



Lateral Open Wedge HTO



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Lyon

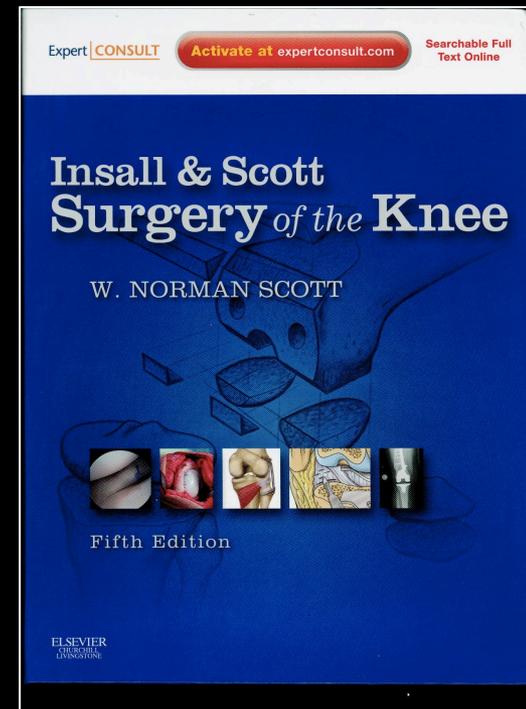
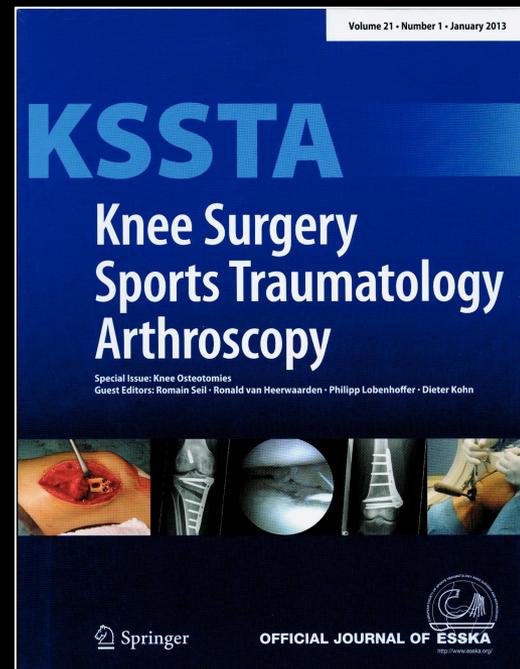
Failed osteotomy?

- **SHORT TERM :**
 - OVER CORRECTION
- **MID TERM :**
 - UNDER CORRECTION
- **LONG TERM :**
 - OA PROGRESSION

Chapter 95

Osteotomy for the Arthritic Knee: A European Perspective

Sébastien Lustig, Elvire Servien, Guillaume Demey, and Philippe Neyret



How much deformity should we correct ?



Knee Surg Sports Traumatol Arthrosc
DOI 10.1007/s00167-015-3752-z



KNEE

The role of high tibial osteotomy in the treatment of knee laxity: a comprehensive review

O. Cantin¹ · R. A. Magnussen² · F. Corbi¹ · E. Servien¹ · P. Neyret¹ · Sébastien Lustig¹

Treatment : *Lateral Opening wedge HTO*

Marti and Kerkhoffs, JBJS Am 2001, 2008, 2009

J Bone Joint Surg Am. 2001 Feb;83-A(2):164-70.

Proximal tibial varus osteotomy. Indications, technique, and five to twenty-one-year results.

Marti RK¹, Verhagen RA, Kerkhoffs GM, Moojen TM.

J Bone Joint Surg Am. 2008 Jun;90(6):1252-7. doi: 10.2106/JBJS.D.01816.

Combined intra-articular and varus opening wedge osteotomy for lateral depression and valgus malunion of the proximal part of the tibia.

Kerkhoffs GM¹, Rademakers MV, Altena M, Marti RK.

J Bone Joint Surg Am. 2009 Mar 1;91 Suppl 2 Pt 1:101-15. doi: 10.2106/JBJS.H.01500.

Combined intra-articular and varus opening wedge osteotomy for lateral depression and valgus malunion of the proximal part of the tibia. Surgical technique.

Kerkhoffs GM¹, Rademakers MV, Altena M, Marti RK.

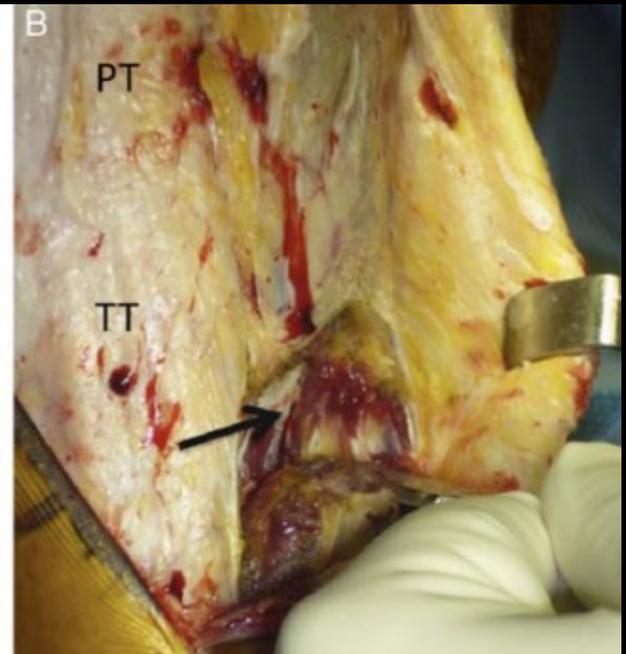
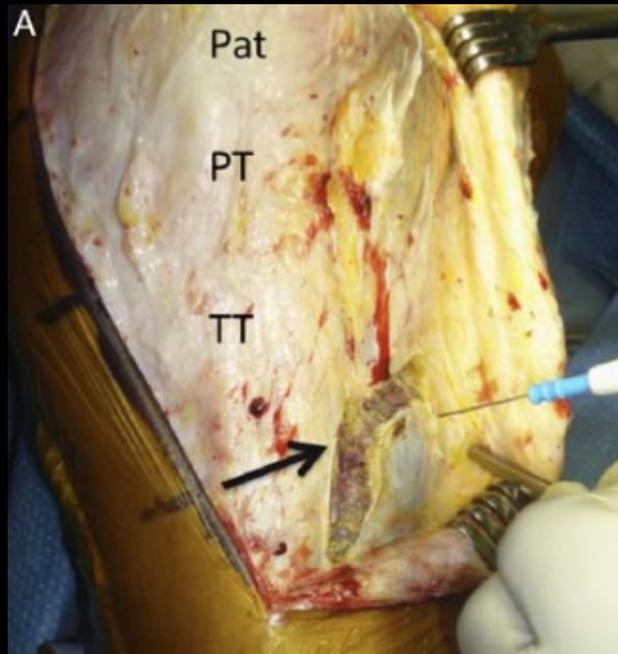
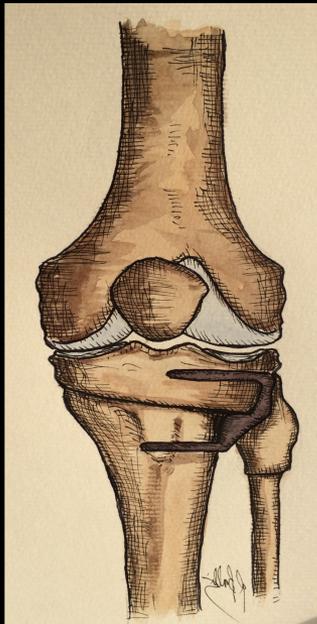


