AAOS
American Academy of Orthopaedic Surgeons

Supplement to the Clinical Practice Guideline for the Management of Acute Isolated Meniscal Pathology

e-Appendix 2

- Quality Evaluation
- Data Tables
- Meta Analyses

This supplementary material has been provided by the authors to give readers additional information about their work

Table of Contents

***Note: Summary of Findings Tables - Please see full data tables for all times points and sub-category data.**

***Note: Summary of Findings Tables - Please see full data tables for all times points and sub-category data.**

***Note: Summary of Findings Tables - Please see full data tables for all times points and sub-category data.**

***Note: Summary of Findings Tables - Please see full data tables for all times points and sub-category data.**

***Note: Summary of Findings Tables - Please see full data tables for all times points and sub-category data.**

Strength of Recommendations

Strength	Overall Strength of Evidence	Description of Evidence Quality
Strong	**Strong or Moderate**	Evidence from two or more "High" quality studies with consistent findings for recommending for or against the intervention. Or Rec is upgrade from Moderate using the EtD framework.
Moderate	**Strong, Moderate, or Limited**	Evidence from two or more "Moderate" quality studies with consistent findings, or evidence from a single "High" quality study for recommending for or against the intervention. Or Rec is upgraded or downgraded from Limited or Strong using the EtD framework.
Limited	**Limited or Moderate**	Evidence from two or more "Low" quality studies with consistent findings or evidence from a single "Moderate" quality study recommending for or against the intervention. Or Rec is downgraded from Moderate using the EtD Framework
Consensus	**No Reliable Evidence**	There is no supporting evidence, or higher quality evidence was downgraded due to major concerns addressed in the EtD framework. In the absence of reliable evidence, the guideline work group is making a recommendation based on their clinical opinion.

***Note: Summary of Findings Tables - Please see full data tables for all times points and sub-category data.**

Quality Appraisal Tables

Quality Evaluation: Intervention – Randomized

Study	Random Sequence Generation	Allocation Concealment	Blinding	Incomplete Outcome Data	Selective Reporting	Other Bias	Strength
Ahrens, P. M., 2017	●	◑	◑	●	◑	●	High Quality
Anand, A., 2021	○	○	◑	◑	●	●	Moderate Quality
Ban, I., 2021	●	●	◑	●	●	◑	High Quality
Bhardwaj, A., 2018	◑	◑	◑	◑	◑	◑	Moderate Quality
Calbiyik, M., 2017	●	◑	◑	◑	◑	●	Moderate Quality
Canadian Orthopaedic Trauma, Society, 2007	●	●	○	○	○	◑	Moderate Quality
Chen, Q. Y., 2011	◑	◑	○	◑	◑	◑	Moderate Quality
Fuglesang, H. F. S., 2017	◑	●	◑	◑	◑	●	Moderate Quality
Fuglesang, H. F. S., 2018	●	●	●	●	●	○	High Quality
Hulsmans, M. H., 2017	◑	◑	◑	●	◑	○	Moderate Quality
King, P. R., 2019	●	○	◑	●	◑	●	Moderate Quality
Lubbert, P. H., 2008	●	●	●	○	●	◑	High Quality
Melean, P. A., 2015	●	○	◑	●	◑	●	Moderate Quality
Narsaria, N., 2014	◑	◑	◑	◑	◑	◑	Moderate Quality
Nicholson, J. A., 2021	◑	◑	◑	●	●	◑	Moderate Quality
Qvist, A. H., 2018	●	●	◑	●	●	◑	High Quality
Rafique, M., 2020	○	○	◑	●	◑	◑	Moderate Quality
Robinson, C. M., 2013	◑	◑	◑	◑	◑	○	Moderate Quality
Saha, P., 2014	○	○	◑	●	●	●	Moderate Quality

***Note: Summary of Findings Tables - Please see full data tables for all times points and sub-category data.**

Study	Random Sequence Generation	Allocation Concealment	Blinding	Incomplete Outcome Data	Selective Reporting	Other Bias	Strength
Schemitsch, L. A., 2011	◑	◑	○	○	◑	○	Low Quality
Smekal, V., 2009	●	◑	◑	◑	◑	○	Moderate Quality
Tamaoki, M. J. S., 2017	●	●	○	●	◑	●	High Quality
van der Meijden, O. A., 2015	●	◑	○	●	◑	◑	Moderate Quality
van der Meijden, O. A., 2016	◑	◑	◑	●	●	◑	Moderate Quality
Wang, H. K., 2020	◑	◑	◑	●	●	●	High Quality
Woltz, S., 2018	◑	◑	◑	●	●	◑	Moderate Quality
Woltz, Sarah, 2017	◑	◑	◑	○	●	◑	Moderate Quality
Zhang, T., 2019	◑	○	◑	●	◑	●	Moderate Quality

***Note: Summary of Findings Tables - Please see full data tables for all times points and sub-category data.**

Quality Evaluation: Prognostic/Observational

Study	Patient Spectrum	Participant Recruitment	Treatment recording	Confounding Variables	Outcome measurement bias	Incomplete Outcome Data	Adequate Reporting	Strength
Andersson-Molina, H., 2002	◑	◑	●	●	●	●	●	Low Quality
Cohen, S. B., 2012	●	◑	○	◑	●	●	●	Low Quality
Dai, W. L., 2019	●	◑	◑	◑	●	●	●	Low Quality
Englund, M., 2003	●	●	●	●	●	○	●	Low Quality
Englund, M., 2004	●	●	●	●	●	○	●	Low Quality
Englund, M., 2009	●	●	●	●	●	●	●	Low Quality
Everhart, J. S., 2019	●	●	◑	●	●	●	●	Low Quality
Gan, J. Z., 2020	●	◑	○	◑	●	●	●	Low Quality
Hulet, C. H., 2001	●	◑	◑	●	●	○	●	Low Quality
Lu, J., 2020	●	●	◑	●	●	●	○	Low Quality
Mao, X., 2022	●	●	◑	○	○	●	●	Low Quality
Marder, R. A., 1994	●	●	◑	○	●	●	●	Low Quality
Papachristou, G., 2003	●	●	◑	◑	◑	○	●	Low Quality
Pujol, N., 2015	●	●	●	●	●	●	●	Low Quality
Rockborn, P., 1995	●	◑	●	○	●	○	●	Low Quality
Roos, E. M., 2008	●	◑		◑	●	○	●	Low Quality
Roos, H., 1998	●	◑	●	●	●	○	●	Low Quality
Sochacki, K. R., 2020	●	◑	○	◑	●	●	●	Low Quality
Stein, T., 2010	●	◑	◑	○	●	○	●	Low Quality
Stone, R. G., 1988	●	◑	◑	●	●	●	●	Low Quality
Taskin, C., 2022	◑	●	◑	●	●	◑	●	Low Quality
Zhang, P., 2018	●	◑	○	○	●	◑	●	Low Quality
Zhou, Z., 2019	●	◑	◑	◑	●	●	●	Low Quality

***Note: Summary of Findings Tables - Please see full data tables for all times points and sub-category data.**

Quality Evaluation: Diagnostic

Study	Patient selection bias	Index test risk of bias	Reference standard bias	Flow and timing bias	Strength
Abd Elkhalek, Y. I., 2019	●	●	◑	○	Moderate Quality
Abdon, P., 1989	○	●	◑	●	Moderate Quality
Ahmadi, O., 2022	●	●	●	●	High Quality
Alizadeh, A., 2013	●	●	●	●	High Quality
Araki, Y., 1992	●	●	◑	◑	Moderate Quality
De Smet, A. A., 1994	●	●	●	◑	High Quality
Dhillon, K. S., 1985	◑	●	●	◑	Moderate Quality
Elshimy, A., 2021	○	●	●	●	Moderate Quality
Evancho, A. M., 1990	◑	●	◑	◑	Moderate Quality
Gokalp, G., 2012	●	●	●	○	Moderate Quality
Goossens, P., 2015	●	●	●	●	High Quality
Grevitt, M. P., 1992	●	●	●	●	High Quality
Grevitt, M. P., 1993	●	●	●	●	High Quality
Habib, E., 2023	◑	●	◑	◑	Moderate Quality
Imran, A., 2019	●	◑	◑	●	Moderate Quality
Jurik, A. G., 1986	◑	●	●	●	High Quality
Konan, S., 2009	◑	●	●	◑	Moderate Quality
Lohmann, M., 1991	●	●	●	●	High Quality
Mackenzie, R., 1995	●	◑	◑	◑	Moderate Quality
Madhusudhan, T. R., 2008	●	◑	◑	●	Moderate Quality

***Note: Summary of Findings Tables - Please see full data tables for all times points and sub-category data.**

Study	Patient selection bias	Index test risk of bias	Reference standard bias	Flow and timing bias	Strength
Matava, M. J., 1999	●	●		○	Moderate Quality
McNally, E. G., 2002	●	◑	○	●	Moderate Quality
Mohan, B. R., 2007	●	●	○	◑	Moderate Quality
Muellner, T., 1997	●	●	◑	◑	Moderate Quality
Murray, I. P., 1990	●	●	◑	●	High Quality
Nalaini, F., 2022	◑	●	●	◑	Moderate Quality
Nazem, K., 2006	◑	●	●	●	High Quality
Nederveen, D., 1989	●	●	●	●	High Quality
Nemec, S. F., 2008	○	●	●	●	Moderate Quality
Orlando Junior, N., 2015	●	●	◑	◑	Moderate Quality
Porter, M., 2021	●	●	●	●	High Quality
Rand, T., 1999	●	●	●	●	High Quality
Raunest, J., 1991	●	●	●	◑	High Quality
Reicher, M. A., 1986	◑	◑	◑	●	Moderate Quality
Reicher, M. A., 1987	●	●	◑	●	High Quality
Roper, B. A., 1986	●	◑	◑	◑	Moderate Quality
Rubin, D. A., 1994	●	●	●	◑	High Quality
Schafer, F. K., 2006	◑	●	◑	●	Moderate Quality
Shantanu, K., 2021	●	●	●	●	High Quality
Shetty, A. A., 2008	●	●	●	◑	High Quality
Syal, A., 2015	●	●	●	●	High Quality

***Note: Summary of Findings Tables - Please see full data tables for all times points and sub-category data.**

Study	Patient selection bias	Index test risk of bias	Reference standard bias	Flow and timing bias	Strength
Tahmasebi, M. N., 2005	●	●	○	●	Moderate Quality
van Heuzen, E. P., 1988	○	●	●	●	Moderate Quality
Vande Berg, B. C., 2000	●	●	●	○	Moderate Quality
Wareluk, P., 2012	●	●	◑	●	High Quality
Yaseen, M. K., 2019	◑	●	●	○	Moderate Quality

***Note: Summary of Findings Tables - Please see full data tables for all times points and sub-category data.**

Data Tables:

Likelihood Threshold Key

Positive Likelihood Ratio	Negative Likelihood Ratio	Test strength	Interpretation
≥10	≤0.1	Strong	Large and conclusive change in probability of tear
≥5 but <10	>0.1 but ≤0.2	Moderate	Moderate change in probability of tear
>2 and <5	>0.2 but <0.5	Weak	Small (but sometimes important) change in probability of tear
≤2	≥0.5	Poor	Small (and rarely important) change in probability of tear

***Note: Summary of Findings Tables - Please see full data tables for all times points and sub-category data.**

PICO 1: Physical Exam

Table 1. Mixed Exam

Reference Title	Quality	Patient Char.	Index Test	Reference Standard	Sens|Spec	LR+|LR-	Rule In Test	Rule Out Test
Porter, 2021	High Quality	Mean age: 52 yrs; Female: 31.43%; Mean BMI: NA	Joint Line Tenderness and/or McMurray and/or an effusion (Required 2 of 3 positive readings: Lateral Meniscus)	Arthroscopy	80.20%|98.90%	72.91|0.2	**STRONG**	WEAK
Porter, 2021	High Quality	Mean age: 52 yrs; Female: 31.43%; Mean BMI: NA	Joint Line Tenderness and/or McMurray and/or an effusion (Required 2 of 3 positive readings: Medial Meniscus)	Arthroscopy	86.10%|99.40%	143.5|0.14	**STRONG**	**MODERATE**
Muellner, 1997	Moderate Quality	Mean Age: 23.4 yrs; Age Range: (14-38 yrs); Female: 36.8%	Tenderness on Palpation of the Joint Line, Bohler Test, McMurray Test, Steinmann Test, Apley Grinding Test, Payr Test (Medial Meniscus)	Arthroscopy	100.0%|76.00%	4.17|0	WEAK	**STRONG**
Muellner, 1997	Moderate Quality	Mean Age: 23.4 yrs; Age Range: (14-38 yrs); Female: 36.8%	Tenderness on Palpation of the Joint Line, Bohler Test, McMurray's Test, Steinmann Test, Apley Grinding Test, Payr Test	Arthroscopy	96.50%|87.00%	7.42|0.04	**MODERATE**	**STRONG**
Muellner, 1997	Moderate Quality	Mean Age: 23.4 yrs; Age Range: (14-38 yrs); Female: 36.8%	Tenderness on Palpation of the Joint Line, Bohler Test, McMurray's Test, Steinmann Test, Apley Grinding Test, Payr Test (Lateral Meniscus)	Arthroscopy	92.00%|98.00%	46|0.08	**STRONG**	**STRONG**

Table 2. Joint Line Tenderness

Reference Title	Quality	Patient Char.	Index Test	Reference Standard	Sens|Spec	LR+|LR-	Rule In Test	Rule Out Test
Konan, 2009	Moderate Quality	Mean Age: 39 yrs; Age Range: 16-56 yrs; Female: 26.6%	Joint Line Tenderness (Lateral Meniscus)	Arthroscopy	68.42%|96.92%	22.24|0.33	STRONG	WEAK
Konan, 2009	Moderate Quality	Mean Age: 39 yrs; Age Range: 16-56 yrs; Female: 26.6%	Joint Line Tenderness (Medial Meniscus)	Arthroscopy	82.54%|76.19%	3.47|0.23	WEAK	WEAK

***Note: Summary of Findings Tables - Please see full data tables for all times points and sub-category data.**

Table 3. McMurray Test

Reference Title	Quality	Patient Char.	Index Test	Reference Standard	Sens|Spec	LR+|LR-	Rule In Test	Rule Out Test
Goossens, 2015	High Quality	Mean Age: 49.4 yrs; Female: 42.5%	McMurray Test	Arthroscopy	70.00%|45.00%	1.27|0.67	POOR	POOR
Goossens, 2015	High Quality	Mean Age: 49.4 yrs; Female: 42.5%	McMurray test (Lateral Meniscus)	Arthroscopy	72.00%|34.00%	1.09|0.82	POOR	POOR
Goossens, 2015	High Quality	Mean Age: 49.4 yrs; Female: 42.5%	McMurray test (Medial Meniscus)	Arthroscopy	69.00%|37.00%	1.1|0.84	POOR	POOR
Shantanu, 2021	High Quality	Mean Age: 29.17 yrs; Age Range: (26-35 yrs); Female 8.3%	McMurray Test (Lateral Meniscus)	Arthroscopy	87.50%|94.23%	15.17|0.13	**STRONG**	**MODERATE**
Shantanu, 2021	High Quality	Mean Age: 29.17 yrs; Age Range: (26-35 yrs); Female 8.3%	McMurray Test (Medial Meniscus)	Arthroscopy	47.37%|97.56%	19.42|0.54	**STRONG**	POOR
Konan, 2009	Moderate Quality	Mean Age: 39 yrs; Age Range: 16-56 yrs; Female: 26.6%	McMurray Test (Lateral Meniscus)	Arthroscopy	21.05%|93.85%	3.42|0.84	WEAK	POOR
Konan, 2009	Moderate Quality	Mean Age: 39 yrs; Age Range: 16-56 yrs; Female: 26.6%	McMurray Test (Medial Meniscus)	Arthroscopy	50.00%|77.27%	2.2|0.65	WEAK	POOR
Mohan, 2007	Moderate Quality	Mean Age: 49 yrs; Age Range: (19-79 yrs); Female: 31%	McMurray Test (Lateral Meniscus)	Arthroscopy	90.91%|92.59%	12.27|0.1	**STRONG**	**STRONG**
Mohan, 2007	Moderate Quality	Mean Age: 49 yrs; Age Range: (19-79 yrs); Female: 31%	McMurray Test (Medial Meniscus)	Arthroscopy	97.78%|65.00%	2.79|0.03	WEAK	**STRONG**

***Note: Summary of Findings Tables - Please see full data tables for all times points and sub-category data.**

Table 4. Physical Exam

Reference Title	Quality	Patient Char.	Index Test	Reference Standard	Sens|Spec	LR+|LR-	Rule In Test	Rule Out Test
Syal, 2015	High Quality	Mean Age: (32/29 yrs); Age Range: (9-58 yrs/15-52 yrs); Female: (17.8%/11.1%)	Physical Exam (Lateral Meniscus)	Arthroscopy	53.96%|94.49%	9.79|0.49	**MODERATE**	WEAK
Syal, 2015	High Quality	Mean Age: (32/29 yrs); Age Range: (9-58 yrs/15-52 yrs); Female: (17.8%/11.1%)	Physical Exam (Medial Meniscus)	Arthroscopy	91.39%|68.04%	2.86|0.13	WEAK	**MODERATE**
Dhillon, 1985	Moderate Quality	Age Range: (19-39 yrs)	Physical Exam (Lateral Meniscus)	Arthrotomy	93.33%|0.00%	0.93|0.38	POOR	WEAK
Dhillon, 1985	Moderate Quality	Age Range: (19-39 yrs)	Physical Exam (Medial Meniscus)	Arthrotomy	96.97%|0.00%	0.97|0.53	POOR	POOR
Madhusudhan, 2008	Moderate Quality	Age Range: (18-50 yrs)	Physical Exam	Arthroscopy	38.75%|93.10%	5.62|0.66	**MODERATE**	POOR
Orlando Junior, 2015	Moderate Quality	Mean Age: 33.54 yrs; Age Range: (17-59 yrs); Female: 15.28%	Physical Exam (Lateral Meniscus)	MRI w/ Arthroscopy	55.60%|97.70%	24.17|0.45	**STRONG**	WEAK
Orlando Junior, 2015	Moderate Quality	Mean Age: 33.54 yrs; Age Range: (17-59 yrs); Female: 15.28%	Physical Exam (Lateral Meniscus)	Arthroscopy	47.82%|93.87%	7.8|0.56	**MODERATE**	POOR
Orlando Junior, 2015	Moderate Quality	Mean Age: 33.54 yrs; Age Range: (17-59 yrs); Female: 15.28%	Physical Exam (Medial Meniscus)	MRI w/ Arthroscopy	96.20%|76.50%	4.09|0.05	WEAK	**STRONG**
Orlando Junior, 2015	Moderate Quality	Mean Age: 33.54 yrs; Age Range: (17-59 yrs); Female: 15.28%	Physical Exam (Medial Meniscus)	Arthroscopy	75.00%|62.00%	1.97|0.4	POOR	WEAK
Yaseen, 2019	Moderate Quality	Mean Age: 35.44 yrs; Age Range: (23.35-47.53 yrs); Female: 28%	Physical Exam	Ultrasound	83.00%|20.00%	1.04|0.85	POOR	POOR

***Note: Summary of Findings Tables - Please see full data tables for all times points and sub-category data.**

Table 5. Thessaly

Reference Title	Quality	Patient Char.	Index Test	Reference Standard	Sens|Spec	LR+|LR-	Rule In Test	Rule Out Test
Goossens, 2015	High Quality	Mean Age: 49.4 yrs; Female: 42.5%	Thessaly Test	Arthroscopy	64.00%|53.00%	1.36|0.68	POOR	POOR
Goossens, 2015	High Quality	Mean Age: 49.4 yrs; Female: 42.5%	Thessaly Test (Lateral Meniscus)	Arthroscopy	64.00%|40.00%	1.07|0.9	POOR	POOR
Goossens, 2015	High Quality	Mean Age: 49.4 yrs; Female: 42.5%	Thessaly Test (Medial Meniscus)	Arthroscopy	64.00%|45.00%	1.16|0.8	POOR	POOR
Imran, 2019	Moderate Quality	Mean Age: 31.55 yrs; Age Range: (20.72-42.38 yrs); Female: 40.69%	Thessaly Test	MRI	95.10%|78.90%	4.51|0.06	WEAK	**STRONG**
Konan, 2009	Moderate Quality	Mean Age: 39 yrs; Age Range: 16-56 yrs; Female: 26.6%	Thessaly Test 20° (Lateral Meniscus)	Arthroscopy	31.58%|95.08%	6.42|0.72	**MODERATE**	POOR
Konan, 2009	Moderate Quality	Mean Age: 39 yrs; Age Range: 16-56 yrs; Female: 26.6%	Thessaly Test 20° (Medial Meniscus)	Arthroscopy	59.32%|66.67%	1.78|0.61	POOR	POOR
Konan, 2009	Moderate Quality	Mean Age: 39 yrs; Age Range: 16-56 yrs; Female: 26.6%	Thessaly Test 5° (Lateral Meniscus)	Arthroscopy	15.79%|88.52%	1.38|0.95	POOR	POOR
Konan, 2009	Moderate Quality	Mean Age: 39 yrs; Age Range: 16-56 yrs; Female: 26.6%	Thessaly Test 5° (Medial Meniscus)	Arthroscopy	41.38%|68.18%	1.3|0.86	POOR	POOR

***Note: Summary of Findings Tables - Please see full data tables for all times points and sub-category data.**

PICO 2: Imaging Accuracy

Table 6. MRI (High Quality)

Reference Title	Quality	Patient Char.	Index Test	Reference Standard	Sens|Spec	LR+|LR-	Rule In Test	Rule Out Test
Alizadeh, 2013	High Quality	Mean Age: 23.5 yrs; Age Range: (18.5-28.5 yrs);	MRI	Arthroscopy	100.0%|88.90%	9.01|0	**MODERATE**	**STRONG**
Alizadeh, 2013	High Quality	Mean Age: 43.5 yrs; Age Range: (34.2-52.8 yrs)	MRI	Arthroscopy	96.70%|85.70%	6.76|0.04	**MODERATE**	**STRONG**
Grevitt, 1992	High Quality	Mean Age: 36 yrs; (Age Range: 17-65 yrs); Female: 30.90%	MRI	Arthroscopy	91.00%|95.00%	18.2|0.09	**STRONG**	**STRONG**
Shetty, 2008	High Quality	Mean Age: 47 yrs; Age Range: (14-73 yrs); Female: 42.8%;	MRI	Arthroscopy	86.36%|100.0%	23.74|0.14	**STRONG**	**MODERATE**
De Smet, 1994	High Quality		MRI (Lateral Meniscus)	Arthroscopy	80.00%|93.00%	11.43|0.22	**STRONG**	WEAK
Grevitt, 1992	High Quality	Mean Age: 36 yrs; (Age Range: 17-65 yrs); Female: 30.90%	MRI (Lateral Meniscus)	Arthroscopy	88.89%|97.83%	40.89|0.11	**STRONG**	**MODERATE**
Nazem, 2006	High Quality		MRI (Lateral Meniscus)	Arthroscopy	44.40%|60.00%	1.11|0.93	POOR	POOR
Nederveen, 1989	High Quality	Mean Age: 34 yrs; (Age Range: 21-62 yrs); Female: 0%	MRI (Lateral Meniscus)	Arthroscopy	100.0%|61.54%	2.6|0	WEAK	**STRONG**
Raunest, 1991	High Quality	Mean Age: 40.9 yrs; Age Range: (16-69 yrs); Female: 28%	MRI (Lateral Meniscus)	Arthroscopy	77.78%|68.75%	2.49|0.32	WEAK	WEAK
Reicher, 1987	High Quality	(Age Range: 14-66 yrs)	MRI (Lateral Meniscus)	Arthroscopy	75.00%|83.87%	4.65|0.3	WEAK	WEAK
Shantanu, 2021	High Quality	Mean Age: 29.17 yrs; Age Range: (26-35 yrs); Female 8.3%	MRI (Lateral Meniscus)	Arthroscopy	87.50%|94.23%	15.17|0.13	**STRONG**	**MODERATE**
Syal, 2015	High Quality	Mean Age: (32/29 yrs); Age Range: (9-58 yrs/15-52 yrs); Female: (17.8%/11.1%)	MRI (Lateral Meniscus)	Arthroscopy	55.00%|90.00%	5.5|0.5	**MODERATE**	WEAK
Reicher, 1987	High Quality	(Age Range: 14-66 yrs)	MRI (Lateral Meniscus; Grade 1 or 2)	Arthroscopy	.|100.0%	Unable to calculate		
Reicher, 1987	High Quality	(Age Range: 14-66 yrs)	MRI (Lateral Meniscus; Grade 3)	Arthroscopy	100.0%|.	Unable to calculate		

