

How I do a medial Unicompartmental Knee Arthroplasty

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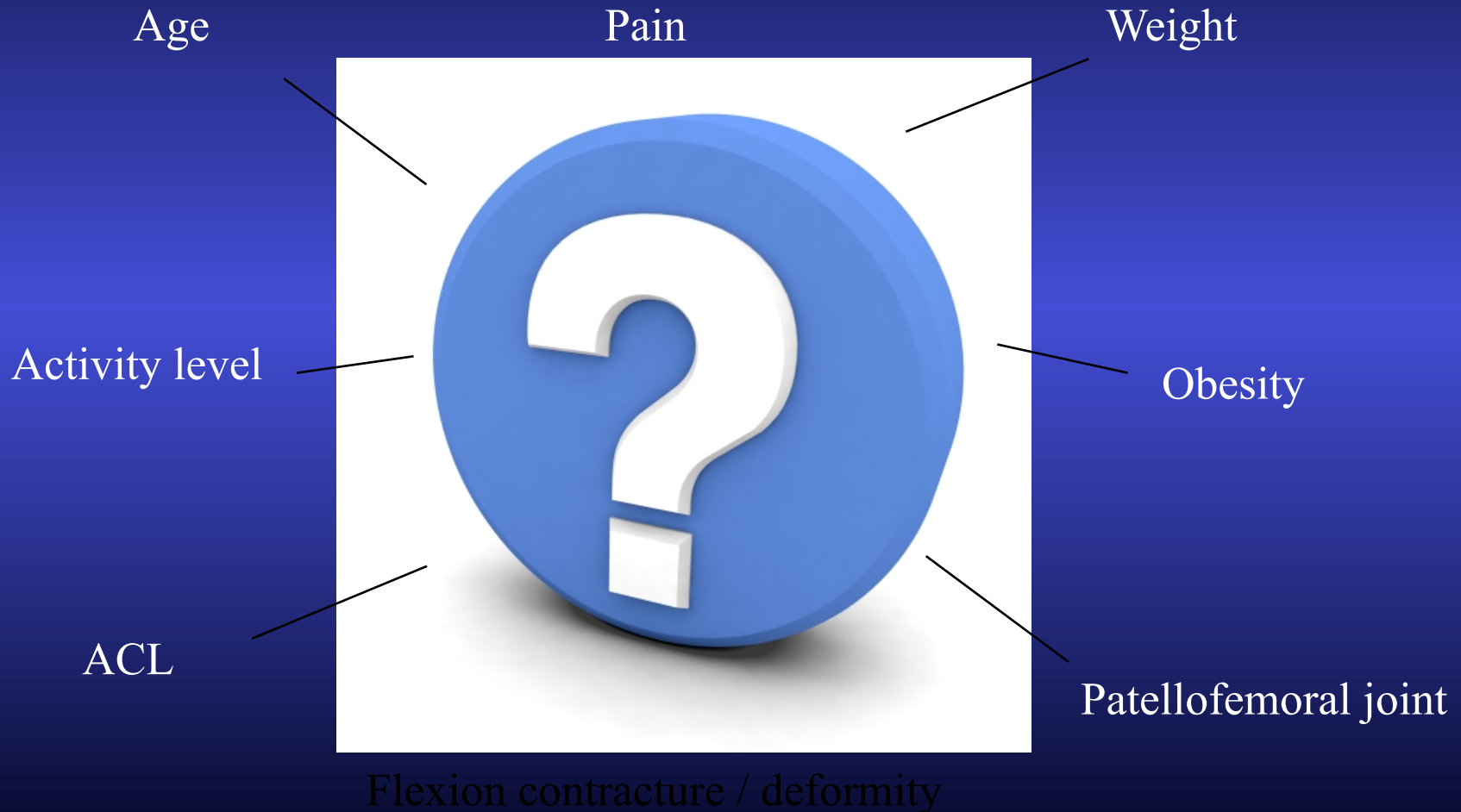
Why UKA ?

Benefits

- Preservation of bone stock
- Preserve ACL / PCL
- Better proprioception
- Shorter hospital stays
- Fewer complications
- Improved walking



How to Manage UKA Indications in 2017





Consensus Statement on Indications and Contraindications for Medial Unicompartmental Knee Arthroplasty

Keith R. Berend, MD¹; Michael E. Berend, MD²; David F. Dalury, MD³; Jean-Noel Argenson, MD⁴; Chris A. Dodd, MD⁵; and Richard D. Scott, MD⁶

Previous work, now nearly 30 years dated, is frequently cited as the "gold standard" for the indications and contraindications for medial unicompartmental knee arthroplasty (UKA). The purpose of this article is to review current literature on the indications and contraindications to UKA and develop a consensus statement based on those data. Six surgeons with a combined experience of performing more than 8,000 partial knee arthroplasties were surveyed. Surgeons then participated in a discussion, emerging proposal, collaborative modification, and final consensus phase. The final consensus on primary indications and contraindications is presented. Notably, the authors provide consensus on previous contraindications, which are no longer considered to be contraindications. The authors provide an updated and concise review of the current indications and contraindications for medial UKA using scientifically based consensus-building methodology. (Journal of Surgical Orthopaedic Advances 24(4):252–256, 2015)

The Ideal Candidate on Radiograph

AP Radiograph

- Classic bone-on-bone compartmental **anteromedial osteoarthritis** disease in the AP x-ray



