

How to prevent problems

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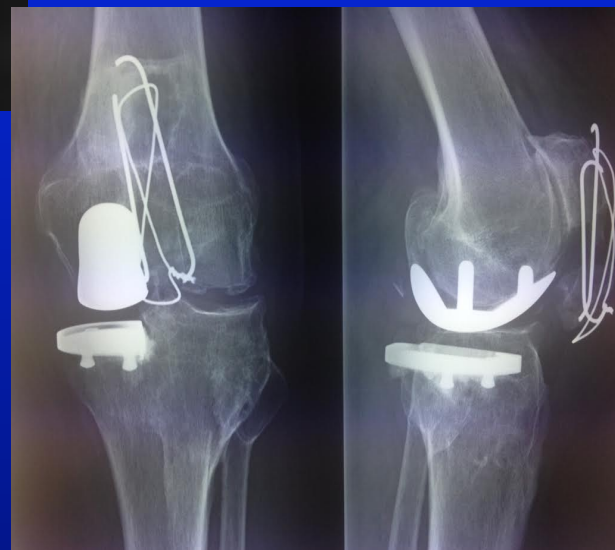
6th Advanced Course on Knee Surgery

January 31st – February 5th, 2016 Val d'Isère - France



Institut du Mouvement et de l'appareil Locomoteur





1. Preserve the soft tissues

2. Reduce the fracture

3. Stable fixation

4. Early mobilisation

1. Nerve and vascular structures



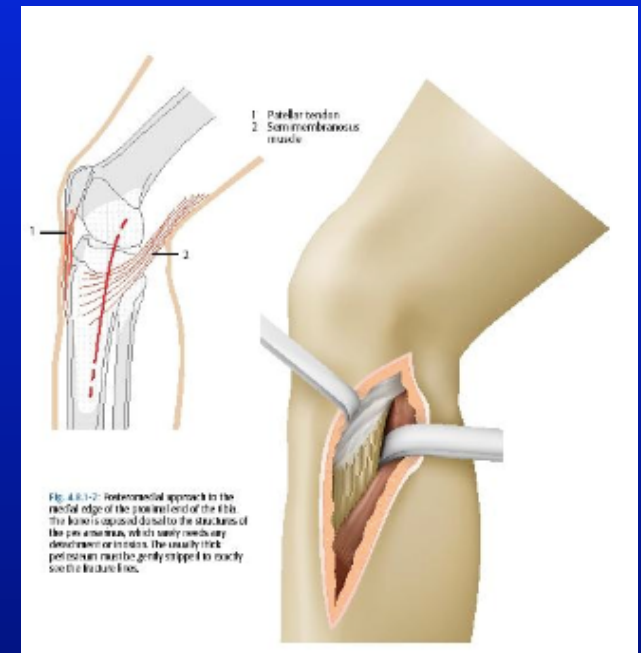


2. Skin

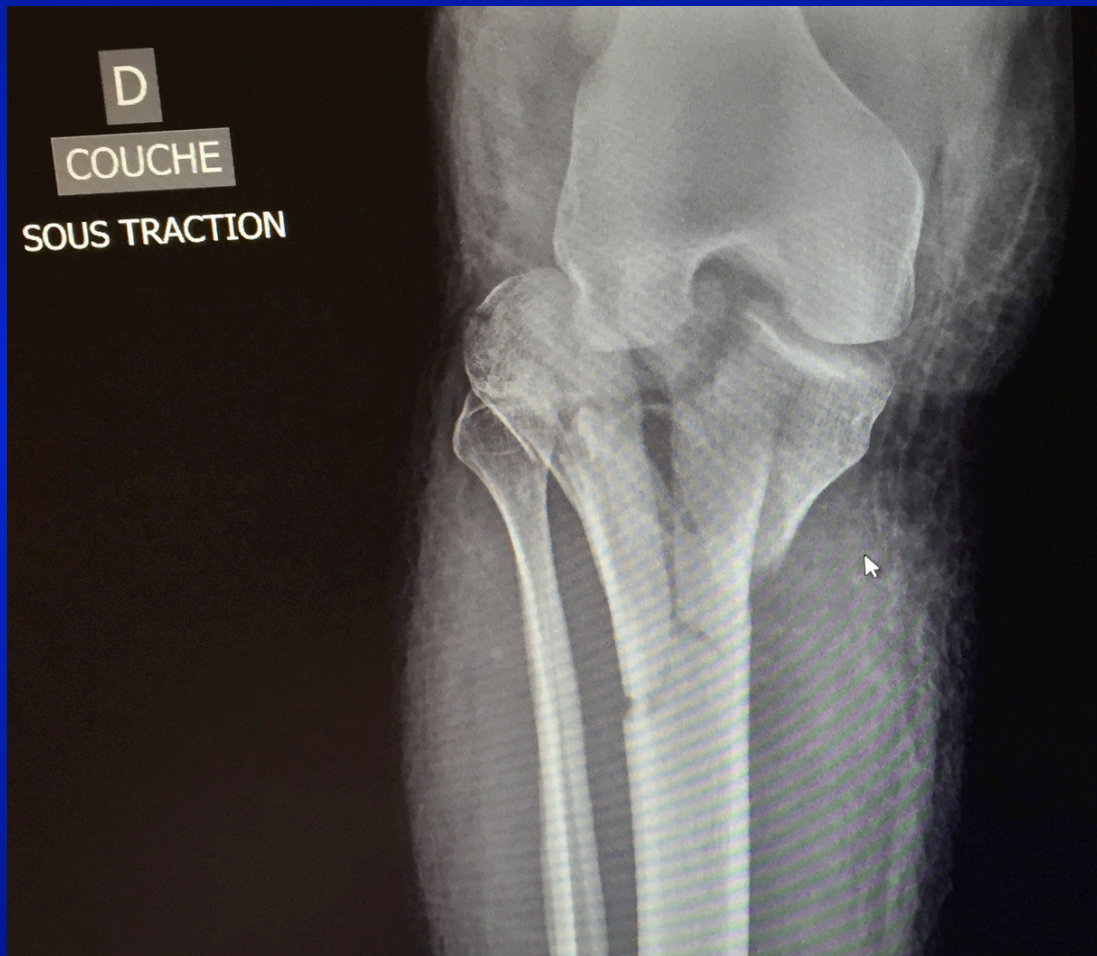
First rule: 6 hours / 6 days

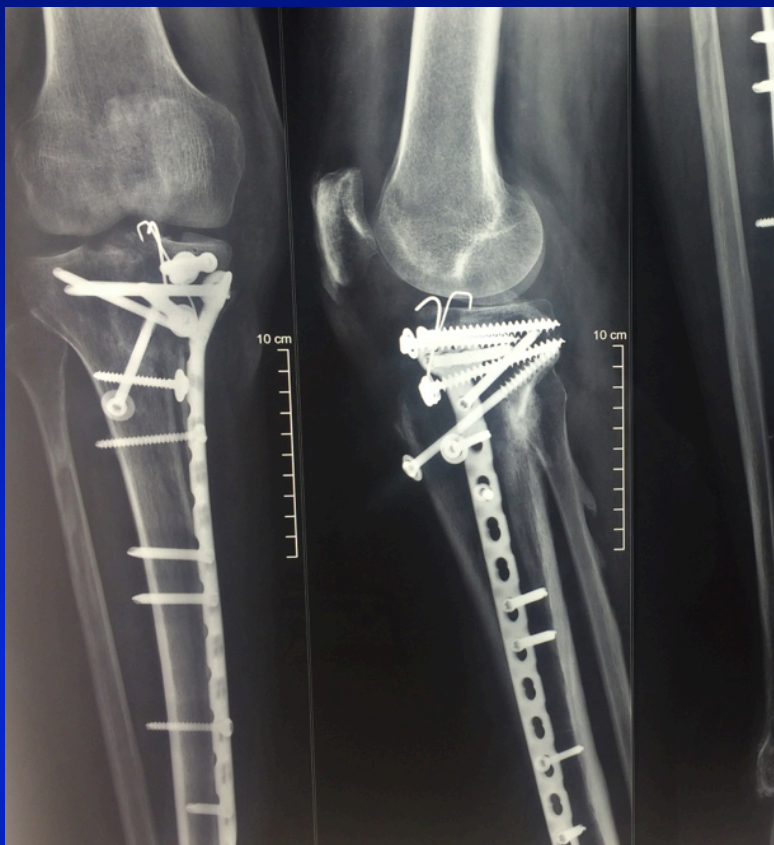






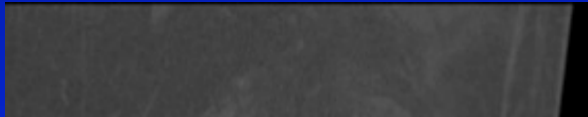
