

Supplemental Table S1. Studies Included in the Scoping Review on Diagnosis and Treatment Strategies for Meniscus Root Tears (N = 461)

Study Title	Lead Author	Year	Level of Evidence	Country	Design	Theme
A biomechanical comparison of all-inside versus transtibial meniscus root repair techniques	Pasic	2023	5	US	Biomechanical human	Treatment/ Outcomes
A case of bilateral posterior medial meniscus root tear: partial meniscectomy versus pull-out suture repair	Patil	2015	4	India	Case report	Treatment/ Outcomes
A characteristic MRI finding to diagnose a partial tear of the medial meniscus posterior root: an ocarina sign	Furumatsu	2021	4	Japan	Comparative retrospective	Diagnosis
A clinical sign to detect root avulsions of the posterior horn of the medial meniscus	Seil	2011	4	Luxembourg	Case report	Diagnosis
A comparison of the transtibial pullout technique and all-inside meniscal repair in medial meniscus posterior root tear: prognostic factors and midterm clinical outcomes	Dzidzishvili	2021	3	Spain	Case control	Treatment/ Outcomes
A giraffe neck sign of the medial meniscus: a characteristic finding of the medial meniscus posterior root tear on magnetic resonance imaging	Furumatsu	2017	3	Japan	Case control	Diagnosis
A medial meniscal root pullout repair with the use of a tibial tunnel suturing technique	Apivatgaroon	2016	5	Thailand	Technical note	Technical note
A meta-analysis of clinical and radiographic outcomes of posterior horn medial meniscus root repairs	Chung	2016	4	South Korea	Meta-analysis	Treatment/ Outcomes
A new aiming guide can create the tibial tunnel at favorable position in transtibial pullout repair for the medial meniscus posterior root tear	Furumatsu	2017	4	Japan	Nonrandomized controlled trial	Treatment/ Outcomes
A new arthroscopic classification of degenerative medial meniscus root tear that correlates with meniscus extrusion on magnetic resonance imaging	Bin	2016	4	South Korea	Case series	Diagnosis
A new clinical sign for diagnosing medial meniscus posterior root tear	Akmese	2021	2	Turkey	Cohort	Diagnosis
A new surgical technique for arthroscopic repair of the meniscus root tear	Nicholas	2009	5	US	Technical note	Technical note
A newly-developed guide can create tibial tunnel at an optimal position during medial meniscus posterior root repairs	Hiranaka	2022	3	Japan	Nonrandomized controlled trial	Treatment/ Outcomes
A novel arthroscopic classification of degenerative medial meniscus posterior root tears based on the tear gap	Kim	2019	3	South Korea	Cohort	Diagnosis
A novel surgical technique for arthroscopic repair of type II posterior lateral meniscal root tear	Zhang	2020	3	China	Cohort	Treatment/ Outcomes
A novel suture technique to reduce the meniscus extrusion in the pullout repair for medial meniscus posterior root tears	Okazaki	2019	5	Japan	Technical note	Technical note
A novel suture technique using the Fast-Fix combined with Ultrabraid for pullout repair of the medial meniscus posterior root tear	Fujii	2017	5	Japan	Technical note	Technical note
A posterior anchoring method decreases pullout suture translation of the medial meniscus posterior root repair during knee flexion	Okazaki	2022	3	Japan	Cohort	Treatment/ Outcomes
A posterior shiny-corner lesion of the tibia is observed in the early phase after medial meniscus posterior root tear	Okazaki	2022	4	Japan	Case series	Diagnosis
A pull out suture for transection of the posterior horn of the medial meniscus: using a posterior trans-septal portal	Ahn	2007	5	South Korea	Technical note	Technical note
A repair technique using two simple stitches reduces the short-term postoperative medial meniscus extrusion after pullout repair for medial meniscus posterior root tear	Hiranaka	2020	3	Japan	Cohort	Treatment/ Outcomes
A simple cinch is superior to a locking loop for meniscus root repair: a human biomechanical comparison of suture constructs in a transtibial pull-out model	Krych	2018	5	US	Biomechanical human	Treatment/ Outcomes
A spreading roots sign: characteristic sign of the preliminary stage of medial meniscus posterior root tear on magnetic resonance imaging	Nakamura	2022	4	Japan	Case series	Diagnosis
A systematic review of adverse events and complications after isolated posterior medial meniscus root repairs	Jackson	2023	4	US	Systematic review	Systematic review/ meta-analysis
A technique combining "U" shape suture and shared tunneling to treat the posterior cruciate ligament rupture and posterior root tears of the medial meniscus	Xue	2018	4	China	Case series	Treatment/ Outcomes
A transosseous bone bridge repair for posterior horn meniscal root tears during anterior cruciate ligament reconstruction	Frank	2017	5	US	Technical note	Technical note
Abnormal tibial alignment is a risk factor for lateral meniscus posterior root tears in patients with anterior cruciate ligament ruptures	Okoroha	2019	3	US	Cohort	Treatment/ Outcomes
Accuracy of the newly developed Zimmer Biomet Root Aiming guide in tibial tunnel creation compared with that of conventional guides	Hiranaka	2023	3	Japan	Comparative retrospective	Treatment/ Outcomes
Accurate placement of a tibial tunnel significantly improves meniscal healing and clinical outcomes at 1-year after medial meniscus posterior root repair	Kamatsuki	2021	3	Japan	Cohort	Treatment/ Outcomes
Acute repair of meniscus root tear partially restores joint displacements as measured with magnetic resonance images and loading in a cadaveric porcine knee	Meadows	2023	5	US	Biomechanical animal	Treatment/ Outcomes
Age and meniscal extrusion are determining factors of osteoarthritis progression after conservative treatments for medial meniscus posterior root tear	Kim	2022	3	South Korea	Cohort	Treatment/ Outcomes
Age, male sex, higher posterior tibial slope, deep sulcus sign, bone bruises on the lateral femoral condyle, and concomitant medial meniscal tears are risk factors for lateral meniscal posterior root tears: a systematic review and meta-analysis	Wu	2022	4	China	Systematic review and meta-analysis	Systematic review/ meta-analysis
All-inside repair for a root tear of the medial meniscus using a suture anchor	Jung	2012	4	South Korea	Case series	Treatment/ Outcomes

Study Title	Lead Author	Year	Level of Evidence	Country	Design	Theme
All-inside techniques for meniscal radial root tear repair	Mao	2020	5	Singapore	Technical note	Technical note
Altered tibiofemoral contact mechanics due to lateral meniscus posterior horn root avulsions and radial tears can be restored with in situ pull-out suture repairs	LaPrade	2014	5	US	Biomechanical human	Treatment/ Outcomes
Alternative techniques for lateral and medial posterior root meniscus repair without special instruments	Helito	2020	5	Brazil	Technical note	Technical note
An all-inside repair technique for unstable type-IV lateral meniscal posterior root tear	Meng	2022	5	China	Technical note	Technical note
An MRI-based suspension bridge sign can predict an arthroscopically favorable meniscal healing following the medial meniscus posterior root repair	Furumatsu	2021	3	Japan	Cohort	Diagnosis
Analysis of affecting factors of the fate of medial meniscus posterior root tear based on treatment strategies	Lee	2021	3	South Korea	Cohort	Treatment/ Outcomes
Anatomic reinforced medial meniscal root reconstruction with gracilis autograft	Holmes	2019	5	US	Technical note	Technical note
Anterior medial meniscal root tears: a novel arthroscopic all inside repair	Osti	2015	4	Italy	Case series	Treatment/ Outcomes
Anterior meniscal root repair using a transtibial double-tunnel pullout technique	Menge	2016	5	US	Technical note	Technical note
Anterior meniscus root avulsion following intramedullary nailing for a tibial shaft fracture	Ellman	2015	4	US	Case report	Treatment/ Outcomes
Are outcomes of acute meniscus root tear repair better than debridement or nonoperative management? a systematic review	Eseonu	2022	4	UK	Systematic review	Systematic review/ meta-analysis
Are root avulsions of the lateral meniscus associated with extrusion at the time of acute anterior cruciate ligament injury? A case control study	Pula	2014	2	US	Cohort	Diagnosis
Arthritic progression secondary to meniscus root tear treated with knee arthroplasty demonstrates similar outcomes to primary osteoarthritis: a matched case-control comparison	Tagliero	2021	3	US	Case control	Treatment/ Outcomes
Arthritis progression on serial MRIs following diagnosis of medial meniscal posterior horn root tear	Krych	2018	3	US	Cohort	Treatment/ Outcomes
Arthroscopic all inside repair of the lateral meniscus root tear	Ahn	2008	4	South Korea	Case series	Treatment/ Outcomes
Arthroscopic all-inside repair for a tear of posterior root of the medial meniscus: a technical note	Choi	2009	5	South Korea	Technical note	Technical note
Arthroscopic centralization of the extruded medial meniscus	Leafblad	2021	5	US	Technical note	Technical note
Arthroscopic centralization reduces extrusion of the medial meniscus with posterior root defect in the ACL reconstructed knee	Ueki	2023	5	US	Biomechanical human	Treatment/ Outcomes
Arthroscopic centralization using knotless anchors for extruded medial meniscus	Koga	2021	5	Japan	Technical note	Technical note
Arthroscopic direct meniscal extrusion reduction: surgical tips to reduce persistent meniscal extrusion in meniscal root repair	Chernchujit	2018	5	Thailand	Technical note	Technical note
Arthroscopic direct repair for a complete radial tear of the posterior root of the medial meniscus	Wang	2011	5	South Korea	Technical note	Technical note
Arthroscopic incidence of lateral meniscal root avulsion in patients with anterior cruciate ligament injury	Ciatti	2021	3	Italy	Cross sectional	Treatment/ Outcomes
Arthroscopic lateral meniscus root repair with soft suture anchor technique	Prasathaporn	2013	5	Thailand	Technical note	Technical note
Arthroscopic medial meniscal root reconstruction with gracilis autograft is safe and improves 2-year postoperative patient-reported outcomes	Holmes	2022	4	US	Case series	Treatment/ Outcomes
Arthroscopic medial meniscus posterior root fixation Using a modified Mason-Allen Stitch	Chung	2016	5	South Korea	Technical note	Technical note
Arthroscopic medial meniscus posterior root reconstruction and pull-out repair combined technique for root tear of medial meniscus	Ishikawa	2022	5	Japan	Technical note	Technical note
Arthroscopic medial meniscus posterior root reconstruction using auto-gracilis tendon	Lee	2017	5	South Korea	Technical note	Technical note
Arthroscopic medial meniscus posterior root repair with centralization using knotless suture anchors	Wu	2022	5	US	Technical note	Technical note
Arthroscopic meniscal healing following medial meniscus posterior root repair: a comparison between two suture materials	Okazaki	2022	3	Japan	Comparative retrospective	Treatment/ Outcomes
Arthroscopic pullout repair of posterior root tear of the medial meniscus: the anterior approach using medial collateral ligament pie-crusting release	Park	2010	5	South Korea	Technical note	Technical note
Arthroscopic pullout suture repair of posterior root tear of the medial meniscus: radiographic and clinical results with a 2-year follow-up	Lee	2009	4	South Korea	Case series	Treatment/ Outcomes
Arthroscopic repair of double radial tears of the lateral meniscus	Leafblad	2019	5	US	Technical note	Technical note
Arthroscopic repair of posterior root tears of the lateral meniscus with all-suture anchor	Familiari	2022	5	Italy	Technical note	Technical note
arthroscopic repair of the "tibial avulsion triad"-ACL posterolateral bundle, PCL, and lateral meniscus posterior root: the triple tunnel technique	Dartus	2022	5	Canada	Technical note	Technical note
Arthroscopic repair of the posterior root of the medial meniscus using knotless suture anchor: a technical note	Eun	2016	4	South Korea	Case series	Treatment/ Outcomes
Arthroscopic scoring system of meniscal healing following medial meniscus posterior root repair	Furumatsu	2019	4	Japan	Case series	Treatment/ Outcomes