Varus stress showing full loss of medial cartilage

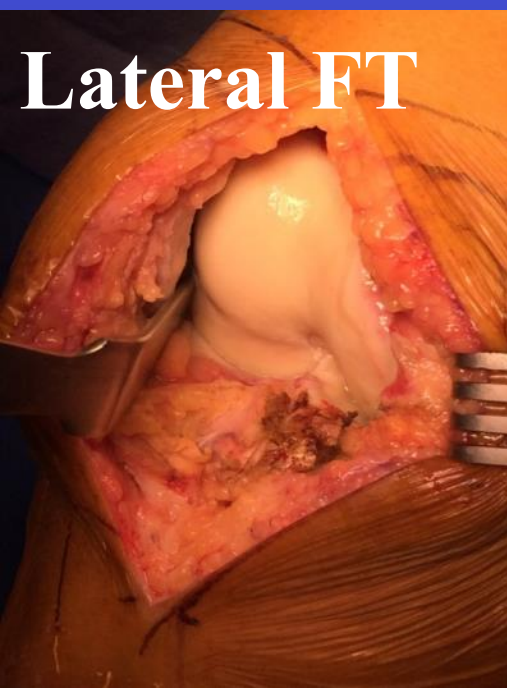
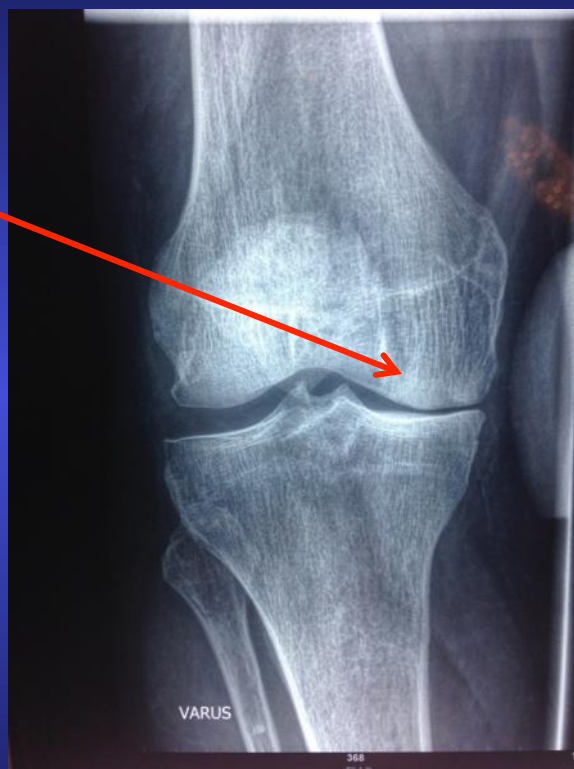
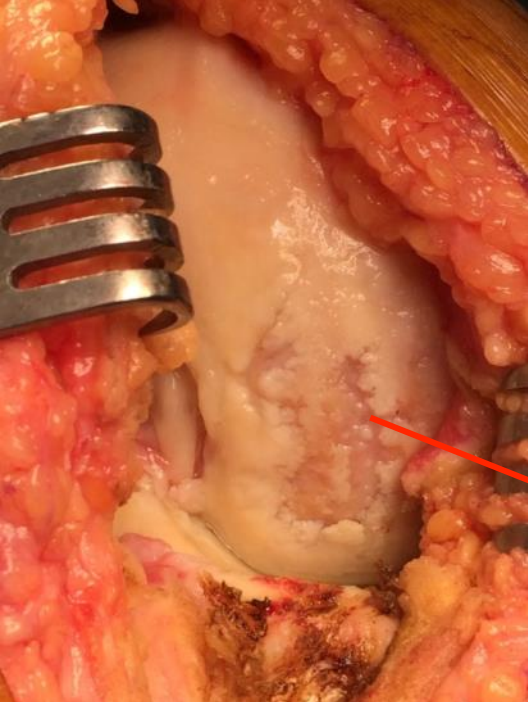
Correctable



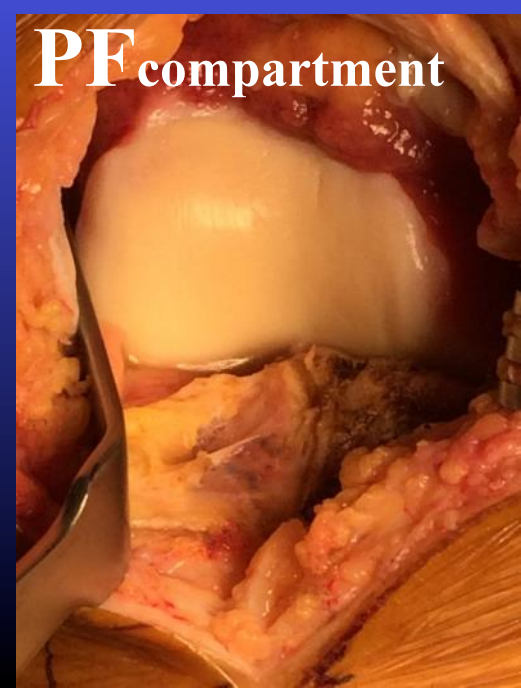
Valgus stress showing correction of the deformity and full-thickness lateral cartilage

Usually in frontal deformities up to 15°

The Ideal Candidate at Surgery



Lateral FT



PF compartment

**Antero Medial isolated
femoro-tibial OA**

Indication Expansion: Age

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journal homepage: www.arthroplastyjournal.org



EKS Symposium paper

Unicompartmental Knee Arthroplasty in Patients Older Than 75 Results in Better Clinical Outcomes and Similar Survivorship Compared to Total Knee Arthroplasty. A Matched Controlled Study

Maxime Fabre-Aubrespy, MD, Matthieu Ollivier, MD, Sébastien Pesenti, MD, Sébastien Parratte, MD, PhD, Jean-Noël Argenson, MD, PhD *