Sometimes no real choice





MIS: Kyphoplasty

Described with PMMA cement => burning the bone
40 % of the cases : cement in the joint in the literature
Foreign body



Int Orthop. 2015 Nov 14. [Epub ahead of print]

Balloon tibioplasty for reduction of depressed tibial plateau fractures: Preliminary radiographic and clinical results.

Ollivier M^{1,2}, Turati M^{1,2,3}, Munier M^{1,2}, Lunebourg A^{1,2}, Argenson JN^{1,2}, Parratte S^{4,5}.

MASSON

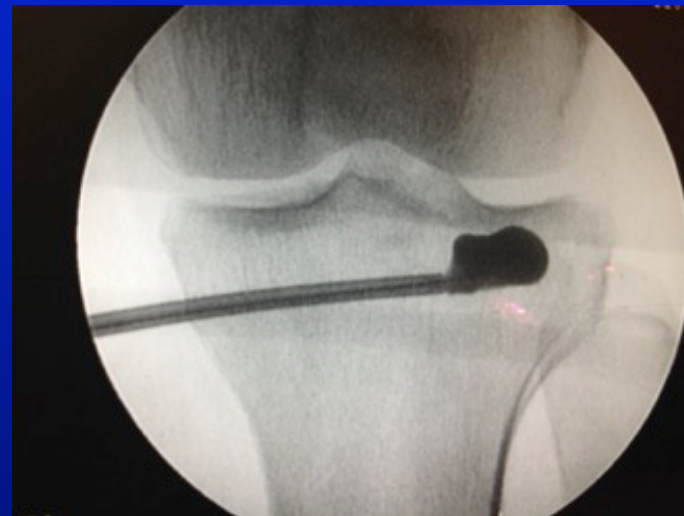
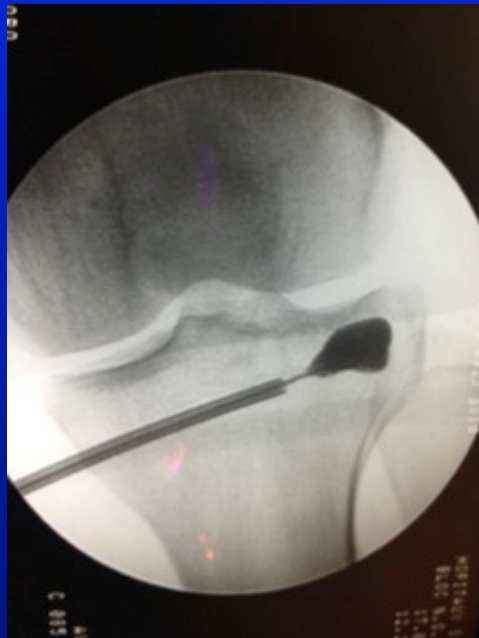
WORKSHOPS OF THE SOO (2012, NANTES). ORIGINAL ARTICLE

