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Biologic Augmentation of Meniscus Repair

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Aims

The aim of this study was to carry out a scoping review to investigate the use of biologic augmentation strategies for arthroscopic meniscal repair.

Rationale

Increasing numbers of meniscus repairs being performed using a range of surgical techniques

BUT rates of failure of healing remain high.[1,2]

This is a comprehensive overview evaluating the extent, range and overall summary of the literature pertaining to the biological enhancement of arthroscopic meniscal repair.

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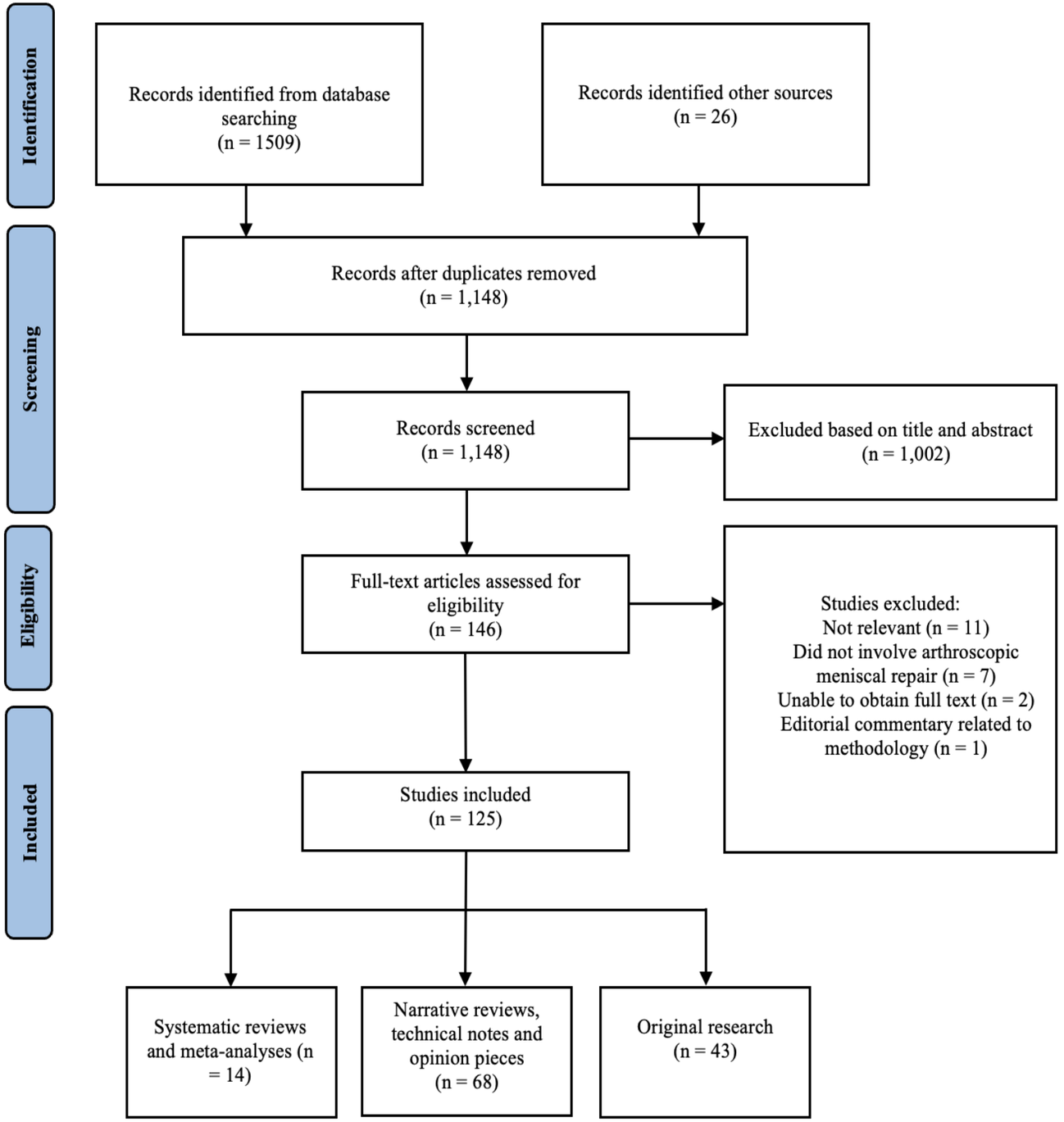
PRISMA DIAGRAM



