



Degenerative Meniscus Lesions

When is Knee Arthroscopy Useful?

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Disclosure

→ **No conflict of interest**

Structure

- **Background/ Introduction**
- **Definition/ Epidemiology/ Etiology/ Clinics**
- **Current Treatment Guidelines**
- **Summary**

Background

→ **Meniscus Lesions are common** → most often performed surgery

Muheim et al. Acta Orthopaedica 2017

→ At least **2/3** are degenerative lesions
→ Around 50% with signs of arthritis in x-ray

Bergkvist et al. Acta Orthopaedica 2018

Introduction

Arthroscopic Partial Meniscectomy versus Sham Surgery for a Degenerative Meniscal Tear

Sihvonen et al. N Engl J Med
2013

Surgery versus Physical Therapy for a Meniscal Tear and Osteoarthritis

Katz et al. N Engl J Med
2013

Inappropriate use of arthroscopic meniscal surgery in degenerative knee disease

Muheim et al. Acta Orthop
2017


Introduction

Cochrane Database of Systematic Reviews | [Review - Intervention](#)

Arthroscopic surgery for degenerative knee disease (osteoarthritis including degenerative meniscal tears)

Denise O'Connor, Renea V Johnston, Romina Brignardello-Petersen, Rudolf W Poolman, Sheila Cyril, Per O Vandvik,
✉ [Rachelle Buchbinder](#) Authors' declarations of interest

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“ Arthroscopic surgery provides little or no clinically important benefit in pain or function, probably does not provide clinically important benefits in knee-specific quality of life, and may not improve treatment success compared with a placebo procedure.

Background

Unnötige Knieoperationen weit verbreitet

Nach einer wissenschaftlichen Studie sind die häufigen Operationen auf finanzielle Anreize zurückzuführen.

Basler Zeitung

Juli 2017

16'000 nutzlose Knie-Eingriffe pro Jahr

Ärzte in der Schweiz führen häufig Meniskus-Teilentfernungen durch – obwohl diese den Patienten nichts bringen.

SRF

Juni 2017

Unnötige Arthroskopien

Experten raten von Knie-Operationen ab

Experten raten von chirurgischen Eingriffen bei Kniebeschwerden ab. Physiotherapie oder Medikamente nützen genauso viel.

TagesAnzeiger

Juli 2017

Ein Statementpaper der Expertengruppe Knie von Swiss Orthopaedics

Behandlung degenerativer Meniskusläsionen

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Dr. med. Hermes Miozzari^d; Prof. Dr. med. Markus P. Arnold, PhD^a**

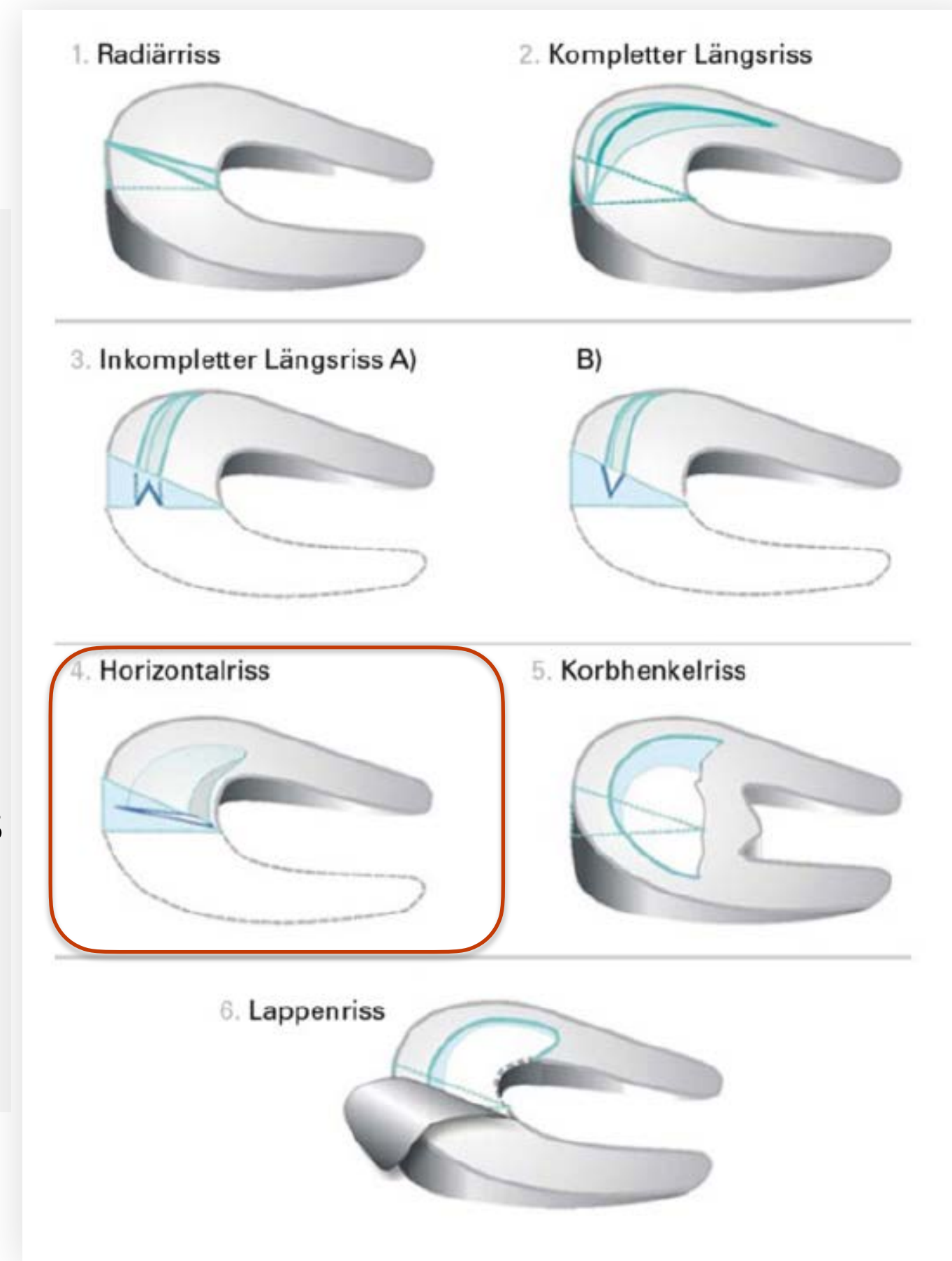
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^c Orthopädie Sonnenhof, Bern; ^d Service de chirurgie orthopédique et traumatologie de l'appareil moteur, Hôpitaux Universitaires de Genève, Genève

