

Allogreffes méniscales



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FIFA medical center of excellence

Hôpital de la Croix-Rousse

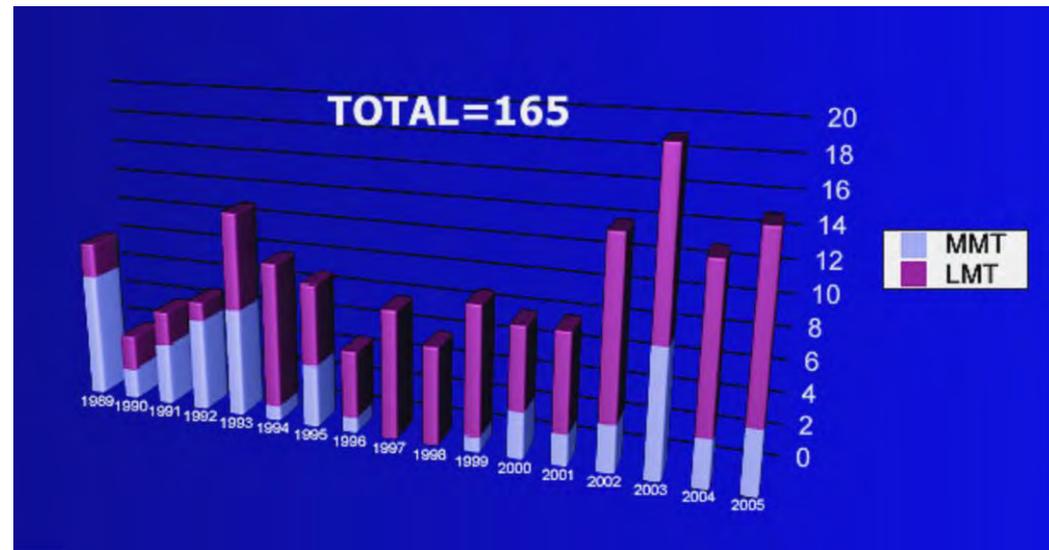
DIU arthroscopie 2019

La transplantation méniscale

- 1ère description en 1988-89

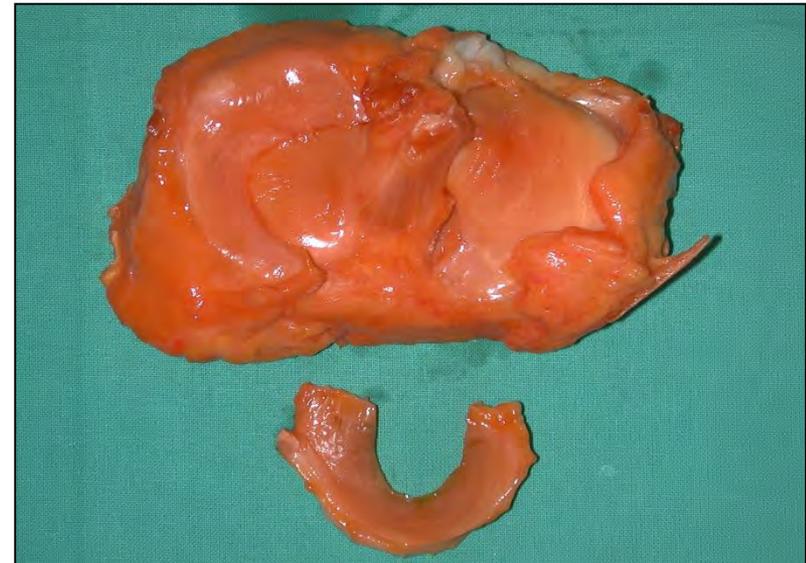
Milachowski et Wirth

- ...2007 : Verdonk



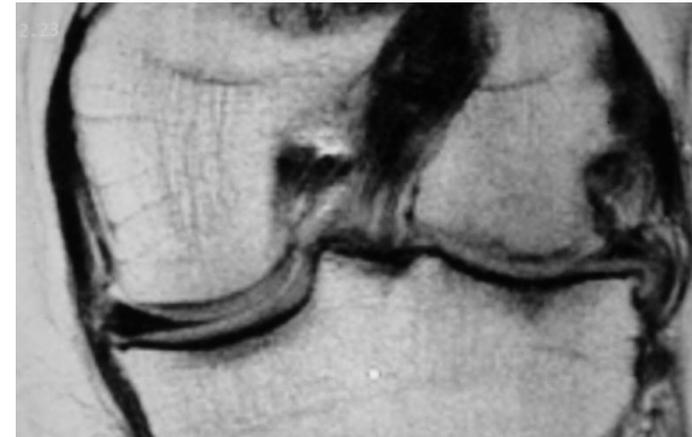
Quel type ?Quelle préservation?

- Greffons frais : allogreffes viables
- Congelés
- Cryoconservés
- irradiées
- ~~● lyophilisés~~



