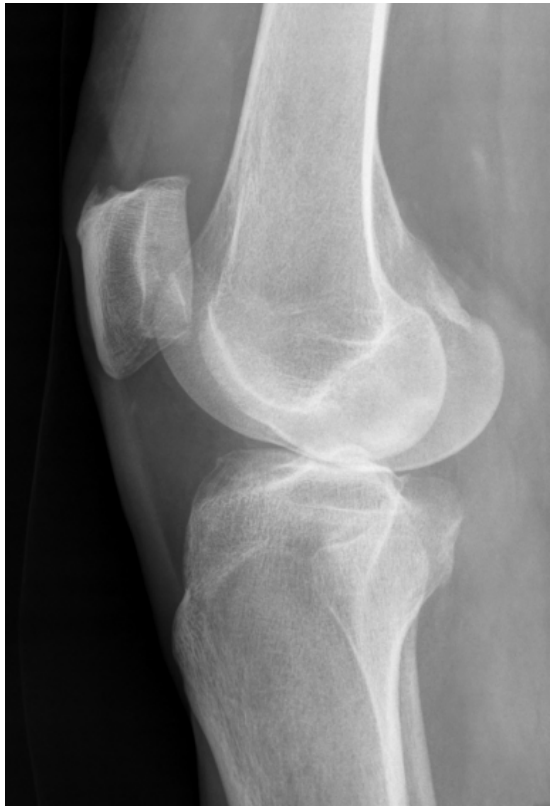
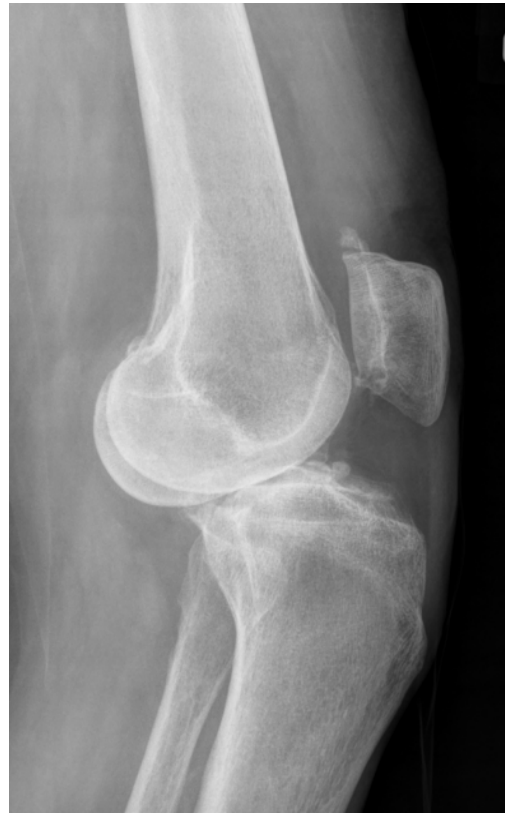
Radiographs







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Considerations

- Technical Pearls for TKA in the valgus knee
- When is a semi-constrained tibial bearing (varus-valgus constrained) indicated in primary TKA?
- Are all varus-valgus constrained inserts the same geometry?
- Are stem extension necessary?

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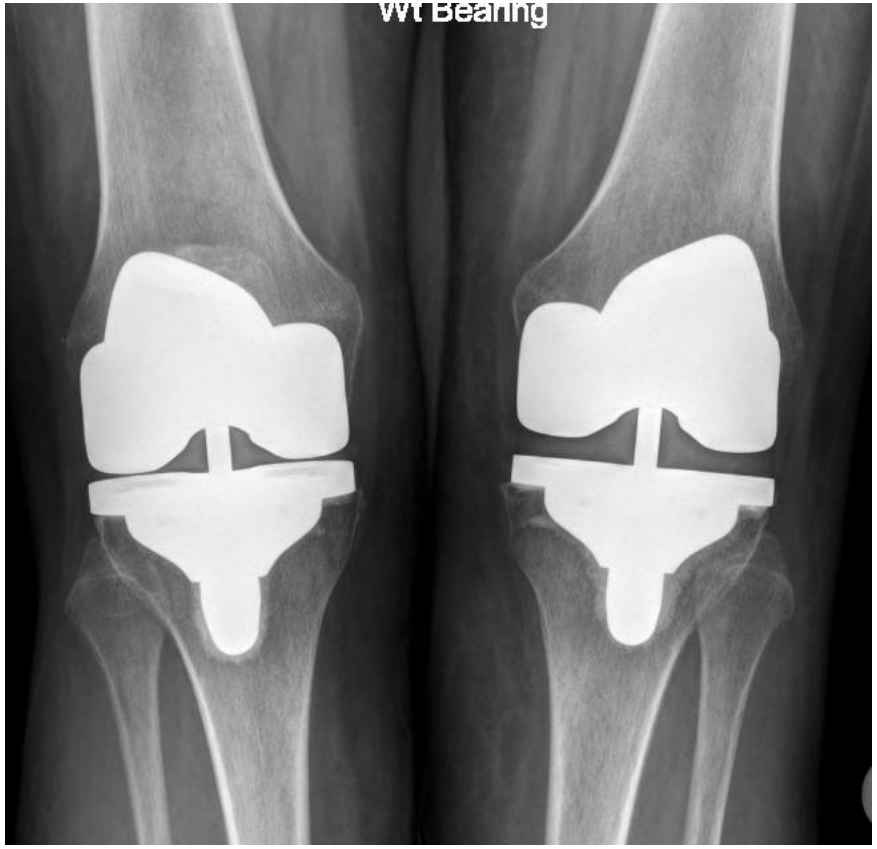
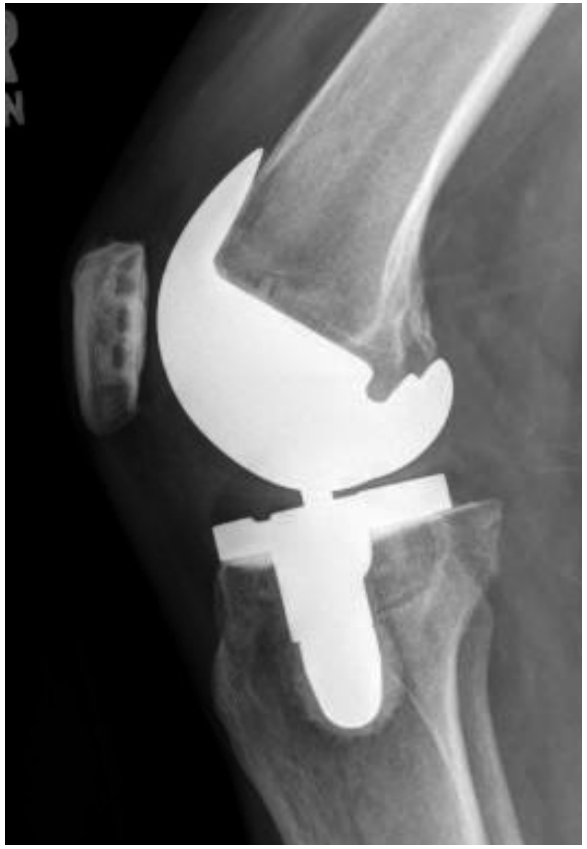
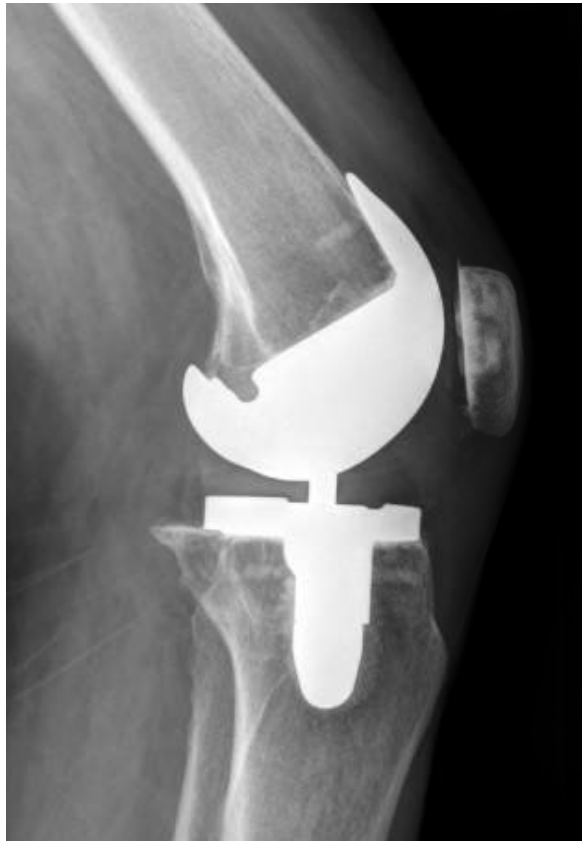
Post Op X rays







