

# References for "The Tectonic Shift in Knee OA Injectables"

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[1] [Corticosteroids, hyaluronic acid, platelet-rich plasma, and cell-based therapies for knee osteoarthritis - literature trends are shifting in the injectable treatments' evidence: a systematic review and expert opinion](#)

Alessandro Bensa, ..., and G. Filardo. Expert Opinion on Biological Therapy, 2025. 15 citations.

100% Topic Match

Reviews evidence volume for IA corticosteroids, hyaluronic acid, PRP, and cell based injections in knee osteoarthritis.

Systematic review (PRISMA) of PubMed/Cochrane/Web of Science through 2025, including 766 clinical studies (1959–2025) and 75,834 patients.

Includes counts by modality (CS 11,245; HA 40,862; PRP 16,174; cell based 7,553), study types (401 RCTs, 110 comparative, 255 case series); limited placebo RCTs and few disease modification studies — clearly highly relevant and precisely within the requested corpus.

[2] [Long-term effectiveness of intra-articular injectables in patients with knee osteoarthritis: a systematic review and Bayesian network meta-analysis](#)

Nikhil Gupta, ..., and K. Bansal. Journal of Orthopaedic Surgery and Research, 2025. 1 citations.

100% Topic Match

Evaluates long term effectiveness of IA PRP, HA, CS, and combinations for knee OA.

Conducts a Bayesian network meta analysis of 37 RCTs (n=5,089) with e1 year follow up, searching major databases to Oct 20, 2024, assessing pain and function.

Precisely relevant: human RCTs, knee specific, peer reviewed, up to 2024; useful for modality focused, study type, and year trend synthesis (includes SUCRA rankings).

[3] [Corticosteroid injections for knee osteoarthritis offer clinical benefits similar to hyaluronic acid and lower than platelet-rich plasma: a systematic review and meta-analysis](#)

Alessandro Bensa, ..., and G. Filardo. EFORT Open Reviews, 2024. 12 citations.

100% Topic Match

Compares clinical effectiveness of intra articular corticosteroids vs HA and PRP in knee osteoarthritis.

Performs a PRISMA systematic review and meta analysis of 35 RCTs (3,348 patients), using RoB 2, GRADE, and MCID up to 12 month follow up.

Knee focused, peer reviewed 2024 synthesis; reports CS H HA on WOMAC, HA better than CS on long term VAS (not MCID), and PRP superior to CS on WOMAC.

[4] [Efficacy and safety of corticosteroids, hyaluronic acid, and PRP and combination therapy for knee osteoarthritis: a systematic review and network meta-analysis](#)

Xiaochen Qiao, ..., and Zhi Tian. BMC Musculoskeletal Disorders, 2023. 50 citations.

100% Topic Match

Performs a Bayesian network meta analysis comparing IA corticosteroids, HA, PRP, and combinations for knee osteoarthritis.

Pooled 35 randomized controlled trials (n=3,104) identified via PubMed/Embase/Cochrane/Web of Science/Wanfang (to Dec 2022), assessed VAS/WOMAC/AEs, used Cochrane RoB v1 and STATA17.

Relevant: knee specific RCTs only, outcomes at ~3 months favored PRP (WOMAC), includes combination arms (e.g., PRP+HA); search/publication up to 2022 with full paper 2023.

[5] [Relative Efficacy of Intra-articular Injections in the Treatment of Knee Osteoarthritis: A Systematic Review and Network Meta-analysis](#)

Harshvivek Singh, ..., and J. Chahla. The American Journal of Sports Medicine, 2021. 81 citations.

100% Topic Match

Compares efficacy of IA PRP, HA, CS, and PRGF for knee osteoarthritis.

Performs a PRISMA systematic review and network meta analysis of RCTs with e6 month follow up, synthesizing pain/function outcomes standardized to 0–100 scales.

Relevant: human, peer reviewed RCT evidence synthesis focused on knee OA and the three target IA modalities (plus PRGF); includes study type and year (2021) for trend analyses.

[6] [Differentiating factors of intra-articular injectables have a meaningful impact on knee osteoarthritis outcomes: a network meta-analysis](#)

M. Phillips, ..., and M. Bhandari. Knee Surgery, Sports Traumatology, Arthroscopy, 2020. 53 citations.

100% Topic Match

Reports a network meta-analysis comparing intra articular PRP, HA (HMW vs LMW), corticosteroids (extended vs standard), and saline for primary knee OA.

Synthesizes 64 trials (n=9,710) through Nov 12, 2018, assessing short term (3 month) pain/function outcomes with frequentist NMA and effect sizes (SMDs, 95% CIs).

Relevant: knee specific RCTs only, distinguishes within class factors (HA MW, steroid release), finds HMW HA and PRP meet pain MID; useful for modality classification and trend/synthesis but limited to short term data and literature d2018.

[7] [Comparative effectiveness of intra-articular therapies in knee osteoarthritis: a meta-analysis comparing platelet-rich plasma \(PRP\) with other treatment modalities](#)

Saad Khalid, ..., and Pratik Bhattachari. Annals of Medicine and Surgery, 2023. 15 citations.

100% Topic Match

Compares clinical effectiveness of IA PRP versus HA, CS, and placebo in knee osteoarthritis.

Performs a meta-analysis of randomized controlled trials (42 RCTs through March 2023) pooling WOMAC, VAS, KOOS, IKDC outcomes at 1, 3, 6, and 12 months with subgroup/heterogeneity analyses.

Human, peer reviewed RCT evidence synthesis focused on knee OA; useful for modality level counts and trend/efficacy summaries but stops at March 2023 (not up to 2025).

[8] [How Does Platelet-Rich Plasma Compare Clinically to Other Therapies in the Treatment of Knee Osteoarthritis? A Systematic Review and Meta-analysis](#)

L. A. Costa, ..., and M. Ferretti. The American Journal of Sports Medicine, 2022. 55 citations.

100% Topic Match

Evaluates PRP versus other non surgical IA therapies for knee OA.

Performs a systematic review and meta analysis of 40 RCTs/quasi RCTs (n=3035), comparing PRP to HA, corticosteroid, and saline, with outcomes pain, function, and treatment failure.

Peer reviewed 2022 paper; searches to Jan 2021—knee focused, human clinical trials only; includes risk of bias and GRADE assessments (useful for inclusion as a precisely relevant evidence synthesis).

[9] [Safety profile comparison of intra-articular corticosteroids, hyaluronic acid, platelet-rich plasma, and cell-based injections for knee osteoarthritis: A systematic review and meta-analysis by the ESSKA Orthobiologics Initiative](#)

Alessandro Bensa, ..., and Giuseppe Filardo. Knee surgery, sports traumatology, arthroscopy : official journal of the ESSKA, 2025. 0 citations.

100% Topic Match

Compares safety profiles of IA corticosteroids, HA, PRP, and cell based injections for knee OA.

Conducts a PRISMA systematic review and meta analysis of clinical studies reporting adverse events across 559 studies (76,061 patients).

Includes knee OA injective treatments only; provides pooled rates for total, non severe, severe AEs and infections — useful for modality focused landscape and safety trend inclusion (2025 publication).

[10] [PRP Injections for the Treatment of Knee Osteoarthritis: A Meta-Analysis of Randomized Controlled Trials](#)

G. Filardo, ..., and A. Grassi. Cartilage, 2020. 227 citations.

100% Topic Match

Summarizes RCT evidence on intra articular PRP for knee osteoarthritis.  
Performs a systematic review and meta analysis of 34 RCTs (1403 PRP knees vs 1426 controls) comparing PRP to HA, saline/placebo, and corticosteroids with pooled WOMAC/VAS/KOOS outcomes.  
Human, knee specific RCTs only (search to Jan 17, 2020); reports bias/GRADE assessments, blinding details, and finds PRP favored over placebo (12 mo), HA (6–12 mo), and steroids (VAS).

[11] [Platelet-Rich Plasma, Bone Marrow Aspirate and Hyaluronic Acid Lead to Significant Improvement at 6 months Compared to Placebo: A Network Metaanalysis of Injections for Knee Osteoarthritis](#)  
E. Mameri, ..., and Jorge Chahla. *Orthopaedic Journal of Sports Medicine*, 2024. 0 citations.  
100% Topic Match  
Compares efficacy of intra articular PRP, HA, CS, and BMAC for knee OA via network meta analysis.  
Performs an arm based Bayesian network meta analysis of 47 RCTs (level I-II) with e6 month follow up, converting outcomes to 0–100 scales and ranking interventions by SUCRA.  
Relevant: human RCTs only, knee OA focus, includes PRP/HA/CS (and BMAC); reports HA and PRP improve pain versus placebo, HA/PRP/BMAC improve function.

[12] [A comparative study of the efficacy of intra-articular injection of different drugs in the treatment of mild to moderate knee osteoarthritis: A network meta-analysis](#)  
Yuan Xue, ..., and Y. Xue. *Medicine*, 2023. 16 citations.  
100% Topic Match  
Compares efficacy of multiple intra articular injections for mild–moderate knee OA via network meta analysis.  
Synthesizes RCTs through systematic search (7 databases to Dec 20, 2021) using VAS and WOMAC change and Cochrane RoB; reports WMDs and 95% CIs.  
Relevant: human, knee specific, peer reviewed RCT evidence synthesis including IA modalities (likely HA, corticosteroids, PRP if trials available); cut off 2021—does not include studies published 2022–2025.

[13] [Effectiveness of Different Types of Intraarticular Injections for the Knee Osteoarthritis: a Systemic Review](#)  
M. El sayed, ..., and Androw Shenoda. *Benha Medical Journal*, 2022. 0 citations.  
100% Topic Match  
Summarizes comparative efficacy of IA PRP, HA, and corticosteroid injections for knee osteoarthritis.  
Systematic review of RCTs/nonrandomized trials (Jan 2010–Mar 2021); screened 6,912 citations, included 30 studies (n=3,303).  
Relevant: human, peer reviewed clinical trials focused on knee OA; includes head to head PRP vs HA (13 studies), HA vs CS (6), and mixed comparisons — useful for modality-focused landscape and year range up to 2021 (not covering 2022–2025).

[14] [Lack of standardization among clinical trials of injection therapies for knee osteoarthritis: a systematic review](#)  
B. Saltzman, ..., and B. Cole. *The Physician and Sportsmedicine*, 2020. 9 citations.  
100% Topic Match  
Demonstrates high heterogeneity across clinical trials of intra articular injections for knee OA.  
Systematically reviewed 84 published studies (2013–2019) and 114 registered trials, cataloguing treatments, outcomes, and assessment timepoints.  
Relevant: includes HA (most common, 22/84), PRP/CS likely among 29 treatment groups; focuses on knee OA clinical trials but ends 2019 (pre 2020 literature).

[15] [Injection-Based Management of Osteoarthritis of the Knee: A Systematic Review of Guidelines](#)  
V. Pavone, ..., and G. Testa. *Frontiers in Pharmacology*, 2021. 42 citations.  
100% Topic Match  
Synthesizes guideline recommendations on IA CS, HA, and PRP for knee OA.  
Reviews and critically appraises international clinical guidelines (searched multiple databases) and reports each guideline's stance and cited RCTs.  
Guideline level evidence: CS advised with caution for short lived benefit (<4 weeks); HA shows mixed support (some benefit for high MW, 2–4 injections/year); PRP not recommended due to heterogeneity/lack of evidence; review reflects guideline conclusions (not pooled primary trial data) and is limited to English guidelines.

[16] [Role and Effectiveness of Intra-articular Injection of Hyaluronic Acid in the Treatment of Knee Osteoarthritis: A Systematic Review](#)  
Sumanth Chavda, ..., and Tarun Wadhwa. *Cureus*, 2022. 79 citations.  
100% Topic Match  
Summarizes the efficacy and safety of intra articular hyaluronic acid for knee osteoarthritis.  
Performs a PRISMA systematic review of RCTs (Jan 2015–Dec 2021): 38 RCTs, NH5,025, K–L grades 1–3, Cochrane RoB 2 used.  
Relevant details: HA characterized by MW (24 high, 8 low, 6 unspecified), injection schedules (single 52.6%, 3 week 28.9%, 5 week 13.2%), some trials combined HA with PRP or corticosteroids; outcomes show pain/function benefits up to 3–6 months; excludes non RCTs and non English studies.

[17] [Efficacy and Safety of Intra-Articular Platelet-Rich Plasma in Osteoarthritis Knee: A Systematic Review and Meta-Analysis](#)  
Mao Hong, ..., and Wanshou Guo. *BioMed Research International*, 2021. 43 citations.  
100% Topic Match  
Demonstrates a systematic review and meta-analysis of intra articular PRP for knee osteoarthritis.  
Pools 23 randomized controlled trials from PubMed/Medline, Embase, Cochrane; primary outcomes VAS, WOMAC, IKDC; adverse events as secondary outcome.  
Human, peer reviewed 2021 evidence synthesis focused on knee OA; includes head to head PRP vs HA/CS/placebo and reports mainly 6 month outcomes (some longer term trials cited).

[18] [Intra-articular platelet-rich plasma injections versus intra-articular corticosteroid injections for symptomatic management of knee osteoarthritis: systematic review and meta-analysis](#)  
M. McLarnon and N. Heron. *BMC Musculoskeletal Disorders*, 2021. 74 citations.  
100% Topic Match  
Compares intra articular PRP versus corticosteroid injections for knee osteoarthritis.  
Performs a PRISMA style systematic review and random effects meta analysis of 8 trials (n=648) through June 2020, using WOMAC/KOOS/VAS outcomes and Cochrane risk of bias assessment.  
Relevant: peer reviewed 2021 study focused specifically on knee OA, reports modality classification (LP PRP vs LR PRP), timing (1–12 months, primary 6 month), low overall bias, and no joint infections; useful for modality focused quantitative summaries.

[19] [A Systematic Review of Current Clinical Practice Guidelines on Intra-articular Hyaluronic Acid, Corticosteroid, and Platelet-Rich Plasma Injection for Knee Osteoarthritis: An International Perspective](#)  
M. Phillips, ..., and E. Schemitsch. *Orthopaedic Journal of Sports Medicine*, 2021. 75 citations.  
100% Topic Match  
Summarizes CPG recommendations on IA HA, IA CS, and PRP for knee osteoarthritis.  
Performs a systematic review of 27 international clinical practice guidelines, classifying recommendations as strong/conditional/uncertain and charting trends to 2021.  
Guideline level evidence (not primary trials); reports more recommendations favoring IA HA and IA CS, with PRP generally judged uncertain due to insufficient evidence.

[20] [Sex differences in intra articular treatment outcomes for knee osteoarthritis: Current evidence and research gaps: A systematic review and meta analysis](#)  
Gae Fattini Fellini, ..., and Giuseppe Filardo. *Journal of Experimental Orthopaedics*, 2025. 0 citations.  
100% Topic Match  
Analyzes sex specific outcomes after intra articular CS, HA, PRP, and cell therapies for knee OA.  
Performs a systematic review and meta analysis (2025) pooling studies reporting sex stratified clinical outcomes for these IA injections.  
Relevant: human, knee focused, peer reviewed synthesis through 2025 including PRP/HA/CS; check if meta included studies report modality specific counts, study types, and whether multijoint cohorts provided knee separable data.

[21] [Intraarticular injections \(corticosteroid, hyaluronic acid, platelet rich plasma\) for the knee osteoarthritis.](#)  
E. Ayhan, ..., and Is1k AkgunWorld journal of orthopedics, 2014. 417 citations.  
100% Topic Match  
Summarizes clinical evidence on IA corticosteroid, HA, and PRP for knee osteoarthritis.  
Reviews human clinical studies (including RCTs and head to head trials) and synthesizes efficacy, duration, and safety findings.  
Narrative review (2014) — knee specific, peer reviewed, useful for background and references but predates many later PRP/HA trials through 2025.

[22] [Injections in the osteoarthritic knee: a review of current treatment options](#)  
G. Fusco, ..., and E. Kon. EFORT Open Reviews, 2021. 38 citations.  
100% Topic Match  
Summarizes current intra articular injection options for knee osteoarthritis.  
Provides a 2021 narrative review covering CS, HA, PRP, MSCs, other injectables, mechanisms, RCTs, guidelines, and safety.  
Narrative (not systematic); includes many knee focused RCTs/meta analyses and discussion of PRP/HA/CS heterogeneity—useful as a citation map but not for quantitative inclusion as primary data.

[23] [Intra-Articular Injections in Knee Osteoarthritis: A Review of Literature](#)  
G. Testa, ..., and V. Pavone. Journal of Functional Morphology and Kinesiology, 2021. 129 citations.  
100% Topic Match  
Summarizes intra articular PRP, HA, and corticosteroid use for knee OA.  
Reviews clinical literature (RCTs, systematic reviews, meta analyses) and discusses efficacy, safety, and injection technique.  
Narrative 2021 peer reviewed review focused explicitly on knee OA (not original data); useful for inclusion as an evidence synthesis in the corpus.