TECHNIQUE

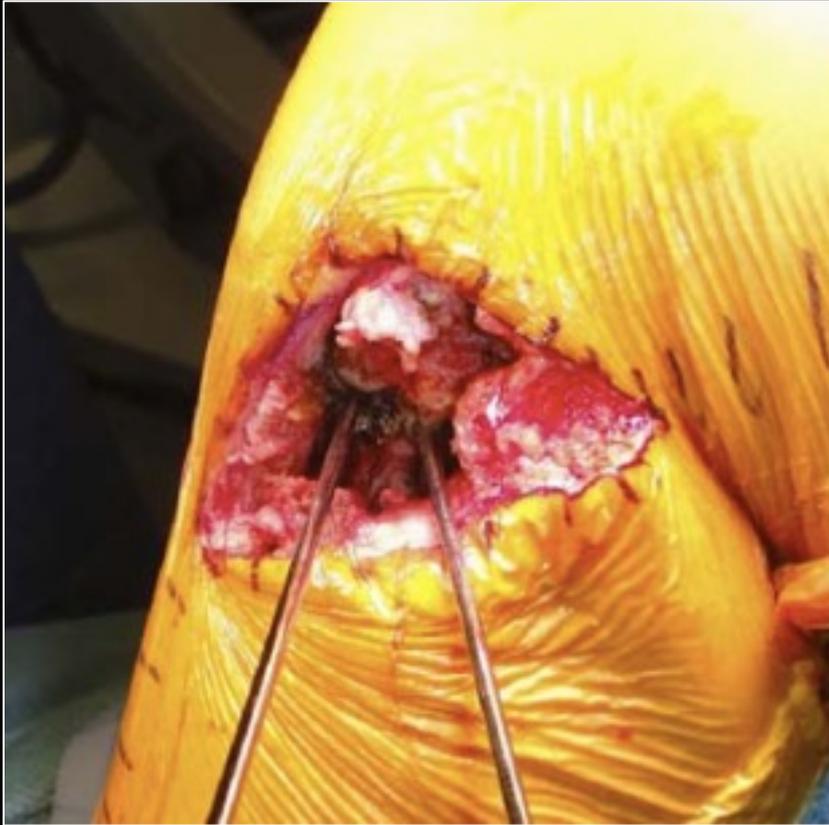
Lateral Opening-wedge High Tibial Osteotomy

Ma'ad F. Al-Saati, MD, Robert A. Magnussen, MD, Guillaume Demey, MD, Sebastien Lustig, MD, PhD, Elvire Servien, MD, PhD, and Philippe Neyret, MD

