

Resurfacing vs Not Resurfacing the Patella in Total Knee Arthroplasty - 4 year results -

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Prospective Comparative Randomized Studies

Auteur (ref.)	Nb Gen.	Recul (ans)	Avantage	Significatif	Facteurs favorisants
R.S. Burnett	100	> 10	Aucun	0	0
D. Mayman	100	8-oct	Resurf.	Douleurs Marche Montée escaliers Satisfaction	0
R.L. Barrack	118	5-juil	Aucun	0	0
T.S. Waters	514	2 - 8,5	Resurf.	Score genou Douleurs Satisfaction	Chondrite F Pneumatoïde
J.H. Newman	125	> 5	Resurf.	Unif. Patella Score Reprise chir.	Chondrite FP Malalignement
D. Wood	20	> 5	Resurf.	Douleurs ant. Descente escaliers	Poids
J.A. Miller	40	3	Non resurf.	Montée escaliers	0
R.B. Bourne	100	> 2	Non resurf.	Douleurs ant. Force flexion	0
H. Schroeder-Boersch	40	2	Resurf.	Score Genou Score fonction Montée escaliers	Arthrose avancée

Design Influence?

HLS Noetos® TORNIER



✓ « Anatomical » Trochlea

=> Patellar Retention

✓ Postero-stabilized (3^d condyle)

=> ↗ Lever Arm Quad.

✓ Distractor distal femoral cut

=> Same Patellar Height

Surgery



Patellar Retention

- Denervation
- Peripatellar Synovectomy
- External Osteophytes Removal

No Patellar spongialisation



Patellar Resurfacing

- External Osteophytes Removal
- Cemented Patellar Dome
- Patellar Shape « chapeau de gendarme »



Continuous Retrospective Comparative Study



- ✓ 94 knees
- ✓ Age : 73 y. (54-87)
- ✓ F.U. : 4 y. (3,5-5)
- ✓ F.U. : 85%



- ✓ 94 Knees
- ✓ Age : 73 y. (42-90)
- ✓ F.U. : 4 y. (3,5-5)
- ✓ F.U. : 80%

MATCH SERIES

Preoperative IKS Score /100



29

Knee Score

35

51

Function Score

55

NO SIGNIFICANT DIFFERENCE

Revision

Independant Observer

- *Clinical Score* : **IKS** (Knee Score / Function Score)

- *Subjective Score* (Lower the score, better the result) :

=>**Clinical Ant. Knee Pain Score** (Waters - J Bone Joint

Surg Am, 85-A(2): 212-7, 2003.) *0 = No pain / 3 = Severe*

pain

=>**Patellar score** = Visual Analogical Scale assessing
pain during exercises involving Patellofemoral Function

(Poster)

0 = No pain / 10 = Most horrible pain

- *X-rays*

STAT View 5.0® - $p < 0,05$

Results: Patient Satisfaction



91%	51%	Very Satisfied	57%	96%
	40%	Satisfied	39%	
	5%	Disappointed	4%	
	4%	Dissatisfied	0%	

NO SIGNIFICANT DIFFERENCE (p=0,4)

Revision IKS Score /100



Group 1

82

Knee Score



Group 2

83

76

Function Score

75

NO DIFFERENCE (p=0,87)

Clinical Anterior Knee Pain Score



Group 1

0,60



Group 2

0,43

Severe pain - Patient considering further surgery
(score = 3)

3/80 => 3.75%

1/75 => 1.3%

NO SIGNIFICANT DIFFERENCE (p=0,15)

Patellar Score (VAS)



Group 1



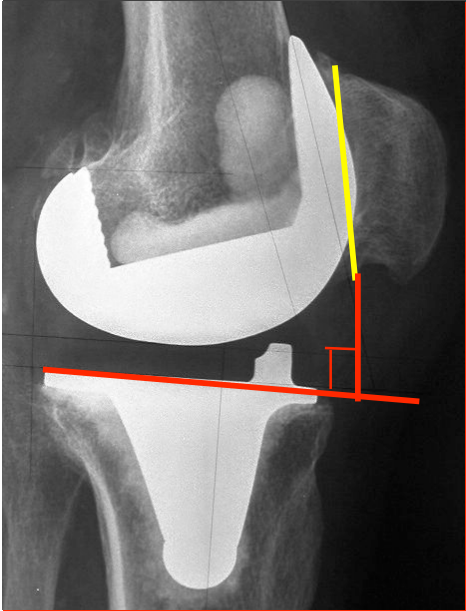
Group 2

2,19	2,38	Stair Climbing	1,97	1,81
	2,47	Stair Descent	2,16	
	1,39	Prolonged Sitting	1,21	
	2,44	Chair Rising	1,73	
	2,22	Car Exiting	1,85	
	2,16	MP Palpation	1,68	
	2,06	LP Palpation	1,33	
	2,21	Trochlea Palpation	2,28	