SWISS MEDICAL FORUM – SCHWEIZERISCHES MEDIZIN-FORUM 2018;18(7):147–153

www.medicalforum.ch

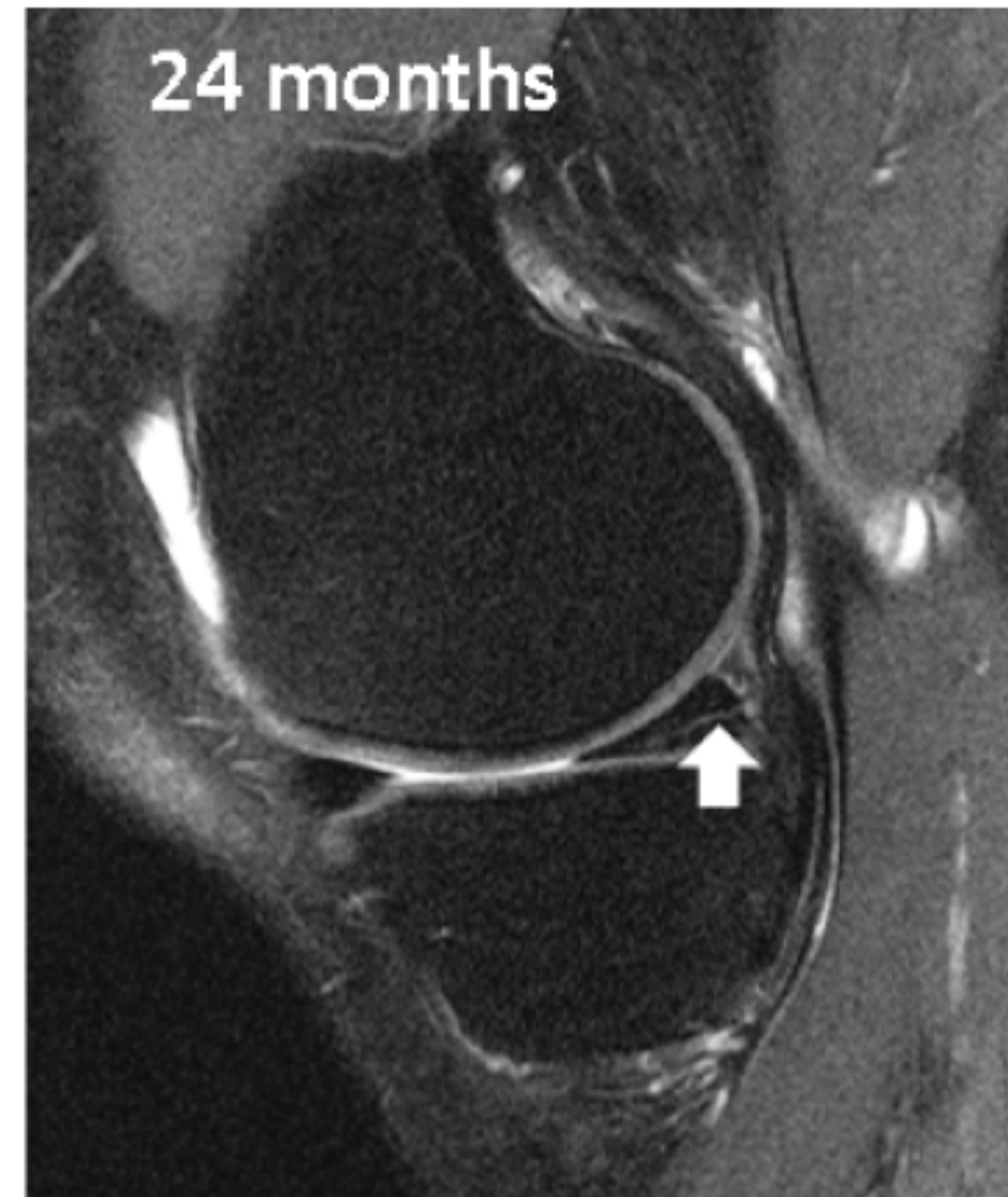