Indications

- Patient jeune
- Atcd de méniscectomie totale
- Douleur post-M
- Cartilage sain



Alignement correct



ostéotomie

Articulation stable



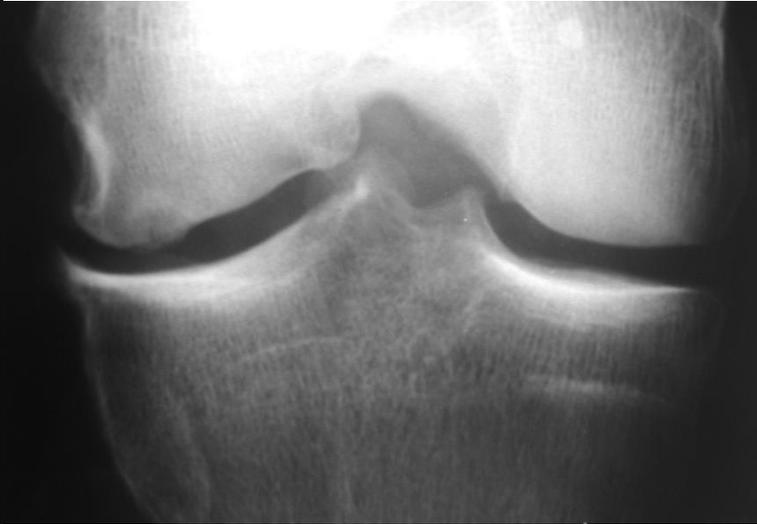
greffe du LCA

Cas clinique

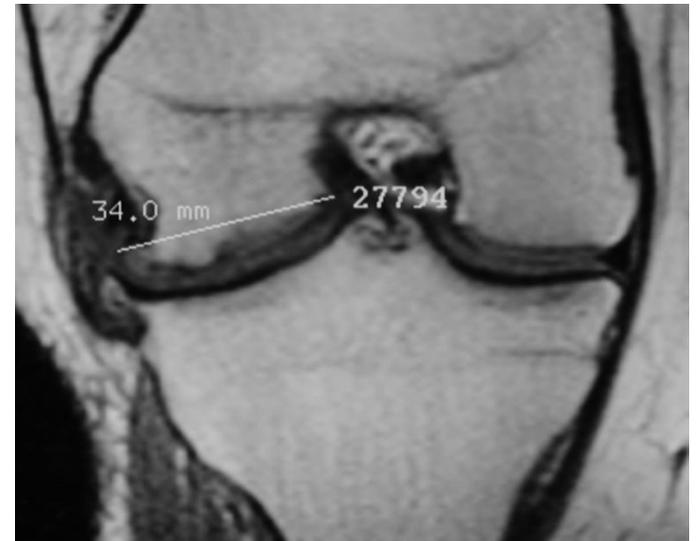
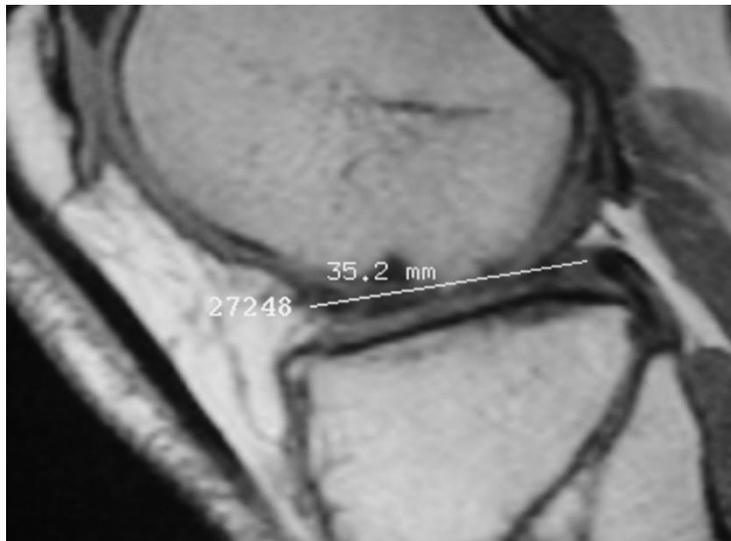
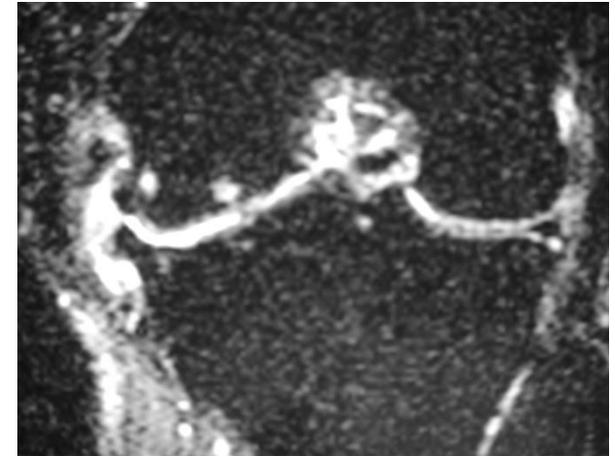
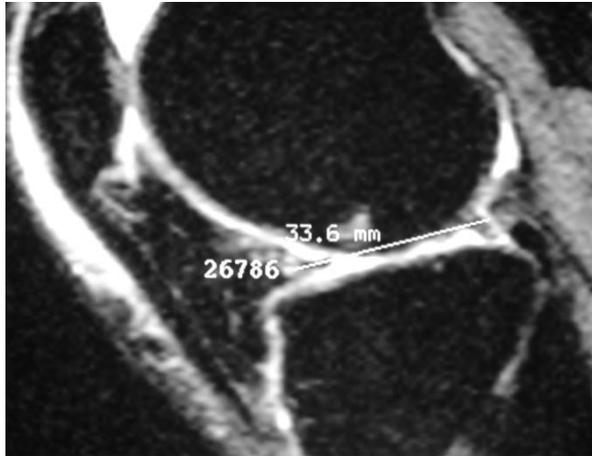
- Femme (30 ans)
- Me Bilat 1982
- Depuis De+, H+

