

Balgrist, 25.10.2012



Lateral Retinacular Release Still indicated?

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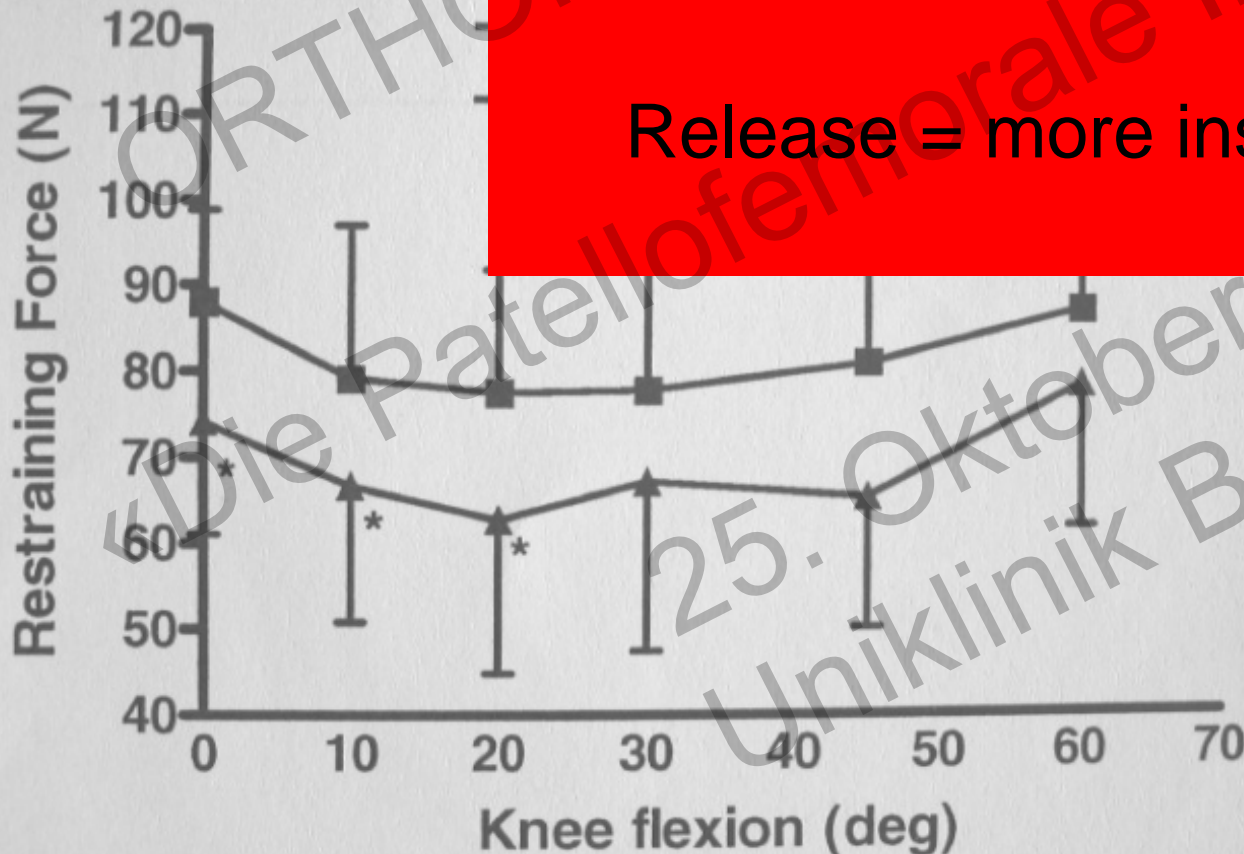
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Problem Release

- Satisfaction rate 14-100%
 - ▶ Aglietti et al. (review of 15 publications) 2006
- Complication rate underestimated:
Hematoma – Recurrence – medial Instability
 - ▶ Small NC Arthroscopy 1988
 - ▶ Gerbino et al. J Pediatr Orthop 2008
 - ▶ Elkousy H CORR 2012

