

Case challenge

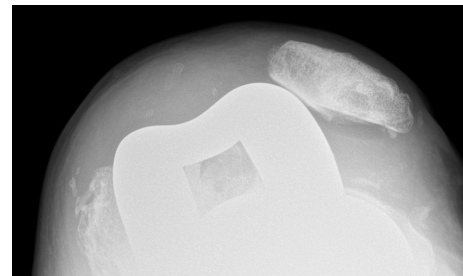
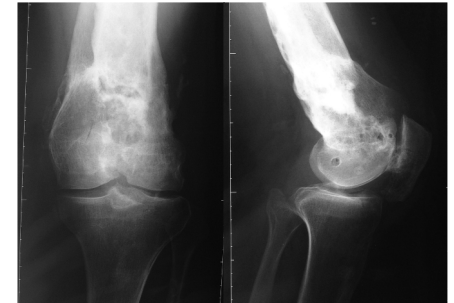
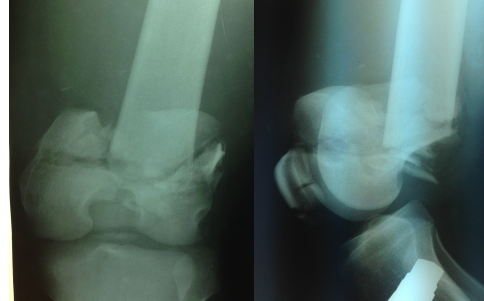
Complex Instability

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History

- 50 year active male
- 1994 Car accident
Open # distal femur
- Multiple surgeries
ORIF, Arthrolysis,
Ligamentoplasty ...
- Malunion & post # OA
- 2016 mobile TKA
with PSI



Clinical Findings

- Severe instability daily activities & pain
- Laxity ext lat & flex med
- T/F subluxation with spontaneous reduction
- Patellar dislocation
- Walking 2 crutches + brace
- ROM 0-0-120°
- Extensor mech intact



Case Challenge Voting



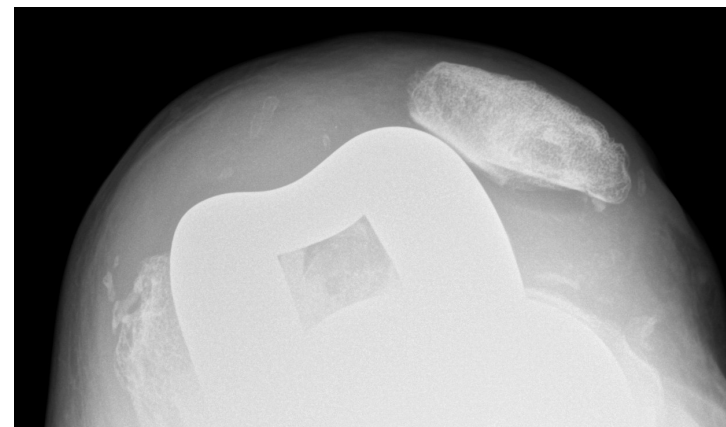
Case Challenge Voting

- Additional imaging
- Failure analysis
- What to offer patient
- Approach
- Type Implant