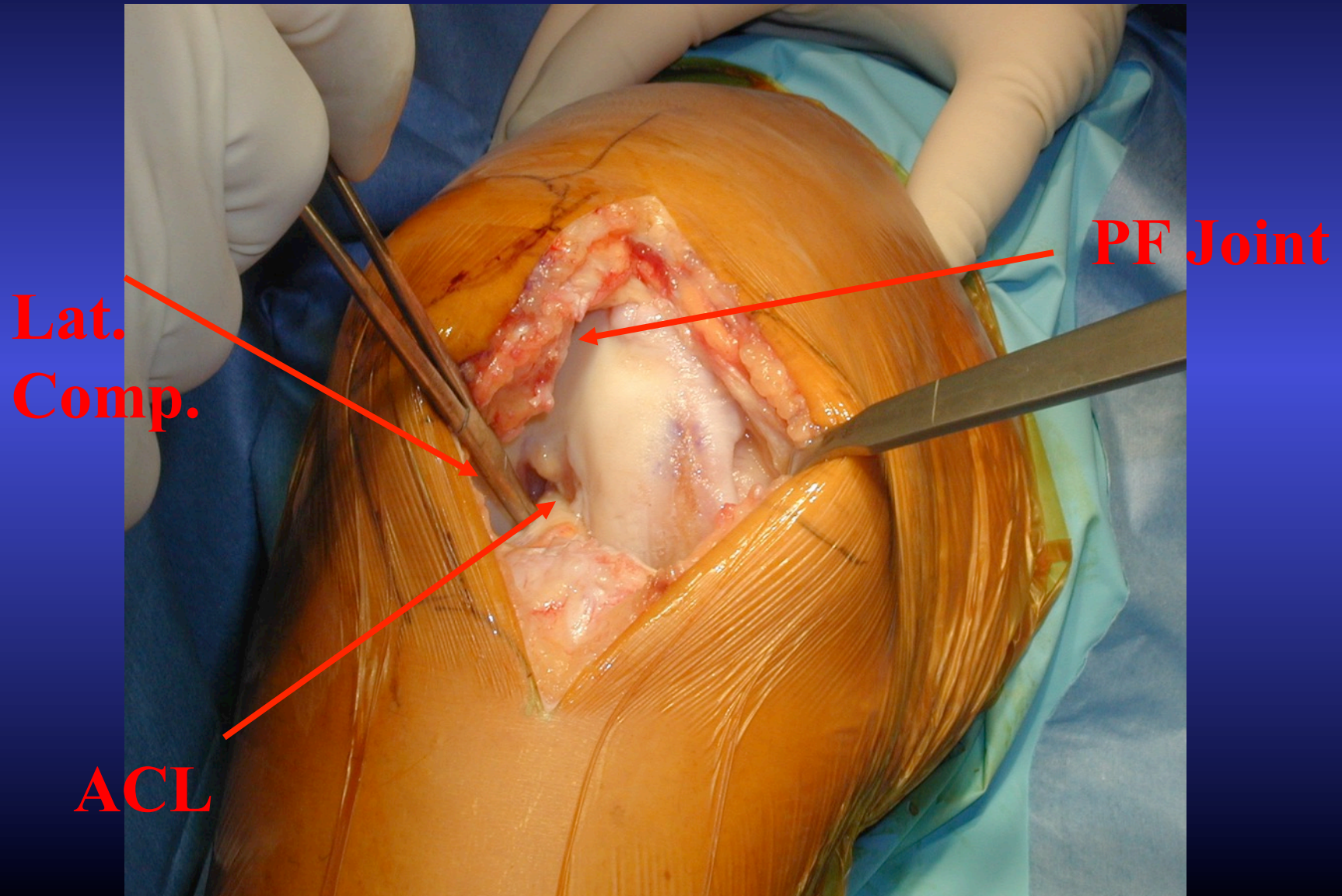
Department of Orthopedics and Traumatology, St. Marguerite Hospital, Marseille, France