Laxité = 0, Valgus 6TD sym. fixé

Cas clinique



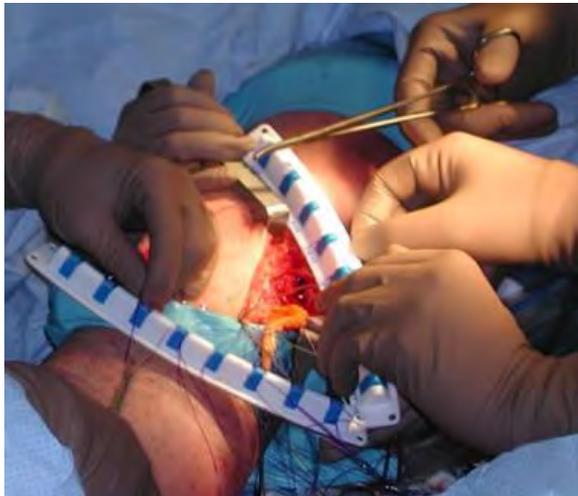
Cas clinique



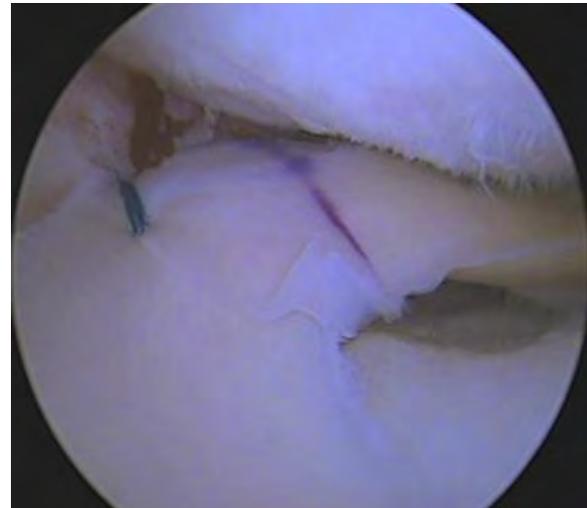
Techniques chirurgicales



Greffes à ciel ouvert

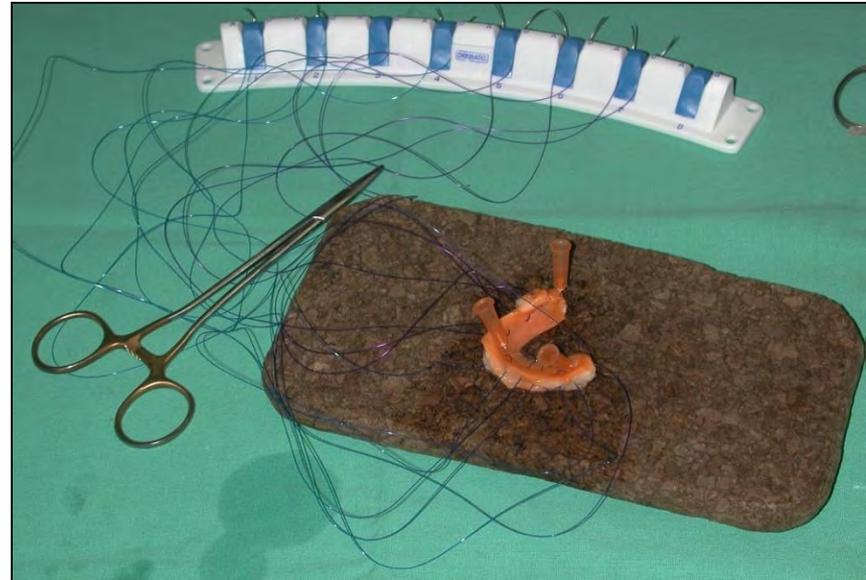
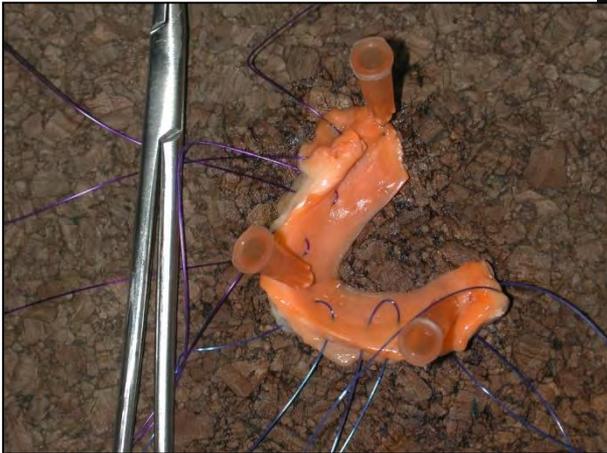


Greffes sous arthroscopie



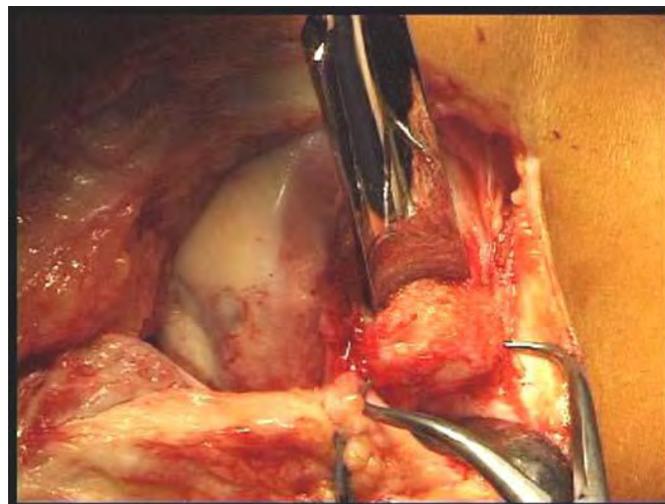
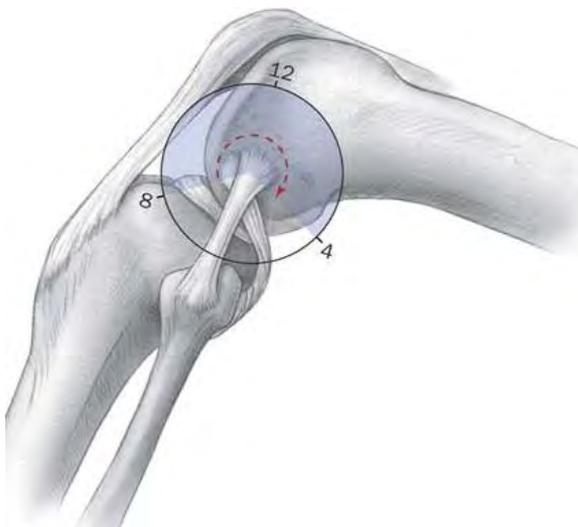
Technique à ciel ouvert