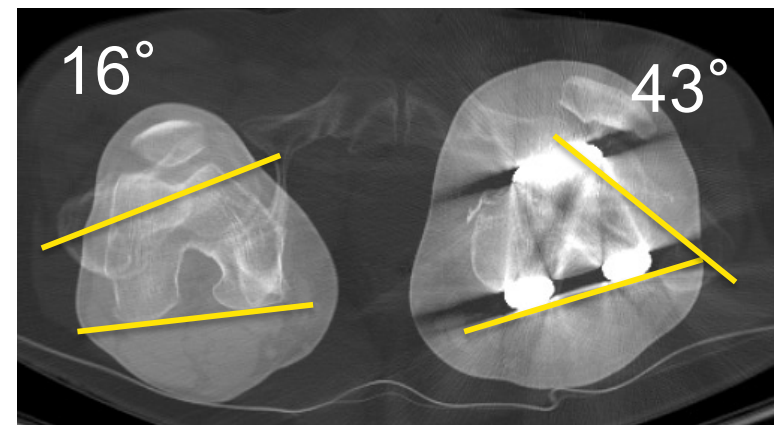
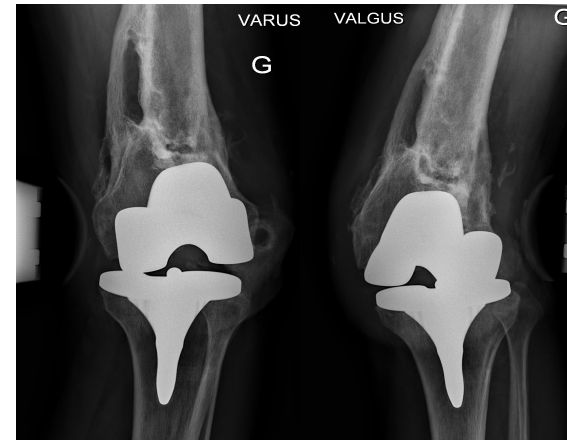
1. Additional Imaging

1. Not necessary
2. Long leg films
3. Stress X-rays
4. CT Scan full leg
5. All three
6. MRI
7. Bone Scan
8. All of them



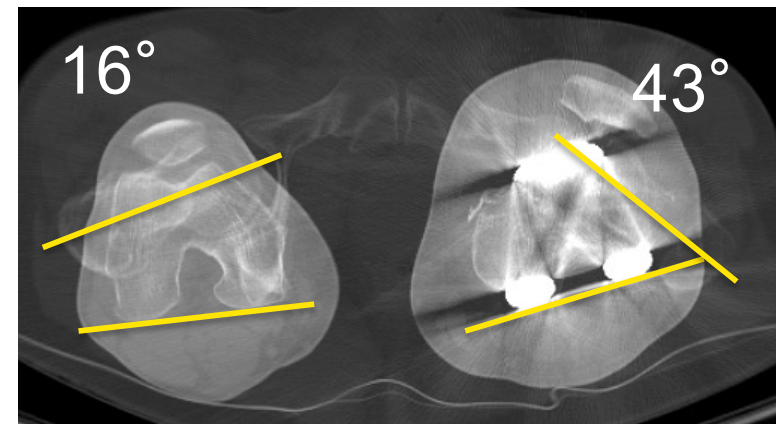
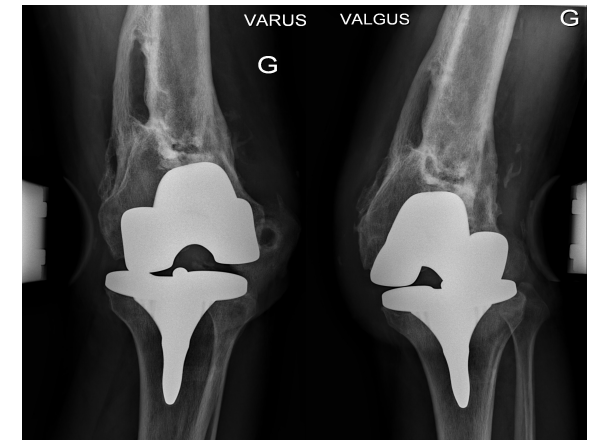
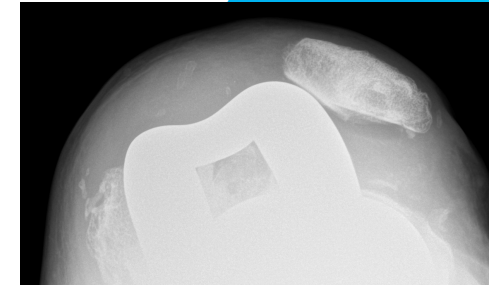
1. Additional Imaging