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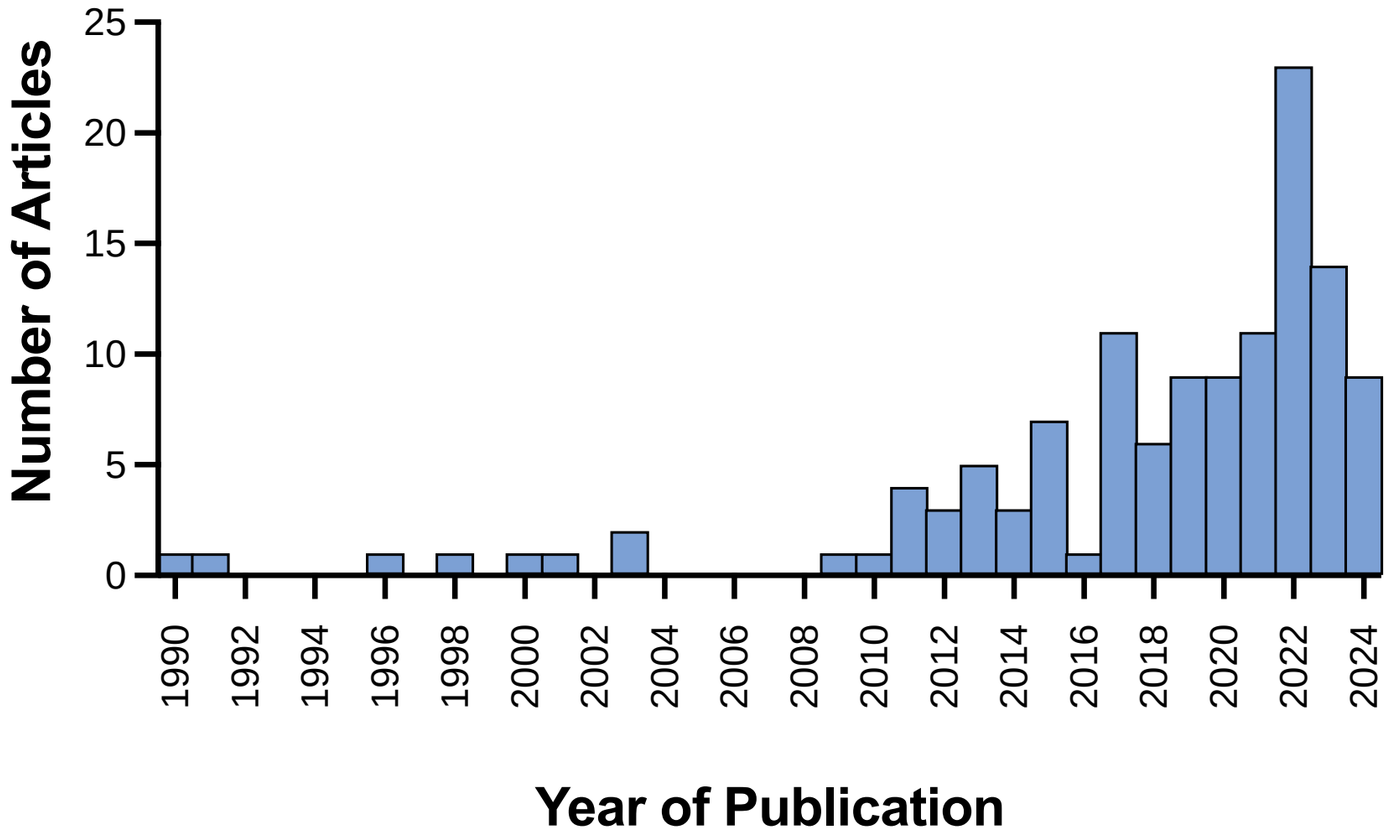
Results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1990