Definition and Meniscus Tear Types

- Middle and older aged
- Atraumatic
- Often slow onset of symptoms



Müller-Rath et al. Arthroskopie 2010

Degenerative Meniscus Lesions

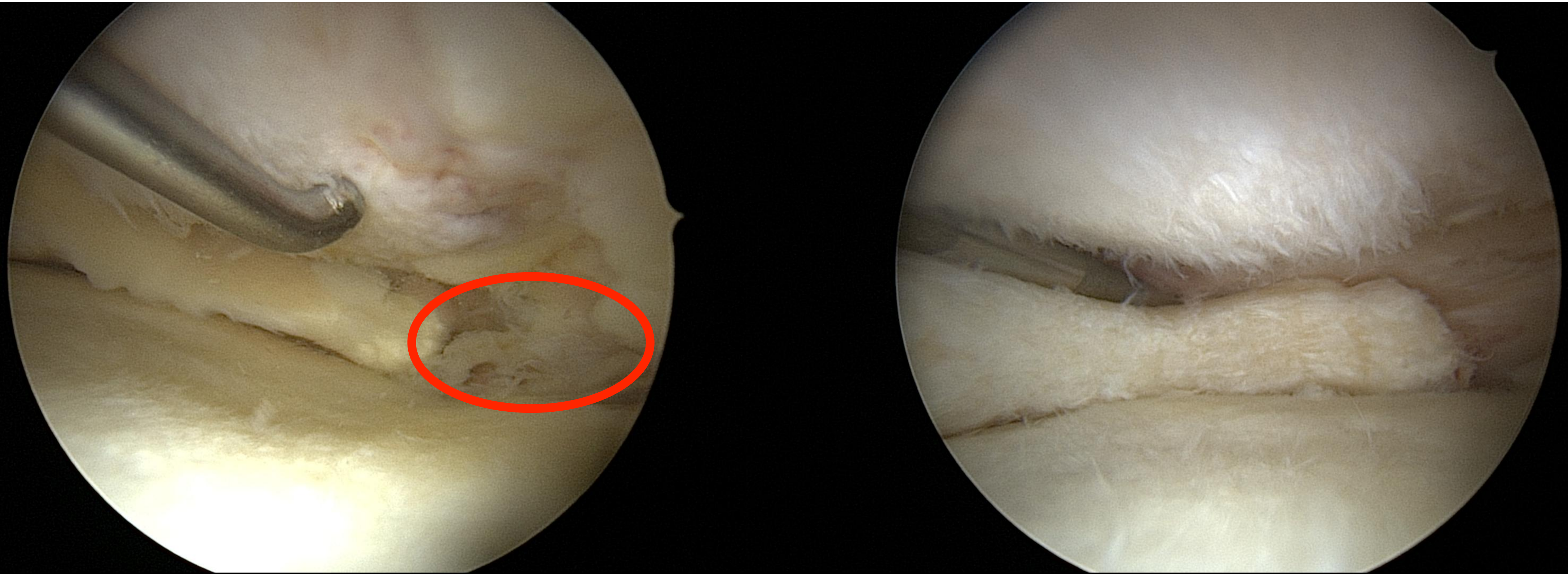


Kumm et al. Radiology 2015

Medial Posterior Root Tear

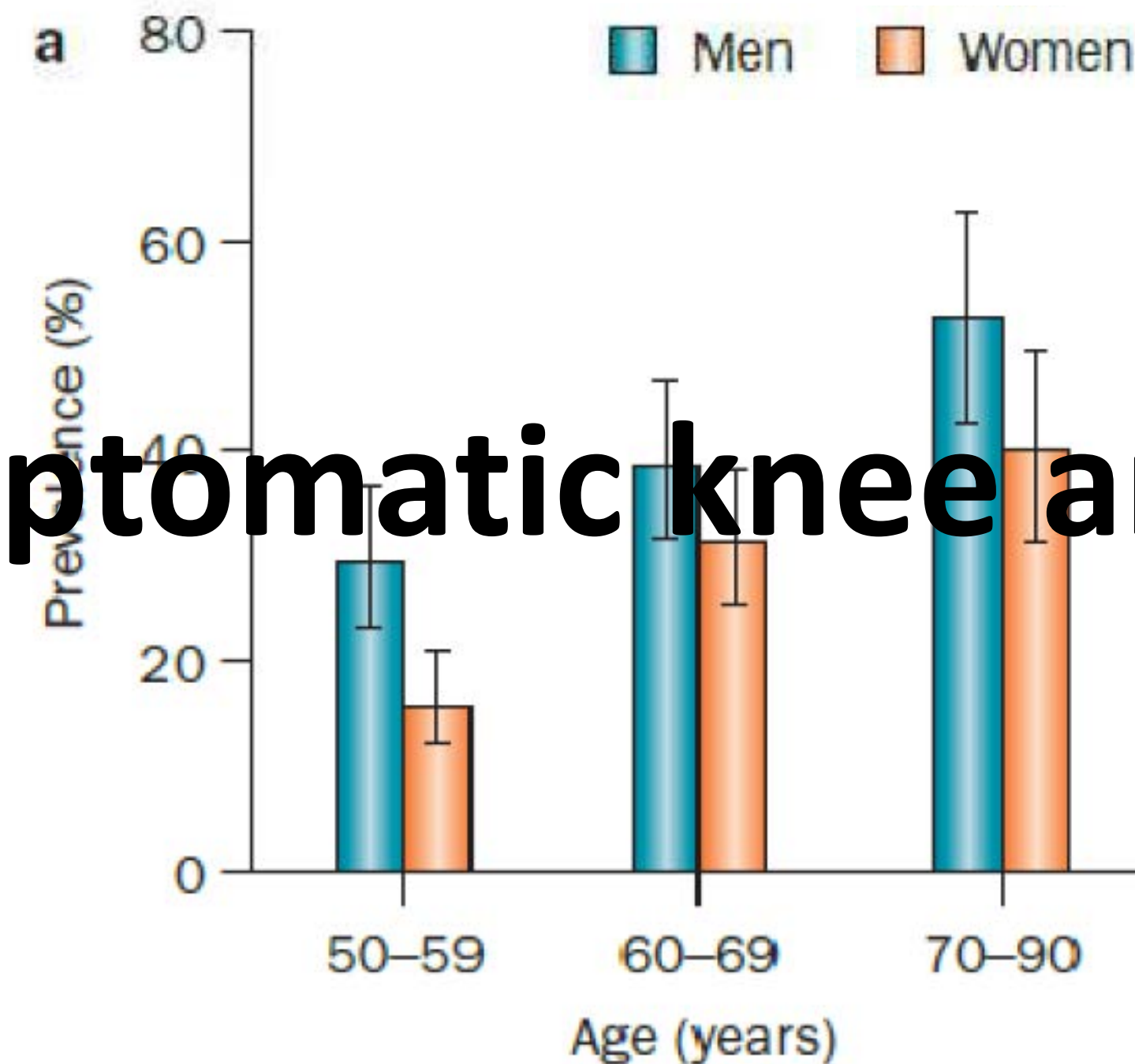