Step 1 : Fibular neck osteotomy

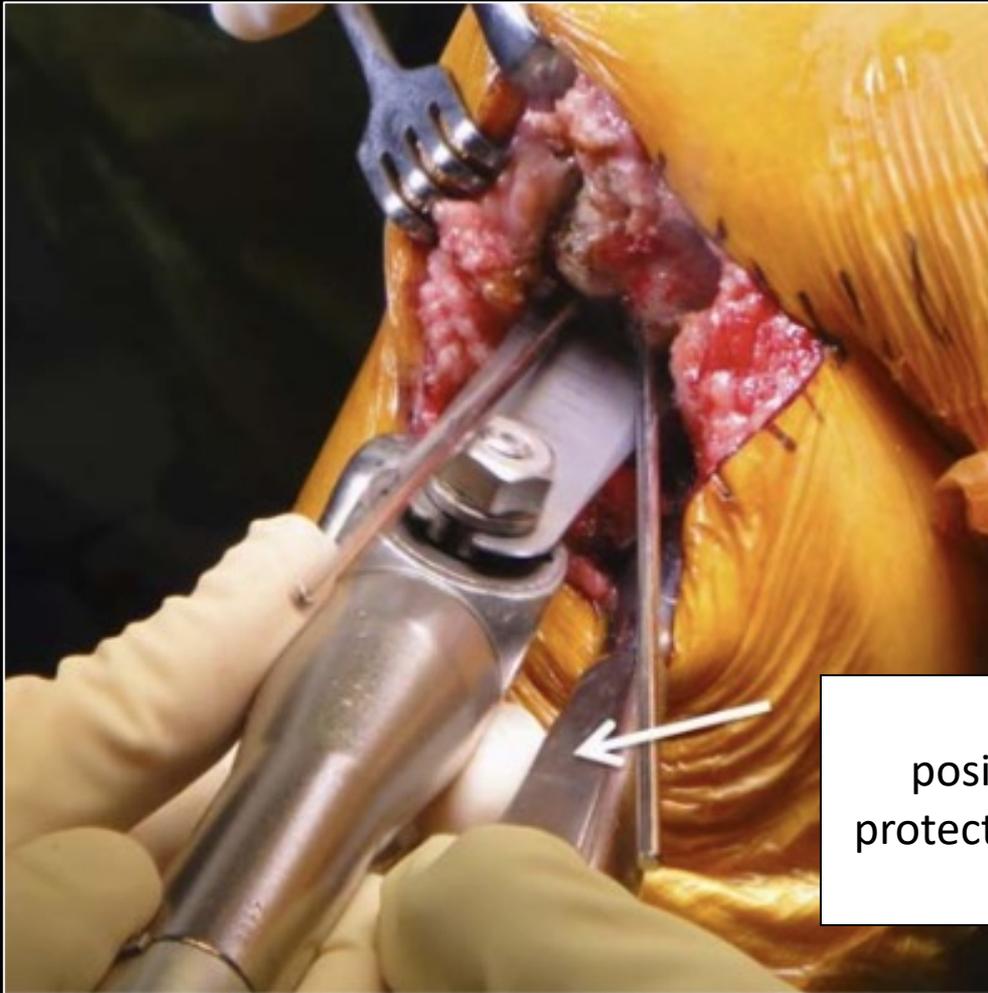


Step 2 : Preparation for tibial osteotomy



Two Kirschner wires are placed in the proximal tibial metaphysis to mark the future tibial osteotomy site.

Step 3 :Tibial osteotomy



An oscillating saw is used to perform the tibial osteotomy below the Kirschner wires.

Periosteal elevator positioned behind the tibia to protect the posterior neurovascular structures.

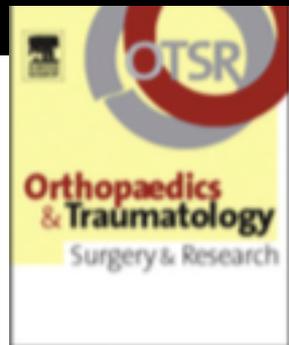
Original article

Vascular injuries during closing-wedge high tibial osteotomy: A cadaveric angiographic study

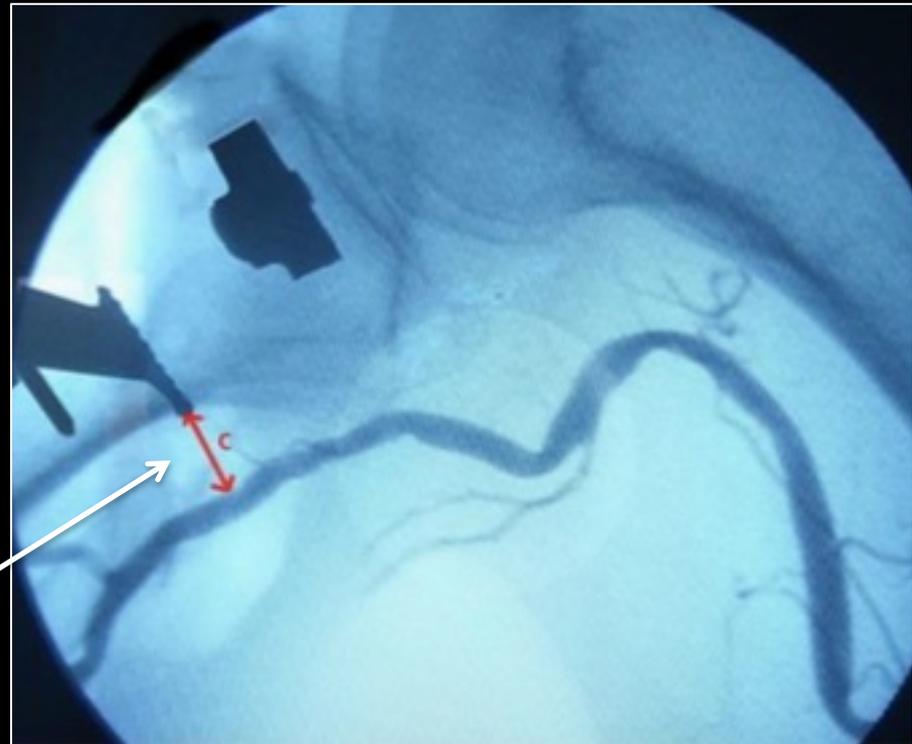
A. Darnis^{a,b,*}, V. Villa^a, C. Debette^a, S. Lustig^a, E. Servien^a, P. Neyret^a

^a Service de chirurgie orthopédique, centre Albert-Trillat, université Claude-Bernard Lyon 1, hôpital de la Croix-Rousse, hospices civils de Lyon, 103, Grande-Rue-de-la-Croix-Rousse, 69004 Lyon, France

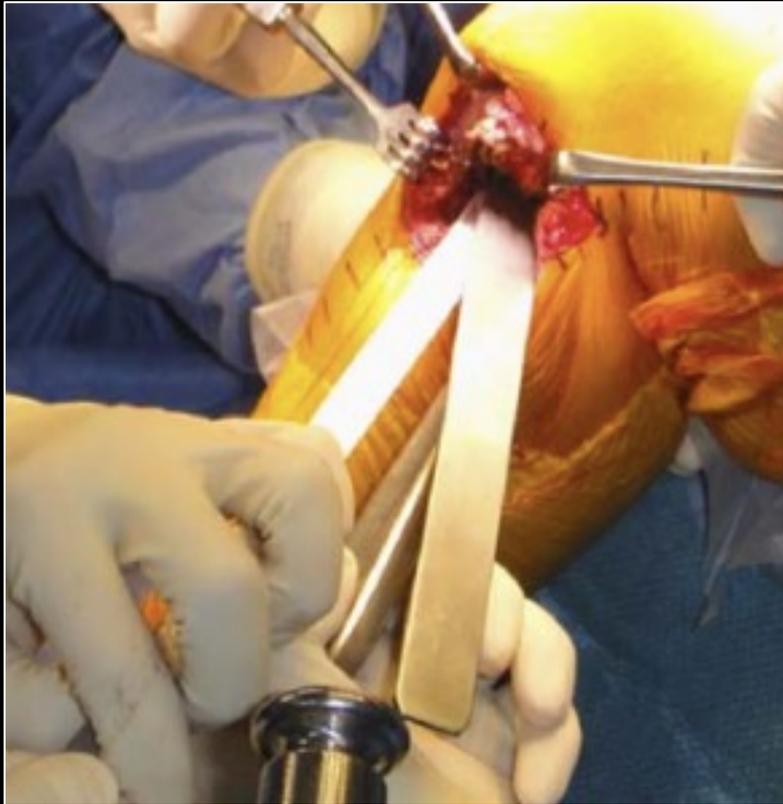
^b Laboratoire d'anatomie, faculté de médecine Rockefeller, université Claude-Bernard Lyon 1, 8, avenue Rockefeller, 69003 Lyon, France



