

KEY CHOICES AND TECHNIQUES IN REVISION THA AND TKA

Step-by-Step Decisions

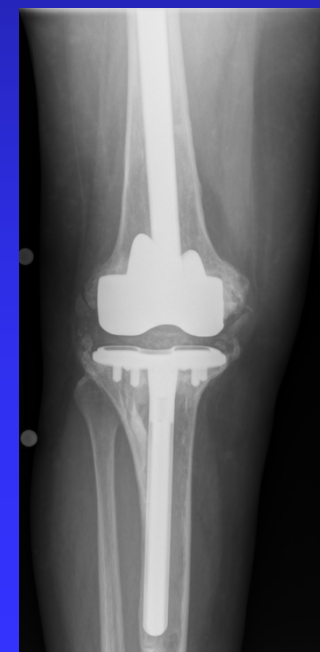
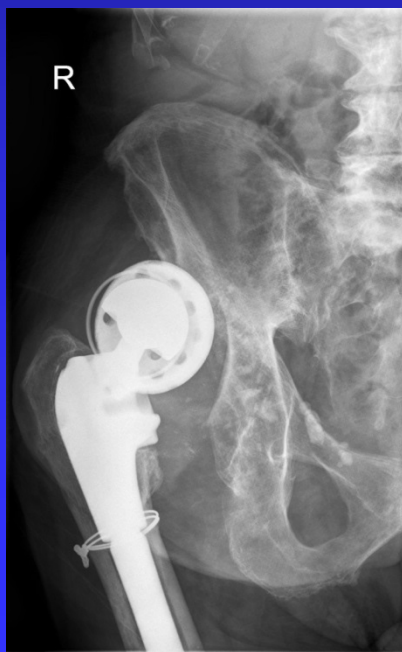
Moderator: Daniel J Berry, Mayo Clinic

Panelists: John J Callaghan

William L Griffin

Thomas P Vail

Michael P Bolognesi

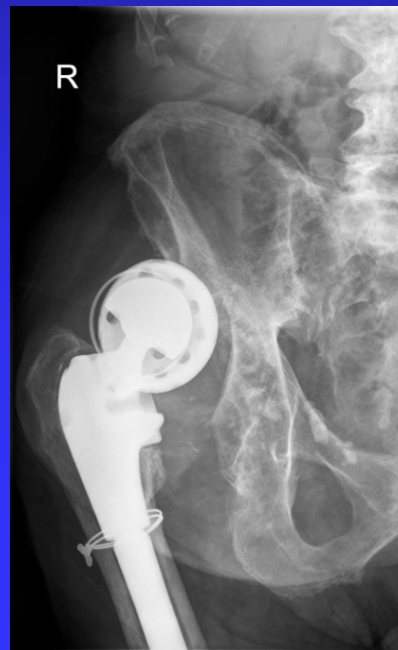


Presenter Disclosure Information

- The author has received royalties from DePuy related to certain hip and knee products
- The author's institution receives research support from: DePuy, Zimmer, Stryker, Biomet, Smith-Nephew
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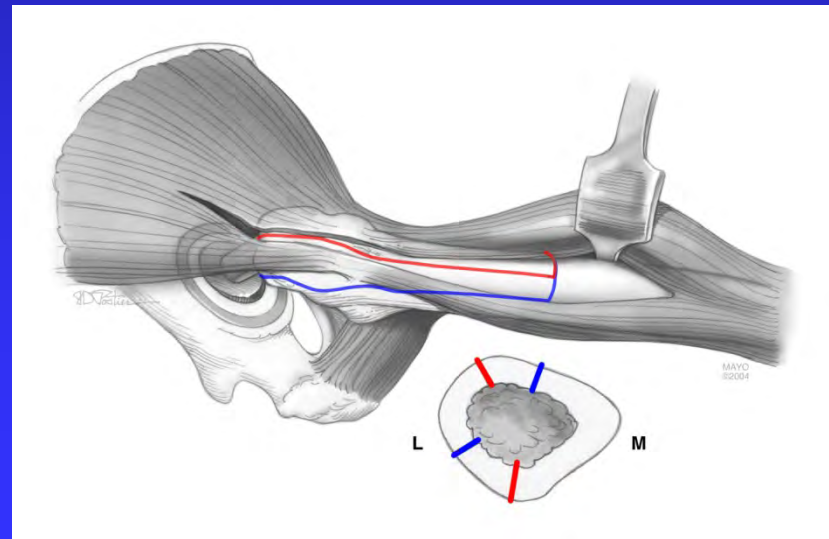
TOUGH REVISION THA AND TKA