Medial Posterior Root Tear



Prevalence of Degenerative Meniscus Lesions

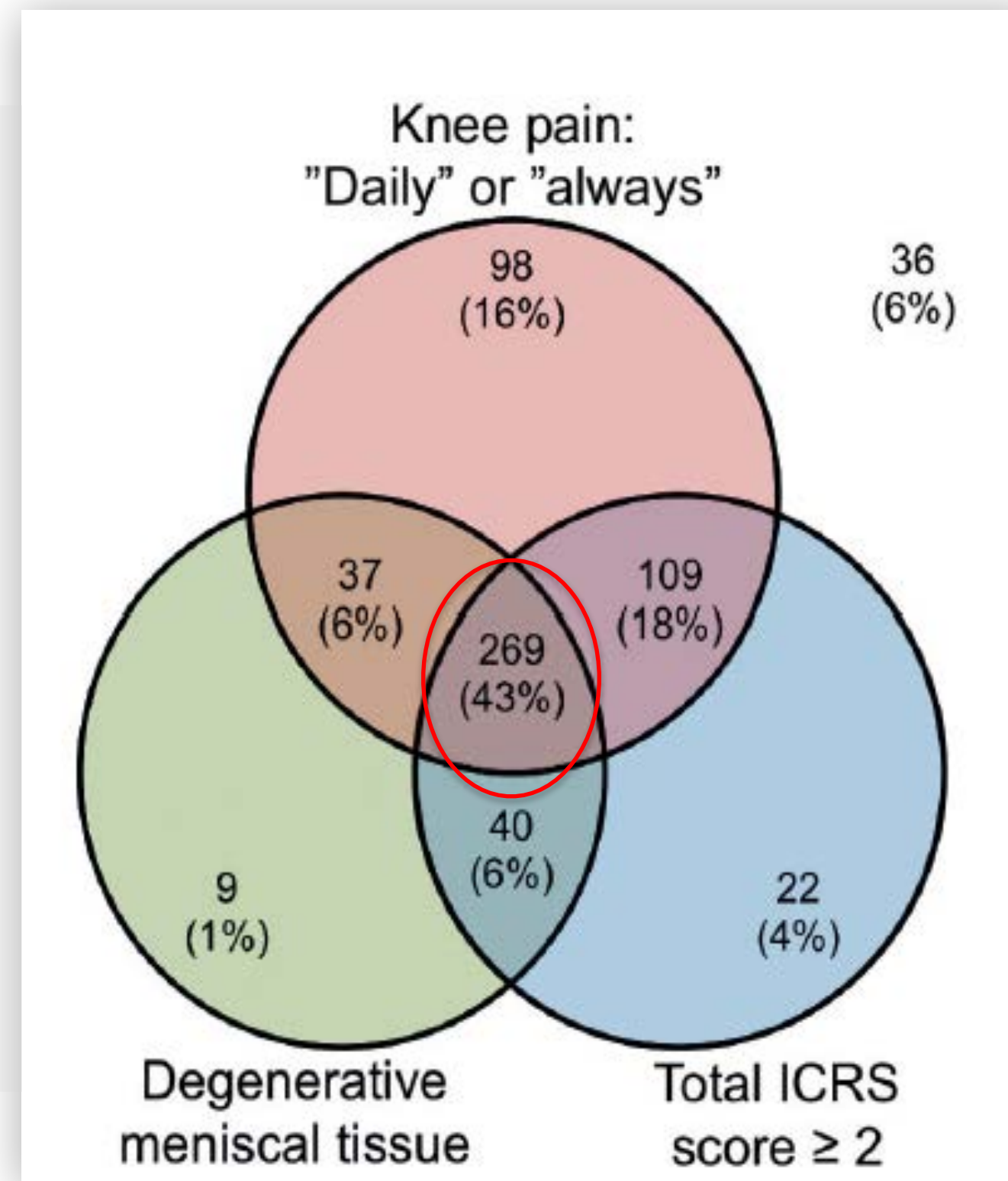