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1994
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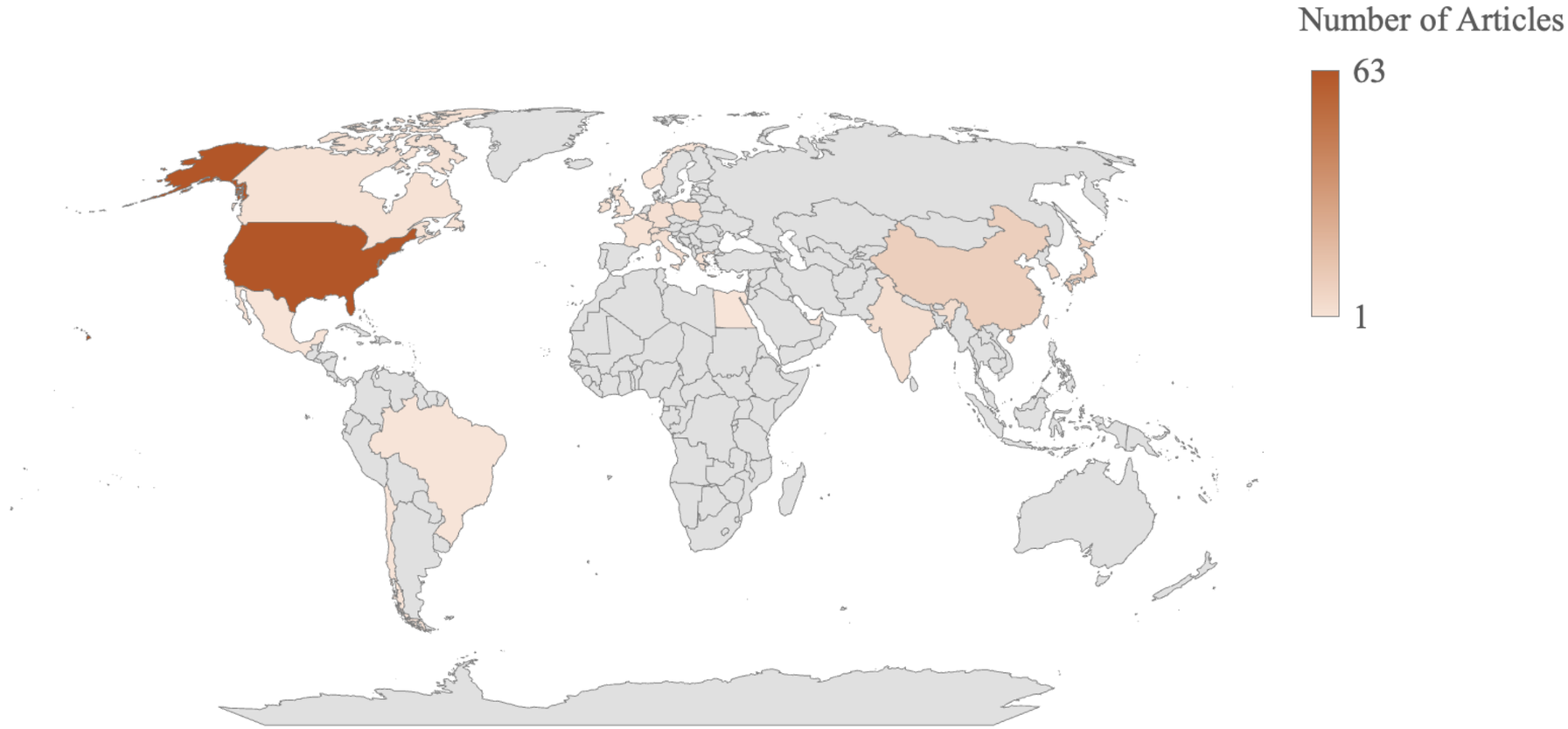
2016
2018
2020
2022
2024
Year of Publication

