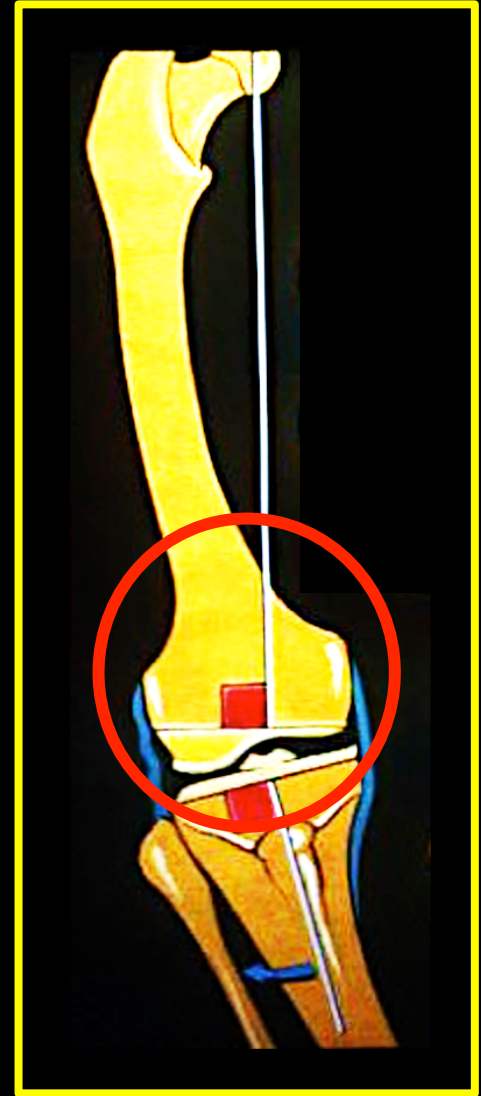
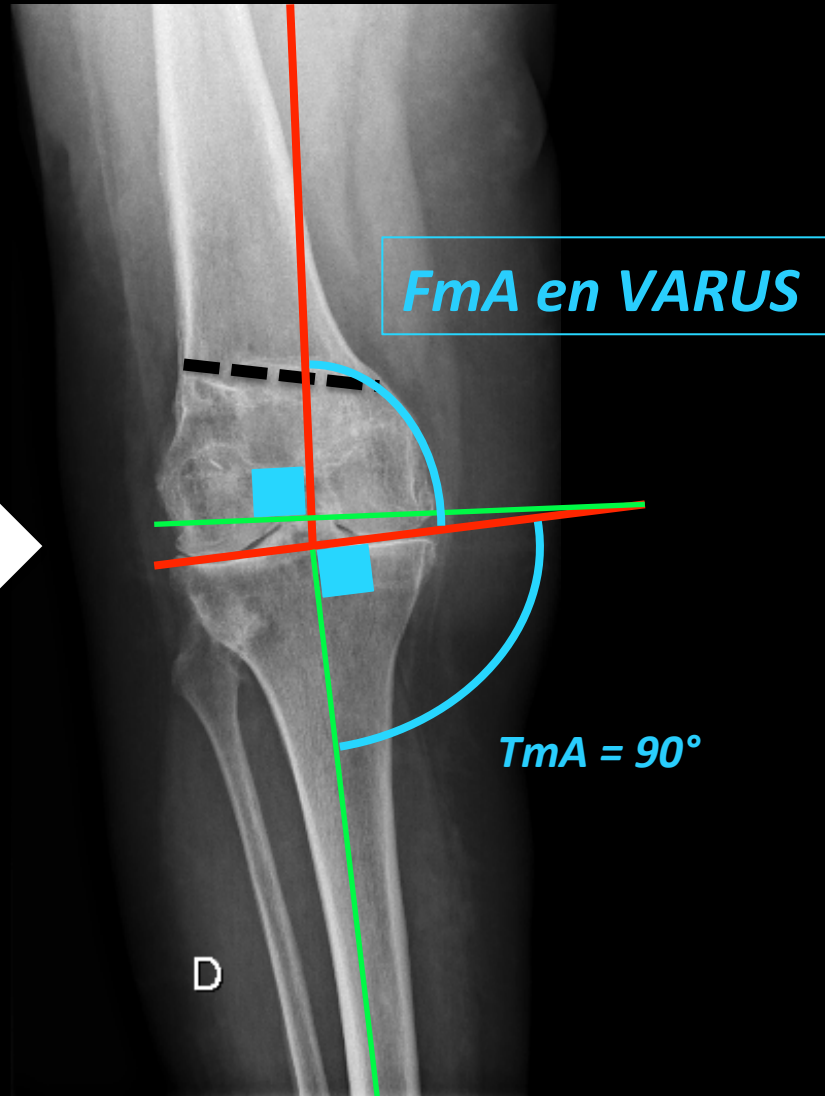
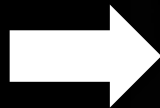