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64 year old male

- Bilateral knee pain for years
- Right knee pain greater than left knee
- Takes acetaminophen and NSAIDs
- Has tried injections without sustained relief
- 3 prior arthroscopies on right knee
  - Last one a few years ago

Exam

- Crepitus throughout motion
- Joint line pain Bilateral knees
- No ligamentous instability
- No pain with hip ROM
- ROM:
  - Right knee: 3-120 degrees
  - Left knee: 0-125 degrees

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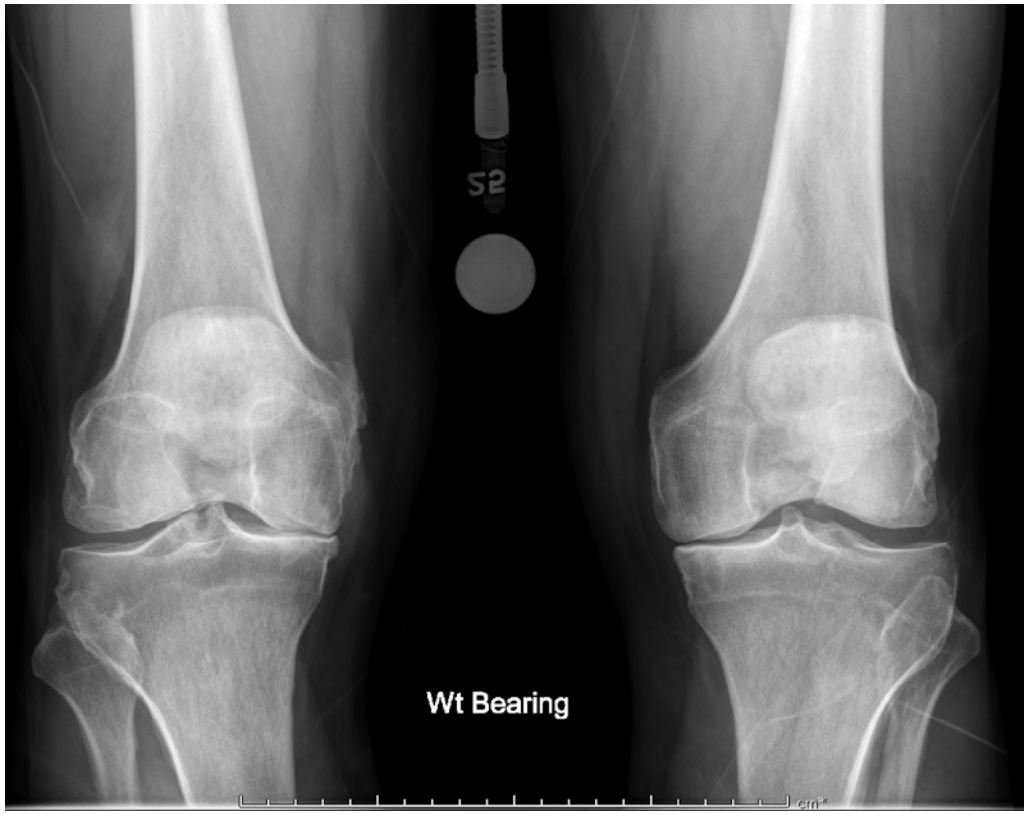
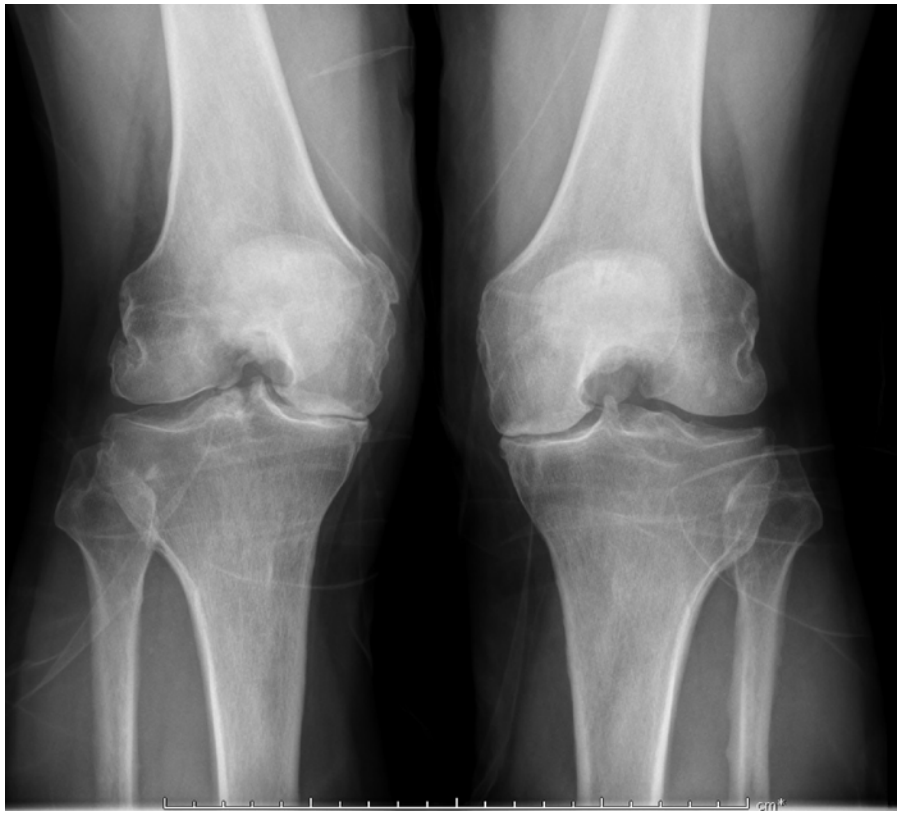
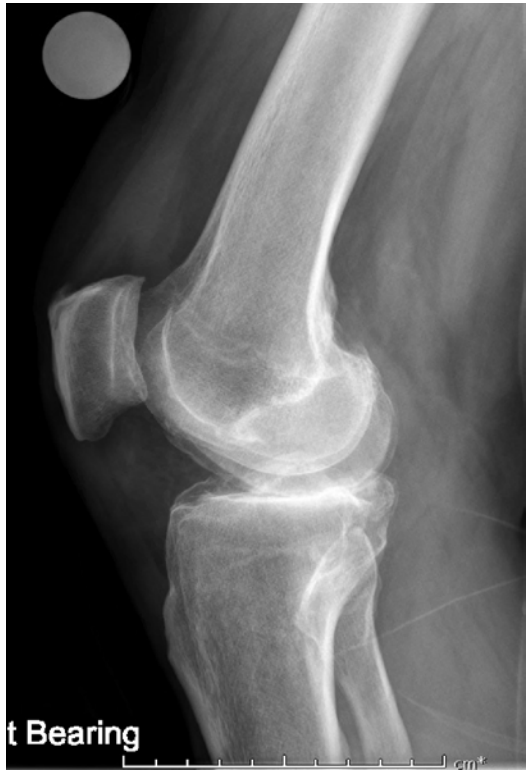
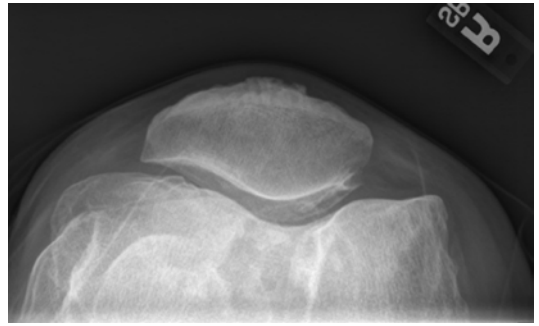
Radiographs