1. Problem Indication

Patellar Instability

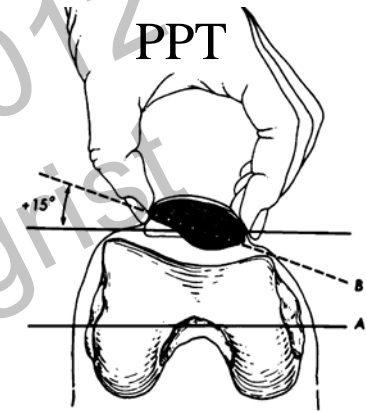
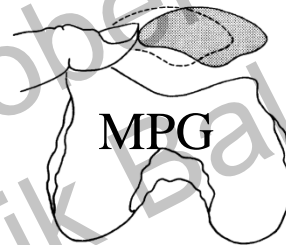


Christoforakis
& Amis
KSSTA 2006

Indication for Lateral Retinacular Release

Consensus Trias

- Painful lateral retinacular palpation
- Decreased passive patellar tilt
- Reduced patellar glide
- = per definition PFI is ruled out!

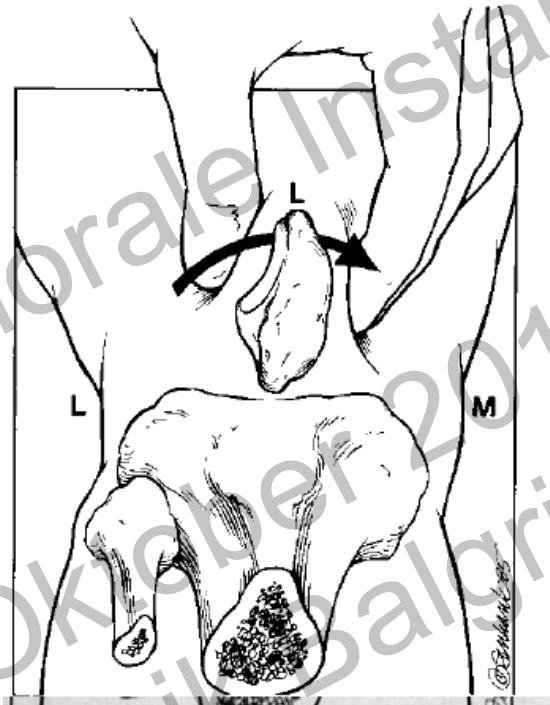


from Kolowich et al. AJSM 1990

2. Problem Technique

What technique?

- Staged



from Henry et al. AJSM 1986

2. Problem Technique

What technique?

- Staged
- Inside out



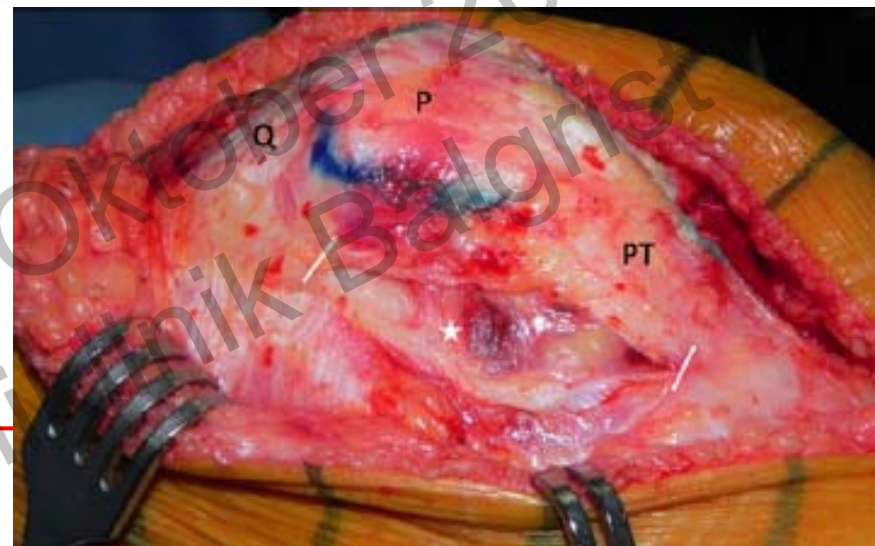
2. Problem Technique

What technique?