Tuberoplasty: Minimally invasive osteosynthesis technique for tibial plateau fractures[☆]

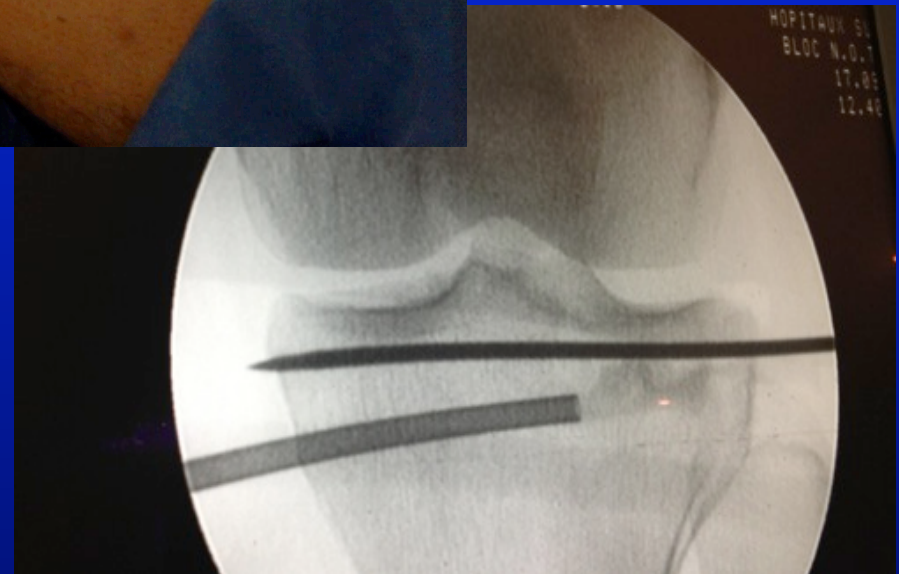
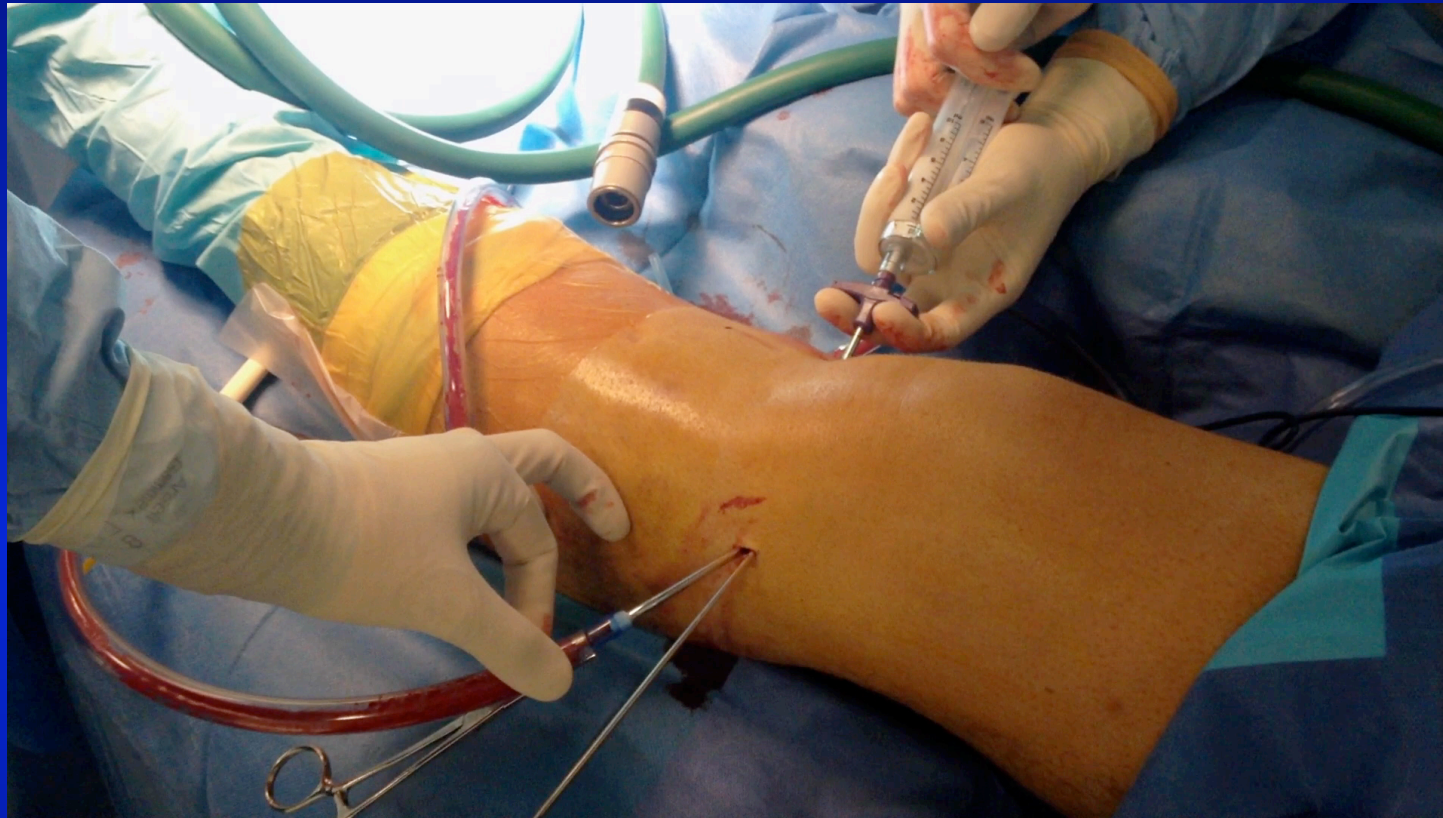


Figure 2 Diagram of entry point.