REVISION THA



TOUGH REVISION THA AND TKA

EXPOSURE

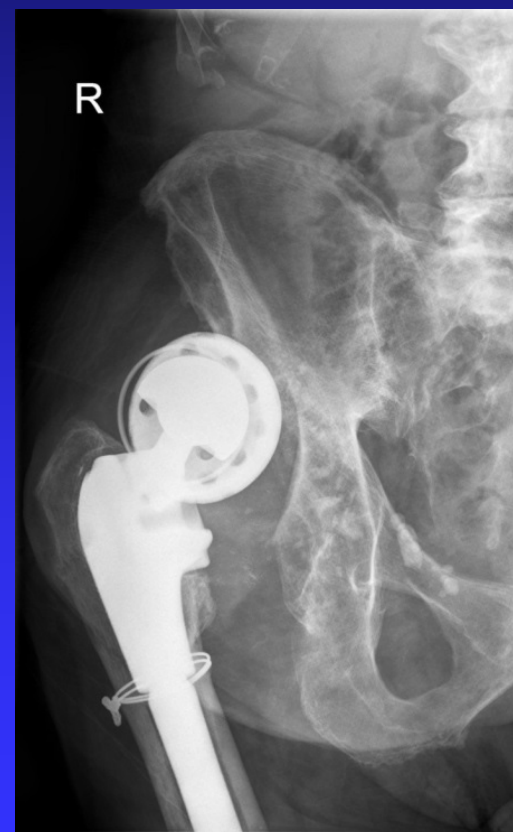


TOUGH REVISION THA AND TKA

THAR: Exposure

Old Skin Incisions:

- Which ones do you use?



TOUGH REVISION THA AND TKA

THAR: Exposure

- In revision THA, how often do you perform an *extended greater trochanteric osteotomy*?
- Under what circumstances?

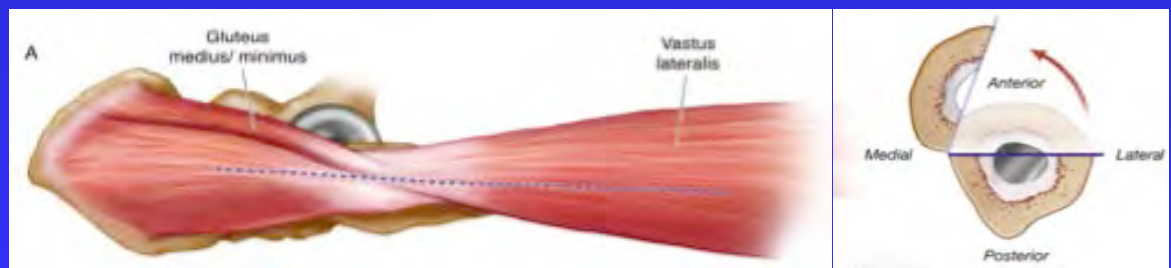


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THAR: Exposure

- What type of ETO do you prefer?
 - lateral 1/3 of femur (Paprosky)
 - anterior 1/3 of femur (Wagner)

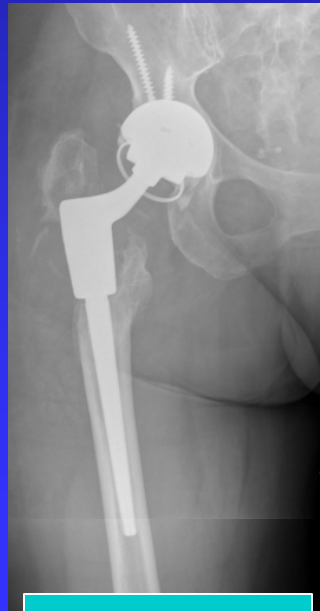
Laterally based ETO



Anteriorly based ETO

TOUGH REVISION THA AND TKA

IMPLANT REMOVAL



Infected

TOUGH REVISION THA AND TKA

THAR: Implant Removal

- Well-fixed uncemented cup removal
“Technical Tips”



TOUGH REVISION THA AND TKA

THAR: Implant Removal

- Well fixed uncemented stem removal?



TOUGH REVISION THA AND TKA

THAR: Implant Removal

- Well fixed broken stem removal?



TOUGH REVISION THA AND TKA

Implant Removal

- Well-fixed fluted tapered stem removal?



Infected

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BONE LOSS



TOUGH REVISION THA AND TKA

THAR: Acetabular Bone Loss

Mild-Moderate Bone Loss:

- What is your “go to” technique?



Loose cup

TOUGH REVISION THA AND TKA

THAR: Acetabular Bone Loss

- Do you always use an “enhanced” ingrowth surface in revisions?



Failed “impaction grafting”

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Acetabular Bone Loss

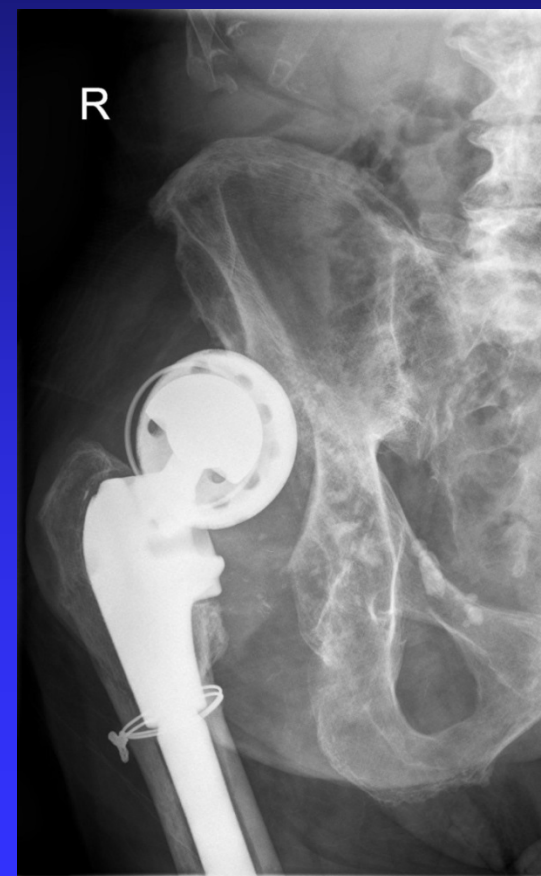
- When you have major **medial** segmental loss, what is your preferred reconstruction method?
 - cancellous graft
 - bulk graft
 - metal augments