NO SIGNIFICANT DIFFERENCE (p=0,15)

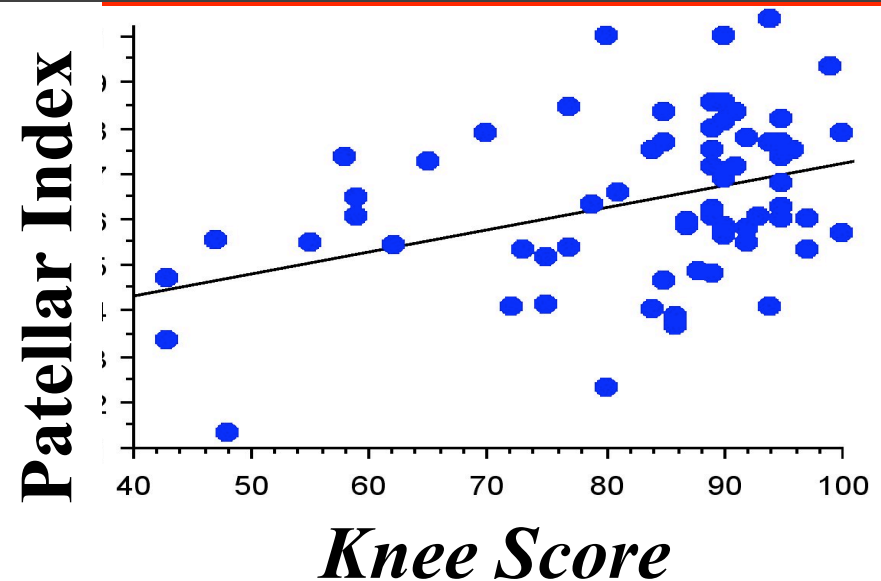
Group 1

Patellar Index



Knee Score / Patellar Index

$P = 0,001$



Function Score / Patellar Index

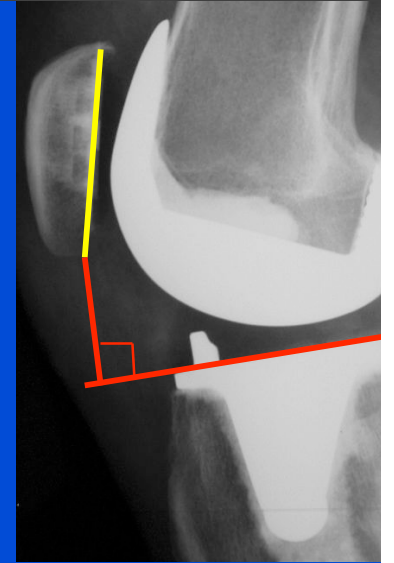
$P = 0,09$

Patellar Score / Patellar Index

$P = 0,06$

Patellar Index

Group 2



IKS Score - Patellar Score / Patellar Index

NO CORRELATION - $p = 0,9$

Patello-femoral Complication



**2 Stiffness
=> Mobilisation**

**Good
results**



**1 Stiffness
=> Mobilisation**

**4 Ant. Knee Pain++
=> II^{ary} Resurf.**

**Bad
results**

**1 Clunk Syndrome
=> Arthro Resection
3 Partial Patellar
Fractures
=> 1 Fragment Res.**

Study Interest

Continuous Serie
2 « Seniors » Surgeons

Patellar Resurfacing or Not

Independant Observer

Patellar Score Evaluation

Meta-analysis (Pakos/Nizard) : ↘ Ant. Knee Pain in Resurfaced Group BUT No Improvement in Global Knee Scores (IKS-HSS)

Study Limitation

Non randomised Retrospective Study

Short Follow-Up ?

Meta-analysis (Pakos/Nizard) : ↘ Reoperation Risk in Resurfaced Patella Group After 5 Years F.U.

Statistically underpowered !!

5% Anterior Knee Pain Prevalence in Resurfaced Knees Require 187 Knees in Each Group to Show Significant Difference

Conclusion

Group 1

Group 2

Satisfaction

IKS Score

Patellar Score

Conclusion

Group 1

Group 2

Reliable Option

Genuine Surgery

Fragile Patella

Small - Thin - Osteoporotic

Patella Baja

Young Patient

Risk Patient

Obesity - Lymphatic Oedema -
multioperated knee

Thank You