- Long leg films mandatory for deformity analysis
- Stress x-rays
MCL & LCL function
- CT full leg rot profile
after femur # & pat dislocation
- MRI & Bone scan
not necessary



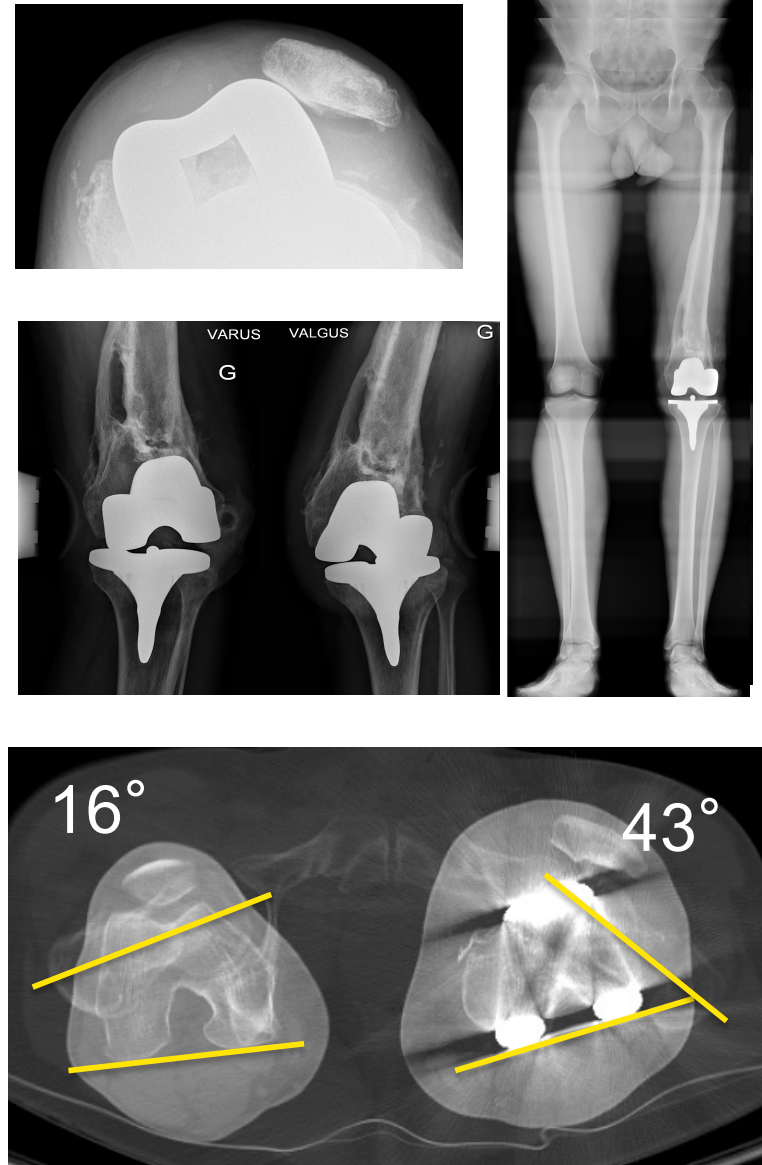
2. Failure Analysis

1. Patella dislocation due to malrotation component
2. Patella dislocation due to ligament deficiency
3. TF instability due to malrotation component
4. TF instability due to ligament deficiency
5. Pat & TF instability due to extraarticular maltorsion