TKA after DFO

S. LUSTIG, R. GAILLARD, E. SERVIEN, P. NEYRET

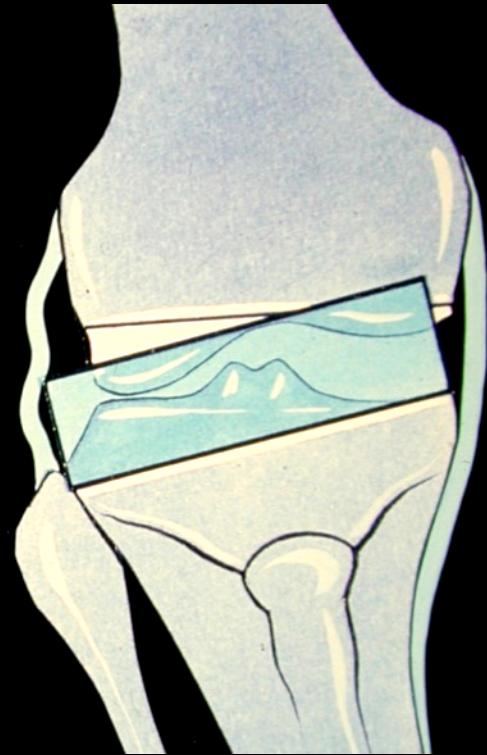
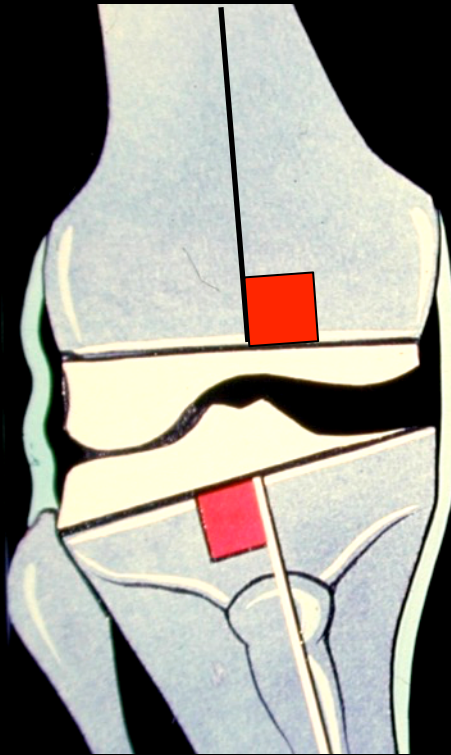
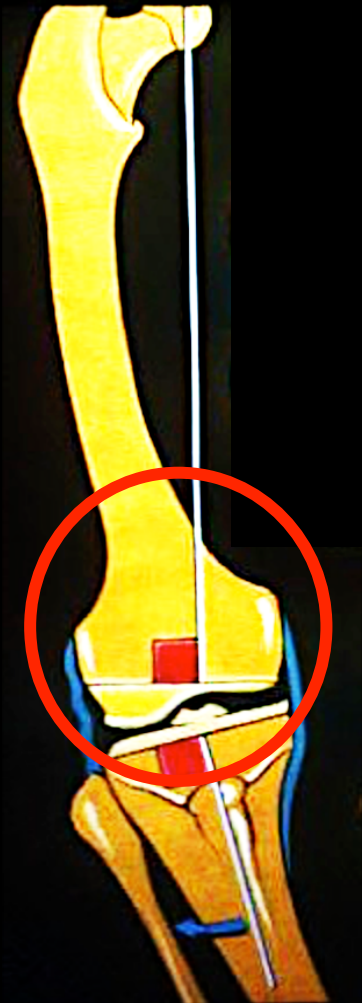
¹ Albert Trillat Center, Groupement Hospitalier Nord - Université Lyon 1,
103 Grande rue de la Croix Rousse, 69004 Lyon, France