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Arthroscopic side-to-side repair for complete radial posterior lateral meniscus root tears	Zhuo	2020	4	China	Case series	Treatment/ Outcomes
Arthroscopic suture anchor repair of posterior root attachment injury in medial meniscus: technical note	Kim	2009	5	South Korea	Technical note	Technical note
Arthroscopic suture anchor repair versus pullout suture repair in posterior root tear of the medial meniscus: a prospective comparison study	Kim	2011	3	South Korea	Prospective therapeutic comparative	Treatment/ Outcomes
Arthroscopic transosseous repair of a medial meniscal posterior-root tear	Gannon	2021	5	South Korea	Technical note	Technical note
Arthroscopic transtibial pull-out repair for meniscal posterior root tear: the slip knot technique	Chen	2022	5	Taiwan	Technical note	Technical note
Arthroscopic transtibial pull-out repair of medial meniscus posterior root tear with a whip running suture technique	Kim	2021	5	South Korea	Technical note	Technical note
Arthroscopic transtibial pullout repair for posterior medial meniscus root tears: a systematic review of clinical, radiographic, and second-look arthroscopic results	Feucht	2015	4	Germany	Systematic review	Systematic review/ meta-analysis
Arthroscopic transtibial pullout repair for posterior meniscus root tears	Feucht	2019	5	Germany	Technical note	Technical note
Arthroscopic, suture anchor repair through a novel medial quadriceptal portal for medial meniscal root tear	Jung	2012	5	South Korea	Technical note	Technical note
Association between postoperative meniscal extrusion and clinical outcomes of the pullout fixation technique for medial meniscus posterior root tear	Yanagisawa	2020	3	Japan	Cohort	Treatment/ Outcomes
Association between tears of the posterior root of the medial meniscus and far posterior femoral condyle osteoarthritis	Sebro	2020	3	US	Cohort	Diagnosis
Association between transtibial meniscus root repair and rate of meniscal healing and extrusion on postoperative magnetic resonance imaging: a prospective multicenter study	Krych	2021	4	US	Case series	Diagnosis
Augmentation of a nonanatomical repair of a medial meniscus posterior root tear with centralization using three knotless anchors may be associated with less meniscal extrusion and better compressive load distribution in mid-flexion compared with non-anatomic	Amano	2023	5	Japan	Biomechanical animal	Treatment/ Outcomes
Augmentation of the pullout repair of a medial meniscus posterior root tear by arthroscopic centralization	Koga	2017	5	Japan	Technical note	Technical note
Avulsion of both posterior meniscal roots associated with acute rupture of the anterior cruciate ligament	Mariani	2015	4	Italy	Case report	Treatment/ Outcomes
Avulsion of the anterior medial meniscus root: case report and surgical technique	Feucht	2015	4	Germany	Case report	Treatment/ Outcomes
Bilateral anterior cruciate ligament tear combined with medial meniscus posterior root tear	Hiranaka	2019	4	Japan	Case report	Treatment/ Outcomes
Biomechanical and viscoelastic properties of different posterior meniscal root fixation techniques	Forkel	2017	5	Germany	Biomechanical animal	Treatment/ Outcomes
Biomechanical assessment of disease outcome in surgical interventions for medial meniscal posterior root tears: a finite element analysis	Xu	2022	5	China	Biomechanical finite element analysis	Treatment/ Outcomes
Biomechanical comparison between suture anchor and transtibial pull-out repair for posterior medial meniscus root tears	Feucht	2014	5	Germany	Biomechanical animal	Treatment/ Outcomes
Biomechanical comparison of an all-inside meniscal repair device construct versus pullout sutures for arthroscopic transtibial repair of posterior medial meniscus root tears: a matched-pair cadaveric study	Vertullo	2021	5	Australia	Biomechanical human	Treatment/ Outcomes
Biomechanical comparison of arthroscopic repair constructs for meniscal root tears	Anz	2014	5	US	Biomechanical human	Treatment/ Outcomes
Biomechanical comparison of four tibial fixation techniques for meniscal root sutures in posterior medial meniscus root repair: a porcine study	Wu	2020	5	Taiwan	Biomechanical animal	Treatment/ Outcomes
Biomechanical comparison of meniscus-suture constructs for pullout repair of medial meniscus posterior root tears	Okimura	2019	5	US	Biomechanical animal	Treatment/ Outcomes
Biomechanical consequences of a complete radial tear adjacent to the medial meniscus posterior root attachment site: in situ pull-out repair restores derangement of joint mechanics	Padalecki	2014	5	US	Biomechanical human	Treatment/ Outcomes
Biomechanical consequences of a nonanatomic posterior medial meniscal root repair	LaPrade	2015	5	US	Biomechanical human	Treatment/ Outcomes
Biomechanical consequences of a posterior root tear of the lateral meniscus: stabilizing effect of the menisiofemoral ligament	Forkel	2013	5	Germany	Biomechanical animal	Treatment/ Outcomes
Biomechanical consequences of a tear of the posterior root of the medial meniscus. Similar to total meniscectomy	Allaire	2008	5	US	Biomechanical human	Treatment/ Outcomes
Biomechanical consequences of a tear of the posterior root of the medial meniscus. Surgical technique	Harner	2009	5	US	Biomechanical human	Treatment/ Outcomes
Biomechanical consequences of anterior root detachment of the lateral meniscus and its reinsertion	Espejo-Reina	2022	5	Spain	Biomechanical human	Treatment/ Outcomes
Biomechanical evaluation of a transtibial pull-out meniscal root repair: challenging the bungee effect	Cerminara	2014	5	US	Biomechanical human	Treatment/ Outcomes
Biomechanical evaluation of an all-inside posterior medial meniscal root repair technique via suture fixation to the posterior cruciate ligament	Saltzman	2020	5	US	Biomechanical human	Treatment/ Outcomes
Biomechanical evaluation of different suture materials for arthroscopic transtibial pull-out repair of posterior meniscus root tears	Feucht	2015	5	Germany	Biomechanical human	Treatment/ Outcomes