***Note: Summary of Findings Tables - Please see full data tables for all times points and sub-category data.**

Reference Title	Quality	Patient Char.	Index Test	Reference Standard	Sens|Spec	LR+|LR-	Rule In Test	Rule Out Test
Reicher, 1987	High Quality	(Age Range: 14-66 yrs)	MRI (Lateral Meniscus; Grade 4)	Arthroscopy	100.0%|.	Unable to calculate		
De Smet, 1994	High Quality		MRI (Medial Meniscus)	Arthroscopy	93.00%|87.00%	7.15|0.08	**MODERATE**	**STRONG**
Grevitt, 1992	High Quality	Mean Age: 36 yrs; (Age Range: 17-65 yrs); Female: 30.90%	MRI (Medial Meniscus)	Arthroscopy	92.00%|90.00%	9.2|0.09	**MODERATE**	**STRONG**
Nazem, 2006	High Quality		MRI (Medial Meniscus)	Arthroscopy	57.10%|60.00%	1.43|0.72	POOR	POOR
Nederveen, 1989	High Quality	Mean Age: 34 yrs; (Age Range: 21-62 yrs); Female: 0%	MRI (Medial Meniscus)	Arthroscopy	100.0%|71.43%	3.5|0	WEAK	**STRONG**
Raunest, 1991	High Quality	Mean Age: 40.9 yrs; Age Range: (16-69 yrs); Female: 28%	MRI (Medial Meniscus)	Arthroscopy	93.55%|36.84%	1.48|0.18	POOR	**MODERATE**
Reicher, 1987	High Quality	(Age Range: 14-66 yrs)	MRI (Medial Meniscus)	Arthroscopy	80.00%|100.0%	26.98|0.2	**STRONG**	**MODERATE**
Shantanu, 2021	High Quality	Mean Age: 29.17 yrs; Age Range: (26-35 yrs); Female 8.3%	MRI (Medial Meniscus)	Arthroscopy	89.47%|85.37%	6.11|0.12	**MODERATE**	**MODERATE**
Syal, 2015	High Quality	Mean Age: (32/29 yrs); Age Range: (9-58 yrs/15-52 yrs); Female: (17.8%/11.1%)	MRI (Medial Meniscus)	Arthroscopy	76.59%|72.91%	2.83|0.32	WEAK	WEAK
Reicher, 1987	High Quality	(Age Range: 14-66 yrs)	MRI (Medial Meniscus; Grade 1 or 2)	Arthroscopy	.|100.0%	Unable to calculate		
Reicher, 1987	High Quality	(Age Range: 14-66 yrs)	MRI (Medial Meniscus; Grade 3)	Arthroscopy	100.0%|.	Unable to calculate		
Reicher, 1987	High Quality	(Age Range: 14-66 yrs)	MRI (Medial Meniscus; Grade 4)	Arthroscopy	100.0%|.	Unable to calculate		
Porter, 2021	High Quality	Mean age: 52 yrs; Female: 31.43%; Mean BMI: NA	MRI performed on a 1.5T or 3T MRI machine with standard MRI sequences (Lateral Meniscus)	Arthroscopy	79.80%|70.40%	2.7|0.29	WEAK	WEAK
Porter, 2021	High Quality	Mean age: 52 yrs; Female: 31.43%; Mean BMI: NA	MRI performed on a 1.5T or 3T MRI machine with standard MRI sequences (Medial Meniscus)	Arthroscopy	88.30%|95.10%	18.02|0.12	**STRONG**	**MODERATE**
Rand, 1999	High Quality	Mean Age: 35.5 yrs; Female: 44%	MRI (Low Field MRI)	MRI (High Field MRI)	75.00%|100.0%	28.89|0.25	**STRONG**	WEAK

***Note: Summary of Findings Tables - Please see full data tables for all times points and sub-category data.**

Reference Title	Quality	Patient Char.	Index Test	Reference Standard	Sens|Spec	LR+|LR-	Rule In Test	Rule Out Test
Rubin, 1994	High Quality	Mean Age: 37 yrs; (Age Range: 11-73 yrs); Female: 50%	MRI (Fast spin-echo imaging)	MRI Conventional spin-echo imaging	65.22%|96.39%	18.04|0.36	**STRONG**	WEAK
Rubin, 1994	High Quality	Mean Age: 37 yrs; (Age Range: 11-73 yrs); Female: 50%	MRI (Fast spin-echo imaging; Echo time TE1-13; Echo Time TE2-65; E-Space-13; Echo-train length ETL-6; Timing Parameter: 3 min 25 sec)	MRI Conventional spin-echo imaging	64.29%|.	Unable to calculate		
Rubin, 1994	High Quality	Mean Age: 37 yrs; (Age Range: 11-73 yrs); Female: 50%	MRI (Fast spin-echo imaging; Echo time TE1-16; Echo Time TE2-64; E-Space-16; Echo-train length ETL-4; Timing Parameter: 4 min 5 sec)	MRI Conventional spin-echo imaging	65.63%|.	Unable to calculate		

***Note: Summary of Findings Tables - Please see full data tables for all times points and sub-category data.**

Table 7. MRI (Moderate Quality)

Reference Title	Quality	Patient Char.	Index Test	Reference Standard	Sens|Spec	LR+|LR-	Rule In Test	Rule Out Test
Habib, 2023	Moderate Quality	Mean Age: 31 yrs; (Age Range 14-56 yrs); Female: 4%	0.3 T MRI (Lateral Meniscus)	Arthroscopy	96.00%|96.00%	24|0.04	**STRONG**	**STRONG**
Habib, 2023	Moderate Quality	Mean Age: 31 yrs; (Age Range 14-56 yrs); Female: 4%	0.3 T MRI (Medial Meniscus)	Arthroscopy	97.62%|87.50%	7.81|0.03	**MODERATE**	**STRONG**
Mackenzie, 1995	Moderate Quality		1.5 T MRI	Arthroscopy	79.07%|94.26%	13.78|0.22	**STRONG**	WEAK
Mackenzie, 1995	Moderate Quality		1.5 T MRI (Lateral Meniscus)	Arthroscopy	60.00%|100.0%	86.69|0.4	**STRONG**	WEAK
Matava, 1999	Moderate Quality	Mean Age: 35 yrs; (Age Range: 6-78 yrs); Female: 42.45%	1.5 T MRI (Lateral meniscus)	Arthroscopy	84.00%|95.00%	16.8|0.17	**STRONG**	**MODERATE**
Mackenzie, 1995	Moderate Quality		1.5 T MRI (Medial Meniscus)	Arthroscopy	89.29%|86.00%	6.38|0.12	**MODERATE**	**MODERATE**
Matava, 1999	Moderate Quality	Mean Age: 35 yrs; (Age Range: 6-78 yrs); Female: 42.45%	1.5 T MRI (Medial meniscus)	Arthroscopy	91.00%|92.00%	11.38|0.1	**STRONG**	**STRONG**
Nemec, 2008	Moderate Quality	Mean Age: 38.3 yrs; Age Range: (18-55 yrs); Female: 44%	High-Resolution MRI (Medial Meniscus)	Arthroscopy	88.00%|.	Unable to calculate		
Abd Elkhalek, 2019	Moderate Quality	Mean Age: 35 yrs; Age Range: (30-48 yrs); Female: 32%	MRI	Arthroscopy	96.30%|100.0%	.|0.04		**STRONG**
Elshimy, 2021	Moderate Quality	Mean Age: 32.9 yrs; (Age Range: 18-60 Yrs); Female 25%	MRI	Arthroscopy	90.50%|83.30%	5.42|0.11	**MODERATE**	**MODERATE**
Madhusudhan, 2008	Moderate Quality	Age Range: (18-50 yrs)	MRI	Arthroscopy	59.00%|50.00%	1.18|0.82	POOR	POOR

***Note: Summary of Findings Tables - Please see full data tables for all times points and sub-category data.**

Reference Title	Quality	Patient Char.	Index Test	Reference Standard	Sens|Spec	LR+|LR-	Rule In Test	Rule Out Test
McNally, 2002	Moderate Quality	Mean Age: 27 yrs; Age Range: (12-50 yrs); Female: 23%	MRI	Arthroscopy	96.00%|100.0%	.|0.04		**STRONG**
Muellner, 1997	Moderate Quality	Mean Age: 21.9 yrs; Age Range: (15-39 yrs); Female: 33.3%	MRI	Arthroscopy	98.00%|85.50%	6.76|0.02	**MODERATE**	**STRONG**
Tahmasebi, 2005	Moderate Quality	Mean Age: 31 yrs; Age Range: (15-52 yrs); Female: 18.7%	MRI	Arthroscopy	89.00%|94.00%	14.83|0.12	**STRONG**	**MODERATE**
van Heuzen, 1988	Moderate Quality	Median Age: 28 yrs; (Age Range: 14 to 58 yrs); Female: 16%	MRI	Arthroscopy	100.0%|25.00%	1.33|0	POOR	**STRONG**
Araki, 1992	Moderate Quality	Mean Age: 31 yrs; (Age Range: 13-57 yrs); Female: 54.05%	MRI (2-D images)	Arthroscopy	81.82%|100.0%	77.65|0.18	**STRONG**	**MODERATE**
Araki, 1992	Moderate Quality	Mean Age: 31 yrs; (Age Range: 13-57 yrs); Female: 54.05%	MRI (2-D images) (Lateral Meniscus)	Arthroscopy	69.23%|100.0%	38|0.31	**STRONG**	WEAK
Araki, 1992	Moderate Quality	Mean Age: 31 yrs; (Age Range: 13-57 yrs); Female: 54.05%	MRI (2-D images) (Medial Meniscus)	Arthroscopy	90.00%|100.0%	37|0.1	**STRONG**	**STRONG**
Araki, 1992	Moderate Quality	Mean Age: 31 yrs; (Age Range: 13-57 yrs); Female: 54.05%	MRI (3-D Fourier transform, gradient refocused acquisition in the steady state [GRASS] pulse sequence; Axial 3-D imaging (Lateral meniscus))	Arthroscopy	100.0%|100.0%	54|0	**STRONG**	**STRONG**
Araki, 1992	Moderate Quality	Mean Age: 31 yrs; (Age Range: 13-57 yrs); Female: 54.05%	MRI (3-D Fourier transform, gradient refocused acquisition in the steady state [GRASS] pulse sequence; Axial 3-D imaging (Medial Meniscus)	Arthroscopy	95.00%|90.00%	9.5|0.06	**MODERATE**	**STRONG**
Araki, 1992	Moderate Quality	Mean Age: 31 yrs; (Age Range: 13-57 yrs); Female: 54.05%	MRI (3-D Fourier transform, gradient refocused acquisition in the steady state [GRASS] pulse sequence; Axial 3-D imaging)	Arthroscopy	96.97%|95.74%	22.79|0.03	**STRONG**	**STRONG**

***Note: Summary of Findings Tables - Please see full data tables for all times points and sub-category data.**

Reference Title	Quality	Patient Char.	Index Test	Reference Standard	Sens|Spec	LR+|LR-	Rule In Test	Rule Out Test
Araki, 1992	Moderate Quality	Mean Age: 31 yrs; (Age Range: 13-57 yrs); Female: 54.05%	MRI (Combination of both 2D and 3D images)	Arthroscopy	100.0%|100.0%	.|0		**STRONG**
Elshimy, 2021	Moderate Quality	Mean Age: 32.9 yrs; (Age Range: 18-60 yrs); Female 25%	MRI (Lateral Meniscus)	Arthroscopy	90.00%|98.00%	45|0.1	**STRONG**	**MODERATE**
Muellner, 1997	Moderate Quality	Mean Age: 21.9 yrs; Age Range: (15-39 yrs); Female: 33.3%	MRI (Lateral Meniscus)	Arthroscopy	100.0%|100.0%	.|0		**STRONG**
Orlando Junior, 2015	Moderate Quality	Mean Age: 33.54 yrs; Age Range: (17-59 yrs); Female: 15.28%	MRI (Lateral Meniscus)	Arthroscopy	65.00%|88.46%	5.63|0.4	**MODERATE**	WEAK
Reicher, 1986	Moderate Quality	(Age Range: 14-66 yrs); Female: 24%	MRI (Lateral Meniscus)	Arthroscopy	77.78%|87.50%	6.22|0.25	**MODERATE**	WEAK
Reicher, 1986	Moderate Quality	(Age Range: 14-66 yrs); Female: 24%	MRI (Lateral Meniscus; Grade 1 or 2)	Arthroscopy	.|100.0%	Unable to calculate		
Reicher, 1986	Moderate Quality	(Age Range: 14-66 yrs); Female: 24%	MRI (Lateral Meniscus; Grade 1 or 2; Anterior half)	Arthroscopy	.|100.0%	Unable to calculate		
Reicher, 1986	Moderate Quality	(Age Range: 14-66 yrs); Female: 24%	MRI (Lateral Meniscus; Grade 1 or 2; Posterior half)	Arthroscopy	.|100.0%	Unable to calculate		
Reicher, 1986	Moderate Quality	(Age Range: 14-66 yrs); Female: 24%	MRI (Lateral Meniscus; Grade 3)	Arthroscopy	100.0%|.	Unable to calculate		
Reicher, 1986	Moderate Quality	(Age Range: 14-66 yrs); Female: 24%	MRI (Lateral Meniscus; Grade 3; Posterior half)	Arthroscopy	100.0%|.	Unable to calculate		
Reicher, 1986	Moderate Quality	(Age Range: 14-66 yrs); Female: 24%	MRI (Lateral Meniscus; Grade 4)	Arthroscopy	100.0%|.	Unable to calculate		
Reicher, 1986	Moderate Quality	(Age Range: 14-66 yrs); Female: 24%	MRI (Lateral Meniscus; Grade 4; Anterior half)	Arthroscopy	100.0%|.	Unable to calculate		
Reicher, 1986	Moderate Quality	(Age Range: 14-66 yrs); Female: 24%	MRI (Lateral Meniscus; Grade 4; Posterior half)	Arthroscopy	100.0%|.	Unable to calculate		
Reicher, 1986	Moderate Quality	(Age Range: 14-66 yrs); Female: 24%	MRI (Lateral, Anterior Half Meniscus)	Arthroscopy	100.0%|86.96%	7.67|0	**MODERATE**	**STRONG**

***Note: Summary of Findings Tables - Please see full data tables for all times points and sub-category data.**

Reference Title	Quality	Patient Char.	Index Test	Reference Standard	Sens|Spec	LR+|LR-	Rule In Test	Rule Out Test
Reicher, 1986	Moderate Quality	(Age Range: 14-66 yrs); Female: 24%	MRI (Lateral, Posterior Half Meniscus)	Arthroscopy	77.78%|87.50%	6.22|0.25	**MODERATE**	WEAK
Elshimy, 2021	Moderate Quality	Mean Age: 32.9 yrs; (Age Range: 18-60 yrs); Female 25%	MRI (Medial Meniscus)	Arthroscopy	96.67%|92.86%	13.53|0.04	**STRONG**	**STRONG**
Muellner, 1997	Moderate Quality	Mean Age: 21.9 yrs; Age Range: (15-39 yrs); Female: 33.3%	MRI (Medial Meniscus)	Arthroscopy	96.00%|71.00%	3.31|0.06	WEAK	**STRONG**
Nemec, 2008	Moderate Quality	Mean Age: 38.3 yrs; Age Range: (18-55 yrs); Female: 44%	MRI (Medial Meniscus)	Arthroscopy	76.00%|.	Unable to calculate		
Orlando Junior, 2015	Moderate Quality	Mean Age: 33.54 yrs; Age Range: (17-59 yrs); Female: 15.28%	MRI (Medial Meniscus)	Arthroscopy	92.50%|74.19%	3.58|0.1	WEAK	**MODERATE**
Reicher, 1986	Moderate Quality	(Age Range: 14-66 yrs); Female: 24%	MRI (Medial Meniscus)	Arthroscopy	100.0%|58.82%	2.43|0	WEAK	**STRONG**
Reicher, 1986	Moderate Quality	(Age Range: 14-66 yrs); Female: 24%	MRI (Medial Meniscus; Grade 1 or 2)	Arthroscopy	.|100.0%	Unable to calculate		
Reicher, 1986	Moderate Quality	(Age Range: 14-66 yrs); Female: 24%	MRI (Medial Meniscus; Grade 1 or 2; Anterior half)	Arthroscopy	.|100.0%	Unable to calculate		
Reicher, 1986	Moderate Quality	(Age Range: 14-66 yrs); Female: 24%	MRI (Medial Meniscus; Grade 1 or 2; Posterior half)	Arthroscopy	.|100.0%	Unable to calculate		
Reicher, 1986	Moderate Quality	(Age Range: 14-66 yrs); Female: 24%	MRI (Medial Meniscus; Grade 3)	Arthroscopy	100.0%|.	Unable to calculate		
Reicher, 1986	Moderate Quality	(Age Range: 14-66 yrs); Female: 24%	MRI (Medial Meniscus; Grade 3; Posterior half)	Arthroscopy	100.0%|.	Unable to calculate		
Reicher, 1986	Moderate Quality	(Age Range: 14-66 yrs); Female: 24%	MRI (Medial Meniscus; Grade 4)	Arthroscopy	100.0%|.	Unable to calculate		
Reicher, 1986	Moderate Quality	(Age Range: 14-66 yrs); Female: 24%	MRI (Medial Meniscus; Grade 4; Anterior half)	Arthroscopy	100.0%|.	Unable to calculate		
Reicher, 1986	Moderate Quality	(Age Range: 14-66 yrs); Female: 24%	MRI (Medial Meniscus; Grade 4; Posterior half)	Arthroscopy	100.0%|.	Unable to calculate		

***Note: Summary of Findings Tables - Please see full data tables for all times points and sub-category data.**

Reference Title	Quality	Patient Char.	Index Test	Reference Standard	Sens|Spec	LR+|LR-	Rule In Test	Rule Out Test
Reicher, 1986	Moderate Quality	(Age Range: 14-66 yrs); Female: 24%	MRI (Medial, Anterior Half Meniscus)	Arthroscopy	66.67%|100.0%	48.75|0.33	**STRONG**	WEAK
Reicher, 1986	Moderate Quality	(Age Range: 14-66 yrs); Female: 24%	MRI (Medial, Posterior Half Meniscus)	Arthroscopy	100.0%|58.82%	2.43|0	WEAK	**STRONG**
Evancho, 1990	Moderate Quality		MRI 2eT2 sequence (Lateral Meniscus Grade 1)	Arthroscopy	.|100.0%	Unable to calculate		
Evancho, 1990	Moderate Quality		MRI 2eT2 sequence (Lateral Meniscus Grade 2)	Arthroscopy	.|100.0%	Unable to calculate		
Evancho, 1990	Moderate Quality		MRI 2eT2 sequence (Lateral Meniscus Grade 2d)	Arthroscopy	.|100.0%	Unable to calculate		
Evancho, 1990	Moderate Quality		MRI 2eT2 sequence (Lateral Meniscus Grade 3)	Arthroscopy	100.0%|.	Unable to calculate		
Evancho, 1990	Moderate Quality		MRI 2eT2 sequence (Lateral Meniscus)	Arthroscopy	50.00%|100.0%	18|0.5	**STRONG**	WEAK
Evancho, 1990	Moderate Quality		MRI 2eT2 sequence (Medial Meniscus Grade 1)	Arthroscopy	.|100.0%	Unable to calculate		
Evancho, 1990	Moderate Quality		MRI 2eT2 sequence (Medial Meniscus Grade 2)	Arthroscopy	.|100.0%	Unable to calculate		
Evancho, 1990	Moderate Quality		MRI 2eT2 sequence (Medial Meniscus Grade 2d)	Arthroscopy	.|100.0%	Unable to calculate		
Evancho, 1990	Moderate Quality		MRI 2eT2 sequence (Medial Meniscus Grade 3)	Arthroscopy	100.0%|.	Unable to calculate		
Evancho, 1990	Moderate Quality		MRI 2eT2 sequence (Medial Meniscus)	Arthroscopy	83.33%|81.82%	4.58|0.2	WEAK	WEAK
Evancho, 1990	Moderate Quality		MRI oblique (10 degree to 20 degree) sagittal plane, 2eT2 weighted spin echo pulse sequence	Arthroscopy	72.22%|92.86%	10.11|0.3	**STRONG**	WEAK
Evancho, 1990	Moderate Quality		MRI oblique (10 degree to 20 degree) sagittal plane, T1 weighted spin echo pulse sequence	Arthroscopy	77.78%|92.86%	10.89|0.24	**STRONG**	WEAK
Evancho, 1990	Moderate Quality		MRI T1 sequence (Lateral Meniscus Grade 1)	Arthroscopy	.|100.0%	Unable to calculate		

***Note: Summary of Findings Tables - Please see full data tables for all times points and sub-category data.**

Reference Title	Quality	Patient Char.	Index Test	Reference Standard	Sens|Spec	LR+|LR-	Rule In Test	Rule Out Test
Evancho, 1990	Moderate Quality		MRI T1 sequence (Lateral Meniscus Grade 2)	Arthroscopy	.|100.0%	Unable to calculate		
Evancho, 1990	Moderate Quality		MRI T1 sequence (Lateral Meniscus Grade 2d)	Arthroscopy	.|100.0%	Unable to calculate		
Evancho, 1990	Moderate Quality		MRI T1 sequence (Lateral Meniscus Grade 3)	Arthroscopy	100.0%|.	Unable to calculate		
Evancho, 1990	Moderate Quality		MRI T1 sequence (Lateral Meniscus)	Arthroscopy	66.67%|100.0%	23.14|0.33	**STRONG**	WEAK
Evancho, 1990	Moderate Quality		MRI T1 sequence (Medial Meniscus Grade 1)	Arthroscopy	.|100.0%	Unable to calculate		
Evancho, 1990	Moderate Quality		MRI T1 sequence (Medial Meniscus Grade 2)	Arthroscopy	.|100.0%	Unable to calculate		
Evancho, 1990	Moderate Quality		MRI T1 sequence (Medial Meniscus Grade 2d)	Arthroscopy	.|100.0%	Unable to calculate		
Evancho, 1990	Moderate Quality		MRI T1 sequence (Medial Meniscus Grade 3)	Arthroscopy	100.0%|.	Unable to calculate		
Evancho, 1990	Moderate Quality		MRI T1 sequence (Medial Meniscus)	Arthroscopy	83.33%|81.82%	4.58|0.2	WEAK	WEAK
Gokalp, 2012	Moderate Quality	Age Range: (18-62 yrs); Female: 29.3%	MRI; Axial Images (Lateral Meniscus/Flap Tear)	Arthroscopy	100.0%|100.0%	.|0		**STRONG**
Gokalp, 2012	Moderate Quality	Age Range: (18-62 yrs); Female: 29.3%	MRI; Axial Images (Lateral Meniscus/Horizontal Tear)	Arthroscopy	100.0%|100.0%	.|0		**STRONG**
Gokalp, 2012	Moderate Quality	Age Range: (18-62 yrs); Female: 29.3%	MRI; Axial Images (Lateral Meniscus/Longitudinal Tear)	Arthroscopy	100.0%|100.0%	.|0		**STRONG**
Gokalp, 2012	Moderate Quality	Age Range: (18-62 yrs); Female: 29.3%	MRI; Axial Images (Lateral Meniscus/Radial Tear)	Arthroscopy	100.0%|100.0%	.|0		**STRONG**
Gokalp, 2012	Moderate Quality	Age Range: (18-62 yrs); Female: 29.3%	MRI; Axial Images (Medial Meniscus/Bucket-Handle Tear)	Arthroscopy	100.0%|96.55%	28.99|0	**STRONG**	**STRONG**
Gokalp, 2012	Moderate Quality	Age Range: (18-62 yrs); Female: 29.3%	MRI; Axial Images (Medial Meniscus/Flap Tear)	Arthroscopy	81.82%|92.00%	10.23|0.2	**STRONG**	**MODERATE**

***Note: Summary of Findings Tables - Please see full data tables for all times points and sub-category data.**

Reference Title	Quality	Patient Char.	Index Test	Reference Standard	Sens|Spec	LR+|LR-	Rule In Test	Rule Out Test
Gokalp, 2012	Moderate Quality	Age Range: (18-62 yrs); Female: 29.3%	MRI; Axial Images (Medial Meniscus/Horizontal Tear)	Arthroscopy	75.00%|96.87%	23.96|0.26	**STRONG**	WEAK
Gokalp, 2012	Moderate Quality	Age Range: (18-62 yrs); Female: 29.3%	MRI; Axial Images (Medial Meniscus/Longitudinal Tear)	Arthroscopy	90.91%|88.00%	7.58|0.1	**MODERATE**	**MODERATE**
Gokalp, 2012	Moderate Quality	Age Range: (18-62 yrs); Female: 29.3%	MRI; Axial Images (Medial Meniscus/Radial Tear)	Arthroscopy	66.66%|96.87%	21.3|0.34	**STRONG**	WEAK
Gokalp, 2012	Moderate Quality	Age Range: (18-62 yrs); Female: 29.3%	MRI; Axial PDW Images (Lateral Meniscus)	Arthroscopy	95.65%|80.50%	4.91|0.05	WEAK	**STRONG**
Gokalp, 2012	Moderate Quality	Age Range: (18-62 yrs); Female: 29.3%	MRI; Axial PDW Images (Medial Meniscus)	Arthroscopy	97.30%|84.00%	6.08|0.03	**MODERATE**	**STRONG**
Nalaini, 2022	Moderate Quality	Mean Age: 33 yrs; Age Range: (13-68 yrs); Female: 47.8%	MRI; CSE PD	Arthroscopy	88.06%|97.01%	29.45|0.12	**STRONG**	**MODERATE**
Nalaini, 2022	Moderate Quality	Mean Age: 33 yrs; Age Range: (13-68 yrs); Female: 47.8%	MRI; CSE PD (Lateral Meniscus)	Arthroscopy	91.67%|98.18%	50.42|0.08	**STRONG**	**STRONG**
Nalaini, 2022	Moderate Quality	Mean Age: 33 yrs; Age Range: (13-68 yrs); Female: 47.8%	MRI; CSE PD (Medial Meniscus)	Arthroscopy	90.00%|41.67%	1.54|0.24	POOR	WEAK
Nalaini, 2022	Moderate Quality	Mean Age: 33 yrs; Age Range: (13-68 yrs); Female: 47.8%	MRI; FSE PD	Arthroscopy	87.88%|69.12%	2.85|0.18	WEAK	**MODERATE**
Nalaini, 2022	Moderate Quality	Mean Age: 33 yrs; Age Range: (13-68 yrs); Female: 47.8%	MRI; FSE PD (Lateral Meniscus)	Arthroscopy	75.00%|94.55%	13.75|0.26	**STRONG**	WEAK
Nalaini, 2022	Moderate Quality	Mean Age: 33 yrs; Age Range: (13-68 yrs); Female: 47.8%	MRI; FSE PD (Medial Meniscus)	Arthroscopy	84.44%|77.27%	3.72|0.2	WEAK	WEAK
Schafer, 2006	Moderate Quality	Mean Age: 40.5 yrs; Age Range: (13-80 yrs); Female: 48.3%	MRI; Sagittal and Coronal PD FS-TSE	Arthroscopy	90.00%|98.50%	60|0.1	**STRONG**	**MODERATE**