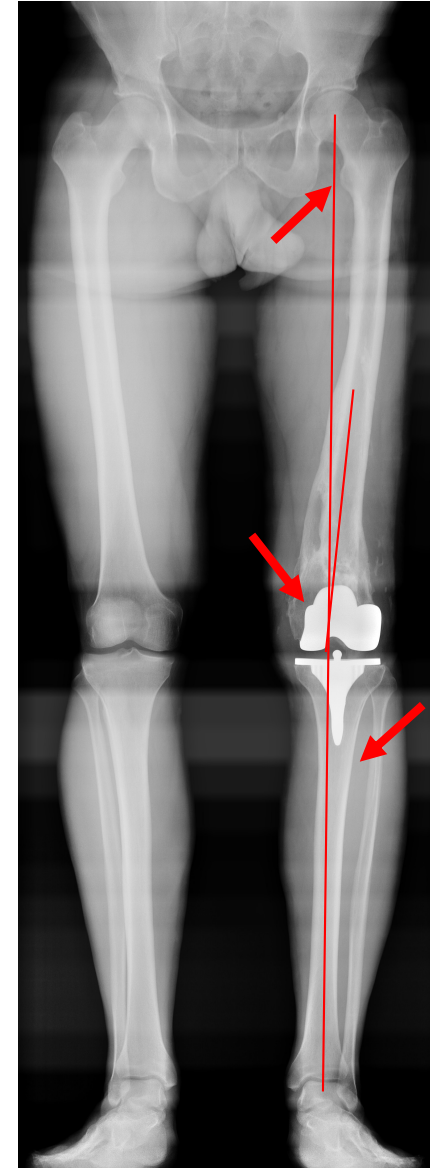
2. Failure Analysis

- PSI standard planning neglecting malunion & femur torsional deformity
- PF dislocation
femur parallel Epi-line but femur internal torsion 27°
Quad vector lateral
- TF instability
after multiple surgeries with arthrolysis & lig recon



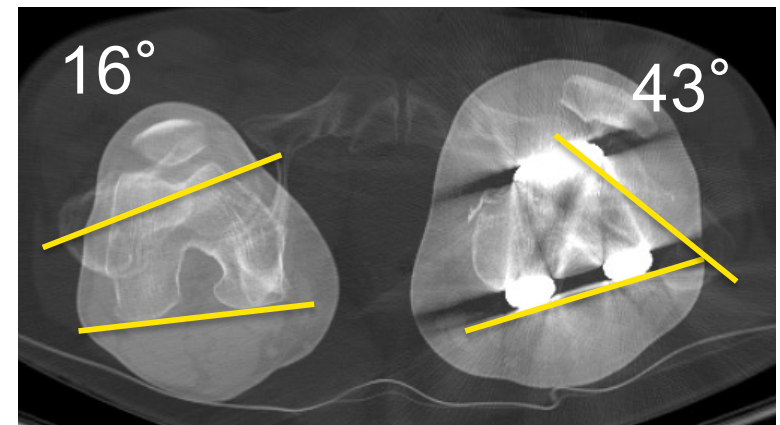
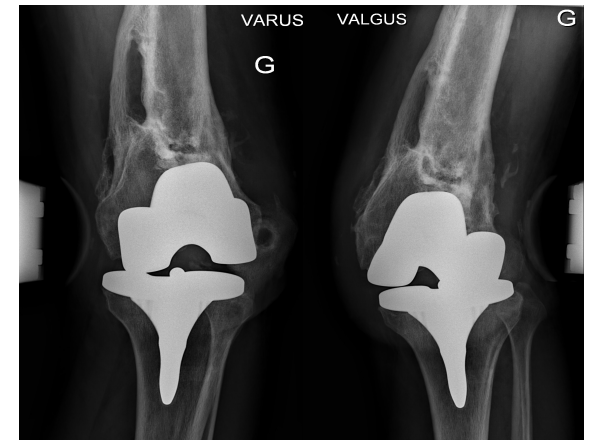
Deformity Analysis

- Varus 2°
 - LDFA 90°
 - MPTA 89°
 - IM 5°
- Torsional deformity dist femur
 - Prox femur ER
 - ⇒ troch minor
 - Distal femur & tibia IR
 - ⇒ med condyle less
 - ⇒ tibia-fibular space