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THAR: Acetabular Bone Loss

- When you have major **lateral** segmental acetabular bone loss, what are your indications for:
 - highly porous metal augments?
 - bulk bone allograft?



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Acetabular Bone Loss

- When do you need more than a hemisphere?
- Any indications for custom triflange cup?



Failed “impaction grafting”

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THAR: Acetabular Bone Loss

Pelvic Discontinuity:

- Go to method?



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THAR: Femoral Bone Loss

Mild-Moderate Bone Loss:

- What is your “go to” method in **mild** femoral bone loss?



Loose subsided stem

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Femoral Bone Loss

- What is your “go to” category of stem when there is notable femoral bone loss?
 - fluted tapered modular
 - extensively coated
 - cemented long stem
 - impaction grafting



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Femoral Bone Loss

- Is there a role for impacting grafting?
- For bulk proximal femoral allograft?



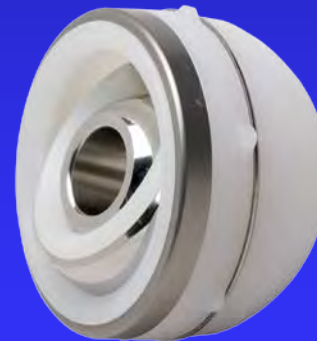
Impaction
grafting



Femoral
allograft

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HIP STABILITY



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Joint Stability

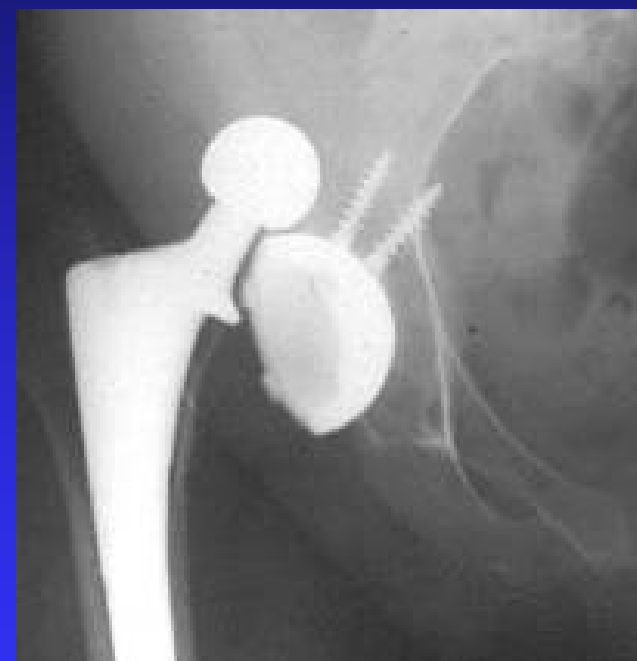
- In revisions, when do you use:
 - large fixed head?
 - dual mobility?
 - constrained?



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Joint Stability

- Revision for recurrent dislocation:
 - large head?
 - dual mobility?
 - constraint?



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HISTORY OF INFECTION



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Infection

Question:

- Do you typically use a one stage or a two stage protocol for infected THA?



TOUGH REVISION THA AND TKA

Infection

Question:

- During two stage treatment, do you prefer articulated or non articulated spacers?



Articulated



Non articulated

TOUGH REVISION THA AND TKA Infection

Question:

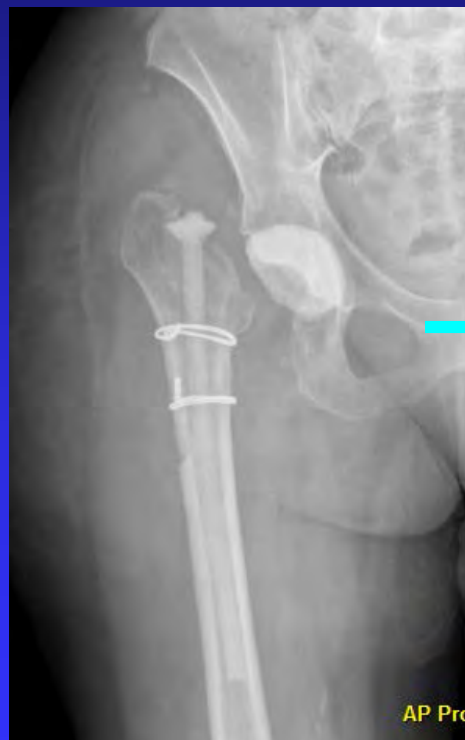
- During two stage treatment, what is your typical resection **interval**?