***Note: Summary of Findings Tables - Please see full data tables for all times points and sub-category data.**

Reference Title	Quality	Patient Char.	Index Test	Reference Standard	Sens|Spec	LR+|LR-	Rule In Test	Rule Out Test
Schafer, 2006	Moderate Quality	Mean Age: 40.5 yrs; Age Range: (13-80 yrs); Female: 48.3%	MRI; Sagittal and Coronal PD FS-TSE (Lateral Meniscus)	Arthroscopy	90.00%|98.30%	52.94|0.1	**STRONG**	**MODERATE**
Schafer, 2006	Moderate Quality	Mean Age: 40.5 yrs; Age Range: (13-80 yrs); Female: 48.3%	MRI; Sagittal and Coronal PD FS-TSE (Medial Meniscus)	Arthroscopy	91.40%|98.60%	65.29|0.09	**STRONG**	**STRONG**
Gokalp, 2012	Moderate Quality	Age Range: (18-62 yrs); Female: 29.3%	MRI; Sagittal FS PDW Images (Lateral Meniscus)	Arthroscopy	72.73%|77.14%	3.18|0.35	WEAK	WEAK
Gokalp, 2012	Moderate Quality	Age Range: (18-62 yrs); Female: 29.3%	MRI; Sagittal FS PDW Images (Medial Meniscus)	Arthroscopy	90.62%|70.37%	3.06|0.13	WEAK	**MODERATE**
Schafer, 2006	Moderate Quality	Mean Age: 40.5 yrs; Age Range: (13-80 yrs); Female: 48.3%	MRI; Sagittal PD TSE + Coronal T1 SE	Arthroscopy	89.10%|96.90%	28.74|0.11	**STRONG**	**MODERATE**
Schafer, 2006	Moderate Quality	Mean Age: 40.5 yrs; Age Range: (13-80 yrs); Female: 48.3%	MRI; Sagittal PD TSE + Coronal T1 SE (Lateral Meniscus)	Arthroscopy	90.00%|95.90%	21.95|0.1	**STRONG**	**MODERATE**
Schafer, 2006	Moderate Quality	Mean Age: 40.5 yrs; Age Range: (13-80 yrs); Female: 48.3%	MRI; Sagittal PD TSE + Coronal T1 SE (Medial Meniscus)	Arthroscopy	88.60%|98.30%	52.12|0.12	**STRONG**	**MODERATE**

***Note: Summary of Findings Tables - Please see full data tables for all times points and sub-category data.**

Table 8. CT/SPECT/Spiral CT

Reference Title	Quality	Patient Char.	Index Test	Reference Standard	Sens|Spec	LR+|LR-	Rule In Test	Rule Out Test
Jurik, 1986	High Quality	Mean Age: 32 yrs; Age Range: (15-56 yrs); Female: 40%	CT (Lateral Meniscus)	Arthrography	95.00%|80.00%	4.75|0.06	WEAK	**STRONG**
Jurik, 1986	High Quality	Mean Age: 32 yrs; Age Range: (15-56 yrs); Female: 40% Right Knee: 56%	CT (Medial Meniscus)	Arthrography	92.00%|85.00%	6.13|0.09	**MODERATE**	**STRONG**
Grevitt, 1993	High Quality	Mean Age: 32 yrs; (Age Range: 17-50 yrs); Female: 26.67%	SPECT	Arthroscopy	76.92%|73.91%	2.95|0.31	WEAK	WEAK
Lohmann, 1991	High Quality	Median Age: 36 yrs; (Age Range: 18 to 44 yrs); Female: 34%	SPECT	Arthroscopy	73.91%|76.19%	3.1|0.34	WEAK	WEAK
Murray, 1990	High Quality	Female: 15.68%	SPECT	Arthroscopy	87.88%|87.23%	6.88|0.14	**MODERATE**	**MODERATE**
Murray, 1990	High Quality	Female: 15.68%	SPECT (Lateral meniscus)	Arthroscopy	75.00%|87.00%	5.77|0.29	**MODERATE**	WEAK
Murray, 1990	High Quality	Female: 15.68%	SPECT (Medial + Lateral Meniscus)	Arthroscopy	88.00%|87.00%	6.77|0.14	**MODERATE**	**MODERATE**
Murray, 1990	High Quality	Female: 15.68%	SPECT (Medial meniscus)	Arthroscopy	86.67%|87.00%	6.67|0.15	**MODERATE**	**MODERATE**
Grevitt, 1993	High Quality	Mean Age: 32 yrs; (Age Range: 17-50 yrs); Female: 26.67%	SPECT (with scintigraphic abnormalities such as intense focal uptake included as criteria for diagnosing meniscal tears)	Arthroscopy	90.00%|74.00%	3.46|0.14	WEAK	**MODERATE**
Tahmasebi, 2005	Moderate Quality	Mean Age: 31 yrs; Age Range: (15-52 yrs); Female: 18.7%	SPECT	Arthroscopy	78.00%|94.00%	13|0.23	**STRONG**	WEAK
Vande Berg, 2000	Moderate Quality	Mean Age: 44.9 yrs; Age Range: (23-77 yrs); Median Age: 40 yrs; Female: 20%	Spiral CT	Arthroscopy	97.00%|90.00%	9.7|0.03	**MODERATE**	**STRONG**

***Note: Summary of Findings Tables - Please see full data tables for all times points and sub-category data.**

Table 9. Ultrasound

Reference Title	Quality	Patient Char.	Index Test	Reference Standard	Sens|Spec	LR+|LR-	Rule In Test	Rule Out Test
Ahmadi, 2022	High Quality	Mean Age: 35.48 yrs; Female: 30.9%;	Ultrasound (POCUS); Philips Affiniti 50G ultrasound machine with L 12-5 Linear probe (5-12MHz)	MRI	86.96%|71.88%	3.09|0.18	WEAK	**MODERATE**
Alizadeh, 2013	High Quality	Mean Age: 43.5 yrs; Age Range: (34.2-52.8 yrs)	Ultrasound	Arthroscopy	83.30%|71.40%	2.91|0.23	WEAK	WEAK
Alizadeh, 2013	High Quality	Mean Age: 23.5 yrs; Age Range: (18.5-28.5 yrs);	Ultrasound	Arthroscopy	100.0%|88.90%	9.01|0	**MODERATE**	**STRONG**
Shetty, 2008	High Quality	Mean Age: 47 yrs; Age Range: (14-73 yrs); Female: 42.8%;	Ultrasound	Arthroscopy	86.36%|69.23%	2.81|0.2	WEAK	**MODERATE**
Wareluk, 2012	High Quality	Mean Age: 36.2 yrs; Age Range: (16-70 Yrs); Female 52.9%	Ultrasound; Voluson 730 Expert, 6-12 MHz frequency probe	Arthroscopy	85.40%|85.70%	5.97|0.17	**MODERATE**	**MODERATE**
Wareluk, 2012	High Quality	Mean Age: 36.2 yrs; Age Range: (16-70 Yrs); Female 52.9%	Ultrasound; Voluson 730 Expert, 6-12 MHz frequency probe	Arthroscopy	95.70%|82.20%	5.38|0.05	**MODERATE**	**STRONG**
Wareluk, 2012	High Quality	Mean Age: 36.2 yrs; Age Range: (16-70 Yrs); Female 52.9%	Ultrasound; Voluson 730 Expert, 6-12 MHz frequency probe	Arthroscopy	72.20%|91.30%	8.3|0.3	**MODERATE**	WEAK
Wareluk, 2012	High Quality	Mean Age: 36.2 yrs; Age Range: (16-70 Yrs); Female 52.9%	Ultrasound; Voluson 730 Expert, 6-12 MHz frequency probe	Arthroscopy	90.90%|84.80%	5.98|0.11	**MODERATE**	**MODERATE**
Wareluk, 2012	High Quality	Mean Age: 36.2 yrs; Age Range: (16-70 Yrs); Female 52.9%	Ultrasound; Voluson 730 Expert, 6-12 MHz frequency probe	Arthroscopy	78.90%|86.80%	5.98|0.24	**MODERATE**	WEAK
Wareluk, 2012	High Quality	Mean Age: 36.2 yrs; Age Range: (16-70 Yrs); Female 52.9%	Ultrasound; Voluson 730 Expert, 6-12 MHz frequency probe	Arthroscopy	83.30%|84.60%	5.41|0.2	**MODERATE**	**MODERATE**

***Note: Summary of Findings Tables - Please see full data tables for all times points and sub-category data.**

Reference Title	Quality	Patient Char.	Index Test	Reference Standard	Sens|Spec	LR+|LR-	Rule In Test	Rule Out Test
Wareluk, 2012	High Quality	Mean Age: 36.2 yrs; Age Range: (16-70 Yrs); Female 52.9%	Ultrasound; Voluson 730 Expert, 6-12 MHz frequency probe	Arthroscopy	85.70%|80.00%	4.29|0.18	WEAK	**MODERATE**
Wareluk, 2012	High Quality	Mean Age: 36.2 yrs; Age Range: (16-70 Yrs); Female 52.9%	Ultrasound; Voluson 730 Expert, 6-12 MHz frequency probe	Arthroscopy	83.30%|95.00%	16.66|0.18	**STRONG**	**MODERATE**
Wareluk, 2012	High Quality	Mean Age: 36.2 yrs; Age Range: (16-70 Yrs); Female 52.9%	Ultrasound; Voluson 730 Expert, 6-12 MHz frequency probe	Arthroscopy	77.80%|70.40%	2.63|0.32	WEAK	WEAK
Wareluk, 2012	High Quality	Mean Age: 36.2 yrs; Age Range: (16-70 Yrs); Female 52.9%	Ultrasound; Voluson 730 Expert, 6-12 MHz frequency probe	Arthroscopy	85.70%|93.20%	12.6|0.15	**STRONG**	**MODERATE**
Wareluk, 2012	High Quality	Mean Age: 36.2 yrs; Age Range: (16-70 Yrs); Female 52.9%	Ultrasound; Voluson 730 Expert, 6-12 MHz frequency probe	Arthroscopy	90.00%|76.70%	3.86|0.13	WEAK	**MODERATE**
Wareluk, 2012	High Quality	Mean Age: 36.2 yrs; Age Range: (16-70 Yrs); Female 52.9%	Ultrasound; Voluson 730 Expert, 6-12 MHz frequency probe	Arthroscopy	86.70%|91.40%	10.08|0.15	**STRONG**	**MODERATE**
Wareluk, 2012	High Quality	Mean Age: 36.2 yrs; Age Range: (16-70 Yrs); Female 52.9%	Ultrasound; Voluson 730 Expert, 6-12 MHz frequency probe	Arthroscopy	81.30%|87.00%	6.25|0.21	**MODERATE**	WEAK
Wareluk, 2012	High Quality	Mean Age: 36.2 yrs; Age Range: (16-70 Yrs); Female 52.9%	Ultrasound; Voluson 730 Expert, 6-12 MHz frequency probe (Female patients)	Arthroscopy	85.70%|82.90%	5.01|0.17	**MODERATE**	**MODERATE**
Wareluk, 2012	High Quality	Mean Age: 36.2 yrs; Age Range: (16-70 Yrs); Female 52.9%	Ultrasound; Voluson 730 Expert, 6-12 MHz frequency probe (Lateral Meniscus in female patients)	Arthroscopy	75.00%|94.70%	14.15|0.26	**STRONG**	WEAK
Wareluk, 2012	High Quality	Mean Age: 36.2 yrs; Age Range: (16-70 Yrs); Female 52.9%	Ultrasound; Voluson 730 Expert, 6-12 MHz frequency probe (Lateral Meniscus in male patients)	Arthroscopy	62.50%|95.20%	13.02|0.39	**STRONG**	WEAK
Wareluk, 2012	High Quality	Mean Age: 36.2 yrs; Age Range: (16-70 Yrs); Female 52.9%	Ultrasound; Voluson 730 Expert, 6-12 MHz frequency probe (Lateral Meniscus)	Arthroscopy	66.70%|95.60%	15.16|0.35	**STRONG**	WEAK

***Note: Summary of Findings Tables - Please see full data tables for all times points and sub-category data.**

Reference Title	Quality	Patient Char.	Index Test	Reference Standard	Sens|Spec	LR+|LR-	Rule In Test	Rule Out Test
Wareluk, 2012	High Quality	Mean Age: 36.2 yrs; Age Range: (16-70 Yrs); Female 52.9%	Ultrasound; Voluson 730 Expert, 6-12 MHz frequency probe (Male patients)	Arthroscopy	85.20%|89.80%	8.35|0.16	**MODERATE**	**MODERATE**
Wareluk, 2012	High Quality	Mean Age: 36.2 yrs; Age Range: (16-70 Yrs); Female 52.9%	Ultrasound; Voluson 730 Expert, 6-12 MHz frequency probe (Medial Meniscus in female patients)	Arthroscopy	90.00%|68.80%	2.88|0.15	WEAK	**MODERATE**
Wareluk, 2012	High Quality	Mean Age: 36.2 yrs; Age Range: (16-70 Yrs); Female 52.9%	Ultrasound; Voluson 730 Expert, 6-12 MHz frequency probe (Medial Meniscus in male patients)	Arthroscopy	94.70%|78.90%	4.49|0.07	WEAK	**STRONG**
Wareluk, 2012	High Quality	Mean Age: 36.2 yrs; Age Range: (16-70 Yrs); Female 52.9%	Ultrasound; Voluson 730 Expert, 6-12 MHz frequency probe (Medial Meniscus)	Arthroscopy	93.10%|72.50%	3.39|0.1	WEAK	**STRONG**
Elshimy, 2021	Moderate Quality	Mean Age: 32.9 yrs; (Age Range: 18-60 Yrs); Female 25%	Ultrasound (POCUS); high-resolution linear multi-frequency transducer 9-15 MHz (ideally 12 MHz) superficial probe	Arthroscopy	92.90%|88.90%	8.37|0.08	**MODERATE**	**STRONG**
Elshimy, 2021	Moderate Quality	Mean Age: 32.9 yrs; (Age Range: 18-60 yrs); Female 25%	Ultrasound (POCUS); high-resolution linear multi-frequency transducer 9-15 MHz (ideally 12 MHz) superficial probe (Lateral Meniscus)	Arthroscopy	90.00%|98.00%	45|0.1	**STRONG**	**MODERATE**
Elshimy, 2021	Moderate Quality	Mean Age: 32.9 yrs; (Age Range: 18-60 yrs); Female 25%	Ultrasound (POCUS); high-resolution linear multi-frequency transducer 9-15 MHz (ideally 12 MHz) superficial probe (Medial Meniscus)	Arthroscopy	93.75%|96.43%	26.25|0.06	**STRONG**	**STRONG**

***Note: Summary of Findings Tables - Please see full data tables for all times points and sub-category data.**

Table 10. Arthrography

Reference Title	Quality	Patient Char.	Index Test	Reference Standard	Sens|Spec	LR+|LR-	Rule In Test	Rule Out Test
van Heuzen, 1988	Moderate Quality	Median Age: 28 yrs; (Age Range: 14 to 58 yrs); Female: 16%	Arthrography (Double Contrast)	Arthroscopy	Unable to calculate	Unable to calculate	FP: 1	FN: 3
Abdon, 1989	Moderate Quality	Mean Age: 32 yrs; Female: 21.74%	Arthrography (Lateral Meniscus)	Arthroscopy	100.0%|100.0%	. |0	Unable to calculate	**STRONG**
Abdon, 1989	Moderate Quality	Mean Age: 32 yrs; Female: 21.74%	Arthrography (Medial Meniscus)	Arthroscopy	97.22%|63.64%	2.67|0.04	WEAK	**STRONG**
Dhillon, 1985	Moderate Quality	Age Range: (19-39 yrs)	Arthrography (Lateral Meniscus)	Arthrotomy	75.00%|.--	1.47|0.53	POOR	POOR
Dhillon, 1985	Moderate Quality	Age Range: (19-39 yrs)	Arthrography (Medial Meniscus)	Arthrotomy	56.67%|50.00%	1.13|0.87	POOR	POOR

***Note: Summary of Findings Tables - Please see full data tables for all times points and sub-category data.**

Table 11. Surgery/Arthroscopy

Reference Title	Quality	Patient Char.	Index Test	Reference Standard	Sens|Spec	LR+|LR-	Rule In Test	Rule Out Test
Roper, 1986	Moderate Quality	Mean Age: 45 yrs; (Age Range: 35-77 yrs); Female: 28.57%	Surgery (Anterior horn tear)	Arthrogram	75.00%|.	Unable to calculate		
Roper, 1986	Moderate Quality	Mean Age: 45 yrs; (Age Range: 35-77 yrs); Female: 28.57%	Surgery (Bucket handle tear)	Arthrogram	75.00%|.	Unable to calculate		
Roper, 1986	Moderate Quality	Mean Age: 45 yrs; (Age Range: 35-77 yrs); Female: 28.57%	Surgery (Lateral Meniscus)	Arthrogram	61.54%|.	Unable to calculate		
Roper, 1986	Moderate Quality	Mean Age: 45 yrs; (Age Range: 35-77 yrs); Female: 28.57%	Surgery (Medial Meniscus)	Arthrogram	81.08%|.	Unable to calculate		
Roper, 1986	Moderate Quality	Mean Age: 45 yrs; (Age Range: 35-77 yrs); Female: 28.57%	Surgery (No definition of tear)	Arthrogram	100.0%|.	Unable to calculate		
Roper, 1986	Moderate Quality	Mean Age: 45 yrs; (Age Range: 35-77 yrs); Female: 28.57%	Surgery (No pathology at surgery)	Arthrogram	100.0%|.	Unable to calculate		
Roper, 1986	Moderate Quality	Mean Age: 45 yrs; (Age Range: 35-77 yrs); Female: 28.57%	Surgery (Parrot beak tear)	Arthrogram	50.00%|.	Unable to calculate		
Roper, 1986	Moderate Quality	Mean Age: 45 yrs; (Age Range: 35-77 yrs); Female: 28.57%	Surgery (Peripheral detachment)	Arthrogram	100.0%|.	Unable to calculate		
Roper, 1986	Moderate Quality	Mean Age: 45 yrs; (Age Range: 35-77 yrs); Female: 28.57%	Surgery (Posterior horn tear)	Arthrogram	80.00%|.	Unable to calculate		
Roper, 1986	Moderate Quality	Mean Age: 45 yrs; (Age Range: 35-77 yrs); Female: 28.57%	Surgery (Vertical split tear)	Arthrogram	60.00%|.	Unable to calculate		
Dhillon, 1985	Moderate Quality	Age Range: (19-39 yrs)	Arthroscopy (Lateral Meniscus)	Arthrotomy	87.50%|.	1.71|0.29	POOR	WEAK

Dhillon, 1985	Moderate Quality	Age Range: (19-39 yrs)	Arthroscopy (Medial Meniscus)	Arthrotomy	92.11%|.	1.82|0.18	POOR	**MODERATE**

PICO 3: Advanced Imaging Utility

No included evidence

PICO 4: Tx Indications

Figure 1: Operative Tx vs. Non-Operative Tx - Summary of Findings

	Low
	Marder, 1994
↑ **Better Outcomes** ↓ **Worse Outcomes** ● **Not Significant**	
Pain	
Pain at Follow Up	●
Return toactivity	
Preinjury Activity Level	●

***Note: Summary of Findings Tables - Please see full data tables for all timepoints and sub-category data.**

Table 12: Additional Article Details

Author	Quality	Pt Characteristics	Additional Notes	Age)	Activity Level	Timing of Symptoms	Symptoms	Pain	Location of Pain	Location of Injury	Time from Injury	Mechanism of Injury	Operative Tx Type	Tear Type)
Marder, 1994	Low	Mean Age: 27/40 yrs; Female: 36.11%/36.36%; Mean BMI: NA		Age Range: (22-68/16-43 yrs)	Type of activity was arbitrarily classified as type I (low demand), type II (moderate demand), and type III (high demand) which required knee pivoting. Operative Group: Type I (n=2), Type II (n=10), type III (n=24); Non-Operative Group: Type 1 (n=12), Type II (n=7), Type III (m=3)	Operative Group: 4.5 mos (range: 0-12)/Non-Operative Group: 6 mos (Range: 0-15)	Principal complaint was pain, and the most frequent finding was joint-line tenderness. Symptoms: Pain (n=58), Giving way (n = 34), Swelling (n = 31), Stiffness (n = 7), Popping (n = 27), Catching (n = 22), Grinding (n = 4)	All patients had pain	55 had join line tenderness; 36 had pain w/ forced flexion; 27 had pain w/ forced extension; 2 had pain with patellofemoral compression	Operative Group: 25 medial, 9 lateral, 2 both; Non-Operative Group: 16 medial, 5 lateral, 1 both	Operative Group: 4.5 mos (range: 0-12)/Non-Operative Group: 6 mos (Range: 0-15)	NA	34 patients had arthroscopic partial meniscectomy; 2 patients had meniscal repair	Operative Group: 22 Vertical, 8 Horizontal, 7 Complex; Non-Operative Group: 13 Vertical, 5 Horizontal, 6 Complex

Table 13: Operative Tx vs. Non-operative Tx - Pain

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Marder, 1994	Low	Pain at Follow Up	3 mos	34 patients had arthroscopic partial meniscectomy, 2 patients had meniscal repair	Patients chose not to undergo surgery	RR	0.71(0.29,1.73)	NS

Table 14: Operative Tx vs. Non-operative Tx - Return to Activity

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Marder, 1994	Low	Preinjury Activity Level (Number of patients who returned to preinjury activity level)	3 mos	34 patients had arthroscopic partial meniscectomy, 2 patients had meniscal repair	Patients chose not to undergo surgery	RR	1.23(0.89,1.70)	NS

PICO 5: Injections

No included evidence

PICO 6: Physical Therapy

Figure 2: PT Modalities vs. PT Modalities – Summary of Findings

	Moderate
	Kasturi, 2020
↑ **Better Outcomes** ↓ **Worse Outcomes** ● **Not Significant**	
Function	
ROM (degrees)	↑
Patient Specific Functional Score	↑
Pain	
VAS Pain at Rest	↑

Table 15: PT Modalities vs. PT Modalities - Function

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Kasturi, 2020	Moderate	ROM (degrees)	1 mos	Conventional Therapy with MC "Squeeze" Technique	Conventional Therapy	Author Reported - independent t-test	6.00(.,.)	**Conventional Therapy with MC "Squeeze" Technique**
Kasturi, 2020	Moderate	ROM (degrees)	1.5 mos	Conventional Therapy with MC "Squeeze" Technique	Conventional Therapy	Author Reported - independent t-test	7.50(.,.)	**Conventional Therapy with MC "Squeeze" Technique**
Kasturi, 2020	Moderate	Patient Specific Functional Score	1 mos	Conventional Therapy with MC "Squeeze" Technique	Conventional Therapy	Mean Difference	1.3 (0.77, 1.83)	**Conventional Therapy with MC "Squeeze" technique**
Kasturi, 2020	Moderate	Patient Specific Functional Score	1.5 mos	Conventional Therapy with MC "Squeeze" Technique	Conventional Therapy	Mean Difference	1.375 (0.92, 1.83)	**Conventional Therapy with MC "Squeeze" technique**

Table 16: PT Modalities vs. PT Modalities - Pain

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Kasturi, 2020	Moderate	VAS Pain at Rest	1 mos	Conventional Therapy with MC "Squeeze" Technique	Conventional Therapy	Mean Difference	-1.65 (-2.37, -0.93)	**Conventional Therapy with MC "Squeeze" technique**
Kasturi, 2020	Moderate	VAS Pain at Rest	1.5 mos	Conventional Therapy with MC "Squeeze" Technique	Conventional Therapy	Mean Difference	-1.95 (-2.59, -1.31)	**Conventional Therapy with MC "Squeeze" technique**