« Safety distance »
7 to 11 mm



Step 4 : Preparation for opening of the osteotomy

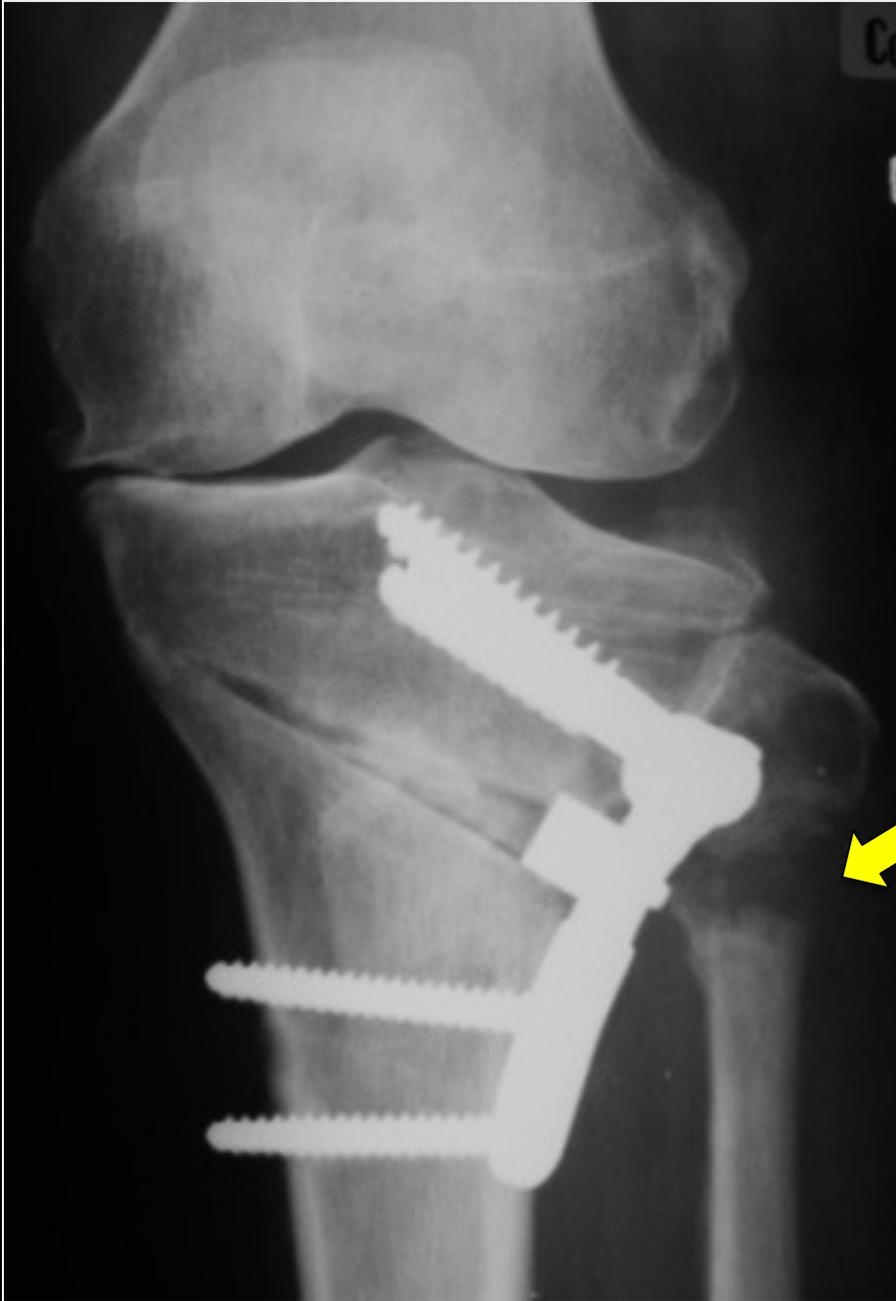


Osteotomes are placed across the osteotomy site.

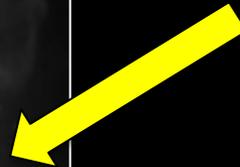
Step 5 : Evaluating the correction



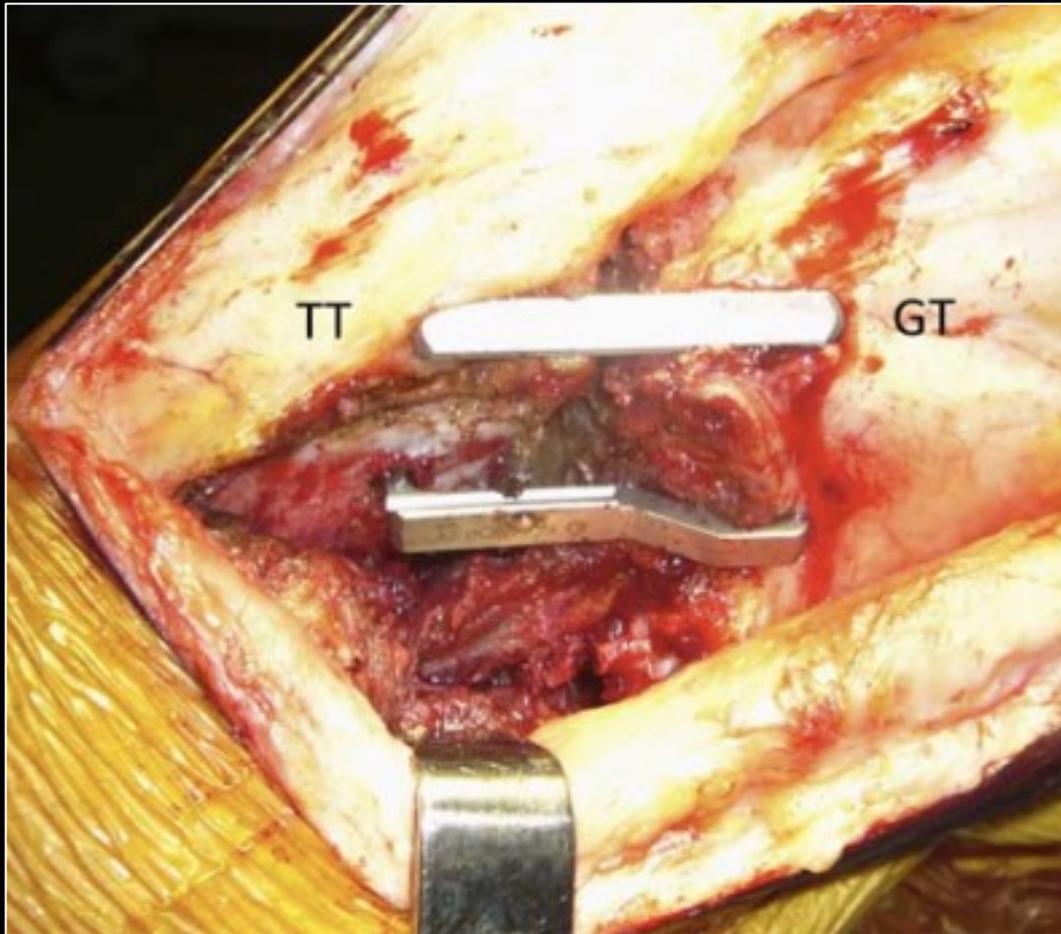
A lamina spreader is placed to maintain correction
A fluoroscopic image is obtained with a bar centered over the femoral head and ankle demonstrating the new mechanical axis of the limb.