- P. Verdonk , JBJS [Am] 2006, 88, Supl. 1



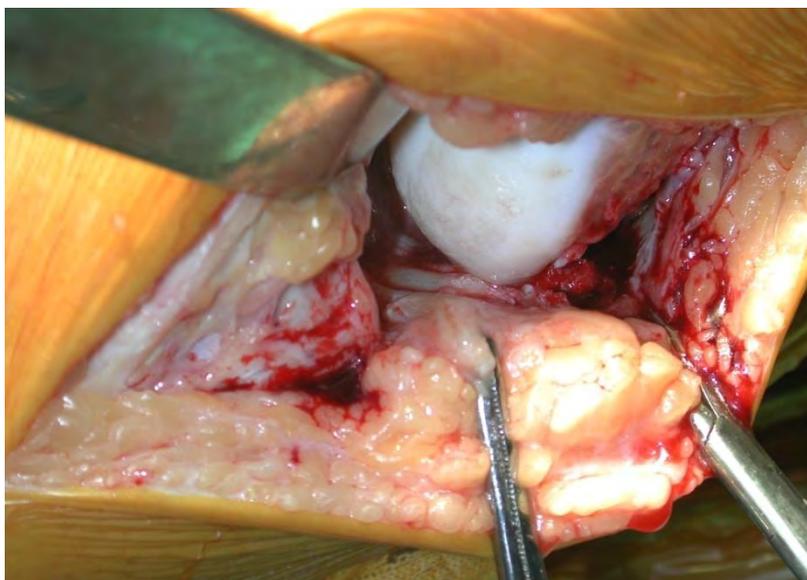
Technique à ciel ouvert

P. Verdonk , JBJS [Am] 2006, 88, Supl. 1



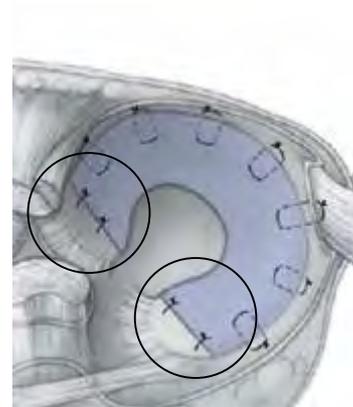
Technique à ciel ouvert

- P. Verdonk , JBJS [Am] 2006, 88, Supl. 1



Technique à ciel ouvert

- P. Verdonk , JBJS [Am] 2006, 88, Supl. 1



Technique simple, reproductible, rapide

Visibilité parfois limitée

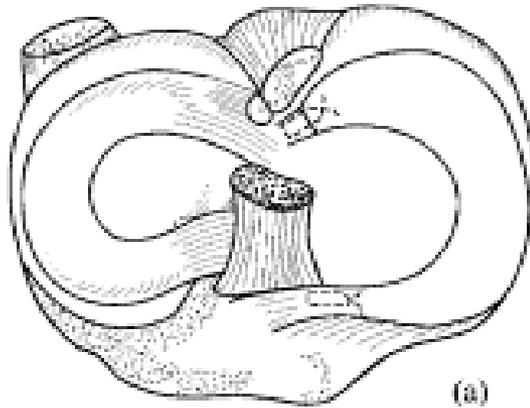
Fixation indirecte des cornes méniscales

Nécessite la désinsertion du plan collatéral

Techniques arthroscopiques

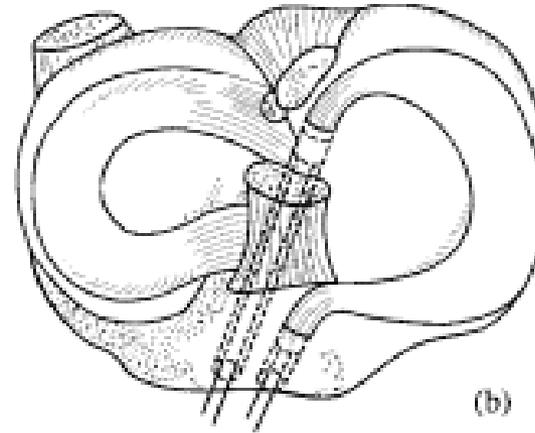
Suture simple

**Sans
fixation
osseuse**



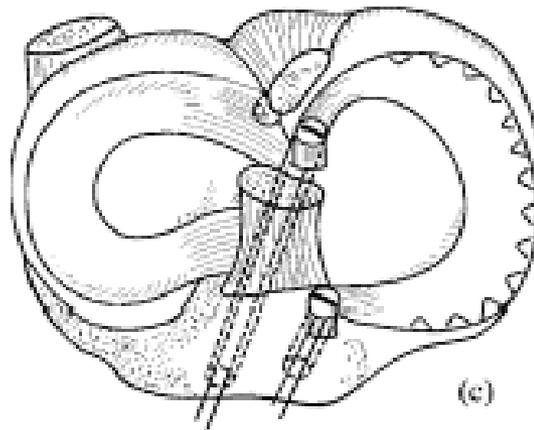
(a)

*Suture
transosseuse*



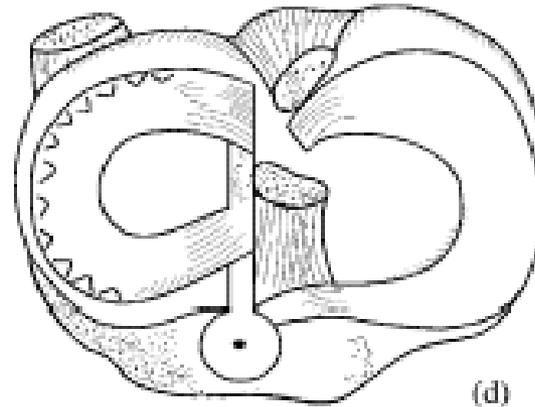
(b)

*Plots
osseux*



(c)

Bloc osseux



(d)

**Avec
fixation
osseuse**

Mode de fixation des cornes



Facilité d'implantation

Interface de cicatrisation os/os

Stabilité primaire



Maintien de la forme

Fixation osseuse semble supérieure:

Chen M et al, Arthroscopy, 1996;12(2):174– 81.

