

# Examination of the knee

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**ARTHRITIS**



# Meet the speakers



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GP WITH SPECIAL INTEREST IN MSK MEDICINE AND  
CLINICAL CHAMPION IN PHYSICAL ACTIVITY WITH PHE



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GP WITH SPECIAL INTEREST IN MSK MEDICINE  
CLINICAL LEAD VERSUS ARTHRITIS 'CORE SKILLS IN MSK'

# Learning outcomes

1. Gain confidence in taking an effective history from an MSK patient, including eliciting red flags and psychosocial flags.
2. Be able to demonstrate focused examination of the MSK patient.
3. Practice explanation of the diagnosis.
4. Formulate a management plan, including appropriate investigations, referral, safety net and follow-up.

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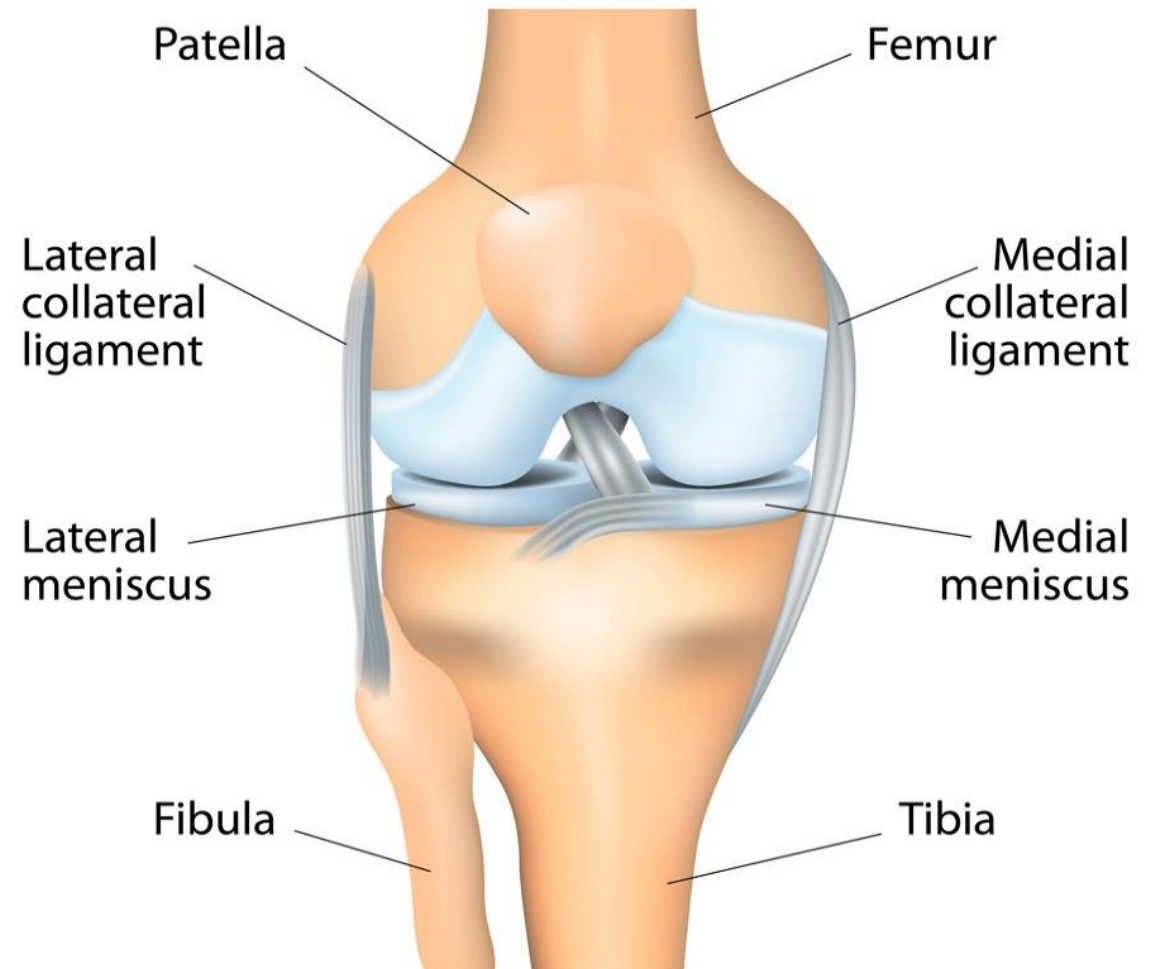


# Lower limb workshop

During this session:

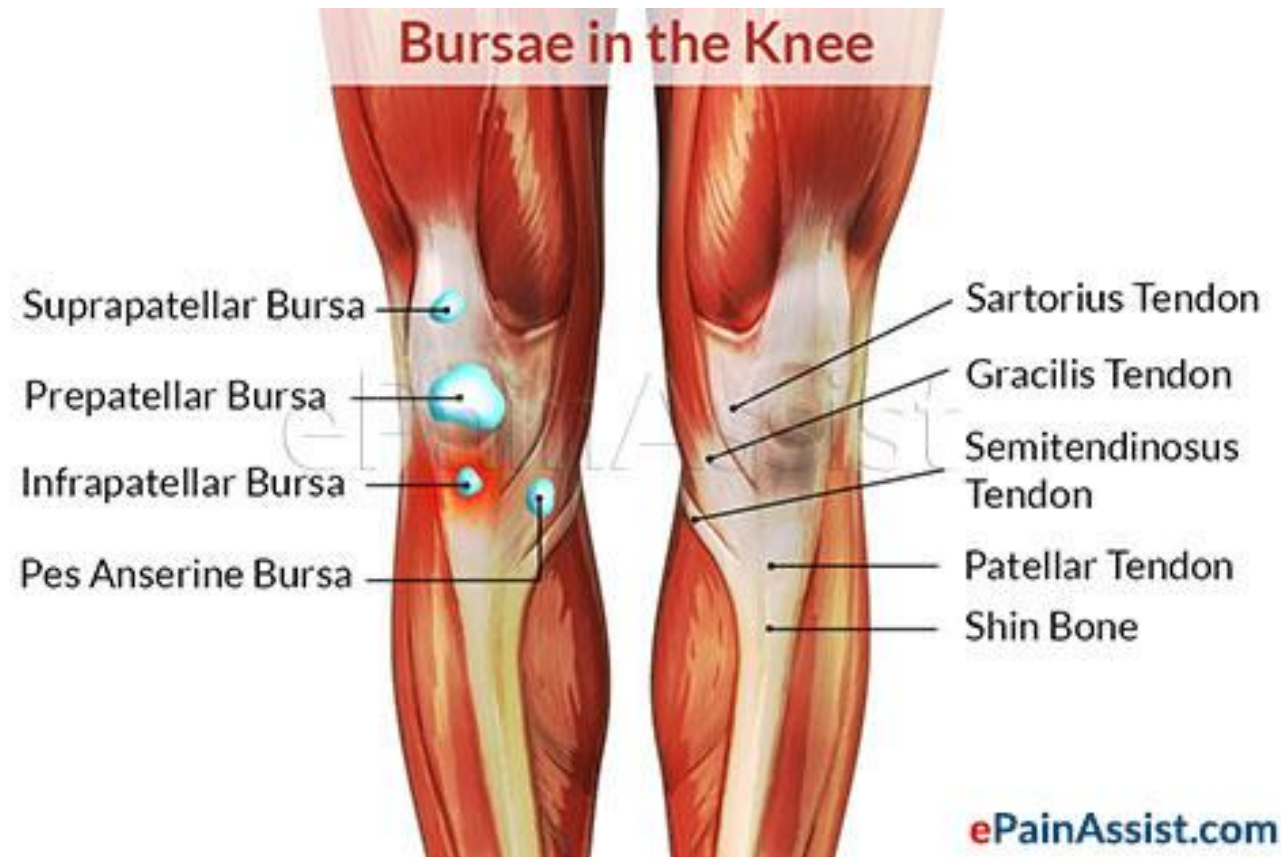
- Introduction and anatomy
- Clinical case and history
- Examination demonstration and pract
- Explanation and management plan

## The human knee





# Swelling not always an effusion



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# Age groups affected by pathologies