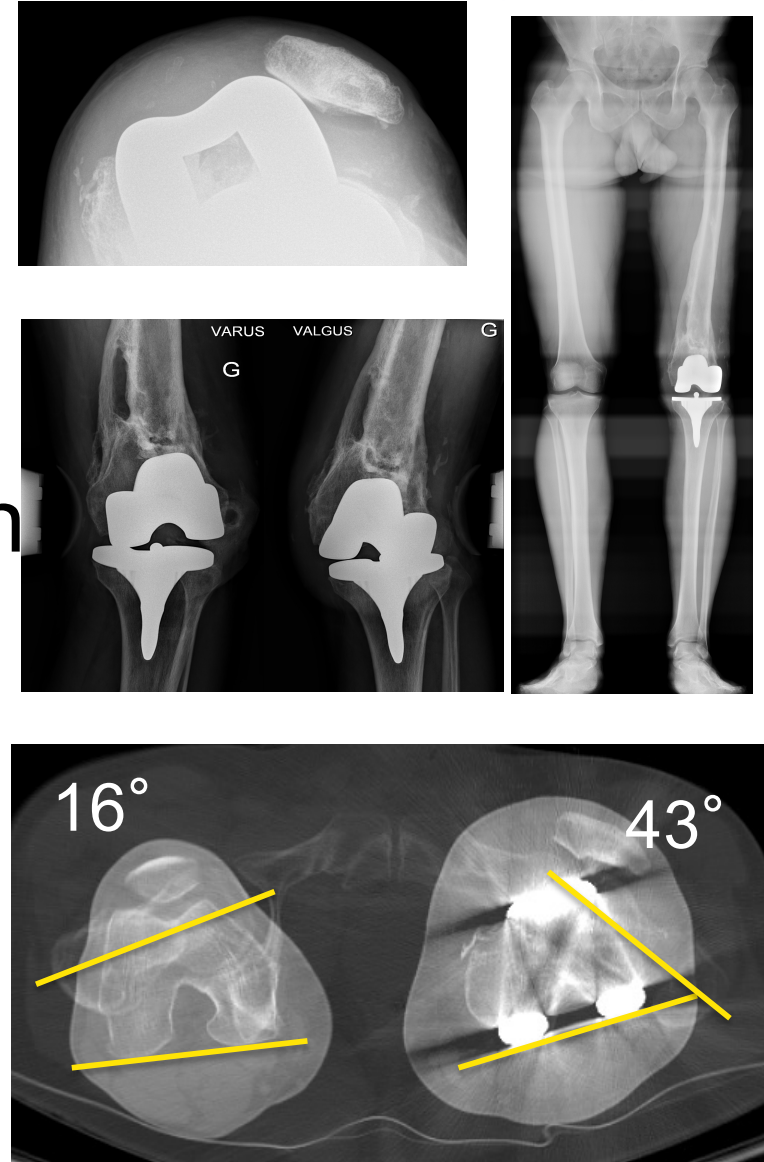
3. What to offer patient

1. Further conservative
2. TT medialization + MPFL plus MCL/LCL repair
3. DFO derotation + RTKA single stage
4. DFO derotation + RTKA two stages
5. RTKA + TT medialization plus MPFL
6. Arthrodesis



3. What to offer Patient

- TT med + MPFL plus MCL & LCL will not work
- DFO derotation + RTKA full correction femur deformity challenging & risk non union
- RTKA + TTO + MPFL possible compromise partial correction fem def
- Arthrodesis ext mech intact not indicated