DFO = Femur MalUnion in VARUS



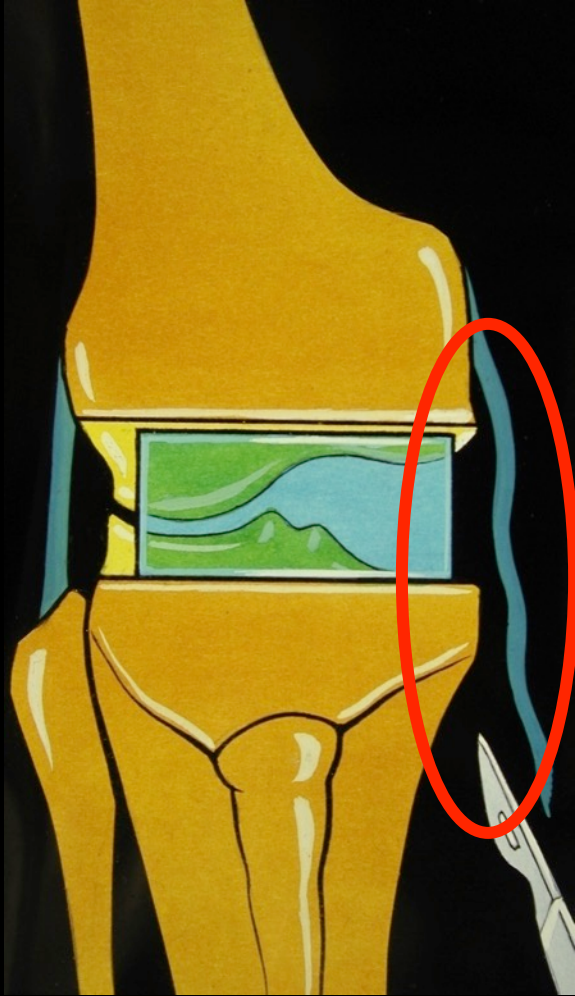
DFO = Femur MalUnion in VARUS

=> If distal cut at 90° (Fma)