**BOLD: EFFUSION PRESENT**

Age	Joint causes	Around the joint	Referred pain to the knee
10–18 years	<ul style="list-style-type: none"> <li>• <b>Osteochondritis dissecans</b></li> <li>• <b>Torn meniscus</b></li> <li>• Anterior knee pain                             <ul style="list-style-type: none"> <li>– Hypermobility</li> <li>– Patellar malalignment</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Osgood-Schlatter disease</li> <li>• Sinding-Larsen-Johansson syndrome</li> <li>• <b>Osteomyelitis</b></li> <li>• <b>Tumours</b></li> </ul>	Slipped upper femoral epiphysis
Early adulthood 18–30 years	<ul style="list-style-type: none"> <li>• <b>Osteochondritis dissecans</b></li> <li>• <b>Torn meniscus</b></li> <li>• Anterior knee pain                             <ul style="list-style-type: none"> <li>– Hypermobility</li> <li>– Patellar malalignment</li> </ul> </li> <li>• <b>ACL tear</b></li> </ul>	<ul style="list-style-type: none"> <li>• Overuse syndromes</li> <li>• Bursitis</li> <li>• Sports injuries to tendons</li> </ul>	
Adulthood 30–50 years	<ul style="list-style-type: none"> <li>• <b>Meniscal tears</b></li> <li>• Anterior knee pain                             <ul style="list-style-type: none"> <li>– Hypermobility</li> </ul> </li> <li>• <b>Early degeneration</b> <ul style="list-style-type: none"> <li>– Previous injury</li> <li>– Previous meniscectomy</li> </ul> </li> <li>• <b>Inflammatory arthropathies</b></li> </ul>	<ul style="list-style-type: none"> <li>• Bursitis</li> <li>• Tendinitis</li> <li>• Sports injuries to tendons</li> <li>• <b>Baker's cyst</b></li> </ul>	Referred pain from hip conditions (pain front of thigh and knee)
Older adulthood >50 years	<ul style="list-style-type: none"> <li>• <b>OA</b></li> <li>• <b>Inflammatory arthropathies</b></li> <li>• Hypermobility</li> </ul>	<ul style="list-style-type: none"> <li>• Bursitis</li> <li>• Tendinitis</li> <li>• Sports injuries to tendons</li> <li>• <b>Baker's cyst</b></li> </ul>	Referred pain from OA hip

Gilchrist I. (2004). Anterior Knee Pain.  
Hands on practical advice on management of rheumatic disease, 4, 5th ser.

# History

- Characteristics of patient's pain
- Mechanism and force direction of injury (if present)
- Mechanical symptoms (locking, popping, giving way, crepitus)
- Joint effusion (timing, amount, recurrence)
- Systemic symptoms



# Matrix for examination of the knee

## Look

- Weight bearing and non-weight bearing
- Misalignment
- Scars
- Wasting
- Swelling
- Erythema
- Baker's cyst
- 'Too many toes' sign



## Consider

- Two-legged/one-legged squat



## Feel

- Quads bulk
- Effusion
- Joint line tenderness
- Patellar margins
- Tibial tuberosity