➡ *OA in patients older than 75 years old*

Exposure



Confirm Indication

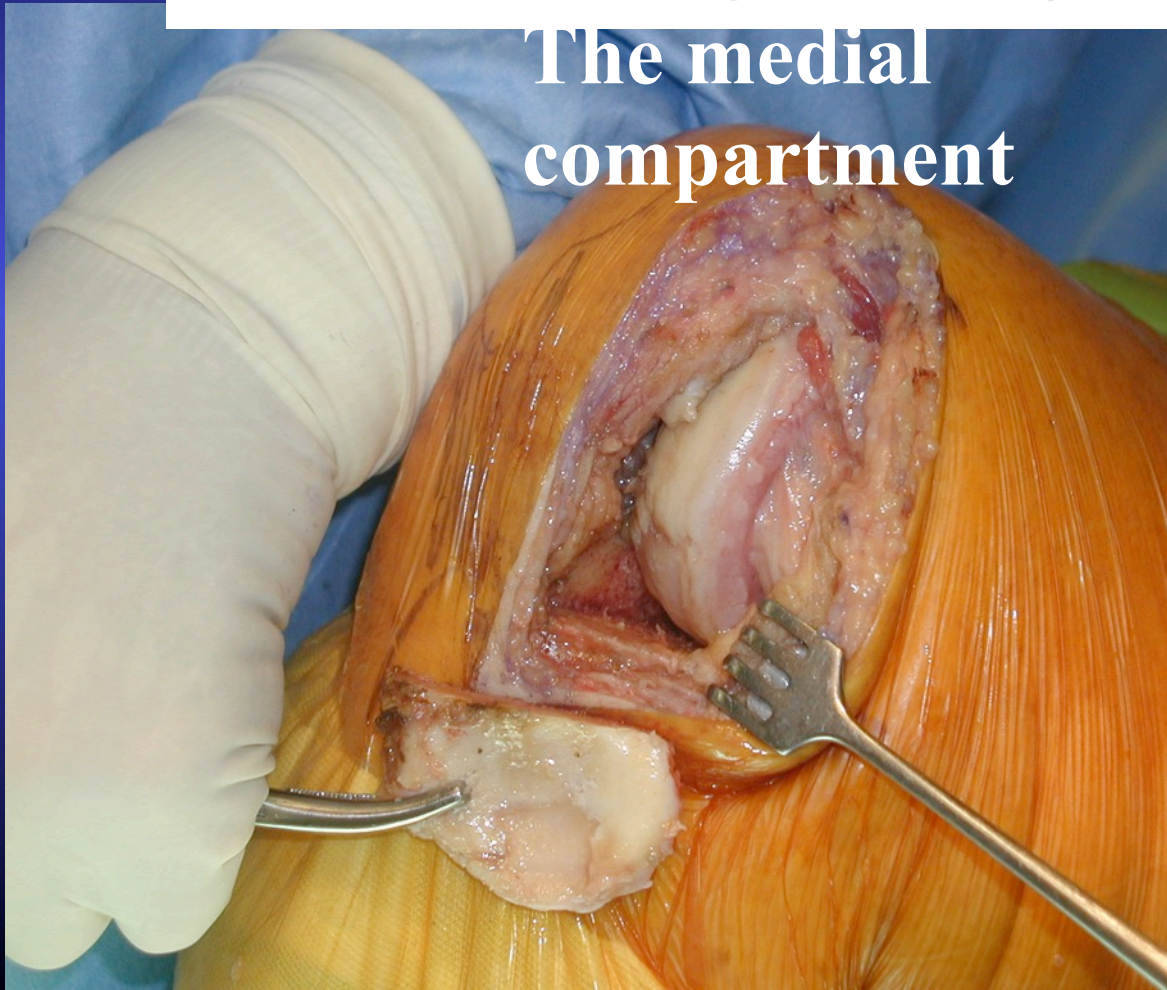


Unicompartmental Knee Arthroplasty

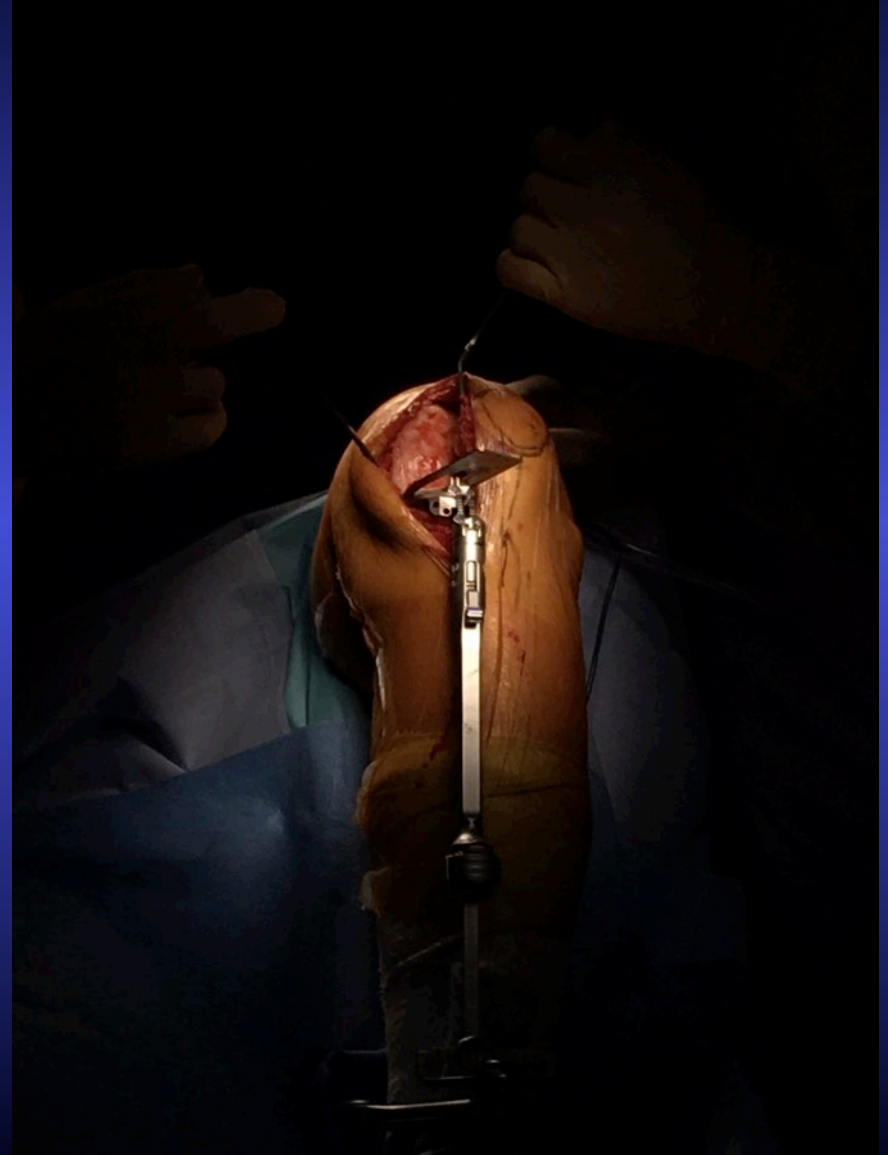
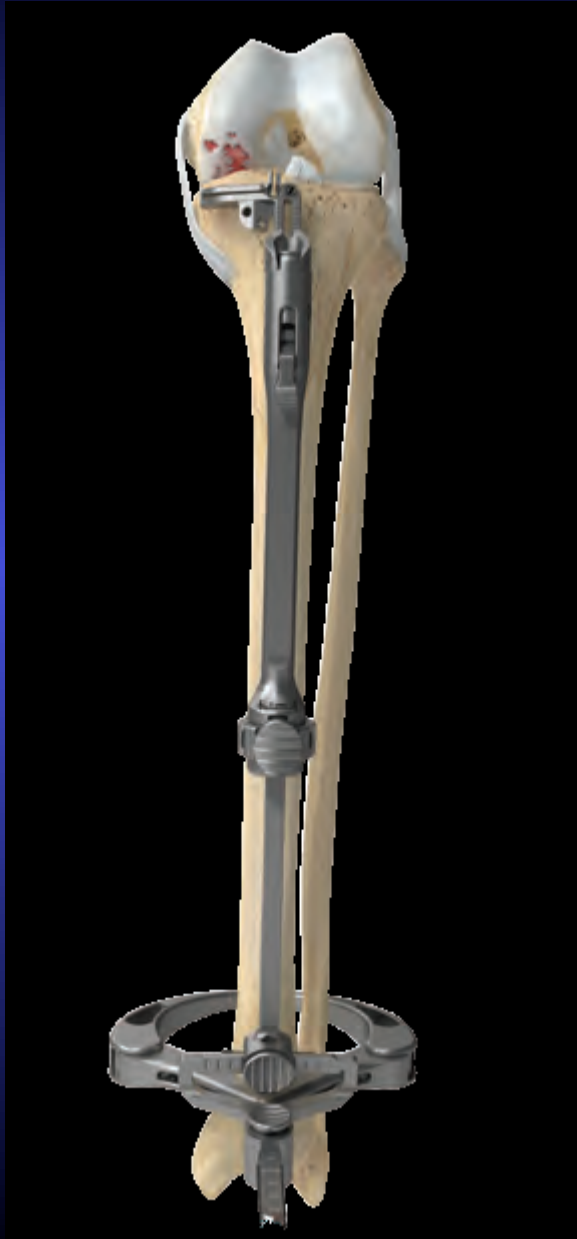
Technique Through a Mini-incision

*Jean-Noel A. Argenson, MD; Sebastien Parratte, MD; Xavier Flecher, MD; and
Jean-Manuel Aubaniac, MD*