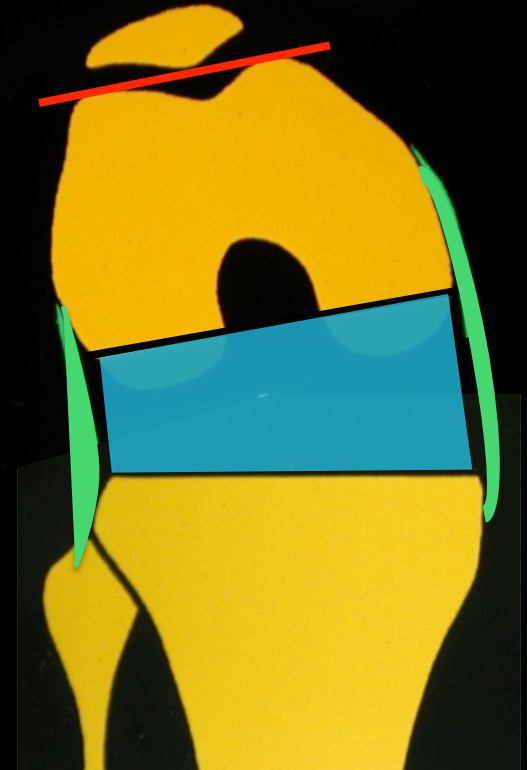
Asymetrical extension gap+++

MEDIAL release +++ to correct asymmetrical gap in extension



Symetrical EXTENSION GAP +++

***DISCORDANCE
FLEXION /
EXTENSION***



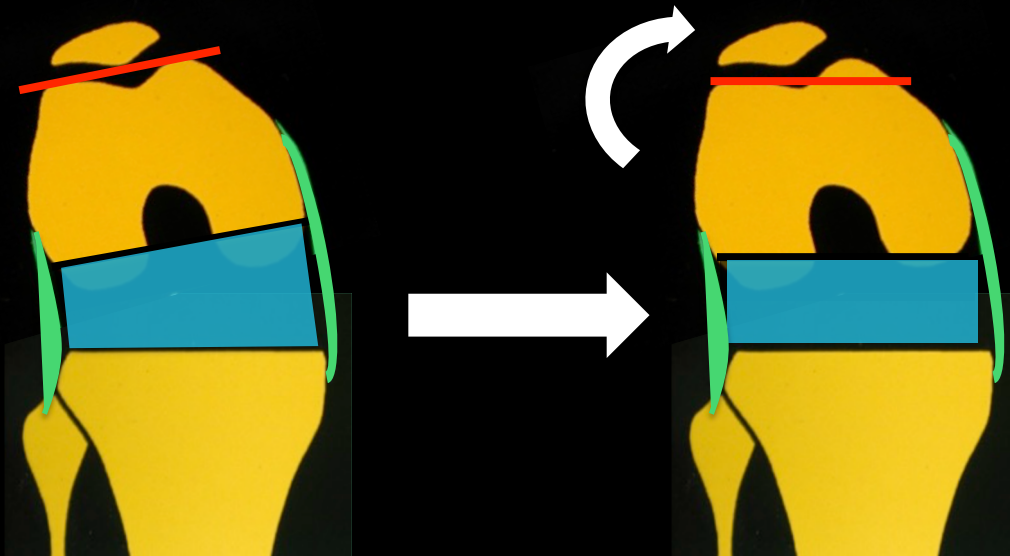
**ASYMETRICAL
FLEXION GAP +++**

2 OPTIONS :

1. ACCEPT medial laxity in FLEXION and use a

CONSTRAINT PROSTHESIS

2. INTERNAL ROTATION of the femoral component



PATELLAR
MALTRACKING

Our Choice (n°3) :

Maintain residual

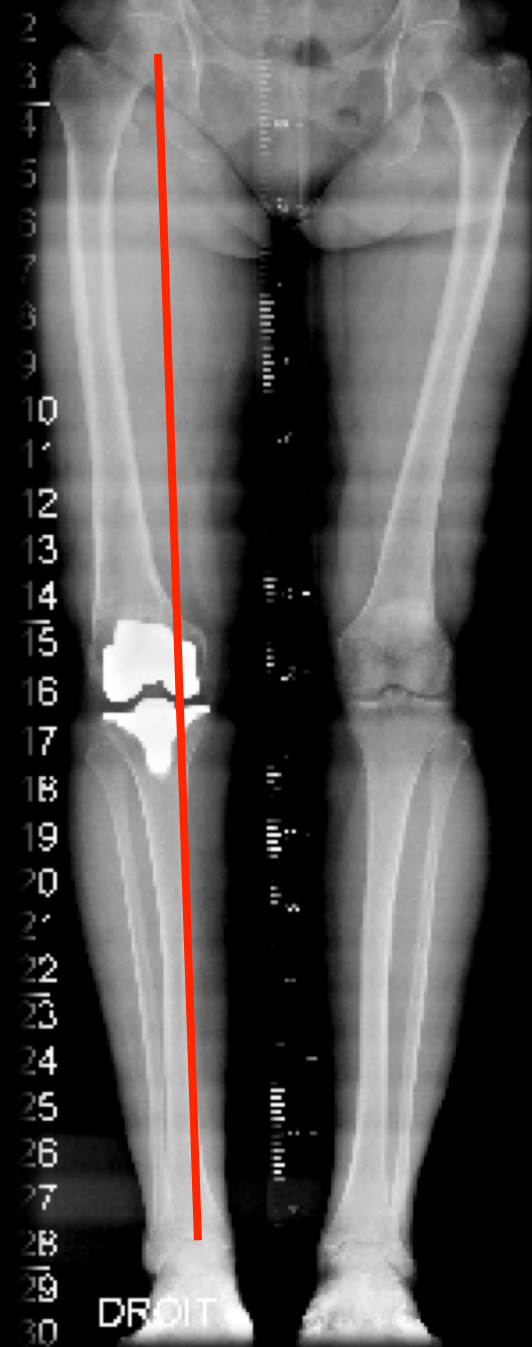
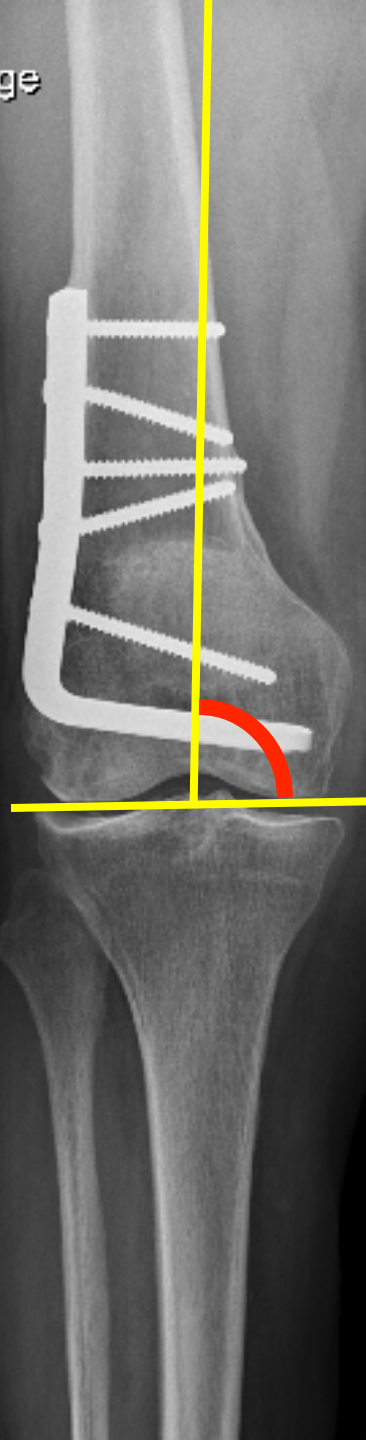
Femur VARUS Deformity