[24] [Injections for Knee Osteoarthritis: Corticosteroids, Viscosupplementation, Platelet-Rich Plasma, and Autologous Stem Cells.](#)  
David M. Levy, ..., and B. Cole. Arthroscopy : the journal of arthroscopic & related surgery : official publication of the Arthroscopy Association of North America and the International Arthroscopy Association, 2018. 66 citations.  
100% Topic Match  
No summary or abstract available

[25] [State of the art in the treatment of knee osteoarthritis using platelet-rich plasma alone or in combination: a systematic review](#)  
João Paulo Rodrigues Pacheco, ..., and João Paulo Ramos de Moraes. MedNEXT Journal of Medical and Health Sciences, 2025. 0 citations.  
100% Topic Match  
Reviews clinical evidence for intra articular PRP, alone and combined with other injectables, in knee osteoarthritis.  
Performs a PRISMA systematic review (search Nov 2024–Jan 2025 across PubMed/Scopus/ScienceDirect/Scielo/Google Scholar), assessing RCTs and meta - analyses with GRADE and risk of bias evaluation.  
Relevant: human, peer reviewed 2025 systematic review focused on knee OA and PRP (also examines combinations with HA, corticosteroids, stem cell products); check full text for inclusion criteria, whether knee specific data were separated from multijoint studies, and exact study selection (some journals may have variable peer review standards).

[26] [Platelet-Rich Plasma for Knee Osteoarthritis: A Comprehensive Narrative Review of the Mechanisms, Preparation Protocols, and Clinical Evidence](#)  
W. Glinkowski, ..., and Dariusz ZladowskiJournal of Clinical Medicine, 2025. 9 citations.  
100% Topic Match  
Summarizes clinical and mechanistic evidence for intra articular PRP in knee osteoarthritis.  
Reviews 40 high quality studies (RCTs, SRs/meta analyses) through March 2025, comparing PRP to HA, corticosteroids, and placebo.  
Notes leukocyte poor PRP often outperforms HA/CS in mild–moderate KOA (K–L I–III), but formulation/regimen heterogeneity and inconsistent long term placebo superiority limit certainty (GRADE: moderate).

[27] [Platelet rich plasma injections for knee osteoarthritis: an overview of systematic reviews](#)  
Lin Yi, ..., and Guanghui Zhang. Frontiers in Physiology, 2025. 4 citations.  
100% Topic Match  
Summarizes the SR/MA evidence base on intra articular PRP for knee osteoarthritis.  
Reviews 29 systematic reviews/meta analyses (search to 1 Dec 2024), assessing overlap (GROOVE), review quality (AMSTAR 2), and primary trial bias (ROB 2).  
Relevant: human, peer reviewed evidence synthesis focused on IA PRP for knee OA (up to 2024/2025 publication); finds very high primary study overlap and predominantly critically low AMSTAR 2 quality.

[28] [The Potential of Intra-Articular Therapies in Managing Knee Osteoarthritis: A Systematic Review](#)  
C. Pojala, ..., and Lorena Dima. Clinics and Practice, 2024. 6 citations.  
100% Topic Match  
Summarizes evidence on IA hyaluronic acid and PRP for knee osteoarthritis.  
Systematic review of 23 RCTs/cohorts/observational studies from last 10 years assessing pain, function, and safety of IA HA and PRP.  
Relevant: human, peer reviewed, knee specific IA HA and PRP focus; excludes corticosteroids, limited detail on study selection/heterogeneity and whether knee only data separated from multijoint cohorts.

[29] [The comparison effects of intra-articular injection of Platelet Rich Plasma \(PRP\), Plasma Rich in Growth Factor \(PRGF\), Hyaluronic Acid \(HA\), and ozone in knee osteoarthritis: a one year randomized clinical trial](#)  
S. A. Raeissadat, ..., and M. Darvish. BMC Musculoskeletal Disorders, 2021. 127 citations.  
100% Topic Match  
Compares clinical efficacy of IA PRP, PRGF, HA, and ozone for knee osteoarthritis.  
Does so via a single center randomized clinical trial (n=238 randomized; 200 analyzed) with VAS, WOMAC, and Lequesne outcomes at 2, 6, and 12 months.  
Knee specific, human, peer reviewed RCT (mild–moderate ACR OA; adult 50–75 y), includes distinct platelet products (PRP vs PRGF) and HA — suitable for modality based landscape; ozone arm is non target modality.

[30] [Intra-articular platelet-rich plasma versus hyaluronic acid in the treatment of knee osteoarthritis: a meta-analysis](#)  
Huafeng Zhang, ..., and Zhi-jun Li. Drug Design, Development and Therapy, 2018. 97 citations.  
100% Topic Match  
Compares intra articular PRP versus HA for knee osteoarthritis via meta analysis.  
Pooled 13 prospective/RCT human knee OA studies (search to Sep 2017) and found PRP improved WOMAC pain at 6 and 12 months versus HA.  
Relevant: peer reviewed 2018 study; high between study heterogeneity (I<sup>2</sup> 81–95%), mixed outcome measures, limited quality, search cutoff 2017 (so covers literature to 2017 only).

[31] [Clinical and radiographic comparison of a single LP-PRP injection, a single hyaluronic acid injection and daily NSAID administration with a 52-week follow-up: a randomized controlled trial](#)  
David Buendía-López, ..., and Miguel A. Fernández-Villacañas Marín. Journal of Orthopaedics and Traumatology : Official Journal of the Italian Society of Orthopaedics and Traumatology, 2018. 124 citations.  
100% Topic Match  
Demonstrates a randomized controlled comparison of single IA LP PRP, single IA HA, and daily NSAID for knee OA.  
Randomized 106 patients (98 completers) to single leukocyte poor PRP (H3.9x platelets), single HA, or oral NSAID; assessed WOMAC/VAS at 0, 26, 52 weeks and X ray/MRI at 0 and 52 weeks.  
Relevant: human, knee specific RCT (2018) with IA PRP and IA HA arms; reports superior clinical benefit for single LP PRP at 52 weeks but no structural MRI/X ray benefit; single blind, no placebo injection, single injection protocol.

[32] [Platelet-rich plasma versus hyaluronic acid in knee osteoarthritis: A meta-analysis with the consistent ratio of injection](#)  
Qipeng Wu, ..., and B. Mi. Journal of Orthopaedic Surgery, 2020. 61 citations.  
100% Topic Match  
Compares intra articular PRP versus HA efficacy in knee osteoarthritis via meta analysis.  
Pooled 10 studies (search through May 2018) with consistent injection cycles (primarily 3 injections), analyzing IKDC/WOMAC/VAS/KOOS at ~6 months using RevMan.  
Knee specific, peer reviewed (2020); includes RCTs but notes high heterogeneity (PRP/HA protocols, OA grades, follow up variability) and limited long term data—relevant but interpret with caution.

[33] [Is platelet-rich plasma better than hyaluronic acid in the treatment of knee osteoarthritis? A meta-analysis of randomized controlled trials](#)  
Lichun Wang, ..., and S. Rastogi. Videosurgery and other Miniinvasive Techniques, 2022. 6 citations.  
100% Topic Match  
Compares efficacy of intra articular PRP versus hyaluronic acid for knee osteoarthritis via meta analysis.  
Synthesizes 14 randomized controlled trials (2000–2021; n=613), using Cochrane RoB, random effects RevMan pooling; finds pooled OR 2.55 (95% CI 1.35–4.84) and RR 1.34 (95% CI 1.09–1.65) favoring PRP.  
Relevant: peer reviewed 2022 RCT only synthesis focused on knee OA; high between study heterogeneity (I<sup>2</sup> H77–84%); excludes nonrandomized studies.

[34] [Platelet-rich plasma versus hyaluronic acid in the treatment of knee osteoarthritis](#)  
Zehan Chen, ..., and Meng Xu. Medicine, 2020. 33 citations.  
100% Topic Match  
Compares clinical efficacy and safety of intra articular PRP versus HA for knee osteoarthritis.  
Performs a meta analysis of 14 studies (searching PubMed, EMBASE, Cochrane) extracting VAS, IKDC, WOMAC, KOOS, and adverse events across multiple timepoints.  
Peer reviewed 2020 article; human clinical trials only (knee OA focused); useful as an evidence synthesis for PRP vs HA but check included studies' modalities, PRP types, and study designs.

[35] [Platelet-rich plasma versus hyaluronic acid in the treatment of knee osteoarthritis: a meta-analysis](#)  
Jiazh Tang, ..., and Bo Wang. Journal of Orthopaedic Surgery and Research, 2020. 145 citations.  
100% Topic Match  
Compares clinical efficacy of intra articular PRP versus HA for knee osteoarthritis.  
Performs a systematic review and meta analysis of 20 randomized controlled trials (search through Jan 23, 2020), pooling WOMAC, VAS, IKDC, KOOS at 1–12 months.  
Relevant: peer reviewed RCT level evidence showing PRP superior to HA for pain at 6 and 12 months; focused on PRP vs HA (CS largely not included).

[36] [Comparison of hyaluronic acid and platelet-rich plasma in knee osteoarthritis: a systematic review](#)  
Hong Xu, ..., and Zhuang Wei. BMC Musculoskeletal Disorders, 2025. 3 citations.  
100% Topic Match  
Compares efficacy and safety of intra articular HA versus PRP for knee osteoarthritis.  
Performs a systematic review and meta analysis of 42 randomized controlled trials, pooling VAS, WOMAC, and other clinical outcomes using RevMan.  
Human, peer reviewed RCT evidence through 2025; includes knee focused IA HA and PRP trials—relevant for modality focused quantitative synthesis (report notes PRP better on VAS/WOMAC).

[37] [Platelet-Rich Plasma Versus Hyaluronic Acid for Knee Osteoarthritis: A Systematic Review and Meta-analysis of Randomized Controlled Trials](#)  
J. W. Belk, ..., and E. McCarty. The American Journal of Sports Medicine, 2020. 315 citations.  
100% Topic Match  
Compares efficacy and safety of intra articular PRP versus HA for knee osteoarthritis.  
Conducts a systematic review and meta analysis of 18 randomized (level 1) trials, pooling WOMAC, VAS, and IKDC outcomes; includes leukocyte poor vs leukocyte rich PRP subanalysis.  
Human, knee specific RCT evidence up to 2020; sample pooled ~811 PRP patients; useful for modality focused synthesis but limited to trials available through 2020.

[38] [The temporal effect of platelet-rich plasma on pain and physical function in the treatment of knee osteoarthritis: systematic review and meta-analysis of randomized controlled trials](#)  
Longxiang Shen, ..., and Changqing Zhang. Journal of Orthopaedic Surgery and Research, 2017. 325 citations.  
100% Topic Match  
Demonstrates a PRP benefit over controls for knee OA symptoms.  
Systematic review/meta analysis of 14 RCTs (n=1,423) comparing intra articular PRP to saline, HA, ozone, or corticosteroids, synthesizing WOMAC pain/function at 3–12 months.  
Human RCTs only; follow up 12 weeks–12 months; methodological quality mostly high risk of bias (10/14); includes head to head PRP vs HA and PRP vs CS trials.

[39] [a comparison of intra-articular hyaluronic acid and platelet-rich plasma for knee osteoarthritis: a systematic review.](#)  
Gian Ivander and Yovita Anggono. Orthopedic reviews, 2024. 8 citations.  
100% Topic Match  
Compares intra articular hyaluronic acid (HA) versus platelet rich plasma (PRP) for knee osteoarthritis (systematic review).  
Conducts a PRISMA guided search (PubMed, Google Scholar, ScienceDirect) for prospective RCTs (2019–2022), selects 23 studies and highlights four highest quality pRCTs; uses modified Jadad and Cochrane RoB 2.  
Relevant only to PRP vs HA (no IA corticosteroid studies), limited to pRCTs from 2019–2022, concludes both effective but insufficient evidence that PRP is superior.

[40] [Hope, Hype, Hurdles & Future Perspective for PRP, PRP versus Hyaluronic Acid Injection in Osteoarthritis of Knee: A Review Article.](#)  
Ashok Kumar, ..., and Krish Ghosh Kadamb. Unknown journal, 2020. 5 citations.  
100% Topic Match  
Summarizes comparative evidence for PRP versus hyaluronic acid in knee osteoarthritis.  
Performs a PRISMA guided review of 14 studies (n=1,575) comparing IA PRP (mostly 2–3 injections, 4–6 mL, leukocyte poor) to HA and synthesizes outcomes.  
Relevant: human, peer reviewed review (2020); focuses on knee OA, reports better short–midterm (3–12 month) pain/function with PRP, notes greater post injection pain/swelling with leukocyte rich PRP and possible PRP+HA synergy.

[41] [Efficacy and Safety of Intra-articular Platelet-Rich Plasma \(PRP\) Versus Corticosteroid Injections in the Treatment of Knee Osteoarthritis: A Systematic Review of Randomized Clinical Trials](#)  
Diego Ivan Diaz Haaz and Oswaldo Rizo Castro. Cureus, 2025. 3 citations.  
100% Topic Match  
Analyzes RCT evidence comparing intra articular PRP versus corticosteroid for knee osteoarthritis.  
Systematic review of RCTs (2019–2024) using PRISMA; searched PubMed, CENTRAL, VHL; RoB 2 used; six RCTs (n=36–80) included.  
Relevant: human, peer reviewed 2025 review focused on IA PRP vs IA corticosteroid for knee OA; notes heterogeneity in PRP prep and suggests PRP may have longer benefit but no consensus.

[42] [Platelet rich plasma compared to viscosupplementation in the treatment of knee osteoarthritis: A systematic review and meta analysis of randomised controlled trials with 6 month and 12 month follow up](#)  
Kian Bagheri, ..., and Amir A Jamali. Journal of Experimental Orthopaedics, 2025. 3 citations.  
100% Topic Match  
Compares PRP versus HA for knee osteoarthritis via systematic review/meta analysis.  
Pools randomized controlled trials with 6 and 12 month follow up to compare patient reported outcomes and assess platelet concentration effects.

Human, peer reviewed RCT evidence synthesis specific to knee OA; directly relevant (2025 publication); check included trials for PRP type (leukocyte/content), HA product details, and whether any CS or multijoint studies were excluded.

[43] [Intraarticular leukocyte-poor platelet-rich plasma injection is more effective than intraarticular hyaluronic acid injection in the treatment of knee osteoarthritis: a systematic review and meta-analysis of 12 randomized controlled trials](#)

Yu-Ning Peng, ..., and Carl P. C. Chen. *Knee Surgery & Related Research*, 2025. 4 citations.

100% Topic Match

Demonstrates a superiority of intra articular leukocyte poor PRP over hyaluronic acid for knee OA.

Performs a systematic review and meta analysis of 12 randomized controlled trials comparing LP PRP vs HA using WOMAC, VAS, IKDC, EQ VAS and adverse events. Human, knee specific RCTs only; reports improved WOMAC total/physical function at 6 and 12 months and better VAS at 3–12 months; relevant and precisely within your inclusion criteria.

[44] [Platelet-rich plasma combined with hyaluronic acid improves pain and function compared with hyaluronic acid alone in knee osteoarthritis: A systematic review and meta-analysis](#)

Theofilos Karasavvidis, ..., and B. Cole. *Arthroscopy : the journal of arthroscopic & related surgery : official publication of the Arthroscopy Association of North America and the International Arthroscopy Association*, 2020. 48 citations.

100% Topic Match

No summary or abstract available

[45] [\[Efficacy of Intra-Articular Platelet-Rich Plasma in Knee Osteoarthritis: a Systematic Review and Meta-Analysis\]](#)

Matúš Sloviak, ..., and J. Gallo. *Acta chirurgiae orthopaedicae et traumatologiae Cechoslovaca*, 2025. 0 citations.

100% Topic Match

Analyzes recent RCT evidence on intra articular PRP for knee osteoarthritis.

Performs a systematic review and meta analysis of RCTs published 2020–2024 using WOMAC, VAS, and IKDC up to 6 weeks, 3 months, and 6 months.

Human, peer reviewed RCT focused evidence synthesis (2025); modality = PRP monotherapy; excludes non RCTs and other IA agents — useful for PRP specific corpus and trend counts.

[46] [Intra-articular platelet-rich plasma vs. corticosteroid injections efficacy in knee osteoarthritis treatment: a systematic review](#)

F. A. Idres and M. Samaan. *Annals of Medicine and Surgery*, 2023. 7 citations.

100% Topic Match

Compares IA platelet rich plasma (PRP) versus intra articular corticosteroid (CS) efficacy for knee OA.