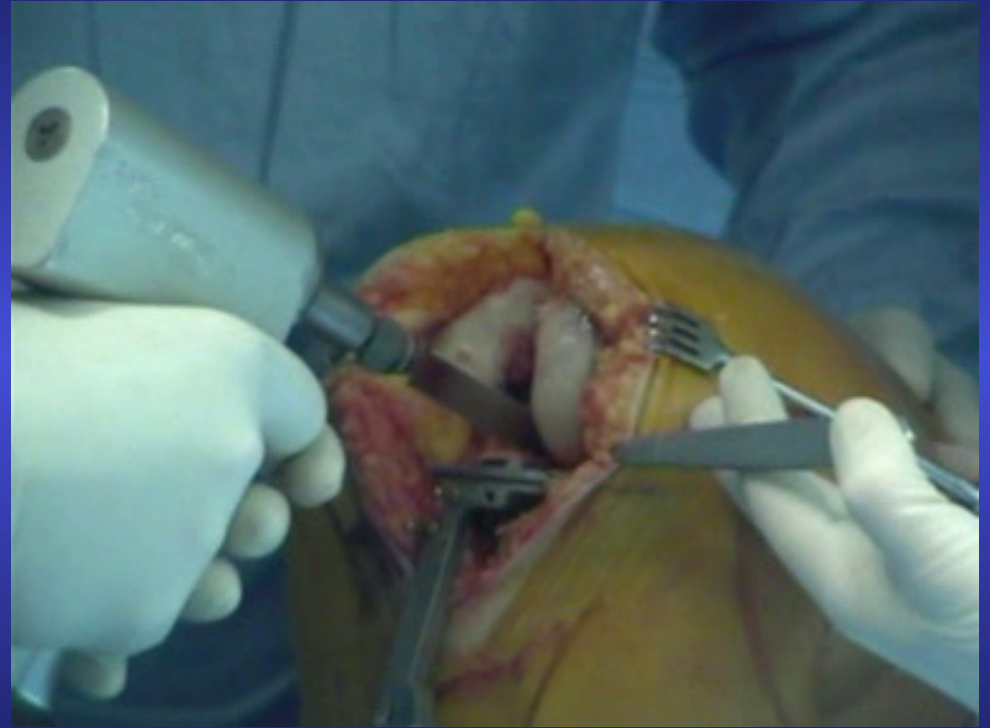
The medial
compartment



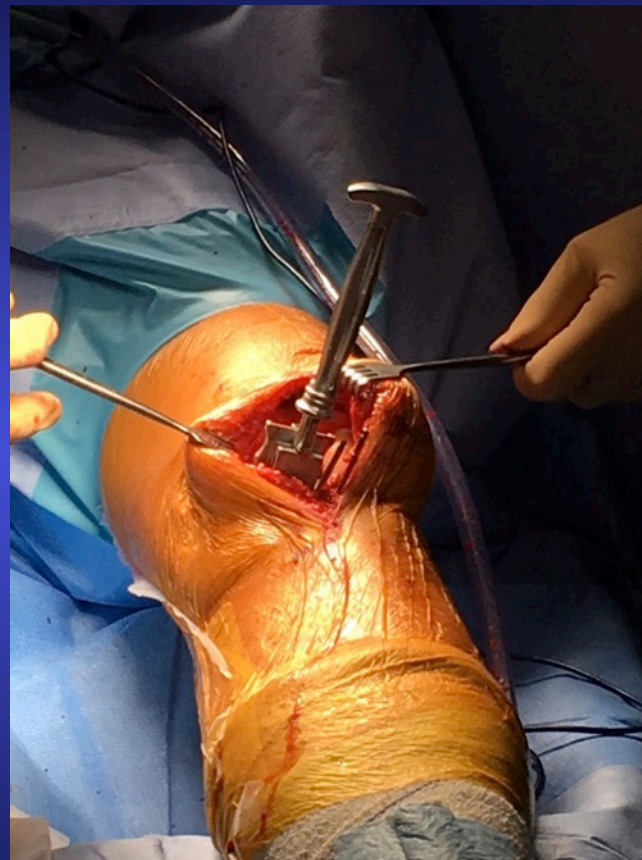
Tibial first



Tibial guide : EM Technique



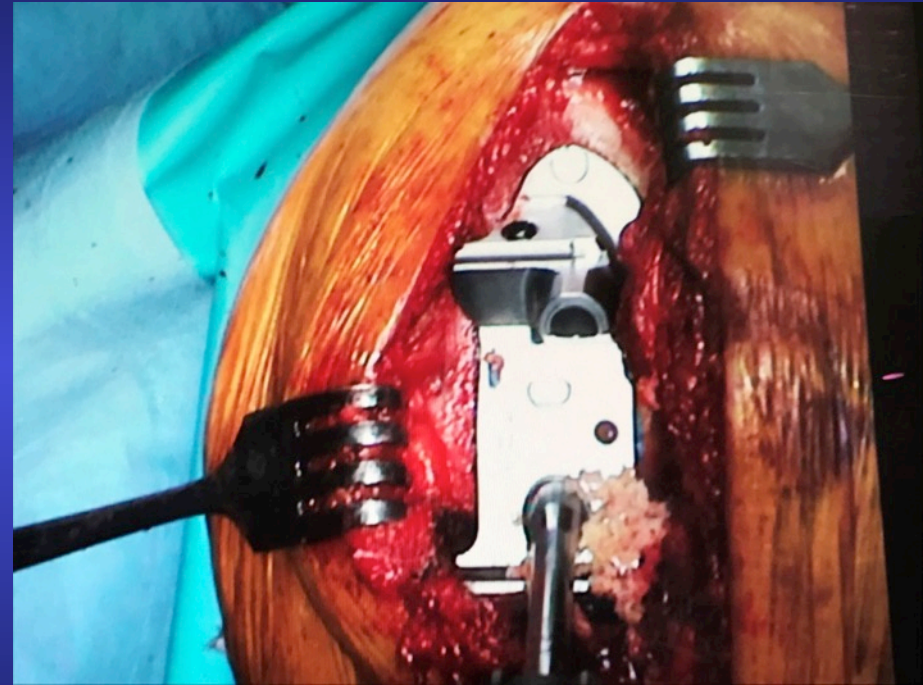
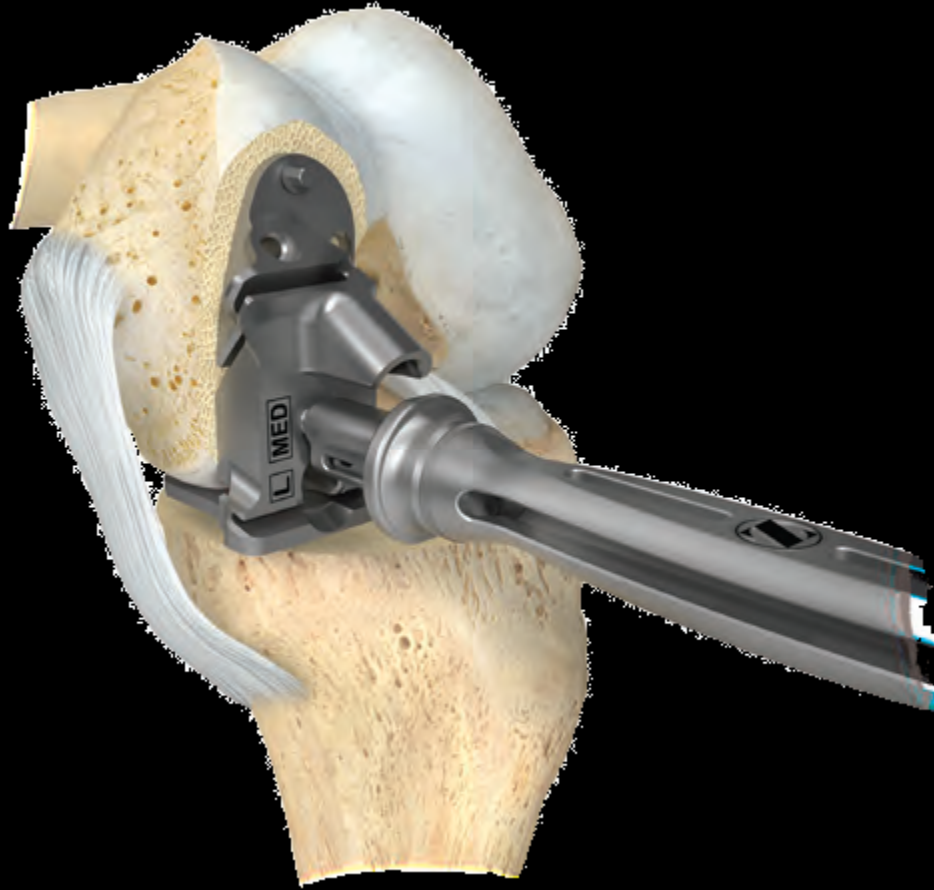
Femoral distal cut