In symptomatic knee arthritis: >90%



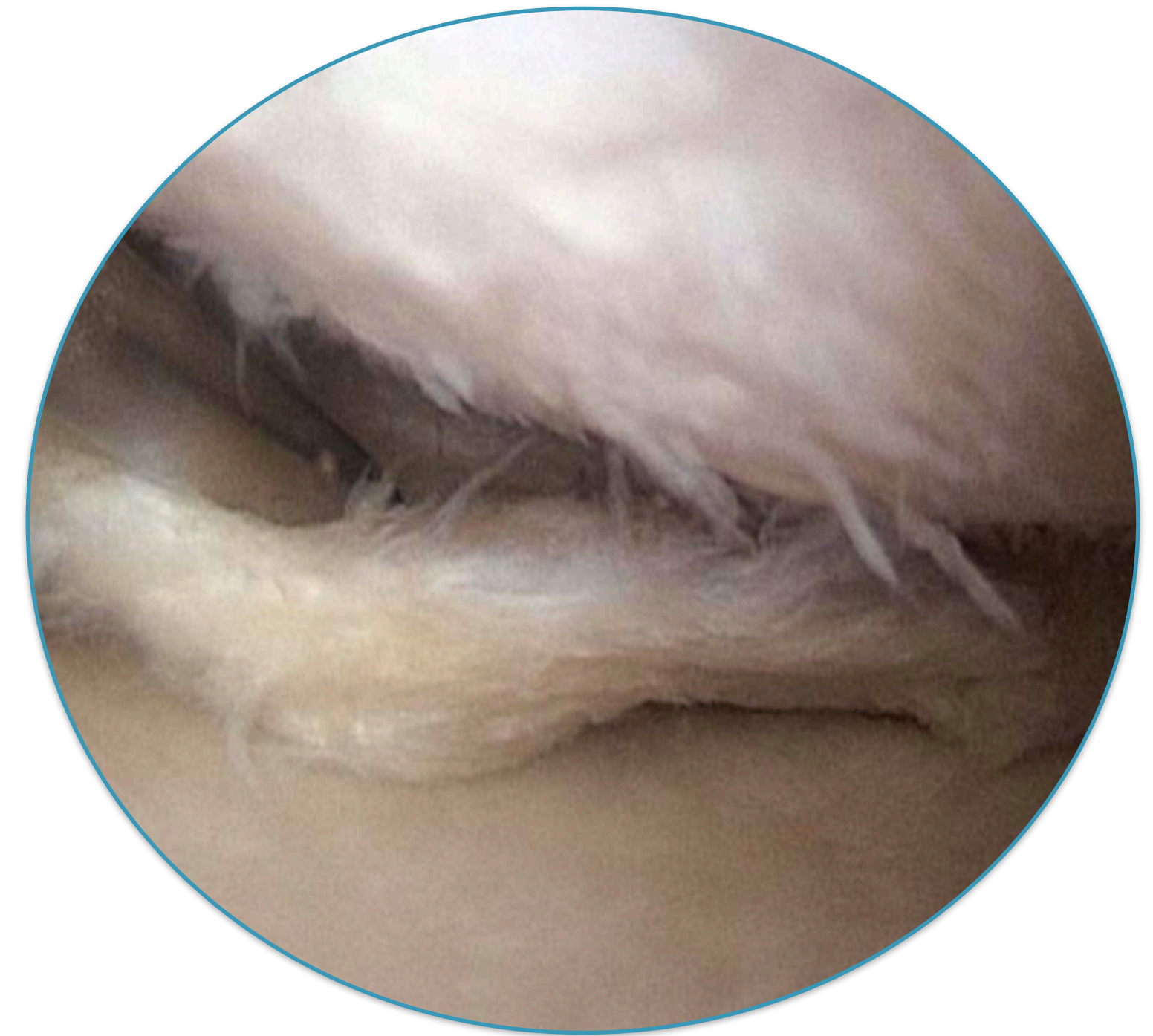
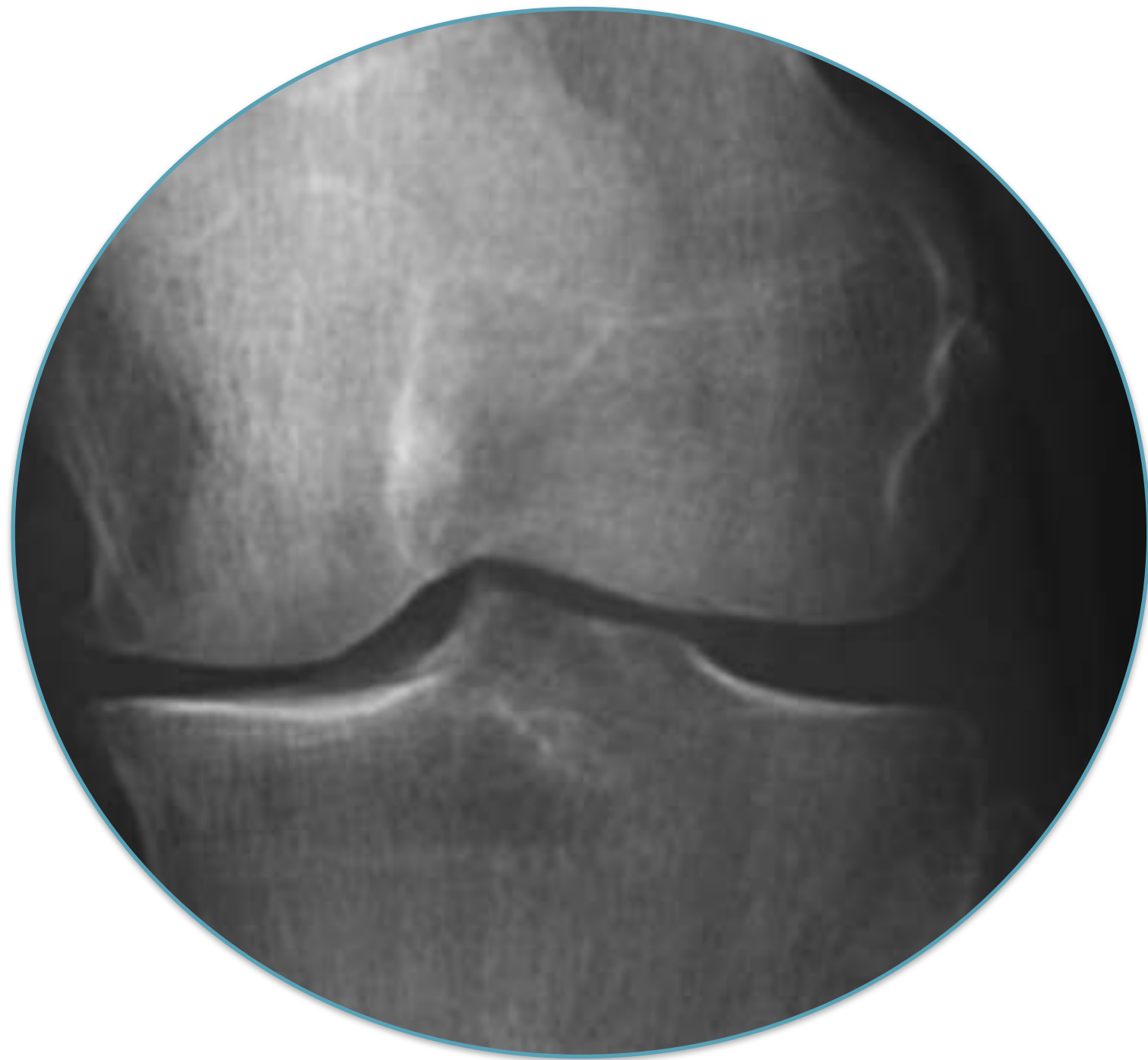
Englund et al. N Engl J Med 2008