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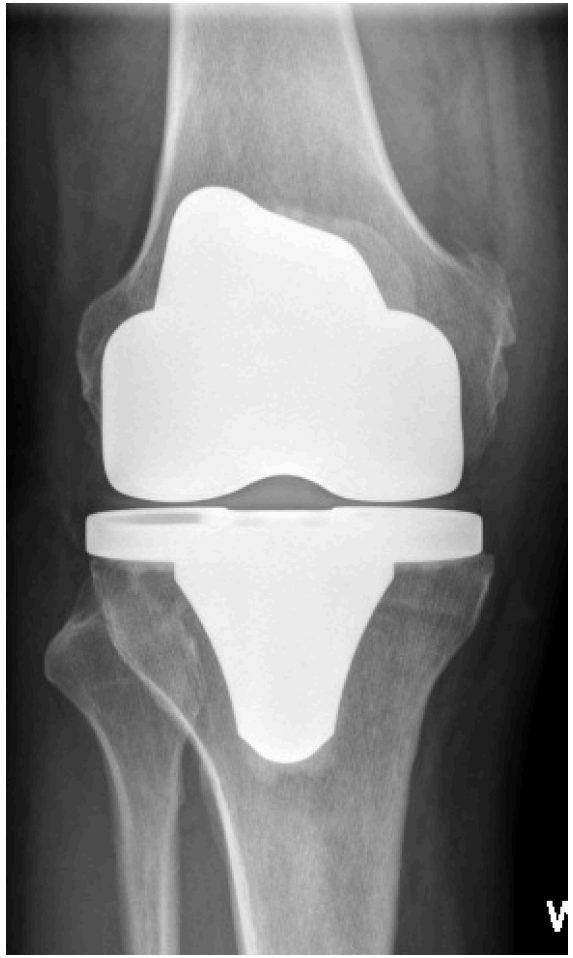
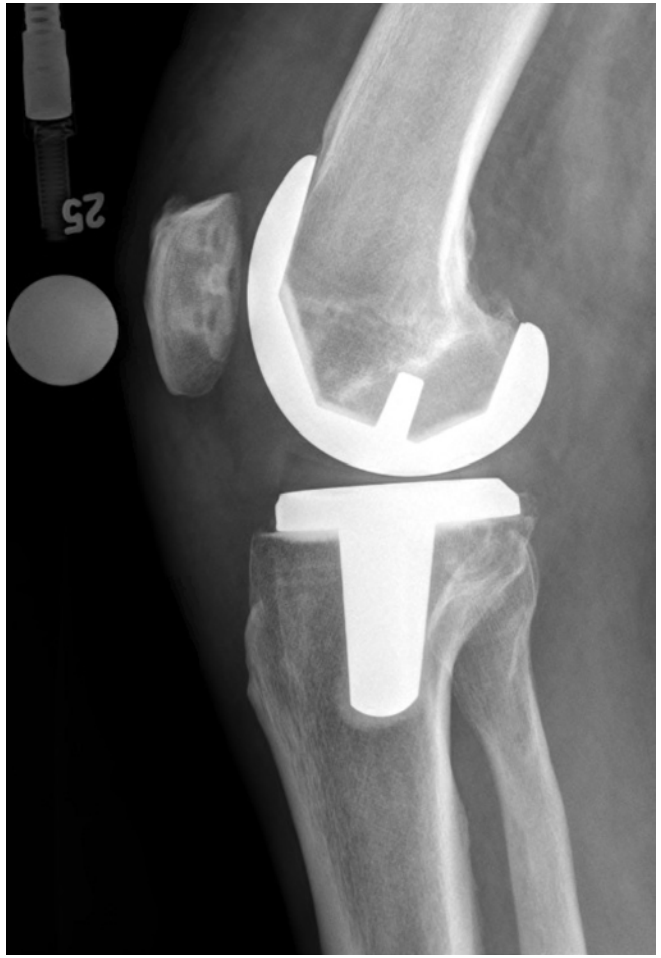
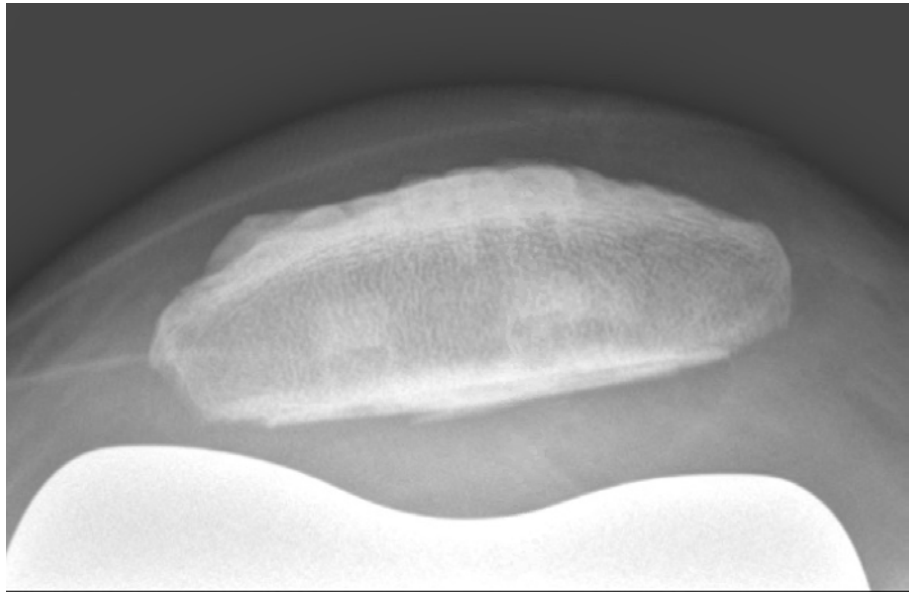
4-Week Post Op X rays







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4-Week Exam

- Persistent pain, but improving
- No assist device
- Struggling with ROM
  - **15 degree flexion contracture**
  - **Flexion to 75-degrees**

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Considerations

- When is MUA timing optimal?
- Is it effective in all patients?
- Are indications data-driven?
- Would you expect the incidence changes in bundled payment programs that cover 90-days of care?