Fibular
osteotomy
Opening



Step 6 : Fixation

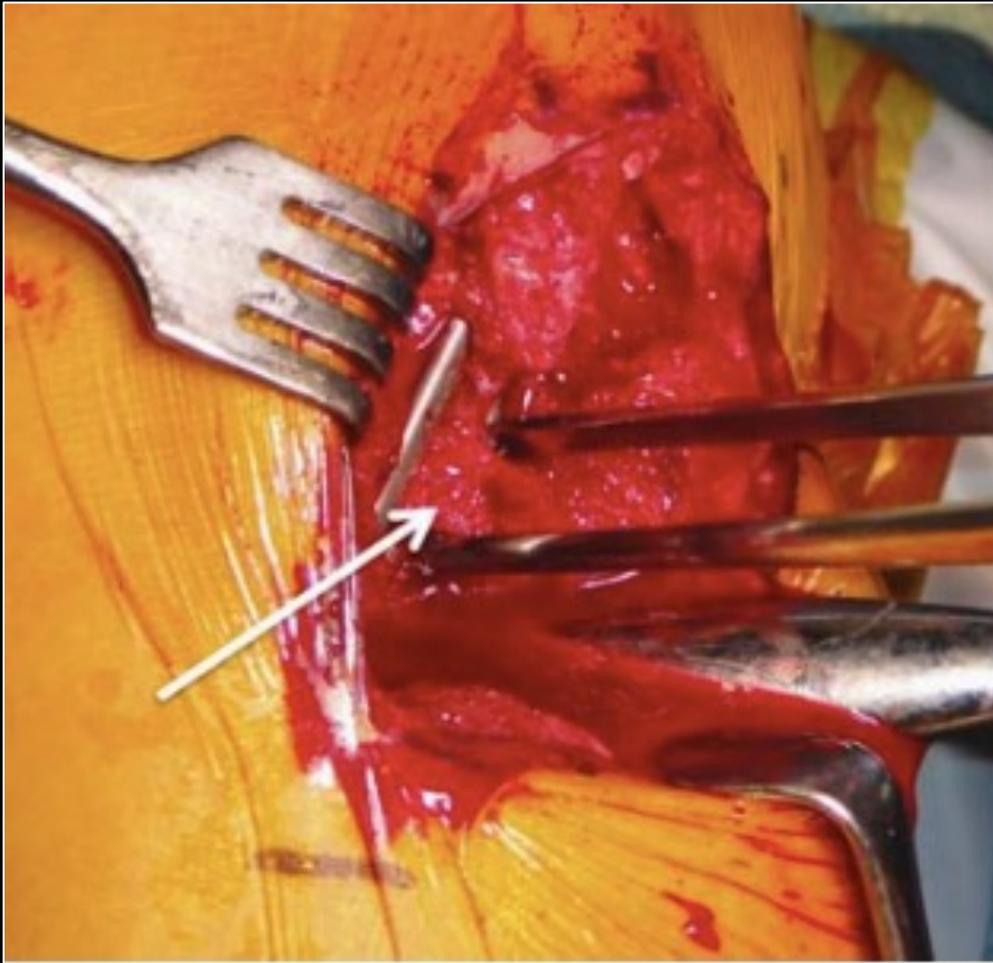


Staples

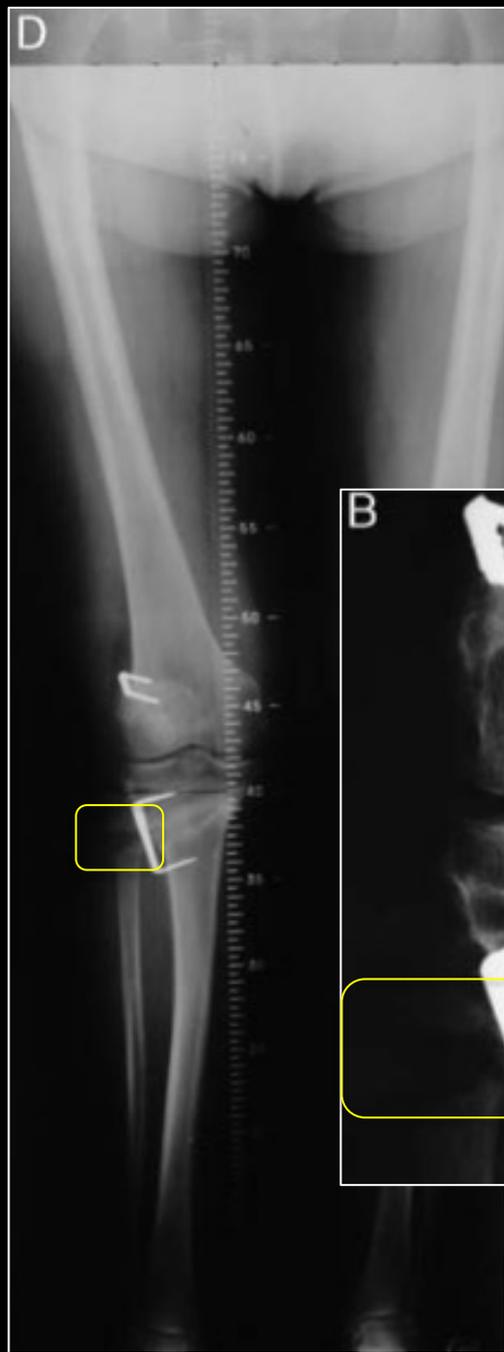
The first is placed from the tibial tuberosity (TT) to Gerdy's tubercle (GT).