- Staged
- Inside out
- Outside in



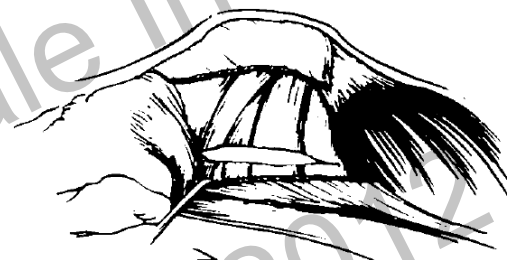
Maniar et al. CORR 2012



2. Problem Technique

What technique?

- Staged
- Inside out
- Outside in
- Lengthening



from Larson et al. CORR 1978



Material & Methods

■ Double blinded prospective comparative trial

- ▶ 28 patients (7 males, 21 females, mean age 42,5 y (range, 19-68y))

1. Blinding: “patient” laterale retinacular decompression (14 RR, 14 RL)

- ▶ Same skin incision, same surgeon (GP)

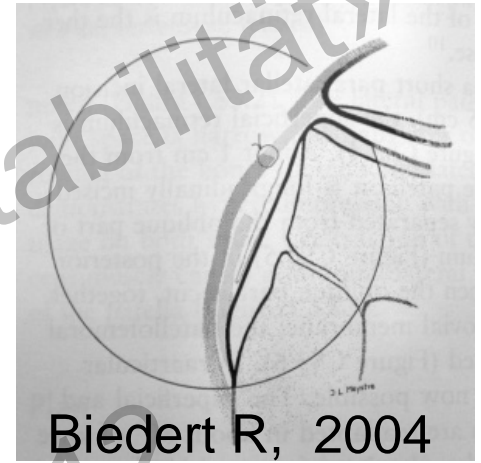


- ▶ Same Rehab protocol

drain & compression 48h, full weight bearing & SLR immediate, crutches and 90° flex in 1st week

2. Blinding: “FU-exam” two examiner without knowledge upon surgery

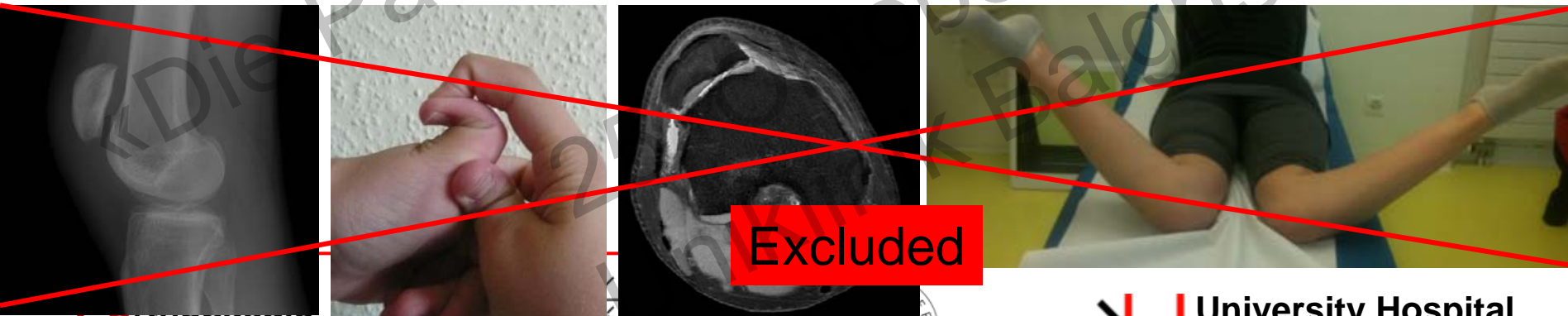
Retinacular Lengthening



Material & Methods

■ Exclusion

- ▶ **Patellar instability** (dislocation/subluxation)
- ▶ General ligament laxity (Beighton et al. 1973)
- ▶ **Malrotation** (Staheli et al. CORR 1972, JBJS Am 1985)
- ▶ **Malalignment** (Q-angle > 20°, tubero-sulcus-angle > 10°)