Study Title	Lead Author	Year	Level of Evidence	Country	Design	Theme
Biomechanical evaluation of different suture techniques for arthroscopic transtibial pull-out repair of posterior medial meniscus root tears	Feucht	2013	5	Germany	Biomechanical human	Treatment/ Outcomes
Biomechanical evaluation of the transtibial pull-out technique for posterior medial meniscal root repairs using 1 and 2 transtibial bone tunnels	LaPrade	2015	5	US	Biomechanical human	Treatment/ Outcomes
Both posterior root lateral-medial meniscus tears with anterior cruciate ligament rupture: the step-by-step systematic arthroscopic repair technique	Chernchujit	2017	5	Thailand	Technical note	Technical note
Changes in bone marrow lesions following root repair surgery using modified Mason-Allen stitches in medial meniscus posterior root tears	Chung	2022	4	South Korea	Cohort	Treatment/ Outcomes
Characteristic location and rapid progression of medial femoral condylar chondral lesions accompanying medial meniscus posterior root tear	Park	2019	3	South Korea	Comparative retrospective	Treatment/ Outcomes
Circumferential rim augmentation suture around the perimeniscal capsule decreases meniscal extrusion and progression of osteoarthritis in rabbit meniscus root tear model	Park	2022	5	South Korea	Biomechanical animal	Treatment/ Outcomes
Clinical and radiologic evaluation of arthroscopic medial meniscus root tear refixation: comparison of the modified Mason-Allen stitch and simple stitches	Lee	2014	3	South Korea	Comparative retrospective	Treatment/ Outcomes
Clinical and radiologic outcomes of patients with lax healing after medial meniscal root repair: comparison with subtotal meniscectomy	Kim	2019	3	South Korea	Comparative retrospective	Treatment/ Outcomes
Clinical and radiological outcomes of meniscal repair versus partial meniscectomy for medial meniscus root tears: a systematic review and meta-analysis	Ro	2020	4	South Korea	Systematic review	Systematic review/ meta-analysis
Clinical and radiological results with second-look arthroscopic findings after open wedge high tibial osteotomy without arthroscopic procedures for medial meniscal root tears	Lee	2018	4	South Korea	Case series	Treatment/ Outcomes
Clinical evaluation of suture materials for transtibial pullout repair of medial meniscus posterior root tear	Hiranaka	2022	3	Japan	Comparative retrospective	Treatment/ Outcomes
Clinical evaluation of the root tear of the posterior horn of the medial meniscus in total knee arthroplasty for osteoarthritis	Choi	2015	3	South Korea	Cohort	Treatment/ Outcomes
Clinical factors associated with successful meniscal root repairs: a systematic review	Jiang	2019	4	US	Systematic review	Systematic review/ meta-analysis
Clinical outcomes of medial meniscus posterior root repair: a midterm follow-up study	Furumatsu	2022	4	Japan	Cohort	Treatment/ Outcomes
Clinical, radiographic, and arthroscopic outcomes of surgical repair for radial and avulsed lesions on the lateral meniscus posterior root during acl reconstruction: a systematic review	Zheng	2021	4	China	Systematic review	Systematic review/ meta-analysis
Collagenous ultrastructure of the torn medial meniscus posterior root: a transmission electron microscopy study	Seo	2019	5	South Korea	Descriptive laboratory human	Preclinical
Combined repair of medial meniscal ramp lesions and posterior root tears of the lateral meniscus during anterior cruciate ligament reconstruction: a case report	Moran	2023	4	US	Case report	Treatment/ Outcomes
Comparative biomechanical study on contact alterations after lateral meniscus posterior root avulsion, transosseous reinsertion, and total meniscectomy	Perez-Blanca	2016	5	Spain	Biomechanical human	Treatment/ Outcomes
Comparison between conservative treatment and arthroscopic pull-out repair of the medial meniscus root tear and analysis of prognostic factors for the determination of repair indication	Ahn	2015	3	South Korea	Comparative retrospective	Treatment/ Outcomes
Comparison of clinical and radiologic results between partial meniscectomy and refixation of medial meniscus posterior root tears: a minimum 5-year follow-up	Chung	2015	3	South Korea	Comparative retrospective	Treatment/ Outcomes
Comparison of long-term radiographic outcomes and rate and time for conversion to total knee arthroplasty between repair and meniscectomy for medial meniscus posterior root tears: a systematic review and meta-analysis	Krivicich	2022	4	US	Systematic review and meta-analysis	Systematic review/ meta-analysis
Comparison of medial and lateral meniscus root tears	Koo	2015	3	South Korea	Retrospective	Treatment/ Outcomes
Comparison of medial and lateral tibial tunnel in pullout repair of posterior root tear of medial meniscus: radiologic, clinical, and arthroscopic outcomes	Kwon	2020	3	South Korea	Comparative retrospective	Treatment/ Outcomes
Comparison of the clinical outcomes of transtibial pull-out repair for medial meniscus posterior root tear: two simple stitches versus modified Mason-Allen suture	Hiranaka	2020	3	Japan	Comparative retrospective	Treatment/ Outcomes
Comparison of the radiologic, arthroscopic, and clinical outcomes between repaired versus unrepaired medial meniscus posterior horn root tear during open wedge high tibial osteotomy	Lee	2021	3	South Korea	Case control	Treatment/ Outcomes
Comparison of tibiofemoral contact mechanics after various transtibial and all-inside fixation techniques for medial meniscus posterior root radial tears in a porcine model	Chung	2018	5	South Korea	Biomechanical human	Treatment/ Outcomes
Comparison of two simple stitches and modified Mason-Allen suture for medial meniscus posterior root tear based on the progression of meniscal posterior extrusion: a retrospective cohort study	Kintaka	2021	3	Japan	Cohort	Treatment/ Outcomes
Complete posterior lateral meniscal root lesion is associated with high-grade pivot-shift phenomenon in noncontact anterior cruciate ligament injuries	Song	2017	4	China	Case control	Treatment/ Outcomes
Complete tear of the lateral meniscus posterior root is associated with meniscal extrusion in anterior cruciate ligament deficient knees	Kamatsuki	2018	4	Japan	Comparative retrospective	Treatment/ Outcomes
Concomitant medial and lateral meniscus posterior horn root repair with ACL Reconstruction using trans-tibial tunnel technique	Shetty	2023	5	Singapore	Technical note	Technical note
Concomitant posterior anchoring further reduces posterior meniscal extrusion during pullout repair of medial meniscus posterior root tears: a retrospective study	Xue	2022	3	Japan	Comparative retrospective	Treatment/ Outcomes

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Concurrent arthroscopic meniscal repair during open-wedge high tibial osteotomy is not clinically beneficial for medial meniscus posterior root tears	Ke	2021	2	China	Comparative prospective	Treatment/ Outcomes
Coronal extrusion of the lateral meniscus does not increase after pullout repair of the posterior root of the lateral meniscus at short-term follow-up	Forkel	2023	4	Germany	Case series	Treatment/ Outcomes
Correlation between meniscal extrusion and symptom duration, alignment, and arthritic changes in medial meniscus posterior root tear: research article	Kim	2020	3	South Korea	Observational	Treatment/ Outcomes
Correlation of factors affecting correction of meniscal extrusion and outcome after medial meniscus root repair	Sundararajan	2022	4	India	Case series	Treatment/ Outcomes
Current concepts on posterior meniscal root lesion: a treatment algorithm based on the currently available evidence	Song	2014	5	China	Review of current concepts	Narrative review
Current reviews in musculoskeletal medicine: current controversies for treatment of meniscus root tears	Lee	2022	5	US	Review of current concepts	Narrative review
Cyclic displacement after meniscal root repair fixation: a human biomechanical evaluation	LaPrade	2015	5	US	Biomechanical human	Treatment/ Outcomes
Degenerative meniscus lesions: an expert consensus statement using the modified Delphi technique	Hohmann	2020	5	Australia	Delphi consensus panel	Treatment/ Outcomes
Description of a surgical technique of medial meniscus root repair: a fixation technique with two simple stitches under an expected initial tension	Okazaki	2019	5	Japan	Technical note	Technical note
Developing an experimental model of early knee osteoarthritis after medial meniscus posterior root release: an in vivo study	Dzidzishvili	2022	5	Spain	Biomechanical human	Treatment/ Outcomes
Development and analysis of mouse medial meniscus posterior root tear model	Nukuto	2023	5	Japan	Biomechanical human	Treatment/ Outcomes
Diagnostic accuracy of 3.0 T magnetic resonance imaging for the detection of meniscus posterior root pathology	LaPrade	2015	2	US	Cohort	Diagnosis
Different effects of the lateral meniscus complete radial tear on the load distribution and transmission functions depending on the tear site	Ohori	2021	5	Japan	Biomechanical animal	Treatment/ Outcomes
Different patterns of lateral meniscus root tears in ACL injuries: application of a differentiated classification system	Forkel	2015	4	Germany	Cohort	Treatment/ Outcomes
Different suture materials for arthroscopic transtibial pull-out repair of medial meniscal posterior root tears: a human biomechanical study	Nakama	2019	5	US	Biomechanical human	Treatment/ Outcomes
Distal fixation of meniscal root repair by transtibial pullout technique via transtibial tubercle fixation without hardware	Shohdy	2023	5	Kuwait	Technical note	Technical note
Does meniscectomy have any advantage over conservative treatment in middle-aged patients with degenerative medial meniscus posterior root tear?	Lee	2021	3	South Korea	Comparative retrospective	Treatment/ Outcomes
Does release of the superficial medial collateral ligament result in clinically harmful effects after the fixation of medial meniscus posterior root tears?	Chung	2017	4	South Korea	Case series	Treatment/ Outcomes
Early osteoarthritis after untreated anterior meniscal root tears: an in vivo animal study	Steinman	2017	5	US	Biomechanical human	Treatment/ Outcomes
Early surgical repair of medial meniscus posterior root tear minimizes the progression of meniscal extrusion: 2-year follow-up of clinical and radiographic parameters after arthroscopic transtibial pull-out repair	Moon	2020	3	South Korea	Case series	Treatment/ Outcomes
Effect of atelocollagen on the healing status after medial meniscal root repair using the modified Mason-Allen stitch	Lee	2020	3	South Korea	Comparative retrospective	Treatment/ Outcomes
Effect of concurrent repair of medial meniscal posterior root tears during high tibial osteotomy for medial osteoarthritis during short-term follow-up: a systematic review and meta-analysis	Kyun-Ho	2021	3	South Korea	Systematic review and meta-analysis	Systematic review/ meta-analysis
Effect of lateral meniscal root tear on the stability of the anterior cruciate ligament-deficient knee	Shybut	2015	4	US	Biomechanical human	Treatment/ Outcomes
Effect of physical therapy on early knee osteoarthritis with medial meniscal posterior root assessed by MRI T2 mapping and 3D-to-2D registration technique: a prospective intervention study	Ikuta	2020	2	Japan	Prospective study	Treatment/ Outcomes
Effect of posterior horn medial meniscus root tear on in vivo knee kinematics	Marsh	2014	3	US	Cross sectional	Treatment/ Outcomes
Effect of repair of radial tears at the root of the posterior horn of the medial meniscus with the pullout suture technique: a biomechanical study using porcine knees	Seo	2009	5	South Korea	Biomechanical animal	Treatment/ Outcomes
Epidemiological features of acute medial meniscus posterior root tears	Kamatsuki	2023	3	Japan	Cohort	Treatment/ Outcomes
Epidemiology of combined injuries of the secondary stabilizers in ACL-deficient knees: medial meniscal ramp lesion, lateral meniscus root tear, and ALL Tear: a prospective case series of 602 Patients With ACL tears from the SANTI Study Group	Gracia	2022	3	France	Cross sectional	Diagnosis
Etiology of posterior meniscus root tears: medial vs. lateral	Karpinski	2023	3	Germany	Cohort	Treatment/ Outcomes
Evaluation of healing after medial meniscal root repair using second-look arthroscopy, clinical, and radiological criteria	Lee	2018	4	South Korea	Case series	Treatment/ Outcomes
Evaluation of meniscal extrusion with posterior root disruption and repair using ultrasound	Rowland	2016	5	US	Biomechanical human	Diagnosis
Evaluation of the all-inside technique for the repair of lateral meniscus root tears at 1 year after ACL reconstruction	Cuvillier	2023	3	France	Cohort	Treatment/ Outcomes
Evaluation of the bone tunnel position and state of healing on second-look arthroscopy after pullout repair of medial meniscus posterior root tear during open-wedge high tibial osteotomy	Yanagisawa	2023	4	Japan	Cohort	Treatment/ Outcomes