Performs a systematic review of randomized controlled trials (searching PubMed and CENTRAL) and includes nine RCTs with WOMAC/KOOS/VAS outcomes.

Human, peer reviewed knee specific RCT evidence only; useful for modality comparison but limited to nine trials and short–midterm outcomes (safety/effectiveness).

[47] [Efficacy of Platelet-Rich Plasma versus Hyaluronic Acid for treatment of Knee Osteoarthritis: A systematic review and meta-analysis](#)

Hassan Niroomand Sadabadi, ..., and H. Dehghan. *Electronic Physician*, 2016. 68 citations.

100% Topic Match

Compares efficacy of intra articular PRP versus hyaluronic acid for knee osteoarthritis.

Performs a systematic review and meta analysis (databases to Aug 2015), pooling 7 studies (N=722) using WOMAC SMD (PRP vs HA SMD H 0.75).

Knee focused, human, peer reviewed (2016); includes RCTs and lower quality trials, very high heterogeneity (I<sup>2</sup>H96.6%), follow up up to 1 year — limits robustness.

[48] [Mapping the Research Landscape of Intra-Articular Knee Injections: A Bibliometric Analysis Using the Scopus Database](#)

Abdullah Aqeel Musa, ..., and A. H. Zulkifly. *Cureus*, 2024. 2 citations.

100% Topic Match

Maps the publication trends for intra articular knee injections (2003–2023).

Uses a Scopus bibliometric review of 1,318 articles to quantify topic trends and shifts over time.

Human clinical vs nonclinical distinction unclear; includes broad IA modalities (CS, HA, PRP, marrow/stromal) — useful for trend overview but not for extracting only knee specific clinical trial data.

[49] [Intra Articular Platelet Rich Plasma Injections VS Hyaluronic Acid for Patients with Knee Osteoarthritis: A Systematic Review](#)

Hendra Aditama and Avip Rahmat Prasetya. *INTERNATIONAL JOURNAL OF MEDICAL SCIENCE AND CLINICAL RESEARCH STUDIES*, 2023. 0 citations.

100% Topic Match

Compares intra articular PRP versus hyaluronic acid for knee osteoarthritis.

Performs a systematic review of clinical studies (searched PubMed/Google Scholar to Oct 2023), retained 7 RCTs and reports their WOMAC and related outcome findings.

Relevant: human, knee specific, peer reviewed RCT evidence up to 2023; however, methods reporting appears limited (no clear protocol registration, risk of bias assessment, meta analysis, or detailed PRP/HA product/protocol taxonomy), so classification by modality and study type is possible but pooled quantitative synthesis may be unreliable without full text verification.

[50] [A Randomized Trial of Intra-articular Injection Therapy for Knee Osteoarthritis](#)

M. Tschopp, ..., and A. Rosskopf. *Investigative Radiology*, 2022. 38 citations.

100% Topic Match

Compares IA glucocorticoid, HA, PRP, and placebo for knee OA in an RCT.

Conducts a double blinded, placebo controlled, single center randomized trial (K–L grade 1–3), N=120 knees (30/group), primary outcome NRS pain over 6 months plus WOMAC, activity, mobility, and AEs.

Relevant: human, knee specific, peer reviewed RCT directly addressing PRP vs HA vs IA corticosteroid vs placebo through 6 month follow up; useful for modality classification, study type, and publication year trend.

[51] [Comparison of the Clinical Effectiveness of Single Versus Multiple Injections of Platelet-Rich Plasma in the Treatment of Knee Osteoarthritis: A Systematic Review and Meta-analysis](#)

F. Vilchez-Cavazos, ..., and Mario Simental-Mendía. *Orthopaedic Journal of Sports Medicine*, 2019. 81 citations.

100% Topic Match

Compares clinical effectiveness of single versus multiple intra articular PRP injections for knee osteoarthritis.

Conducts a PRISMA registered systematic review and meta analysis of RCTs (5 trials, n=301) reporting pain/function, pooled with random effects models at ~6 month follow up.

Knee specific, human RCTs only; includes various PRP formulations; notes heterogeneity in OA severity and PRP protocols; suitable as high level evidence for PRP modality trends.

[52] [The efficacy and safety of intra-articular platelet-rich plasma versus sodium hyaluronate for the treatment of osteoarthritis: Meta-analysis](#)

Qinglin Liu, ..., and Hao Chen. *PLOS One*, 2025. 5 citations.

100% Topic Match

Compares combined PRP+HA versus PRP alone for knee osteoarthritis.

Performs a meta-analysis (16 studies, 1,384 patients) extracting VAS, WOMAC, Lequesne, and adverse events from PubMed/Embase/Cochrane through July 2024.

Relevant: human, knee OA-focused, peer reviewed (PLOS One, 2025); primary modality class = mixed (PRP+HA vs PRP); includes efficacy and safety outcomes but does not compare HA only or corticosteroids.

[53] [Comparing the efficacy of different intra-articular injections for knee osteoarthritis: A network analysis](#)

Xingzhen Lin, ..., and Qing Wan. *Medicine*, 2022. 9 citations.

100% Topic Match

Compares efficacy of IA platelet rich plasma, hyaluronic acid, ozone, and combinations via network meta analysis.  
Performs a reticulated (network) meta analysis of randomized/controlled studies to rank IA interventions for knee OA.  
Peer reviewed (Medicine, 2022); focuses on knee OA IA injections (includes PRP and HA); check inclusion criteria (RCTs vs mixed designs), modalities included (ozone present), and whether corticosteroids were analyzed.

[54] [Morphological and Quantitative Parametric MRI Follow-up of Cartilage Changes Before and After Intra-articular Injection Therapy in Patients With Mild to Moderate Knee Osteoarthritis](#)

Marcel Tschopp, ..., and A. Rosskopf. *Investigative Radiology*, 2024. 8 citations.

100% Topic Match

Demonstrates a randomized, double blinded, placebo controlled MRI comparison of IA glucocorticoid, HA, PRP, and placebo in knee OA.  
Compares cartilage morphological and quantitative MRI (T2 and T2 mapping) at baseline, 3 months, and 12 months in KL grade 1–3 knees.  
Human, peer reviewed RCT imaging study directly on intra articular PRP/HA/CS for knee OA; provides structural (not primarily clinical symptom) endpoints and is fully relevant for modality focused landscape analysis.

[55] [Evaluating the Efficacy and Safety of Intra - Articular Corticosteroid versus Hyaluronic Acid Injections in the Treatment of Knee Osteoarthritis: A Comparative Analysis of Randomized Controlled Trials](#)

Ashwani Sadana Choudhary Abdul. *International Journal of Science and Research (IJSR)*, 2024. 0 citations.

100% Topic Match

Analyzes RCTs comparing intra articular corticosteroid versus hyaluronic acid for knee OA.  
Performs an electronic literature search by two reviewers to identify RCTs and reports pooled short term pain/function p values (1, 2, 3 months).  
Relevance caveats: published 2024 in IJSR (low citation), methods lack clear trial counts, sample sizes, search dates, PRISMA/registration details—uncertain rigor and extractable data for a systematic corpus.

[56] [Analysis of the Cost and Efficacy of Intra-Articular Knee Injections](#)

Sean Pirkle, ..., and Jason A. Strelzow. *JAAOS Global Research & Reviews*, 2022. 7 citations.

100% Topic Match

Analyzes the comparative cost and TKA conversion timing after intra articular knee injections.  
Uses Humana insurance claims (ages 50–70) to stratify patients by CS, HA, or no injection cohorts and compares TKA rates, time to TKA, and reimbursement.  
Large administrative database study (NH778,686); includes CS and HA but likely excludes PRP (not mentioned); knee focused but claims data may lack clinical severity, exact injection route confirmation, PRP details, and peer reviewed (JAAOS Global) publication.

[57] [Efficacy and Safety of Hyaluronic Acid and Platelet-Rich Plasma Combination Therapy Versus Platelet-Rich Plasma Alone in Treating Knee Osteoarthritis: A Systematic Review](#)

Md Al Amin Howlader, ..., and Hassan Ibrahim. *Cureus*, 2023. 12 citations.

100% Topic Match

Abstract: Knee osteoarthritis (KOA) is a chronic degenerative disease of the joint characterized by biochemical and biomechanical alterations of articular cartilage, degradation of the joint edge, and subchondral bone hyperplasia. Nowadays, intra-articular hyaluronic acid (HA) or platelet-rich plasma (PRP) has become a popular treatment modality for treating KOA. Each treatment can be used independently or in combination. However, the efficacy and safety of combination treatment are still inconclusive, and there is a lack of high-quality level 1 studies that support using combination therapy over PRP alone. Consequently, we conducted a systematic review to examine the effectiveness and safety of combining HA...

[58] [Clinical Efficacy of Platelet-Rich Plasma Injection and Its Association With Growth Factors in the Treatment of Mild to Moderate Knee Osteoarthritis: A Randomized Double-Blind Controlled Clinical Trial As Compared With Hyaluronic Acid](#)

Yong-Beom Park, ..., and Dong-hyun Lee. *The American Journal of Sports Medicine*, 2021. 87 citations.

100% Topic Match

Abstract: Background: Although platelet-rich plasma (PRP) has potential as a regenerative treatment for knee osteoarthritis, its efficacy varies. Compositional differences among types of PRP could affect clinical outcomes, but the biological characterization of PRP is lacking. Purpose: To assess the efficacy of intra-articular PRP injection in knee osteoarthritis as compared with hyaluronic acid (HA) injection and to determine whether the clinical efficacy of PRP is associated with its biological characteristics. Study Design: Randomized controlled trial; Level of evidence, 1. Methods: A total of 110 patients with symptomatic knee osteoarthritis received a single injection of leukocyte-rich PRP (1 commercial kit) or HA....

[59] [Comparison of clinical efficiency between intra-articular injection of platelet-rich plasma and hyaluronic acid for osteoarthritis: a meta-analysis of randomized controlled trials](#)

Lili Chen, ..., and Jinshen He. *Therapeutic Advances in Musculoskeletal Disease*, 2023. 10 citations.

100% Topic Match

Abstract: Background: Platelet-rich plasma (PRP) and hyaluronic acid (HA) are non-surgical treatments for osteoarthritis (OA), but the comparison of their efficiency is still inconclusive. Objectives: The objectives of this study were to compare the efficacy of PRP and HA in the treatment of OA by meta-analysis and to explore the effects of different injection times and leukocyte concentration on the efficacy of PRP. Design: Meta-analysis and subgroup analysis were conducted. The data were analyzed by Review Manager v5.4.1. Data sources and methods: Articles were retrieved and screened from PubMed, the Cochrane Library, Web of Science, and Embase. The outcome included the...

[60] [Effects and safety of the combination of platelet-rich plasma \(PRP\) and hyaluronic acid \(HA\) in the treatment of knee osteoarthritis: a systematic review and meta-analysis](#)

Jinlong Zhao, ..., and Jun Liu. *BMC Musculoskeletal Disorders*, 2020. 124 citations.

100% Topic Match

Abstract: Background Studies have shown that the combined application of hyaluronic acid (HA) and platelet-rich plasma (PRP) can repair degenerated cartilage and delay the progression of knee osteoarthritis (KOA). The purpose of this study was to explore the efficacy and safety of the intra-articular injection of PRP combined with HA compared with the intra-articular injection of PRP or HA alone in the treatment of KOA. Methods The PubMed, Cochrane Library, EMBASE and China National Knowledge Infrastructure (CNKI) databases were searched from inception to December 2019. Randomized controlled trials and cohort studies of PRP combined with HA for KOA were included. Two...

[61] [Clinical Outcome of Multiple Platelet-Rich Plasma Injection and Correlation with PDGF-BB in the Treatment of Knee Osteoarthritis](#)

R. U. Partan, ..., and E. Rahmawati. *Journal of Personalized Medicine*, 2024. 3 citations.

99% Topic Match

Abstract: (1) Background: Current treatments for knee osteoarthritis (KOA), such as intra-articular corticosteroids or hyaluronic acid (HA) injections, are controversial due to their ineffectiveness in preventing disease progression. Platelet-rich plasma (PRP) has become a promising and possible treatment for KOA. It is thought to enhance articular cartilage regeneration and reduce OA-related impairment. PRP contains growth factors such as PDGF-BB, which stimulates growth and inhibits joint damage. Based on numerous studies, after a certain amount of time, it was found that multiple PRP treatments reduced pain more than a single injection. This study evaluates the efficacy of multiple PRP (m-PRP) injections compared...

[62] [Comparative efficacy of intra-articular platelet-rich plasma, hyaluronic acid, corticosteroids, and NSAIDs for knee osteoarthritis: A retrospective cohort study](#)

Y. Gökçeo lu, ..., and Sedat Demir. *Medicine*, 2025. 0 citations.

99% Topic Match

Abstract: To compare the efficacy of intra-articular administration of platelet-rich plasma (PRP), hyaluronic acid (HA), corticosteroids (CS), and nonsteroidal anti-inflammatory drugs (NSAIDs) in patients with knee osteoarthritis. This retrospective study analyzed 205 knees of 150 patients with Kellgren–Lawrence grade 2 to 3 knee osteoarthritis treated between 2016 and 2021. Patients received intra-articular injections of PRP, HA, CS, or NSAIDs. Visual analog scale (VAS) pain scores, Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) scores, and Kellgren–Lawrence grades were assessed at baseline and final follow-up (6–12 months). All groups showed significant improvements in the VAS and WOMAC scores from baseline to the...

[63] [A meta-analysis and systematic review of the clinical efficacy and safety of platelet-rich plasma combined with hyaluronic acid \(PRP + HA\) versus PRP monotherapy for knee osteoarthritis \(KOA\)](#)

Dan Du and Yuan Liang. Journal of Orthopaedic Surgery and Research, 2025. 11 citations.

99% Topic Match

Abstract: KOA, a chronic degenerative joint disease, is commonly treated with intra-articular HA and PRP, used alone or in combination. However, the efficacy and safety of combination therapy (PRP + HA) remain unclear. The aim of this systematic review and meta-analysis is to assess the clinical effectiveness and safety profile of PRP + HA versus PRP monotherapy for KOA. A systematic search was conducted using four electronic databases (PubMed, EMBASE, Scopus, and Cochrane Library) to select publications published in peer-reviewed journals. The mean difference (MD) and risk ratio (RR) was calculated, along with their 95% confidence intervals. We assessed heterogeneity using...

[64] [A comparative analysis of the efficacy of intra-articular injections of corticosteroid, hyaluronic acid and platelet-rich plasma for the treatment of osteoarthritis knee](#)

Anant Akash and U. Gupta. International Journal of Orthopaedics Sciences, 2020. 0 citations.

99% Topic Match

Abstract: Background: Osteoarthritis (OA) of the knee is the most common chronic degenerative joint disease characterized by pain, stiffness, swelling and progressive functional limitation in elderly. Non-surgical management modalities like physical therapy, lifestyle modification and oral non-steroidal antiinflammatory drugs, are often ineffective or do not alleviate symptoms adequately. Intra-articular corticosteroid (CS) and hyaluronic acid (HA) injections have been used for long to alleviate the symptoms of knee OA. Recently platelet-rich plasma (PRP) therapy has also been tried widely. Very few researches involving a comparison of the three have been conducted. The purpose of the present study was to evaluate the therapeutic...

[65] [Treating Knee Osteoarthritis With Platelet-Rich Plasma and Hyaluronic Acid Combination Therapy: A Systematic Review](#)

Michael R Baria, ..., and R. Magnussen. The American Journal of Sports Medicine, 2021. 21 citations.

99% Topic Match

Abstract: Background: Platelet-rich plasma (PRP) and hyaluronic acid (HA) are injectable treatments for knee osteoarthritis. The focus of previous studies has compared their efficacy against each other as monotherapy. However, a new trend of combining these 2 injections has emerged in an attempt to have a synergistic effect. Purpose: To systematically review the clinical literature examining the combined use of PRP + HA. Design: Systematic review. Methods: A systematic review was performed according to the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines using PubMed and Embase. The following search terms were used: knee osteoarthritis AND platelet rich plasma...

[66] [T2 mapping evaluation of changes in cartilage matrix after PRP and HA injection therapy in knee osteoarthritis: a prospective, randomized, double blind, placebo controlled study](#)

M. Vogrin, ..., and R. Kelc. Unknown journal, 2020. 1 citations.

99% Topic Match

Abstract: BackgroundIn this study we focused on evaluating the effect of intra-articular platelet-rich plasma (PRP) and hyaluronic acid (HA) on the qualitative and quantitative properties of the articular cartilage in patients with knee osteoarthritis (OA).MethodsWe evaluated 264 patients undergoing treatment of moderate knee OA. Patients aged between 40 and 70 years were included with articular K-L stage d 2. Patients were randomized into three groups and treated with three doses of intra-articular PRP, HA, or placebo injection. Patients were evaluated clinically and by using T2 mapping.ResultsBoth PRP ( $619.05 \pm 243$  ms;  $p = 2.7 \times 10^{-5}$ ) and HA ( $637.12$ ...