Step 1 : reduction using the Balloon

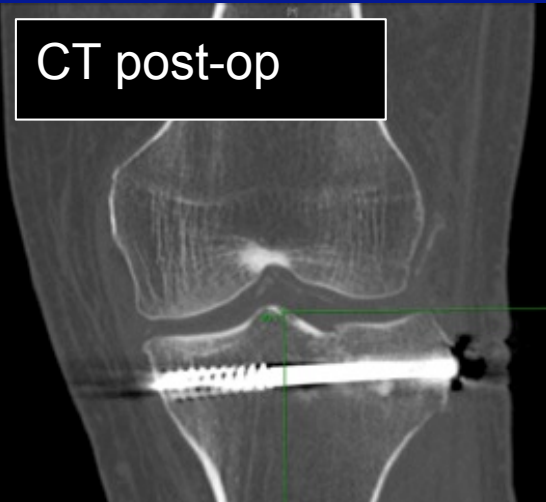


Step 2 : injection of the Quickset ®



Prospective study: 20 cases included

CT post-op



2 screws
No brace
Immediate full-range of motion
Non weight-bearing 1 month

6 months

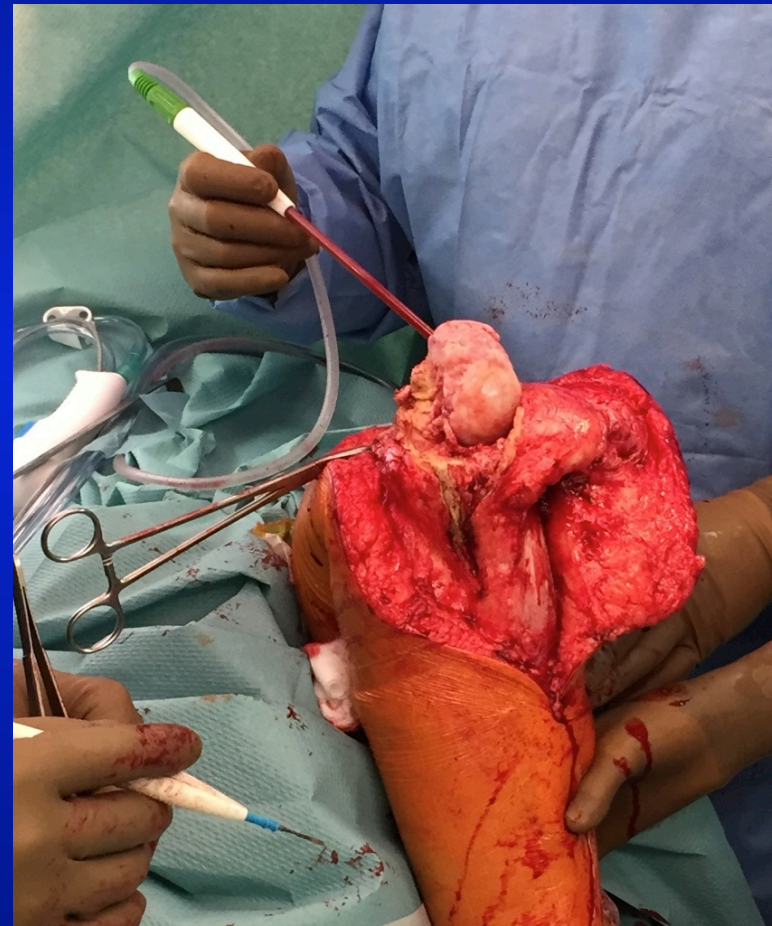
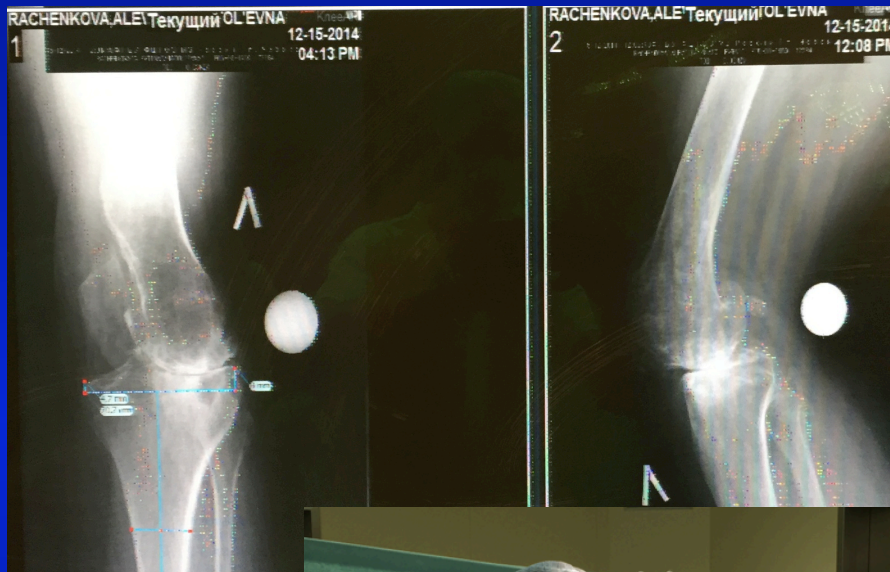