Excluded

Material & Methods

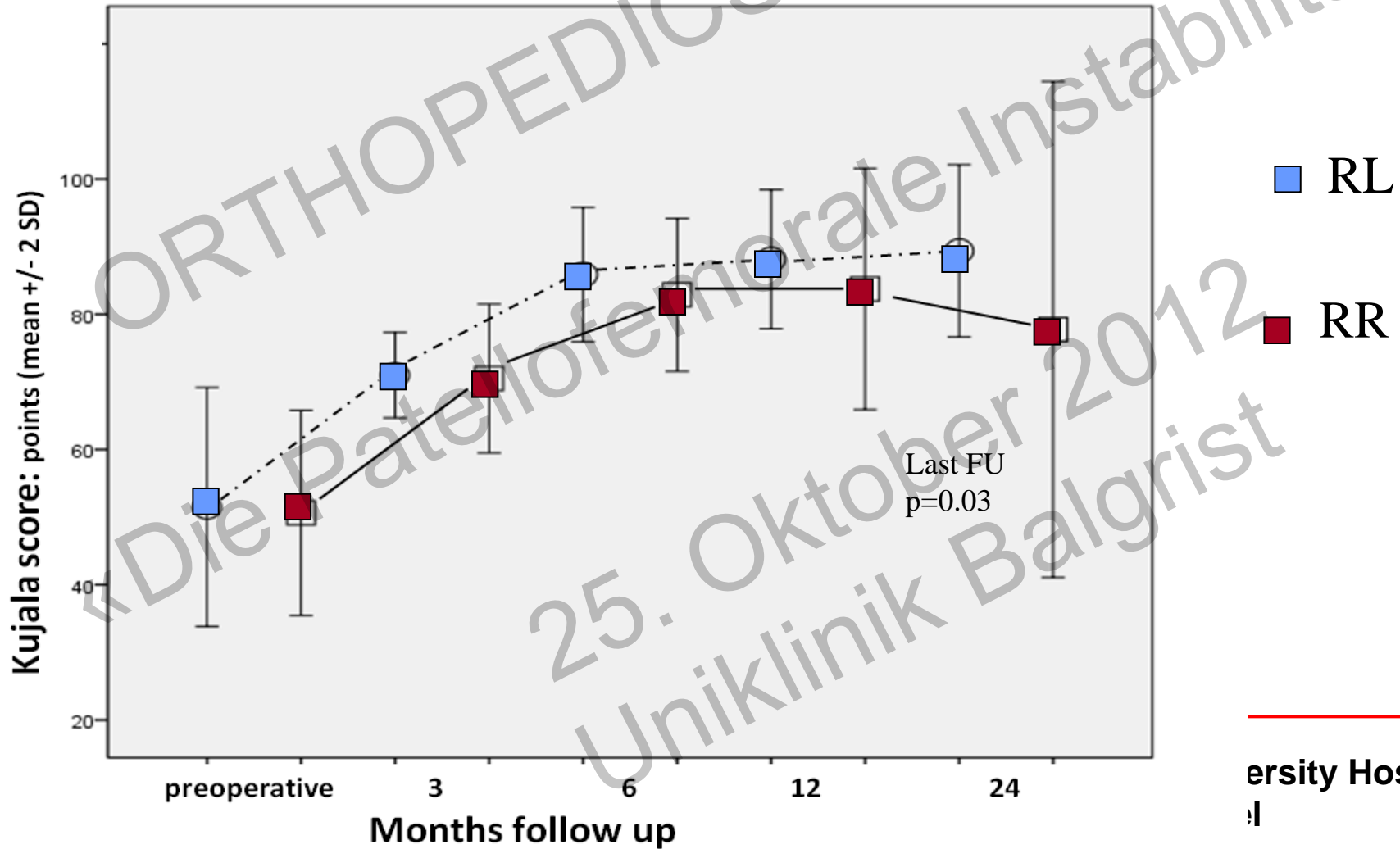
■ Outcome variables

1. Patellofemoral pain & function = Kujala Score (min 0, max 100 points)

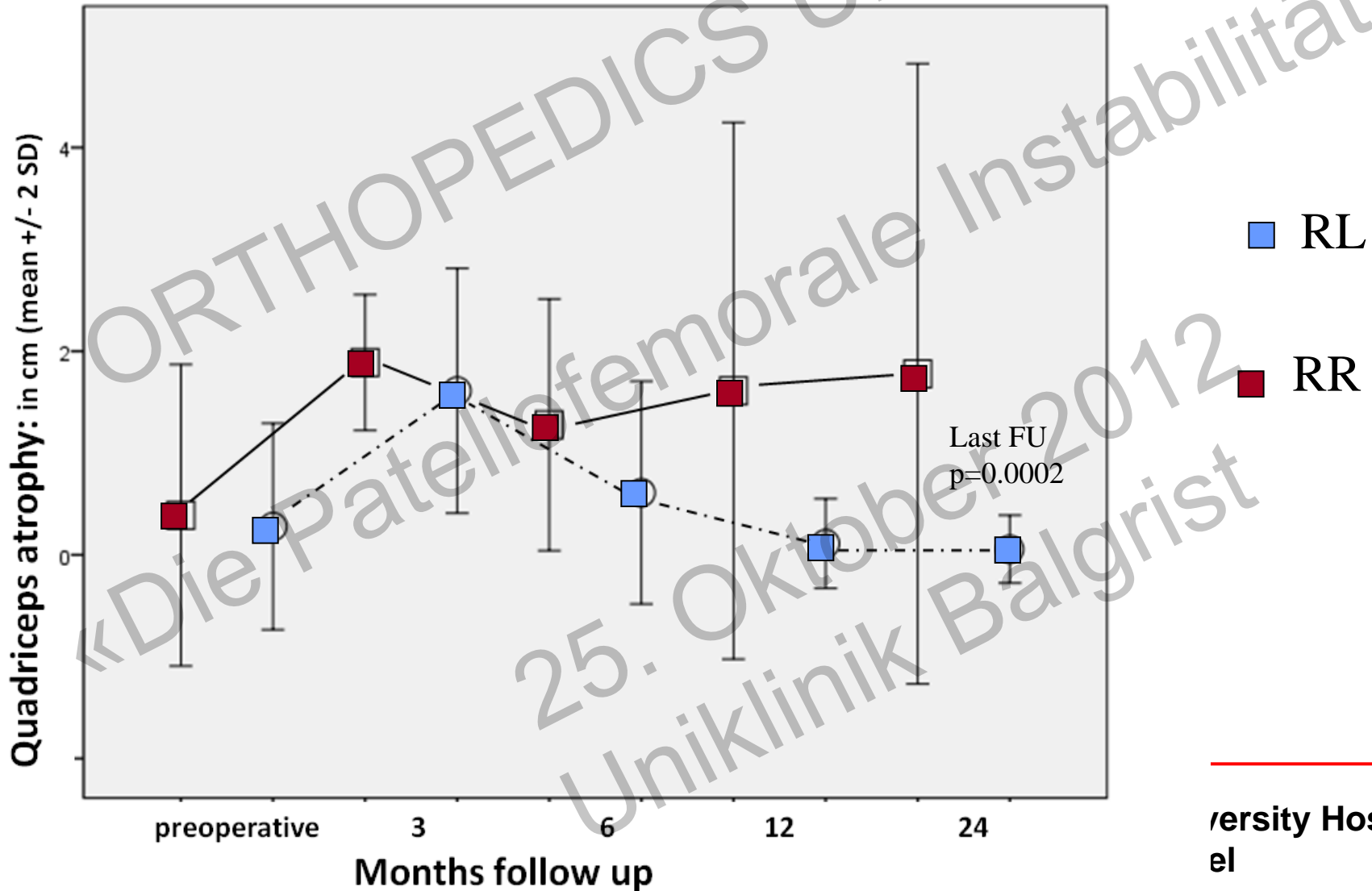
2. Complications

- **Instability** = Gravitation-Subluxation-Test (GST) Nonweiler & DeLee AJSM 1990
- **Recurrence** = pain + pathol. PPT & MPG
- Hematoma, wound healing, infection, chronic pain syndrome, etc.