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Evaluation, treatment, and outcomes of meniscal root tears: a critical analysis review	Strauss	2016	4	US	Review of current concepts	Narrative review
Factors related to meniscal extrusion and cartilage lesions in medial meniscus root tears	Jeon	2021	4	South Korea	Cohort	Treatment/ Outcomes
Failed transtibial pullout repair of the medial meniscus posterior root	Wasilewski	2023	4	US	Case report	Treatment/ Outcomes
Functional, magnetic resonance imaging, and second-look arthroscopic outcomes after pullout repair for avulsion tears of the posterior lateral meniscus root	Zhuo	2021	4	China	Case series	Treatment/ Outcomes
Global research status and hotspot analysis of meniscal root tears based on the WOS database	Wang	2022	3	China	Bibliometric analysis	Narrative review
Grade of subchondral insufficiency fracture of the knee and the presence of a posterior shiny-corner lesion are correlated with duration of medial meniscus posterior root tear in women	Okazaki	2022	4	Japan	Case series	Treatment/ Outcomes
Greater medial meniscus extrusion seen on ultrasonography indicates the risk of MRI-detected complete medial meniscus posterior root tear in a Japanese population with knee pain	Chiba	2022	4	Japan	Cross sectional	Diagnosis
H-plasty repair technique improved tibiofemoral contact mechanics after repair for adjacent radial tears of posterior lateral meniscus root: a biomechanical study	Zhang	2021	5	China	Biomechanical human	Treatment/ Outcomes
Healing of the torn anterior horn of rabbit medial meniscus to bone after transtibial pull-out repair and autologous platelet-rich plasma gel injection	Cui	2023	5	China	Histological animal	Treatment/ Outcomes
High body mass index is a risk factor for unfavorable clinical outcomes after medial meniscus posterior root repair in well-aligned knees	Zhang	2021	3	Japan	Comparative retrospective	Treatment/ Outcomes
High prevalence of a deep lateral femoral notch sign in patients with anterior cruciate ligament (ACL) and concomitant posterior root tears of the lateral meniscus	Berthold	2021	4	Germany	Cohort	Diagnosis
High rate of missed lateral meniscus posterior root tears on preoperative magnetic resonance imaging	Krych	2018	4	US	Case series	Diagnosis
High tibial osteotomy for medial meniscus posterior root tears in knees with moderate varus alignment can achieve favorable clinical outcomes	Itou	2022	4	Japan	Cohort	Treatment/ Outcomes
Higher incidence of complete lateral meniscal root tears in revision compared with primary anterior cruciate ligament reconstruction	Vial	2021	3	US	Cohort	Treatment/ Outcomes
Histological analysis of repaired tissue after pullout repair of a medial meniscus posterior root tear	Xue	2021	5	Japan	Case report	Treatment/ Outcomes
Histological evaluation of harvested specimen of a patient who underwent unicompartmental knee arthroplasty two years and six months after medial meniscus posterior root tear transtibial pull-out repair	Kubo	2021	5	Japan	Case report	Treatment/ Outcomes
How to perform concomitant medial meniscus pull-out repair with medial open-wedge high tibial osteotomy without technical failure	Jin	2022	5	South Korea	Technical note	Technical note
ICRS scores worsen between 2-year short term and 5-year mid-term follow-up after transtibial medial meniscus root repair despite maintained functional outcomes	Kaplan	2022	4	US	Cohort	Treatment/ Outcomes
Improvement of clinical and radiological outcomes of root repair patients with advanced articular cartilage degeneration and osteoarthritis	Hopkins	2021	4	US	Case series	Treatment/ Outcomes
In situ repair of segmental loss posterior lateral meniscal root tears outperforms meniscofemoral ligament imbrication in the ACL reconstructed knee	Seiter	2023	5	US	Biomechanical human	Treatment/ Outcomes
Incidence and healing rates of meniscal tears in patients undergoing repair during the first stage of 2-stage revision anterior cruciate ligament reconstruction	DePhillipo	2019	4	US	Case series	Treatment/ Outcomes
Increased cleft width during knee flexion is useful for the diagnosis of medial meniscus posterior root tears	Hiranaka	2022	3	Japan	Case series	Diagnosis
Increased extrusion and ICRS grades at 2-year follow-up following transtibial medial meniscal root repair evaluated by MRI	Kaplan	2018	4	US	Case series	Treatment/ Outcomes
Increased medial femoral condyle angle and narrow intercondylar notch are associated with medial meniscus posterior root tear	Altinayak	2023	3	Turkey	Cohort	Treatment/ Outcomes
Increased posterior tibial slope results in increased incidence of posterior lateral meniscal root tears in ACL reconstruction patients	Bernholt	2021	4	US	Case control	Treatment/ Outcomes
Influence of lateral meniscal posterior root avulsions and the meniscofemoral ligaments on tibiofemoral contact mechanics	Geeslin	2016	5	US	Biomechanical human	Treatment/ Outcomes
Initial biomechanical properties of transtibial meniscal root repair are improved by using a knotless anchor as a post-insertion tensioning device	Prado-Novoa	2020	5	Spain	Biomechanical animal	Treatment/ Outcomes
Injury patterns of medial meniscus posterior root tears	Furumatsu	2019	4	Japan	Cohort	Diagnosis
Injury to the posterior horn of the lateral meniscus from a misplaced tibial tunnel for anterior cruciate ligament reconstruction: a case report	Vadhera	2022	4	US	Case report	Treatment/ Outcomes
Investigating the chronology of meniscus root tears: do medial meniscus posterior root tears cause extrusion or the other way around?	Krych	2020	4	US	Case series	Treatment/ Outcomes
Knee flexion-induced translation of pullout sutures used in the repair of medial meniscus posterior root tears	Xue	2021	4	Japan	Retrospective	Treatment/ Outcomes
Knee meniscus posterior root repair with FiberTak	Mesquita Queirós	2022	5	Portugal	Technical note	Technical note
Knotless anchors offer better prevention of meniscal excursion than knotted anchors: An experimental study of the bovine knee	Eren	2020	5	Turkey	Biomechanical animal	Treatment/ Outcomes
Knotless medial meniscus posterior root repair	Tapasvi	2018	5	India	Technical note	Technical note

Study Title	Lead Author	Year	Level of Evidence	Country	Design	Theme
Knotless suture anchor repair of anterolateral meniscus root after iatrogenic injury	Robbins	2018	5	US	Technical note	Technical note
Large lateral tibial slope and lateral-to-medial slope difference are risk factors for poorer clinical outcomes after posterolateral meniscus root tear repair in anterior cruciate ligament reconstruction	Wong	2022	3	China	Retrospective	Treatment/ Outcomes
Large meniscus extrusion ratio is a poor prognostic factor of conservative treatment for medial meniscus posterior root tear	Kwak	2018	3	South Korea	Cohort	Treatment/ Outcomes
Larger medial femoral to tibial condylar dimension may trigger posterior root tear of medial meniscus	Chung	2016	3	South Korea	Case control	Treatment/ Outcomes
Lateral meniscal posterior root repair with anterior cruciate ligament reconstruction better restores knee stability	Tang	2019	5	US	Biomechanical human	Treatment/ Outcomes
Lateral meniscal posterior root tears experience acceptable healing status after transtibial repair technique	Aga	2021	4	Norway	Case series	Treatment/ Outcomes
Lateral meniscus posterior root and meniscofemoral ligaments as stabilizing structures in the ACL-deficient knee: a biomechanical study	Frank	2017	5	US	Biomechanical human	Treatment/ Outcomes
Lateral meniscus posterior root lesion influences anterior tibial subluxation of the lateral compartment in extension after anterior cruciate ligament injury	Zheng	2020	3	China	Cohort	Treatment/ Outcomes
Lateral meniscus posterior root tear contributes to anterolateral rotational instability and meniscus extrusion in anterior cruciate ligament-injured patients	Minami	2018	3	Japan	Retrospective	Diagnosis
Lateral meniscus posterior root tear in anterior cruciate ligament injury can be detected using MRI-specific signs in combination but not individually	Asai	2020	4	Japan	Retrospective	Diagnosis
Lateral meniscus root tear and meniscus extrusion with anterior cruciate ligament tear	Brody	2006	3	US	Cohort	Diagnosis
Lateral-medial asymmetry of posterior tibial slope and small lateral tibial plateau articular surface depth are morphological factors of lateral meniscus posterior root tears in ACL-injured patients	Yoshihara	2023	3	Japan	Retrospective	Diagnosis
Long-term evaluation of posterior lateral meniscus root tears left in situ at the time of anterior cruciate ligament reconstruction	Shelbourne	2011	3	US	Cohort	Treatment/ Outcomes
Loop-post construct, a novel technique for medial meniscus root repair	Tahami	2020	5	Iran	Technical note	Technical note
Loosening of posteromedial meniscal root repairs affects knee mechanics: a finite element study	Steineman	2022	5	US	Biomechanical finite element analysis	Treatment/ Outcomes
Low reoperation rate following lateral meniscus root repair: clinical outcomes at 2 years follow-up	De Leissègues	2023	4	France	Case series	Treatment/ Outcomes
Magnetic resonance imaging evidence of meniscal extrusion in medial meniscus posterior root tear	Choi	2010	4	South Korea	Case series	Diagnosis
Magnetic resonance imaging findings of surgically proven medial meniscus root tear: tear configuration and associated knee abnormalities	Lee	2008	4	South Korea	Case series	Treatment/ Outcomes
Magnetic resonance imaging of the meniscal roots	Sharif	2020	5	UK	Review of current concepts	Narrative review
Medial and lateral meniscus posterior root tears with an intact anterior cruciate ligament	Okazaki	2020	4	Japan	Case report	Diagnosis
Medial joint space narrowing progresses after pullout of repair of medial meniscus posterior root tear	Kawada	2023	4	Japan	Case series	Treatment/ Outcomes
Medial knee osteoarthritis precedes medial meniscal posterior root tear with an event of painful popping	Lee	2018	4	South Korea	Case series	Diagnosis
Medial meniscal extrusion in patients with medial meniscus root tears: a systematic review and meta-analysis	Fong	2023	4	Singapore	Systematic review and meta-analysis	Systematic review/ meta-analysis
Medial meniscal extrusion of greater than 3 mm on ultrasound suggests combined medial meniscotibial ligament and posterior medial meniscal root tears: a cadaveric analysis	Farivar	2023	5	US	Biomechanical human	Preclinical
Medial meniscal posterior root avulsion fracture repair using the nice knot	Revelt	2023	5	US	Technical note	Technical note
Medial meniscal posterior root/horn radial tears correlate with cartilage degeneration detected by T1ρ relaxation mapping	Takahashi	2015	3	Japan	Retrospective imaging	Diagnosis
Medial meniscal root repair using curved guide and soft suture anchor	Lee	2018	5	South Korea	Technical note	Technical note
Medial meniscal root tears and meniscal extrusion transverse length ratios on MRI	Park	2012	3	South Korea	Retrospective imaging	Diagnosis
Medial meniscus extrusion correlates with disease duration of the sudden symptomatic medial meniscus posterior root tear	Furumatsu	2017	4	Japan	Retrospective imaging	Treatment/ Outcomes
Medial meniscus posterior root attachment injury and degeneration: MRI findings	Jones	2006	5	Australia	Review of current concepts	Narrative review
Medial meniscus posterior root reconstruction and open- wedge high tibial osteotomy for medial meniscus posterior root tear with varus knee: a case report	Ohno	2022	4	Japan	Case report	Treatment/ Outcomes
Medial meniscus posterior root repair decreases posteromedial extrusion of the medial meniscus during knee flexion	Okazaki	2020	3	Japan	Cohort	Treatment/ Outcomes
Medial meniscus posterior root repair influences sagittal length and coronal inclination of the anterior cruciate ligament: a retrospective study	Okazaki	2023	3	Japan	Retrospective imaging	Treatment/ Outcomes
Medial meniscus posterior root repair prevents the progression of subchondral insufficiency fracture of the knee	Okazaki	2021	3	Japan	Cohort	Treatment/ Outcomes