*Facilité
Préparation
Implantation*



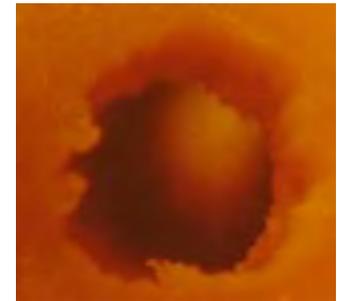
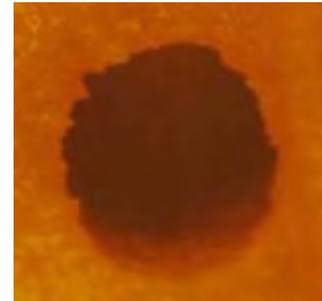
*Risque extrusion
Positionnement des
cornes?*

2 Racines (Cornes): 2 Tunnels



Tunnels orthogonaux

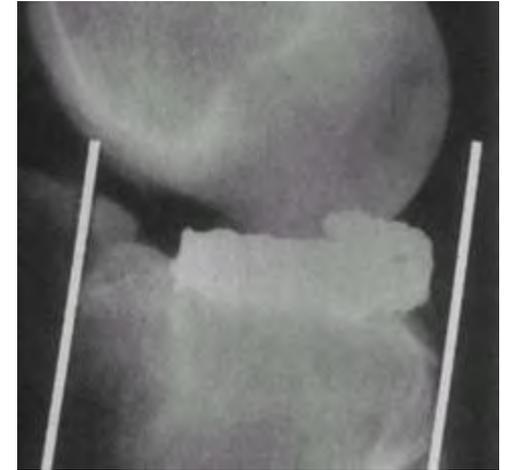
Effondrement tunnels convergents



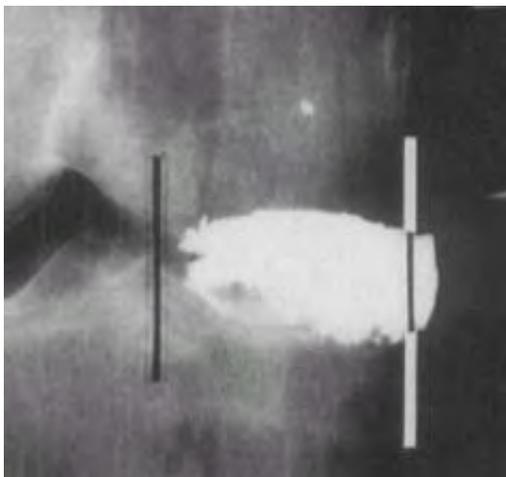
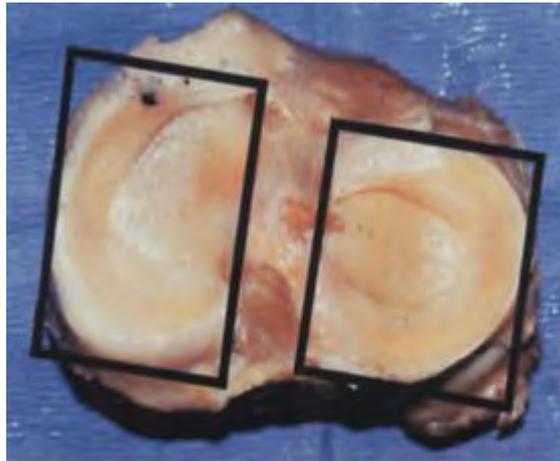
Retrocutter: Tunnel borgne

*Qualité de l'orifice
stock osseux
Pas d'effondrement du pont osseux*

Concordance de taille

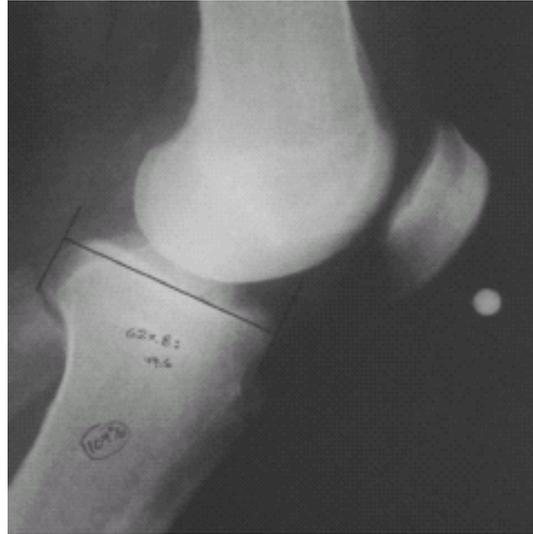


70%



80%

Concordance de taille



Importance de concordance de taille

Modèle expérimental brebis: taille et congruence.

Lazovic et al Z Orthop 1997;135:131 –135.