Comorbidities / Cofactors

- Bone marrow lesions (up to 50%)
- Chondral lesions
- Coronal alignment (varus/valgus)
- Meniscus extrusion
- Chronic instability
- Leisure/ sports activities
- Profession
- Age, weight



Pihl et al. Acta Orthopaedica 2017



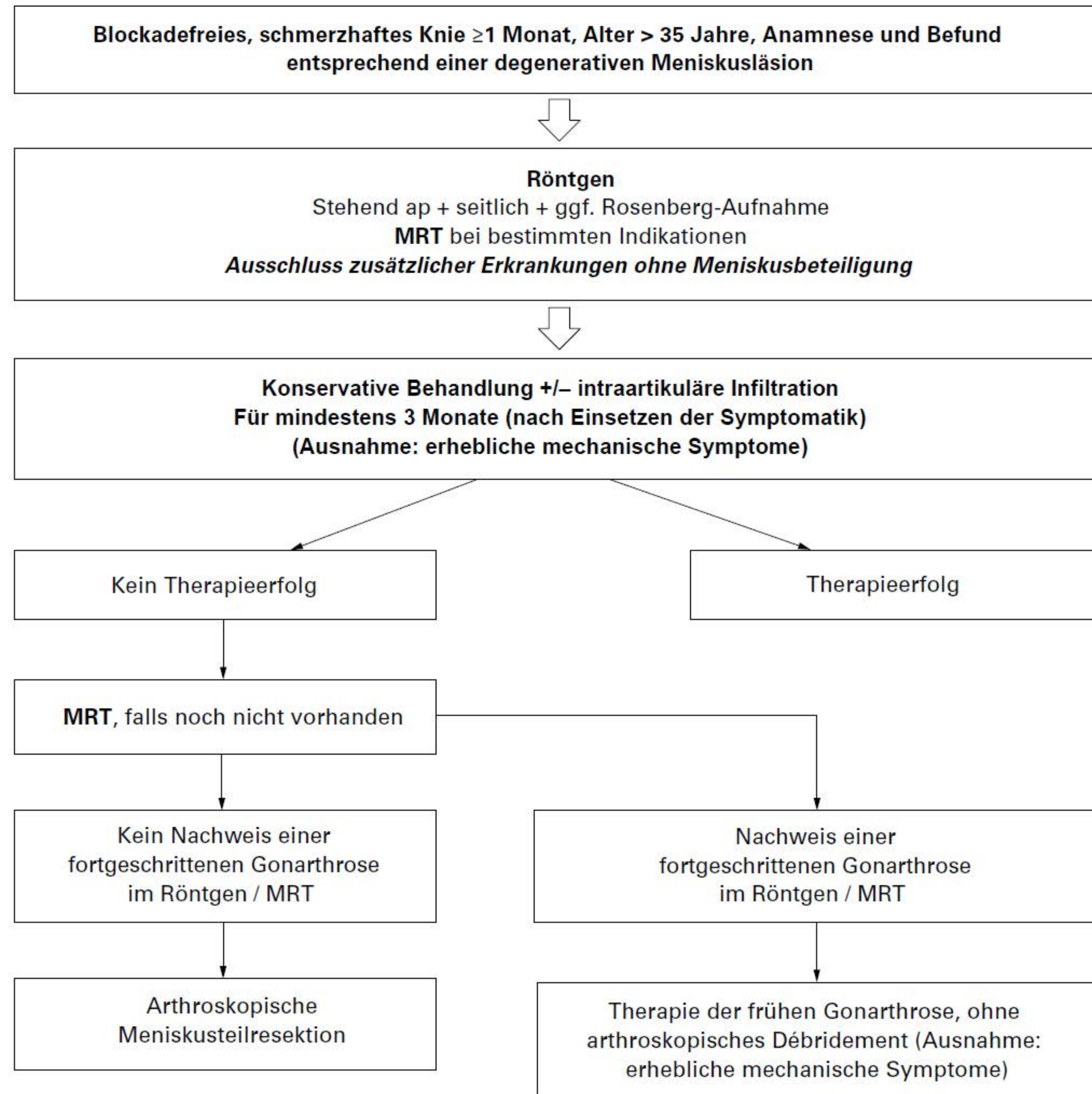
Symptoms and Clinical Findings

Symptom/ Clinical Finding	Degenerative Meniscus Lesion	Knee Arthritis
Night and rest pain	-	+
Start-up pain	(+)	+
Weith bearing pain	+	(+)
Rotation pain	++	(+)
Locking/ mechanical symptoms	+	(+)
Joint space tenderness	+	++
Effusion/ swelling	(+)	+

Treatment Algorithm

Kaelin et al. Medicalforum 2018
Beaufils et al. KSSTA 2017

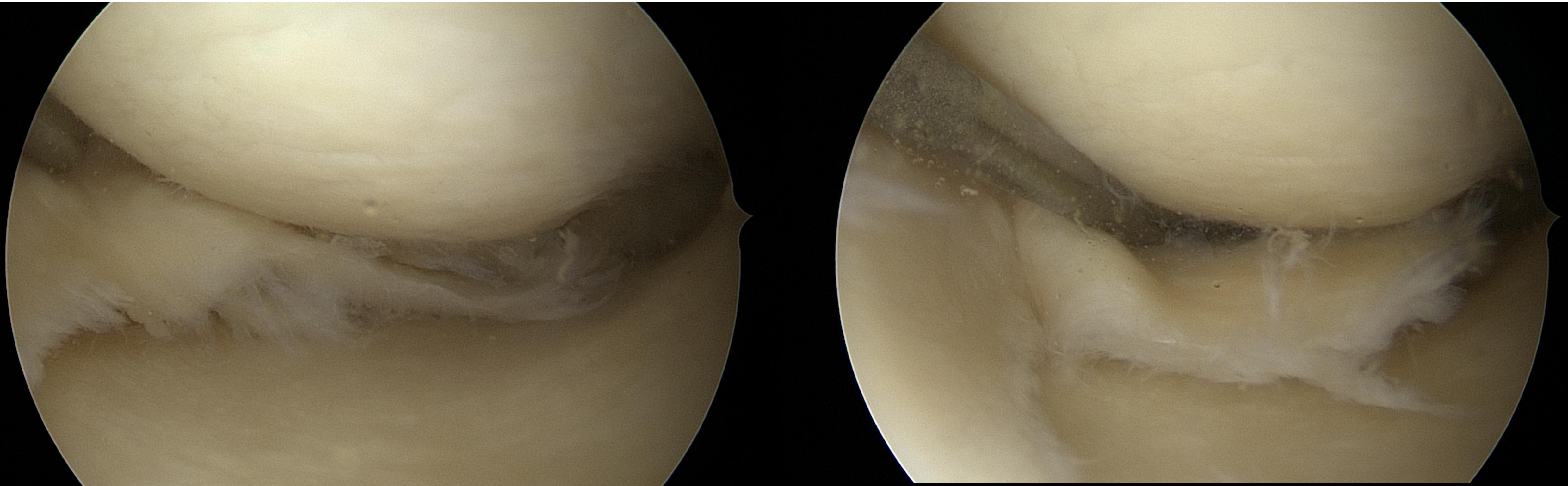
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„Good“ Indications for Surgery

- (Sub)Acute onset of symptoms
- Mainly pain with weight bearing
- Positive meniscus signs and joint line tenderness
- Mechanical Symptoms (locking, snapping, extension deficit or clear rotational pain)
- Instable tear pattern in MRI (flap tear, bucket handle)

„Good“ Indications for Surgery



Conclusion

“

We believe that a surgeon should treat the patient's symptoms and not perform surgery based solely on the results of MRI findings. A carefully taken history, physical examination, and standing radiographs still remain the most important diagnostic tools. The primary indication for arthroscopic surgery includes distinct presenting symptoms of well-localized joint line pain with acute onset and mechanical symptoms such as catching or locking that have failed comprehensive nonoperative management.

Krych et al. Arthroscopy 2014

Summary

- Degenerative meniscus tears are common and often not symptomatic
- First conventional imaging (x-ray)
- Arthroscopic partial meniscectomy is indicated and effective under certain conditions (mechanical symptoms)
- In absence of mechanical symptoms:
First conservative therapy (physiotherapy, NSAR, infiltration)



Thank you!

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