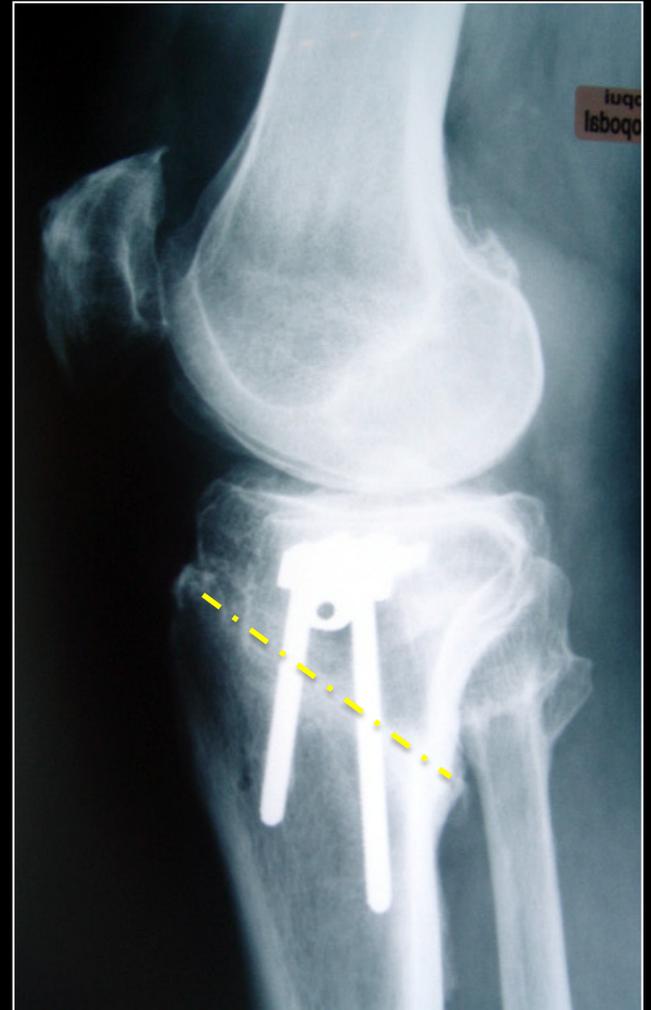
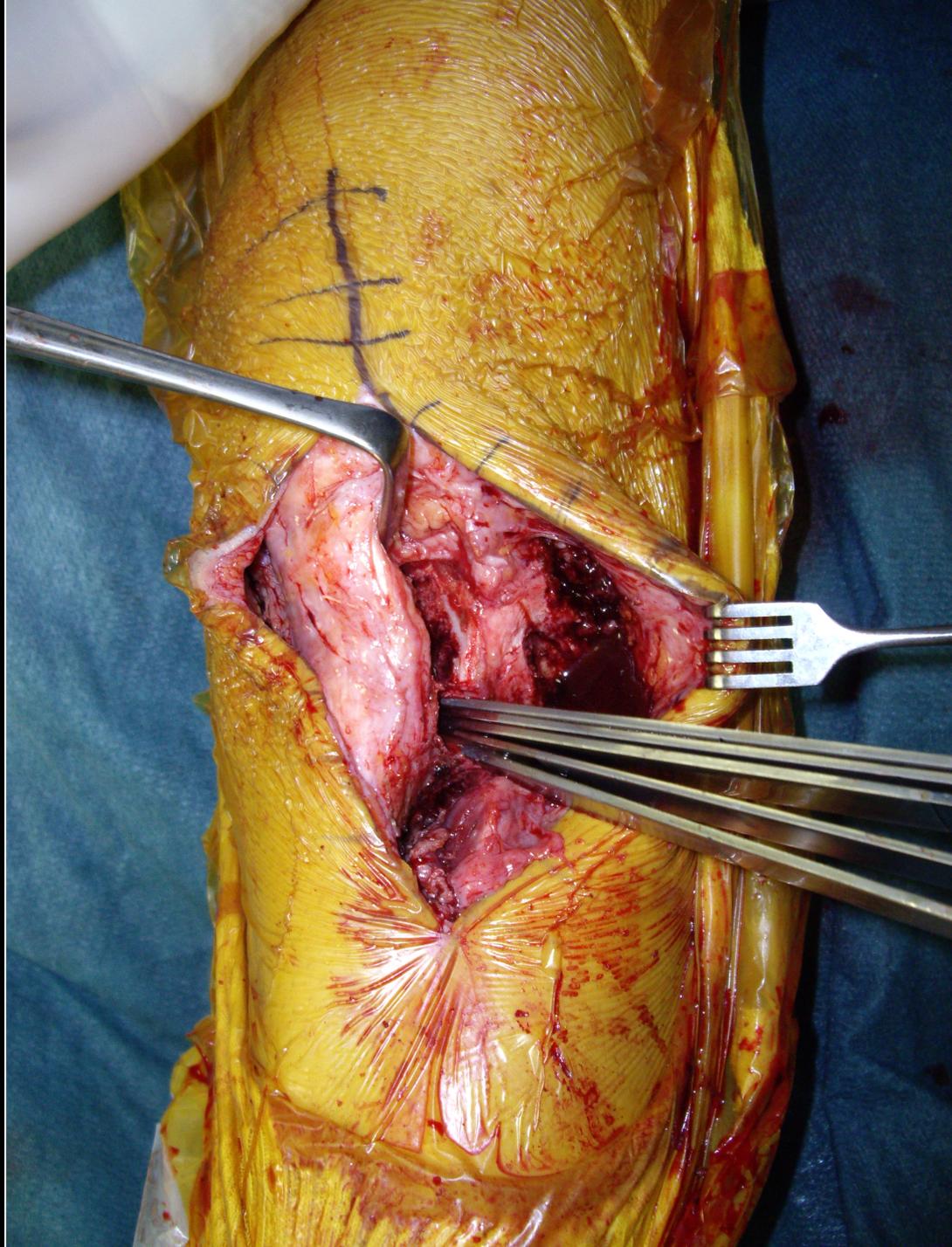
The second is placed posterolateral to the first in a vertical position.