## Move

- Extension
- Flexion
- Resisted extension in PFJ pain



## Screen

- Hip
- L spine
- Ankle





# Why are we 'decluttering' GP knee examination?

## 'NICE CKS Knee Pain-assessment (July 17)'

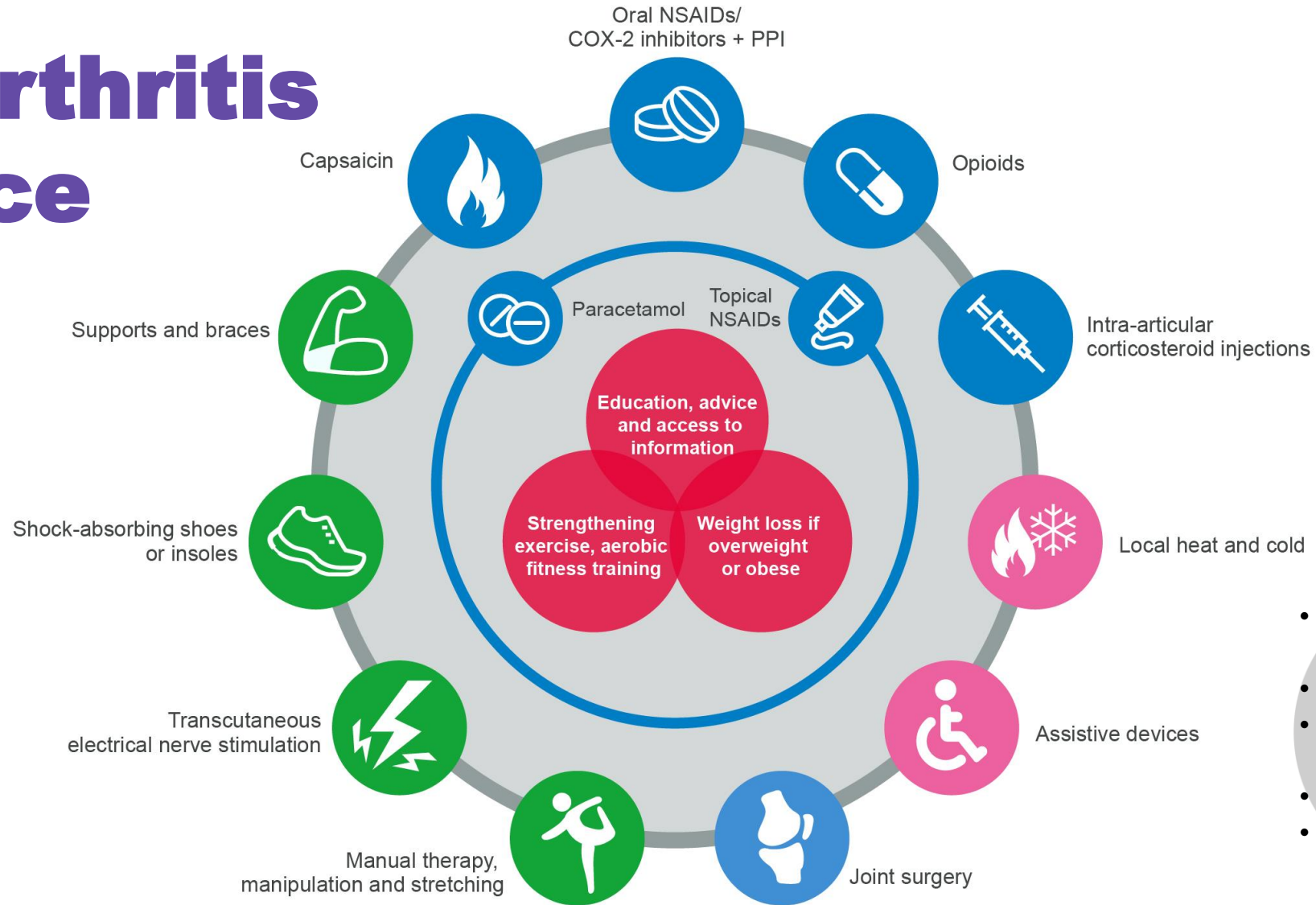
### CONCLUSION

- ✓ A comprehensive overview of meta-analyses and systematic reviews concluded that the Lachman test for ACL trauma is the only test able to rule in or out a knee disorder.
- ✓ A classic ACL history is a better guide!
- ✓ McMurray's test can exacerbate meniscal injuries!

Test	Finding	Sensitivity	Specificity
MRI		75–87%	87–93%
Meniscal tests	Joint line tenderness	71%	27%
	McMurray	58%	93%
	Apley	58%	80%
ACL tests	History	58%	94%
	Lachman	85%	94%
	Anterior drawer	68%	79%
	Pivot shift	24%	98%

# NICE

## Osteoarthritis guidance

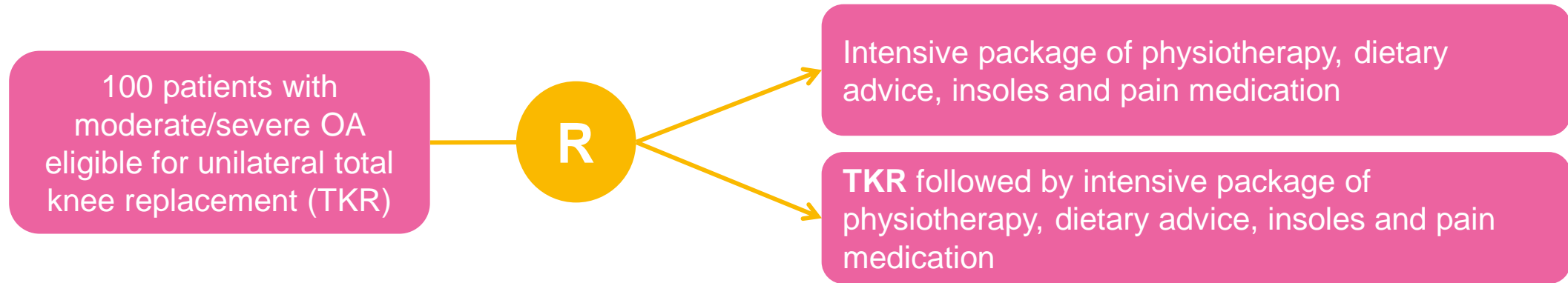


- Glucosamine/  
chondroitin
- Acupuncture
- Arthroscopic lavage  
and debridement
- Rubefacients
- Hyaluronan IA  
injections

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NICE (2014) Osteoarthritis care and management CG177.[Accessed: 02/05/2019];  
Recommendations IN see: 1.2.5, 1.3.1, 1.5.1, 1.5.3, 1.5.6, 1.5.9, 1.5.1, 1.5.12, 1.3.4, 1.4.9, 1.6.3, 1.4.2, 1.4.4, 1.4.7, 1.4.8, 1.5.4;  
Recommendations OUT see: 1.4.5, 1.4.6, 1.4.10, 1.5.5, 1.5.13. See appendix for full details.