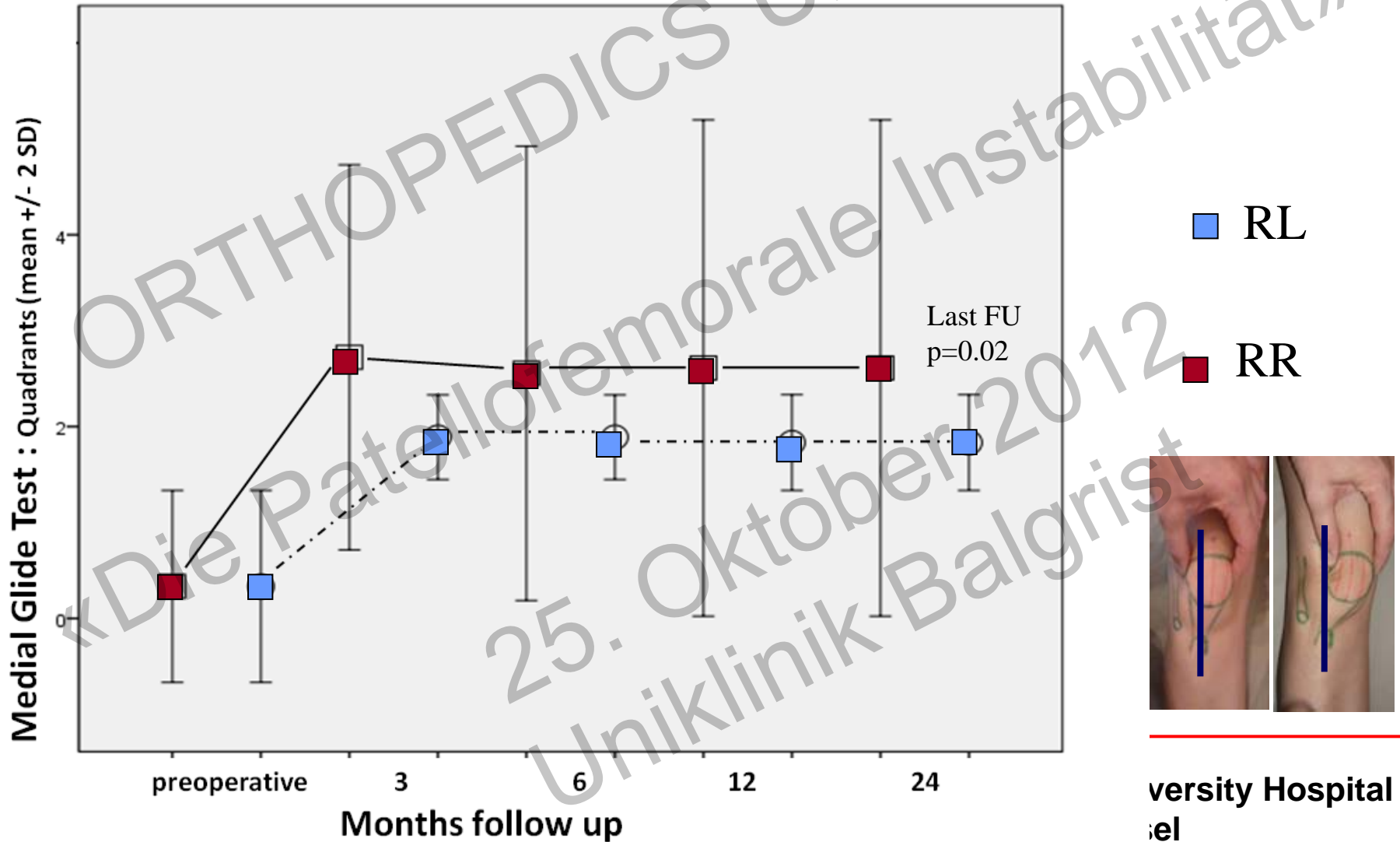
Results Kujala



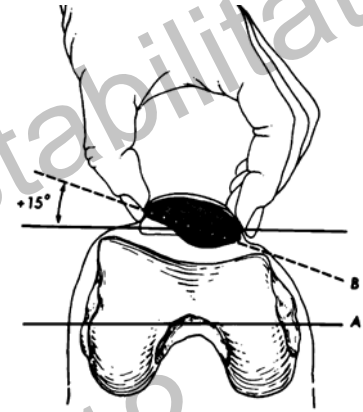
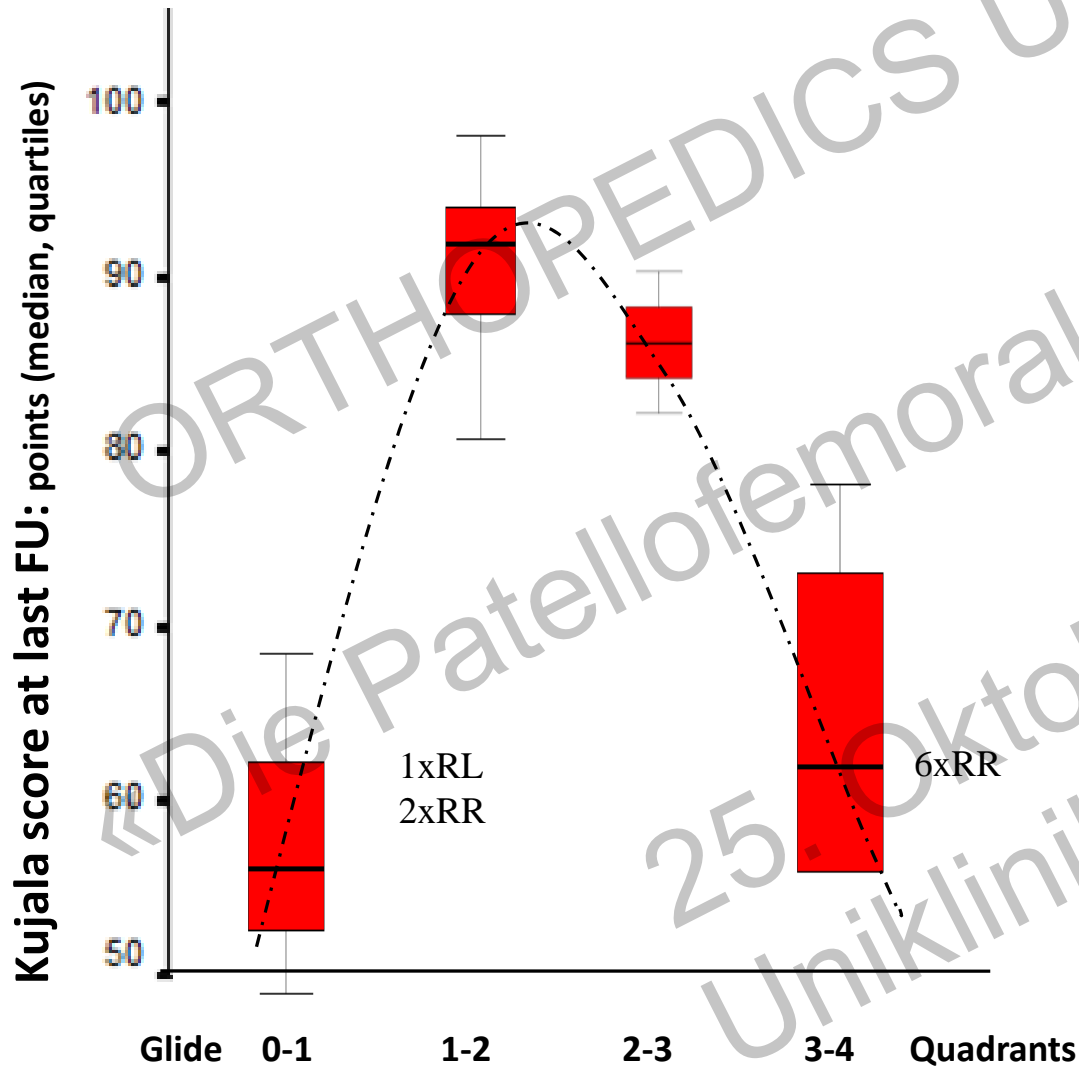
Results Quad-Atrophy



Results Medial Glide Test



Kujala & Medial patellar glide, tilt & Nonweiler



from Kolowich et al. AJSM 1990



Nonweiler & DeLee AJSM 1990

Conclusion

Release & lengthening improved outcome of HCS

2y data of db-CT favor retinacular lengthening

- Less quadriceps atrophy
- More durable pain reduction
- More controlled patellar mobility
- No patellar instability

Pagenstert et al. Arthroscopy 2012
with surgical video

Other indications for lateral retinacular decompression?