Study Title	Lead Author	Year	Level of Evidence	Country	Design	Theme
Medial meniscus posterior root repair reduces the extruded meniscus volume during knee flexion with favorable clinical outcome	Zhang	2021	4	Japan	Retrospective imaging	Treatment/ Outcomes
Medial meniscus posterior root repair restores the intra-articular volume of the medial meniscus by decreasing posteromedial extrusion at knee flexion	Okazaki	2020	4	Japan	Retrospective imaging	Treatment/ Outcomes
Medial meniscus posterior root repair using a modified Mason-Allen suture can prevent the progression of cartilage degeneration on the loading surface of the medial compartment: a second-look arthroscopic evaluation	Takihira	2021	4	Japan	Case series	Treatment/ Outcomes
Medial meniscus posterior root repair using a transtibial technique	Woodmass	2017	5	US	Technical note	Technical note
Medial meniscus posterior root repairs: a comparison among three surgical techniques in short-term clinical outcomes and arthroscopic meniscal healing scores	Furumatsu	2022	3	Japan	Comparative retrospective	Treatment/ Outcomes
Medial meniscus posterior root tear causes swelling of the medial meniscus and expansion of the extruded meniscus: a comparative analysis between 2D and 3D MRI	Okazaki	2020	3	Japan	Case control	Diagnosis
Medial meniscus posterior root tear does not affect the outcome of medial open-wedge high tibial osteotomy	Kim	2021	3	South Korea	Comparative retrospective	Treatment/ Outcomes
Medial meniscus posterior root tear induces pathological posterior extrusion of the meniscus in the knee-flexed position: an open magnetic resonance imaging analysis	Masuda	2018	4	Japan	Case series	Treatment/ Outcomes
Medial meniscus posterior root tear reconstructed with gracilis autograft improve healing rate and patient reported outcome measures	Li	2022	3	China	Comparative retrospective	Treatment/ Outcomes
Medial meniscus posterior root tear repair using a 2-simple-suture pullout technique	Samy	2017	5	Egypt	Technical note	Technical note
Medial meniscus posterior root tear treatment: a matched cohort comparison of nonoperative management, partial meniscectomy, and repair	Bernard	2020	3	US	Cohort	Treatment/ Outcomes
Medial meniscus posterior root tear: a comprehensive review	Lee	2014	5	South Korea	Review of current concepts	Narrative review
Medial meniscus posterior root tears and partial meniscectomy significantly increase stress in the knee joint during dynamic gait	Yang	2023	5	China	Biomechanical finite element analysis	Treatment/ Outcomes
Medial meniscus root repair: a transtibial pull-out surgical technique	Hevesi	2018	5	US	Technical note	Technical note
Medial meniscus root tear in the middle aged patient: a case based review	Carreau	2017	5	US	Biomechanical human	Treatment/ Outcomes
Medial meniscus root tear refixation: comparison of clinical, radiologic, and arthroscopic findings with medial meniscectomy	Kim	2011	3	South Korea	Comparative retrospective	Treatment/ Outcomes
Medial posterior meniscal root tears are associated with development or worsening of medial tibiofemoral cartilage damage: the multicenter osteoarthritis study	Guermazi	2013	3	US	Cohort	Treatment/ Outcomes
Medial versus lateral meniscus root tears: is there a difference in injury presentation, treatment decisions, and surgical repair outcomes?	Krych	2020	3	US	Comparative retrospective	Treatment/ Outcomes
Meniscal extrusion and spontaneous osteonecrosis with root tear of medial meniscus: comparison with horizontal tear	Sung	2013	3	South Korea	Comparative retrospective	Treatment/ Outcomes
Meniscal extrusion measurements after posterior medial meniscus root tears: a systematic review and meta-analysis	Farivar	2022	4	US	Systematic review	Systematic review/ meta-analysis
Meniscal extrusion progresses shortly after the medial meniscus posterior root tear	Furumatsu	2017	3	Japan	Comparative retrospective	Treatment/ Outcomes
Meniscal extrusion under increasing varus in stress patients with a medial meniscus posterior root-tear	Beer	2022	3	Israel	Comparative prospective	Treatment/ Outcomes
Meniscal extrusion, cartilage, bone, and ligament lesions associated with medial meniscus posterior root tear gap	Dirim Mete	2023	3	Turkey	Retrospective	Treatment/ Outcomes
Meniscal ossicle: posttraumatic origin and association with posterior meniscal root tears	Mohankumar	2014	4	Canada	Case series	Treatment/ Outcomes
Meniscal root injuries	Krych	2020	5	US	Review of current concepts	Narrative review
Meniscal root injury and spontaneous osteonecrosis of the knee	Robertson	2009	4	US	Case series	Diagnosis
Meniscal root repair alone or combined with different procedures after at least 6 months of follow-up: a series of cases	Rocha de Faria	2022	4	Brazil	Case series	Treatment/ Outcomes
Meniscal root repair along with auxiliary procedures for joint preservation: current concepts	Sundararajan	2021	5	India	Review of current concepts	Narrative review
Meniscal root repair with mini-open medial collateral ligament release	DeFroda	2021	5	US	Technical note	Technical note
Meniscal root suturing techniques: implications for root fixation	Kopf	2011	5	US	Biomechanical human	Treatment/ Outcomes
Meniscal root tear repair: why, when and how?	Bonasia	2015	5	Italy	Review of current concepts	Narrative review
Meniscal root tears evaluation and management	Day	2018	5	US	Review of current concepts	Narrative review
Meniscal root tears: a classification system based on tear morphology	LaPrade	2015	4	US	Case series	Diagnosis

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Meniscal root tears: a decade of research on their relevant anatomy, biomechanics, diagnosis, and treatment	Banovetz	2022	5	US	Review of current concepts	Narrative review
Meniscal root tears: a silent epidemic	Cinque	2018	5	US	Review of current concepts	Narrative review
Meniscal root tears: an update focused on preoperative and postoperative MRI findings	Guimarães	2022	5	Brazil	Review of current concepts	Narrative review
Meniscal root tears: current concepts review	Pache	2018	5	US	Review of current concepts	Narrative review
Meniscal root tears: diagnosis and treatment	Koenig	2009	5	US	Review of current concepts	Narrative review
Meniscal root tears: from basic science to ultimate surgery	Papalia	2013	4	Italy	Review of current concepts	Narrative review
Meniscal root tears: identification and repair	Doherty	2016	5	US	Review of current concepts	Narrative review
Meniscal root tears: repair and salvage techniques	Homan	2023	5	US	Review of current concepts	Narrative review
Meniscal root tears: significance, diagnosis, and treatment	Bhatia	2014	5	US	Review of current concepts	Narrative review
Meniscus extrusion is a predisposing factor for determining arthroscopic treatments in partial medial meniscus posterior root tears	Furumatsu	2023	4	Japan	Comparative retrospective	Treatment/ Outcomes
Meniscus root avulsion	Marzo	2012	5	US	Review of current concepts	Narrative review
Meniscus root repair	Vyas	2018	5	US	Review of current concepts	Narrative review
Meniscus root repair	Navasartian	2012	5	US	Review of current concepts	Narrative review
Meniscus root repair vs meniscectomy or nonoperative management to prevent knee osteoarthritis after medial meniscus root tears: clinical and economic effectiveness	Faucett	2019	4	US	Systematic review	Systematic review/ meta-analysis
Meniscus root tears: a clinical review	Randazzo	2022	5	US	Review of current concepts	Narrative review
Midterm outcomes of posterior medial meniscus root tear repair: a systematic review	Chang	2022	4	US	Systematic review	Systematic review/ meta-analysis
Mild to moderate varus alignment in relation to surgical repair of a medial meniscus root tear: a matched-cohort controlled study with 2 years of follow-up	Moon	2021	3	South Korea	Cohort	Treatment/ Outcomes
Minimum 2-year clinical outcomes of medial meniscus root tears in relation to coronal alignment	Ridley	2022	4	US	Case series	Treatment/ Outcomes
Modified pull-out suture in posterior root tear of the medial meniscus: using a posteromedial portal	Cho	2012	5	South Korea	Technical note	Technical note
Morphological changes in the superficial medial collateral ligament on knee MR imaging: association with medial meniscal extrusion and posterior root medial meniscus abnormality	Yoon	2022	4	South Korea	Retrospective diagnostic	Diagnosis
MR diagnosis of posterior root tears of the lateral meniscus using arthroscopy as the reference standard	De Smet	2009	4	US	Retrospective diagnostic	Diagnosis
MR findings of meniscal extrusion correlated with arthroscopy	Magee	2008	4	US	Retrospective diagnostic	Diagnosis
MRI study of medial meniscus degeneration of osteoarthritic knees with or without posterior root tear	Hisashi	2022	3	Japan	Cohort	Treatment/ Outcomes
No dynamic extrusion of the medial meniscus in ultrasound examination in patients with confirmed root tear lesion	Karpinski	2019	3	Germany	Cohort	Diagnosis
Non-anatomic repair of medial meniscus posterior root tears to the posterior capsule provided favourable outcomes in middle-aged and older patients	Zhu	2021	4	China	Retrospective	Treatment/ Outcomes
Non-anatomical arthroscopic all-inside repair of medial meniscus posterior root tear to posterior cruciate ligament for patients with normal lower limb alignment	Jiang	2022	4	China	Retrospective	Treatment/ Outcomes
Non-operative management of medial meniscus posterior horn root tears is associated with worsening arthritis and poor clinical outcome at 5-year follow-up	Krych	2017	4	US	Cohort	Treatment/ Outcomes
Non-operative treatment of degenerative posterior root tear of the medial meniscus	Lim	2010	4	South Korea	Retrospective	Treatment/ Outcomes
Novel posterior anchoring method associated with medial meniscus posterior root repair	Okazaki	2022	5	Japan	Technical note	Technical note
Novel technique for repairing posterior medial meniscus root tears using porcine knees and biomechanical study	Wu	2018	5	Taiwan	Biomechanical animal	Treatment/ Outcomes
Obesity is a risk factor for osteoarthritis progression and spontaneous osteoporosis is a risk for the development of spontaneous osteonecrosis in patients with medial meniscus posterior root tear	Takahashi	2021	3	Japan	Retrospective	Treatment/ Outcomes
Osteomeniscal impact edema (OMIE): description of a distinct MRI finding in displaced flap tears of the medial meniscus, with comparison to posterior root tears	Krych	2020	3	US	Case series	Diagnosis
Outcomes after surgical repair of medial meniscal root tears: a review	Edwards	2021	4	US	Systematic review	Systematic review/ meta-analysis
Outcomes of arthroscopic all-inside repair are improved compared to transtibial pull-out repair of medial meniscus posterior root tears	Yoon	2023	3	South Korea	Comparative retrospective	Treatment/ Outcomes