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6-Week MUA: Before Procedure

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MUA – After Procedure

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55 Year Old Male

- Severe bilateral knee pain for years
- Pain nearly equivalent in both knees
- Very active as firefighter
- Has tried NSAIDs and injections
- H/O Bilateral closing wedge osteotomies 12 years ago

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Exam

- Laterally based incisional scars on both knees
- Pain with ROM bilateral knees
- Crepitus throughout motion
- ROM 5-90 degrees bilaterally
- No ligamentous instability

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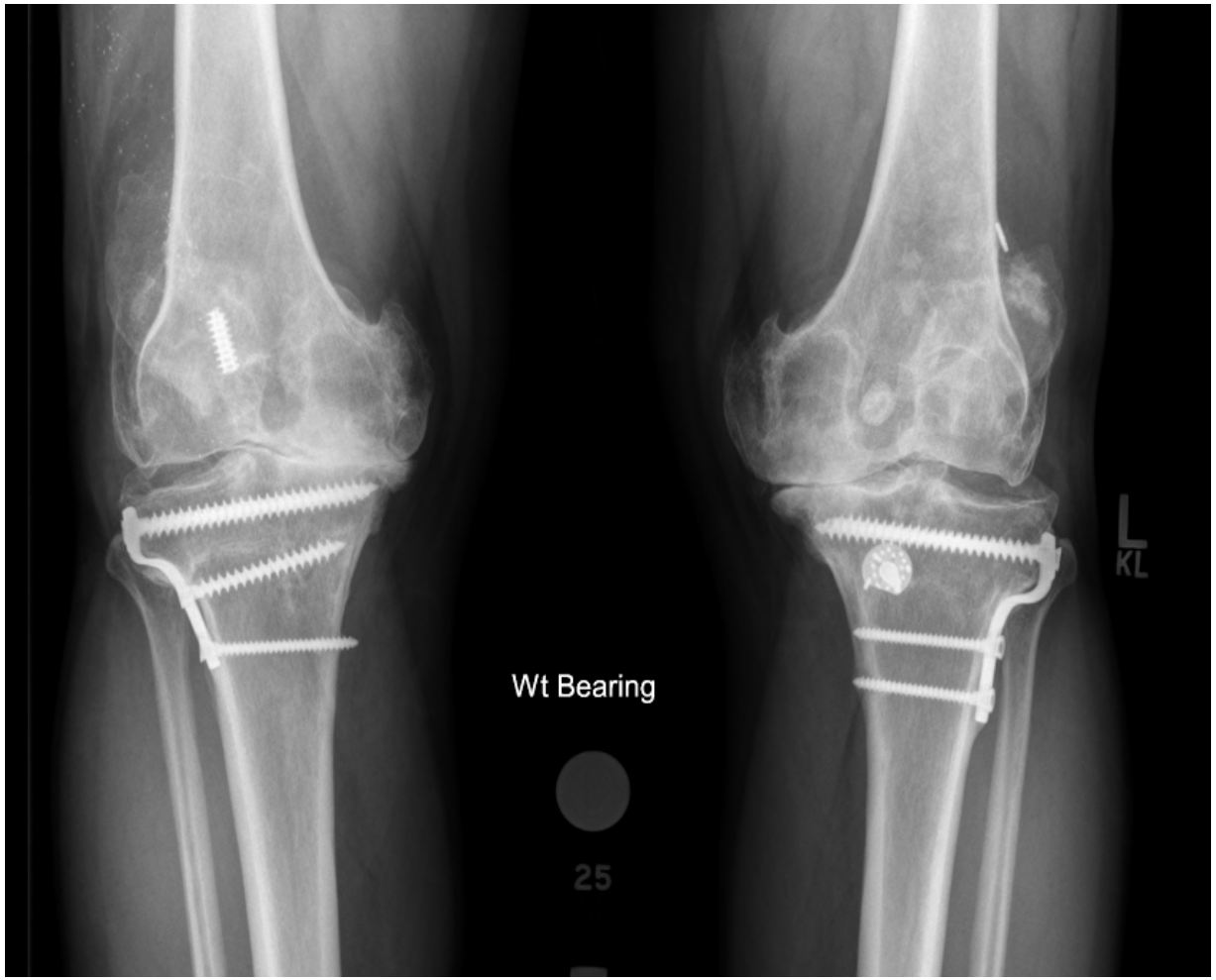