Lateral Release and MPFL Recon in PFI

Lateral release and medial plication for recurrent patella dislocation

KSSTA 2012

Jae-Jeong Lee · Seung-Joo Lee · You-Gun Won ·
Chong-Hyuk Choi

Medial patellofemoral ligament reconstruction with lateral soft tissue release in adult patients with habitual patellar dislocation

KSSTA 2012

Takehiko Matsushita · Ryosuke Kuroda ·
Daisuke Araki · Seiji Kubo · Tomoyuki Matsumoto ·
Masahiro Kurosaka

Lateral Release and MPFL Recon

Richetti et al. Arthroscopy 2007 May;23(5):463-8.

Comparison of lateral release versus lateral release with medial soft-tissue realignment for the treatment of recurrent patellar instability: a systematic review.

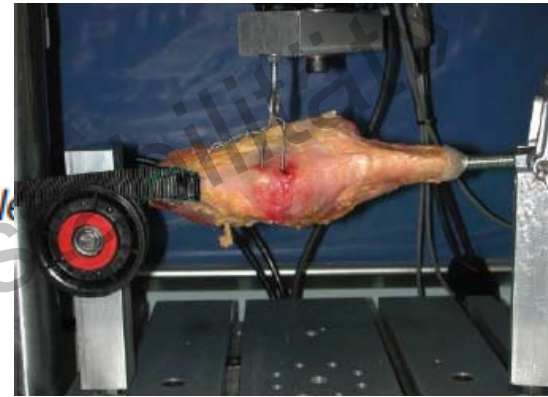
CONCLUSIONS:

This systematic review found that isolated LRR yields significantly inferior long-term results with respect to symptoms of recurrent lateral patellar instability compared with LRR with MR.

LEVEL OF EVIDENCE: Level III

The Biomechanics of Medial Patellofemoral Ligament Repair Followed by Lateral Retinacular Release

Harvinder Bedi, MD, and John Marzo, MD
 From the Department of Orthopedic Surgery, State University of New York at Buffalo, Buffalo, New York



Pairwise Comparisons of Mean Differences in Newtons (N) ± Standard Error of the Means^a

Comparison	Knee Flexion Angle, deg				
	0	15	30	45	60
Native vs cut MPFL	13.1 ± 4 ^b	15.2 ± 3 ^b	15.6 ± 4 ^b	19.1 ± 5 ^b	22.4 ± 8 ^b
Cut MPFL vs repaired MPFL	17.5 ± 4 ^b	26.0 ± 3 ^b	21.6 ± 3 ^b	15.5 ± 3 ^b	26.5 ± 4 ^b
Repaired MPFL vs repaired MPFL with LRR	9.2 ± 4 ^b	10.2 ± 4 ^b	9.8 ± 3 ^b	7 ± 3	11.67 ± 3 ^b
Native vs repaired MPFL	4.4 ± 5	10.8 ± 3 ^b	5.9 ± 3	3.6 ± 6	4.1 ± 6
Native vs repaired MPFL with LRR	4.7 ± 5	0.6 ± 4	3.9 ± 3	10.7 ± 4 ^b	7.5 ± 6
Cut MPFL vs repaired MPFL with LRR	8.3 ± 4	15.8 ± 2 ^b	11.7 ± 4 ^b	8.4 ± 3 ^b	14.9 ± 4 ^b

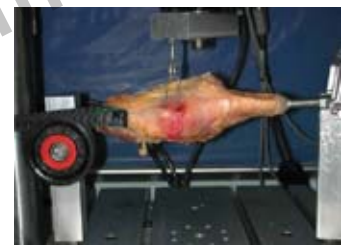
^aMPFL, medial patellofemoral ligament; LRR, lateral retinacular release.

^bP ≤ .05.

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Lateral Release does NOT help to stabilize the patella
But may be necessary to REDUCE the patella

the Means^a

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Fixed lateral subluxation in patellar instability



Arthroscopic Biomechanics PFI. Bachmann & Pagenstert 2010

Fixed lateral subluxation in patellar instability

Grading of Patella Relocation Test

1. Reduction leads to lateral hypercompression
2. Reduction prevented by tight lateral retinaculum



Center & Stabilize Patella

Technique with single central incision

MPFL Recon



Lateral Lengthening

Take Home Message

TWO Indications for Lateral Decompression

1. Lateral Patellar Hypercompression (isolated procedure)
2. Fixed lateral Patellar Sub-/Dislocation (**NOT** as isolated procedure)

Fine