TOUGH REVISION THA AND TKA Infection

Question:

- Femoral fixation at reimplantation
 - cemented?
 - uncemented?



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POSTOP MANAGEMENT

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Postop

Postop:

- Hip guide brace?
- Weight bearing
 - cup revision with bone loss
 - femoral revision with bone loss



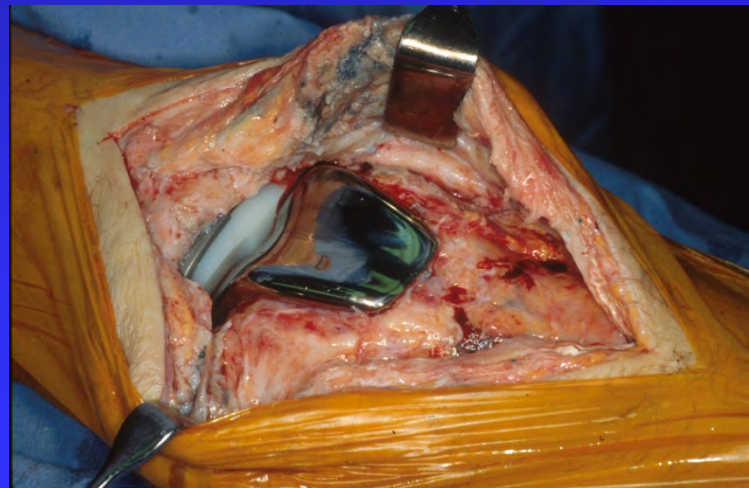
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REVISION TKA



TOUGH REVISION THA AND TKA

EXPOSURE

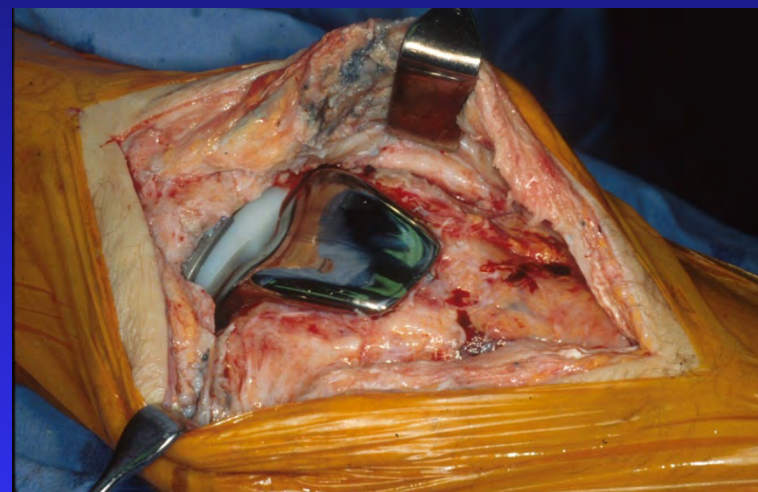


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TKAR: Exposure

Your “go to” exposure when things are tight?

- Quad snip
- Tibial tubercle osteotomy



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IMPLANT REMOVAL



TOUGH REVISION THA AND TKA

TKAR: Implant Removal

Implant Removal in Revision TKA:

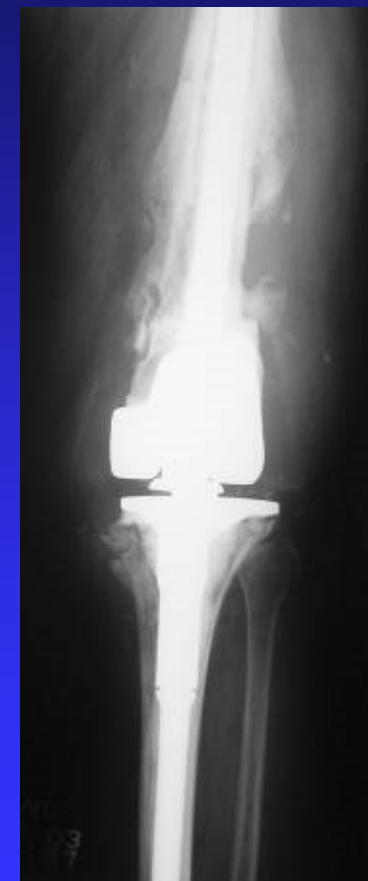
- Multiply Revised Knee:
 - technical tips to:
 - speed removal
 - avoid complications



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TKAR: Implant Removal

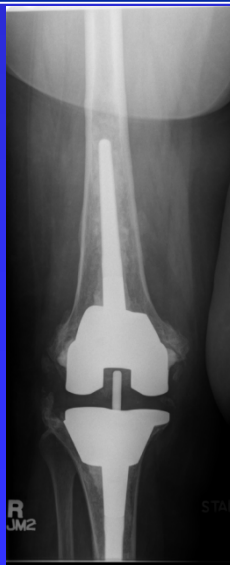
- Do you ever need to do something exotic like “osteotomy” to get out well-fixed stemmed implants?