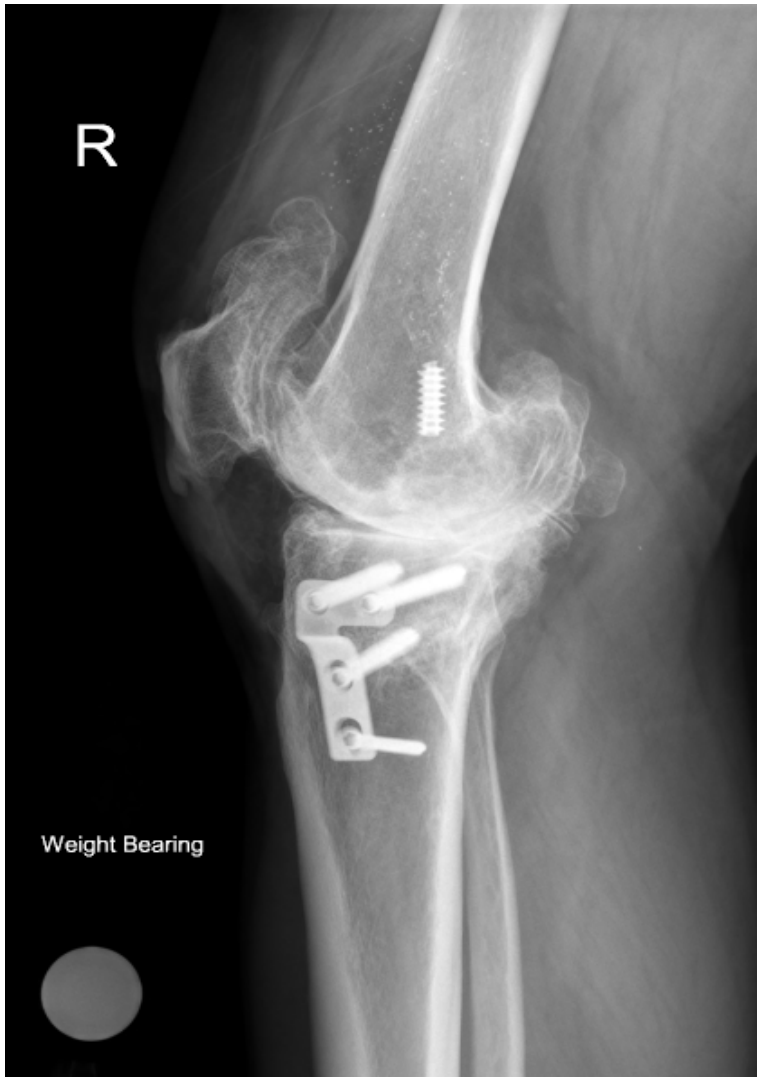

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Considerations

- Preoperative workup
- Incision considerations
- Strategy for hardware removal?
- Simultaneous bilateral?
- Appropriate for ASC?
- Fixation choice…cementless?

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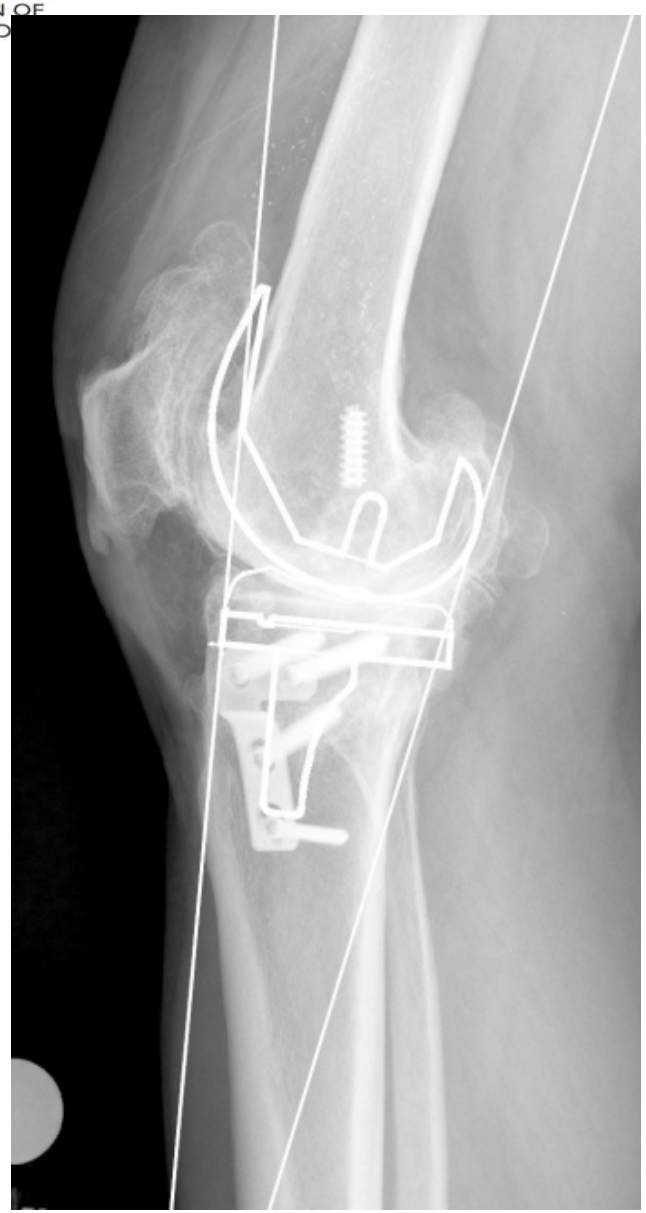