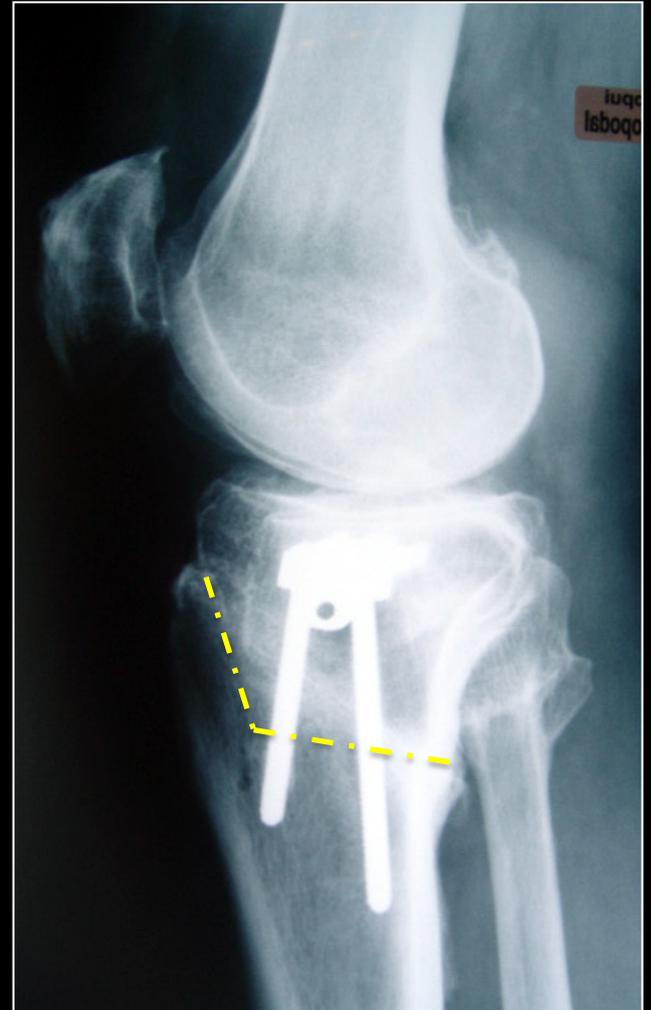
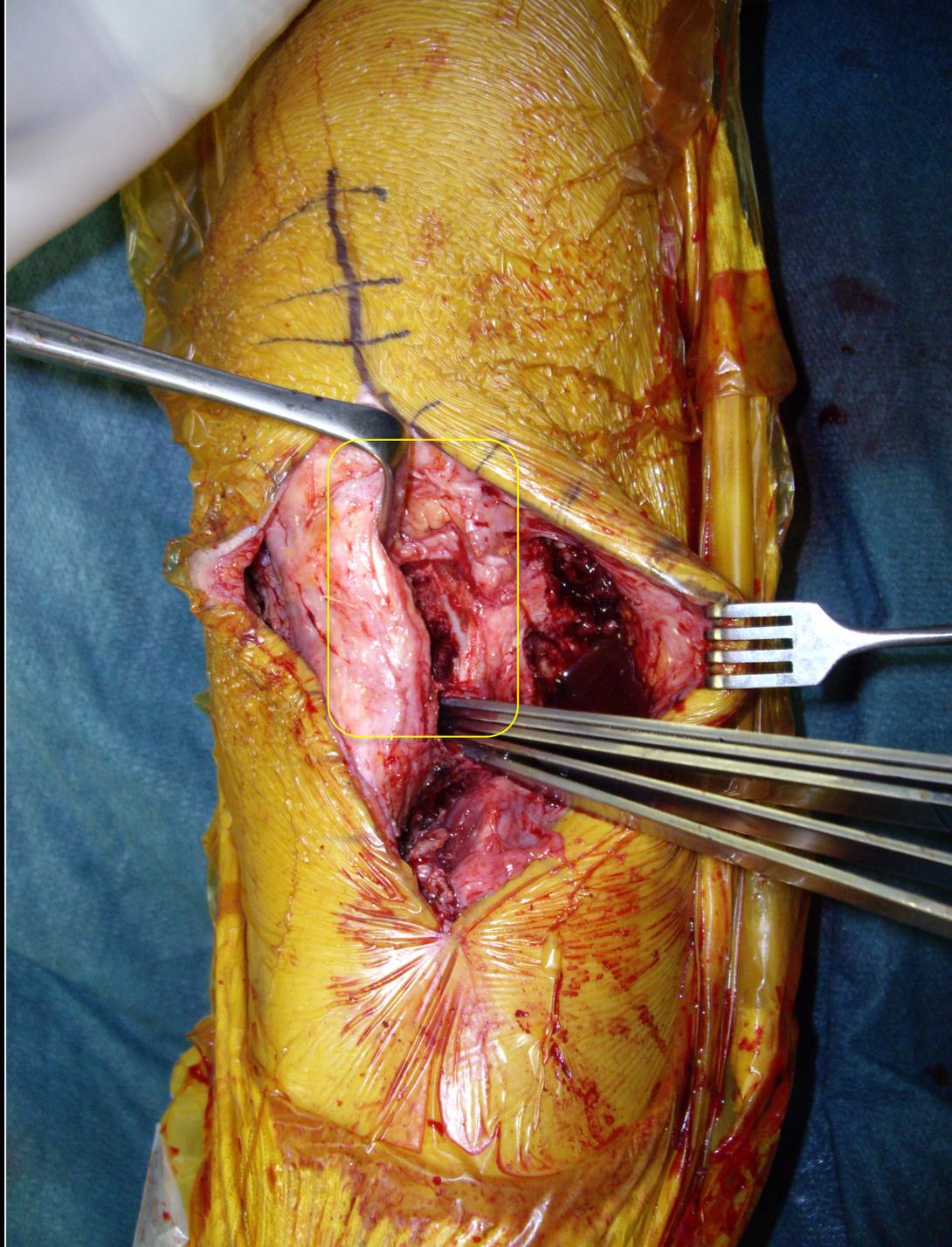
Step 7 : Bone grafting