Infected

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IMPLANT FIXATION BONE LOSS

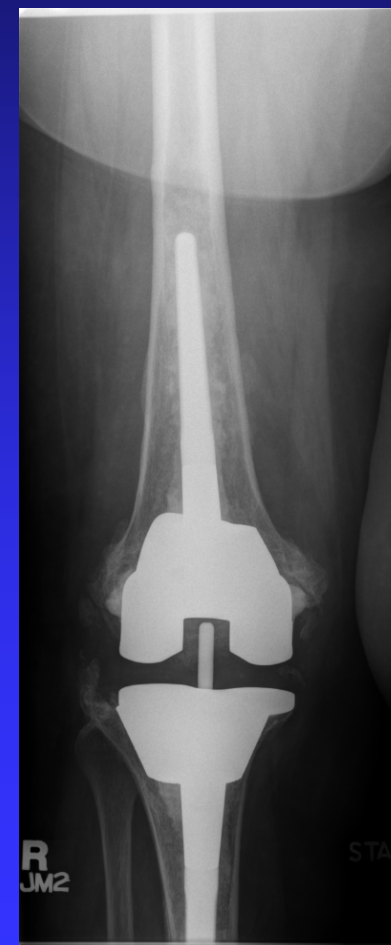


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TKAR: Bone Loss/Fixation

Options to Improve Fixation/Manage Bone Loss:

- Cemented stems
- Uncemented stems
- Metaphyseal cones/sleeves
- Bone graft



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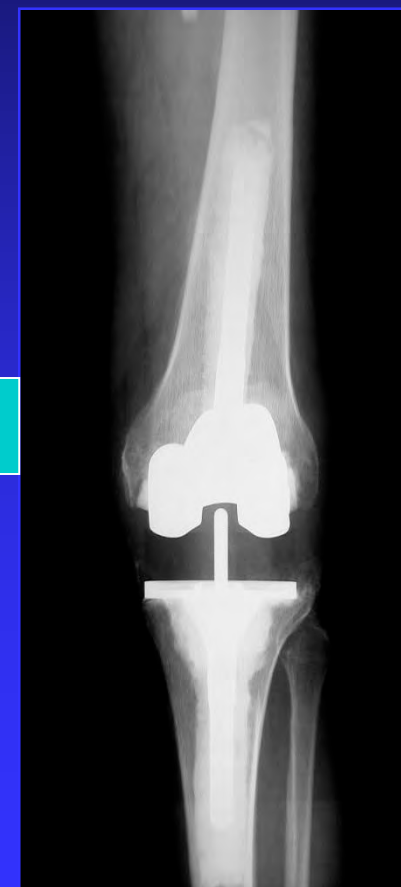
TKAR: Bone Loss - Fixation

Cemented Versus Uncemented Stems?

- Balance of fixation
versus
- Removability



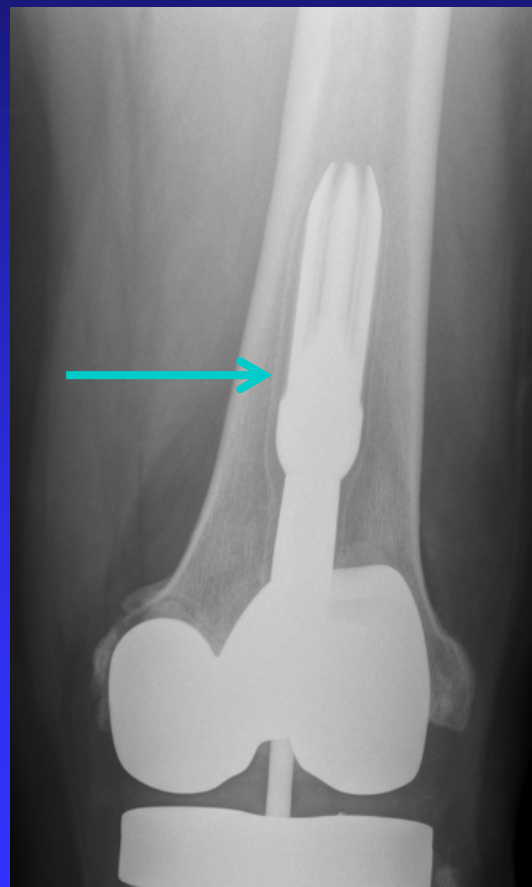
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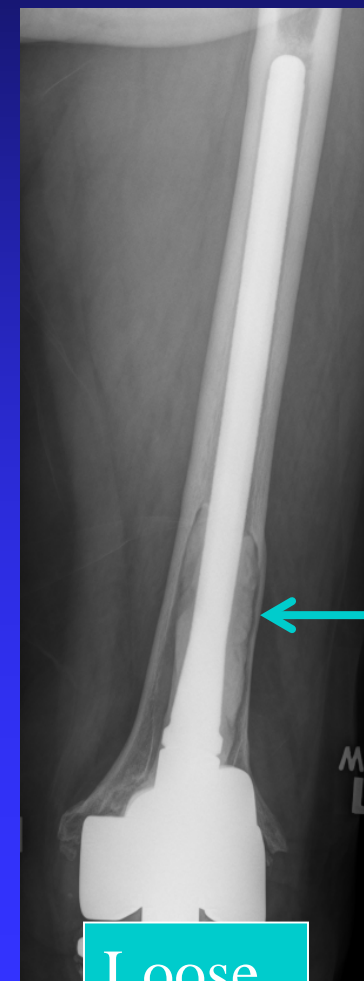
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TKAR: Bone Loss - Fixation

- How do you get *fixation* in sclerotic canal damaged by previous stem?