4. Which Approach

1. Medial parapatellar
2. Medial less invasive
3. Lateral no TTO
4. Lateral + TTO
5. Other
6. Will ask for help



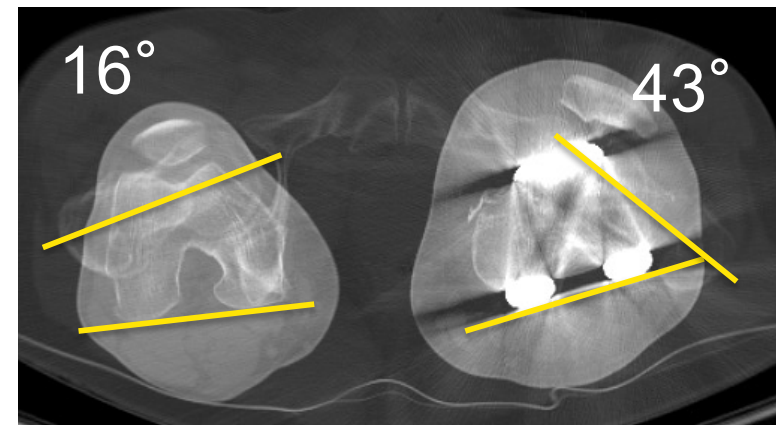
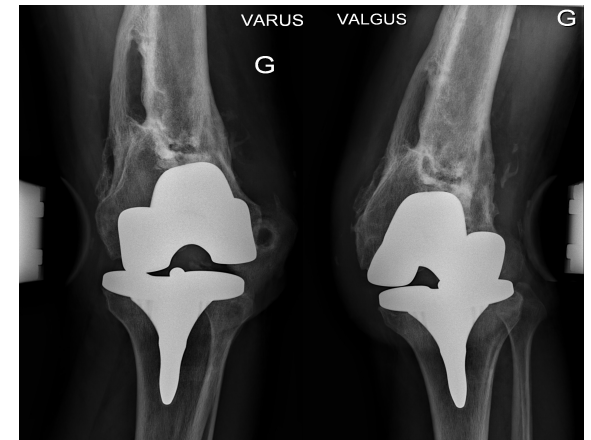
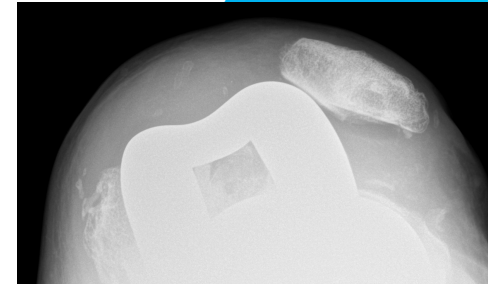
4. Which Approach

- Medial
risk distal skin necrosis
not easy perform lat releases
better view for MPFL
- Lateral plus TTO
excellent overview
save ext mech arthrolysis
Lateral plate for DFO