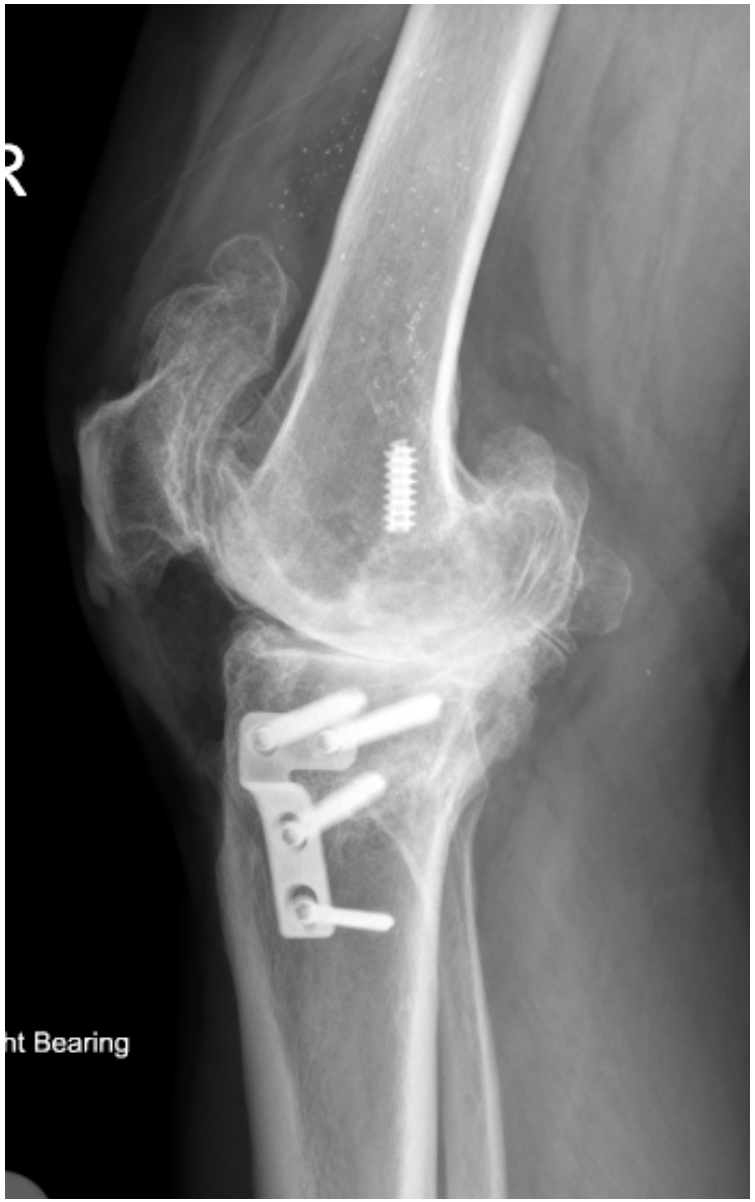

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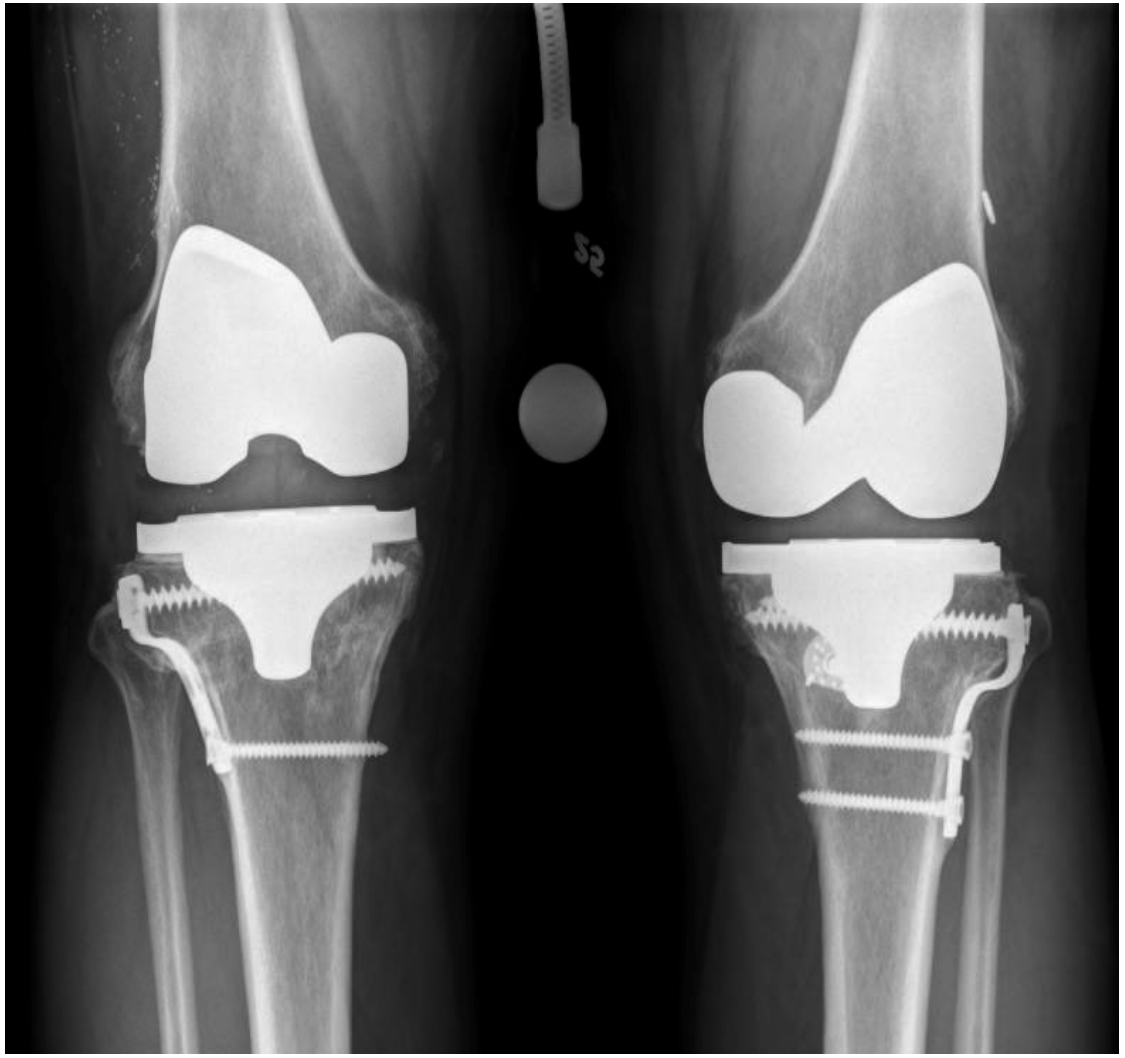