Loose



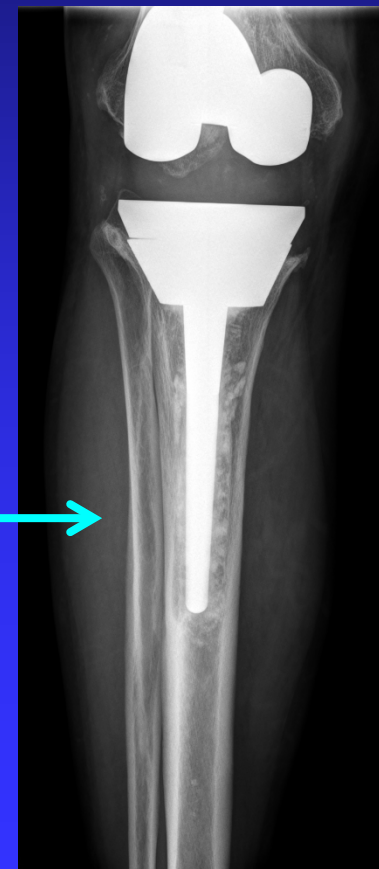
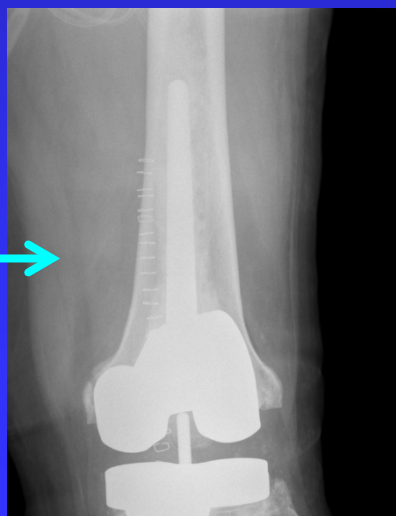
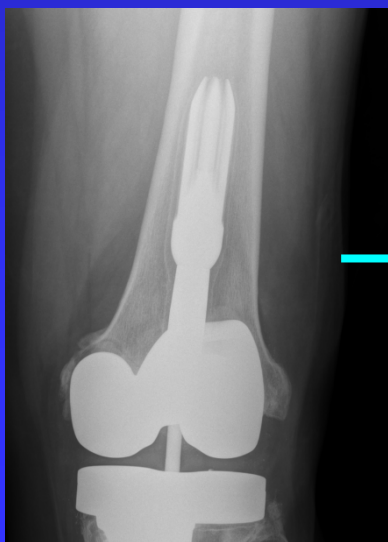
Loose

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TKAR: Bone Loss - Fixation

One Good Method:

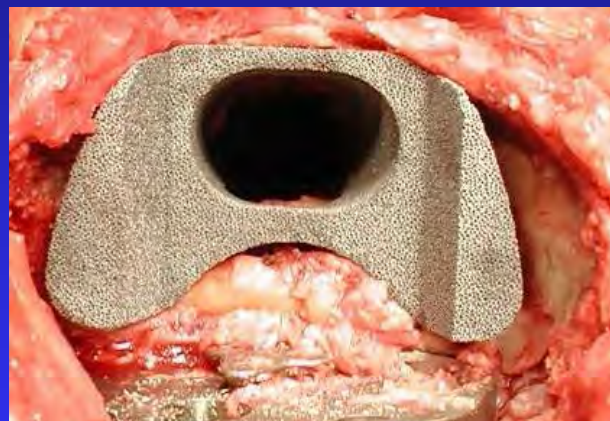
- Metaphyseal cone
- Impacting grafting



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TKAR: Bone Loss - Fixation

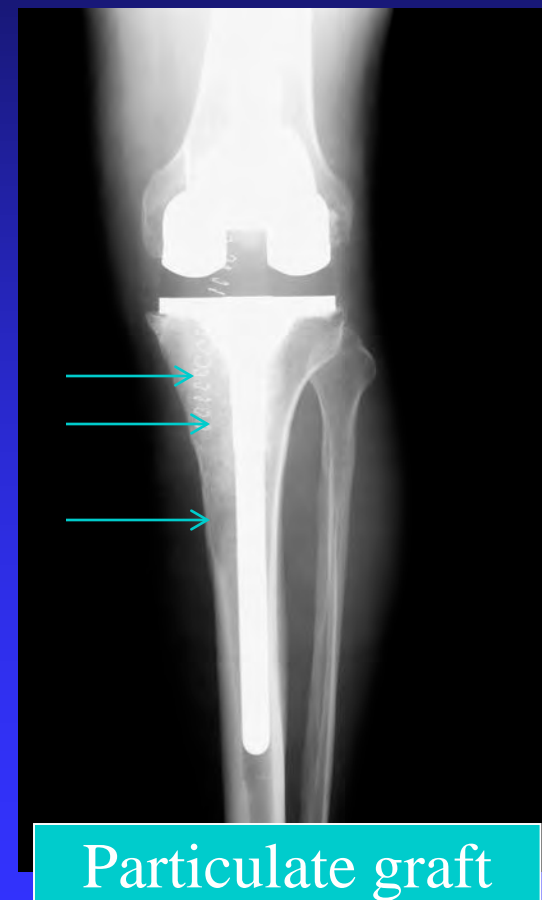
- When do you use metaphyseal sleeves or porous metal cones?