- **Residual varus alignment** (a few degrees)
- **Avoid medial laxity in flexion** (and the use of a constraint implant)
- **No internal rotation of the femoral component +++**

en charge

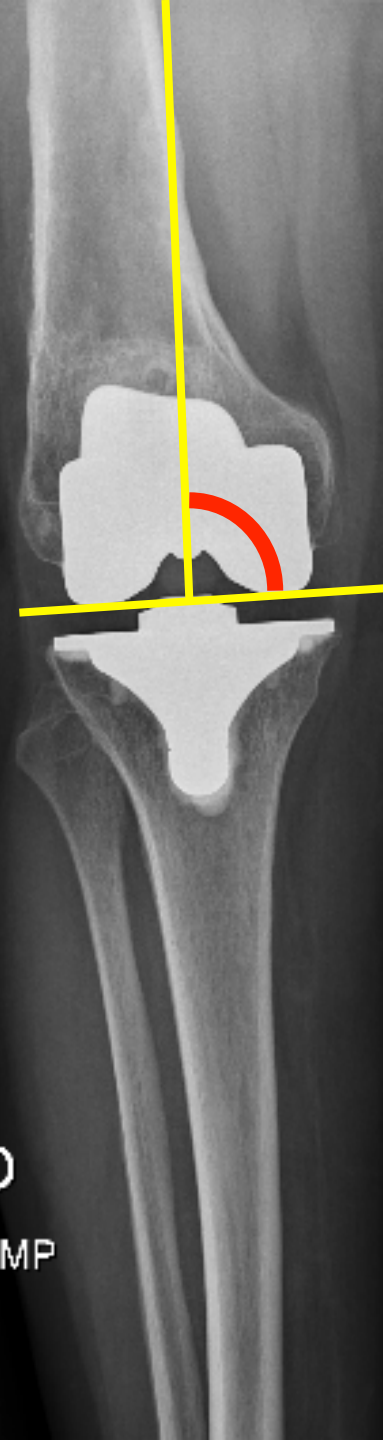
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DROIT

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AMP



QUESTION

MID TERM RESULTS ?

Knee Surg Sports Traumatol Arthrosc
DOI 10.1007/s00167-017-4487-9



KNEE

Total knee arthroplasty after varus distal femoral osteotomy vs native knee: similar results in a case control study

Romain Gaillard¹ · Timothy Lording² · Sebastien Lustig¹ · Elvire Servien¹ ·
Phillippe Neyret¹

MATERIAL

- Retrospective monocentric study
(Lyon Croix Rousse Hospital , Lyon)



- **4014** consecutive TKAs
(nov 1987 to jan 2015)



IMPLANTS : PS TKA PS 3rd CONDYLE

HLS (Tornier©)

1987 : HLS 1

1990 : HLS 2

1995 : HLS Evolution

2000 : HLS Noetos

2009 : HLS Kneetec



METHODS

- **Prospective Database**

- IKS + Xr
- Surgical details

- **Prospective Follow-up**

The screenshot shows a web browser window titled "Mini-CULPER" with a Microsoft Internet Explorer address bar. The form is for "ORTHOPEDIE TRAUMATOLOGIE" and "Prothèse totale du genou". It contains the following sections:

- 1. Compte rendu opératoire**
 - N°: []
 - Type de prothèse: ☐ HLS Noetos, ☐ Fixe, ☐ HLS Kneetec, ☐ Rotatoire, ☐ Révision, ☐ Charnière, ☐ Navigation
 - Durée: 120 min, Opérateur: Professeur Philippe NEYRET
 - Anesthésie: ☐ Générale, ☒ Rachi, ☐ Bloc plexique
 - Garrot: ☒ Oui, ☐ Sur scellement, ☐ Pas de garrot, Durée: 85 min
 - Voie d'abord: ☒ Interne, ☐ Sous le Vaste interne, ☐ Dans le Vaste interne, ☒ Dans le Tendon quadriceps, ☐ Externe, ☐ Sous le Vaste externe, ☐ Dans le Tendon quadriceps, ☐ Autre (précisez): []
 - ☐ Relèvement TTA, ☐ Mini-invasive
- Ligament croisé antérieur**: ☐ Présent, ☒ Absent, ☐ Fragilisé
- Libération plan interne**: ☐ Capsule, ☒ Capsule + LLI (damier), ☐ Capsule + 1/2 membraneux, ☐ Capsule + 1/2 membraneux + LLI (damier), ☐ Capsule + LLI en bas + autre, ☐ Autre: []
- Libération plan externe**: ☐ Capsule, ☐ Capsule + Désinsertion Poplitée / LLE, ☐ Capsule + Libération F. lata, ☐ Capsule + Ostéotomie condyle externe, ☐ Autre: []
- Libération postérieure étendue**: ☐ Non, ☒ Oui
- Technique chirurgicale**: ☒ Référence postérieure avec coupe tibia première, ☐ Coupe postérieure seconde (technique HLS)

At the bottom, there are buttons for "Habillations", "Enregistrer", "Envoyer", "Finaliser/Valider", "Imprimer", "Habiller", "Propriétés...", "Autres", and "Fermer".

2 months, 1 y, every 2ys

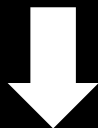
Database

N = 4014



TKA after DFO

N = 14



Between january 1993 and
september 2014

12 men / 2 females

Men age= **66.6 ys**

en charge

D

Primary TKA (no
surgical history)

N = 28

Comparable :

- **Sexe**
- **Age**
- **BMI**
- **Arthritis**
- **Implant**

RESULTS

- PER-OPERATIVE : *surgical difficulties*
- POST-OPERATIVE : *Mid term clinical and radiological results*

Mean Follow up = 42 months (12-102 months)

PER-OPERATIVE (1)

		TKA after DFO (N=14)	Primary TKA (N=28)	<i>p</i>
COMPLICATIONS PER-OP.	Medial laxity	2/14	2/28	0,28
	Lateral laxity	2/14	0/28	0,03
	Patellar tendon weakening	4/14	0/28	< 0,001
	TOTAL	8 difficulties in 6 patients	2 difficulties in 2 patients	< 0,001