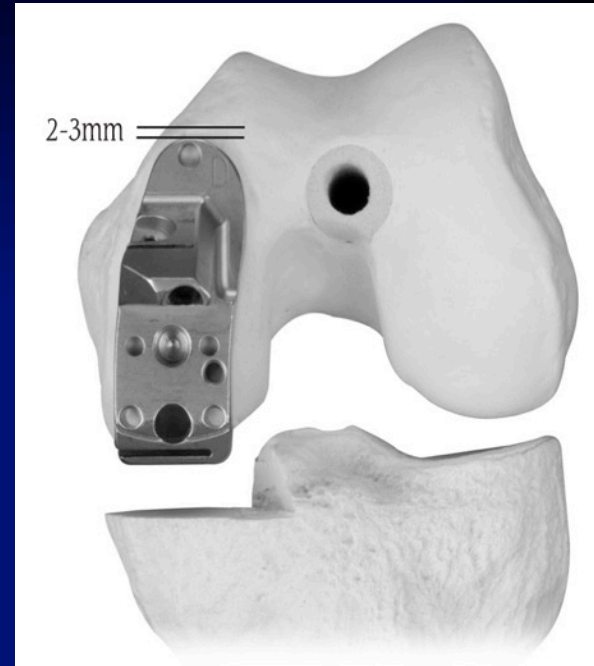
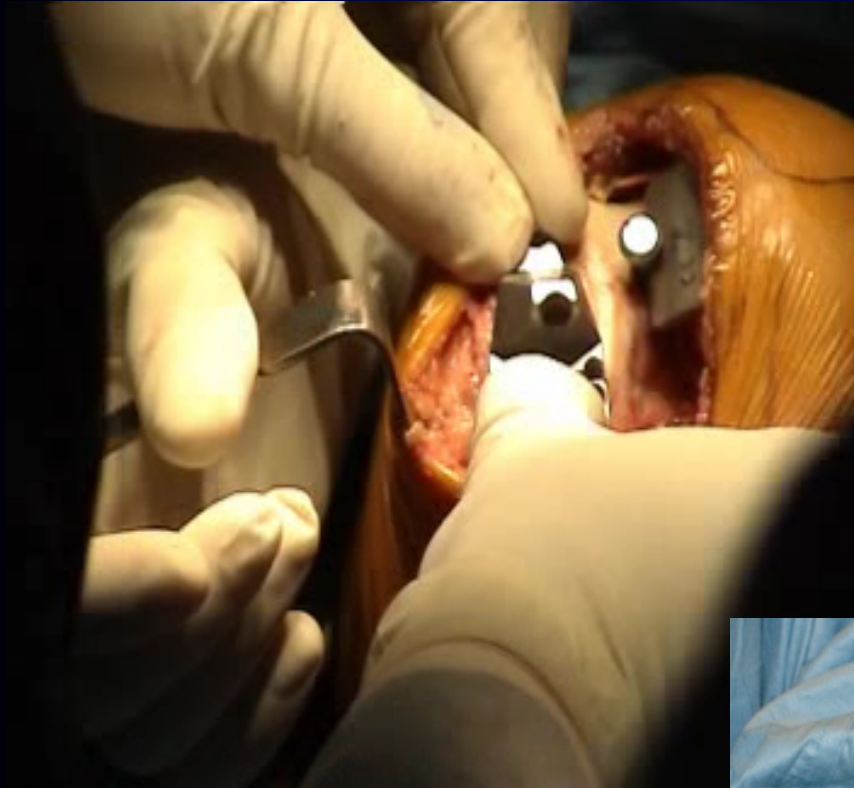
Check Gaps