[67] [Assessment of the effectiveness and satisfaction of platelet-rich plasma compared with hyaluronic acid in knee osteoarthritis at minimum 7-year follow-up: A post hoc analysis of a randomized controlled trial](#)

Zhengming Wang, ..., and Shuaijie Lv. Frontiers in Bioengineering and Biotechnology, 2022. 13 citations.

99% Topic Match

Abstract: Background: Knee osteoarthritis (KOA) can be effectively treated conservatively using platelet-rich plasma (PRP) injections into the affected joints. While the short-term therapeutic clinical benefits were well documented, the mid-term results remain undetermined. To clarify its efficacy, the mid-term clinical outcomes of intra-articular injections of either PRP or hyaluronic acid (HA) in KOA were compared. Methods: One hundred patients who complied with the inclusion criteria were randomized to undergo once a week 3 weeks, intra-articular injections of either PRP or HA. Patients were evaluated before the injection, at 3, 6, and a mean of 78.9 months of follow-up. Eighty-five patients reached...

[68] [Research trends of platelet-rich plasma therapy on knee osteoarthritis from 2011 to 2021: A review](#)

Yubo Cui, ..., and Yiyuan Zhang. Medicine, 2023. 12 citations.

99% Topic Match

Abstract: Background: Platelet-rich plasma (PRP) has been widely used to alleviate osteoarthritis of the knee, and research results are abundant. However, there are no bibliometric reports in publications in this field. Therefore, the current status of PRP for the treatment of osteoarthritis of the knee from 2011 to 2021 was analyzed using Citespace 6.1.R2 software. Methods: Publications regarding PRP treating Knee Osteoarthritis between 2011 and 2021 were extracted from the Web of Science database. CiteSpace was used to analyze the number of publications, countries, institutions, journals, authors, cited references, and keywords by using standard bibliometric indicators. Results: A total of 988...

[69] [Efficacy and safety of platelet-rich plasma combined with hyaluronic acid versus platelet-rich plasma alone for knee osteoarthritis: a systematic review and meta-analysis](#)

Qing Zhang, ..., and Jiangdong Ni. Journal of Orthopaedic Surgery and Research, 2022. 36 citations.

99% Topic Match

Abstract: Purpose To systematically evaluate the curative efficacy and safety of platelet-rich plasma (PRP) combined with hyaluronic acid (HA) in the treatment of knee osteoarthritis (KOA), comparing with platelet-rich plasma alone. Methods Cochrane Library, PubMed, China National Knowledge Infrastructure (CNKI) and Embase were searched for randomized controlled trials (RCTs) and cohort studies regarding the efficacy and safety of platelet-rich plasma (PRP) combined with hyaluronic acid (HA) in the treatment of knee osteoarthritis (KOA) comparing with platelet-rich plasma alone before January 15, 2022. The methodological quality of the ultimately included studies was assessed comprehensively, and meta-analysis was implemented using RevMan 5.3 software....

[70] [Clinical therapy of hyaluronic acid combined with platelet-rich plasma for the treatment of knee osteoarthritis.](#)

Wenxing Yu, ..., and Lin Liu. Experimental and therapeutic medicine, 2018. 101 citations.

99% Topic Match

Abstract: Knee osteoarthritis is the most common degenerative disease of the joints caused by articular cartilage injury, degradation of the joint edge and subchondral bone hyperplasia. Various treatments are used to alleviate the symptoms of patients with knee osteoarthritis, including analgesics and intra-articular injections. Platelet-rich plasma (PRP) is an autologous and multifunctional platelet concentrate of the blood, which stimulates the cartilage healing process and improves the damage caused by articular disease. Hyaluronic acid (HA) is an effective treatment for patients with knee osteoarthritis. In the current study, the effectiveness of PRP and HA combination therapy administered via intra-articular injections for patients...

[71] [Outcome Comparison between Platelet Rich Plasma in Combination with Hyaluronic Acid Versus Steroid Alone in the Treatment of Primary Knee Osteoarthritis](#)

Md Saydur Rahman, ..., and Fardoushy Akter. Bangladesh Journal of Pain, 2024. 0 citations.

99% Topic Match

Abstract: Background: Platelet-rich plasma (PRP) and hyaluronic acid (HA) are two promising intra-articular therapies for osteoarthritis (OA). These agents have demonstrated effectiveness in the healing and regeneration of OA joints. However, a few studies have assessed their combined effect in the treatment of OA in humans. The present study aimed to fill that gap.Methods: This open-label randomized clinical trial was conducted among a total of 51 patients with OA of the knee who did not respond to conservative treatment. Equal number of patients were randomly assigned to one of three intervention groups using the block randomization method. Group S (control group)...

[72] [Platelet-rich Plasma Superiority over Hyaluronic Acid as a Conservative Treatment for Early Knee Osteoarthritis: A Systematic Review](#)

Gian Ivander, ..., and Yovita Anggono. Open Access Macedonian Journal of Medical Sciences, 2024. 0 citations.

99% Topic Match

Abstract: Abstract AIM: This study aimed to perform a systematic review (SR) of SR to elucidate prior findings regarding favorable outcomes between platelet-rich plasma (PRP) and hyaluronic acid (HA) injections for early knee osteoarthritis (KOA). MATERIALS AND METHODS: We conducted a thorough literature search adhering to the Preferred Reporting Items for SRs and Meta-analyses only for SRs from PubMed, ScienceDirect, and Google Scholar from 2020 to 2023. The inclusion and exclusion criteria were determined using the population, intervention, comparison, outcome, and study design model. A measurement tool to assess SR-2 was used to grade the included SRs. Two researchers independently searched,...

[73] [Intra-articular injection with platelet-rich plasma compared to triamcinolone hexacetonide or saline solution in knee osteoarthritis: A double blinded randomized controlled trial with one year follow-up](#)

José Carlos Nunes-Tamashiro, ..., and R. N. V. Furtado. *Clinical Rehabilitation*, 2022. 28 citations.

99% Topic Match

Abstract: Objectives To compare the effectiveness of intra-articular injection (IAI) of Platelet-Rich Plasma (PRP) with Triamcinolone Hexacetonide (TH) and Saline Solution (SS), in patients with knee osteoarthritis (OA). Design A randomized controlled trial, with blinded patients and assessor. Setting Outpatient rheumatology service. Subjects Patients with knee osteoarthritis grades II and III. Interventions Patients received IAI with PRP, 40 mg TH, or SS. Methods Patients were assessed at baseline and after 4, 8, 12 e 52 weeks with: visual analogue scale (VAS) for pain at rest and movement, WOMAC questionnaire, Timed to Up and Go test, 6-min walk test, percentage of improvement,...

[74] [Treatment of knee osteoarthritic pain with platelet-rich plasma: a systematic review of clinical studies.](#)

R. Aiyer, ..., and C. Hunter. *Pain management*, 2021. 13 citations.

99% Topic Match

Abstract: Introduction: Knee osteoarthritis is a degenerative joint disease that is secondary to degradation of articular cartilage, reformation of subchondral bone through degradation and proliferation as well as presence of synovitis. Materials & methods: This systematic review was conducted and reported as per Preferred Reporting Items for Systematic Reviews and Meta-Analysis guidelines. Results: A total of 30 of the 48 comparators showed statistically significant superiority with platelet-rich plasma (PRP) compared with a control, while the other 16 comparators showed no significant difference between PRP and the comparator. Conclusion: We can only recommend PRP for patients with early-stage osteoarthritis (I or II)...

[75] [Comparative Efficacy of PRP Combined with Acupoint Injection, PRP Monotherapy, and HA Injection in Knee Osteoarthritis Evaluation of Short and Long Term Outcomes](#)

Hongjun Zhang. *Med Discoveries*, 2025. 0 citations.

99% Topic Match

Abstract: This study aims to compare the short and long term effects of intra articular Platelet Rich Plasma (PRP) injections combined with acupoint injections versus PRP injections alone and Hyaluronic Acid (HA) intra-articular injections in the treatment of knee osteoarthritis.

[76] [Intra-articular injection of Platelet rich plasma versus Hyaluronic acid for moderate knee osteoarthritis. A prospective, double-blind randomized controlled trial on 189 patients with follow-up for three years.](#)

Medhat Sdeek, ..., and Ahmed Darweash. *Acta orthopaedica Belgica*, 2021. 34 citations.

99% Topic Match

Abstract: Platelet-rich plasma injections have been proposed as an option for Conservative management of knee Osteoarthritis to provide symptomatic relief and also to delay the need for surgical intervention. Although almost all the current literatures provide some evidence on the benefits of this technique compared with Visco-supplementation, no studies have been performed to compare their Clinical outcomes. The purpose is to compare the Clinical outcomes provided by intra-articular injection of either Platelet rich plasma or Hyaluronic acid to treat knee Osteoarthritis. Study Design: Randomized Controlled Trial 200 Patients with a history of Symptomatic Knee Osteo- arthritis (Kellgren-Lawrence grade 2...

[77] [A bibliometric analysis of intra-articular injection therapy for knee osteoarthritis from 2012 to 2022](#)

Zhiyong Lu, ..., and Bin Shi. *Medicine*, 2023. 4 citations.

98% Topic Match

Abstract: Knee osteoarthritis (KOA) is the most common joint disease worldwide and, with the progression of an aging population, is one of the most important causes of disability worldwide. Its main symptoms include articular cartilage damage, periarthritis pain, swelling, and stiffness. Intra-articular (IA) injections offer many advantages over systemic administration and surgical treatment, including direct action on the target joint to improve local bioavailability, reduce systemic toxicity, and lower costs. This study analyzed KOA intra-articular injection treatment and its hot literature and research horizons using bibliometric methodologies and graphical tools to aid future research. We performed a bibliometric analysis of 2360...

[78] [Efficacy of intra-articular corticosteroid and hyaluronic acid injections in preventing progression of early osteoarthritis of the knee in Indian population – A single centre prospective study with a follow-up of 18 months](#)

Thirunthaiyan Mr, ..., and D. R. *International Journal of Orthopaedics Sciences*, 2021. 0 citations.

98% Topic Match

Abstract: Introduction: Osteoarthritis is a degenerative joint disease affecting middle aged to elderly population. Trial of conservative management in form of intra-articular injection with drugs like corticosteroid and hyaluronic acid have been in use for quite some time. We aim to test the efficacy of these drugs when given individually as well in combination in providing pain relief in patients with early-stage osteoarthritis. Materials and Methods: A prospective study conducted over a period of 4 years (2015-2019) was conducted with a sample size of 150 patients with 50 patients divided equally into 3 groups receiving corticosteroid, hyaluronic acid and combination of...

[79] [Therapeutic trajectory following intra-articular hyaluronic acid injection in knee osteoarthritis--meta-analysis.](#)

Raveendhara R. Bannuru, ..., and T. McAlindon. *Osteoarthritis and cartilage*, 2010. 407 citations.

98% Topic Match

No summary or abstract available

[80] [Role of platelet-rich plasma in the treatment of osteoarthritis: a meta-analysis](#)

Haijiang Ren, ..., and Wenlai Guo. *The Journal of International Medical Research*, 2020. 16 citations.

98% Topic Match

Abstract: Objective The clinical efficacy of platelet-rich plasma (PRP) in the treatment of osteoarthritis remains controversial. In this paper, we evaluated the clinical efficacy of PRP in the treatment of osteoarthritis using meta-analysis, providing evidence for the selection of clinical treatment options. Methods We performed a computer-based search of PubMed, Embase, and the Cochrane Library databases to retrieve articles using the search terms "platelet-rich plasma", "osteoarthritis", and "knee joint". Quality evaluation and data extraction were performed. The combined effect was assessed using RevMan 5.3 software. Results Five randomized controlled trials, involving 320 patients, were included in this study. No significant differences...

[81] [Comparative analysis of single-dose platelet-rich plasma and hyaluronic acid therapies in knee osteoarthritis: A 12-week follow-up study](#)

Ça lar Karaba\_ and E. A. TezcanNorthern Clinics of Istanbul, 2025. 1 citations.

98% Topic Match

Abstract: OBJECTIVE Osteoarthritis (OA) is a prevalent and disabling joint condition that affects millions worldwide, particularly in the knee joint, and it presents limited therapeutic options. Platelet-rich plasma (PRP) and hyaluronic acid (HA) have emerged as promising intra-articular treatments. This study aimed to compare the effects of single-dose PRP and HA on pain, functionality, and stiffness in patients with knee OA over a 12-week follow-up period. METHODS A retrospective analysis was conducted on 64 patients who underwent single-dose intra-articular HA or PRP treatment for knee OA between December 2021 and June 2022. Pain and functional outcomes were assessed using the Visual...

[82] [Comparison of the short-term effect of intra-articular hyaluronic acid and platelet-rich plasma injections in knee osteoarthritis: a randomized clinical trial](#)

Omid Ghorbani, ..., and Paria YOUSEFI-TOODDESHKI. *Journal of Preventive Medicine and Hygiene*, 2024. 2 citations.

98% Topic Match

Abstract: Summary Introduction Osteoarthritis (OA) is one of the most common degenerative joint diseases which involved all joints. It is very important to choose a treatment method with high efficiency to reduce the pain and disability of patients and also to improve their quality of life. The current study aimed to investigate

the therapeutic effects of intra-articular injection of PRP and hyaluronic acid (HA) in the knee of people with knee osteoarthritis (KOA). Methods In this randomized clinical trial study, 90 patients with KOA were randomly divided into two groups of intra-articular HA and PRP. The patients of the two groups...

[83] [Intra-Articular Injection of Platelet-Rich Plasma Is More Effective than Hyaluronic Acid or Steroid Injection in the Treatment of Mild to Moderate Knee Osteoarthritis: A Prospective, Randomized, Triple-Parallel Clinical Trial](#)

D. Szwedowski, ..., and S. Jeka. *Biomedicines*, 2022. 20 citations.

98% Topic Match

Abstract: Purpose: To prospectively compare the efficacy and safety of intra-articular injections of platelet-rich plasma (PRP) with hyaluronic acid (HA) and glucocorticosteroid (CS) control groups for knee osteoarthritis (KOA) in a randomized, triple-parallel, single-center clinical trial. Methods: A total of 75 patients were randomly assigned to one of three groups receiving a single injection of either leukocyte-poor platelet-rich plasma (25 knees), hyaluronic acid (25 knees), or glucocorticosteroid (25 knees). The Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) score was collected at baseline and 6, 12, and 26 weeks after treatment. Results: After 6 weeks of PRP administration, a decrease in...

[84] [A comparative study of functional outcome of osteoarthritis knee post intraarticular injection of PRP and corticosteroid with minimum six months of follow-up](#)

N. Bharath and Yadav Uidesh. *National Journal of Clinical Orthopaedics*, 2019. 1 citations.

97% Topic Match

Abstract: Aim: to compare current application of platelet rich plasma (PRP) with corticosteroid as intraarticular injection in the osteoarthritis knee patients. We focused on comparing functional outcome of the knee joint following both the modalities and drawing a conclusion after evaluating merits and demerits of both the intraarticular injections. Introduction: Osteoarthritis (OA) is a chronic joint disease that usually occurs in older people and leads to pain and disabilities. OA treatment ranges from drug therapy to surgery. Drug and rehabilitation therapy are preferred over surgery, and, especially, there is a tendency toward compounds causing regenerative changes in the knee joint. In...

[85] [Global trends and hotspots in the application of platelet-rich plasma in knee osteoarthritis: A bibliometric analysis from 2008 to 2022](#)

Zipeng Xiao, ..., and Gangjian Tang. *Medicine*, 2023. 11 citations.

97% Topic Match

Abstract: Platelet-rich plasma (PRP) injection therapy holds great promise in improving knee cartilage repair. This bibliometric analysis aimed to explore the research landscape in the application of PRP for knee osteoarthritis (KOA) over the last 15 years. All articles investigating PRP in the application of KOA were retrieved from the web of science core collection. Publications were analyzed using R software, VOS Viewer, CiteSpace, Microsoft Excel, and an online bibliometric platform (<https://bibliometric.com/>). A total of 815 articles were identified, 6 articles from 2010 had the highest average number of citations in the local database. Filardo G., Kon E., Cole B.J., Marcacci...