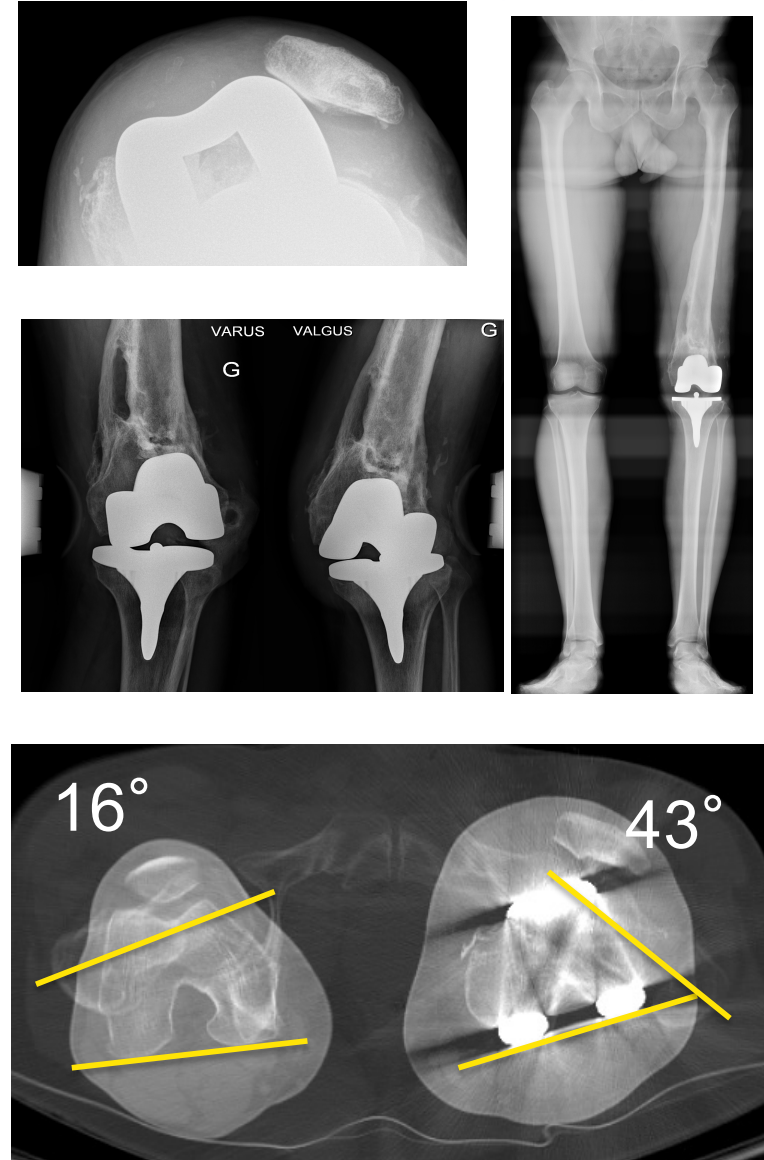
5. Type of Implant

1. Primary CR
2. Primary PS
3. Medial Pivot or others
4. CCK
5. RHK
6. Megaprosthesis



5. Type of Implant

- Primary CR or PS not possible due to lig insufficiency
- CCK might not be sufficient
- RHK allows more ER femur to avoid DFO
- Megaprosthesis not necessary

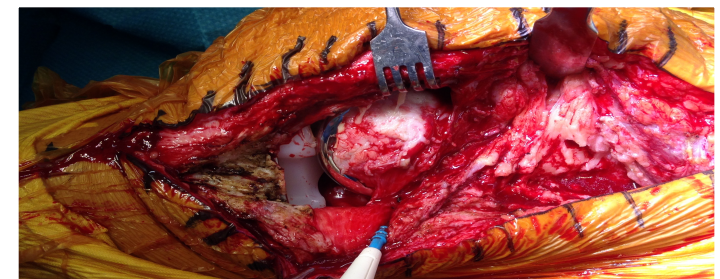
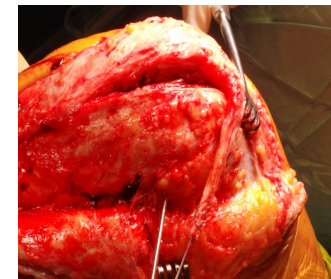
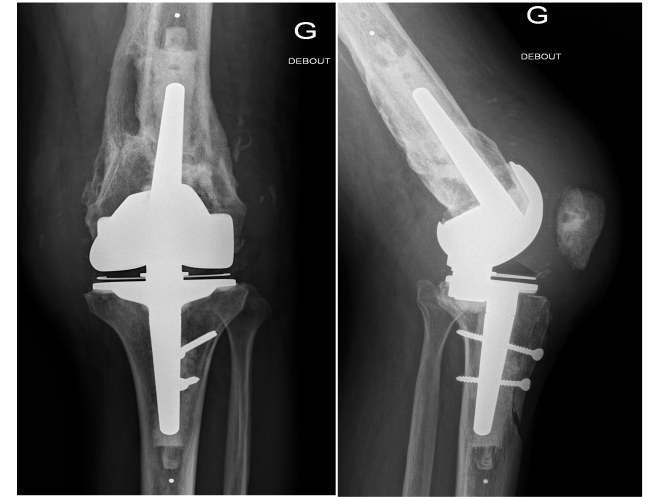




Solution ?

Intra Operative

- Single stage revision monoblock RHK & cemented stems
- Lat approach plus TTO
- Compromise without DFO
- Torsional def correction
 - ER femur component 10°
 - TT medialisation plus
 - MPFL recon
 - Mod Judet arthrolysis



Clinical Outcome 6 Months

- Patient very satisfied & residual pain only
- Stable knee & ROM 0-0-100°