DEMANDING Surgery +++

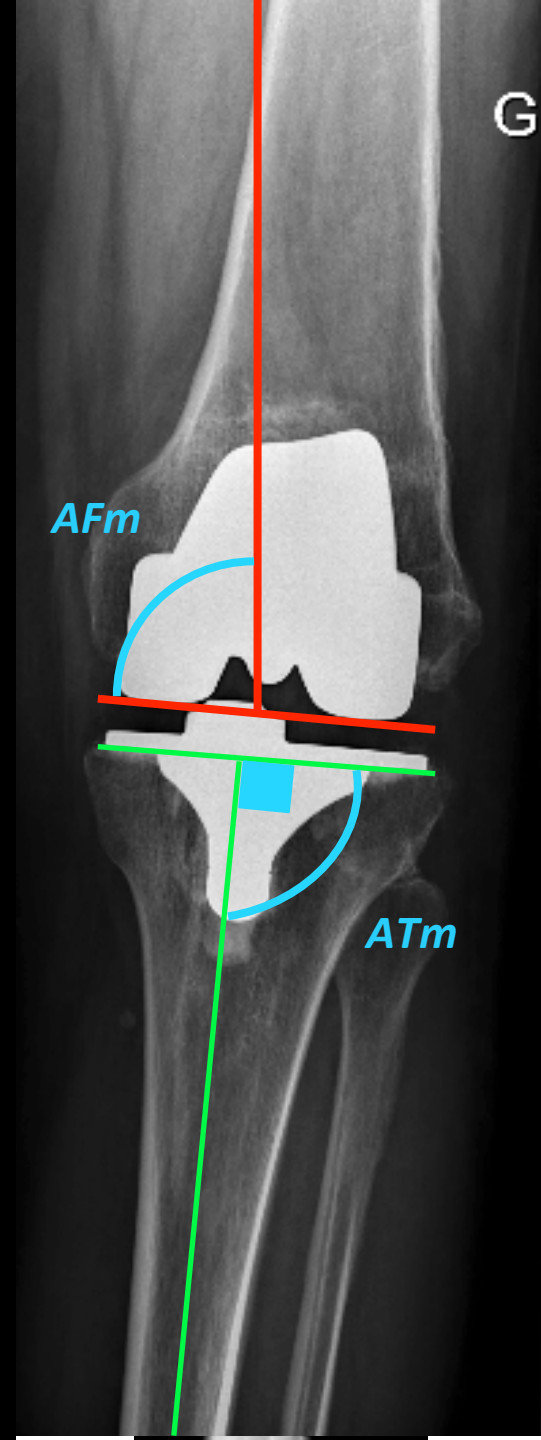
Pre-existing scar management(1)

1 complication : skin necrosis :

⇒ 61 ys, obesity, 13° varus , preop
stiffness

POST-OPERATIVE (1)

	XRays		
	TKA after DFO	Primary TKA	p
FTmA	177 °	180 °	0.04
FmA	88 °	90.67 °	0.007
TmA	88.88 °	89.25 °	0.77

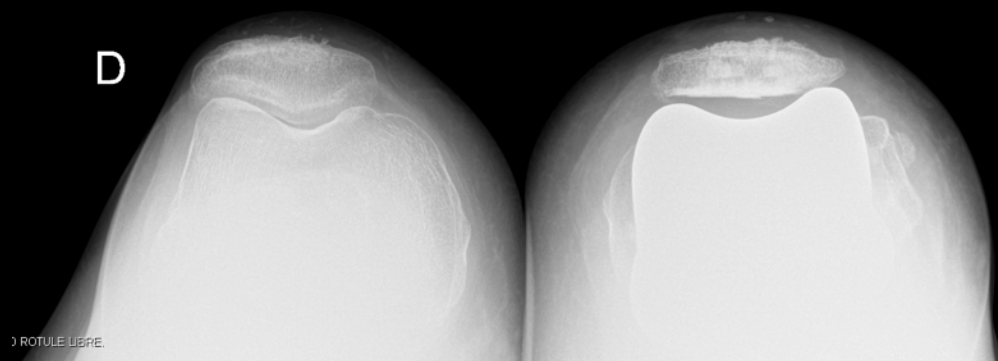


POST-OPERATIVE (2)

		TKA after DFO	Primary TKA	<i>p</i>
CLINICAL	Flessum	0.71 °	0.37 °	0,76
	Flexion max.	115.71 °	110.53 °	0,32
	IKS knee	91.71	82.58	0,11
	IKS function	70.63	80.79	0,23
Very satisfied/ satisfied		100%	89,5%	< 0,001
Disappointed / unhappy		0%	10,5%	



D



DISCUSSION

	<i>Nelson et al.</i> (N=11) - 2003	<i>Kosashvili et al.</i> (N=22) - 2011	<i>Gaillard , Lustig et al.</i> (N=14) - 2015
Flexion max.	105.9 °	114 °	115,71 °
IKS knee	84	91	91,71
IKS function	68	64	70,63
Satisfaction	Very satisfied: 2/9 Satisfied : 3/9 Disappointed : 4/9		Very satisfied: 5/8 Satisfied : 3/8 Disappointed : 0/8
FTmA	183,6 °	« well aligned »	177 °
Complications	1 Clunk syndrom	2 aseptic loosening	1 skin necrosis

CONCLUSIONS - TKA after DFO

- Unusual situation.
- Challenging surgery (patellar tendon, ligament balancing, pre existing scar).
- Consider maintaining FEMUR VARUS DEFORMITY in order to facilitate ligament balancing and avoid constraint implants.



Thank You