[86] [Platelet-rich plasma for the treatment of knee osteoarthritis: an expert opinion and proposal for a novel classification and coding system](#)

E. Kon, ..., and Mikél Sanchez. *Expert Opinion on Biological Therapy*, 2020. 201 citations.

97% Topic Match

Abstract: ABSTRACT Introduction Platelet-rich plasma (PRP) is able to modulate the joint environment by reducing the inflammatory distress and promoting tissue anabolism. Therefore, it has gained increasing popularity among clinicians in the treatment of osteoarthritis (OA), and it is currently proposed beside consolidated options such as viscosupplementation. Areas covered A systematic review of all available meta-analyses evaluating intra-articular PRP injections in patients affected by knee OA was performed, to understand how this biologic treatment approach compares to the traditional injective therapies available in clinical practice. Moreover, a novel coding system and 'minimum reporting requirements' are proposed to improve future research in...

[87] [Relative efficacy of hyaluronic acid in comparison with NSAIDs for knee osteoarthritis: a systematic review and meta-analysis](#)

Raveendhara R. Bannuru, ..., and T. McAlindon. *Seminars in arthritis and rheumatism*, 2014. 175 citations.

97% Topic Match

No summary or abstract available

[88] [The Efficacy of Intra-articular Platelet-Rich Plasma Injection Versus Corticosteroid Injection in the Treatment of Knee Osteoarthritis: A Prospective Comparative Analysis](#)

Sumbal Irshad, ..., and Tayyab Mumtaz Khan. *Cureus*, 2024. 2 citations.

97% Topic Match

Abstract: Background Knee osteoarthritis (KOA) is the most typical cause of knee pain and impairment worldwide. It is typified by slow and progressive degeneration of the articular cartilage of the knee joint. Although KOA is being managed with a variety of therapies, the comparison of the effectiveness of different intra-articular injections in KOA treatment in Pakistan is still not thoroughly investigated. Therefore, the purpose of this current study is to compare the efficacy of intra-articular administration of platelet-rich plasma (PRP) and corticosteroids (CSs) in the treatment of KOA. Methods This prospective comparative study was performed among one hundred patients diagnosed with...

[89] [Platelet-Rich Plasma-Derived Growth Factor vs Hyaluronic Acid Injection in the Individuals with Knee Osteoarthritis: A One Year Randomized Clinical Trial](#)

S. A. Raeissadat, ..., and Pegah Yavari. *Journal of Pain Research*, 2020. 37 citations.

97% Topic Match

Abstract: Objective In this study, we aimed at performing a comparison between intra-articular injections of PRP-derived growth factor (PGF) and hyaluronic acid regarding their effect on pain and patient's function in knee osteoarthritis, as well as their safety profiles. Methods During our single-masked randomized clinical trial, the candidates with symptomatic knee osteoarthritis received two intra-articular injections of PGF with 3 weeks apart or received three weekly injections of HA. The mean improvements from before treatment until the second, sixth, and twelfth months post-intervention in scores obtained by visual analog scale (VAS), Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC), and Lequesne...

[90] [Double-Blind Randomized Controlled Trial Comparing Platelet-Rich Plasma With Intra-Articular Corticosteroid Injections in Patients With Bilateral Knee Osteoarthritis](#)

Jacques Pretorius, ..., and Sayed Nadeem. *Cureus*, 2022. 13 citations.

96% Topic Match

Abstract: Introduction Platelet-rich plasma (PRP) intra-articular injections have gained popularity and are suggested to be more effective and longer lasting than corticosteroid or visco-supplementation therapy. There are few studies comparing PRP with corticosteroid injections and none comparing PRP in patients with bilateral knee osteoarthritis with the patient acting as their own control. Methods We performed a double-blind randomized controlled trial including 29 patients (58 knees) with radiologically confirmed mild-to-moderate bilateral knee osteoarthritis. They were randomized to receive an intra-articular PRP injection into one knee and a methylprednisolone injection with a local anesthetic into the contralateral knee. The primary outcome was measured...

[91] [Effect of Intra-articular Platelet-Rich Plasma vs Placebo Injection on Pain and Medial Tibial Cartilage Volume in Patients With Knee Osteoarthritis: The RESTORE Randomized Clinical Trial](#)

K. Bennell, ..., and David J. Hunter. *JAMA*, 2021. 316 citations.

96% Topic Match

Abstract: Importance Most clinical guidelines do not recommend platelet-rich plasma (PRP) for knee osteoarthritis (OA) because of lack of high-quality evidence on efficacy for symptoms and joint structure, but the guidelines emphasize the need for rigorous studies. Despite this, use of PRP in knee OA is increasing. Objective To evaluate the effects of intra-articular PRP injections on symptoms and joint structure in patients with symptomatic mild to moderate radiographic medial knee OA. Design, Setting, and Participants This randomized, 2-group, placebo-controlled, participant-, injector-, and assessor-blinded clinical trial enrolled community-based participants (n = 288) aged 50 years or older with symptomatic medial knee...

[92] [Regenerative Medicine for Knee Osteoarthritis – The Efficacy and Safety of Intra-Articular Platelet-Rich Plasma and Mesenchymal Stem Cells Injections: A Literature Review](#)

Hoi Leng Ip, ..., and Nusrat Jahan. *Cureus*, 2020. 36 citations.

96% Topic Match

Abstract: The prevalence of osteoarthritis (OA) has been rising exponentially in recent years. As the disease progresses, patients may eventually require surgical intervention to restore the functionality of the affected knees. The current literature review aims to explore two treatment options in regenerative medicine for OA by analyzing the efficacy and safety of platelet-rich plasma (PRP) and mesenchymal stem cells (MSCs) use, as well as determining which population will benefit from these treatments. A total of 1093 patients who were diagnosed with unilateral or bilateral knee osteoarthritis (KOA) were recruited in 23 studies. The experimental groups received either PRP or MSCs...

[93] [Intra-articular Hyaluronic Acid \(HA\) and Platelet Rich Plasma \(PRP\) injection versus Hyaluronic acid \(HA\) injection alone in Patients with Grade III and IV Knee Osteoarthritis \(OA\): A Retrospective Study on Functional Outcome](#)

Saturveithan C, ..., and Jaspreet K. Malaysian Orthopaedic Journal, 2016. 57 citations.

95% Topic Match

Abstract: Introduction: Intra-articular hyaluronic acid (HA) is widely utilized in the treatment of knee osteoarthritis whereas platelet rich plasma (PRP) enhances the regeneration of articular cartilage. This study analyses the efficacy of HA and PRP in grade III and IV knee osteoarthritis. Methodology: This is a cross sectional study with retrospective review of 64 patients (101 knees) which includes 56 knees injected with HA+ PRP, and 45 knees with HA only. Results: During the post six months International Knee Documentation Committee (IKDC) evaluation, HA+PRP group showed marked improvement of 24.33 compared to 12.15 in HA group. Decrement in visual analogue score...

[94] [Comparative Effectiveness of Pharmacologic Interventions for Knee Osteoarthritis](#)

J. Moloo. NEJM Journal Watch, 2015. 214 citations.

95% Topic Match

No summary or abstract available

[95] [Comparison between the effect of intra-articular injections of platelet-rich plasma and corticosteroids in advanced knee osteoarthritis](#)

A. Ismaiel. Journal of Medicine in Scientific Research, 2018. 5 citations.

94% Topic Match

Abstract: Objective The objective of this study was to compare intra-articular injections (IAIs) of platelet-rich plasma (PRP) and corticosteroid injections in reducing pain and studying which has a more effective and lasting functional improvement. Patients and methods A total of 60 patients with chronic knee osteoarthritis (Kellgren-Lawrence grades 3 and 4) were enrolled in this study. Patients were randomized to treatment either with a single leukocyte-rich PRP or corticosteroid IAIs. Patients were assessed by visual analog scale, and Knee injury and Osteoarthritis Outcome Score at 1, 3, and 6 months after treatment. Results Our results showed improvement in all variables in...

[96] [Platelet-rich plasma: why intra-articular? A systematic review of preclinical studies and clinical evidence on PRP for joint degeneration](#)

G. Filardo, ..., and bullet M Marcacci. Knee Surgery, Sports Traumatology, Arthroscopy, 2013. 253 citations.

94% Topic Match

Abstract: PurposeThe aim of this review was to analyze the available evidence on the clinical application of this biological approach for the injective treatment of cartilage lesions and joint degeneration, together with preclinical studies to support the rationale for the use of platelet concentrates, to shed some light and give indications on what to treat and what to expect from intra-articular injections of platelet-rich plasma (PRP).MethodsAll in vitro, in vivo preclinical and clinical studies on PRP injective treatment in the English language concerning the effect of PRP on cartilage, synovial tissue, menisci, and mesenchymal stem cells were considered. A systematic review...

[97] [Single- and double-dose of platelet-rich plasma versus hyaluronic acid for treatment of knee osteoarthritis: A randomized controlled trial](#)

M. Tavassoli, ..., and S. Esmaeilnejad-Ganjii. World Journal of Orthopedics, 2019. 45 citations.

94% Topic Match

Abstract: BACKGROUND Platelet-rich plasma (PRP) and hyaluronic acid have been shown to be useful in the treatment of knee osteoarthritis. However, investigations comparing the efficacy of these two drugs together are insufficient. AIM To compare the outcomes of PRP vs hyaluronic acid injections in three groups of patients with bilateral knee osteoarthritis. METHODS This randomized controlled trial study involved 95 patients. Thirty-one subjects received a single injection of PRP (group PRP-1), 33 subjects received two injections of PRP at an interval of 3 wk (group PRP-2) and 31 subjects received three injections of hyaluronic acid at 1-wk intervals (group hyaluronic acid)....

[98] [Assessment of Pain and Functional Outcome between Intra-Articular Corticosteroids and Platelet Rich Plasma \(Prp\) in Treatment of Knee Osteoarthritis: A Prospective Observational Cohort Study](#)

Dimple Narkhede, ..., and Piyush Khandelwal. Indian Journal of Health Care, Medical & Pharmacy Practice, 2023. 0 citations.

94% Topic Match

Abstract: Background-Osteoarthritis is the most prevalent type of arthritis, which significantly impacts the patient's mobility and quality of life. Although pharmacological treatments like corticosteroids can provide immediate pain relief and enhance mobility and quality of life for osteoarthritis patients, their long-term effectiveness is limited. Material and Method- Forty patients affected by symptomatic radiologically confirmed knee osteoarthritis (Kellgren Lawrence grades II-III) were enrolled in this study. In the study, 30 patients were assigned to the PRP group and received a 5 mL intra-articular injection of PRP, while another 30 patients were randomized to the corticosteroid group and received an intra-articular injection of...

[99] [Combined intra-articular injections \(Hyaluronic acid, platelet-rich plasma, and corticosteroid\) for osteoarthritis knee, an effective alternative treatment](#)

Sanjay Rai, ..., and S. Wani. Journal of Orthopedics, Traumatology and Rehabilitation, 2018. 2 citations.

93% Topic Match

Abstract: Objective: Knee osteoarthritis (OA) is a common problem in the elderly but often difficult to manage in primary care. In literature, traditional nonsurgical managements, consisting of physical therapy, lifestyle modification, and pharmacologic therapy such as nonsteroidal anti-inflammatory drugs, are often ineffective or do not alleviate symptoms adequately. Viscosupplementation is a newly available option for patients with symptomatic knee OA that involves a series of intra-articular (IA) injections of hyaluronic acid (HA). Materials and Methods: In our study, we included 300 patients with primary knee OA who did not have diabetes mellitus as comorbidity. We gave IA injections (HA, platelet-rich plasma...

[100] [Analogies Between Platelet-Rich Plasma Versus Hyaluronic Acid Intra-articular Injections in the Treatment of Advanced Knee Arthritis: A Single-Center Study](#)

Ahmed Abu-Awwad, ..., and Gheorghe Szilagyi. Cureus, 2024. 3 citations.

93% Topic Match

Abstract: Background Knee osteoarthritis (KOA), a degenerative joint disease, is a common cause of chronic knee pain and disability in adults. Conservative management options are the first-line approach, but intra-articular injections, such as platelet-rich plasma (PRP) and hyaluronic acid (HA), are considered for advanced cases. This study aims to compare the efficacy of PRP versus HA injections in patients with advanced KOA. Methods A retrospective study was conducted on 145 patients with advanced KOA. Seventy patients received PRP injections, while 75 patients received HA injections. The Visual Analog Scale (VAS), Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) score, and International...

[101] [Is platelet-rich plasma effective for osteoarthritis?](#)

D. Ubilla, ..., and Sebastián Irarrázaval. Medwave, 2018. 5 citations.

92% Topic Match

Abstract: INTRODUCTION Despite varied non-surgical alternatives for the treatment of osteoarthritis, many patients remain symptomatic. In the last decade, the use of intra-articular platelet-rich plasma (PRP) has been proposed as an option. However, there is controversy about its clinical benefit and safety. METHODS To answer this question we used Epistemonikos, the largest database of systematic reviews in health, which is maintained by screening multiple information sources, including MEDLINE, EMBASE, Cochrane, among others. We extracted data from the systematic reviews, reanalyzed data of primary studies, conducted a meta-analysis and generated a summary of findings table using the GRADE approach. CONCLUSIONS We identified...

[102] [Efficacy of intra-articular injection of combined platelet-rich plasma and hyaluronic acid in knee degenerative joint disease \(182\)](#)

P. Randelli, ..., and A. Menon. Orthopaedic Journal of Sports Medicine, 2021. 0 citations.

92% Topic Match

Abstract: Objectives: Osteoarthritis (OA) of the knee is a debilitating disease whose prevalence has increased across the world with aging population. Platelet-Rich Plasma (PRP) and Hyaluronic Acid (HA) injections appear to be two of the main strategies for conservative treatment of early knee OA. The effectiveness of both treatments, however, is still under debate because contrasting results have been described in the current literature. Some pre-clinical studies evaluated the association of PRP and HA with encouraging results, highlighting the possibility of a synergistic effect between the two compounds and suggesting a possible use through combined intra-articular injections. The aim of this...

[103] [Maximizing Knee OA Treatment: A Comparative Look at Physiotherapy and Injections](#)

D. Donati, ..., and R. Tedeschi. *Journal of Personalized Medicine*, 2024. 5 citations.

91% Topic Match

Abstract: Background: Knee osteoarthritis (OA) is a prevalent and disabling condition often managed with physiotherapy or intra-articular injections. However, the comparative effectiveness of these treatments remains unclear. This systematic review aimed to evaluate and compare the efficacy of physiotherapy and intra-articular injections in managing knee OA. Methods: A systematic search of PubMed, Scopus, Web of Science, PEDro, and Cochrane Library was conducted. Randomized controlled trials (RCTs) comparing physiotherapy and intra-articular injections in knee OA patients were included. Key outcomes included pain (VAS), function (WOMAC, KOOS), range of motion (ROM), and quality of life. Data from five studies with a total of...

[104] [Comparative study between hyaluronic acid & platelet rich plasma in treatment of knee osteoarthritis](#)

Aniruddha Indra, ..., and P. Das. *IP International Journal of Orthopaedic Rheumatology*, 2024. 1 citations.

91% Topic Match

Abstract: : Knee osteoarthritis (OA) is a prevalent degenerative joint condition. This study aims to compare the therapeutic potential of Hyaluronic Acid (HA) and Platelet Rich Plasma (PRP) in its management.: A comparative study was conducted with patients receiving either HA or PRP injections. Outcome measures included VAS and WOMAC scores, safety profiles, patient satisfaction, and requirement for repeat injections.: PRP-treated patients exhibited superior improvement in VAS and WOMAC scores by the 12-month mark. Adverse reactions were minimal and comparable between groups. Notably, 92% of PRP recipients expressed a willingness for repeat treatment. PRP-treated patients also showcased prolonged therapeutic benefits, with...

[105] [Evaluation of platelet-rich plasma injection in knee osteoarthritis patients](#)

S. Suleiman, ..., and Mahmoud El-Sorogy. *Menoufia Medical Journal*, 2019. 0 citations.

90% Topic Match

Abstract: Objectives The aim of this study was to determine the effect of local injection of platelet-rich plasma (PRP) in patients with mild and moderate knee osteoarthritis (OA) and its effect on pain in comparison to corticosteroid injection. Background OA is one of the most prevalent chronic musculoskeletal diseases worldwide. The use of PRP appeared in the last years for the management of symptoms of knee OA. Patients and methods This study included 50 patients with knee OA. Our patients were divided to two groups: a group of 25 patients who were injected intra-articularly with about 3–4 ml of PRP and...

[106] [Intra-articular injections of platelet-rich plasma vs. hyaluronic acid in patients with knee osteoarthritis: Preliminary follow-up results at 6-months](#)

Ming Li, ..., and Hua Liu. *Experimental and Therapeutic Medicine*, 2021. 9 citations.