# Total Knee Replacement



## RESULTS:

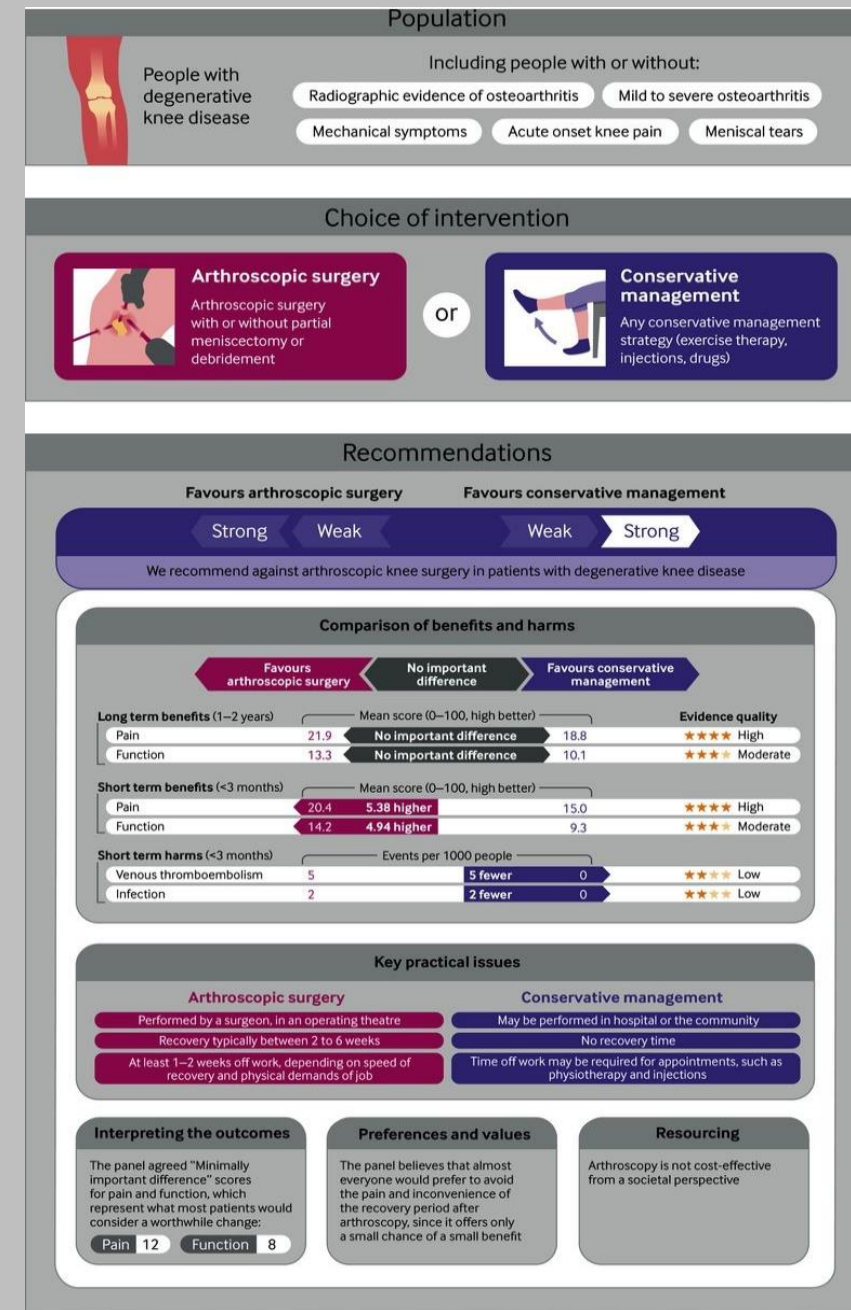
	Surgical group	Intensive input
>15% improvement in pain at 12-month follow-up	85%	68%
Serious adverse events	48%	12%

## CONCLUSIONS:

- Non-surgical group did very well (only 26% opted for TKR after the non-surgical intervention)
- TKR was significantly superior to non-surgical treatment in terms of pain and function but was associated with significant complications

# Arthroscopic surgery for degenerative knee arthritis and meniscal tears: a clinical practice guideline

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# What you say really matters!

*“I've learned that people will forget what you said, people will forget what you did, but people will never forget how you made them feel.”*

Maya Angelou: American poet, memoirist and civil rights activist



# Core skills Workshops

Remaining workshop dates for 2019:

Wednesday 23 October – Leeds

Tuesday 26 November – London

Tuesday 10 December – Glasgow

To book your place visit: [www.coreskillsinmsk.co.uk](http://www.coreskillsinmsk.co.uk)

For local workshops in your areas please contact

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# Thank you...

## Questions?

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