PICO 7: Oral Medication

Figure 3: Oral Medication vs. No Oral Medication – Summary of Findings

↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Taskin, 2022	Low
Function		
Y-Balance Test		

Table 17: Oral Medication vs. No Oral Medication - Function

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Taskin, 2022	Low	Y-Balance Test (Balance - Anterior Right Leg)	3 mos	Hydrolyzed Type-II Collagen Treatment orally on an empty stomach: 10g/day in the morning orally on an empty stomach for three months	No additional nutritional supplements	Mean Difference	7.42 (5.38, 9.46)	**Hydrolyzed Type-II Collagen Treatment orally on an empty stomach**
Taskin, 2022	Low	Y-Balance Test (Balance - Anterior Left Leg)	3 mos	Hydrolyzed Type-II Collagen Treatment orally on an empty stomach: 10g/day in the morning orally on an empty stomach for three months	No additional nutritional supplements	Mean Difference	6.62 (4.26, 8.98)	**Hydrolyzed Type-II Collagen Treatment orally on an empty stomach**
Taskin, 2022	Low	Y-Balance Test (Balance - Anterior Average (cm))	3 mos	Hydrolyzed Type-II Collagen Treatment orally on an empty stomach: 10g/day in the morning orally on an empty stomach for three months	No additional nutritional supplements	Mean Difference	7.02 (4.48, 9.56)	**Hydrolyzed Type-II Collagen Treatment orally on an empty stomach**
Taskin, 2022	Low	Y-Balance Test (Balance - Posteromedial Right Leg)	3 mos	Hydrolyzed Type-II Collagen Treatment orally on an empty stomach: 10g/day in the morning orally on an empty stomach for three months	No additional nutritional supplements	Mean Difference	5.9 (3.10, 8.70)	**Hydrolyzed Type-II Collagen Treatment orally on an empty stomach**
Taskin, 2022	Low	Y-Balance Test (Balance - Posteromedial Left Leg)	3 mos	Hydrolyzed Type-II Collagen Treatment orally on an empty stomach: 10g/day in the morning orally on an empty stomach for three months	No additional nutritional supplements	Mean Difference	6.74 (4.16, 9.32)	**Hydrolyzed Type-II Collagen Treatment orally on an empty stomach**
Taskin, 2022	Low	Y-Balance Test (Balance - Posteromedial Average (cm))	3 mos	Hydrolyzed Type-II Collagen Treatment orally on an empty stomach: 10g/day in the morning orally on an empty stomach for three months	No additional nutritional supplements	Mean Difference	6.32 (4.30, 8.34)	**Hydrolyzed Type-II Collagen Treatment orally on an empty stomach**
Taskin, 2022	Low	Y-Balance Test (Balance - Posterolateral Right Leg)	3 mos	Hydrolyzed Type-II Collagen Treatment orally on an empty stomach: 10g/day in the morning orally on an empty stomach for three months	No additional nutritional supplements	Mean Difference	5.5 (2.82, 8.18)	**Hydrolyzed Type-II Collagen Treatment orally on an empty stomach**
Taskin, 2022	Low	Y-Balance Test (Balance - Posterolateral Left Leg)	3 mos	Hydrolyzed Type-II Collagen Treatment orally on an empty stomach: 10g/day in the morning orally on an empty stomach for three months	No additional nutritional supplements	Mean Difference	6.4 (4.03, 8.77)	**Hydrolyzed Type-II Collagen Treatment orally on an empty stomach**
Taskin, 2022	Low	Y-Balance Test (Balance - Posterolateral Average (cm))	3 mos	Hydrolyzed Type-II Collagen Treatment orally on an empty stomach: 10g/day in the morning orally on an empty stomach for three months	No additional nutritional supplements	Mean Difference	5.95 (3.38, 8.52)	**Hydrolyzed Type-II Collagen Treatment orally on an empty stomach**
Taskin, 2022	Low	Y-Balance Test (Total Average Y Balance Test)	3 mos	Hydrolyzed Type-II Collagen Treatment orally on an empty stomach: 10g/day in the morning orally on an empty stomach for three months	No additional nutritional supplements	Mean Difference	6.43 (4.17, 8.69)	**Hydrolyzed Type-II Collagen Treatment orally on an empty stomach**

PICO 8: Adjunctive Non-Operative Tx

Figure 4: Nerve Stimulation vs. No Treatment/Control – Summary of Findings

	Malliaropoulos,2013	Moderate
↑ Better Outcomes ↓ Worse Outcomes ● Not Significant		
Composite		
Lysholm Knee Score	↑	
Pain		
VAS Pain	↑	

Table 18: Nerve Stimulation vs. No Treatment/Control - Composite

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Malliaropoulos, 2013	Moderate	Lysholm Knee Score	1 mos	Low-Level Laser Therapy: Twice per week for the first 3 weeks and once per week for the next 3 weeks (a total of 9 sessions). Each patient was treated for 420 s per knee and per session (210 s using 2,400 Hz and 210 s using 700 Hz, 10.5 s per point). The dose of active treatment was 2.52 J per point, 100.8 J per knee.	Identical Placebo Therapy: Twice per week for the first 3 weeks and once per week for the next 3 weeks (a total of 9 sessions)	Mean Difference	3.43 (1.71, 5.15)	**Low-Level Laser Therapy**
Malliaropoulos, 2013	Moderate	Lysholm Knee Score	6 mos	Low-Level Laser Therapy: Twice per week for the first 3 weeks and once per week for the next 3 weeks (a total of 9 sessions). Each patient was treated for 420 s per knee and per session (210 s using 2,400 Hz and 210 s using 700 Hz, 10.5 s per point). The dose of active treatment was 2.52 J per point, 100.8 J per knee.	Identical Placebo Therapy: Twice per week for the first 3 weeks and once per week for the next 3 weeks (a total of 9 sessions)	Mean Difference	9.87 (7.62, 12.12)	**Low-Level Laser Therapy**
Malliaropoulos, 2013	Moderate	Lysholm Knee Score	1 yrs	Low-Level Laser Therapy: Twice per week for the first 3 weeks and once per week for the next 3 weeks (a total of 9 sessions). Each patient was treated for 420 s per knee and per session (210 s using 2,400 Hz and 210 s using 700 Hz, 10.5 s per point). The dose of active treatment was 2.52 J per point, 100.8 J per knee.	Identical Placebo Therapy: Twice per week for the first 3 weeks and once per week for the next 3 weeks (a total of 9 sessions)	Mean Difference	6.56 (4.08, 9.04)	**Low-Level Laser Therapy**

Table 19: Nerve Stimulation vs. No Treatment/Control - Pain

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Malliaropoulos, 2013	Moderate	VAS Pain	1 mos	Low-Level Laser Therapy: Twice per week for the first 3 weeks and once per week for the next 3 weeks (a total of 9 sessions). Each patient was treated for 420 s per knee and per session (210 s using 2,400 Hz and 210 s using 700 Hz, 10.5 s per point). The dose of active treatment was 2.52 J per point, 100.8 J per knee.	Identical Placebo Therapy: Twice per week for the first 3 weeks and once per week for the next 3 weeks (a total of 9 sessions)	Mean Difference	-31.81 (-36.75, -26.87)	**Low-Level Laser Therapy**
Malliaropoulos, 2013	Moderate	VAS Pain	6 mos	Low-Level Laser Therapy: Twice per week for the first 3 weeks and once per week for the next 3 weeks (a total of 9 sessions). Each patient was treated for 420 s per knee and per session (210 s using 2,400 Hz and 210 s using 700 Hz, 10.5 s per point). The dose of active treatment was 2.52 J per point, 100.8 J per knee.	Identical Placebo Therapy: Twice per week for the first 3 weeks and once per week for the next 3 weeks (a total of 9 sessions)	Mean Difference	-49.5 (-52.69, -46.31)	**Low-Level Laser Therapy**
Malliaropoulos, 2013	Moderate	VAS Pain	1 yrs	Low-Level Laser Therapy: Twice per week for the first 3 weeks and once per week for the next 3 weeks (a total of 9 sessions). Each patient was treated for 420 s per knee and per session (210 s using 2,400 Hz and 210 s using 700 Hz, 10.5 s per point). The dose of active treatment was 2.52 J per point, 100.8 J per knee.	Identical Placebo Therapy: Twice per week for the first 3 weeks and once per week for the next 3 weeks (a total of 9 sessions)	Mean Difference	-49.2 (-51.83, -46.57)	**Low-Level Laser Therapy**

PICO 9: Time to Operative Tx

Figure 5: Time to Operative Tx/Length of Non-Op Tx vs. Time to Op Tx – Summary of Findings

↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Low	
	Stone, 1988	Marder, 1994
Adverse events		
Increase in Condylar Chondromalacia	↑	
Chondral Damage		●
Return to activity		
Satisfactory Results	↑	

Table 20: Time to Operative Tx/Length of Non-Op Tx vs. Time to Op Tx - Adverse Events

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Stone, 1988	Low	Increase in Condylar Chondromalacia (Significant chondromalacia was considered any change of grade 2 or worse)	2 yrs	< 6 mos between onset of symptoms and arthroscopic partial meniscectomy	> 6 mos between onset of symptoms and arthroscopic partial meniscectomy	RR	0.42(0.28,0.62)	**< 6 mos between onset of symptoms and arthroscopic partial meniscectomy**
Marder, 1994	Low	Chondral Damage	3 mos	< 6 mos: < 2 months and between 2 and 6 months were grouped together	> 6 mos	RR	0.77(0.24,2.50)	NS

Table 21: Time to Operative Tx/Length of Non-Op Tx vs. Time to Op Tx - Return to Activity

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Stone, 1988	Low	Satisfactory Results (Patients assigned to 4 groups according to their results: excellent, good, fair, and poor. Patients with excellent results relayed no problems and returned to presymptom level of activity. Patients with good had minimal or occasional symptoms and full activity. Fair results had frequent symptoms or decrease in activity. Poor results showed deterioration from preoperative state or required additional surgery. "Satisfactory" were those with excellent or good results. "Unsatisfactory" were fair/poor results.)	2 yrs	< 6 mos between onset of symptoms and arthroscopic partial meniscectomy	> 6 mos between onset of symptoms and arthroscopic partial meniscectomy	RR	1.54(1.08,2.19)	**< 6 mos between onset of symptoms and arthroscopic partial meniscectomy**

PICO 10: Meniscal Repair

Figure 6: Meniscus Repair vs. Meniscectomy – Summary of Findings

	Low				
↑ **Better Outcomes** ↓ **Worse Outcomes** ● **Not Significant**	**Mao, 2022**	**Lu, 2020**	**Sochacki, 2020**	**Gan, 2020**	**Stein, 2010**
Composite					
IKDC				●	
Lysholm Knee Score	↓	●			●
Ikeuchi Score	●				
Function					
Tegner Score	●			↓	●
ROM (degrees)		●			
Pain					
Pain During Activity					
Surgery					
Partial Meniscectomy					
Adverse events					
Reoperation (Overall)			↑		
Complications (Any)			↓		

Table 22: Meniscus Repair vs. Meniscectomy - Composite

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Mao, 2022	Low	Lysholm Knee Score (Used "to evaluate clinical efficacy")	3 mos	Meniscus Repair: Partial Meniscus Excision + Plasty	Total Meniscus Resection: For the severe degree of meniscus tear, involving the peripheral tissues of the meniscus, at the same time as the torn meniscus is removed, part of the peripheral tissue of the meniscus is removed, and all meniscus fragments are removed;	Mean Difference	-8.43 (-13.21, -3.65)	**Total Meniscus Resection**
Mao, 2022	Low	Lysholm Knee Score (Used "to evaluate clinical efficacy")	6 mos	Meniscus Repair: Partial Meniscus Excision + Plasty	Total Meniscus Resection: For the severe degree of meniscus tear, involving the peripheral tissues of the meniscus, at the same time as the torn meniscus is removed, part of the peripheral tissue of the meniscus is removed, and all meniscus fragments are removed; a total meniscus	Mean Difference	-1.05 (-4.05, 1.95)	NS
Mao, 2022	Low	Lysholm Knee Score (Used "to evaluate clinical efficacy")	1 yrs	Meniscus Repair: Partial Meniscus Excision + Plasty	Total Meniscus Resection: For the severe degree of meniscus tear, involving the peripheral tissues of the meniscus, at the same time as the torn meniscus is removed, part of the peripheral tissue of the meniscus is removed, and all meniscus fragments are removed; a total meniscus	Mean Difference	-0.58 (-3.12, 1.96)	NS
Mao, 2022	Low	Ikeuchi Score (Reported as Excellent, Good and Poor - dichotomized to an "Excellent and Good' Score; "Excellent": normal range of motion, no mechanical symptoms (snap, lock), no pain; "good": normal range of motion, no mechanical symptoms (snap, lock), and occasional mild pain during or after exercise; possible: normal range of motion, mechanical symptoms (snap, lock), mild pain during or after exercise; poor: limited range of motion, mechanical symptoms (snap, lock), pain during rest and exercise)	Postop.	Meniscus Repair: Partial Meniscus Excision + Plasty	Total Meniscus Resection: For the severe degree of meniscus tear, involving the peripheral tissues of the meniscus, at the same time as the torn meniscus is removed, part of the peripheral tissue of the meniscus is removed, and all meniscus fragments are removed; a total meniscus	RR	1.08(0.88,1.32)	NS
Stein, 2010	Low	Lysholm Knee Score	9 yrs	Meniscus Repair: Performed in full-thickness and vertical longitudinal tears greater than 1 cm in length or bucket-handle tears in the red-red to the red-white zone	Partial Meniscectomy: Performed in ruptures in the white-white zone	Mean Difference	3.19 (-1.73, 8.11)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Stein, 2010	Low	Lysholm Knee Score	3 yrs	Meniscus Repair: Performed in full-thickness and vertical longitudinal tears greater than 1 cm in length or bucket-handle tears in the red-red to the red-white zone	Partial Meniscectomy: Performed in ruptures in the white-white zone	Mean Difference	1.28 (-3.32, 5.88)	NS
Lu, 2020	Low	Lysholm Knee Score (Comparison of clinical efficacy - "Excellent and Good" indicated painless group with excellent > = 90 and good 80-90)	Postop.	Meniscoplasty: After inserting the arthroscope, the anterior medial approach was chosen to insert the planing knife to clean the hyperplastic synovium. The anterolateral approach was then chosen to insert the blue forceps to remove the thickened tissue, and to trim the incision to keep the structure of the meniscus in a “C” shape. For patients w/ a lamellar tear, the next layer was excised, while for patients with a barrel-shaped tear, the operation was completed along the tear edge.	Subtotal Meniscectomy: After inserting the arthroscope, the cold light source was turned on and the hyperplastic synovium was trimmed. The blue forceps were inserted from the anterior side to remove the severely damaged meniscus. For those who were severely torn, with the surrounding tissue affected, the soft tissue of the corresponding tissue was removed.	RR	1.00(0.82,1.23)	NS
Lu, 2020	Low	Lysholm Knee Score ("Excellent" >=90 points)	Postop.	Meniscoplasty: After inserting the arthroscope, the anterior medial approach was chosen to insert the planing knife to clean the hyperplastic synovium. The anterolateral approach was then chosen to insert the blue forceps to remove the thickened tissue, and to trim the incision to keep the structure of the meniscus in a “C” shape. For patients w/ a lamellar tear, the next layer was excised, while for patients with a barrel-shaped tear, the operation was completed along the tear edge.	Subtotal Meniscectomy: After inserting the arthroscope, the cold light source was turned on and the hyperplastic synovium was trimmed. The blue forceps were inserted from the anterior side to remove the severely damaged meniscus. For those who were severely torn, with the surrounding tissue affected, the soft tissue of the corresponding tissue was removed.	RR	1.04(0.64,1.70)	NS
Lu, 2020	Low	Lysholm Knee Score ("Good" 80-90 points)	Postop.	Meniscoplasty: After inserting the arthroscope, the anterior medial approach was chosen to insert the planing knife to clean the hyperplastic synovium. The anterolateral approach was then chosen to insert the blue forceps to remove the thickened tissue, and to trim the incision to keep the structure of the meniscus in a “C” shape. For patients w/ a lamellar tear, the next layer was excised, while for patients with a barrel-shaped tear, the operation was completed along the tear edge.	Subtotal Meniscectomy: After inserting the arthroscope, the cold light source was turned on and the hyperplastic synovium was trimmed. The blue forceps were inserted from the anterior side to remove the severely damaged meniscus. For those who were severely torn, with the surrounding tissue affected, the soft tissue of the corresponding tissue was removed.	RR	0.96(0.52,1.77)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Lu, 2020	Low	Lysholm Knee Score ("Average" 60 - 80 points)	Postop.	Meniscoplasty: After inserting the arthroscope, the anterior medial approach was chosen to insert the planing knife to clean the hyperplastic synovium. The anterolateral approach was then chosen to insert the blue forceps to remove the thickened tissue, and to trim the incision to keep the structure of the meniscus in a “C” shape. For patients w/ a lamellar tear, the next layer was excised, while for patients with a barrel-shaped tear, the operation was completed along the tear edge.	Subtotal Meniscectomy: After inserting the arthroscope, the cold light source was turned on and the hyperplastic synovium was trimmed. The blue forceps were inserted from the anterior side to remove the severely damaged meniscus. For those who were severely torn, with the surrounding tissue affected, the soft tissue of the corresponding tissue was removed.	RR	0.82(0.22,3.02)	NS
Lu, 2020	Low	Lysholm Knee Score ("Poor" <60 points)	Postop.	Meniscoplasty: After inserting the arthroscope, the anterior medial approach was chosen to insert the planing knife to clean the hyperplastic synovium. The anterolateral approach was then chosen to insert the blue forceps to remove the thickened tissue, and to trim the incision to keep the structure of the meniscus in a “C” shape. For patients w/ a lamellar tear, the next layer was excised, while for patients with a barrel-shaped tear, the operation was completed along the tear edge.	Subtotal Meniscectomy: After inserting the arthroscope, the cold light source was turned on and the hyperplastic synovium was trimmed. The blue forceps were inserted from the anterior side to remove the severely damaged meniscus. For those who were severely torn, with the surrounding tissue affected, the soft tissue of the corresponding tissue was removed.	RR	1.64(0.16,17.29)	NS
Gan, 2020	Low	IKDC (Longitudinal tears (Including Bucket-Handle) only)	2 yrs	Meniscus Repair	Partial Meniscectomy	Mean Difference	-10.6 (-24.85, 3.65)	NS
Gan, 2020	Low	IKDC (Radial tears only)	2 yrs	Meniscus Repair	Partial Meniscectomy	Mean Difference	0.9 (-13.52, 15.32)	NS

Table 23: Meniscus Repair vs. Meniscectomy - Function

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Mao, 2022	Low	Tegner Score (Used "to evaluate the functional recovery of the knee joint after surgery")	Postop.	Meniscus Repair: Partial Meniscus Excision + Plasty	Total Meniscus Resection: For the severe degree of meniscus tear, involving the peripheral tissues of the meniscus, at the same time as the torn meniscus is removed, part of the peripheral tissue of the meniscus is removed, and all meniscus fragments are removed; a total meniscus	Mean Difference	-0.15 (-1.01, 0.71)	NS
Stein, 2010	Low	Tegner Score	9 yrs	Meniscus Repair: Performed in full-thickness and vertical longitudinal tears greater than 1 cm in length or bucket-handle tears in the red-red to the red-white zone	Partial Meniscectomy: Performed in ruptures in the white-white zone	Mean Difference	0.16 (-0.78, 1.10)	NS
Stein, 2010	Low	Tegner Score (Tegner Sports Activity Level Loss)	3 yrs	Meniscus Repair: Performed in full-thickness and vertical longitudinal tears greater than 1 cm in length or bucket-handle tears in the red-red to the red-white zone	Partial Meniscectomy: Performed in ruptures in the white-white zone	Mean Difference	0.08 (-0.18, 0.34)	NS
Lu, 2020	Low	ROM (degrees) (Maximum degree of knee flexion of the affected limb)	2 wks	Meniscoplasty: After inserting the arthroscope, the anterior medial approach was chosen to insert the planing knife to clean the hyperplastic synovium. The anterolateral approach was then chosen to insert the blue forceps to remove the thickened tissue, and to trim the incision to keep the structure of the meniscus in a “C” shape. For patients w/ a lamellar tear, the next layer was excised, while for patients with a barrel-shaped tear, the operation was completed along the tear edge.	Subtotal Meniscectomy: After inserting the arthroscope, the cold light source was turned on and the hyperplastic synovium was trimmed. The blue forceps were inserted from the anterior side to remove the severely damaged meniscus. For those who were severely torn, with the surrounding tissue affected, the soft tissue of the corresponding tissue was removed.	Mean Difference	-0.35 (-4.19, 3.49)	NS
Lu, 2020	Low	ROM (degrees) (Maximum degree of knee flexion of the affected limb)	1.5 mos	Meniscoplasty: After inserting the arthroscope, the anterior medial approach was chosen to insert the planing knife to clean the hyperplastic synovium. The anterolateral approach was then chosen to insert the blue forceps to remove the thickened tissue, and to trim the incision to keep the structure of the meniscus in a “C” shape. For patients w/ a lamellar tear, the next layer was excised, while for patients with a barrel-shaped tear, the operation was completed along the tear edge.	Subtotal Meniscectomy: After inserting the arthroscope, the cold light source was turned on and the hyperplastic synovium was trimmed. The blue forceps were inserted from the anterior side to remove the severely damaged meniscus. For those who were severely torn, with the surrounding tissue affected, the soft tissue of the corresponding tissue was removed.	Mean Difference	-1.08 (-5.59, 3.43)	NS
Lu, 2020	Low	ROM (degrees) (Maximum degree of knee flexion of the affected limb)	3 mos	Meniscoplasty: After inserting the arthroscope, the anterior medial approach was chosen to insert the planing knife to clean the hyperplastic synovium. The anterolateral approach was then chosen to insert the blue forceps to remove the thickened tissue, and to trim the incision to keep the structure of the meniscus in a “C” shape. For patients w/ a lamellar tear, the next layer was excised, while for patients with a barrel-shaped tear, the operation was completed along the tear edge.	Subtotal Meniscectomy: After inserting the arthroscope, the cold light source was turned on and the hyperplastic synovium was trimmed. The blue forceps were inserted from the anterior side to remove the severely damaged meniscus. For those who were severely torn, with the surrounding tissue affected, the soft tissue of the corresponding tissue was removed.	Mean Difference	-0.31 (-3.34, 2.72)	NS

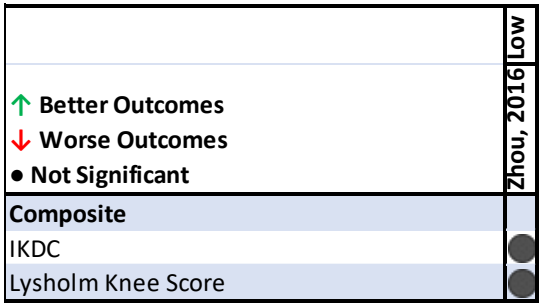
Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Gan, 2020	Low	Tegner Score (Longitudinal tears (Including Bucket-Handle) only)	2 yrs	Meniscus Repair	Partial Meniscectomy	Mean Difference	-1.3 (-2.28, -0.32)	**Partial Meniscectomy**
Gan, 2020	Low	Tegner Score (Radial tears only)	2 yrs	Meniscus Repair	Partial Meniscectomy	Mean Difference	-0.4 (-1.41, 0.61)	NS