90% Topic Match

Abstract: The aim of the present study was to compare the clinical and economic benefits of intra-articular injections of platelet-rich plasma (PRP) and hyaluronic acid (HA) in Chinese patients with knee osteoarthritis (OA). A total of 86 patients (42 treated with PRP and 44 with HA) were treated with three weekly intra-articular injections. The inclusion criteria included patients between 18 and 75 years of age, with chronic knee pain or swelling lasting >3 months and X-ray findings of degenerative joint alterations according to the Kellgren-Lawrence score grade I-III. Clinical examinations were performed before treatment, at 1- and 6-month post-injection intervals. International...

[107] [Comparing the Efficacy of Intra-Articular Single Platelet-Rich Plasma\(PR\)P versus Novel Crosslinked Hyaluronic Acid for Early-Stage Knee Osteoarthritis: A Prospective, Double-Blind, Randomized Controlled Trial](#)

Ying-Chun Wang, ..., and Hsuan-Ti Huang. *Medicina*, 2022. 35 citations.

88% Topic Match

Abstract: Background and Objectives: For the treatment of knee osteoarthritis (OA), intra-articular platelet-rich plasma (PRP) and novel crosslinked single-dose hyaluronic acid (HA) have both been reported to improve outcomes, but no study has compared them for the treatment of knee OA. We hypothesized patients with early-stage knee OA who received PRP injections would have more WOMAC score changes than those who received HA injections. This is the first prospective, double-blind, parallel, randomized controlled trial comparing the efficacy of intra-articular single-dose PRP versus novel crosslinked HA (HyajointPlus) for treating early-stage knee OA. Materials and Methods: This study analyzed 110 patients randomized into...

[108] [Platelet-Rich Plasma in Treatment of Knee Osteoarthritis](#)

M. S. Hamed. *The Egyptian Journal of Hospital Medicine*, 2022. 0 citations.

87% Topic Match

Abstract: Background: Osteoarthritis (OA) is one of the crucial musculoskeletal disorders that are characterized by the imbalanced homeostasis and destruction of the articular cartilage. Objective: This study aimed to evaluate the effect of platelet-rich plasma (PRP) in treatment of knee osteoarthritis. Patients and Methods: This interventional study was carried out on 20 patients who were suffering from mild to moderate primary osteoarthritis of knee joint during the period from May 2012 to March 2013. They were diagnosed clinically, and by plain x-ray and Doppler musculoskeletal ultrasound. Results: There were 5 patients (25%) experienced slight pain at the site of injection...

[109] [The Clinical Efficacy of Platelet-Rich Plasma versus Conventional Drug Injection in the Treatment of Knee Osteoarthritis: A Study Protocol for a Randomized Controlled Trial](#)

Qirong Ma, ..., and Jianfeng Xu. *Evidence-based Complementary and Alternative Medicine : eCAM*, 2022. 3 citations.

87% Topic Match

Abstract: Knee osteoarthritis is a common chronic degenerative joint disease in middle-aged and elderly people. Intra-articular injection for the treatment of knee osteoarthritis is a regularly utilized nonsurgical treatment in modern medicine. Hyaluronic acid (HA) and platelet-rich plasma (PRP) are two frequently employed intra-articular devices. Hyaluronic acid (HA) is an accepted nonsurgical treatment for symptomatic KOA, and platelet-rich plasma is a popular option in the treatment of KOA in recent years. The purpose of this research is to compare the efficacy and safety of intra-articular injection of platelet-rich plasma (PRP) versus hyaluronic acid (HA) on the pain score scale, knee function,...

[110] [Effectiveness of intra-articular injection of platelet-rich plasma versus triamcinolone in osteoarthritis of knee – A hospital-based randomized clinical trial](#)

S. Saidapur, ..., and Satish Bachchu. *IP International Journal of Orthopaedic Rheumatology*, 2021. 1 citations.

86% Topic Match

Abstract: Osteoarthritis of the knee is one of the most common conditions which clinicians have to deal with in their day-to-day practice. There are various pharmacologic therapies recommended for OA knee. Intra-articular Platelet Rich Plasma (PRP) and Intra-articular Triamcinolone have been shown to relieve pain and improve quality of life in patients with OA knee. This study is conducted to compare the effectiveness of PRP and Triamcinolone intra-articular injections in Grade 1 & 2 OA knee. We conducted a randomized control study including 70 patients with Grade 1 & 2 (Kellgren & Lawrence grading) OA knee. 35 patients each were divided into...

[111] [A comparative study between role of platelet rich plasma \(PRP\) and corticosteroid injection in the treatment of osteoarthritis knee](#)

Anand Kumar, ..., and Ashutosh Kumar. *International Journal of Orthopaedics Sciences*, 2021. 4 citations.

86% Topic Match

Abstract: Background: Osteoarthritis is the most prevalent type of arthritis, which significantly impacts the patient's mobility and quality of life. Pharmacological treatments for osteoarthritis, such as corticosteroids, produce an immediate reduction of the patient's pain as well as an improvement in the patient's mobility and quality of life, but with a limited long-term efficacy. In this context, platelet-rich plasma (PRP) infiltrations represent a therapeutic tool due to its trophic properties and its ability to control inflammatory processes. Evidence on the effect of platelet-rich plasma (PRP) in treating osteoarthritis (OA) is insufficient. Therefore, the present study compares the effects of a one-time...

[112] [Platelet-rich plasma injection is more effective than hyaluronic acid in the treatment of knee osteoarthritis](#)

E. Holguin. *Orthopaedic Journal of Sports Medicine*, 2014. 49 citations.

84% Topic Match

Abstract: Objectives: To determine and compare the effects of autologous platelet rich plasma (PRP) and hyaluronic acid (HA) for the treatment of osteoarthritis of the knee. Methods: This prospective study included 150 patients affected by severe osteoarthritis of the knee. Gonarthrosis was graded using the Kellgren-Lawrence and Aliback radiographic classification scale. 150 patients were randomized into 2 study groups. In the PRP group (n=55) three intraarticular injection were applied and the control group (n=55) received 3 intra-articular injections of high molecular weight HA. An unblinded physician performed infiltration once a week for 3 weeks into the knee affected by clinically relevant gonarthrosis...

[113] [Evaluation of the effect of platelet-rich plasma in early osteoarthritis knee using the oxford knee score: A short-term outcome](#)

B. Gadagoli, ..., and Harish S. Pai. *Journal of Orthopaedic Diseases and Traumatology*, 2023. 2 citations.

81% Topic Match

Abstract: Introduction: Osteoarthritis (OA) is classically described as a noninflammatory, degenerative joint disease most commonly occurring in the elderly population. It is characterized by the deterioration of articular cartilage and by the formation of new bone at joint surfaces and margins. Our study aims at evaluating the efficacy of intra-articular platelet-rich plasma (PRP) injections in Grade I and II OA knees. Materials and Methods: A total of 46 patients with Grade I and II (Kellgren and Lawrence grading) primary OA knee were enrolled for a prospective study. Prior consent was taken for intra-articular injection of PRP from all patients. The study...

[114] [A Prospective and Comparative Study of the Effectiveness of Intra-articular Injection of Platelet-rich Plasma versus Hyaluronic Acid for Osteoarthritis of Knee Joint](#)

Vivek Mittal, ..., and Amit Agarwal. *Journal of Orthopedics, Traumatology and Rehabilitation*, 2025. 0 citations.

81% Topic Match

Abstract: Osteoarthritis (OA) of the knee joint is a degenerative disease characterized by pain, decreased range of motion, and cartilaginous damage leading to disability. Nowadays, it is becoming more likely in the younger population due to sedentary and unhealthy lifestyles. Weight reduction and anti-inflammatory drugs are conservative treatment options, but newer therapies such as intra-articular injections of hyaluronic acid (HA) and platelet-rich plasma (PRP) are also being used for patients who are not responding to conservative therapies before surgical intervention. This study was designed to compare the efficacy and safety of intra-articular injections of HA and PRP in patients diagnosed...

[115] [Ozone therapy for knee osteoarthritis: a literature visualization analysis of research hotspots and prospects](#)

Qing Liu, ..., and Xieyuan Jiang. *Medical Gas Research*, 2024. 5 citations.

79% Topic Match

Abstract: Medical ozone is a molecule composed of three oxygen atoms with anti-inflammatory, analgesic, and antioxidant functions. Ozone therapy (O<sub>3</sub> or O<sub>2</sub>–O<sub>3</sub>) for knee osteoarthritis has gradually received increasing attention from researchers in recent years. Here, we discuss the research hotspots and development trends of ozone therapy for knee osteoarthritis through literature visualization and analysis. (1) From 2012 to the present, the overall trend of publications on ozone treatment for knee osteoarthritis has been increasing annually, and it has received widespread attention, especially in Iran and China. (2) Keyword analysis revealed that the keywords with the greatest number of citations...

[116] [Comparative Study of Functional Outcome of Intra-articular Injection of Platelet-Rich Plasma versus Corticosteroid in Treatment of Osteoarthritis of Knee](#)

Dr. E Pradeep, ..., and Dr. V Y Ashwin. *Journal of Orthopaedic Case Reports*, 2025. 0 citations.

79% Topic Match

Abstract: Abstract Introduction: The entire joint structure is impacted by osteoarthritis (OA). The hands, knees, and hips are the joints that sustain the greatest injuries. Since OA is a prevalent illness worldwide and a leading cause of impairment in the elderly, doctors are constantly searching for efficient treatments to reduce pain and enhance symptoms so that patients can live better lives. Materials and Methods: This prospective randomized controlled study was conducted at the orthopedics outpatient department at Chettinad Hospital and Research Institute, Kelambakkam. A total of 40 patients were enrolled in the study. WOMAC and LEQUESNE index scores were deployed to...

[117] [A Comparative Study of Intra-Articular Knee Injection of Leukocyte-Poor Platelet-Rich Plasma Compared to Corticosteroids and Local Anesthetics in Patients with Knee Osteoarthritis](#)

Abbas Ahmadi, ..., and E. Espahbodi. *Archives of Anesthesia and Critical Care*, 2024. 0 citations.

79% Topic Match

Abstract: Background: Knee osteoarthritis (OA) is the most common reason for orthopedic secondary care referral. And it is one of the main causes of disability in adults worldwide. It is estimated to affect between 10 to 25% of patients over the age of 60. Intra-articular corticosteroid injection (IA CS) and physical therapy were the two choices in an attempt to provide symptomatic management or deferred surgery. There is a growing trend is intra-articular platelet-rich plasma (IA PRP) injection to reduce pain and improve function in OA patients. PRP is divided into two types: leukocyte-poor platelet-rich plasma (LP-PRP) and leukocyte-rich platelet-rich plasma...

[118] [Comparative study of clinical and functional outcome of treatment of mild to moderate osteoarthritis of knee joint between intra articular platelet rich plasma and Hyaluronic acid injection](#)

Dr. C Dinesh, ..., and Dr. A Manikandarajan. *International Journal of Orthopaedics Sciences*, 2020. 1 citations.

75% Topic Match

Abstract: Aim: To compare the clinical and functional outcomes of treatment of mild to moderate osteoarthritis of knee joint by using intra-articular platelet-rich plasma injection versus hyaluronic acid injection. Methods: Total of 60 patients with grade 0 to grade 2 osteoarthritis were included in the study, of which 30 were treated with intra-articular PRP and the other 30 with intra-articular HA. Patients was evaluated before and after the procedure using Visual Analogue Scale (VAS) and Western Ontario McMaster Universities Osteoarthritis Index (WOMAC) at 6, 12, 24 weeks respectively. Results: Both groups had clinical improvement but excellent results were seen in the group...

[119] [Efficacy of Intra-Articular Injection of Platelet-Rich Plasma Combined with Mesenchymal Stem Cells in the Treatment of Knee Osteoarthritis: A Systematic Review and Meta-Analysis](#)

Weipeng Zeng, ..., and Caifeng Pei. *International Journal of Clinical Practice*, 2022. 11 citations.

73% Topic Match

Abstract: Objective. This study systematically evaluated the effect of intra articular injection of platelet rich plasma (PRP) and mesenchymal stem cells (MSC) on knee osteoarthritis (KOA). Methods. Randomized controlled trials (RCTs) of PRP combined with MSC in the treatment of KOA were collected from PubMed, Cochrane Library, Web of Science, Wiley online library, CNKI, and Wanfang databases from inception to July 30, 2022. Two researchers read and screened the literature to extract the data, respectively. After conducting a risk of bias assessment of included data, RevMan 5.3 software was used for meta analysis. The Cochrane Handbook risk of bias assessment tool was used to evaluate the included literature....

[120] [Knee Osteoarthritis Injection Choices: Platelet- Rich Plasma \(PRP\) Versus Hyaluronic Acid \(A one-year randomized clinical trial\)](#)

S. A. Raeissadat, ..., and K. Azma. *Clinical Medicine Insights. Arthritis and Musculoskeletal Disorders*, 2015. 307 citations.

71% Topic Match

Abstract: Introduction Knee osteoarthritis (OA) is the most common articular disease. Different methods are used to alleviate the symptoms of patients with knee OA, including analgesics, physical therapy, exercise prescription, and intra-articular injections (glucocorticoids, hyaluronic acid [HA], etc). New studies have focused on modern therapeutic methods that stimulate cartilage healing process and improve the damage, including the use of platelet-rich plasma (PRP) as a complex of growth factors. Due to the high incidence of OA and its consequences, we decided to study the long-term effect of intraarticular injection of PRP and HA on clinical outcome and quality of life of patients...

[121] [Nonoperative Treatments for Knee Osteoarthritis: An Evaluation of Treatment Characteristics and the Intra-Articular Placebo Effect A Systematic Review](#)

C. Vannabouathong, ..., and Moin Khan. *JBJS Reviews*, 2018. 63 citations.

69% Topic Match

Abstract: Background: Guidelines recommending various nonoperative treatments for patients with knee osteoarthritis remain inconsistent. Much of this controversy relates to what constitutes a clinically important effect. The purposes of the present study were to compare treatment effect sizes from recent meta-analyses evaluating pharmacological or medical device interventions for the treatment of knee osteoarthritis and to further assess the clinical impact that the intra-articular

placebo effect may have on intra-articular injection therapies. Methods: A search of PubMed, MEDLINE, and Embase from the inception date of each database through May 30, 2017 was conducted for all articles involving meta-analyses of pharmacological or medical...

[122] [Platelet Rich Plasma Versus Corticosteroid Injections in Treatment of Knee Osteoarthritis](#)

Zeyad Buahlaika, ..., and Sanad Younes. AlQalam Journal of Medical and Applied Sciences, 2024. 0 citations.

69% Topic Match

Abstract: This study seeks to assess and compare the impact and functional outcomes of platelet-rich plasma and corticosteroid injections in individuals with knee osteoarthritis. In this prospective study, sixty randomly selected patients diagnosed with mild to moderate knee osteoarthritis were included. The patients underwent treatment with either platelet-rich plasma or corticosteroid injection. The assessment of patients was conducted during a follow-up period ranging from six months to one year, utilizing the visual analog scale and the Knee Injury and Osteoarthritis Outcome Score. Written informed consent was obtained from each participant included in the study. This study revealed that patients treated with...

[123] [Autologous protein solution inhibits MMP 13 production by IL-1 and TNF- \$\alpha\$  stimulated human articular chondrocytes](#)

Jennifer E Woodell-May, ..., and J. Hoeppner. Journal of Orthopaedic Research, 2011. 140 citations.

69% Topic Match

No summary or abstract available

[124] [The Analysis Study of The Effect of Intraosseous Infiltration of Platelet Rich Plasma for Knee Osteoarthritis : A Comprehensive Systematic Review](#)

Odi Bayu Dharma Perkasa Gede and Stedi Adnyana Christian. The International Journal of Medical Science and Health Research, 2024. 0 citations.

61% Topic Match

Abstract: Background: Knee osteoarthritis (KOA) is an active, heterogeneous, and low-grade inflammatory condition leading to functional disability and pain. The aim: The aim of this study to show about the effect of intraosseous infiltration of platelet rich plasma for knee osteoarthritis. Methods: By the Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA) 2020, this study was able to show that it met all of the requirements. Result: Eight publications were found to be directly related to our ongoing systematic examination after a rigorous three-level screening approach. Subsequently, a comprehensive analysis of the complete text was conducted, and additional scrutiny was...

[125] [Efficacy and clinical outcomes of intra-articular injection of platelet-rich plasma versus hyaluronic acid for knee osteoarthritis](#)

Adel Azzam, ..., and Khaled Amer. Al-Azhar International Medical Journal, 2022. 1 citations.