Evaluation 1 year

Complication
Reduction CT
KOOS
Range of knee motion

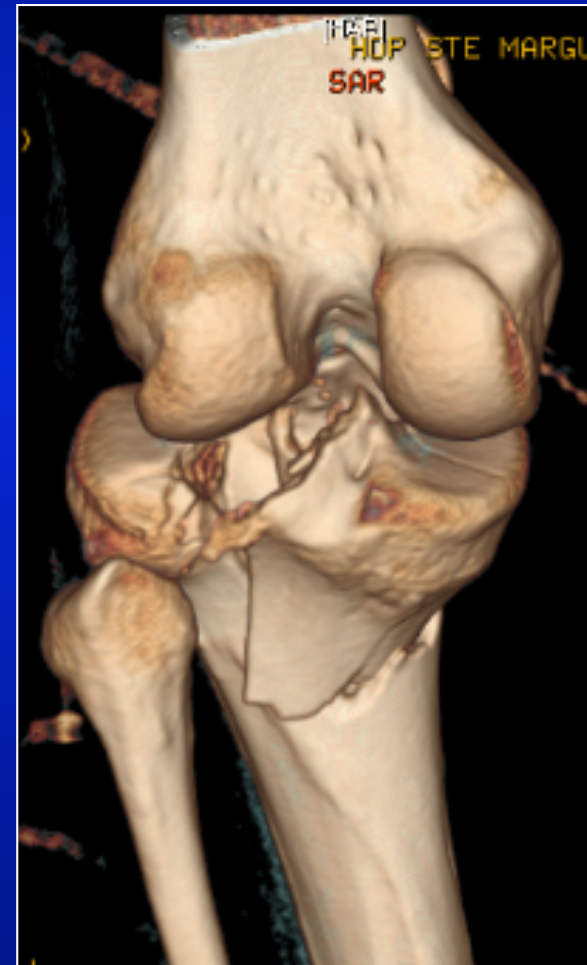
1. Preserve the soft tissues
2. Reduce the fracture
3. Stable fixation
4. Early mobilisation

Put the pieces of bone together



The main problem

Postero-medial fragment



If you miss it...

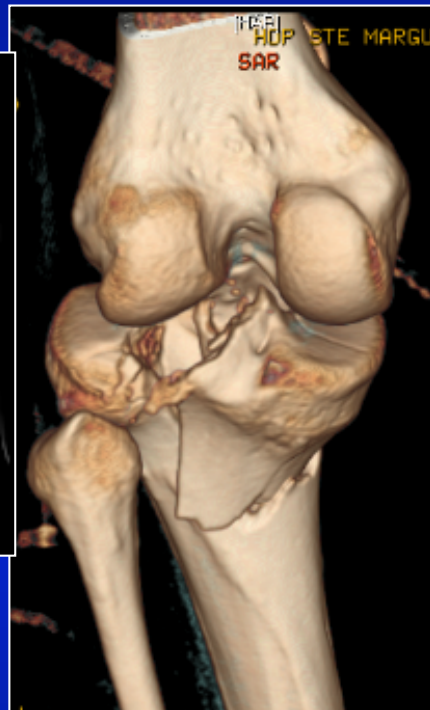
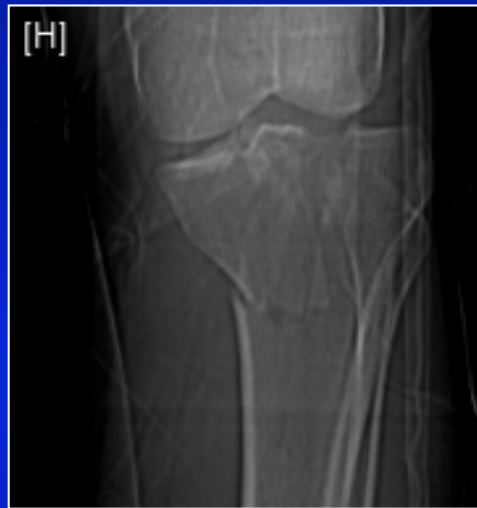
No mobilization