Table 24: Meniscus Repair vs. Meniscectomy - Adverse Events

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Sochacki, 2020	Low	Reoperation (Overall reoperation rates)	4 yrs	Meniscus Repair	Meniscectomy	RR	0.39(0.33,0.48)	**Meniscus Repair**
Sochacki, 2020	Low	Reoperation ("Meniscal Surgery" - Meniscectomy or Meniscal Repair)	4 yrs	Meniscus Repair	Meniscectomy	RR	0.58(0.48,0.70)	**Meniscus Repair**
Sochacki, 2020	Low	Reoperation (Meniscal Transplantation)	4 yrs	Meniscus Repair	Meniscectomy	RR	0.10(0.01,0.73)	**Meniscus Repair**
Sochacki, 2020	Low	Reoperation (Synovectomy)	4 yrs	Meniscus Repair	Meniscectomy	RR	0.92(0.72,1.19)	NS
Sochacki, 2020	Low	Reoperation (Chondroplasty)	4 yrs	Meniscus Repair	Meniscectomy	RR	1.06(0.69,1.62)	NS
Sochacki, 2020	Low	Reoperation (Manipulation under Anesthesia)	4 yrs	Meniscus Repair	Meniscectomy	RR	1.04(0.45,2.38)	NS
Sochacki, 2020	Low	Reoperation (Lysis of Adhesions)	4 yrs	Meniscus Repair	Meniscectomy	RR	2.48(1.24,4.94)	**Meniscectomy**
Sochacki, 2020	Low	Reoperation (Loose Body Removal)	4 yrs	Meniscus Repair	Meniscectomy	RR	1.38(0.65,2.95)	NS
Sochacki, 2020	Low	Reoperation (Debridement for infection)	4 yrs	Meniscus Repair	Meniscectomy	RR	0.50(0.06,4.00)	NS
Sochacki, 2020	Low	Reoperation (High Tibial Osteotomy)	4 yrs	Meniscus Repair	Meniscectomy	RR	0.57(0.07,4.64)	NS
Sochacki, 2020	Low	Reoperation (Distal Femoral Osteotomy)	4 yrs	Meniscus Repair	Meniscectomy	RR	1.71(0.44,6.63)	NS
Sochacki, 2020	Low	Reoperation (Unicompartmental Knee Arthroplasty)	4 yrs	Meniscus Repair	Meniscectomy	RR	1.25(0.46,3.41)	NS
Sochacki, 2020	Low	Reoperation (Total Knee Arthroplasty)	4 yrs	Meniscus Repair	Meniscectomy	RR	0.61(0.45,0.82)	**Meniscus Repair**
Sochacki, 2020	Low	Complications (Any Complication)	1 mos	Meniscus Repair	Meniscectomy	RR	1.50(1.14,1.98)	**Meniscectomy**
Sochacki, 2020	Low	Complications (Bursitis)	1 mos	Meniscus Repair	Meniscectomy	RR	2.00(0.60,6.64)	NS
Sochacki, 2020	Low	Complications (Deficiency Anemia)	1 mos	Meniscus Repair	Meniscectomy	RR	1.11(0.68,1.82)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Sochacki, 2020	Low	Complications (Infection)	1 mos	Meniscus Repair	Meniscectomy	RR	1.87(1.11,3.13)	**Meniscectomy**
Sochacki, 2020	Low	Complications (Nerve Injury)	1 mos	Meniscus Repair	Meniscectomy	RR	4.00(0.25,63.94)	NS
Sochacki, 2020	Low	Complications (Sepsis)	1 mos	Meniscus Repair	Meniscectomy	RR	1.00(0.11,8.95)	NS
Sochacki, 2020	Low	Complications (Wound Complication)	1 mos	Meniscus Repair	Meniscectomy	RR	0.33(0.04,2.56)	NS
Sochacki, 2020	Low	Complications (Deep Vein Thrombosis)	1 mos	Meniscus Repair	Meniscectomy	RR	2.52(1.37,4.62)	**Meniscectomy**
Sochacki, 2020	Low	Complications (Hematoma)	1 mos	Meniscus Repair	Meniscectomy	RR	1.18(0.43,3.19)	NS

Figure 7: Meniscus Repair vs. Control/Non-Repair – Summary of Findings



*Control group included Meniscus Plasty

Table 25: Meniscus Repair vs. Control/Non-Repair - Composite

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Zhou, 2016	Low	Lysholm Knee Score	2 yrs	Meniscus Repair with plasty: Normal anterolateral/anteromedial portals assisted with UAHLM portal (1-2 cm inferior to the anterolateral portal) were used. The criteria for a repair were a meniscus with good fixation and a reducible edge w/o degeneration and a rolled edge.	Meniscus Plasty only: Normal anterolateral/anteromedial portals assisted with UAHLM portal (1-2 cm inferior to the anterolateral portal) were used	Mean Difference	-2 (-4.58, 0.58)	NS
Zhou, 2016	Low	IKDC	2 yrs	Meniscus Repair with plasty: Normal anterolateral/anteromedial portals assisted with UAHLM portal (1-2 cm inferior to the anterolateral portal) were used. The criteria for a repair were a meniscus with good fixation and a reducible edge w/o degeneration and a rolled edge.	Meniscus Plasty only: Normal anterolateral/anteromedial portals assisted with UAHLM portal (1-2 cm inferior to the anterolateral portal) were used	Mean Difference	-1 (-3.47, 1.47)	NS

PICO 11: All-Inside vs. Inside Out

Figure 8: Inside-Out Technique vs. Other Technique – Summary of Findings

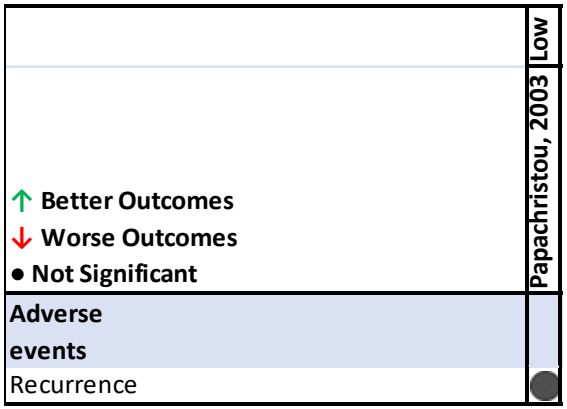


Table 26: Inside-Out technique vs. Other Technique - Adverse Events

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Papachristou, 2003	Low	Recurrence	3 yrs	Inside out arthroscopic technique + Rehab	Meniscal Repair w/ Arthroscopic Assistance: Meniscal Repair w/ Open Procedure + Rehab	RR	0.50(0.06,4.15)	NS

PICO 12: Bio-Enhancement

Figure 9: Biological Enhancement of Healing vs. Control/No Enhancement – Summary of Findings

	High		Low		
↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Kaminski, 2019	Liu, 2019	Everhart, 2019	Dai, 2019	Pujol, 2015
Composite					
IKDC	↑				●
KOOS Symptoms	↑	↑			●
Lysholm Knee Score		↑		●	
Ikeuchi Score				●	
Function					
KOOS ADL	↑	↑			●
KOOS Sports/Rec	↑	↑			↓
WOMAC	↑				
Clinical Efficacy		●			
Pain					
KOOS Pain	↑	↑			↓
VAS Pain at Rest	↑				
VAS Pain				●	
QOL					
KOOS QOL	↑	↑			●
Adverse events					
Reoperation	↑		↑		●
Failure				●	
OA progression					
IL-I (pg/L)		↑			
TNF-alpha (pg/L)		↑			
IL-6 (pg/L)		↑			

Kaminski, 2019: Bone Marrow Venting Procedure

All other studies: PRP

Table 27: PRP vs. Control/No Enhancement - Adverse Events

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Everhart, 2019	Low	Reoperation (Defined as subsequent meniscectomy, no evidence of healing on repeat arthroscopy, revision meniscal repair, or subsequent total knee arthroplasty)	3 yrs	Isolated Meniscal Repair with PRP w/ GPS III Platelet Concentration System and Angel System: GPS II prepared by first drawing 54 mL of blood from the patient followed by combining the blood with 6 mL of ACD-A (citrate anticoagulant) in a disposable separation tube, which was subsequently centrifuged at 3200 revs/min for 15 minutes. After centrifugation, the platelet-poor plasma was removed from the centrifugate, resulting in 6 to 7 mL of PRP, which was extracted to be injected intraoperatively. Angel prepared by 60 mL of whole blood was drawn preoperatively and spun down in the Angel centrifuge set at 2% hematocrit.	No PRP	Author Reported - Multivariate Cox Proportional Hazards	0.18(0.03,0.59)	**PRP**
Everhart, 2019	Low	Reoperation (Defined as subsequent meniscectomy, no evidence of healing on repeat arthroscopy, revision meniscal repair, or subsequent total knee arthroplasty)	3 yrs	Isolated Meniscal Repair with PRP w/ GPS III Platelet Concentration System: Prepared by first drawing 54 mL of blood from the patient followed by combining the blood with 6 mL of ACD-A (citrate anticoagulant) in a disposable separation tube, which was subsequently centrifuged at 3200 revs/min for 15 minutes. After centrifugation, the platelet-poor plasma was removed from the centrifugate, resulting in 6 to 7 mL of PRP, which was extracted to be injected intraoperatively.	No PRP	Author Reported - Multivariate Cox Proportional Hazards	0.14(0.01,0.67)	NS
Everhart, 2019	Low	Reoperation (Defined as subsequent meniscectomy, no evidence of healing on repeat arthroscopy, revision meniscal repair, or subsequent total knee arthroplasty)	3 yrs	Isolated Meniscal Repair with PRP w/ Angel System: 60 mL of whole blood was drawn preoperatively and spun down in the Angel centrifuge set at 2% hematocrit	No PRP	Author Reported - Multivariate Cox Proportional Hazards	0.19(0.01,0.88)	NS
Dai, 2019	Low	Failure (Patients developing symptoms of joint line pain and/or locking or swelling or requiring repeat arthroscopy)	2 yrs	Meniscus Repair w/ Inside Out Technique w/ PRP: 37 ml of the patient's blood was collected into a 50-ml injector containing 4 ml 3.8% sodium citrate as anticoagulant. Then, 2 centrifugations were performed: the first at 2000 rpm for 10 min to separate erythrocytes, and the second also at 2000 rpm for 10 min	Meniscus Repair w/ Inside out Technique and No PRP	RR	0.54(0.05,5.28)	NS
Pujol, 2015	Low	Reoperation (Partial or Subtotal Meniscectomy following repair)	3 yrs	Open meniscal repair w/ in situ injection of PRP: 6 ml of PRP was obtained using the GPS®III system and injected directly into the repaired lesion before the closure of the wound.	Isolated open meniscal repair: Open meniscal repair	RR	0.50(0.05,5.01)	NS

Table 28: PRP vs. Control/No Enhancement - Composite

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Liu, 2019	High	Lysholm Knee Score	6 mos	Arthroscopy combined with Platelet Rich Plasma prepared with specialized centrifuge: 50mL peripheral blood of patients was centrifuged twice at 1400r/min for 10 min. PRP was mixed with activating agent in a 5:1 proportion to get PRP gel which was then sutured to the injured area during meniscus repair.	Arthroscopy Alone: Arthroscopy system by Stryker, checking the knee joint thoroughly, and suturing the meniscus according to the situation of injury (FasT-Fix or Outside-in Suture)	Mean Difference	7.9 (6.63, 9.17)	**Arthroscopy combined with Platelet Rich Plasma prepared with specialized centrifuge**
Liu, 2019	High	KOOS Symptoms	6 mos	Arthroscopy combined with Platelet Rich Plasma prepared with specialized centrifuge: 50mL peripheral blood of patients was centrifuged twice at 1400r/min for 10 min. PRP was mixed with activating agent in a 5:1 proportion to get PRP gel which was then sutured to the injured area during meniscus repair.	Arthroscopy Alone: Arthroscopy system by Stryker, checking the knee joint thoroughly, and suturing the meniscus according to the situation of injury (FasT-Fix or Outside-in Suture)	Mean Difference	4.3 (2.57, 6.03)	**Arthroscopy combined with Platelet Rich Plasma prepared with specialized centrifuge**
Dai, 2019	Low	Lysholm Knee Score	2 yrs	Meniscus Repair w/ Inside Out Technique w/ PRP: 37 ml of the patient's blood was collected into a 50-ml injector containing 4 ml 3.8% sodium citrate as anticoagulant. Then, 2 centrifugations were performed: the first at 2000 rpm for 10 min to separate erythrocytes, and the second also at 2000 rpm for 10 min	Meniscus Repair w/ Inside out Technique and No PRP	Mean Difference	5.2 (-2.53, 12.93)	NS
Dai, 2019	Low	Ikeuchi Score (Excellent or Good grouped together; Fair and Poor grouped together)	2 yrs	Meniscus Repair w/ Inside Out Technique w/ PRP: 37 ml of the patient's blood was collected into a 50-ml injector containing 4 ml 3.8% sodium citrate as anticoagulant. Then, 2 centrifugations were performed: the first at 2000 rpm for 10 min to separate erythrocytes, and the second also at 2000 rpm for 10 min	Meniscus Repair w/ Inside out Technique and No PRP	RR	0.89(0.59,1.35)	NS
Pujol, 2015	Low	IKDC	3 yrs	Open meniscal repair w/ in situ injection of PRP: 5 ml of PRP was obtained using the GPS®III system and injected directly into the repaired lesion before the closure of the wound.	Isolated open meniscal repair: Open meniscal repair	Author Reported - Independent Samples t-Test and Mann-Whitney U Test	N/A	NS
Pujol, 2015	Low	KOOS Symptoms	3 yrs	Open meniscal repair w/ in situ injection of PRP: 5 ml of PRP was obtained using the GPS®III system and injected directly into the repaired lesion before the closure of the wound.	Isolated open meniscal repair: Open meniscal repair	Author Reported - Independent Samples t-Test and Mann-Whitney U Test	N/A	NS

Table 29: PRP vs. Control/No Enhancement - Function

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Liu, 2019	High	KOOS ADL	6 mos	Arthroscopy combined with Platelet Rich Plasma prepared with specialized centrifuge: 50mL peripheral blood of patients was centrifuged twice at 1400r/min for 10 min. PRP was mixed with activating agent in a 5:1 proportion to get PRP gel which was then sutured to the injured area during meniscus repair.	Arthroscopy Alone: Arthroscopy system by Stryker, checking the knee joint thoroughly, and suturing the meniscus according to the situation of injury (FasT-Fix or Outside-in Suture)	Mean Difference	5.3 (4.55, 6.05)	**Arthroscopy combined with Platelet Rich Plasma prepared with specialized centrifuge**
Liu, 2019	High	KOOS Sports/Rec	6 mos	Arthroscopy combined with Platelet Rich Plasma prepared with specialized centrifuge: 50mL peripheral blood of patients was centrifuged twice at 1400r/min for 10 min. PRP was mixed with activating agent in a 5:1 proportion to get PRP gel which was then sutured to the injured area during meniscus repair.	Arthroscopy Alone: Arthroscopy system by Stryker, checking the knee joint thoroughly, and suturing the meniscus according to the situation of injury (FasT-Fix or Outside-in Suture)	Mean Difference	5.5 (4.55, 6.45)	**Arthroscopy combined with Platelet Rich Plasma prepared with specialized centrifuge**
Liu, 2019	High	Clinical Efficacy (Judged according to functional recovery and pain of the knee joint: Grouped into Excellent and Good vs. Not Bad and Bad)	6 mos	Arthroscopy combined with Platelet Rich Plasma prepared with specialized centrifuge: 50mL peripheral blood of patients was centrifuged twice at 1400r/min for 10 min. PRP was mixed with activating agent in a 5:1 proportion to get PRP gel which was then sutured to the injured area during meniscus repair.	Arthroscopy Alone: Arthroscopy system by Stryker, checking the knee joint thoroughly, and suturing the meniscus according to the situation of injury (FasT-Fix or Outside-in Suture)	RR	1.11(0.98,1.27)	NS
Pujol, 2015	Low	KOOS ADL	3 yrs	Open meniscal repair w/ in situ injection of PRP: 5 ml of PRP was obtained using the GPS®III system and injected directly into the repaired lesion before the closure of the wound.	Isolated open meniscal repair: Open meniscal repair	Author Reported - Independent Samples t-Test and Mann-Whitney U Test	N/A	NS
Pujol, 2015	Low	KOOS Sports/Rec	3 yrs	Open meniscal repair w/ in situ injection of PRP: 5 ml of PRP was obtained using the GPS®III system and injected directly into the repaired lesion before the closure of the wound.	Isolated open meniscal repair: Open meniscal repair	Author Reported - Independent Samples t-Test and Mann-Whitney U Test	N/A	**Control/No Enhancement**

Table 30: PRP vs. Control/No Enhancement - OA Progression

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Liu, 2019	High	IL-I (pg/L) (Serum Inflammatory Factors measured by enzyme linked immunosorbent assay)	6 mos	Arthroscopy combined with Platelet Rich Plasma prepared with specialized centrifuge: 50mL peripheral blood of patients was centrifuged twice at 1400r/min for 10 min. PRP was mixed with activating agent in a 5:1 proportion to get PRP gel which was then sutured to the injured area during meniscus repair.	Arthroscopy Alone: Arthroscopy system by Stryker, checking the knee joint thoroughly, and suturing the meniscus according to the situation of injury (FasT-Fix or Outside-in Suture)	Mean Difference	-11.5 (-12.89, -10.11)	**Arthroscopy combined with Platelet Rich Plasma prepared with specialized centrifuge**
Liu, 2019	High	TNF-alpha (pg/L) (Serum Inflammatory Factors measured by enzyme linked immunosorbent assay)	6 mos	Arthroscopy combined with Platelet Rich Plasma prepared with specialized centrifuge: 50mL peripheral blood of patients was centrifuged twice at 1400r/min for 10 min. PRP was mixed with activating agent in a 5:1 proportion to get PRP gel which was then sutured to the injured area during meniscus repair.	Arthroscopy Alone: Arthroscopy system by Stryker, checking the knee joint thoroughly, and suturing the meniscus according to the situation of injury (FasT-Fix or Outside-in Suture)	Mean Difference	-15.2 (-17.85, -12.55)	**Arthroscopy combined with Platelet Rich Plasma prepared with specialized centrifuge**
Liu, 2019	High	IL-6 (pg/L) (Serum Inflammatory Factors measured by enzyme linked immunosorbent assay)	6 mos	Arthroscopy combined with Platelet Rich Plasma prepared with specialized centrifuge: 50mL peripheral blood of patients was centrifuged twice at 1400r/min for 10 min. PRP was mixed with activating agent in a 5:1 proportion to get PRP gel which was then sutured to the injured area during meniscus repair.	Arthroscopy Alone: Arthroscopy system by Stryker, checking the knee joint thoroughly, and suturing the meniscus according to the situation of injury (FasT-Fix or Outside-in Suture)	Mean Difference	-17.5 (-18.42, -16.58)	**Arthroscopy combined with Platelet Rich Plasma prepared with specialized centrifuge**

Table 31: PRP vs. Control/No Enhancement - Pain

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Liu, 2019	High	KOOS Pain	6 mos	Arthroscopy combined with Platelet Rich Plasma prepared with specialized centrifuge: 50mL peripheral blood of patients was centrifuged twice at 1400r/min for 10 min. PRP was mixed with activating agent in a 5:1 proportion to get PRP gel which was then sutured to the injured area during meniscus repair.	Arthroscopy Alone: Arthroscopy system by Stryker, checking the knee joint thoroughly, and suturing the meniscus according to the situation of injury (FasT-Fix or Outside-in Suture)	Mean Difference	4.5 (3.20, 5.80)	**Arthroscopy combined with Platelet Rich Plasma prepared with specialized centrifuge**
Dai, 2019	Low	VAS Pain	2 yrs	Meniscus Repair w/ Inside Out Technique w/ PRP: 37 ml of the patient's blood was collected into a 50-ml injector containing 4 ml 3.8% sodium citrate as anticoagulant. Then, 2 centrifugations were performed: the first at 2000 rpm for 10 min to separate erythrocytes, and the second also at 2000 rpm for 10 min	Meniscus Repair w/ Inside out Technique and No PRP	Mean Difference	-0.4 (-1.16, 0.36)	NS
Pujol, 2015	Low	KOOS Pain	3 yrs	Open meniscal repair w/ in situ injection of PRP: 5 ml of PRP was obtained using the GPS®III system and injected directly into the repaired lesion before the closure of the wound.	Isolated open meniscal repair: Open meniscal repair	Author Reported - Independent Samples t-Test and Mann-Whitney U Test	N/A	**Control/No Enhancement**

Table 32: PRP vs. Control/No Enhancement - QOL

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Liu, 2019	High	KOOS QOL	6 mos	Arthroscopy combined with Platelet Rich Plasma prepared with specialized centrifuge: 50mL peripheral blood of patients was centrifuged twice at 1400r/min for 10 min. PRP was mixed with activating agent in a 5:1 proportion to get PRP gel which was then sutured to the injured area during meniscus repair.	Arthroscopy Alone: Arthroscopy system by Stryker, checking the knee joint thoroughly, and suturing the meniscus according to the situation of injury (FasT-Fix or Outside-in Suture)	Mean Difference	7.1 (5.84, 8.36)	**Arthroscopy combined with Platelet Rich Plasma prepared with specialized centrifuge**
Pujol, 2015	Low	KOOS QOL	3 yrs	Open meniscal repair w/ in situ injection of PRP: 5 ml of PRP was obtained using the GPS®III system and injected directly into the repaired lesion before the closure of the wound.	Isolated open meniscal repair: Open meniscal repair	Author Reported - Independent Samples t-Test and Mann-Whitney U Test	N/A	NS

Table 33: BMVP vs. Control/No Enhancement - Adverse Events

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Kaminski, 2019	High	Reoperation (W/ a meniscectomy or meniscal repair)	3 yrs	All-Inside and Outside-In Meniscal Repair w/ Biological Augmentation Using a Bone Marrow Venting Procedure (BMVP) of the intercondylar notch: BMVP was performed with a standard 45 Chondro Pick device. A bloodless field was maintained with plasma radiofrequency device). BMVP was performed w/ 6 to 7 microfracture awl holes into the lateral aspect of the intercondylar notch to release bone marrow elements into the joint. No drainage was applied to the operated knee joint.	All-Inside and Outside-In Meniscal Repair Only: All menisci were repaired using standard procedures (rasping, reduction, fixation); Fixation was performed via the all-inside technique using a FasT-Fix device. In patients w/ a tear extending to the middle body, additional sutures were placed via the outside-in technique	RD	-0.24(-0.42,-0.06)	**All-Inside and Outside-In Meniscal Repair w/ Biological Augmentation Using a Bone Marrow Venting Procedure (BMVP) of the intercondylar notch**

Table 34: BMVP vs. Control/No Enhancement - Composite

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Kaminski, 2019	High	IKDC	2.5 yrs	All-Inside and Outside-In Meniscal Repair w/ Biological Augmentation Using a Bone Marrow Venting Procedure (BMVP) of the intercondylar notch: BMVP was performed with a standard 45 Chondro Pick device. A bloodless field was maintained with plasma radiofrequency device). BMVP was performed w/ 6 to 7 microfracture awl holes into the lateral aspect of the intercondylar notch to release bone marrow elements into the joint. No drainage was applied to the operated knee joint.	All-Inside and Outside-In Meniscal Repair Only: All menisci were repaired using standard procedures (rasping, reduction, fixation); Fixation was performed via the all-inside technique using a FasT-Fix device. In patients w/ a tear extending to the middle body, additional sutures were placed via the outside-in technique	Mean Difference	13.18 (12.87, 13.49)	**All-Inside and Outside-In Meniscal Repair w/ Biological Augmentation Using a Bone Marrow Venting Procedure (BMVP) of the intercondylar notch**
Kaminski, 2019	High	KOOS Symptoms	2.5 yrs	All-Inside and Outside-In Meniscal Repair w/ Biological Augmentation Using a Bone Marrow Venting Procedure (BMVP) of the intercondylar notch: BMVP was performed with a standard 45 Chondro Pick device. A bloodless field was maintained with plasma radiofrequency device). BMVP was performed w/ 6 to 7 microfracture awl holes into the lateral aspect of the intercondylar notch to release bone marrow elements into the joint. No drainage was applied to the operated knee joint.	All-Inside and Outside-In Meniscal Repair Only: All menisci were repaired using standard procedures (rasping, reduction, fixation); Fixation was performed via the all-inside technique using a FasT-Fix device. In patients w/ a tear extending to the middle body, additional sutures were placed via the outside-in technique	Mean Difference	5.54 (5.29, 5.79)	**All-Inside and Outside-In Meniscal Repair w/ Biological Augmentation Using a Bone Marrow Venting Procedure (BMVP) of the intercondylar notch**

Table 35: BMVP vs. Control/No Enhancement - Function

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Kaminski, 2019	High	WOMAC	2.5 yrs	All-Inside and Outside-In Meniscal Repair w/ Biological Augmentation Using a Bone Marrow Venting Procedure (BMVP) of the intercondylar notch: BMVP was performed with a standard 45 Chondro Pick device. A bloodless field was maintained with plasma radiofrequency device). BMVP was performed w/ 6 to 7 microfracture awl holes into the lateral aspect of the intercondylar notch to release bone marrow elements into the joint. No drainage was applied to the operated knee joint.	All-Inside and Outside-In Meniscal Repair Only: All menisci were repaired using standard procedures (rasping, reduction, fixation); Fixation was performed via the all-inside technique using a FasT-Fix device. In patients w/ a tear extending to the middle body, additional sutures were placed via the outside-in technique	Mean Difference	-2.37 (-2.47, -2.27)	**All-Inside and Outside-In Meniscal Repair w/ Biological Augmentation Using a Bone Marrow Venting Procedure (BMVP) of the intercondylar notch**
Kaminski, 2019	High	KOOS ADL	2.5 yrs	All-Inside and Outside-In Meniscal Repair w/ Biological Augmentation Using a Bone Marrow Venting Procedure (BMVP) of the intercondylar notch: BMVP was performed with a standard 45 Chondro Pick device. A bloodless field was maintained with plasma radiofrequency device). BMVP was performed w/ 6 to 7 microfracture awl holes into the lateral aspect of the intercondylar notch to release bone marrow elements into the joint. No drainage was applied to the operated knee joint.	All-Inside and Outside-In Meniscal Repair Only: All menisci were repaired using standard procedures (rasping, reduction, fixation); Fixation was performed via the all-inside technique using a FasT-Fix device. In patients w/ a tear extending to the middle body, additional sutures were placed via the outside-in technique	Mean Difference	2.87 (2.75, 2.99)	**All-Inside and Outside-In Meniscal Repair w/ Biological Augmentation Using a Bone Marrow Venting Procedure (BMVP) of the intercondylar notch**
Kaminski, 2019	High	KOOS Sports/Rec	2.5 yrs	All-Inside and Outside-In Meniscal Repair w/ Biological Augmentation Using a Bone Marrow Venting Procedure (BMVP) of the intercondylar notch: BMVP was performed with a standard 45 Chondro Pick device. A bloodless field was maintained with plasma radiofrequency device). BMVP was performed w/ 6 to 7 microfracture awl holes into the lateral aspect of the intercondylar notch to release bone marrow elements into the joint. No drainage was applied to the operated knee joint.	All-Inside and Outside-In Meniscal Repair Only: All menisci were repaired using standard procedures (rasping, reduction, fixation); Fixation was performed via the all-inside technique using a FasT-Fix device. In patients w/ a tear extending to the middle body, additional sutures were placed via the outside-in technique	Mean Difference	16.52 (16.05, 16.99)	**All-Inside and Outside-In Meniscal Repair w/ Biological Augmentation Using a Bone Marrow Venting Procedure (BMVP) of the intercondylar notch**