61% Topic Match

Abstract: Background: Platelet-rich plasma (PRP) and hyaluronic acid (HA) have received considerable consideration as good potential nonsurgical treatment options for knee OA. Aim of The Work: To examine the effectiveness of PRP and HA injections in the treatment of knee OA. Patients and Methods: In this prospective randomized clinical study, Three weekly intra-articular injections were given to 40 individuals with knee OA (20 had PRP and 20 had HA). Clinical evaluations were conducted prior to and four weeks after the third injection. In every evaluation, goniometer-measured knee flexion ROM, Western Ontario and McMaster University (WOMAC) OA index, and pain assessment using...

[126] [MRI Findings after Injection of Single and Double Centrifuged Platelet-Rich Plasma and Placebo \(Normal Saline\) in Patients with Knee Osteoarthritis: A Randomized Double-Blind Clinical Trial with Six-Month Follow-Up](#)

M. Ghadamzadeh, ..., and Paniz Jahani. Archives of Bone and Joint Surgery, 2025. 1 citations.

56% Topic Match

Abstract: Objectives: This research aimed to compare the changes in knee MRI findings after the injection of platelet-rich plasma with those after the injection of a placebo (normal saline) in patients with knee osteoarthritis. Methods: This randomized clinical trial study was conducted on 63 patients with grade 2 and 3 knee osteoarthritis. Patients were randomly assigned to one of three injection groups: double-centrifuged PRP, single-centrifuged PRP, or placebo (normal saline). Patients were evaluated with MRI, VAS (visual analog scale), WOMAC (Western Ontario and McMaster Universities Arthritis Index), knee ROM (range of motion), and functional tests before and six months after the...

[127] [Comparison of platelet-rich plasma vs hyaluronic acid injections in patients with knee osteoarthritis](#)

Yanhong Han, ..., and Jun Liu. Medicine, 2018. 14 citations.

55% Topic Match

Abstract: Background: Knee osteoarthritis (KOA) is a progressive joint disease involving intraarticular and periarthritis structures. In recent years, there has been increasing interest in the use of autologous growth factors, such as intraarticular injections of platelet-rich plasma (PRP), to treat KOA. It is necessary to update the research and reevaluate the efficacy and safety of PRP to provide up-to-date evidence for KOA management. Therefore, we provide a protocol for a systematic review of PRP for KOA. Methods: The aim of this study was to retrieve papers on the topic of PRP treatment for KOA in electronic databases including PubMed, Embase, and...

[128] [Intraarticular corticosteroid injections in the management of osteoarthritis knee](#)

S. Hussain, ..., and Manzoor Ahmad. JMS SKIMS, 2019. 0 citations.

54% Topic Match

Abstract: Objective:- The aim of the study was to assess therapeutic efficacy, adverse events and patient satisfaction of intraarticular (IA) corticosteroid injections for knee osteoarthritis (OA). Methods:- Thirty-two (96) patients with OA of the knee participated in the present study. The inclusion criteria included (1) Resting visual analog scale pain >50 mm (2) Radiographic evidence for osteoarthritis (as per Kellgren-Lawrence scale) plus; age e50yrs, morning stiffness d 30 min and crepitus on motion. Baseline Western Ontario and MacMaster University Osteoarthritis Index (WOMAC) and visual analogue score (VAS) were documented. Patients received intra-articular injections of triamcinolone acetonide 40 mg in the affected...

[129] [Platelet-Rich Plasma Releasate Inhibits Inflammatory Processes in Osteoarthritic Chondrocytes](#)

G. V. van Buul, ..., and G. V. van Osch. The American Journal of Sports Medicine, 2011. 394 citations.

53% Topic Match

No summary or abstract available

[130] [Intra-Articular Hyaluronic Acid for Knee Osteoarthritis: A Systematic Umbrella Review](#)

W. Glinkowski and WiesBaw TomaszewskiJournal of Clinical Medicine, 2025. 15 citations.

46% Topic Match

Abstract: Objective: to evaluate the efficacy, safety, and cost-effectiveness of intra-articular hyaluronic acid (IAHA) in treating osteoarthritis (OA), considering innovations in formulations, comparative outcomes, and variability in guidelines. This review aims to synthesize evidence supporting the role of IAHA in multimodal treatment strategies. Materials and Methods: A general, narrative, umbrella review of systematic reviews and meta-analyses was conducted. Clinical practice recommendations and guidelines for IAHA use were also reviewed and evaluated. A comprehensive search was conducted across the main medical data sources. Inclusion criteria focused on studies evaluating the efficacy, safety, and impact of IAHA. Key outcomes included pain reduction (e.g.,....

[131] [The chimera of reaching a universal consensus on platelet-rich plasma treatment for knee osteoarthritis: a review of recent consensus statements and expert opinion](#)

Elizaveta Kon, ..., and B. Di Matteo. Expert Opinion on Biological Therapy, 2024. 3 citations.

40% Topic Match

Abstract: ABSTRACT Introduction Osteoarthritis (OA) is a prevalent cause of disability worldwide, affecting millions and posing significant socioeconomic burdens. Various conservative measures like hyaluronic acid (HA) and platelet-rich plasma (PRP) injections aim to manage OA symptoms and delay surgical interventions. Despite the increasing utilization of PRP, consensus on its efficacy remains elusive, reflecting the evolving landscape of OA management. Areas Covered This study reviews guidelines and recommendations on intra-articular PRP injections for OA globally, highlighting divergent perspectives among different medical societies. A comprehensive literature search identified 19 relevant guidelines, indicating a temporal and geographic evolution in attitudes toward PRP use. While...

[132] [Synovial biomarkers in the diagnosis of post-traumatic osteoarthritis following anterior cruciate ligament and meniscus injuries: protocol for a systematic review](#)

João Pedro Oliveira, ..., and Helena Donato. *BMJ Open*, 2025. 1 citations.

39% Topic Match

Abstract: Introduction This review aims to synthesise research evidence regarding biomarkers in the synovial fluid that may predict the risk of post-traumatic osteoarthritis (PTOA) in young adults. Considering the high prevalence of knee joint injuries, particularly among youth sports athletes, this review will focus on anterior cruciate ligament and/or meniscal ruptures. These injuries are highly associated with PTOA, with studies indicating that even with surgical reconstruction, 50%–80% of affected individuals develop knee PTOA within a 10-year follow-up. Methods and analysis The results of this systematic review will be reported in accordance with Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension...

[133] [Intra-articular Injections in the Treatment of Symptoms from Ankle Arthritis: A Systematic Review](#)

C. Vannabouathong, ..., and B. Petrisor. *Foot & Ankle International*, 2018. 59 citations.

38% Topic Match

Abstract: Background: Intra-articular (IA) injections are commonly used to treat knee arthritis pain; however, whether their efficacy generalizes to ankle arthritis remains debatable. We aimed to evaluate the evidence for IA therapies in the management of this patient population. Methods: We performed a literature search for observational and randomized controlled trials (RCTs). Treatments included corticosteroids (CS), hyaluronic acid (HA), platelet-rich plasma (PRP), and mesenchymal stem cells (MSC). We extracted study details, patient demographics, treatment characteristics, efficacy outcomes, and safety. When feasible, data from RCTs were meta-analyzed using a random-effects model and 95% confidence intervals (CIs) were calculated. A P value <.05...

[134] [AB0878 THE COMPARISON EFFECTS OF INTRA-ARTICULAR INJECTION OF PLATELET RICH PLASMA \(PRP\), PLASMA RICH IN GROWTH FACTOR \(PRGF\), HYALURONIC ACID \(HA\), AND OZONE IN KNEE OSTEOARTHRITIS: A ONE YEAR RANDOMIZED CLINICAL TRIAL](#)

S. A. Raeissadat, ..., and M. Darvish. *Annals of the Rheumatic Diseases*, 2020. 2 citations.

35% Topic Match

Abstract: Background: Knee osteoarthritis (OA) as a common progressive degenerative condition is one of the most important leading causes of disability and relative dependence. Worldwide prevalence of symptomatic knee OA has estimated 3.8%. It affects more than 20% of over 45-year-old population. Among the minimally invasive methods recommended for knee OA management is intra-articular injections for which a large array of products have been used. Despite all the existing options, there is still no general consensus on the choice and priority of the best intra-articular injection in knee osteoarthritis. Objectives: Our study compare the short and long-term efficacy of the intra...

[135] [Effectiveness of ultrasound-guided platelets rich plasma injection in knee osteoarthritic cases](#)

Lamis Safwat, ..., and Hesham Alshabrawy. *Journal of Medicine in Scientific Research*, 2021. 0 citations.

34% Topic Match

Abstract: Background Knee osteoarthritis is the most common articular disease. Different methods are used to alleviate the symptoms of patients with knee osteoarthritis, including analgesics, physical therapy, exercise prescription, and intra-articular injections (glucocorticoids, hyaluronic acid). New studies have focused on modern therapeutic methods that stimulate the cartilage healing process and improve the damage, including the use of platelet-rich plasma as a complex growth factor. Aim of the work To evaluate the effectiveness of intra articular PRP in mild to moderate degree knee osteoarthritis. Objectives To slow the rate of progression of knee Osteoarthritis by injection of PRP intraarticular. Decrease pain and...

[136] [Knee Intraosseous Injections: A Systematic Review of Clinical Evidence of Different Treatment Alternatives](#)

B. Di Matteo, ..., and E. Kon. *CARTILAGE*, 2020. 32 citations.

30% Topic Match

Abstract: Objective To systematically review the available clinical evidence regarding the safety and efficacy of knee intraosseous injections for the treatment of bone marrow lesions in patients affected by knee osteoarthritis. Design A literature search was carried out on PubMed, Embase, and Google Scholar databases in January 2020. The following inclusion criteria were adopted: (1) studies of any level of evidence, dealing with subchondral injection of bone substitute materials and/or biologic agents; (2) studies with minimum 5 patients treated; and (3) studies with at least 6 months' follow-up evaluation. All relevant data concerning clinical outcomes, adverse events, and rate of conversion...

[137] [AB0864 DO CORTICOSTEROIDS AND HYALURONIC ACID INJECTIONS CAUSE INFECTIONS? A SYSTEMATIC REVIEW OF LITERATURE ON ADVERSE EFFECTS AND INFECTION RATES OF INTRA-ARTICULAR CORTICOSTEROID AND HYALURONIC ACID INJECTIONS IN PATIENTS WITH KNEE OSTEOARTHRITIS](#)

C. Hatzantonis. *Annals of the Rheumatic Diseases*, 2020. 1 citations.

24% Topic Match

Abstract: Background: Knee osteoarthritis has been a leading cause of chronic pain and disability in our increasingly aging population. Conservative management options of physiotherapy and oral analgesics offer some relief, but delivery of intra-articular injections such as corticosteroids or hyaluronic acid has increasingly become the mainstay of pain management of knee osteoarthritis. In a clinical setting, intra-articular injections offer a means to delay a total knee replacement. Despite the abundance of literature on corticosteroids and hyaluronic acid, there is no known percentage of infection rates or adverse effects that clinicians may use to inform patients prior to obtaining consent for the...

[138] [Does beta-hydroxybutyrate testing affect outcomes in patients with diabetic ketoacidosis?](#)

David H Pratt and T. Thrasher. *Evidence-Based Practice*, 2020. 0 citations.

22% Topic Match

Abstract: and 12 months (five trials, N5450; MD –1.8; 95% CI, –2.5 to –1.0; I<sup>2</sup>89%). Study limitations included inconsistencies in plasma preparations (ie, leukocyte-rich or leukocyte-poor) and differences in quantity and interval of injections. Significant statistical heterogeneity was observed in the outcomes, and several of the individual studies were underpowered. A 2018 meta-analysis of three prospective cohort studies and 10 RCTs (N51,524) compared intraarticular PRP injections versus hyaluronic acid injections for pain reduction in early knee osteoarthritis. Nine of 13 studies were included in the above 2019 meta-analysis; however, this review included four unique studies because of a search strategy that...

[139] [Glenohumeral Joint Injections](#)

C. Gross, ..., and A. Romeo. *Sports Health*, 2013. 38 citations.

19% Topic Match

Abstract: Context: Intra-articular injections into the glenohumeral joint are commonly performed by musculoskeletal providers, including orthopaedic surgeons, family medicine physicians, rheumatologists, and physician assistants. Despite their frequent use, there is little guidance for injectable treatments to the glenohumeral joint for conditions such as osteoarthritis, adhesive capsulitis, and rheumatoid arthritis. Evidence Acquisition: We performed a comprehensive review of the available literature on glenohumeral injections to help clarify the current evidence-based practice and identify deficits in our understanding. We searched MEDLINE (1948 to December 2011 [week 1]) and EMBASE (1980 to 2011 [week 49]) using various permutations of intra-articular injections AND (corticosteroid OR...

[140] [Comparative efficacy and safety of injection therapies for knee osteoarthritis](#)

Ting Yu, ..., and L. Jiao. *Medicine*, 2020. 1 citations.

17% Topic Match

Abstract: Abstract Introduction: There are many injection methods for the treatment of knee osteoarthritis, but there is no comprehensive comparison, based on the fixed effect model. Methods: According to the retrieval strategy, we searched randomized controlled trials (RCTs) randomly from PubMed, the Cochrane Library, Embase, the China National Knowledge Infrastructure (CNKI), Wanfang Database from their inceptions to August 2020, and 2 members of us selected literatures and extracted data independently. Methodological quality was assessed by using the Cochrane bias risk tool, and meta-analysis was performed by using the Stat.14.0. Results: This study will evaluate the effectiveness and safety of different injectable...

[141] [Intra articular corticosteroids for the treatment of osteoarthritis: A systematic review and meta analysis on the comparison of different molecules and doses](#)

Alessandro Bensa, ..., and G. Filardo. *Journal of Experimental Orthopaedics*, 2024. 14 citations.

Not measured Topic Match

Abstract: The purpose of this study was to quantify and compare the clinical relevance of the different intra articular corticosteroids (CS) effects in vivo for osteoarthritis (OA) treatment.

[142] [Randomized controlled trial comparing hyaluronic acid, platelet-rich plasma and the combination of both in the treatment of mild and moderate osteoarthritis of the knee](#)

J. F. Lana, ..., and W. Belangero. *Journal of Stem Cells & Regenerative Medicine*, 2016. 201 citations.

Not measured Topic Match

Abstract: Objective: This study aims at evaluating the clinical effects of Platelet Rich Plasma (PRP) and Hyaluronic Acid (HA) as individual treatments for mild to moderate Osteoarthritis (OA) and it also examines the potential synergistic effects of PRP in combination with HA. Research continues to emerge examining the potential therapeutic efficacy of HA and PRP as autologous injectable treatments for joint arthritis. However, there is a paucity of research investigating the effects of combining HA and PRP on pain and functional status in patients with OA. Design: In this multi-center, randomized, controlled, double blind, prospective trial, 105 patients with mild to...

[143] [Intra-articular Injection of Platelet-Rich Plasma Is Superior to Hyaluronic Acid or Saline Solution in the Treatment of Mild to Moderate Knee Osteoarthritis: A Randomized, Double-Blind, Triple-Parallel, Placebo-Controlled Clinical Trial](#)

Kuan-Yu Lin, ..., and Jenn-Huei Renn. *Arthroscopy : the journal of arthroscopic & related surgery : official publication of the Arthroscopy Association of North America and the International Arthroscopy Association*, 2019. 179 citations.

Not measured Topic Match

No summary or abstract available

[144] [Hyaluronic Acid Versus Platelet-Rich Plasma: A Prospective, Double-Blind Randomized Controlled Trial Comparing Clinical Outcomes and Effects on Intra-articular Biology for the Treatment of Knee Osteoarthritis](#)

B. Cole, ..., and L. Fortier. *The American Journal of Sports Medicine*, 2017. 362 citations.

Not measured Topic Match

No summary or abstract available

[145] [Intra-articular injections of platelet-rich plasma, hyaluronic acid or corticosteroids for knee osteoarthritis](#)

Yong Huang, ..., and Junbin Liu. *Der Orthopäde*, 2019. 127 citations.

Not measured Topic Match

No summary or abstract available

[146] [OARSI guidelines for the non-surgical management of knee, hip, and polyarticular osteoarthritis](#)

Raveendhara R. Bannuru, ..., and T. McAlindon. *Osteoarthritis and cartilage*, 2019. 2592 citations.