Femoral guide



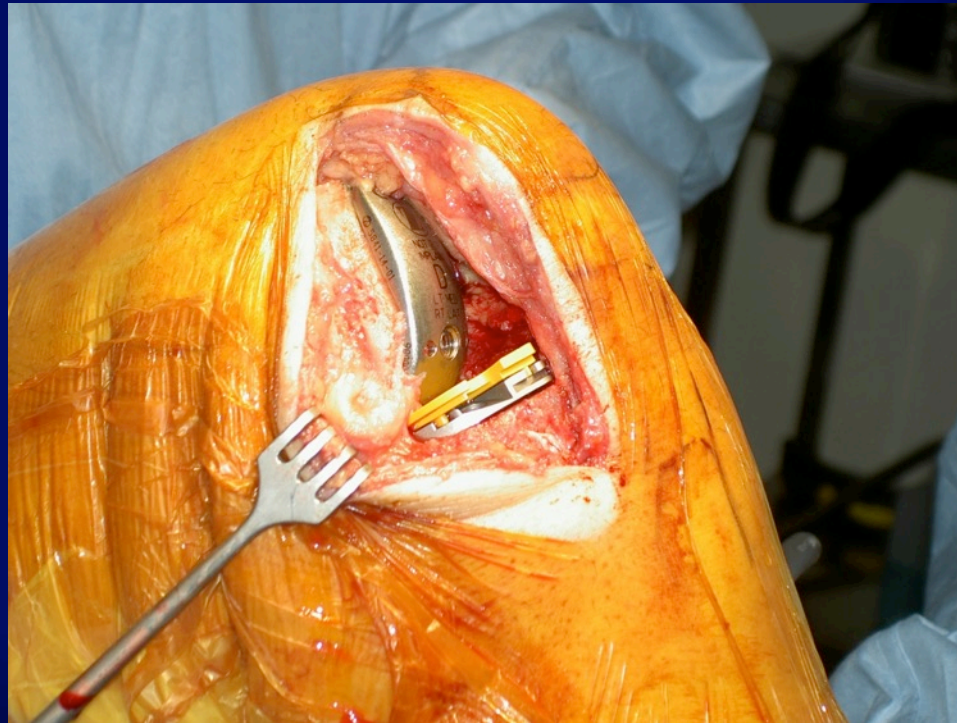
Femoral guide alignment : Tibial referencing



Just Right

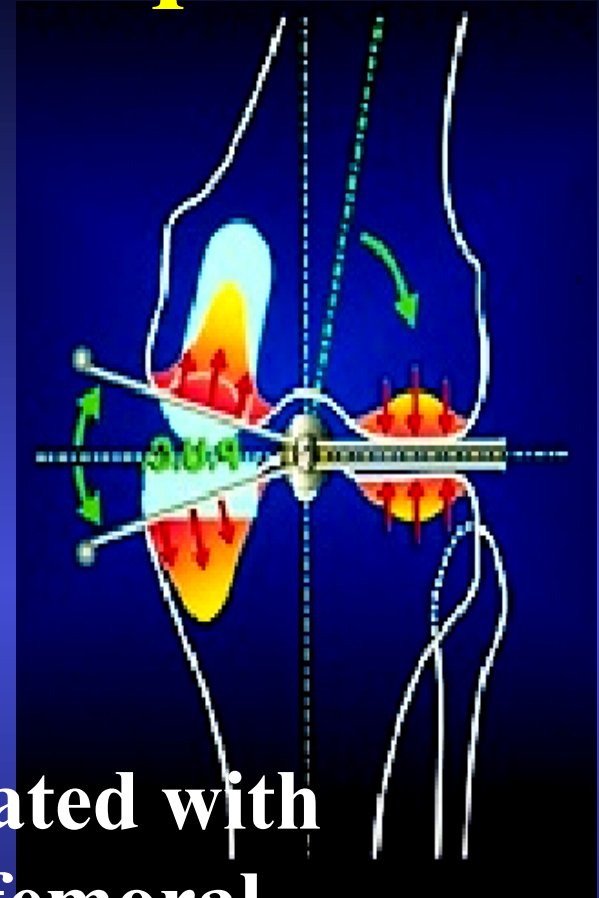


Testing in flexion and extension



UKA : Surgical technique

- Avoid overcorrection
- Severe undercorrection is associated with increased wear in the medial tibiofemoral compartment (Ridgeway et al. *JBJS* 2002
Hernigou and Deschamps *CORR* 2004)



Aiming for slight undercorrection



Tibia final



Long term results UKA

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Modern Unicompartamental Knee Arthroplasty with Cement

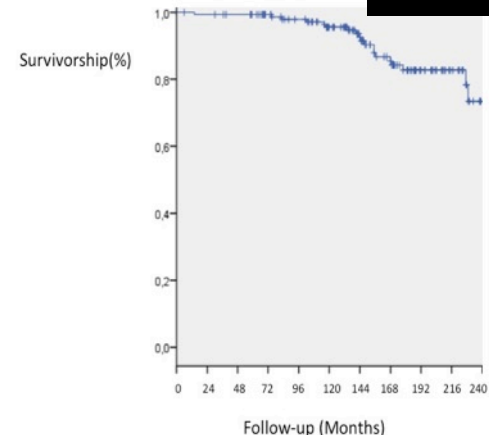
A Concise Follow-up, at a Mean of Twenty Years, of a Previous Report*

Jean-Noel A. Argenson, MD, Guillaume Blanc, MD, Jean-Manuel Aubaniac, MD, and Sebastien Parratte, MD

Investigation performed at the Institute for Locomotion, Aix-Marseille University, Marseille, France