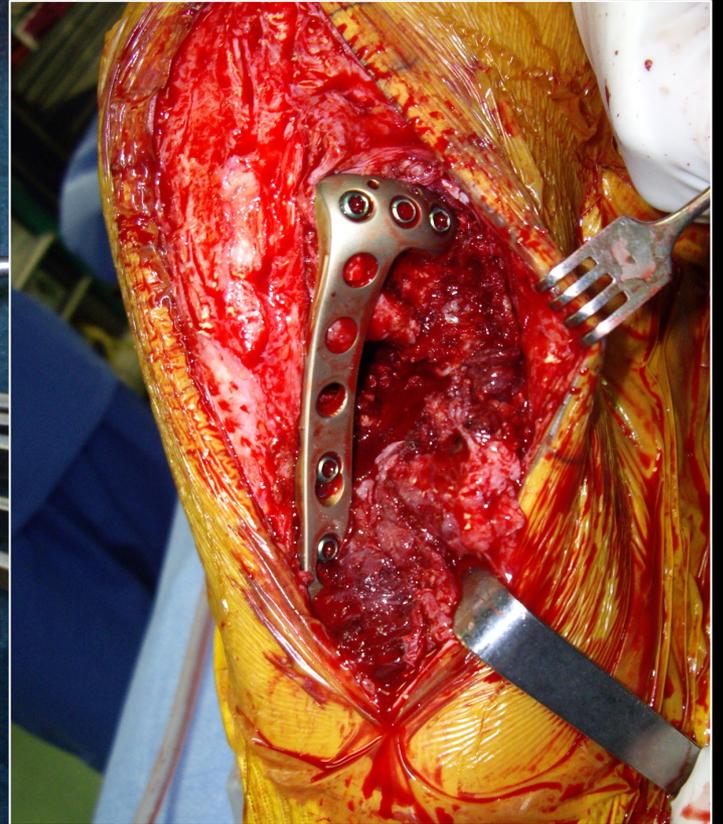
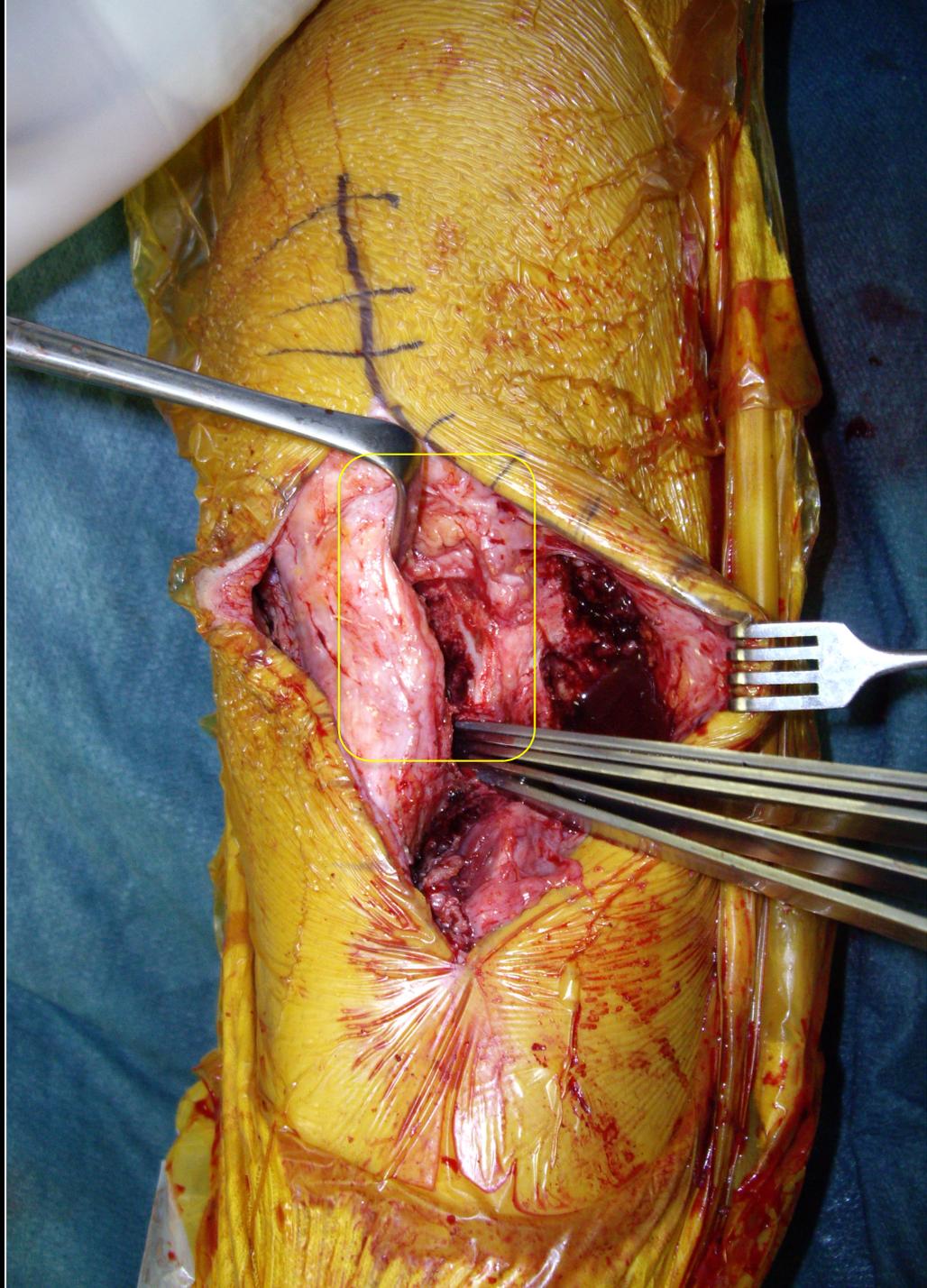


After fixation, corticocancellous bone graft from the anterior iliac crest is placed in the osteotomy site.











Thank You