Not measured Topic Match

No summary or abstract available

[147] [Effect of Intra-articular Triamcinolone vs Saline on Knee Cartilage Volume and Pain in Patients With Knee Osteoarthritis: A Randomized Clinical Trial](#)

T. McAlindon, ..., and R. Ward. *JAMA*, 2017. 697 citations.

Not measured Topic Match

No summary or abstract available

[148] [Choice of intra-articular injection in treatment of knee osteoarthritis: platelet-rich plasma, hyaluronic acid or ozone options](#)

T. M. Duymu, ..., and F. N. Kesikta. *Knee Surgery, Sports Traumatology, Arthroscopy*, 2017. 286 citations.

Not measured Topic Match

No summary or abstract available

[149] [Platelet-Rich Plasma Versus Hyaluronic Acid Injections for the Treatment of Knee Osteoarthritis: Results at 5 Years of a Double-Blind, Randomized Controlled Trial](#)

A. Di Martino, ..., and G. Filardo. *The American Journal of Sports Medicine*, 2018. 248 citations.

Not measured Topic Match

Abstract: Background: Platelet-rich plasma (PRP) injections have been proposed as a new conservative option for knee degeneration to provide symptomatic relief and delay surgical intervention. Although the current literature provides some evidence on the benefits of this technique compared with viscosupplementation, no studies have been performed to compare their long-term effects. Purpose: To compare the long-term clinical outcomes provided by intra-articular injections of either PRP or hyaluronic acid (HA) to treat knee degenerative disease. Study Design: Randomized controlled trial; Level of evidence, 1. Methods: Patients with a history of chronic symptomatic knee degenerative changes and osteoarthritis (Kellgren-Lawrence grade 0-3) were enrolled:...

[150] [Efficacy and safety of platelet-rich plasma and hyaluronic acid combination therapy for knee osteoarthritis: a systematic review and meta-analysis](#)

Jiahao Gao, ..., and Jianlin Zuo. *Archives of Orthopaedic and Trauma Surgery*, 2024. 8 citations.

Not measured Topic Match

No summary or abstract available

[151] [Multiple PRP injections are more effective than single injections and hyaluronic acid in knees with early osteoarthritis: a randomized, double-blind, placebo-controlled trial](#)

G. Görmeli, ..., and K. Ertem. *Knee Surgery, Sports Traumatology, Arthroscopy*, 2017. 377 citations.

Not measured Topic Match

No summary or abstract available

[152] [Intra-Articular Injections of Platelet-Rich Plasma versus Hyaluronic Acid in the Treatment of Osteoarthritic Knee Pain: A Randomized Clinical Trial in the Context of the Spanish National Health Care System](#)

E. Montañez-Heredia, ..., and M. C. Hernández-Lamas. *International Journal of Molecular Sciences*, 2016. 133 citations.

Not measured Topic Match

Abstract: Intra-articular injection of platelet-rich plasma (PRP) has been established as a suitable treatment for knee osteoarthritis. Here, we present a double-blind randomized controlled clinical trial, conducted in a public Hospital of the Spanish National Health Care System, to evaluate the efficacy of injecting autologous PRP versus hyaluronic acid (HA) in knee osteoarthritis. PRP was manufactured in Malaga's Regional Blood Center (Spain). Patients that met the eligibility criteria were randomized into a PRP group or a HA group. Pain and functional improvements were assessed pre- and post-treatment (three and six months follow-up) using the Visual Analogue Scale (VAS); the Knee and...

[153] [Platelet-Rich Plasma Intra-articular Knee Injections Show No Superiority Versus Viscosupplementation](#)

G. Filardo, ..., and E. Kon. *The American Journal of Sports Medicine*, 2015. 248 citations.

Not measured Topic Match

No summary or abstract available

[154] [Comparison between intra-articular infiltrations of placebo, steroids, hyaluronic and PRP for knee osteoarthritis: a Bayesian network meta-analysis](#)

Filippo Migliorini, ..., and J. Eschweiler. *Archives of Orthopaedic and Trauma Surgery*, 2020. 129 citations.

Not measured Topic Match

No summary or abstract available

[155] [2019 American College of Rheumatology/Arthritis Foundation Guideline for the Management of Osteoarthritis of the Hand, Hip, and Knee](#)

S. Kolasinski, ..., and J. Reston. *Arthritis & Rheumatology*, 2020. 2485 citations.

## Not measured Topic Match

Abstract: To develop an evidence based guideline for the comprehensive management of osteoarthritis (OA) as a collaboration between the American College of Rheumatology (ACR) and the Arthritis Foundation, updating the 2012 ACR recommendations for the management of hand, hip, and knee OA.

### [156] [Treatment of knee osteoarthritis: platelet-derived growth factors vs. hyaluronic acid. A randomized controlled trial](#)

C. Lisi, ..., and G. Di Natali. Clinical Rehabilitation, 2018. 76 citations.

## Not measured Topic Match

No summary or abstract available

### [157] [Comparison of hyaluronic acid and PRP intra-articular injection with combined intra-articular and intraosseous PRP injections to treat patients with knee osteoarthritis](#)

Ke Su, ..., and Shiyun Ma. Clinical Rheumatology, 2018. 140 citations.

## Not measured Topic Match

No summary or abstract available

### [158] [Intra-Articular, Single-Shot Hylan G-F 20 Hyaluronic Acid Injection Compared with Corticosteroid in Knee Osteoarthritis: A Double-Blind, Randomized Controlled Trial](#)

N. Tammachote, ..., and P. Panichkul. The Journal of bone and joint surgery. American volume, 2016. 66 citations.

## Not measured Topic Match

No summary or abstract available

### [159] [Spin and reporting bias in the use of platelet-rich plasma for the treatment of knee osteoarthritis](#)

Mary K. Richardson, ..., and N. Heckmann. European Journal of Orthopaedic Surgery & Traumatology, 2025. 1 citations.

## Not measured Topic Match

Abstract: Systematic reviews and meta-analyses evaluating platelet-rich plasma (PRP) injections are vulnerable to spin (i.e., misrepresentation of study findings). We sought to describe the incidence of spin in the abstracts of systematic reviews and meta-analyses reporting on PRP for knee osteoarthritis. A Preferred Reporting Items for Systematic Reviews and Meta-Analyses search was conducted in Embase, PubMed, and Cochrane databases to identify systematic reviews and meta-analyses on PRP injections for knee osteoarthritis. Data collected from abstracts included 21 types of spin as originally reported by Yavchitz et al., year and journal of publication, level of evidence, and Scopus CiteScore™. Associations between the...

### [160] [A Comprehensive Summary of the Meta-Analyses and Systematic Reviews on Platelet-Rich Plasma Therapies for Knee Osteoarthritis](#)

Emily Mende, ..., and Jody-Lynn Young. Military medicine, 2024. 5 citations.

## Not measured Topic Match

Abstract: INTRODUCTION Osteoarthritis (OA), including that of the knee joint, represents a significant proportion of musculoskeletal injuries in the Canadian Armed Forces (CAF) due to the frequent, high-stress physical activity for which member participation is necessary. Platelet-rich plasma (PRP) is a conservative, autologous treatment that has the potential to relieve symptoms and improve functionality of military members to decrease the impact of the disease and ultimately strengthen the CAF. MATERIALS AND METHODS A search of systematic reviews and meta-analyses was conducted to determine the efficacy of PRP injections in treating knee OA. The Scopus database, PubMed database, and Omni academic search...

### [161] [Platelet-Rich Plasma for Knee Osteoarthritis: What Does the Evidence Say?](#)

Mario Simental-Mendía, ..., and C. Acosta-Olivio. Drugs & Aging, 2023. 13 citations.

## Not measured Topic Match

No summary or abstract available

### [162] [Comparison of the Efficacy of Platelet-Rich Plasma and Hyaluronic Acid in the Treatment of Degenerative Knee Diseases Over 12 Months of Therapy According to the Results of the Visual Analogue Pain Scale](#)

A. Shtanova, ..., and E. A. Volokitina. Ural Medical Journal, 2025. 0 citations.

## Not measured Topic Match

Abstract: Introduction. The primary local treatments for knee osteoarthritis (OAKS) include hyaluronic acid (HA) and platelet-rich plasma (PRP) injections. The visual analogue pain scale (VAS) is often used to assess their effectiveness. Ongoing debate persists regarding which method provides the most sustained efficacy in reducing pain and improving joint function, complicating therapeutic decisions. Aim — to evaluate the efficacy of OACS treatment, as measured by VAS, 12 months after the initiation of intra-articular PRP injection compared to HA injection. Materials and methods. We included only English-language articles with full text available that presented treatment outcomes as VAS in patients treated for OACS with...

### [163] [Platelet-rich Plasma in Patients with Symptomatic Osteoarthritis Knee: An Evidence- and Consensus-based 2023 International Society for Musculoskeletal Ultrasound in Pain Medicine Guidelines](#)

K. Sharma, ..., and Chinmoy Roy. Journal on Recent Advances in Pain, 2023. 3 citations.

## Not measured Topic Match

No summary or abstract available

### [164] [Post-Injection Protocols For Knee Osteoarthritis: A Systematic Review Of Randomized Controlled Trials](#)

Anna L. Park, ..., and Anthony Luke. Journal of Cartilage & Joint Preservation, 2024. 1 citations.

## Not measured Topic Match

No summary or abstract available

### [165] [Randomized Controlled Trials for Platelet-Rich Plasma Use in Knee Osteoarthritis Rarely Report Key Sociodemographic Patient Variables: A Scoping Review](#)

Jacob L. Kotlier, ..., and F. Petriglano. Arthroscopy, Sports Medicine, and Rehabilitation, 2024. 0 citations.

## Not measured Topic Match

No summary or abstract available

### [166] [Intra-articular corticosteroid injections provide a clinically relevant benefit compared to placebo only at short-term follow-up in patients with knee osteoarthritis: A systematic review and meta-analysis](#)

Alessandro Bensa, ..., and G. Filardo. Knee surgery, sports traumatology, arthroscopy : official journal of the ESSKA, 2024. 23 citations.

## Not measured Topic Match

Abstract: PURPOSE To quantify the clinical relevance of intra-articular corticosteroid effects compared to placebo for the injective treatment of knee osteoarthritis (OA). METHODS The PubMed, Cochrane Library and Web of Science databases were searched on May 3, 2023. This study was conducted in accordance with the PRISMA guidelines. The inclusion criteria were randomized controlled trials (RCTs), published in English, with no time limitation regarding publication date, comparing intra-articular corticosteroids and placebo injections for knee OA. The effects were quantified at short- (d6 weeks), mid- (>6 weeks and d3 months), and long-term (e6 months) follow-ups. The minimal clinically important difference (MCID) for...

### [167] [Molecular Mechanisms and Therapeutic Role of Intra-Articular Hyaluronic Acid in Osteoarthritis: A Precision Medicine Perspective](#)

W. Glinkowski, ..., and Pol-Iaha Study Group. Journal of Clinical Medicine, 2025. 10 citations.

## Not measured Topic Match

Abstract: Background: Osteoarthritis (OA) is a degenerative joint disease characterized by progressive cartilage breakdown, synovial inflammation, and pain, which leads to significant disability. IAHA is widely used because of its viscoelastic properties, which restore synovial fluid homeostasis and reduce symptoms. However, emerging evidence suggests that IAHA exerts additional biological effects including chondroprotection, inflammatory modulation, oxidative stress reduction, and pain modulation, which may influence disease progression. Objective: This narrative review examines the biological mechanisms underlying IAHA's role in

OA management. The review explored IAHA's effects on synovial fluid viscoelasticity, inflammatory cytokine modulation, cartilage preservation, oxidative stress regulation, and pain pathways, emphasizing the...

[168] [Utilisation de produits orthobiologiques injectables pour l'arthrose du genou : un consensus européen ESSKA-ORBIT. Partie 1 – produits dérivés du sang \(plasma riche en plaquettes\)](#)

Lior Laver, ..., and Laura de Girolamo. Journal de Traumatologie du Sport, 2025. 1 citations.

Not measured Topic Match

No summary or abstract available

[169] [Intra-articular injections of hyaluronic acid versus plasma rich in growth factors \(PRGF\) for knee osteoarthritis: a meta-analysis of randomised controlled trials](#)

Filippo Migliorini, ..., and Naveen Jeyaraman. Die Orthopädie, 2025. 6 citations.

Not measured Topic Match

No summary or abstract available

[170] [Les infiltrations : un traitement modificateur de l'arthrose ou simplement un soulagement momentané ?](#)

Martin Lamontagne, ..., and Naomie Maltais. Journal de Traumatologie du Sport, 2025. 0 citations.

Not measured Topic Match

No summary or abstract available

[171] [Complications of Platelet Rich Plasma Injection for Knee Osteoarthritis are Similar to Corticosteroids and Hyaluronic Acid, but are Significantly Greater than Placebo Injections: A Meta-Analysis of Randomized Controlled Trials.](#)

Stephen P. Fucaloro, ..., and Matthew J. Salzler. Arthroscopy : the journal of arthroscopic & related surgery : official publication of the Arthroscopy Association of North America and the International Arthroscopy Association, 2025. 1 citations.

Not measured Topic Match

No summary or abstract available

[172] [Comparing efficacy of a single intraarticular injection of platelet-rich plasma \(PRP\) combined with different hyaluronans for knee osteoarthritis: a randomized-controlled clinical trial](#)

Hung-Ya Huang, ..., and Shu-Fen Sun. BMC Musculoskeletal Disorders, 2022. 28 citations.

Not measured Topic Match

Abstract: Background Intraarticular plasma-rich platelet (PRP) and hyaluronic acid (HA) have each been shown to be effective for treating knee osteoarthritis (OA). Evidence supporting the combination therapy is controversial. This study aimed to investigate the efficacy of a single intraarticular PRP injection combined with different HAs in patients with knee OA. Methods In this prospective randomized-controlled trial, 99 patients with Kellgren-Lawrence grade 2 knee OA with average knee pain e 30 mm on a 0-100 mm pain visual analog scale (VAS) were randomized into two groups. The PRP + Artz group received a single intraarticular HA (Artz, 2.5 ml, 10 mg/ml)...

[173] [The Effect of Leukocyte Concentration on Platelet-Rich Plasma Injections for Knee Osteoarthritis](#)

A. Abbas, ..., and H. Dhotar. The Journal of Bone and Joint Surgery, 2021. 34 citations.

Not measured Topic Match

Abstract: Background: It is hypothesized that leukocyte-poor (LP) platelet-rich plasma (PRP) is preferred over leukocyte-rich (LR) PRP for the treatment of knee osteoarthritis (OA). Methods: The MEDLINE, Embase, and Cochrane databases were reviewed for all English-language studies comparing LP-PRP or LR-PRP with relevant controls or each other. The follow-up periods were 6 months and 12 months. The primary outcome measure was the change in the Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) score between baseline and follow-up. The secondary outcome measures were changes in the WOMAC pain subscale, visual analog scale (VAS) for pain, and International Knee Documentation Committee (IKDC)....

[174] [Systematic Review of Randomized Controlled Trials Evaluating the Use of Platelet-Rich Plasma for Knee Osteoarthritis: Adherence to Minimum Information for Studies Evaluating Biologics in Orthopaedics](#)

Hirotaka Nakagawa, ..., and Walter I. Sussman. The American Journal of Sports Medicine, 2025. 4 citations.

Not measured Topic Match

Abstract: Background: The Minimum Information for Studies Evaluating Biologics in Orthopedics (MIBO) guidelines were developed in May 2017 to encourage improved reporting standards, promote increased transparency and reproducibility, and enhance clinical evaluation capabilities. The MIBO guidelines consist of 23 checklist items considered necessary to critically appraise clinical studies evaluating platelet-rich plasma (PRP). Purpose: To assess randomized controlled trials that evaluated PRP for the treatment of knee osteoarthritis in order to systematically review their adherence to the MIBO guidelines. Study Design: Systematic review. Level 1a. Methods: A search was performed following the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines....

[175] [Biologics Approaches – When, Why, and How?](#)

Daniel J. Stokes, ..., and Rachel M. Frank. Operative Techniques in Sports Medicine, 2024. 0 citations.

Not measured Topic Match

No summary or abstract available

[176] [Intra-articular hyaluronic acid and platelet-rich plasma as monotherapy or combination therapy in knee osteoarthritis?](#)

Sheng Fei Oon, ..., and Chau Nguyen. Regenerative medicine, 2024. 0 citations.

Not measured Topic Match

Abstract: AIM To systematically identify best current evidence on intra-articular combination therapy with hyaluronic acid (HA) and platelet-rich plasma (PRP), compared to monotherapy in knee osteoarthritis. METHODS Using the McMaster University and National Health Service five-step systematic approach, we conducted a bottom-up literature search of all existing evidence through Ovid Medline, Ovid Embase, and Cochrane (Central - Wiley) from January 2021 to June 2024. RESULTS Of 258 articles retrieved, we systematically narrowed best current evidence to one meta-analysis when evaluating combination therapy versus HA alone. This demonstrated superior outcomes with combination therapy against HA only at 3, 6, and 12 months...