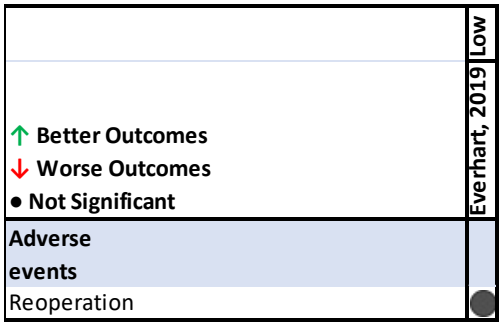
Table 36: BMVP vs. Control/No Enhancement - Pain

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Kaminski, 2019	High	VAS Pain at Rest	2.5 yrs	All-Inside and Outside-In Meniscal Repair w/ Biological Augmentation Using a Bone Marrow Venting Procedure (BMVP) of the intercondylar notch: BMVP was performed with a standard 45 Chondro Pick device. A bloodless field was maintained with plasma radiofrequency device). BMVP was performed w/ 6 to 7 microfracture awl holes into the lateral aspect of the intercondylar notch to release bone marrow elements into the joint. No drainage was applied to the operated knee joint.	All-Inside and Outside-In Meniscal Repair Only: All menisci were repaired using standard procedures (rasping, reduction, fixation); Fixation was performed via the all-inside technique using a FasT-Fix device. In patients w/ a tear extending to the middle body, additional sutures were placed via the outside-in technique	Mean Difference	-1.59 (-1.64, -1.54)	**All-Inside and Outside-In Meniscal Repair w/ Biological Augmentation Using a Bone Marrow Venting Procedure (BMVP) of the intercondylar notch**
Kaminski, 2019	High	KOOS Pain	2.5 yrs	All-Inside and Outside-In Meniscal Repair w/ Biological Augmentation Using a Bone Marrow Venting Procedure (BMVP) of the intercondylar notch: BMVP was performed with a standard 45 Chondro Pick device. A bloodless field was maintained with plasma radiofrequency device). BMVP was performed w/ 6 to 7 microfracture awl holes into the lateral aspect of the intercondylar notch to release bone marrow elements into the joint. No drainage was applied to the operated knee joint.	All-Inside and Outside-In Meniscal Repair Only: All menisci were repaired using standard procedures (rasping, reduction, fixation); Fixation was performed via the all-inside technique using a FasT-Fix device. In patients w/ a tear extending to the middle body, additional sutures were placed via the outside-in technique	Mean Difference	3.35 (3.21, 3.49)	**All-Inside and Outside-In Meniscal Repair w/ Biological Augmentation Using a Bone Marrow Venting Procedure (BMVP) of the intercondylar notch**

Table 37: BMVP vs. Control/No Enhancement - QOL

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Kaminski, 2019	High	KOOS QOL	2.5 yrs	All-Inside and Outside-In Meniscal Repair w/ Biological Augmentation Using a Bone Marrow Venting Procedure (BMVP) of the intercondylar notch: BMVP was performed with a standard 45 Chondro Pick device. A bloodless field was maintained with plasma radiofrequency device). BMVP was performed w/ 6 to 7 microfracture awl holes into the lateral aspect of the intercondylar notch to release bone marrow elements into the joint. No drainage was applied to the operated knee joint.	All-Inside and Outside-In Meniscal Repair Only: All menisci were repaired using standard procedures (rasping, reduction, fixation); Fixation was performed via the all-inside technique using a FasT-Fix device. In patients w/ a tear extending to the middle body, additional sutures were placed via the outside-in technique	Mean Difference	16.1 (15.65, 16.55)	**All-Inside and Outside-In Meniscal Repair w/ Biological Augmentation Using a Bone Marrow Venting Procedure (BMVP) of the intercondylar notch**

Figure 10: Biological Enhancement of Healing vs. Each Other – Summary of Findings



*PRP formulations vs one another

Table 38: PRP vs. Each Other - Adverse Events

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Everhart, 2019	Low	Reoperation (Defined as subsequent meniscectomy, no evidence of healing on repeat arthroscopy, revision meniscal repair, or subsequent total knee arthroplasty)	3 yrs	Isolated Meniscal Repair with PRP w/ GPS III Platelet Concentration System: Prepared by first drawing 54 mL of blood from the patient followed by combining the blood with 6 mL of ACD-A (citrate anticoagulant) in a disposable separation tube, which was subsequently centrifuged at 3200 revs/min for 15 minutes. After centrifugation, the platelet-poor plasma was removed from the centrifugate, resulting in 6 to 7 mL of PRP, which was extracted to be injected intraoperatively.	Isolated Meniscal Repair with PRP w/ Angel Concentrated Platelet Rich Plasma System: 60 mL of whole blood was drawn preoperatively and spun down in the Angel centrifuge set at 2% hematocrit	Author Reported - Multivariate Cox Proportional Hazards	1.33(0.05,33.60)	NS

PICO 13: OA Progression

Figure 11: Risk Factor: Meniscal Tear vs. Control Knee (No Tear) – Summary of Findings

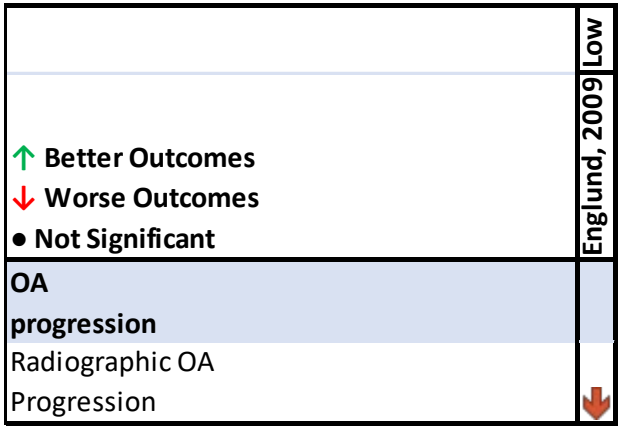


Table 39: Risk Factor: Meniscal Tear vs. Control Knee (No Tear) - OA Progression

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Englund, 2009	Low	Radiographic OA Progression	2.5 yrs	Minor Radial Tear or Parrot Beak Tear	No Damage to Meniscus	Author Reported - t-test or chi-square/Fisher's test	3.00(1.40,6.40)	**Control**
Englund, 2009	Low	Radiographic OA Progression	2.5 yrs	Non-Displaced or Displaced Tear	No Damage to Meniscus	Author Reported - t-test or chi-square/Fisher's test	7.90(4.40,14.00)	**Control**

Figure 12: Risk Factor: Meniscectomy vs. Control Knee (No Tear) –Summary of Findings

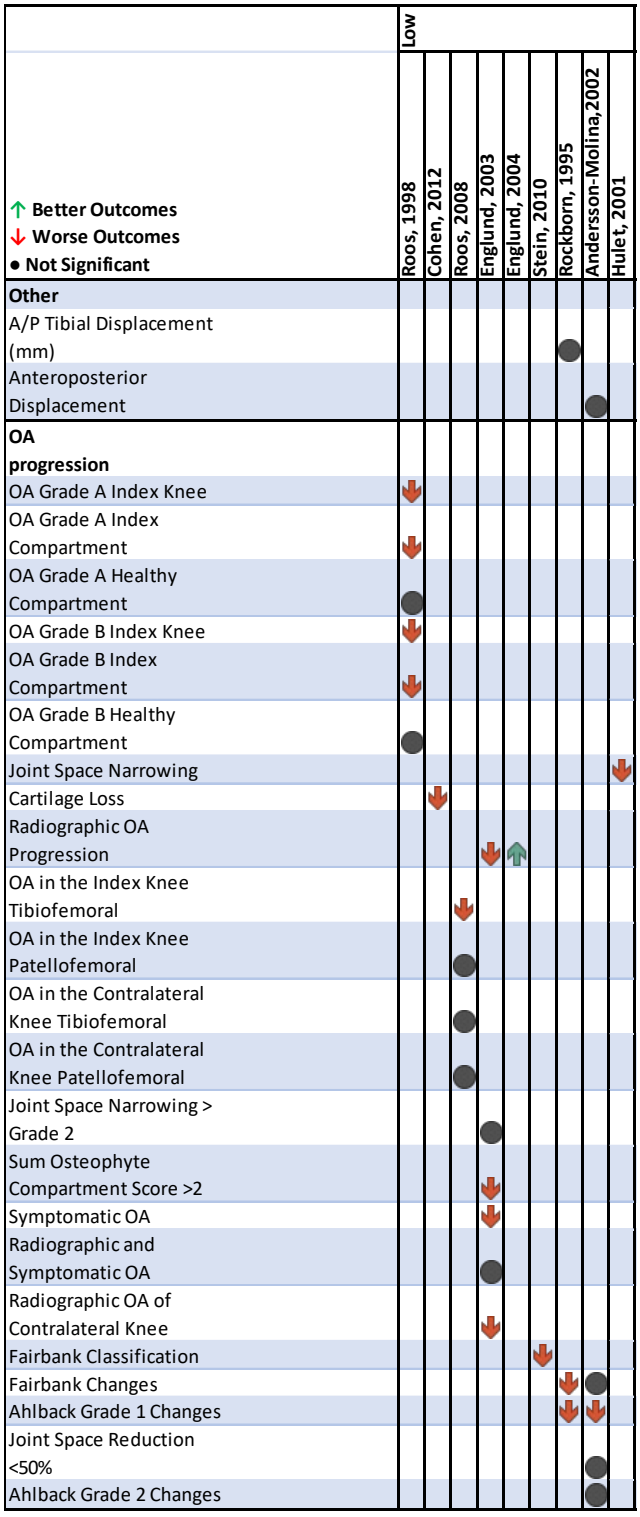


Table 40: Risk Factor: Meniscectomy vs. Control Knee (No Tear) - OA Progression

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Hulet, 2001	Low	Joint Space Narrowing (mean follow-up 12 yrs +/- 1 yr)	11 yrs	Limited Medial Meniscectomy	Control Knee (No Tear)	RD	0.16(0.06,0.27)	**Control Knee (No Tear)**
Cohen, 2012	Low	Cartilage Loss	1.5 yrs	Meniscectomy	Control Knee (No Tear)	RR	1.97(1.27,3.05)	**Control Knee (No Tear)**
Englund, 2003	Low	Radiographic OA Progression	16 yrs	Meniscectomy	Control Knee (No Tear)	Author Reported - Mantel-Haenszel test	3.20(1.40,7.30)	**Control**
Englund, 2003	Low	Joint Space Narrowing > Grade 2	16 yrs	Meniscectomy	Control Knee (No Tear)	Author Reported - Mantel-Haenszel test	4.00(0.80,18.80)	NS
Englund, 2003	Low	Sum Osteophyte Compartment Score >2	16 yrs	Meniscectomy	Control Knee (No Tear)	Author Reported - Mantel-Haenszel test	7.00(1.80,28.00)	**Control**
Englund, 2003	Low	Symptomatic OA	16 yrs	Meniscectomy	Control Knee (No Tear)	Author Reported - Mantel-Haenszel test	1.60(1.00,2.70)	**Control**
Englund, 2003	Low	Radiographic and Symptomatic OA	16 yrs	Meniscectomy	Control Knee (No Tear)	Author Reported - Mantel-Haenszel test	2.70(0.90,7.70)	NS
Englund, 2003	Low	Radiographic OA of Contralateral Knee	16 yrs	Meniscectomy	Control Knee (No Tear)	Author Reported - Mantel-Haenszel test	2.80(1.10,7.40)	**Control**
Englund, 2004	Low	Radiographic OA Progression	2 yrs	Meniscectomy	Control Knee (No Tear)	RR	0.62(0.43,0.89)	**Meniscectomy**
Englund, 2004	Low	Radiographic OA Progression	2 yrs	Meniscectomy	Control Knee (No Tear)	RR	0.76(0.44,1.32)	NS
Rockborn, 1995	Low	Fairbank Changes (mean follow-up 13 yrs, range 10-15 yrs, Ridge Formation, Narrowing of the Joint Space, Flattening of the Femoral Condyle)	10 yrs	Meniscectomy	Control Knee (No Tear)	RR	4.00(1.70,9.39)	**Control Knee (No Tear)**
Rockborn, 1995	Low	Ahlback Grade 1 Changes (mean follow-up 13 yrs, range 10-15 yrs, 50% reduction in joint space)	10 yrs	Meniscectomy	Control Knee (No Tear)	RR	8.00(1.06,60.43)	**Control Knee (No Tear)**
Roos, 1998	Low	OA Grade A Index Knee (presence of joint space narrowing of grade 1 or more)	21 yrs	Meniscectomy	Control Knee (No Tear): Age-sex matched controls	RR	4.02(2.37,6.82)	**Control Knee (No Tear)**
Roos, 1998	Low	OA Grade A Index Compartment (presence of joint space narrowing of grade 1 or more)	21 yrs	Meniscectomy	Control Knee (No Tear): Age-sex matched controls	RR	4.33(2.49,7.55)	**Control Knee (No Tear)**
Roos, 1998	Low	OA Grade A Healthy Compartment (presence of joint space narrowing of grade 1 or more)	21 yrs	Meniscectomy	Control Knee (No Tear): Age-sex matched controls	RR	3.50(0.80,15.29)	NS
Roos, 1998	Low	OA Grade B Index Knee	21 yrs	Meniscectomy	Control Knee (No Tear): Age-sex matched controls	RR	6.48(2.72,15.42)	**Control Knee (No Tear)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Roos, 1998	Low	OA Grade B Index Compartment	21 yrs	Meniscectomy	Control Knee (No Tear): Age-sex matched controls	RR	6.36(2.67,15.13)	**Control Knee (No Tear)**
Roos, 1998	Low	OA Grade B Healthy Compartment	21 yrs	Meniscectomy	Control Knee (No Tear): Age-sex matched controls	RR	1.59(0.32,7.96)	NS
Roos, 1998	Low	OA Grade A Index Knee	21 yrs	Meniscectomy	Control Knee (No Tear): Age-sex matched controls	Author Reported	9.80(3.50,37.60)	**Control**
Roos, 1998	Low	OA Grade B Index Knee	21 yrs	Meniscectomy	Control Knee (No Tear): Age-sex matched controls	Author Reported	14.00(3.50,121.20)	**Control**
Roos, 2008	Low	OA in the Index Knee Tibiofemoral	4 yrs	Meniscectomy	Control Knee (No Tear)	RR	5.91(2.29,15.28)	**Control Knee (No Tear)**
Roos, 2008	Low	OA in the Index Knee Patellofemoral	4 yrs	Meniscectomy	Control Knee (No Tear)	RR	3.00(0.97,9.25)	NS
Roos, 2008	Low	OA in the Contralateral Knee Tibiofemoral	4 yrs	Meniscectomy	Control Knee (No Tear)	RR	2.29(0.97,5.43)	NS
Roos, 2008	Low	OA in the Contralateral Knee Patellofemoral	4 yrs	Meniscectomy	Control Knee (No Tear)	RR	2.96(0.40,21.89)	NS
Andersson-Molina, 2002	Low	Fairbank Changes (mean follow-up 14 years, range 12-15 yrs)	12 yrs	Meniscectomy: Total Meniscectomy	Control Knee (No Tear)	RR	1.50(0.51,4.43)	NS
Andersson-Molina, 2002	Low	Joint Space Reduction <50% (mean follow-up 14 years, range 12-15 yrs)	12 yrs	Meniscectomy: Total Meniscectomy	Control Knee (No Tear)	RR	2.50(0.56,11.25)	NS
Andersson-Molina, 2002	Low	Ahlback Grade 1 Changes (mean follow-up 14 years, range 12-15 yrs)	12 yrs	Meniscectomy: Total Meniscectomy	Control Knee (No Tear)	RD	0.39(0.16,0.61)	**Control Knee (No Tear)**
Andersson-Molina, 2002	Low	Ahlback Grade 2 Changes (mean follow-up 14 years, range 12-15 yrs)	12 yrs	Meniscectomy: Total Meniscectomy	Control Knee (No Tear)	RD	0.00(0.00,0.00)	NS
Andersson-Molina, 2002	Low	Fairbank Changes (mean follow-up 14 years, range 12-15 yrs)	12 yrs	Partial Meniscectomy	Control Knee (No Tear)	RR	1.25(0.40,3.91)	NS
Andersson-Molina, 2002	Low	Joint Space Reduction <50% (mean follow-up 14 years, range 12-15 yrs)	12 yrs	Partial Meniscectomy	Control Knee (No Tear)	RR	2.00(0.42,9.58)	NS
Andersson-Molina, 2002	Low	Ahlback Grade 1 Changes (mean follow-up 14 years, range 12-15 yrs)	12 yrs	Partial Meniscectomy	Control Knee (No Tear)	RD	0.00(0.00,0.00)	NS
Andersson-Molina, 2002	Low	Ahlback Grade 2 Changes (mean follow-up 14 years, range 12-15 yrs)	12 yrs	Partial Meniscectomy	Control Knee (No Tear)	RD	0.06(-0.05,0.16)	NS
Stein, 2010	Low	Fairbank Classification (Grades 0 - 3)	9 yrs	Partial Meniscectomy	Control Knee (No Tear)	Mean Difference	0.6 (0.15, 1.05)	**Control Knee (No Tear)**

Table 41: Risk Factor: Meniscectomy vs. Control Knee (No Tear) - Other

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Rockborn, 1995	Low	A/P Tibial Displacement (mm) (mean follow-up 13 yrs, range 10-15 yrs, 20 deg flexion, 90N load, OSI Laxity Tester)	10 yrs	Meniscectomy	Control Knee (No Tear)	Mean Difference	0.5 (-0.43, 1.43)	NS
Andersson-Molina, 2002	Low	Anteroposterior Displacement (mean follow-up 14 years, range 12-15 yrs)	12 yrs	Meniscectomy: Total Meniscectomy	Control Knee (No Tear)	Author Reported - Wilcoxon Matched-Pairs Test	N/A	NS
Andersson-Molina, 2002	Low	Anteroposterior Displacement (mean follow-up 14 years, range 12-15 yrs)	12 yrs	Partial Meniscectomy	Control Knee (No Tear)	Author Reported - Wilcoxon Matched-Pairs Test	N/A	NS

Figure 13: Risk Factor – Total Meniscectomy vs. Partial Meniscectomy – Summary of Findings

↑ Better Outcomes ↓ Worse Outcomes● Not Significant	High Hede, 1986	Low Andersson-Molina,2002
Surgery		
Arthroscopic or Open Meniscus Surgery of theother Knee		●
Reoperation		●
Further Operation	●	
OAprogression		
Radiographic OAProgression		↓
Fairbank Changes		●
Ahlback Grade 1 Changes		↓
Joint Space Reduction<50%		●
Ahlback Grade 2 Changes		●
Joint Space Narrowing	●	
Other		
Varus Alignment		●
Valgus Alignment		●

Table 42: Risk Factor: Total Meniscectomy vs. Partial Meniscectomy - OA Progression

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Hede, 1986	High	Joint Space Narrowing	1 yrs	Meniscectomy: Total meniscectomy	Partial Meniscectomy	RR	0.90(0.55,1.47)	NS
Andersson-Molina, 2002	Low	Fairbank Changes (mean follow-up 14 years, range 12-15 yrs)	12 yrs	Meniscectomy: Total Meniscectomy	Partial Meniscectomy	RR	1.20(0.45,3.23)	NS
Andersson-Molina, 2002	Low	Joint Space Reduction <50% (mean follow-up 14 years, range 12-15 yrs)	12 yrs	Meniscectomy: Total Meniscectomy	Partial Meniscectomy	RR	1.25(0.40,3.91)	NS
Andersson-Molina, 2002	Low	Ahlback Grade 1 Changes (mean follow-up 14 years, range 12-15 yrs)	12 yrs	Meniscectomy: Total Meniscectomy	Partial Meniscectomy	RD	0.39(0.16,0.61)	Partial Meniscectomy
Andersson-Molina, 2002	Low	Ahlback Grade 2 Changes (mean follow-up 14 years, range 12-15 yrs)	12 yrs	Meniscectomy: Total Meniscectomy	Partial Meniscectomy	RD	-0.06(-0.16,0.05)	NS
Andersson-Molina, 2002	Low	Radiographic OA Progression (mean follow-up 14 years, range 12-15 yrs)	12 yrs	Meniscectomy: Total Meniscectomy	Partial Meniscectomy	Author Reported - McNemar's Test	N/A	Partial Meniscectomy

Table 43: Risk Factor: Total Meniscectomy vs. Partial Meniscectomy - Surgery

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Hede, 1986	High	Further Operation	1 yrs	Meniscectomy: Total meniscectomy	Partial Meniscectomy	RR	0.68(0.20,2.33)	NS
Andersson-Molina, 2002	Low	Reoperation (mean follow-up 14 years, range 12-15 yrs)	12 yrs	Meniscectomy: Total Meniscectomy	Partial Meniscectomy	RD	-0.06(-0.16,0.05)	NS
Andersson-Molina, 2002	Low	Arthroscopic or Open Meniscus Surgery of the other Knee (mean follow-up 14 years, range 12-15 yrs)	12 yrs	Meniscectomy: Total Meniscectomy	Partial Meniscectomy	RR	1.14(0.53,2.48)	NS

Table 44: Risk Factor: Total Meniscectomy vs. Partial Meniscectomy - Other

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Andersson-Molina, 2002	Low	Varus Alignment (mean follow-up 14 years, range 12-15 yrs)	12 yrs	Meniscectomy: Total Meniscectomy	Partial Meniscectomy	RR	1.20(0.71,2.03)	NS
Andersson-Molina, 2002	Low	Valgus Alignment (mean follow-up 14 years, range 12-15 yrs)	12 yrs	Meniscectomy: Total Meniscectomy	Partial Meniscectomy	RR	3.00(0.34,26.19)	NS

Figure 14: Risk Factor: Meniscal Treatment vs. Meniscal Treatment– Summary of Findings

- *Meniscal Treatment vs Meniscal Treatment
  - Meniscoplasty vs Total Meniscectomy
  - Lateral Meniscectomy vs Medial

	Low	
↑ **Better Outcomes** ↓ **Worse Outcomes** ● **Not Significant**	**Zhang, 2018**	**Rockborn, 1995**
Other		
Deviation Angle (Meniscoplasty vs Total Meniscectomy)	↓	
Intrinsic Varizing Distance (Meniscoplasty vs Total Meniscectomy)	↓	
Concentration ofProteoglycan Fragments(ug/ml) (Lateral vs Medial)		●
Radiographic OA Progression (Lateral vs Medial)		●

Table 45: Risk Factor: Meniscal Treatment vs. Meniscal Treatment - Other

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Zhang, 2018	Low	Deviation Angle	Postop.	Meniscoplasty	Total Meniscectomy	Mean Difference	-0.88 (-1.58, -0.18)	**Total Meniscectomy**
Zhang, 2018	Low	Intrinsic Varizing Distance	Postop.	Meniscoplasty	Total Meniscectomy	Mean Difference	-2.36 (-4.29, -0.43)	**Total Meniscectomy**

Table 46: Risk Factor: Meniscal Treatment vs. Meniscal Treatment - OA Progression

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Rockborn, 1995	Low	Concentration of Proteoglycan Fragments (ug/ml) (mean follow-up 13 yrs, range 10-15 yrs)	10 yrs	Lateral Meniscectomy	Medial Meniscectomy	Author Reported - ANOVA	N/A	NS
Rockborn, 1995	Low	Radiographic OA Progression (mean follow-up 13 yrs, range 10-15 yrs)	10 yrs	Lateral Meniscectomy	Medial Meniscectomy	Author Reported - Chi-Square, Fischer's Exact Test	N/A	NS

Figure 15: Risk Factor: Repair vs. Control Knee (No Tear) – Summary of Findings

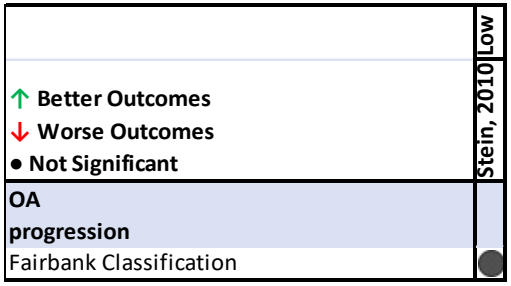


Table 47: Risk Factor: Repair vs. Control Knee (No Tear) - OA Progression

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Stein, 2010	Low	Fairbank Classification (Grades 0 - 3)	9 yrs	Meniscal Repair: Performed in full-thickness and vertical longitudinal tears greater than 1 cm in length or bucket-handle tears in the red-red to the red-white zone	Control Knee (No Tear)	Mean Difference	0.19 (-0.11, 0.49)	NS

Figure 16: Risk Factor: Repair vs. Partial Meniscectomy– Summary of Findings

	Stein, 2010 Low
↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	
OA progression	
Fairbank Classification	

Table 48: Risk Factor: Repair vs. Partial Meniscectomy - OA Progression

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Stein, 2010	Low	Fairbank Classification (Grades 0 - 3)	9 yrs	Meniscus Repair: Performed in full-thickness and vertical longitudinal tears greater than 1 cm in length or bucket-handle tears in the red-red to the red-white zone	Partial Meniscectomy: Performed in ruptures in the white-white zone	Mean Difference	-0.69 (-1.09, -0.29)	**Meniscus Repair**

PICO 14: Rehab

Figure 17: Bracing vs. Control – Summary of Findings 24

↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Dammerer, 2019 Moderate	Favreau, 2023 Low
Composite		
IKDC	●	
KOOS Symptoms	↑	↓
Function		
SF-12 Physical	●	
MARX	●	
KOOS ADL	↑	↓
KOOS Sports/Rec	↑	↓
Tegner Score		●
Pain		
KOOS Pain	↑	↓
QOL		
SF-12 Mental	●	
KOOS QOL	↑	↓
Adverse Events		
Reoperation		↓

*Dammerer reported multiple follow-ups for each outcome.