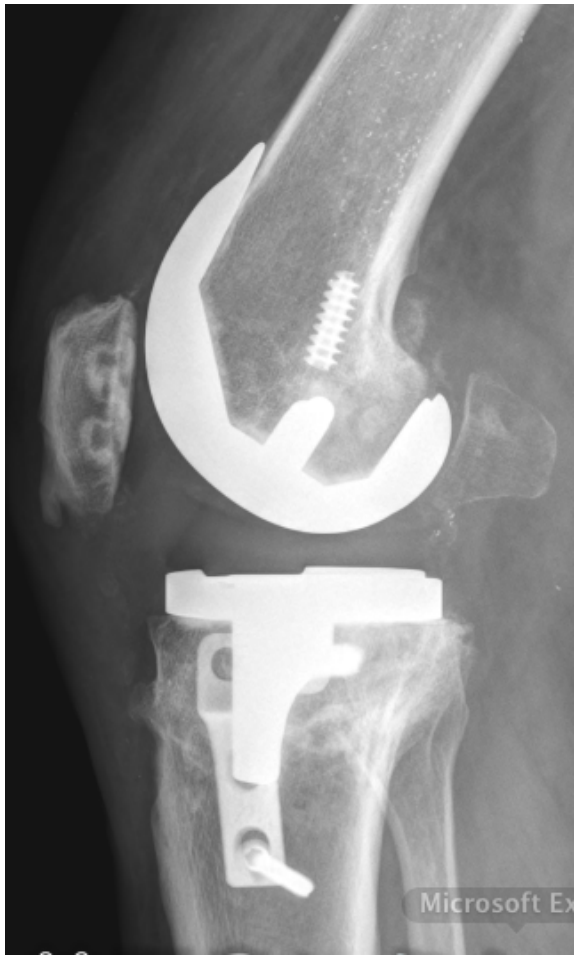

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55 year old male farmer

- Severe right knee pain for years
- Pain predominantly with weight bearing
- Generalized about the knee, not just medial
- Has tried NSAIDs
- Refuses injections
- “Just wants it fixed”
- Remote history of distal diaphyseal femur fracture treated nonoperatively

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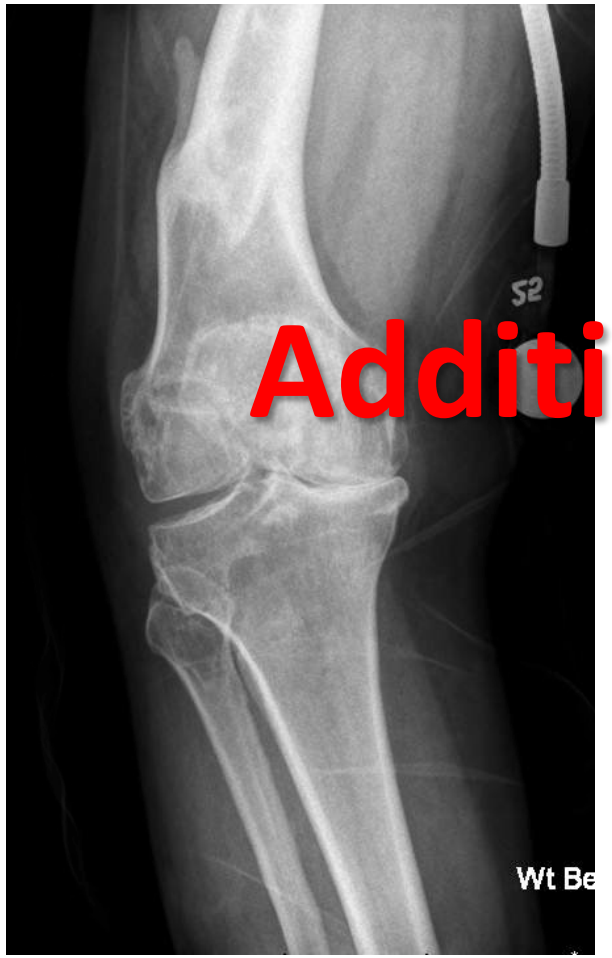
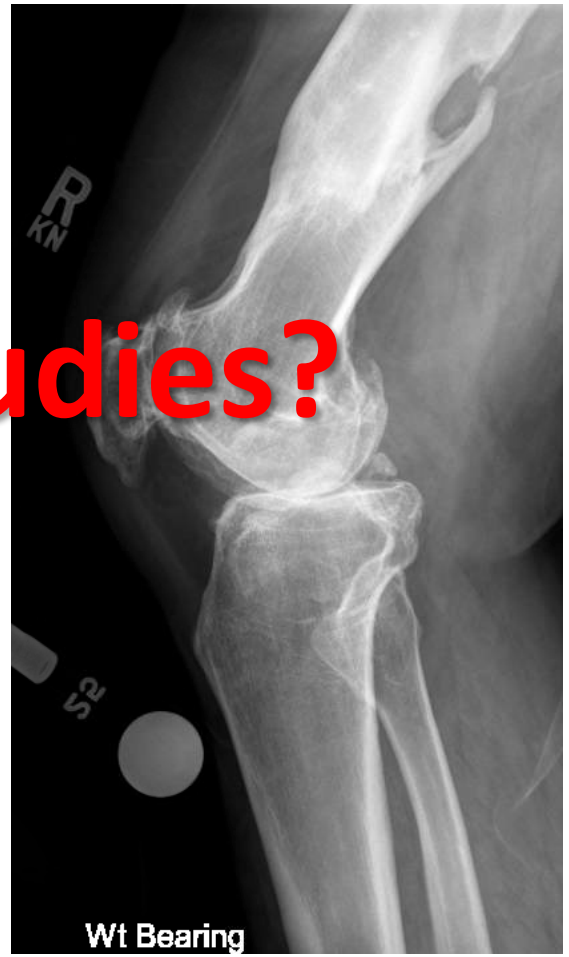
Exam