Stiffness

Non or mal-union

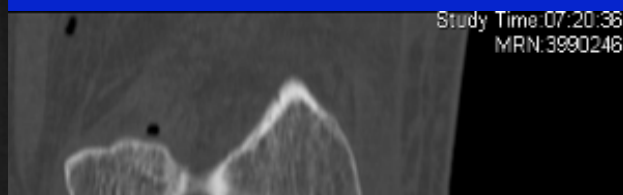
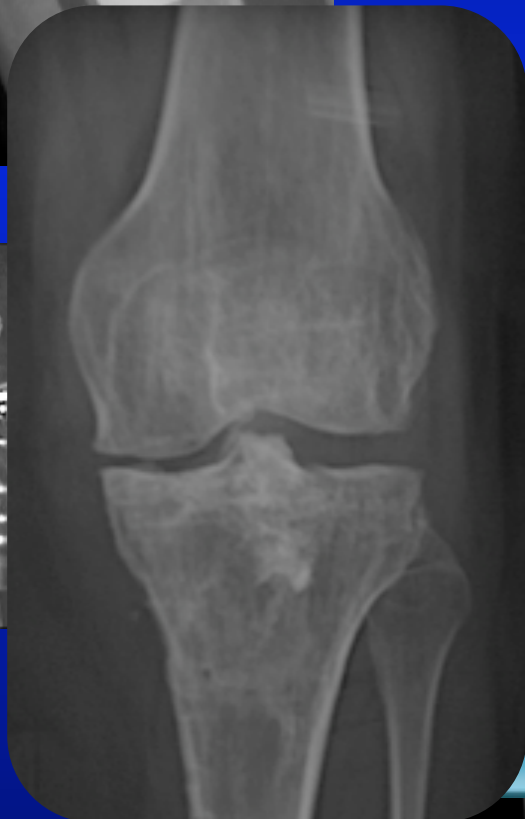
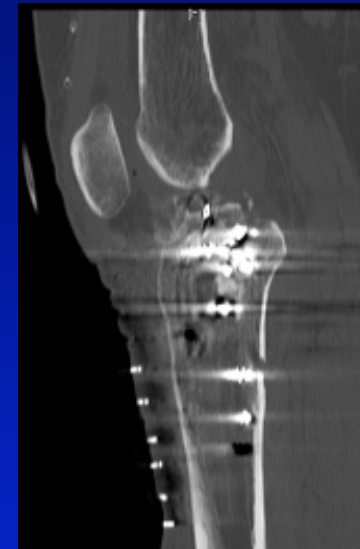
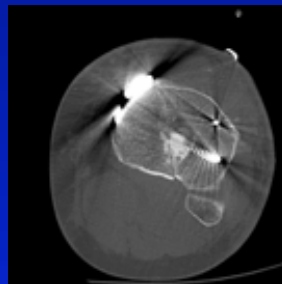