SoF table defaults to significant for an outcome if any follow-up is significant.

See full data tables for complete outcome information.

Table 49: Bracing vs. Control - Composite

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Dammerer, 2019	Moderate	IKDC	1.5 mos	Bracing: unloading knee brace worn for minimum 5h a day for 12 weeks	Control	Mean Difference	2.8 (-7.74, 13.34)	NS
Dammerer, 2019	Moderate	IKDC	3 mos	Bracing: unloading knee brace worn for minimum 5h a day for 12 weeks	Control	Mean Difference	2.4 (-7.76, 12.56)	NS
Dammerer, 2019	Moderate	IKDC	6 mos	Bracing: unloading knee brace worn for minimum 5h a day for 12 weeks	Control	Mean Difference	8.2 (-2.82, 19.22)	NS
Dammerer, 2019	Moderate	IKDC	1 yrs	Bracing: unloading knee brace worn for minimum 5h a day for 12 weeks	Control	Mean Difference	7 (-4.37, 18.37)	NS
Dammerer, 2019	Moderate	KOOS Symptoms	1.5 mos	Bracing: unloading knee brace worn for minimum 5h a day for 12 weeks	Control	Mean Difference	8.8 (-1.24, 18.84)	NS
Dammerer, 2019	Moderate	KOOS Symptoms	3 mos	Bracing: unloading knee brace worn for minimum 5h a day for 12 weeks	Control	Mean Difference	3.2 (-6.27, 12.67)	NS
Dammerer, 2019	Moderate	KOOS Symptoms	6 mos	Bracing: unloading knee brace worn for minimum 5h a day for 12 weeks	Control	Mean Difference	5 (-4.76, 14.76)	NS
Dammerer, 2019	Moderate	KOOS Symptoms	1 yrs	Bracing: unloading knee brace worn for minimum 5h a day for 12 weeks	Control	Mean Difference	13.6 (3.11, 24.09)	**Bracing**
Favreau, 2023	Low	KOOS Symptoms	7 yrs	Bracing: Wearing a brace	No Bracing: Did not wear a brace	Mean Difference	-11.1 (-14.95, -7.25)	**No Bracing**

Table 50: Bracing vs. Control - Function

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Dammerer, 2019	Moderate	SF-12 Physical	1.5 mos	Bracing: unloading knee brace worn for minimum 5h a day for 12 weeks	Control	Mean Difference	3 (-3.04, 9.04)	NS
Dammerer, 2019	Moderate	SF-12 Physical	3 mos	Bracing: unloading knee brace worn for minimum 5h a day for 12 weeks	Control	Mean Difference	1.5 (-3.88, 6.88)	NS
Dammerer, 2019	Moderate	SF-12 Physical	6 mos	Bracing: unloading knee brace worn for minimum 5h a day for 12 weeks	Control	Mean Difference	2.7 (-2.58, 7.98)	NS
Dammerer, 2019	Moderate	SF-12 Physical	1 yrs	Bracing: unloading knee brace worn for minimum 5h a day for 12 weeks	Control	Mean Difference	3.7 (-2.13, 9.53)	NS
Dammerer, 2019	Moderate	MARX	1.5 mos	Bracing: unloading knee brace worn for minimum 5h a day for 12 weeks	Control	Mean Difference	0.5 (-1.10, 2.10)	NS
Dammerer, 2019	Moderate	MARX	3 mos	Bracing: unloading knee brace worn for minimum 5h a day for 12 weeks	Control	Mean Difference	0.9 (-2.16, 3.96)	NS
Dammerer, 2019	Moderate	MARX	6 mos	Bracing: unloading knee brace worn for minimum 5h a day for 12 weeks	Control	Mean Difference	-1 (-3.09, 1.09)	NS
Dammerer, 2019	Moderate	MARX	1 yrs	Bracing: unloading knee brace worn for minimum 5h a day for 12 weeks	Control	Mean Difference	-0.7 (-3.02, 1.62)	NS
Dammerer, 2019	Moderate	KOOS ADL	1.5 mos	Bracing: unloading knee brace worn for minimum 5h a day for 12 weeks	Control	Mean Difference	4.9 (-3.64, 13.44)	NS
Dammerer, 2019	Moderate	KOOS ADL	3 mos	Bracing: unloading knee brace worn for minimum 5h a day for 12 weeks	Control	Mean Difference	6.4 (-3.31, 16.11)	NS
Dammerer, 2019	Moderate	KOOS ADL	6 mos	Bracing: unloading knee brace worn for minimum 5h a day for 12 weeks	Control	Mean Difference	6.5 (-1.90, 14.90)	NS
Dammerer, 2019	Moderate	KOOS ADL	1 yrs	Bracing: unloading knee brace worn for minimum 5h a day for 12 weeks	Control	Mean Difference	10.1 (0.05, 20.15)	**Bracing**
Dammerer, 2019	Moderate	KOOS Sports/Rec	1.5 mos	Bracing: unloading knee brace worn for minimum 5h a day for 12 weeks	Control	Mean Difference	10.1 (-6.84, 27.04)	NS
Dammerer, 2019	Moderate	KOOS Sports/Rec	3 mos	Bracing: unloading knee brace worn for minimum 5h a day for 12 weeks	Control	Mean Difference	8.7 (-5.73, 23.13)	NS
Dammerer, 2019	Moderate	KOOS Sports/Rec	6 mos	Bracing: unloading knee brace worn for minimum 5h a day for 12 weeks	Control	Mean Difference	19 (5.11, 32.89)	**Bracing**
Dammerer, 2019	Moderate	KOOS Sports/Rec	1 yrs	Bracing: unloading knee brace worn for minimum 5h a day for 12 weeks	Control	Mean Difference	18.4 (2.56, 34.24)	**Bracing**
Favreau, 2023	Low	KOOS ADL	7 yrs	Bracing: Wearing a brace	No Bracing: Did not wear a brace	Mean Difference	-2.6 (-4.95, -0.25)	**No Bracing**
Favreau, 2023	Low	KOOS Sports/Rec	7 yrs	Bracing: Wearing a brace	No Bracing: Did not wear a brace	Mean Difference	-16.6 (-22.22, -10.98)	**No Bracing**
Favreau, 2023	Low	Tegner Score	7 yrs	Bracing: Wearing a brace	No Bracing: Did not wear a brace	Mean Difference	0.4 (-0.05, 0.85)	NS

Table 51: Bracing vs. Control - Pain

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Dammerer, 2019	Moderate	KOOS Pain	1.5 mos	Bracing: unloading knee brace worn for minimum 5h a day for 12 weeks	Control	Mean Difference	4.1 (-6.49, 14.69)	NS
Dammerer, 2019	Moderate	KOOS Pain	3 mos	Bracing: unloading knee brace worn for minimum 5h a day for 12 weeks	Control	Mean Difference	6.6 (-4.45, 17.65)	NS
Dammerer, 2019	Moderate	KOOS Pain	6 mos	Bracing: unloading knee brace worn for minimum 5h a day for 12 weeks	Control	Mean Difference	7.9 (-1.37, 17.17)	NS
Dammerer, 2019	Moderate	KOOS Pain	1 yrs	Bracing: unloading knee brace worn for minimum 5h a day for 12 weeks	Control	Mean Difference	10.1 (-0.79, 20.99)	NS
Favreau, 2023	Low	KOOS Pain	7 yrs	Bracing: Wearing a brace	No Bracing: Did not wear a brace	Mean Difference	-2.9 (-5.64, -0.16)	No Bracing

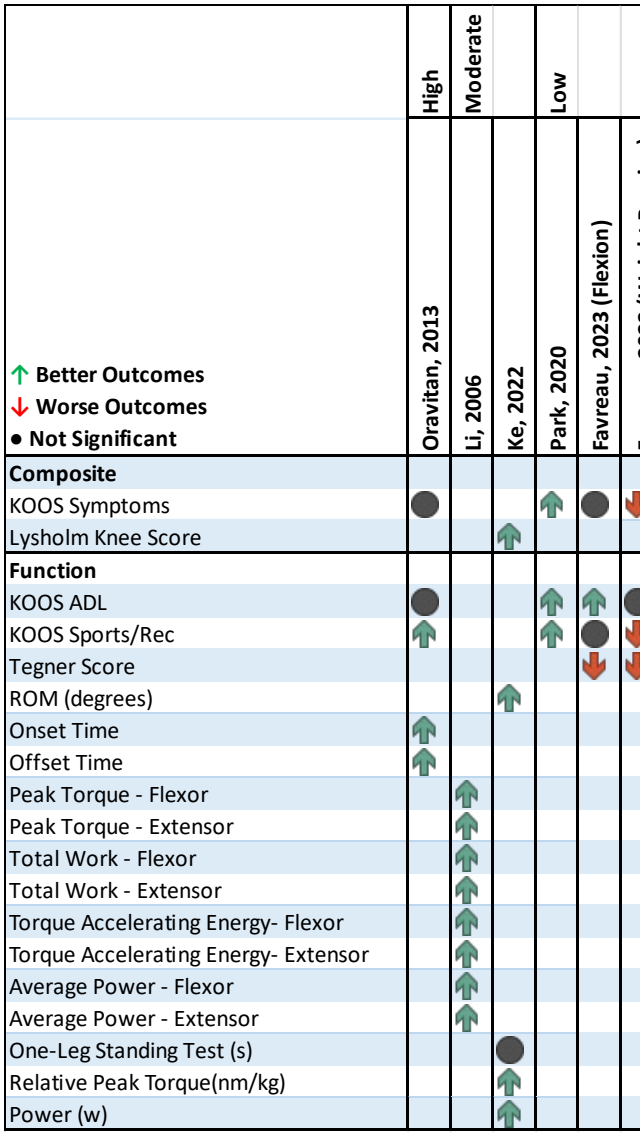
Table 52: Bracing vs. Control - QOL

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Dammerer, 2019	Moderate	SF-12 Mental	1.5 mos	Bracing: unloading knee brace worn for minimum 5h a day for 12 weeks	Control	Mean Difference	-1.7 (-7.87, 4.47)	NS
Dammerer, 2019	Moderate	SF-12 Mental	3 mos	Bracing: unloading knee brace worn for minimum 5h a day for 12 weeks	Control	Mean Difference	-3.5 (-8.06, 1.06)	NS
Dammerer, 2019	Moderate	SF-12 Mental	6 mos	Bracing: unloading knee brace worn for minimum 5h a day for 12 weeks	Control	Mean Difference	-0.5 (-5.37, 4.37)	NS
Dammerer, 2019	Moderate	SF-12 Mental	1 yrs	Bracing: unloading knee brace worn for minimum 5h a day for 12 weeks	Control	Mean Difference	2.5 (-2.58, 7.58)	NS
Dammerer, 2019	Moderate	KOOS QOL	1.5 mos	Bracing: unloading knee brace worn for minimum 5h a day for 12 weeks	Control	Mean Difference	6.8 (-7.39, 20.99)	NS
Dammerer, 2019	Moderate	KOOS QOL	3 mos	Bracing: unloading knee brace worn for minimum 5h a day for 12 weeks	Control	Mean Difference	12.9 (-1.08, 26.88)	NS
Dammerer, 2019	Moderate	KOOS QOL	6 mos	Bracing: unloading knee brace worn for minimum 5h a day for 12 weeks	Control	Mean Difference	17.7 (4.24, 31.16)	**Bracing**
Dammerer, 2019	Moderate	KOOS QOL	1 yrs	Bracing: unloading knee brace worn for minimum 5h a day for 12 weeks	Control	Mean Difference	13.6 (-1.60, 28.80)	NS
Favreau, 2023	Low	KOOS QOL	7 yrs	Bracing: Wearing a brace	No Bracing: Did not wear a brace	Mean Difference	-15.4 (-21.73, -9.07)	**No Bracing**

Table 53: Bracing vs. Control – Adverse Events

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Favreau, 2023	Low	Reoperation (Performing a secondary meniscectomy)	7 yrs	Bracing: Wearing a brace	No Bracing: Did not wear a brace	RR	1.65(1.08,2.53)	**No Bracing**

Figure 18: Rehabilitation/Rehabilitation Interventions vs. Control Summary of Findings



↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	High	Moderate		Low		
	Oravitan, 2013	Li, 2006	Ke, 2022	Park, 2020	Favreau, 2023 (Flexion)	
Composite						
KOOS Symptoms	●			↑	●	↓
Lysholm Knee Score			↑			
Function						
KOOS ADL	●			↑	↑	●
KOOS Sports/Rec	↑			↑	●	↓
Tegner Score					↓	↓
ROM (degrees)			↑			
Onset Time	↑					
Offset Time	↑					
Peak Torque - Flexor		↑				
Peak Torque - Extensor		↑				
Total Work - Flexor		↑				
Total Work - Extensor		↑				
Torque Accelerating Energy- Flexor		↑				
Torque Accelerating Energy- Extensor		↑				
Average Power - Flexor		↑				
Average Power - Extensor		↑				
One-Leg Standing Test (s)			●			
Relative Peak Torque(nm/kg)			↑			
Power (w)			↑			

↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	High	Moderate		Low		
	Oravitan, 2013	Li, 2006	Ke, 2022	Park, 2020	Favreau, 2023 (Flexion)	Favreau, 2023 (Weight Bearing)
Other						
Knee Muscles' Force	●					
Pain						
KOOS Pain	●			●	↑	●
VAS Pain at Rest			↑			
QOL						
KOOS QOL	●			↑	●	↓
Adverse Events						
Reoperation					●	●

*Ke, and Park reported multiple follow-ups for each outcome.

*Li reported multiple sub-outcomes for each umbrella outcome.

*Favreau reported multiple interventions

SoF table defaults to significant for an outcome if any iteration is significant.

See full data tables for complete outcome information.

Oravitan:

- Rehab + Electromyographic Biofeedback vs Rehab

Li:

- Isokinetic Exercise vs No Isokinetic Exercise

Ke:

- Blood Flow Restriction Training w/ Rehab vs Rehab

Park:

- Exercise Program vs Control

Favreau:

- Flexion < 90 degrees vs Full Flexion
- Weight Bearing vs No Weight Bearing

Table 54: Rehabilitation vs. Control - Composite

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Favreau, 2023	Low	KOOS Symptoms	7 yrs	Flexion < 90 degrees	Full Flexion	Mean Difference	5.4 (-3.67, 14.47)	NS
Favreau, 2023	Low	KOOS Symptoms	7 yrs	Weight Bearing: Immediately after surgery	Non-Weight Bearing	Mean Difference	-8.8 (-12.23, -5.37)	**Non-Weight Bearing**
Ke, 2022	Moderate	Lysholm Knee Score	Postop.	Blood Flow Restriction Training w/ Rehabilitation	Rehabilitation	Mean Difference	1.89 (-3.75, 7.53)	NS
Ke, 2022	Moderate	Lysholm Knee Score	1 mos	Blood Flow Restriction Training w/ Rehabilitation	Rehabilitation	Mean Difference	10.68 (6.51, 14.85)	**Blood Flow Restriction Training w/ Rehabilitation**
Ke, 2022	Moderate	Lysholm Knee Score	2 mos	Blood Flow Restriction Training w/ Rehabilitation	Rehabilitation	Mean Difference	12.96 (9.58, 16.34)	**Blood Flow Restriction Training w/ Rehabilitation**
Oravitan, 2013	High	KOOS Symptoms	2 mos	Rehabilitation + Electromyographic Biofeedback: Daily between the 1st and 8th week of surveillance. The surface EMG was assessed using an EMG-BFB device (Myomed 134) with 2 channels, an EMG sensitivity of 0.28 V – 150 mV, a raw EMG signal of 1,000 Hz, a processed signal of 100 Hz and an amplification of 10.8X	Rehabilitation: Same rehabilitation program as experimental group without the electromyographic biofeedback.	Mean Difference	0.72 (-2.54, 3.98)	NS
Park, 2020	Low	KOOS Symptoms	2 wks	Exercise Program: 1 text message sent per week after discharge excluding week 2, 20 minutes per exercise, purpose to strengthen muscles for ADL's	Control: Patients in control group received general postop discharge education through a leaflet	Mean Difference	13.6 (9.31, 17.89)	**Exercise Program**
Park, 2020	Low	KOOS Symptoms	1.5 mos	Exercise Program: 1 text message sent per week after discharge excluding week 2, 20 minutes per exercise, purpose to strengthen muscles for ADL's	Control: Patients in control group received general postop discharge education through a leaflet	Mean Difference	12.36 (6.59, 18.13)	**Exercise Program**