**94 % at
10 years**

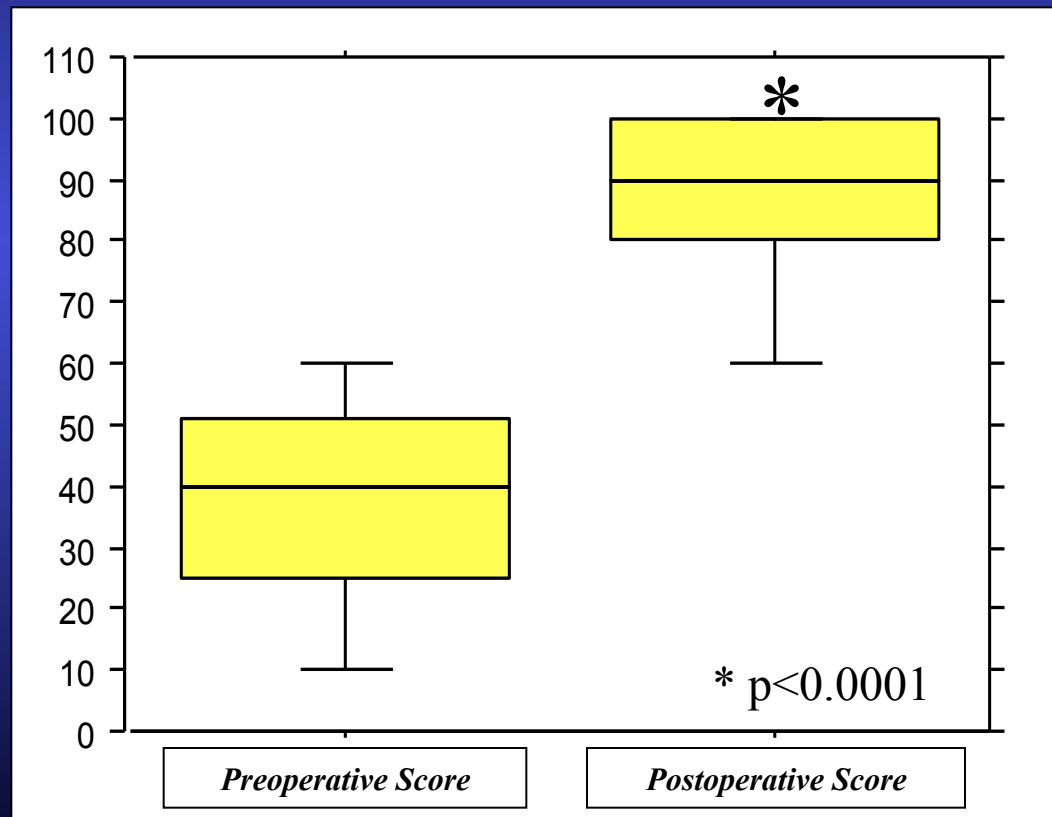
**75 % at
20 years**



Results: function

- 65 cemented UKA implanted in 62 patients < 60, at 10 years FU

Knee Society Function Score



Preoperative
Mean=50±4
25 to 64

Postoperative
Mean=94±4
80 to 100

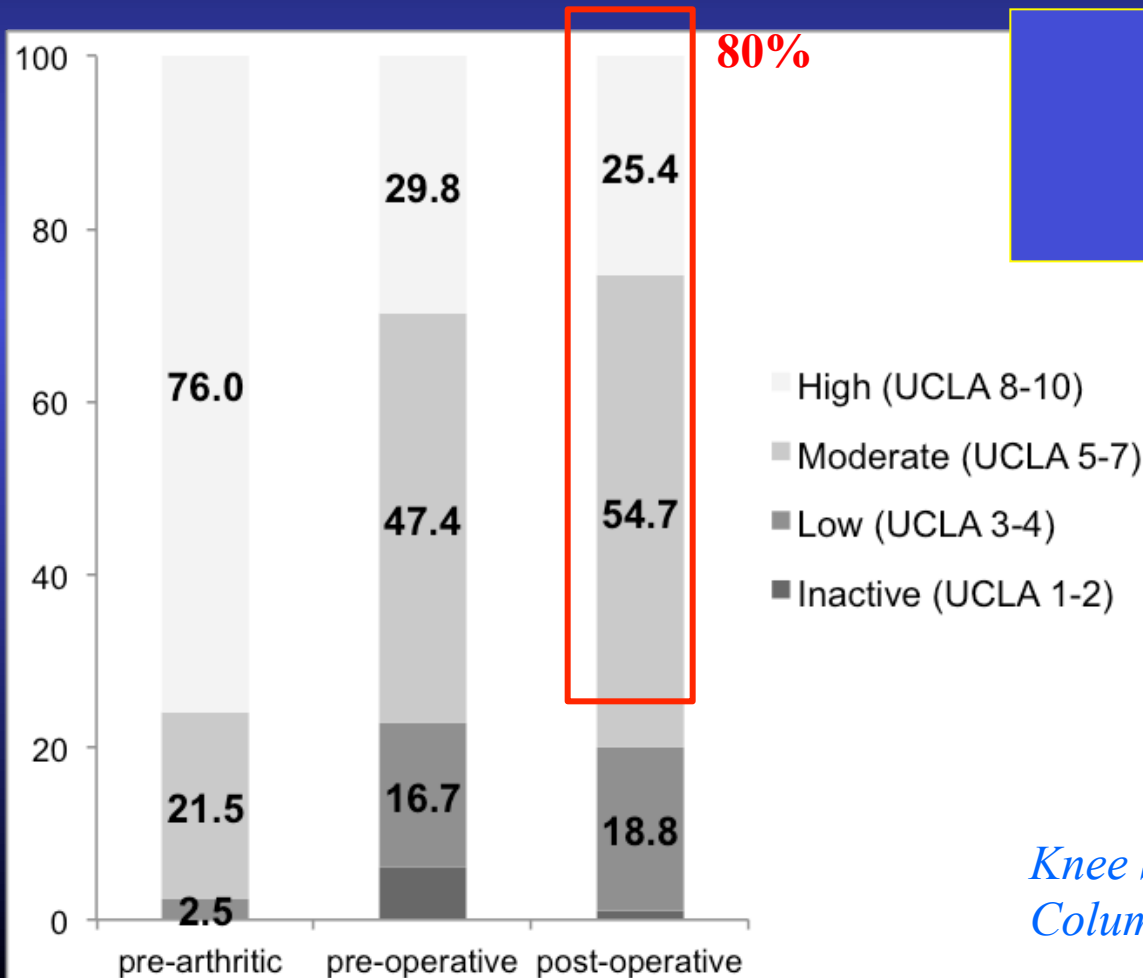


Postoperative
Mean= 135°±6
120 to 150°

Sportive activities: 206 medial UKA

Our experience

Time before returning to sport: 3 months



Mean UCLA score :
Pre-arthritis 8.9+/-2
Preoperative 6.4 +/-2
Postoperative 6.5 +/-2

*Knee Society members meeting,
Columbus, OH, Sept 2017*

What about Kinematics in UKA?

- Knee kinematics which resembles normal during stair climbing *Jung et al. KSSTA 2014; 22: 1879-86*
- *Knee kinematics in flexion*



The Journal of Arthroplasty Vol. 17 No. 8 2002

In Vivo Determination of Knee Kinematics for Subjects Implanted With a Unicompartmental Arthroplasty

Jean-Noël A. Argenson, MD,* Richard D. Komistek, PhD,†
Jean-Manuel Aubaniac, MD,* Douglas A. Dennis, MD,† Eric J. Northcut, MS,†
Dylan T. Anderson,† and Serge Agostini, MD‡

CONCLUSION

- We know the 10 & 20 year results of UKA based on correct patient selection
- We want to reduce compromise during surgery having adequate range of size, and personal fit
- A friendly instrumentation, resurfacing or condylar resection, can match all surgeon expectations
- Based on these principles unicompartmental knee arthroplasty may match every patient expectation.