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TKAR: Bone Loss - Fixation

- When do you use particulate bone graft?



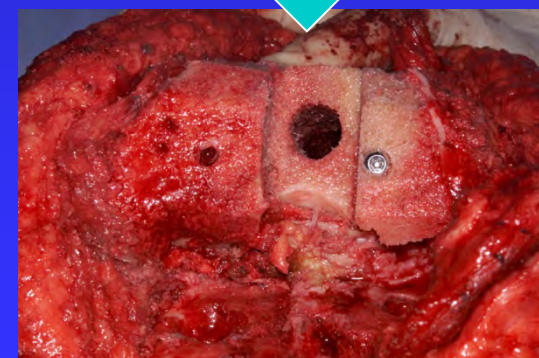
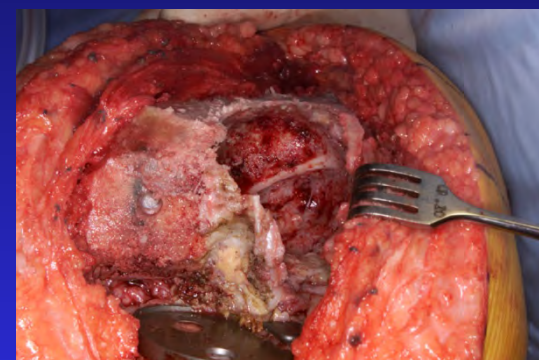
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TKAR: Bone Loss - Fixation

- When do you use small-medium size bulk bone allograft?



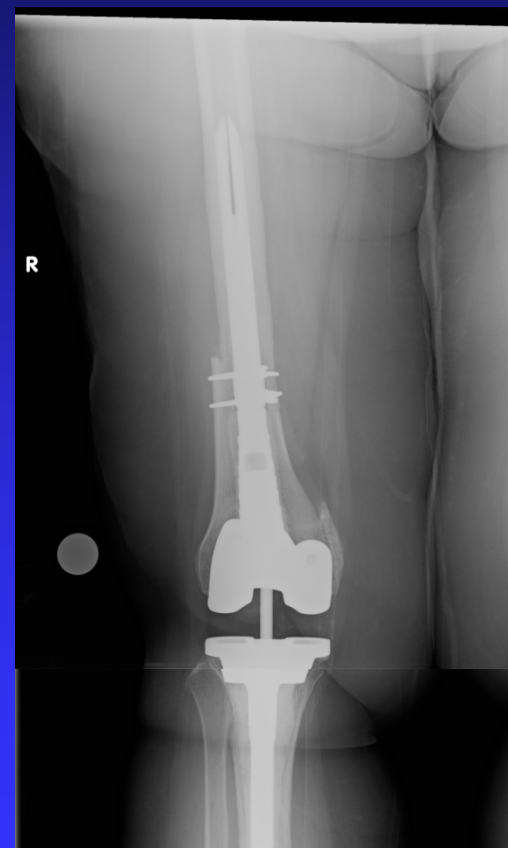
Femoral Head
Graft



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TKAR: Bone Loss - Fixation

- When do you use massive bulk bone allograft?

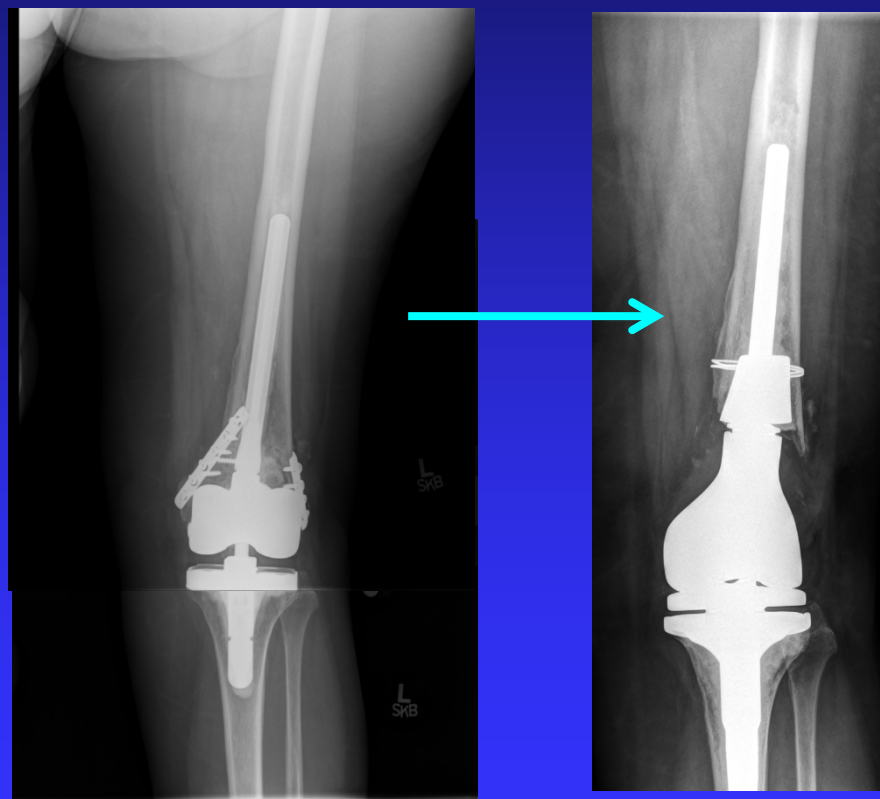


Distal Femoral
Allograft

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TKAR: Bone Loss - Fixation

- When do you go to distal femoral replacement?