Results



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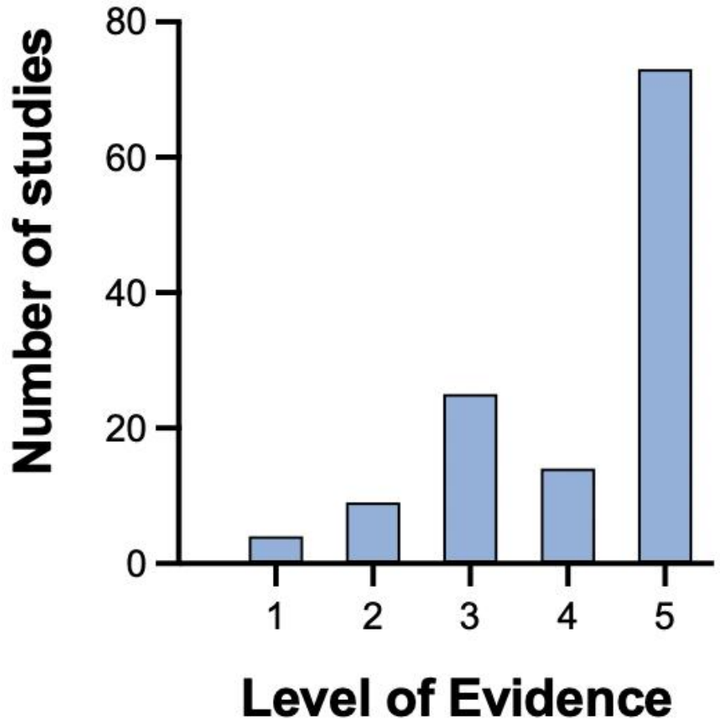