Study Title	Lead Author	Year	Level of Evidence	Country	Design	Theme
Outcomes of arthroscopic all-inside repair versus observation in older patients with meniscus root tears	Dragoo	2020	2	US	Cohort	Treatment/ Outcomes
Outcomes of arthroscopic posterior medial meniscus root repair: association with body mass index	Brophy	2019	4	US	Case series	Treatment/ Outcomes
Outcomes of combined lateral meniscus posterior root repair and anterior cruciate ligament reconstruction	Shekhar	2022	2	India	Cohort	Treatment/ Outcomes
Outcomes of medial meniscal posterior root repair during proximal tibial osteotomy: is root repair beneficial?	Lee	2020	3	South Korea	Cohort	Treatment/ Outcomes
Partial lateral meniscus anterior root injuries during anatomical single-bundle anterior cruciate ligament reconstruction are likely to occur in women with small skeletons	Shimozaki	2020	4	Japan	Case series	Treatment/ Outcomes
Partial meniscectomy for degenerative medial meniscal root tears shows favorable outcomes in well-aligned, nonarthritic knees	Lee	2019	3	South Korea	Case control	Treatment/ Outcomes
Partial meniscectomy provides no benefit for symptomatic degenerative medial meniscus posterior root tears	Krych	2018	3	US	Comparative retrospective	Treatment/ Outcomes
Partial meniscectomy provides the favorable outcomes for symptomatic medial meniscus tear with an intact posterior root	Kim	2020	4	South Korea	Case series	Treatment/ Outcomes
Patients with meniscus posterolateral root tears repair during ACL reconstruction achieve comparable post-operative outcome than patients with isolated ACL reconstruction	Thomas	2023	3	France	Cohort	Treatment/ Outcomes
Patterns and influencing factors of medial meniscus tears in varus knee osteoarthritis	Cho	2016	2	South Korea	Cohort	Treatment/ Outcomes
Peripheral stabilization suture to address meniscal extrusion in a revision meniscal root repair: surgical technique and rehabilitation protocol	Dean	2020	5	US	Technical note	Technical note
Placement of an anatomic tibial tunnel significantly improves the medial meniscus posterior extrusion at 90° of knee flexion following medial meniscus posterior root pullout repair	Kamatsuki	2021	4	Japan	Retrospective series	Treatment/ Outcomes
Posterior horn lateral meniscal oblique radial tear in acute anterior cruciate ligament reconstruction incidence and outcomes after all-inside repair: clinical and second-look arthroscopic evaluation	Jeon	2022	4	South Korea	Case series	Treatment/ Outcomes
Posterior horn medial meniscal root tear: the prequel	Umans	2014	3	US	Cohort	Treatment/ Outcomes
Posterior lateral meniscal root and oblique radial tears: the biomechanical evidence supports repair of these tears, although long-term clinical studies are necessary	LaPrade	2022	5	US	Review of current concepts	Narrative review
Posterior lateral meniscal root tear due to a malpositioned double-bundle anterior cruciate ligament reconstruction tibial tunnel	LaPrade	2015	4	US	Case report	Diagnosis
Posterior lateral meniscal root tears increase strain on the reconstructed anterior cruciate ligament: a cadaveric study	Uffmann	2021	5	US	Biomechanical human	Treatment/ Outcomes
Posterior lateral meniscus root reattachment with suture anchors: an arthroscopic technique	Cuéllar	2017	5	Spain	Technical note	Technical note
Posterior medial meniscus root ligament lesions: MRI classification and associated findings	Choi	2014	3	South Korea	Cohort	Diagnosis
Posterior medial meniscus root repair using two transtibial tunnels with modified Mason-Allen stitches: a technical note	Kim	2023	4	South Korea	Case series	Treatment/ Outcomes
Posterior medial meniscus root tears potentiate the effect of increased tibial slope on anterior cruciate ligament graft forces	Samuelsen	2020	5	US	Biomechanical human	Treatment/ Outcomes
Posterior meniscal root injuries	Moatshe	2016	5	US	Review of current concepts	Narrative review
Posterior meniscal root repair using a meniscal suture device	Rocha de Faria	2020	5	Brazil	Technical note	Technical note
Posterior meniscal root repair: the transtibial double tunnel pullout technique	Chahla	2016	5	US	Technical note	Technical note
Posterior meniscal root repairs: outcomes of an anatomic transtibial pull-out technique	LaPrade	2017	3	US	Cohort	Treatment/ Outcomes
Posterior reattachment of a radial tear in the posterior root of the medial meniscus	Nha	2011	5	South Korea	Technical note	Technical note
Posterior root medial meniscus reconstruction: an option in chronic posterior root meniscal injury management	Prasertia	2018	4	Thailand	Case report	Treatment/ Outcomes
Posterior root medial meniscus tear with medial opening wedge high tibial osteotomy: a step-by-step systematic arthroscopic repair technique	Srimongkolpitak	2022	5	Thailand	Technical note	Technical note
Posterior root repair of medial meniscus combined with valgus opening wedge tibial osteotomy	Rocha de Faria	2021	5	Brazil	Technical note	Technical note
Posterior root tear fixation of the lateral meniscus combined with arthroscopic ACL double-bundle reconstruction: technical note of a transosseous fixation using the tibial PL tunnel	Forkel	2012	5	Germany	Technical note	Technical note
Posterior root tear of the medial and lateral meniscus	Petersen	2014	5	Germany	Review of current concepts	Narrative review
Posterior root tears of the lateral meniscus	Feucht	2015	5	Germany	Review of current concepts	Narrative review
Posterior root tears of the lateral meniscus only affect tibiofemoral contact forces when the meniscofemoral ligament is involved: a cadaveric study	Sequeira	2023	5	US	Biomechanical human	Treatment/ Outcomes