Case exemple

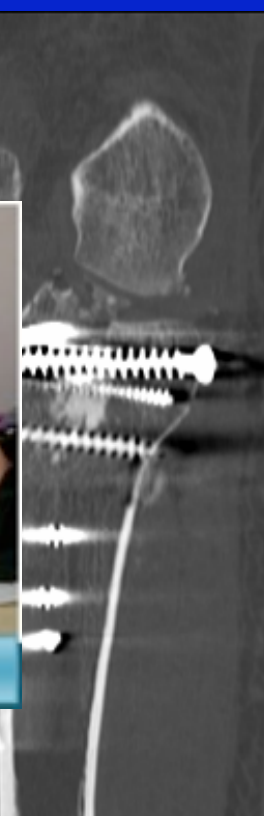


Women, 35 years-old,
Ski Injury
Former french National team

Open reduction Internal fixation January 2010



Extension and flexion at 2 years



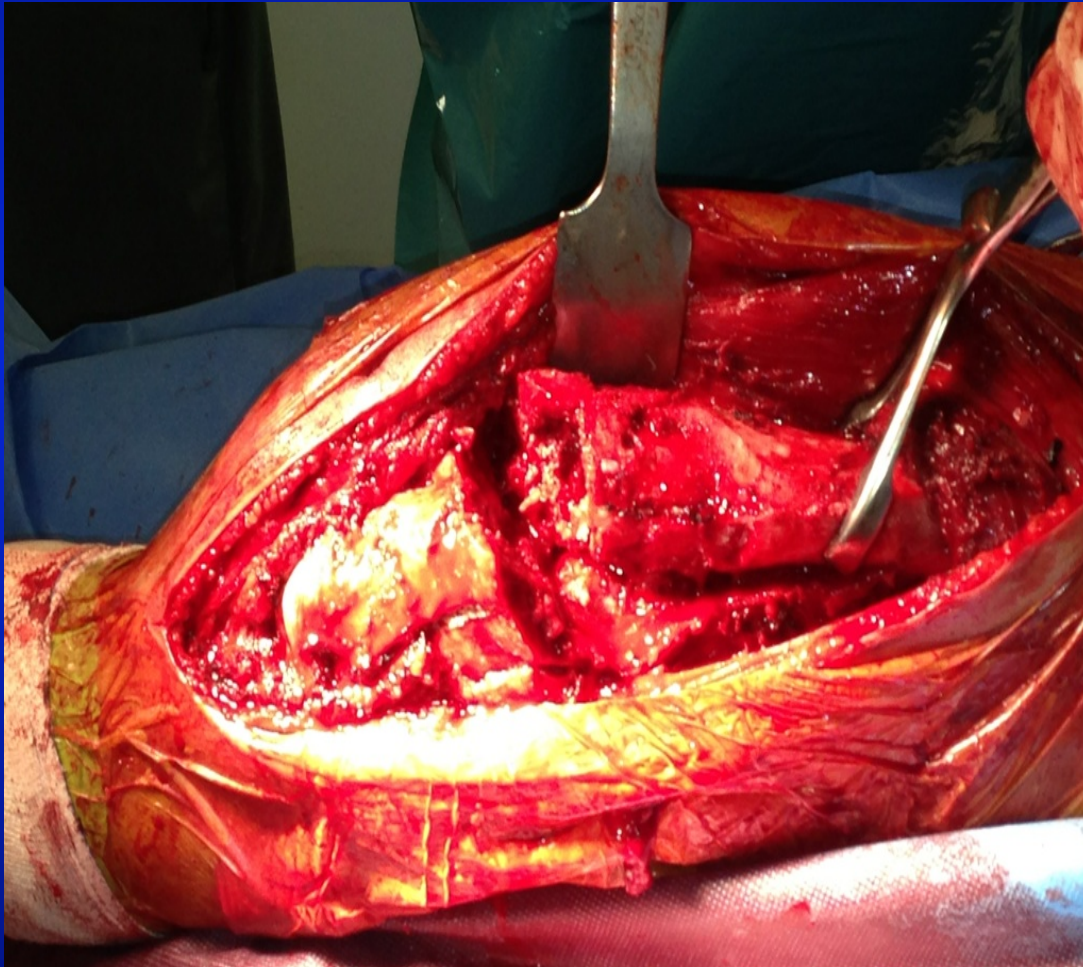
Same thing at the femoral side

Male 32 years-old





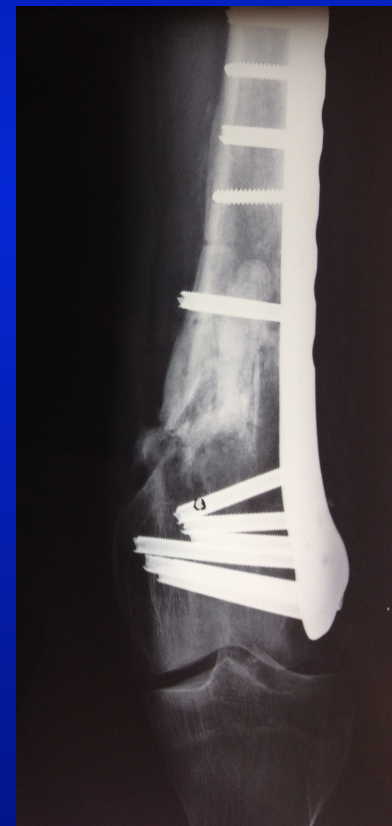
Osteotomy at the location of the deformity



Restauration of the natural valgus of the femur



Post-op
2 months





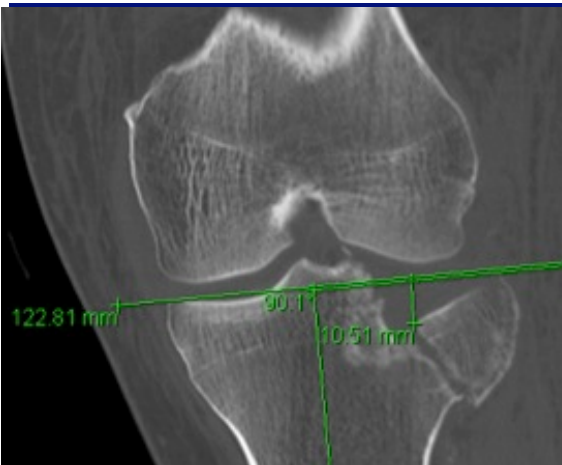
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Plate

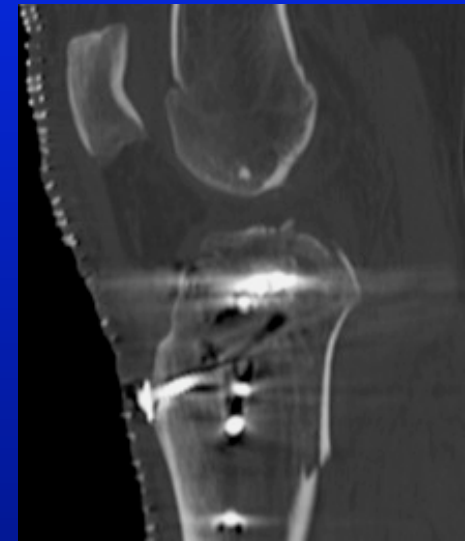
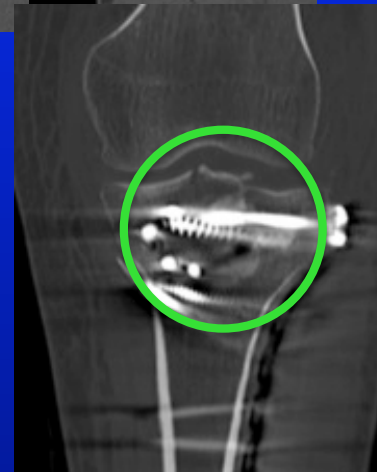
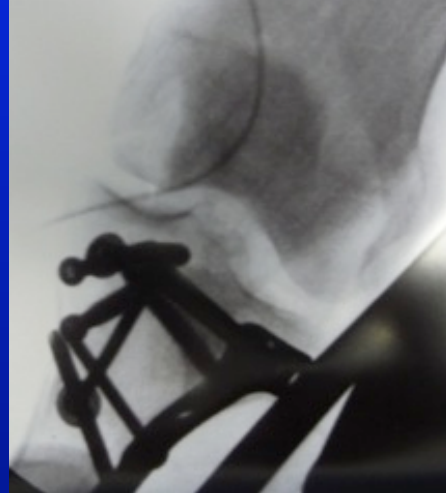
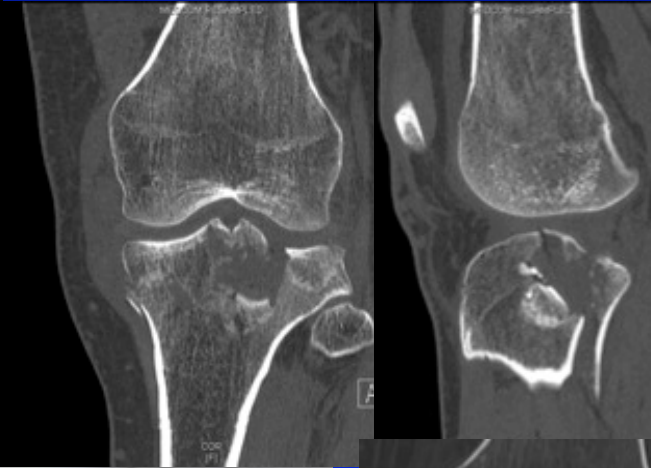
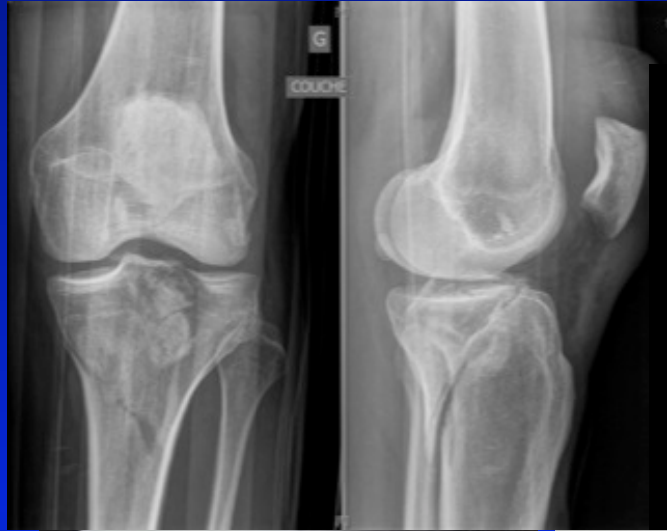
Screws