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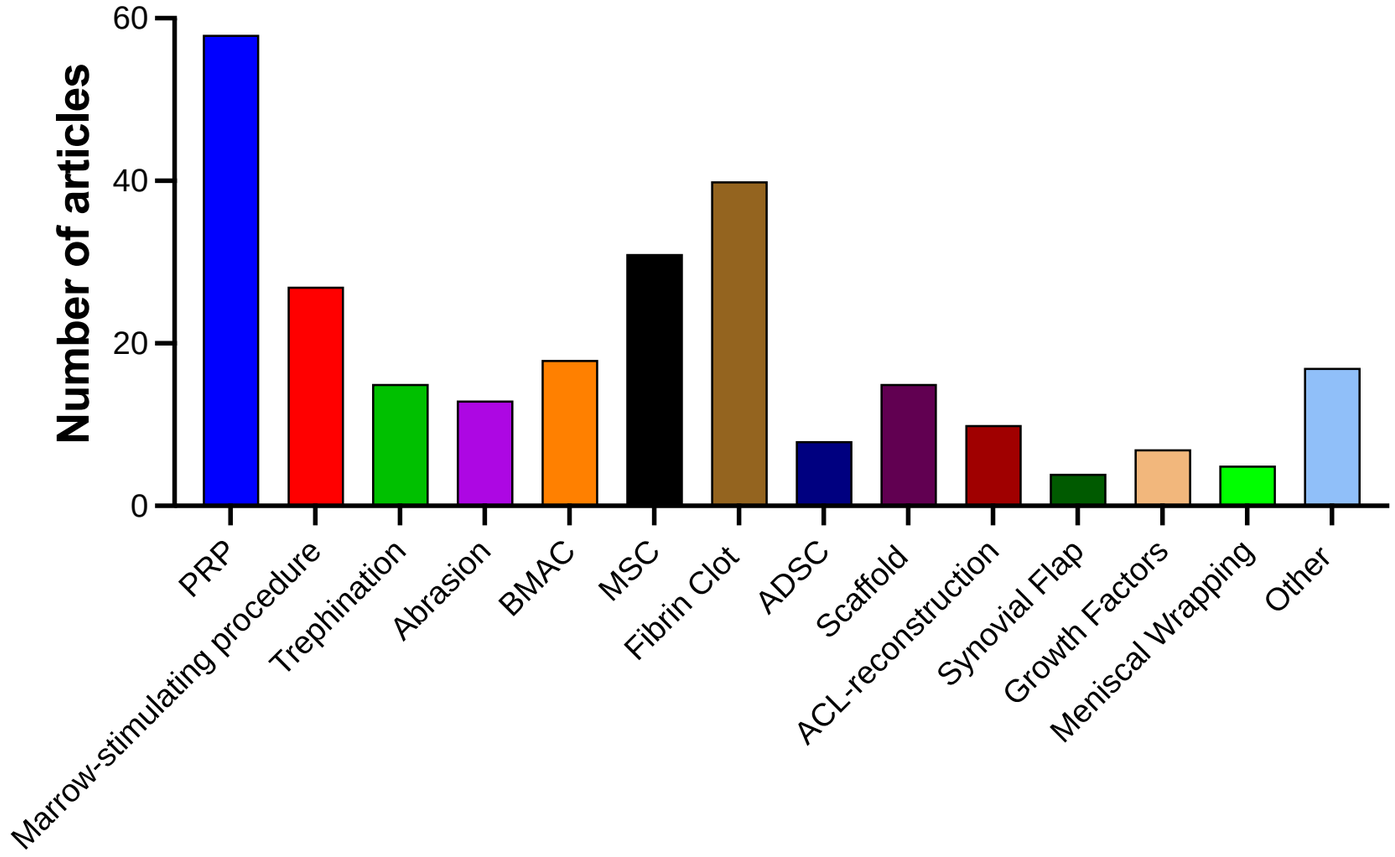
Number of articles
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40
20
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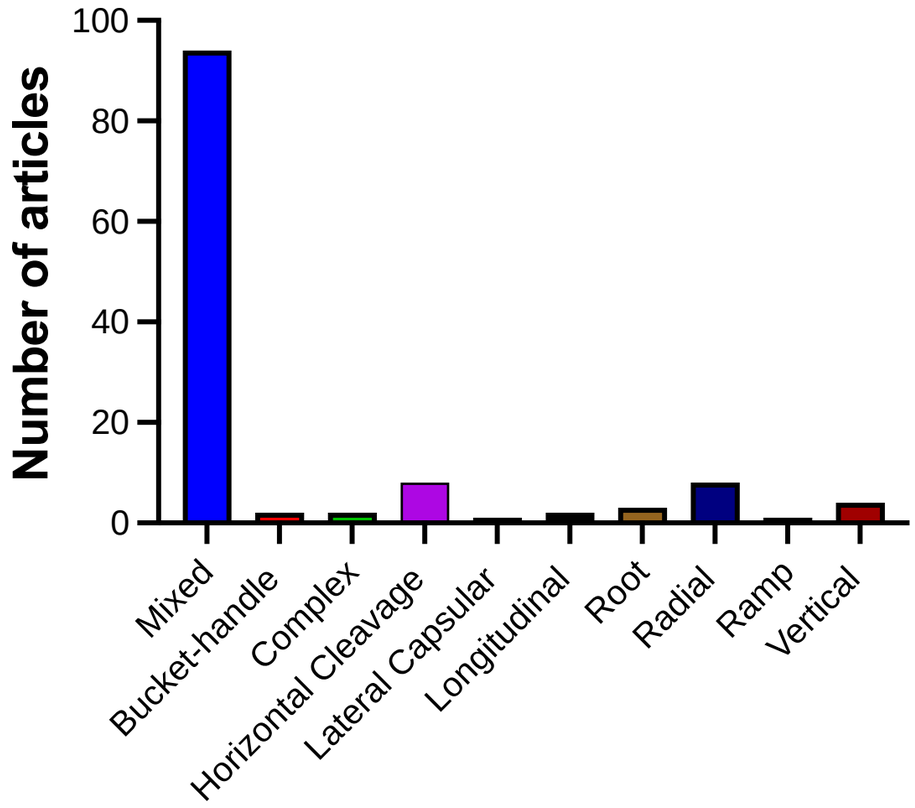
PRP
Marrow-stimulating procedure
Trephination
Abrasion
BMAC
MSC
Fibrin Clot
ADSC
Scaffold
ACL-reconstruction
Synovial Flap
Growth Factors
Meniscal Wrapping
Other

Results


Number of articles
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80
60
40
20
0
Mixed
Bucket-handle
Complex
Horizontal Cleavage
Lateral Capsular
Longitudinal
Root
Radial
Ramp
Vertical

Key Messages:

- **NO** consensus for study design and reporting standards to determine the most effective strategies for specific meniscus tear morphologies and locations.
  1. 28 different outcome measures
  2. No clear definition of ‘healed’ meniscus repair
  3. Limits quality & application of research

- 2 RCTs and other non-randomised clinical studies have shown promising results,[3,4] there is insufficient evidence to guide clinician decision making.

Next Steps

Consensus among experts is required to establish:

- **Appropriate study design**
- **Reporting standards**
- **Tools for determining outcomes**

Further level 1 evidence needed to guide decision making

References

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