- Crepitus with motion
- Right leg antalgia
- 10-degree flexion contracture
- Further flexion to 120-degrees
- Pain at extreme flexion
- No pain with hip motion
- No ligamentous instability

Radiographs



Additional Studies?



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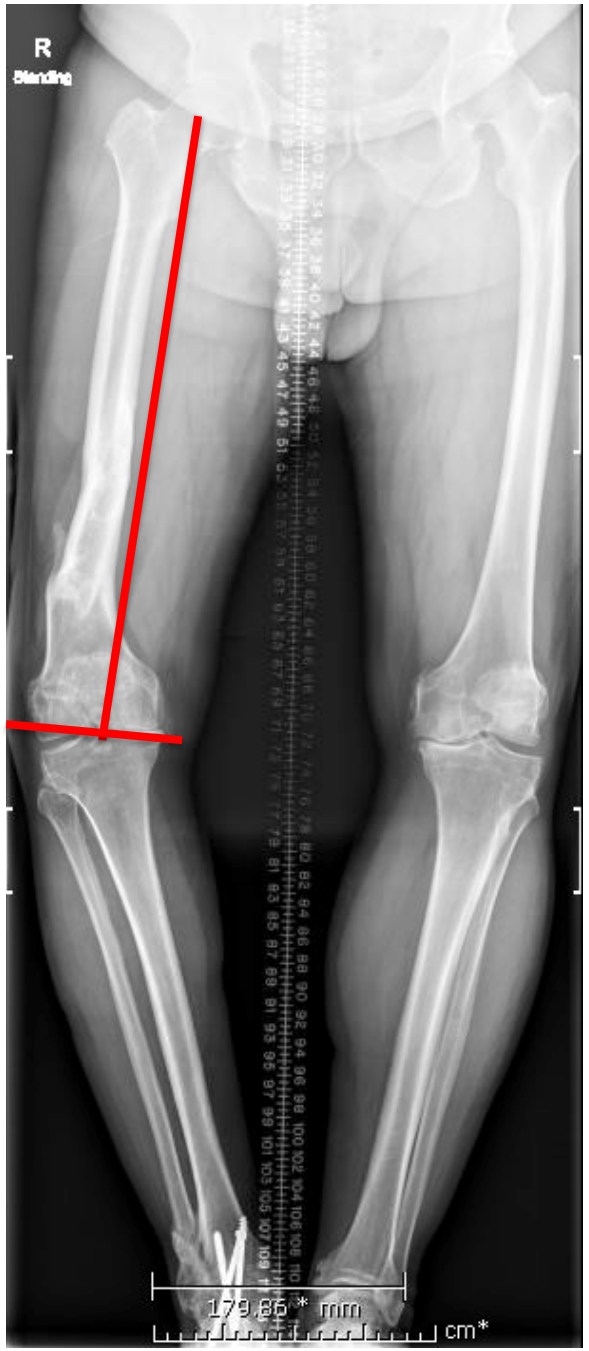

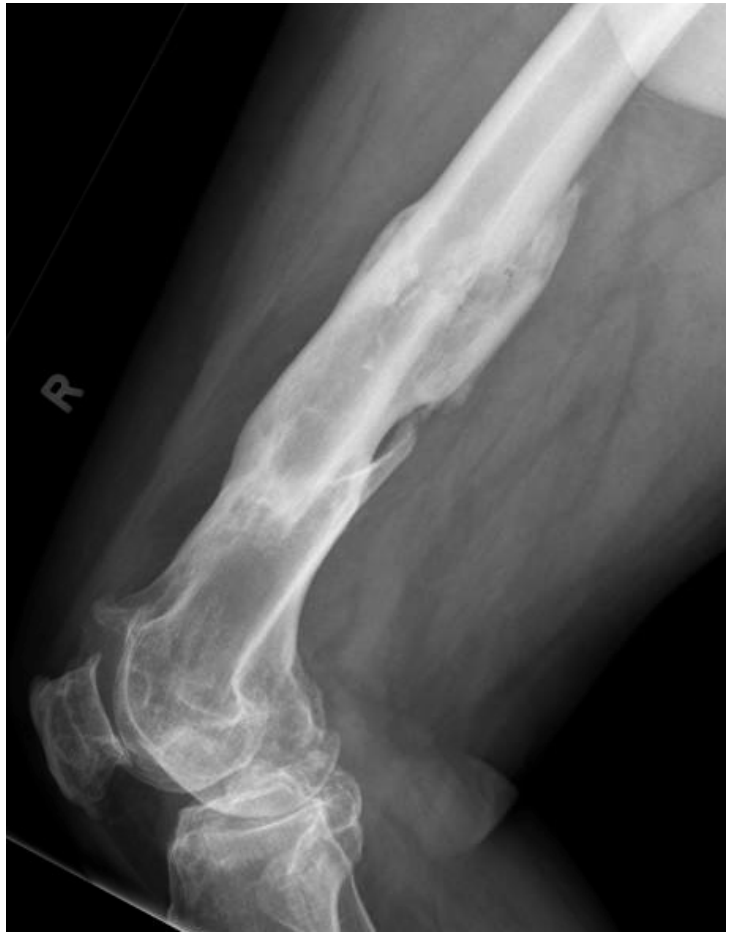

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Considerations

- When to consider corrective osteotomy?
- Is it OK to leave in residual varus?
- Does modern highly cross-linked polyethylene provide additional safety in this scenario?

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