Study Title	Lead Author	Year	Level of Evidence	Country	Design	Theme
Postoperative external tibial rotation is correlated with inferior meniscal healing following pullout repair of a medial meniscus posterior root tear	Hiranaka	2022	3	Japan	Cohort	Treatment/ Outcomes
Potential of the non-weight-bearing tunnel view in diagnosing medial meniscus posterior root tear: a pilot study of x-ray characteristics	Okamura	2021	3	Japan	Cohort	Diagnosis
Predicting outcome of repair for posterior medial meniscus root tear with early osteoarthritis using bone SPECT/CT	Whi	2019	3	South Korea	Cohort	Treatment/ Outcomes
Predicting outcome of repair of medial meniscus posterior root tear with early osteoarthritis using bone single-photon emission computed tomography/computed tomography	Whi	2020	3	South Korea	Observational	Diagnosis
Predictive value of painful popping for a posterior root tear of the medial meniscus in middle-aged to older Asian patients	Bae	2013	4	South Korea	Case series	Diagnosis
Predictors of degenerative medial meniscus extrusion: radial component and knee osteoarthritis	Lee	2011	3	South Korea	Comparative retrospective	Treatment/ Outcomes
Preliminary diagnosis of medial meniscus posterior root tears using the Rosenberg radiographic view	Kodama	2019	4	Japan	Comparative retrospective	Diagnosis
Preoperative morphologic changes of the medial meniscus correlate with suture translations during knee flexion in pullout repair of medial meniscus posterior root tear	Hiranaka	2021	2	Japan	Cohort	Treatment/ Outcomes
Preoperative varus alignment and postoperative meniscus extrusion are the main long-term predictive factors of clinical failure of meniscal root repair	Chung	2021	3	South Korea	Cohort	Treatment/ Outcomes
Prevalence of lateral meniscal extrusion for posterior lateral meniscal root lesion with and without concomitant midbody radial tear in anterior cruciate ligament injury	Shen	2016	3	China	Case control	Diagnosis
Prognostic factors and midterm clinical outcome of transtibial pullout and partial meniscectomy for medial meniscus posterior root tears in middle-aged patients	Dzidzishvili	2022	3	Spain	Case control	Treatment/ Outcomes
Prognostic factors in the midterm results of pullout fixation for posterior root tears of the medial meniscus	Chung	2016	4	South Korea	Case series	Treatment/ Outcomes
Prognostic factors of arthroscopic pull-out repair for a posterior root tear of the medial meniscus	Moon	2012	4	South Korea	Case series	Treatment/ Outcomes
Progression of radiographic osteoarthritis after partial meniscectomy in degenerative medial meniscal posterior root tears was greater in varus- than in neutral-aligned knees: a minimum 5-year follow-up	Kim	2020	3	South Korea	Comparative retrospective	Treatment/ Outcomes
Prospective consecutive clinical outcomes after transtibial root repair for posterior meniscal root tears: a multicenter study	Krych	2022	3	US	Case control	Treatment/ Outcomes
Pullout failure strength of the posterior horn of the medial meniscus with root ligament tear	Kim	2013	2	South Korea	Prospective study	Treatment/ Outcomes
Pullout fixation for medial meniscus posterior root tears: clinical results were not age-dependent, but osteoarthritis progressed	Chung	2019	3	South Korea	Case control	Treatment/ Outcomes
Pullout fixation of posterior medial meniscus root tears: correlation between meniscus extrusion and midterm clinical results	Chung	2017	3	South Korea	Case control	Treatment/ Outcomes
Pullout repair associated with a bridging suture using FiberLink for the medial meniscus posterior horn/root tear	Hiranaka	2021	5	Japan	Technical note	Technical note
Pullout repair of a medial meniscus posterior root tear using a FasT-Fix all-inside suture technique	Kodama	2016	5	Japan	Technical note	Technical note
Pullout repair of the medial meniscus posterior root tear reduces proton density-weighted imaging signal intensity of the medial meniscus	Okazaki	2018	4	Japan	Cohort	Treatment/ Outcomes
Pullout repair using modified Mason-Allen suture induces better meniscal healing and superior clinical outcomes: a comparison between two surgical methods	Furumatsu	2019	3	Japan	Cohort	Treatment/ Outcomes
Quantifying the differential functional behavior between the medial and lateral meniscus after posterior meniscus root tears	Walczak	2021	5	US	Biomechanical human	Diagnosis
Radial tear of the medial meniscal root: reliability and accuracy of MRI for diagnosis	Lee	2008	4	South Korea	Retrospective review	Diagnosis
Radial tears associated with cleavage tears of the medial meniscus in athletes	Kidron	2002	4	Israel	Retrospective review	Treatment/ Outcomes
Radial tears in the root of the posterior horn of the medial meniscus	Ozkoc	2008	4	Turkey	Retrospective review	Treatment/ Outcomes
Radial tears in the roots of the posterior horns of both the medial and lateral menisci combined with anterior cruciate ligament tear: a case report	Lee	2009	4	South Korea	Case report	Treatment/ Outcomes
Radiographic OA, bone marrow lesions, higher body mass index and medial meniscal root tears are significantly associated with medial meniscus extrusion with OA or medial meniscal tears: a systematic review and meta-analysis	Zhan	2023	4	China	Systematic review and meta-analysis	Systematic review/ meta-analysis
Remodified Mason-Allen suture technique concomitant with high tibial osteotomy for medial meniscus posterior root tears improved the healing of the repaired root and suppressed osteoarthritis progression	Kim	2021	4	South Korea	Retrospective review	Treatment/ Outcomes
Repair of meniscus root tear – is there a difference between medial meniscus root repair and lateral meniscus root repair? A systematic review and meta-analysis	Khoo	2023	4	China	Systematic review and meta-analysis	Systematic review/ meta-analysis
Repair of the lateral posterior meniscal root improves stability in an ACL-deficient knee	Forkel	2018	5	Germany	Biomechanical human	Treatment/ Outcomes
Repair of the posterior lateral meniscal root tear: suture anchor fixation through the outside-in anterior cruciate ligament reconstruction femoral tunnel	Leyes	2021	5	Spain	Technical note	Technical note
Repair of the posterior root of the medial meniscus	Jones	2010	5	US	Technical note	Technical note

Study Title	Lead Author	Year	Level of Evidence	Country	Design	Theme
Repair versus nonrepair of medial meniscus posterior root tear: a systematic review of patients' selection criteria, including clinical and radiographic outcomes	Lee	2020	4	South Korea	Systematic review	Systematic review/ meta-analysis
Reprint of: outcomes of arthroscopic all-inside repair are improved compared to transtibial pull-out repair of medial meniscus posterior root tears	Yoon	2023	3	South Korea	Cohort	Treatment/ Outcomes
Results of arthroscopic all-inside repair for lateral meniscus root tear in patients undergoing concomitant anterior cruciate ligament reconstruction	Ahn	2010	4	South Korea	Case series	Treatment/ Outcomes
Risk factors for lateral meniscus posterior root tears in the anterior cruciate ligament-injured knee: an epidemiological analysis of 3956 patients from the SANTI Study Group	Praz	2019	3	France	Case control	Treatment/ Outcomes
Risk factors for medial meniscus posterior root tear	Hwang	2012	3	South Korea	Cohort	Treatment/ Outcomes
Risk factors for posterior lateral meniscus root tears in anterior cruciate ligament injuries	Feucht	2015	4	Germany	Cohort	Treatment/ Outcomes
Risk of interference between the tibial tunnel and locking screws in medial meniscus posterior root repair and open wedge high tibial osteotomy	Nejima	2022	4	Japan	Simulation	Treatment/ Outcomes
Role of musculoskeletal ultrasound in assessment of extrusion of the medial meniscus of the knee joint compared to MRI as a reference standard	Elkwesny	2020	2	Egypt	Cohort	Diagnosis
Role of nonoperative treatment in managing degenerative tears of the medial meniscus posterior root	Neogi	2013	2	India	Cohort	Treatment/ Outcomes
Role of the anterior cruciate ligament, anterolateral complex, and lateral meniscus posterior root in anterolateral rotatory knee instability: a biomechanical study	Willinger	2023	5	UK	Biomechanical human	Treatment/ Outcomes
Role of the mechanical axis of lower limb and body weight in the horizontal tear and root ligament tear of the posterior horn of the medial meniscus	Kim	2012	3	South Korea	Comparative retrospective	Diagnosis
Root avulsion and para-root tear of the posterolateral meniscus: repair versus untreated	Keyhani	2018	3	Iran	Case control	Treatment/ Outcomes
Root repair versus partial meniscectomy for medial meniscus posterior root tears: comparison of long-term survivorship and clinical outcomes at minimum 10-year follow-up	Chung	2020	3	South Korea	Cohort	Treatment/ Outcomes
Root tear of the meniscus: biomechanical evaluation of an arthroscopic refixation technique	Rosslensbroich	2013	5	Germany	Biomechanical animal	Treatment/ Outcomes
Second-look arthroscopic assessment and clinical results of modified pull-out suture for posterior root tear of the medial meniscus	Cho	2014	3	South Korea	Cohort	Treatment/ Outcomes
Second-look arthroscopic findings after medial open-wedge high tibial osteotomy combined with all-inside repair of medial meniscus posterior root tears	Jing	2020	3	China	Cohort	Treatment/ Outcomes
Second-look arthroscopic findings after open wedging high tibia osteotomy focusing on the posterior root tears of the medial meniscus	Nha	2013	4	South Korea	Case series	Treatment/ Outcomes
Second-look arthroscopic findings after repairs of posterior root tears of the medial meniscus	Seo	2011	4	South Korea	Case series	Treatment/ Outcomes
Semi-quantitative arthroscopic scoring system is related to clinical outcomes in patients after medial meniscus posterior root repair	Zhang	2022	4	Japan	Case series	Diagnosis
Shared ACL bone tunnel technique for repair of lateral meniscus posterior root tears combined With ACL reconstruction	Zhou	2022	3	China	Cohort	Treatment/ Outcomes
Short-term results and surgical technique of arthroscopic centralization as an augmentation for medial meniscus extrusion caused by medial meniscus posterior root tear	Mochizuki	2021	4	Japan	Case series	Treatment/ Outcomes
Simple medial meniscus posterior horn root repair using an all-inside meniscal repair device combined with high tibial osteotomy to maintain joint-space width in a patient with a repairable tear	Suh	2021	3	South Korea	Cohort	Treatment/ Outcomes
Simplified arthroscopic lateral meniscal root repair involving the use of 2 cinch-loop sutures	Smith	2017	5	US	Technical note	Technical note
Simultaneous avulsion fracture of the posterior medial and posterior lateral meniscus root: a case report and review of the literature	Feucht	2014	4	Germany	Case report	Narrative review
Simultaneous correction of varus deformity and posterior tibial slope by modified hybrid closed-wedge high tibial osteotomy	Koga	2022	5	Japan	Technical note	Technical note
Six-month outcomes of clinically relevant meniscal injury in a large-animal model	Bansal	2021	5	US	Biomechanical animal	Treatment/ Outcomes
Stable lateral meniscal posterior root tears left in situ at time of anterior cruciate ligament reconstruction are of minimal long-term clinical detriment	Shumborski	2021	3	Australia	Comparative retrospective	Treatment/ Outcomes
Steep lateral tibial slope and lateral-to-medial slope asymmetry are risk factors for concomitant posterolateral meniscus root tears in anterior cruciate ligament injuries	Kolbe	2019	4	Germany	Cohort	Treatment/ Outcomes
Steep medial tibial slope and prolonged delay to surgery are associated with bilateral medial meniscus posterior root tear	Hiranaka	2021	3	Japan	Cohort	Diagnosis
Steep posterior slope and shallow concave shape of the medial tibial plateau are risk factors for medial meniscus posterior root tears	Okazaki	2021	3	Japan	Case control	Treatment/ Outcomes
Steep posterior slope of the medial tibial plateau and anterior cruciate ligament degeneration contribute to medial meniscus posterior root tears in young patients	Kodama	2023	3	Japan	Comparative retrospective	Treatment/ Outcomes
Stress radiography findings in medial meniscus posterior root tears	Argin	2020	3	Turkey	Comparative retrospective	Diagnosis
Subchondral insufficiency fracture is a predictive factor of osteoarthritis progression and conversion to arthroplasty in non-surgically treated medial meniscus root tear	Choi	2023	4	South Korea	Cohort	Treatment/ Outcomes