Mauvaise concordance entre deux genoux

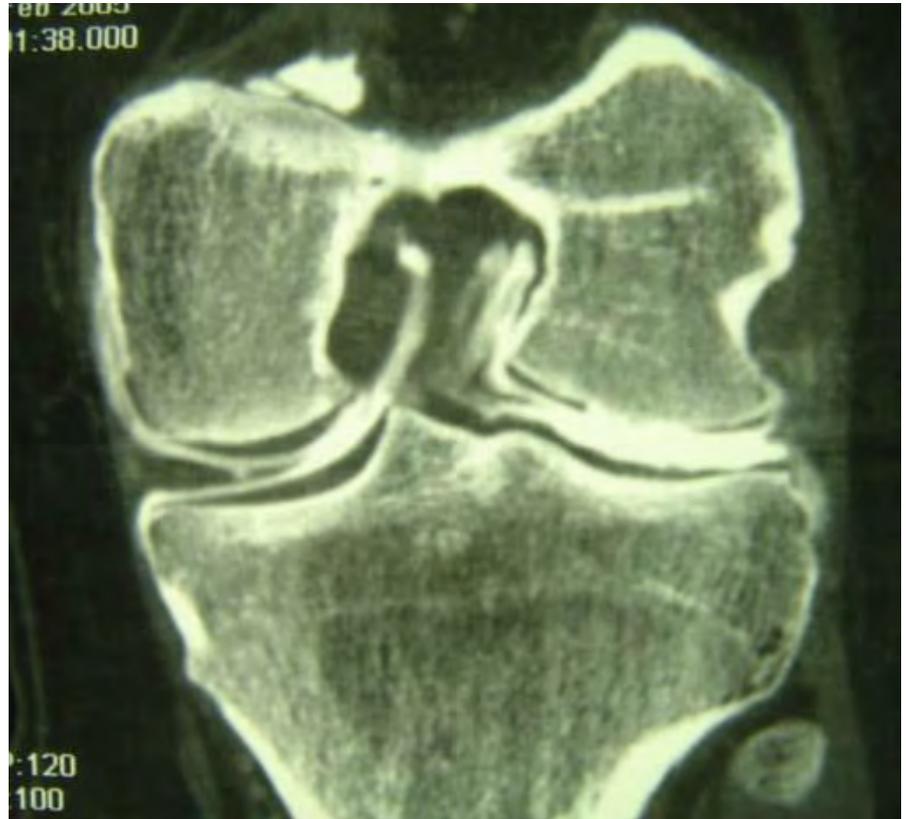
Wilcox TR et al. Am J Knee Surg 1996;9:37-42.

Sutures simples facilitent concordance taille mais fixation osseuse >

Chen M et al, Arthroscopy, 1996;12(2):174– 81

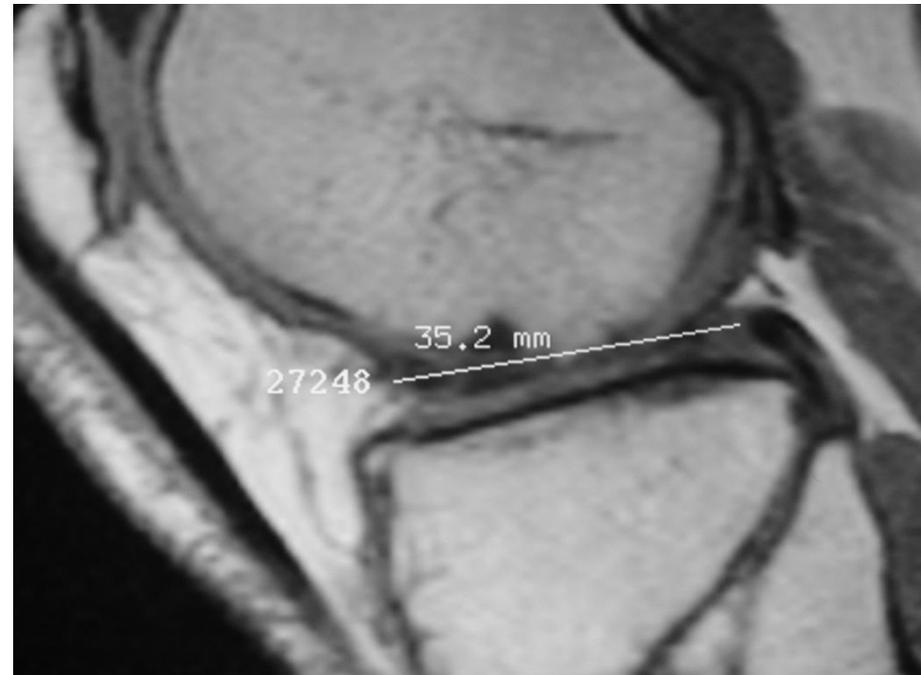
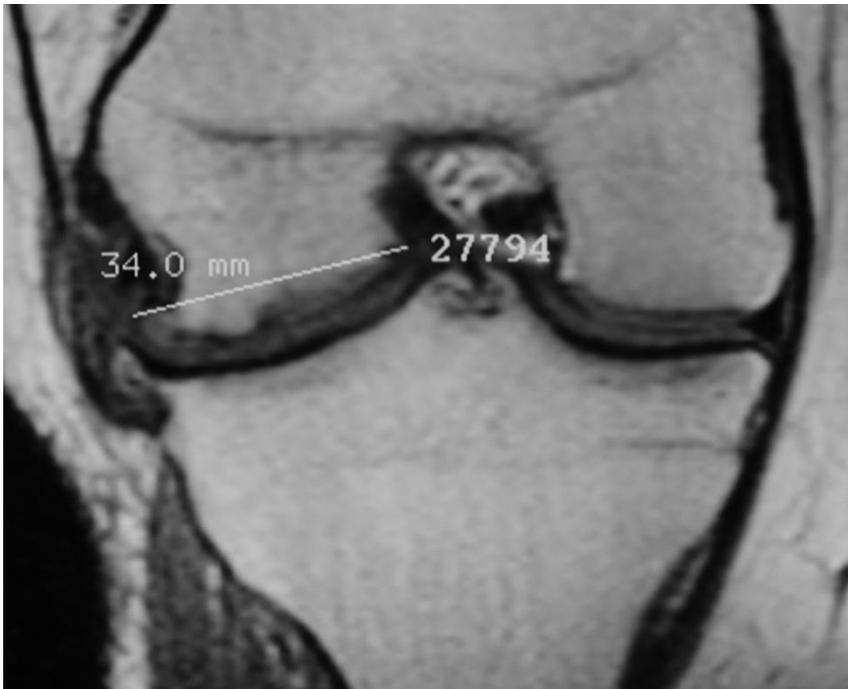
SIZING

