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Which patellofemoral imaging features are associated with patellofemoral pain?

Systematic review and meta-analysis

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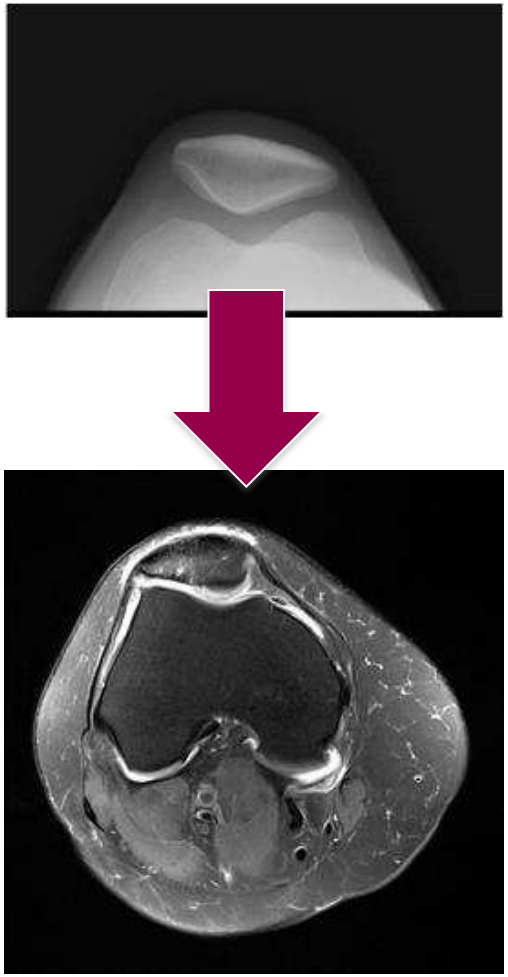
Background

- PFJ structure widely believed to be related to PFP
- Historically viewed using x-ray
- Advances in imaging over last 20 years
- No consensus on imaging features to use
- **To determine which imaging features are most likely to be associated to PFP**

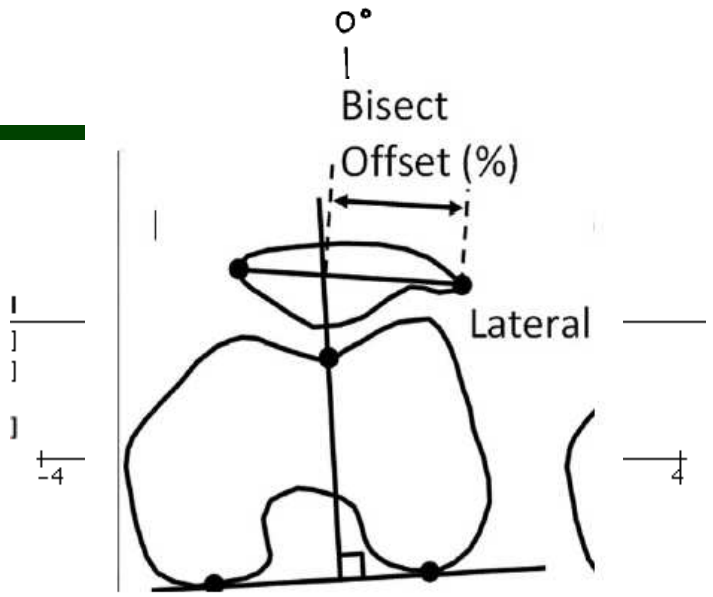


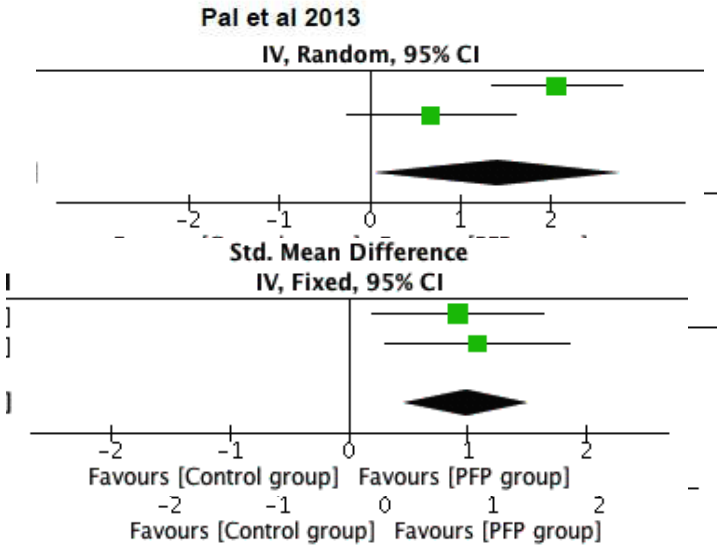
Methods

- Included studies:
  - PFP vs. Control
  - < 45 years old
  - US, MRI, CT & X-ray
- Quality assessment using Modified Downs & Black checklist
- Best-evidence synthesis and meta-analysis
- Sensitivity analysis for full weight bearing

Results

- 40 studies (all moderate to high quality)
- Two features :
  - MRI bisect offset at 0° with load
  - CT congruence angle at 15° with & without load
- Sensitivity analysis:
  - ⇧MRI bisect offset
  - ⇧MRI patella tilt





Conclusions

- Future studies need to clearly report:
  - Study population
  - Imaging-reporting issues
- Imaging under full weight bearing improved the ability to differentiate between PFP and control groups
- MRI bisect offset and CT congruence angle are imaging features most likely to be seen in PFP and not in controls

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