Graft++++

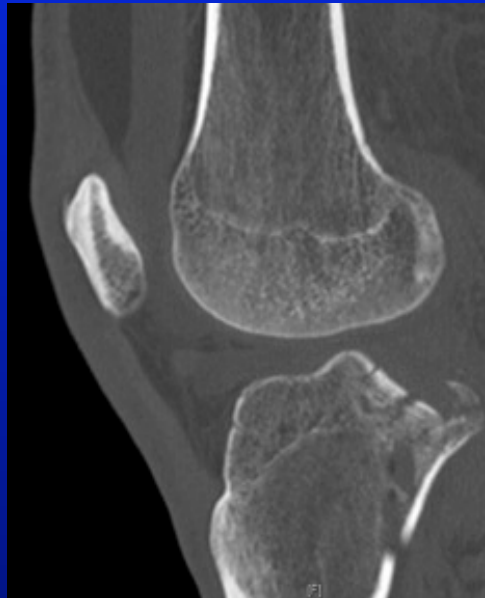
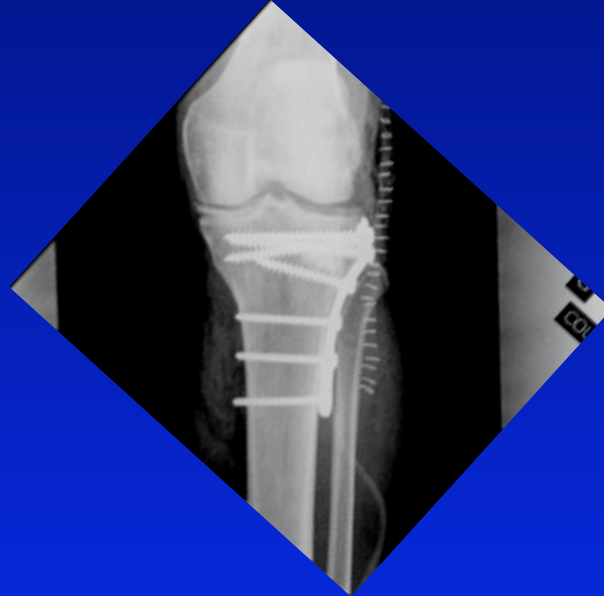
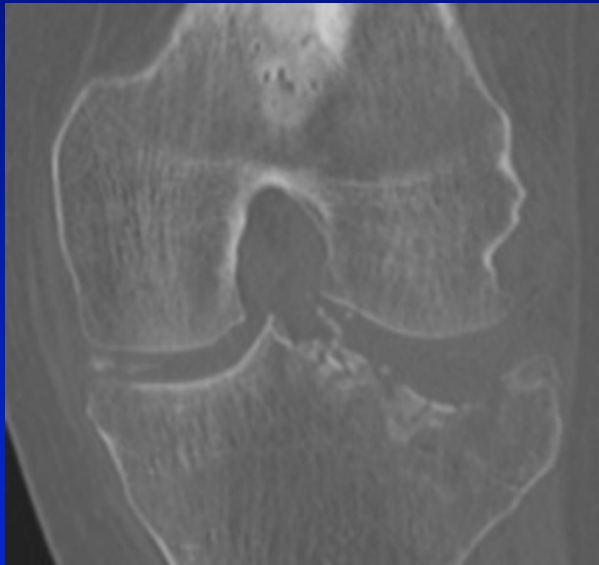
Surgical technique



Surgical Technique



Cases



Results

	Quickset®	Control	p
Complications	5% (non specific)	7%	NS
Discharge	3 days	4 days	NS
Loss of reduction	3 mm	6 mm	p=0.0003
Mean flexion at one year	128°	105°	P=0.004

5 months



12 months



Parratte et al. OTSR Sup 2 2014

1. Preserve the soft tissues
2. Reduce the fracture
3. Stable fixation
4. Early mobilisation

Post-op protocol

Prevent the flexion contracture

No Cast

Start Active flexion the day of surgery

Conclusion

Be prepared

Be patient

Soft tissue

Reduction and stabilisation

Early mobilisation