- Arthroscanner
- IRM



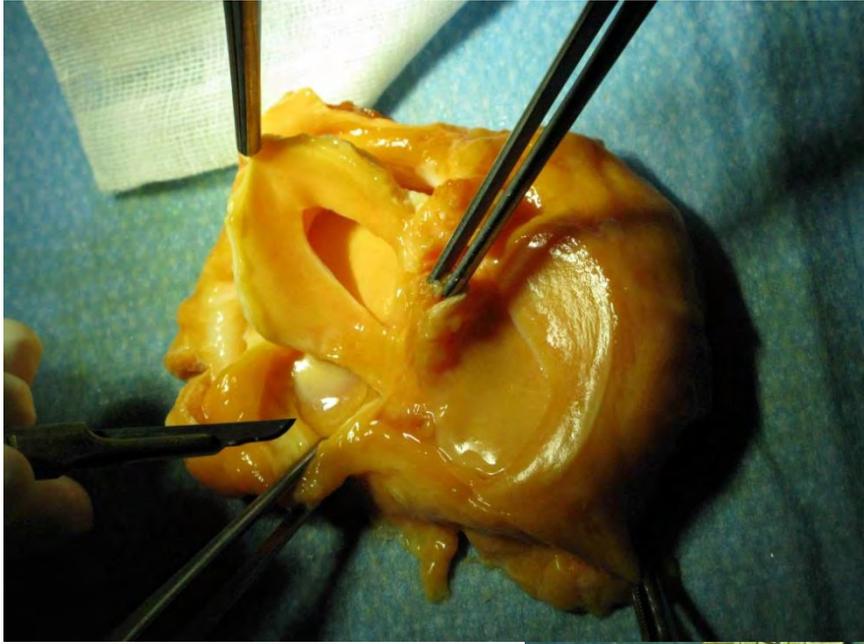
SIZING

- Arthroscanner
- IRM



ALLOGREFFE MENISQUE EXTERNE TECHNIQUE





Fixation de l'allogreffe

- Fixation de la partie moyenne ?
- Fixation de la corne antérieure



Voies d'abord



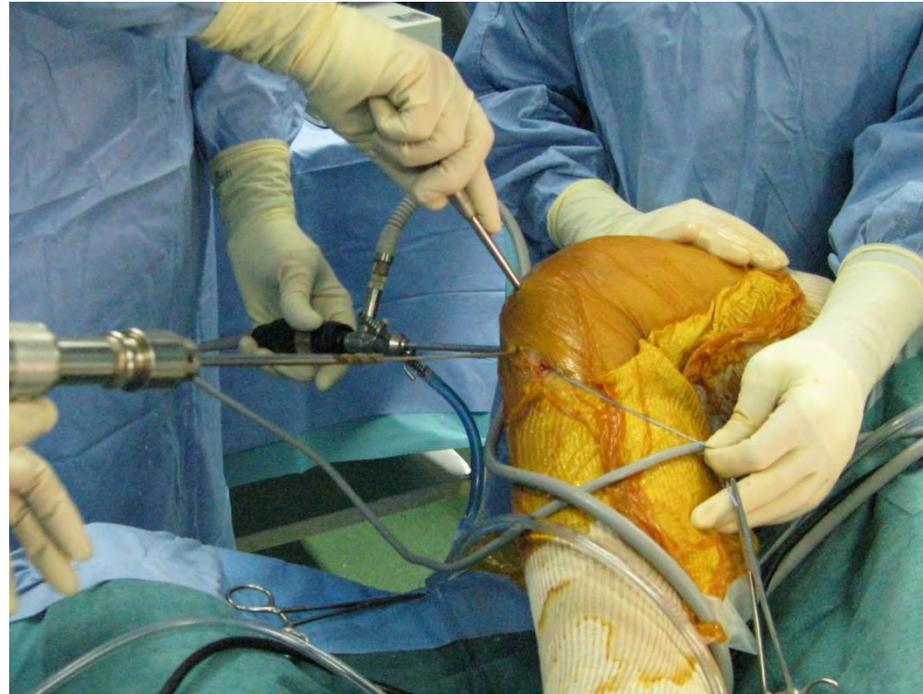
Tunnel

- Tunnel postérieur et tunnel antérieur
- Introduction de la greffe



Tunnel

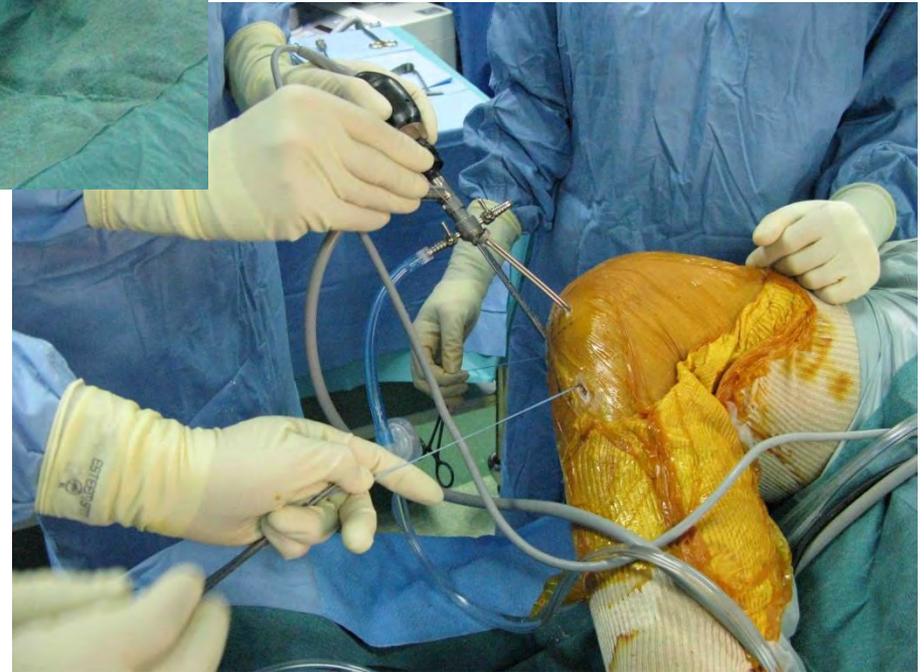
- Tunnel postérieur
- Introduction de la greffe
- Tunnel antérieur adapté à la taille et au positionnement ?



Fixation de l'allogreffe

- Fixation de la partie moyenne ?
- Fixation de la corne antérieure?





