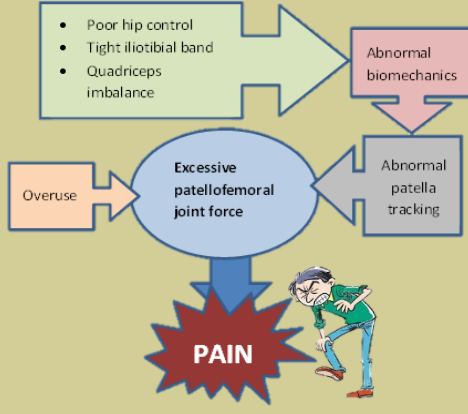


Patellofemoral Pain Syndrome

- Common condition which causes **pain behind the patella**.
- Affects active individuals of **all ages**.
- Occurs through **overloading, overuse and muscular imbalance**.

What causes the syndrome?



Current diagnosis

- No 'gold standard' technique** yet established
- Patient history** taken alongside **clinical examination** for exclusion of other knee conditions.

Conclusion

This systematic review of the most recent literature concludes that whilst new studies have been conducted for PFPs diagnosis, the **tools used have remained consistent**, with no novel ideas being presented since previous reviews undertaken 10 years ago.

Recent studies do suggest that using a **combination of patient history, physical examination, and radiological imaging should be considered the current 'gold standard'** diagnostic technique for PFPs.

Methods

The review will confer valuable insight to clinicians to **judge the diagnostic accuracy of the current PFPs diagnostic tools**.

Search strategy

PubMed, Science Direct, Web of Knowledge, MEDLINE, CINAHL, and EMBASE via NICE NHS databases searched.

Eligibility criteria

Eligible:

- Pain or stiffness in the patella area.
- Confirmed diagnosis of PFPs.
- Evaluated accuracy of diagnostic tools for PFPs.
- A stated reference standard.
- English language.
- 2010-present.

Excluded:

- Knee surgery prior to PFPs diagnosis.
- Associated knee disease alongside PFPs.

Quality assessment

QUADAS2 tool used to assess bias and validity.

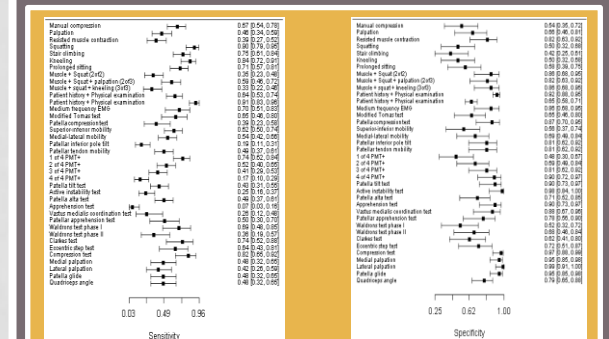
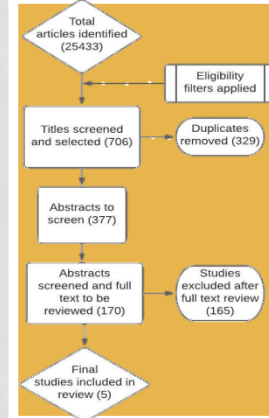
Diagnostic accuracy measures

- Sensitivity
- Specificity
- Likelihood ratio
- Predictive values
- Overall accuracy

Results

The systematic search revealed 25,433 studies. After full text review **5 studies** were considered eligible.

- 540 participants were recruited (234 PFPs, 306 controls).
- 58% female, 39% male.
- PFPs
 - Average age = 39.29
 - Average BMI = 27.68
- Controls
 - Average age = 42.08
 - Average BMI = 27.56



Diagnostic clusters of history and physical examination showed high diagnostic measures [sensitivity 92%, specificity 92.65%, CI95%] for diagnosing or excluding PFPs

I would like to thank Mahshid Paschoolan, Jan Heman-Kuiper, Andy Bamef, Ashley Brown, and Bernhard Tins for their contributions to this review

Cook C, Hegadus E, Hawkins R, Scovell F, Wyland D. Diagnostic Accuracy and Association to Disability of Clinical Test Findings Associated with Patellofemoral Pain Syndrome. *Physical Therapy*. Canada 2010; 22(1): 17-24. Decary S, Frimom J, Pallester B, Falck M, Balazs, Martell-Pallester, et al. Validity of Combining History Elements and Physical Examination Tests to Diagnose Patellofemoral Pain. *Archives of Physical Medicine and Rehabilitation*. 2017; 99(4): 607-614.

Dill S, Dill J. Management of Patellofemoral Pain Syndrome. *American Family Physician*. 2007; 75: 194-202.

Ferrari D, Karki H, Silva C, Alves A, Anzvedo J. Diagnostic accuracy of the EMG parameters associated with anterior knee pain in the diagnosis of patellofemoral pain syndrome. *Archives of physical medicine and rehabilitation*. 2014; 95(8): 1521-1526.

Papadopoulos K, Noyes J, Jones J, Thom J, Stefanopoulos D. 2014. Clinical tests for differentiating between patients with and without patellofemoral pain syndrome. *Hong Kong physical therapy journal*. 32(1): 35-43.

Rotherham M. Patellofemoral Pain. *Clinical journal of sports medicine*. 2015; 34(2): 313-327. doi:10.1016/j.csm.2014.11.011

Sweitzer B, Cook C, Steadman J, Hawkins R, Wyland D. 2010. The Inter-Rater Reliability and Diagnostic Accuracy of Patellar Mobility Tests in Patients with Anterior Knee Pain. *The Physician and Sports Medicine*. 38(3): 90-96.