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Suprameniscal portal for repairing meniscal root tears	Seifeldin	2021	5	Egypt	Technical note	Technical note
Surgical treatment of combined posterior root tears of the lateral meniscus and ACL tears	Pan	2015	3	China	Cohort	Treatment/Outcomes
Surgical treatment of complex meniscus tear and disease: state of the art	Ozeki	2021	5	Japan	Review of current concepts	Narrative review
Survivorship analysis and clinical outcomes of transtibial pullout repair for medial meniscus posterior root tears: a 5- to 10-year follow-up study	Chung	2018	4	South Korea	Case series	Treatment/Outcomes
Suture anchor refixation of meniscal root tears without an additional portal	Balke	2018	5	Germany	Technical note	Technical note
Suture anchor repair for a medial meniscus posterior root tear combined with arthroscopic meniscal centralization and open wedge high tibial osteotomy	Nakamura	2018	5	Japan	Technical note	Technical note
Suture configuration techniques have no effect on mid-term clinical outcomes of arthroscopic meniscus root repairs	Ulku	2020	3	Turkey	Cohort	Treatment/Outcomes
Suture repair of full radial posterior lateral meniscus tears using a central midline portal	Ouanazar	2017	5	UK	Technical note	Technical note
Tear gap and severity of osteoarthritis are associated with meniscal extrusion in degenerative medial meniscus posterior root tears	Kim	2019	3	South Korea	Comparative retrospective	Treatment/Outcomes
Technique for transtibial knotless repair of lateral meniscus root avulsion	Harnden	2017	5	US	Technical note	Technical note
Tensile forces on repaired medial meniscal root tears	Stärke	2013	5	Germany	Biomechanical human	Treatment/Outcomes
Tensile strength of the pullout repair technique for the medial meniscus posterior root tear: a porcine study	Fujii	2017	5	Japan	Biomechanical animal	Treatment/Outcomes
The accuracy of a newly developed guide system in medial meniscus posterior root repair: a comparison between two aiming guides	Furumatsu	2019	4	Japan	Comparative retrospective	Treatment/Outcomes
The biomechanical effect of a lateral meniscus posterior root tear with and without damage to the meniscomfemoral ligament: efficacy of different repair techniques	Forkel	2014	5	Germany	Biomechanical human	Treatment/Outcomes
The clinical and radiographic outcomes of type 2 medial meniscus posterior root tears following transtibial pullout repair	Hiranaka	2023	3	Japan	Comparative retrospective	Treatment/Outcomes
The degeneration of meniscus roots is accompanied by fibrocartilage formation, which may precede meniscus root tears in osteoarthritic knees	Park	2015	3	South Korea	Cross sectional	Diagnosis
The distance between the tibial tunnel aperture and meniscal root attachment is correlated with meniscal healing status following transtibial pullout repair for medial meniscus posterior root tear	Hiranaka	2020	3	Japan	Cohort	Treatment/Outcomes
The early arthroscopic pullout repair of medial meniscus posterior root tear is more effective for reducing medial meniscus extrusion	Kamatsuki	2019	3	Japan	Cohort	Treatment/Outcomes
The effect of complete radial lateral meniscus posterior root tear on the knee contact mechanics: a finite element analysis	Bao	2013	5	China	Biomechanical finite element analysis	Treatment/Outcomes
The effects of different repair methods for a posterior root tear of the lateral meniscus on the biomechanics of the knee: a finite element analysis	Wang	2021	5	China	Biomechanical finite element analysis	Treatment/Outcomes
The effects of lateral meniscus posterior root tear and its repair on knee stability of internal rotation and forward shift: a biomechanical kinematics cadaver study	Qi	2021	5	China	Biomechanical human	Treatment/Outcomes
The effects of lateral meniscus posterior root tears or repair with anterior cruciate ligament reconstruction on the pressure of the patellofemoral joint: A biomechanical evaluation	Zhang	2023	5	China	Descriptive laboratory human	Treatment/Outcomes
The efficacy of medial meniscal posterior root tear repair with or without high tibial osteotomy: a systematic review	Wang	2023	3	China	Systematic review	Systematic review/meta-analysis
The efficacy of meniscus posterior root tears repair: a systematic review and meta-analysis	Wang	2021	3	China	Systematic review	Systematic review/meta-analysis
The functional impact of home-based self-rehabilitation following arthroscopic meniscus root repair	Tahami	2022	4	Iran	Historically controlled study	Rehabilitation
The knee meniscus: management of traumatic tears and degenerative lesions	Beaufils	2017	5	France	Review of current concepts	Narrative review
The lateral meniscus extrudes with and without root tear evaluated using ultrasound	Diermeier	2022	5	US	Biomechanical human	Diagnosis
The lateral meniscus posterior root and meniscomfemoral ligaments are stabilizing structures in the ACL deficient knee: a biomechanical study	Moatshe	2017	5	US	Biomechanical human	Treatment/Outcomes
The meniscal ossicle associated with medial meniscus posterior root tear	Qalib	2022	4	China	Case report	Diagnosis
The MRI findings of meniscal root tear of the medial meniscus: emphasis on coronal, sagittal and axial images	Choi	2012	3	China	Diagnostic study	Diagnosis
The natural history of medial meniscal root tears: a biomechanical and clinical case perspective	Floyd	2021	4	US	Case series	Treatment/Outcomes
The oblique meniscomeniscal ligament: a case report of a rare obstruction to meniscal root repair	Floyd	2021	4	US	Case report	Treatment/Outcomes
The optimal suture site for the repair of posterior horn root tears: biomechanical evaluation of pullout strength in porcine menisci	Kim	2016	5	South Korea	Biomechanical human	Treatment/Outcomes
The role of medial meniscus posterior root tear and proximal tibial morphology in the development of spontaneous osteonecrosis and osteoarthritis of the knee	Yamagami	2017	3	Japan	Cohort	Treatment/Outcomes

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The role of meniscal tears in spontaneous osteonecrosis of the knee: a systematic review of suspected etiology and a call to revisit nomenclature	Hussain	2019	3	US	Systematic review	Systematic review/ meta-analysis
The role of MRI in evaluation of arthroscopic transtibial pullout repair for medial meniscus posterior root tears	de Oliveira	2021	5	Brazil	Review of current concepts	Narrative review
The role of suture cutout in the failure of meniscal root repair during the early post-operative period: a biomechanical study	Perez-Blanca	2018	5	Spain	Biomechanical human	Treatment/ Outcomes
The stability of repaired meniscal root can affect postoperative cartilage status following medial meniscus posterior root repair	Zhang	2022	4	Japan	Case series	Treatment/ Outcomes
There is no difference in radiographic outcomes after average 9 years after arthroscopic partial medial meniscectomy for both posterior horn tears and posterior horn root tears	Kwon	2020	3	South Korea	Comparative retrospective	Treatment/ Outcomes
Tibiofemoral contact mechanics following posterior root of medial meniscus tear, repair, meniscectomy, and allograft transplantation	Kim	2013	5	South Korea	Biomechanical human	Treatment/ Outcomes
Time-dependent increase in medial meniscus extrusion after medial meniscus posterior root tear analyzed by using magnetic resonance imaging	Okazaki	2019	3	Japan	Cross sectional	Diagnosis
Trans-posterior cruciate ligament all-inside root repair versus partial meniscectomy for medial meniscus posterior root tears: comparison of semiquantitative and quantitative MRI outcomes in cartilage degeneration and osteoarthritic progression	Su	2022	3	China	Comparative retrospective	Treatment/ Outcomes
Transosseous medial meniscal root repair using a modified Mason-Allen suture configuration	Lavender	2015	5	US	Technical note	Technical note
Transtibial fixation for medial meniscus posterior root tear reduces posterior extrusion and physiological translation of the medial meniscus in middle-aged and elderly patients	Kodama	2020	4	Japan	Retrospective	Treatment/ Outcomes
Transtibial pull-out repair of converted radial tear adjacent to medial meniscus root	Yin	2020	5	US	Technical note	Technical note
Transtibial pull-out repair of lateral meniscus posterior root is beneficial for graft maturation after anterior cruciate ligament reconstruction: a retrospective study	Li	2022	3	China	Cohort	Treatment/ Outcomes
Transtibial pullout repair of lateral meniscus posterior root tear with tissue loss: a case with anterior cruciate ligament injury and medial meniscus tear	Tamura	2022	4	Japan	Case report	Treatment/ Outcomes
Transtibial pullout repair of medial meniscus posterior root tear restores physiological rotation of the tibia in the knee-flexed position	Okazaki	2019	3	Japan	Comparative retrospective	Treatment/ Outcomes
Transtibial pullout repair of medial meniscus posterior root tears: effects on the meniscus healing score and ICRS grade among patients with mild osteoarthritis of the knee	Kodama	2021	4	Japan	Retrospective	Treatment/ Outcomes
Transtibial pullout repair of the lateral meniscus posterior root tear combined with anterior cruciate ligament reconstruction reduces lateral meniscus extrusion: a retrospective study	Okazaki	2020	3	Japan	Comparative retrospective	Treatment/ Outcomes
Transtibial pullout repair reduces posterior extrusion of the medial meniscus	Masuda	2019	4	Japan	Retrospective	Treatment/ Outcomes
Transtibial pullout repair techniques using two simple stitches for medial meniscus posterior root tear can prevent the progression of medial meniscus extrusion and obtain successful outcomes	Hiranaka	2022	2	Japan	Cohort	Treatment/ Outcomes
Traumatic posterior root tear of the medial meniscus in patients with severe medial instability of the knee	Ra	2015	4	South Korea	Case series	Treatment/ Outcomes
Treatment outcomes of meniscal root tears: a systematic review	Stein	2020	4	US	Systematic review	Systematic review/ meta-analysis
Two simple stitches for medial meniscus posterior root repair prevents the progression of meniscal extrusion and reduces intrameniscal signal intensity better than modified Mason-Allen sutures	Okazaki	2021	4	Japan	Retrospective	Treatment/ Outcomes
Type II medial meniscus root repair with peripheral release for addressing meniscal extrusion	DePhillipo	2019	5	US	Technical note	Technical note
Unfavorable results of partial meniscectomy for complete posterior medial meniscus root tear with early osteoarthritis: a 5- to 8-year follow-up study	Han	2010	4	India	Therapeutic	Treatment/ Outcomes
Utilization of transtibial centralization suture best minimizes extrusion and restores tibiofemoral contact mechanics for anatomic medial meniscal root repairs in a cadaveric model	Daney	2019	5	US	Biomechanical human	Treatment/ Outcomes
Varus stress MRI in diagnosis of medial meniscal posterior root tear	Qardash	2022	4	Egypt	Prospective study	Diagnosis
Volumetric assessment of extrusion in medial meniscus posterior root tears through semi-automatic segmentation on 3-tesla magnetic resonance images	Kim	2020	3	South Korea	Case control	Diagnosis
Younger patients, lower BMI, complete meniscus root healing, lower HKA degree and shorter preoperative symptom duration were the independent risk factors correlated with the good correction of MME in patients with repaired MMPRTs	Nie	2023	4	China	Cohort	Treatment/ Outcomes