RESULTATS

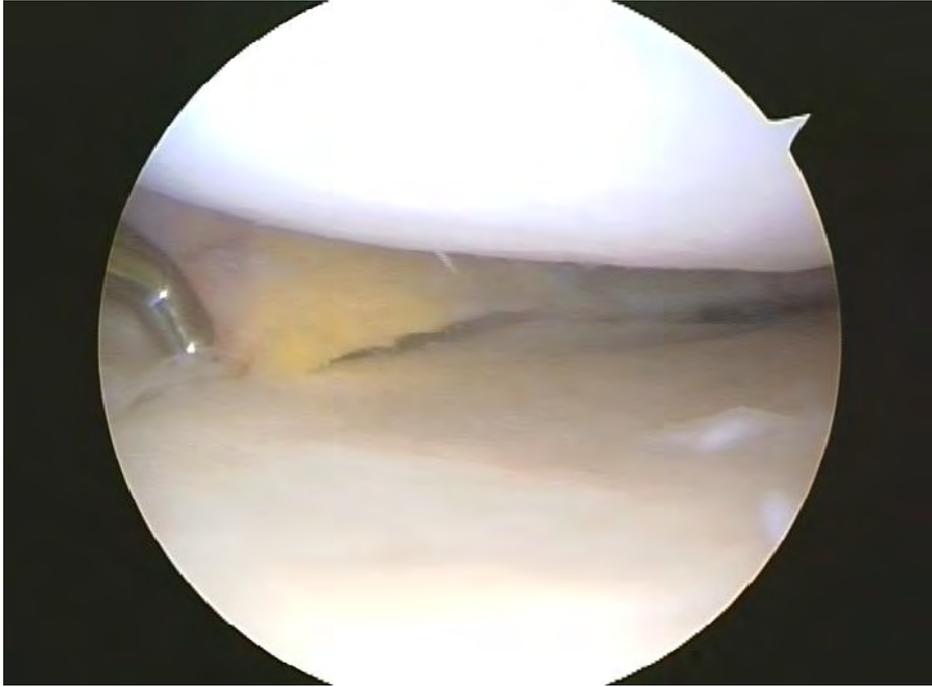
ENCOURAGEANTS

TABLE V Failures, Survival Time, and Mean Cumulative Survival Rate in the Allograft Subgroups

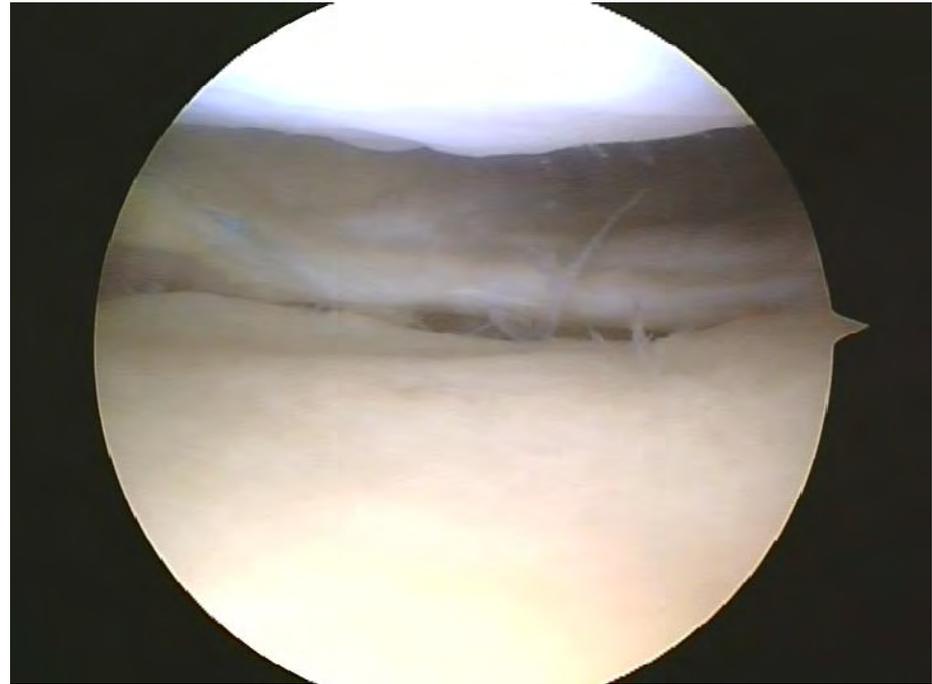
	Cases		Failures		Survival Time*	Cumulative Survival Rate†		
	No.	%	No.	%		5 Yr	10 Yr	14 Yr
Medial meniscal allografts	39	100	11/39	28	11.6 ± 0.8	86.2 ± 5.7	74.2 ± 7.4	52.8 ± 14.4
Medial meniscal allografts and high tibial osteotomy	13/39	33	2/13	15	13.0 ± 1.0	100.0 ± 0.0	83.3 ± 10.7	83.3 ± 10.7
Isolated medial meniscal allografts	20/39	51	7/20	35	10.7 ± 1.0	84.1 ± 8.4	72.4 ± 10.6	27.2 ± 21.1
Lateral meniscal allografts	61	100	10/61	16	11.6 ± 0.7	90.2 ± 4.2	69.8 ± 9.7	69.8 ± 9.7
Isolated lateral meniscal allografts	49/61	80	9/49	18	11.4 ± 0.8	90.9 ± 4.4	66.8 ± 11.3	66.8 ± 11.3

*The values are given as the mean and standard error. †The values are given as the percentage and standard deviation.

Relooks



L-M 8001



Photos courtesy of Dr Djan, Paris, France

CONCLUSION

- Chirurgie de sauvetage
- Verification du cartilage et radio ++++
- Parfois geste osseux associé
- Sous arthroscopie



- Safe
 - No SADEs
 - Biocompatible
 - *Vital cell populations in all biopsies*
- Promotes ingrowth of meniscus like tissue
 - Meniscus like morphology in biopsies
 - Positive staining for chondroblasts
- Effective
 - Significant improvements of pain and functionality
- Easy to use
 - Sizing, cutting, positioning, suturing
 - Visible on MRI