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STABILITY/CONSTRAINT



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TKAR: Implant Constraint

What % of implants for multiply revised knees?

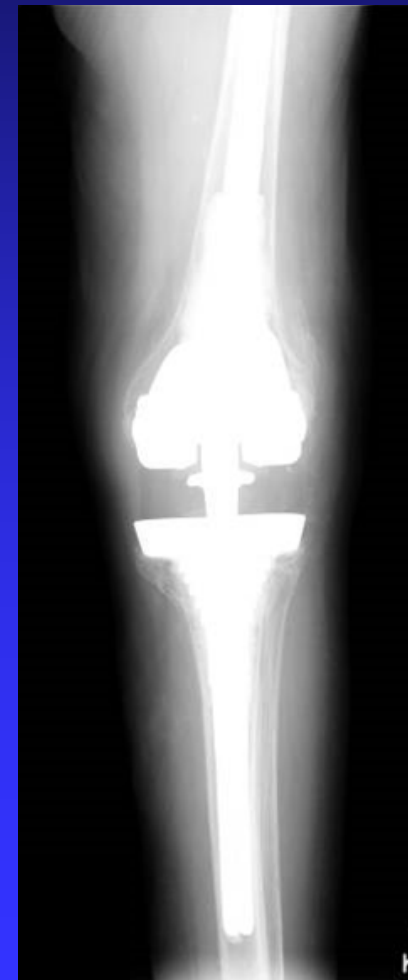
- PS
- Constrained condylar
- Hinge



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TKAR: Implant Constraint

- Indications for hinge?



TOUGH REVISION THA AND TKA

TKAR: Implant Constraint

- Role of ligament augmentation/
ligament
allograft?



No MCL

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EXTENSOR MECHANISM

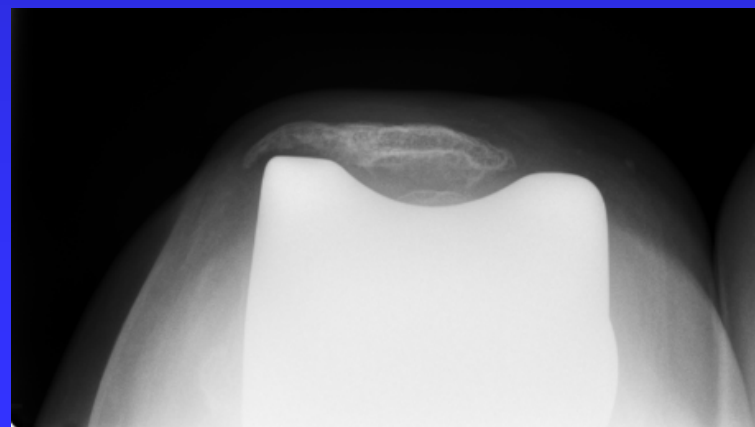


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TKAR: Extensor Mechanism

What do you do with the very deficient patella?

- Leave unresurfaced?
- Bone graft with pouch?
- Gull wing osteotomy?



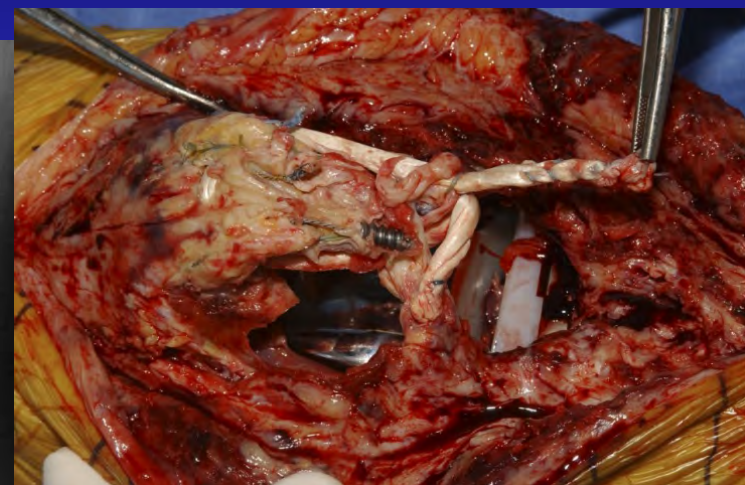
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TKAR: Extensor Mechanism

Extensor Mechanism

Deficiency:

- Role of allograft?
- Role of marlex mesh reconstruction?



TOUGH REVISION THA AND TKA

Hope You Have Enjoyed the Course

Thank You