Table 55: Rehabilitation vs. Control - Function

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Favreau, 2023	Low	KOOS ADL	7 yrs	Flexion < 90 degrees	Full Flexion	Mean Difference	3.2 (0.22, 6.18)	**Flexion < 90 degrees**
Favreau, 2023	Low	KOOS Sports/Rec	7 yrs	Flexion < 90 degrees	Full Flexion	Mean Difference	-0.1 (-9.32, 9.12)	NS
Favreau, 2023	Low	Tegner Score	7 yrs	Flexion < 90 degrees	Full Flexion	Mean Difference	-0.8 (-1.14, -0.46)	**Full Flexion**
Favreau, 2023	Low	KOOS ADL	7 yrs	Weight Bearing: Immediately after surgery	Non-Weight Bearing	Mean Difference	2.1 (-1.13, 5.33)	NS
Favreau, 2023	Low	KOOS Sports/Rec	7 yrs	Weight Bearing: Immediately after surgery	Non-Weight Bearing	Mean Difference	-10 (-14.99, -5.01)	**Non-Weight Bearing**
Favreau, 2023	Low	Tegner Score	7 yrs	Weight Bearing: Immediately after surgery	Non-Weight Bearing	Mean Difference	-1.1 (-1.64, -0.56)	**Non-Weight Bearing**
Ke, 2022	Moderate	One-Leg Standing Test (s)	Postop.	Blood Flow Restriction Training w/ Rehabilitation	Rehabilitation	Author Reported - ANOVA, Kruskal-Wallis	N/A	NS
Ke, 2022	Moderate	One-Leg Standing Test (s)	1 mos	Blood Flow Restriction Training w/ Rehabilitation	Rehabilitation	Author Reported - ANOVA, Kruskal-Wallis	N/A	**Blood Flow Restriction Training w/ Routine Rehabilitation**
Ke, 2022	Moderate	One-Leg Standing Test (s)	2 mos	Blood Flow Restriction Training w/ Rehabilitation	Rehabilitation	Author Reported - ANOVA, Kruskal-Wallis	N/A	**Blood Flow Restriction Training w/ Routine Rehabilitation**
Ke, 2022	Moderate	ROM (degrees)	Postop.	Blood Flow Restriction Training w/ Rehabilitation	Rehabilitation	Mean Difference	-2.84 (-7.37, 1.69)	NS
Ke, 2022	Moderate	ROM (degrees)	1 mos	Blood Flow Restriction Training w/ Rehabilitation	Rehabilitation	Mean Difference	6.41 (2.89, 9.93)	**Blood Flow Restriction Training w/ Rehabilitation**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Ke, 2022	Moderate	ROM (degrees)	2 mos	Blood Flow Restriction Training w/ Rehabilitation	Rehabilitation	Mean Difference	6.51 (3.41, 9.61)	**Blood Flow Restriction Training w/ Rehabilitation**
Ke, 2022	Moderate	Relative Peak Torque (nm/kg)	Postop.	Blood Flow Restriction Training w/ Rehabilitation	Rehabilitation	Mean Difference	-0.06 (-0.36, 0.24)	NS
Ke, 2022	Moderate	Relative Peak Torque (nm/kg)	1 mos	Blood Flow Restriction Training w/ Rehabilitation	Rehabilitation	Mean Difference	0.35 (-0.04, 0.74)	NS
Ke, 2022	Moderate	Relative Peak Torque (nm/kg)	2 mos	Blood Flow Restriction Training w/ Rehabilitation	Rehabilitation	Mean Difference	0.56 (0.13, 0.99)	**Blood Flow Restriction Training w/ Rehabilitation**
Ke, 2022	Moderate	Power (w)	Postop.	Blood Flow Restriction Training w/ Rehabilitation	Rehabilitation	Mean Difference	0.84 (-17.03, 18.71)	NS
Ke, 2022	Moderate	Power (w)	1 mos	Blood Flow Restriction Training w/ Rehabilitation	Rehabilitation	Mean Difference	27.26 (-0.25, 54.77)	NS
Ke, 2022	Moderate	Power (w)	2 mos	Blood Flow Restriction Training w/ Rehabilitation	Rehabilitation	Mean Difference	37.02 (17.56, 56.48)	**Blood Flow Restriction Training w/ Rehabilitation**
Li, 2006	Moderate	Peak Torque - Flexor (60 degrees; measured in N m)	2 mos	Isokinetic Exercise: 2nd to 4th days postoperative began to carry out the functional rehabilitation, and received isokinetic exercise in both knees' flexor and extensors with the Cybex-6000 isokinetic dynamometer 3 weeks later	No Isokinetic Exercise: Did receive routine blocking, physiotherapy, massage, etc.	Mean Difference	15.16 (4.54, 25.78)	**Isokinetic Exercise**
Li, 2006	Moderate	Peak Torque - Flexor (120 degrees; measured in N m)	2 mos	Isokinetic Exercise: 2nd to 4th days postoperative began to carry out the functional rehabilitation, and received isokinetic exercise in both knees' flexor and extensors with the Cybex-6000 isokinetic dynamometer 3 weeks later	No Isokinetic Exercise: Did receive routine blocking, physiotherapy, massage, etc.	Mean Difference	11.57 (3.35, 19.79)	**Isokinetic Exercise**
Li, 2006	Moderate	Peak Torque - Flexor (180 degrees; measured in N m)	2 mos	Isokinetic Exercise: 2nd to 4th days postoperative began to carry out the functional rehabilitation, and received isokinetic exercise in both knees' flexor and extensors with the Cybex-6000 isokinetic dynamometer 3 weeks later	No Isokinetic Exercise: Did receive routine blocking, physiotherapy, massage, etc.	Mean Difference	7.97 (1.59, 14.35)	**Isokinetic Exercise**
Li, 2006	Moderate	Peak Torque - Extensor (60 degrees; measured in N m)	2 mos	Isokinetic Exercise: 2nd to 4th days postoperative began to carry out the functional rehabilitation, and received isokinetic exercise in both knees' flexor and extensors with the Cybex-6000 isokinetic dynamometer 3 weeks later	No Isokinetic Exercise: Did receive routine blocking, physiotherapy, massage, etc.	Mean Difference	23.6 (6.17, 41.03)	**Isokinetic Exercise**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Li, 2006	Moderate	Peak Torque - Extensor (120 degrees; measured in N m)	2 mos	Isokinetic Exercise: 2nd to 4th days postoperative began to carry out the functional rehabilitation, and received isokinetic exercise in both knees' flexor and extensors with the Cybex-6000 isokinetic dynamometer 3 weeks later	No Isokinetic Exercise: Did receive routine blocking, physiotherapy, massage, etc.	Mean Difference	16.33 (4.37, 28.29)	**Isokinetic Exercise**
Li, 2006	Moderate	Peak Torque - Extensor (180 degrees; measured in N m)	2 mos	Isokinetic Exercise: 2nd to 4th days postoperative began to carry out the functional rehabilitation, and received isokinetic exercise in both knees' flexor and extensors with the Cybex-6000 isokinetic dynamometer 3 weeks later	No Isokinetic Exercise: Did receive routine blocking, physiotherapy, massage, etc.	Mean Difference	7.63 (-9.29, 24.55)	NS
Li, 2006	Moderate	Total Work - Flexor (60 degrees; measured in J)	2 mos	Isokinetic Exercise: 2nd to 4th days postoperative began to carry out the functional rehabilitation, and received isokinetic exercise in both knees' flexor and extensors with the Cybex-6000 isokinetic dynamometer 3 weeks later	No Isokinetic Exercise: Did receive routine blocking, physiotherapy, massage, etc.	Mean Difference	21.78 (5.83, 37.73)	**Isokinetic Exercise**
Li, 2006	Moderate	Total Work - Flexor (120 degrees; measured in J)	2 mos	Isokinetic Exercise: 2nd to 4th days postoperative began to carry out the functional rehabilitation, and received isokinetic exercise in both knees' flexor and extensors with the Cybex-6000 isokinetic dynamometer 3 weeks later	No Isokinetic Exercise: Did receive routine blocking, physiotherapy, massage, etc.	Mean Difference	14.14 (0.53, 27.75)	**Isokinetic Exercise**
Li, 2006	Moderate	Total Work - Flexor (180 degrees; measured in J)	2 mos	Isokinetic Exercise: 2nd to 4th days postoperative began to carry out the functional rehabilitation, and received isokinetic exercise in both knees' flexor and extensors with the Cybex-6000 isokinetic dynamometer 3 weeks later	No Isokinetic Exercise: Did receive routine blocking, physiotherapy, massage, etc.	Mean Difference	6.79 (0.43, 13.15)	**Isokinetic Exercise**
Li, 2006	Moderate	Total Work - Extensor (60 degrees; measured in J)	2 mos	Isokinetic Exercise: 2nd to 4th days postoperative began to carry out the functional rehabilitation, and received isokinetic exercise in both knees' flexor and extensors with the Cybex-6000 isokinetic dynamometer 3 weeks later	No Isokinetic Exercise: Did receive routine blocking, physiotherapy, massage, etc.	Mean Difference	26.84 (7.34, 46.34)	**Isokinetic Exercise**
Li, 2006	Moderate	Total Work - Extensor (120 degrees; measured in J)	2 mos	Isokinetic Exercise: 2nd to 4th days postoperative began to carry out the functional rehabilitation, and received isokinetic exercise in both knees' flexor and extensors with the Cybex-6000 isokinetic dynamometer 3 weeks later	No Isokinetic Exercise: Did receive routine blocking, physiotherapy, massage, etc.	Mean Difference	20.51 (0.79, 40.23)	**Isokinetic Exercise**
Li, 2006	Moderate	Total Work - Extensor (180 degrees; measured in J)	2 mos	Isokinetic Exercise: 2nd to 4th days postoperative began to carry out the functional rehabilitation, and received isokinetic exercise in both knees' flexor and extensors with the Cybex-6000 isokinetic dynamometer 3 weeks later	No Isokinetic Exercise: Did receive routine blocking, physiotherapy, massage, etc.	Mean Difference	12.24 (0.57, 23.91)	**Isokinetic Exercise**
Li, 2006	Moderate	Torque Accelerating Energy - Flexor (60 degrees; measured in J)	2 mos	Isokinetic Exercise: 2nd to 4th days postoperative began to carry out the functional rehabilitation, and received isokinetic exercise in both knees' flexor and extensors with the Cybex-6000 isokinetic dynamometer 3 weeks later	No Isokinetic Exercise: Did receive routine blocking, physiotherapy, massage, etc.	Mean Difference	1.53 (0.03, 3.03)	**Isokinetic Exercise**
Li, 2006	Moderate	Torque Accelerating Energy - Flexor (120 degrees; measured in J)	2 mos	Isokinetic Exercise: 2nd to 4th days postoperative began to carry out the functional rehabilitation, and received isokinetic exercise in both knees' flexor and extensors with the Cybex-6000 isokinetic dynamometer 3 weeks later	No Isokinetic Exercise: Did receive routine blocking, physiotherapy, massage, etc.	Mean Difference	5.08 (1.48, 8.68)	**Isokinetic Exercise**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Li, 2006	Moderate	Torque Accelerating Energy - Flexor (180 degrees; measured in J)	2 mos	Isokinetic Exercise: 2nd to 4th days postoperative began to carry out the functional rehabilitation, and received isokinetic exercise in both knees' flexor and extensors with the Cybex-6000 isokinetic dynamometer 3 weeks later	No Isokinetic Exercise: Did receive routine blocking, physiotherapy, massage, etc.	Mean Difference	3.95 (0.76, 7.14)	**Isokinetic Exercise**
Li, 2006	Moderate	Torque Accelerating Energy - Extensor (60 degrees; measured in J)	2 mos	Isokinetic Exercise: 2nd to 4th days postoperative began to carry out the functional rehabilitation, and received isokinetic exercise in both knees' flexor and extensors with the Cybex-6000 isokinetic dynamometer 3 weeks later	No Isokinetic Exercise: Did receive routine blocking, physiotherapy, massage, etc.	Mean Difference	2.85 (-0.34, 6.04)	NS
Li, 2006	Moderate	Torque Accelerating Energy - Extensor (120 degrees; measured in J)	2 mos	Isokinetic Exercise: 2nd to 4th days postoperative began to carry out the functional rehabilitation, and received isokinetic exercise in both knees' flexor and extensors with the Cybex-6000 isokinetic dynamometer 3 weeks later	No Isokinetic Exercise: Did receive routine blocking, physiotherapy, massage, etc.	Mean Difference	2.62 (0.26, 4.98)	**Isokinetic Exercise**
Li, 2006	Moderate	Torque Accelerating Energy - Extensor (180 degrees; measured in J)	2 mos	Isokinetic Exercise: 2nd to 4th days postoperative began to carry out the functional rehabilitation, and received isokinetic exercise in both knees' flexor and extensors with the Cybex-6000 isokinetic dynamometer 3 weeks later	No Isokinetic Exercise: Did receive routine blocking, physiotherapy, massage, etc.	Mean Difference	0.77 (-3.85, 5.39)	NS
Li, 2006	Moderate	Average Power - Flexor (60 degrees; measured in W)	2 mos	Isokinetic Exercise: 2nd to 4th days postoperative began to carry out the functional rehabilitation, and received isokinetic exercise in both knees' flexor and extensors with the Cybex-6000 isokinetic dynamometer 3 weeks later	No Isokinetic Exercise: Did receive routine blocking, physiotherapy, massage, etc.	Mean Difference	11.14 (0.52, 21.76)	**Isokinetic Exercise**
Li, 2006	Moderate	Average Power - Flexor (120 degrees; measured in W)	2 mos	Isokinetic Exercise: 2nd to 4th days postoperative began to carry out the functional rehabilitation, and received isokinetic exercise in both knees' flexor and extensors with the Cybex-6000 isokinetic dynamometer 3 weeks later	No Isokinetic Exercise: Did receive routine blocking, physiotherapy, massage, etc.	Mean Difference	13.55 (0.59, 26.51)	**Isokinetic Exercise**
Li, 2006	Moderate	Average Power - Flexor (180 degrees; measured in W)	2 mos	Isokinetic Exercise: 2nd to 4th days postoperative began to carry out the functional rehabilitation, and received isokinetic exercise in both knees' flexor and extensors with the Cybex-6000 isokinetic dynamometer 3 weeks later	No Isokinetic Exercise: Did receive routine blocking, physiotherapy, massage, etc.	Mean Difference	12.48 (3.52, 21.44)	**Isokinetic Exercise**
Li, 2006	Moderate	Average Power - Extensor (60 degrees; measured in W)	2 mos	Isokinetic Exercise: 2nd to 4th days postoperative began to carry out the functional rehabilitation, and received isokinetic exercise in both knees' flexor and extensors with the Cybex-6000 isokinetic dynamometer 3 weeks later	No Isokinetic Exercise: Did receive routine blocking, physiotherapy, massage, etc.	Mean Difference	15.09 (4.13, 26.05)	**Isokinetic Exercise**
Li, 2006	Moderate	Average Power - Extensor (120 degrees; measured in W)	2 mos	Isokinetic Exercise: 2nd to 4th days postoperative began to carry out the functional rehabilitation, and received isokinetic exercise in both knees' flexor and extensors with the Cybex-6000 isokinetic dynamometer 3 weeks later	No Isokinetic Exercise: Did receive routine blocking, physiotherapy, massage, etc.	Mean Difference	19.47 (5.11, 33.83)	**Isokinetic Exercise**
Li, 2006	Moderate	Average Power - Extensor (180 degrees; measured in W)	2 mos	Isokinetic Exercise: 2nd to 4th days postoperative began to carry out the functional rehabilitation, and received isokinetic exercise in both knees' flexor and extensors with the Cybex-6000 isokinetic dynamometer 3 weeks later	No Isokinetic Exercise: Did receive routine blocking, physiotherapy, massage, etc.	Mean Difference	21.29 (5.65, 36.93)	**Isokinetic Exercise**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Oravitan, 2013	High	KOOS ADL	2 mos	Rehabilitation + Electromyographic Biofeedback: Daily between the 1st and 8th week of surveillance. The surface EMG was assessed using an EMG-BFB device (Myomed 134) with 2 channels, an EMG sensitivity of 0.28 V – 150 mV, a raw EMG signal of 1,000 Hz, a processed signal of 100 Hz and an amplification of 10.8X	Rehabilitation: Same rehabilitation program as experimental group without the electromyographic biofeedback.	Mean Difference	2.78 (-1.13, 6.69)	NS
Oravitan, 2013	High	KOOS Sports/Rec	2 mos	Rehabilitation + Electromyographic Biofeedback: Daily between the 1st and 8th week of surveillance. The surface EMG was assessed using an EMG-BFB device (Myomed 134) with 2 channels, an EMG sensitivity of 0.28 V – 150 mV, a raw EMG signal of 1,000 Hz, a processed signal of 100 Hz and an amplification of 10.8X	Rehabilitation: Same rehabilitation program as experimental group without the electromyographic biofeedback.	Mean Difference	5.17 (0.78, 9.56)	**Rehabilitation + Electromyographic Biofeedback**
Oravitan, 2013	High	Onset Time (Latency period needed for initiating the muscular contraction after an acoustic signal. Important for neuromuscular coordination recovery.)	2 mos	Rehabilitation + Electromyographic Biofeedback: Daily between the 1st and 8th week of surveillance. The surface EMG was assessed using an EMG-BFB device (Myomed 134) with 2 channels, an EMG sensitivity of 0.28 V – 150 mV, a raw EMG signal of 1,000 Hz, a processed signal of 100 Hz and an amplification of 10.8X	Rehabilitation: Same rehabilitation program as experimental group without the electromyographic biofeedback.	Mean Difference	-50.49 (-75.18, -25.80)	**Rehabilitation + Electromyographic Biofeedback**
Oravitan, 2013	High	Offset Time (Latency period needed for relaxation of the muscle after an acoustic signal. Important for neuromuscular coordination recovery.)	2 mos	Rehabilitation + Electromyographic Biofeedback: Daily between the 1st and 8th week of surveillance. The surface EMG was assessed using an EMG-BFB device (Myomed 134) with 2 channels, an EMG sensitivity of 0.28 V – 150 mV, a raw EMG signal of 1,000 Hz, a processed signal of 100 Hz and an amplification of 10.8X	Rehabilitation: Same rehabilitation program as experimental group without the electromyographic biofeedback.	Mean Difference	-112.14 (-143.50, -80.78)	**Rehabilitation + Electromyographic Biofeedback**
Park, 2020	Low	KOOS ADL	2 wks	Exercise Program: 1 text message sent per week after discharge excluding week 2, 20 minutes per exercise, purpose to strengthen muscles for ADL's	Control: Patients in control group received general postop discharge education through a leaflet	Mean Difference	9.78 (4.69, 14.87)	**Exercise Program**
Park, 2020	Low	KOOS ADL	1.5 mos	Exercise Program: 1 text message sent per week after discharge excluding week 2, 20 minutes per exercise, purpose to strengthen muscles for ADL's	Control: Patients in control group received general postop discharge education through a leaflet	Mean Difference	6.85 (3.79, 9.91)	**Exercise Program**
Park, 2020	Low	KOOS Sports/Rec	2 wks	Exercise Program: 1 text message sent per week after discharge excluding week 2, 20 minutes per exercise, purpose to strengthen muscles for ADL's	Control: Patients in control group received general postop discharge education through a leaflet	Mean Difference	9.81 (2.99, 16.63)	**Exercise Program**
Park, 2020	Low	KOOS Sports/Rec	1.5 mos	Exercise Program: 1 text message sent per week after discharge excluding week 2, 20 minutes per exercise, purpose to strengthen muscles for ADL's	Control: Patients in control group received general postop discharge education through a leaflet	Mean Difference	4.81 (2.18, 7.44)	**Exercise Program**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Park, 2020	Low	KOOS ADL	2 wks	Exercise Program: 1 text message sent per week after discharge excluding week 2, 20 minutes per exercise, purpose to strengthen muscles for ADL's	Control: Patients in control group received general postop discharge education through a leaflet	Mean Difference	9.78 (4.69, 14.87)	**Exercise Program**
Park, 2020	Low	KOOS ADL	1.5 mos	Exercise Program: 1 text message sent per week after discharge excluding week 2, 20 minutes per exercise, purpose to strengthen muscles for ADL's	Control: Patients in control group received general postop discharge education through a leaflet	Mean Difference	6.85 (3.79, 9.91)	**Exercise Program**
Park, 2020	Low	KOOS Sports/Rec	2 wks	Exercise Program: 1 text message sent per week after discharge excluding week 2, 20 minutes per exercise, purpose to strengthen muscles for ADL's	Control: Patients in control group received general postop discharge education through a leaflet	Mean Difference	9.81 (2.99, 16.63)	**Exercise Program**
Park, 2020	Low	KOOS Sports/Rec	1.5 mos	Exercise Program: 1 text message sent per week after discharge excluding week 2, 20 minutes per exercise, purpose to strengthen muscles for ADL's	Control: Patients in control group received general postop discharge education through a leaflet	Mean Difference	4.81 (2.18, 7.44)	**Exercise Program**

Table 56: Rehabilitation vs. Control - Other

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Oravitan, 2013	High	Knee Muscles' Force (Muscular Strength of Flexors)	2 mos	Rehabilitation + Electromyographic Biofeedback: Daily between the 1st and 8th week of surveillance. The surface EMG was assessed using an EMG-BFB device (Myomed 134) with 2 channels, an EMG sensitivity of 0.28 V – 150 mV, a raw EMG signal of 1,000 Hz, a processed signal of 100 Hz and an amplification of 10.8X	Rehabilitation: Same rehabilitation program as experimental group without the electromyographic biofeedback.	Mean Difference	-2.02 (-5.07, 1.03)	NS
Oravitan, 2013	High	Knee Muscles' Force (Muscular Strength of Extensors)	2 mos	Rehabilitation + Electromyographic Biofeedback: Daily between the 1st and 8th week of surveillance. The surface EMG was assessed using an EMG-BFB device (Myomed 134) with 2 channels, an EMG sensitivity of 0.28 V – 150 mV, a raw EMG signal of 1,000 Hz, a processed signal of 100 Hz and an amplification of 10.8X	Rehabilitation: Same rehabilitation program as experimental group without the electromyographic biofeedback.	Mean Difference	0.72 (-2.54, 3.98)	NS

Table 57: Rehabilitation vs. Control - Pain

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Favreau, 2023	Low	KOOS Pain	7 yrs	Flexion < 90 degrees	Full Flexion	Mean Difference	10.2 (1.30, 19.10)	**Flexion < 90 degrees**
Favreau, 2023	Low	KOOS Pain	7 yrs	Weight Bearing: Immediately after surgery	Non-Weight Bearing	Mean Difference	-1 (-4.63, 2.63)	NS
Ke, 2022	Moderate	VAS Pain at Rest	Postop.	Blood Flow Restriction Training w/ Rehabilitation	Rehabilitation	Mean Difference	0.11 (-0.48, 0.70)	NS
Ke, 2022	Moderate	VAS Pain at Rest	1 mos	Blood Flow Restriction Training w/ Rehabilitation	Rehabilitation	Mean Difference	-1.05 (-1.51, -0.59)	**Blood Flow Restriction Training w/ Rehabilitation**
Ke, 2022	Moderate	VAS Pain at Rest	2 mos	Blood Flow Restriction Training w/ Rehabilitation	Rehabilitation	Mean Difference	-1 (-1.42, -0.58)	**Blood Flow Restriction Training w/ Rehabilitation**
Oravitan, 2013	High	KOOS Pain	2 mos	Rehabilitation + Electromyographic Biofeedback: Daily between the 1st and 8th week of surveillance. The surface EMG was assessed using an EMG-BFB device (Myomed 134) with 2 channels, an EMG sensitivity of 0.28 V – 150 mV, a raw EMG signal of 1,000 Hz, a processed signal of 100 Hz and an amplification of 10.8X	Rehabilitation: Same rehabilitation program as experimental group without the electromyographic biofeedback.	Mean Difference	-2.02 (-5.07, 1.03)	NS
Park, 2020	Low	KOOS Pain	2 wks	Exercise Program: 1 text message sent per week after discharge excluding week 2, 20 minutes per exercise, purpose to strengthen muscles for ADL's	Control: Patients in control group received general postop discharge education through a leaflet	Mean Difference	4.17 (-0.75, 9.09)	NS
Park, 2020	Low	KOOS Pain	1.5 mos	Exercise Program: 1 text message sent per week after discharge excluding week 2, 20 minutes per exercise, purpose to strengthen muscles for ADL's	Control: Patients in control group received general postop discharge education through a leaflet	Mean Difference	2.13 (-1.15, 5.41)	NS

Table 58: Rehabilitation vs. Control - QOL

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Favreau, 2023	Low	KOOS QOL	7 yrs	Flexion < 90 degrees	Full Flexion	Mean Difference	-2.8 (-12.16, 6.56)	NS
Favreau, 2023	Low	KOOS QOL	7 yrs	Weight Bearing: Immediately after surgery	Non-Weight Bearing	Mean Difference	-7.7 (-14.50, -0.90)	**Non-Weight Bearing**
Oravitan, 2013	High	KOOS QOL	2 mos	Rehabilitation + Electromyographic Biofeedback: Daily between the 1st and 8th week of surveillance. The surface EMG was assessed using an EMG-BFB device (Myomed 134) with 2 channels, an EMG sensitivity of 0.28 V – 150 mV, a raw EMG signal of 1,000 Hz, a processed signal of 100 Hz and an amplification of 10.8X	Rehabilitation: Same rehabilitation program as experimental group without the electromyographic biofeedback.	Mean Difference	1.78 (-3.10, 6.66)	NS
Park, 2020	Low	KOOS QOL	2 wks	Exercise Program: 1 text message sent per week after discharge excluding week 2, 20 minutes per exercise, purpose to strengthen muscles for ADL's	Control: Patients in control group received general postop discharge education through a leaflet	Mean Difference	10.81 (5.96, 15.66)	**Exercise Program**
Park, 2020	Low	KOOS QOL	1.5 mos	Exercise Program: 1 text message sent per week after discharge excluding week 2, 20 minutes per exercise, purpose to strengthen muscles for ADL's	Control: Patients in control group received general postop discharge education through a leaflet	Mean Difference	5.52 (1.08, 9.96)	**Exercise Program**

Table 59: Rehabilitation vs. Control - Adverse Events

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Favreau, 2023	Low	Reoperation (Performing a secondary meniscectomy)	7 yrs	Weight Bearing: Immediately after surgery	Non-Weight Bearing	RR	1.78(1.00,3.16)	NS
Favreau, 2023	Low	Reoperation (Performing a secondary meniscectomy)	7 yrs	Flexion < 90 degrees	Full Flexion	RR	3.05(0.48,19.45)	NS

Figure 19: Rehabilitation Type vs. Rehabilitation Type - Summary of Findings

↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Lind, 2013 Moderate	Chen, 2022 Low
Composite		
IKDC		↑
KOOS Symptoms	●	
Function		
KOOS ADL	●	
KOOS Sports/Rec	●	
Tegner Score	●	
Flexion		↓
Extension		↑
60 degrees/s extension		●
60 degrees/s flexion		●
180 degrees/s extension		●
180 degrees/s flexion		↓
Y-Balance Test		↑
Pain		
KOOS Pain	●	
QOL		
KOOS QOL	●	
Adverseevents		
Failed Healing	↓	

*Lind and Chen reported multiple follow-ups for each outcome.

*Chen also reported multiple sub-outcomes for the Y-Balance Test umbrella outcome.

SoF table defaults to significant for an outcome if any follow-up is significant.

See full data tables for complete outcome information.

Table 60: Rehabilitation Type vs. Rehabilitation Type - Adverse Events

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Lind, 2013	Moderate	Failed Healing (Non-healed menisci at second-look arthroscopy)	1 yrs	Restricted Rehabilitation w/ Bracing: 6 weeks of hinged brace use with a gradual increase ROM to 90 degrees and only touch weightbearing during the 6 weeks.	Rehabilitation: 2 weeks range of motion, 0 - 90 degrees, no brace, and touch weightbearing, with unrestricted activity and free ROM allowed thereafter.	RR	4.47(1.05,18.98)	**Rehabilitation**
Lind, 2013	Moderate	Failed Healing (Non-healed menisci at second-look arthroscopy)	2 yrs	Restricted Rehabilitation w/ Bracing: 6 weeks of hinged brace use with a gradual increase ROM to 90 degrees and only touch weightbearing during the 6 weeks.	Rehabilitation: 2 weeks range of motion, 0 - 90 degrees, no brace, and touch weightbearing, with unrestricted activity and free ROM allowed thereafter.	RR	1.26(0.62,2.54)	NS

Table 61: Rehabilitation Type vs. Rehabilitation Type - Composite

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Chen, 2022	Low	IKDC	1.5 mos	Aquatic Training: 3x per week, continuous water aerobic routine, 32 minutes each session, from 6-24 weeks after surgery	Bicycling Training: 3x per week, continuous bicycling program, 32 minutes each session, from 6-24 weeks after surgery	Mean Difference	2.1 (-5.37, 9.57)	NS
Chen, 2022	Low	IKDC	3 mos	Aquatic Training: 3x per week, continuous water aerobic routine, 32 minutes each session, from 6-24 weeks after surgery	Bicycling Training: 3x per week, continuous bicycling program, 32 minutes each session, from 6-24 weeks after surgery	Mean Difference	9.6 (1.08, 18.12)	**Aquatic Training**
Chen, 2022	Low	IKDC	6 mos	Aquatic Training: 3x per week, continuous water aerobic routine, 32 minutes each session, from 6-24 weeks after surgery	Bicycling Training: 3x per week, continuous bicycling program, 32 minutes each session, from 6-24 weeks after surgery	Mean Difference	-2.3 (-8.52, 3.92)	NS
Lind, 2013	Moderate	KOOS Symptoms	1 yrs	Restricted Rehabilitation w/ Bracing: 6 weeks of hinged brace use with a gradual increase ROM to 90 degrees and only touch weightbearing during the 6 weeks.	Rehabilitation: 2 weeks range of motion, 0 - 90 degrees, no brace, and touch weightbearing, with unrestricted activity and free ROM allowed thereafter.	Mean Difference	4 (-4.66, 12.66)	NS
Lind, 2013	Moderate	KOOS Symptoms	2 yrs	Restricted Rehabilitation w/ Bracing: 6 weeks of hinged brace use with a gradual increase ROM to 90 degrees and only touch weightbearing during the 6 weeks.	Rehabilitation: 2 weeks range of motion, 0 - 90 degrees, no brace, and touch weightbearing, with unrestricted activity and free ROM allowed thereafter.	Mean Difference	-6 (-14.47, 2.47)	NS

Table 62: Rehabilitation Type vs. Rehabilitation Type - Function

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Chen, 2022	Low	Flexion (Degree)	1.5 mos	Aquatic Training: 3x per week, continuous water aerobic routine, 32 minutes each session, from 6-24 weeks after surgery	Bicycling Training: 3x per week, continuous bicycling program, 32 minutes each session, from 6-24 weeks after surgery	Mean Difference	1.9 (-2.07, 5.87)	NS
Chen, 2022	Low	Flexion (Degree)	3 mos	Aquatic Training: 3x per week, continuous water aerobic routine, 32 minutes each session, from 6-24 weeks after surgery	Bicycling Training: 3x per week, continuous bicycling program, 32 minutes each session, from 6-24 weeks after surgery	Mean Difference	-11.4 (-14.42, -8.38)	**Bicycling Training**
Chen, 2022	Low	Flexion (Degree)	6 mos	Aquatic Training: 3x per week, continuous water aerobic routine, 32 minutes each session, from 6-24 weeks after surgery	Bicycling Training: 3x per week, continuous bicycling program, 32 minutes each session, from 6-24 weeks after surgery	Mean Difference	0.1 (-1.78, 1.98)	NS
Chen, 2022	Low	Extension (Degree)	1.5 mos	Aquatic Training: 3x per week, continuous water aerobic routine, 32 minutes each session, from 6-24 weeks after surgery	Bicycling Training: 3x per week, continuous bicycling program, 32 minutes each session, from 6-24 weeks after surgery	Mean Difference	1.1 (-0.57, 2.77)	NS
Chen, 2022	Low	Extension (Degree)	3 mos	Aquatic Training: 3x per week, continuous water aerobic routine, 32 minutes each session, from 6-24 weeks after surgery	Bicycling Training: 3x per week, continuous bicycling program, 32 minutes each session, from 6-24 weeks after surgery	Mean Difference	3.7 (3.29, 4.11)	**Aquatic Training**
Chen, 2022	Low	Extension (Degree)	6 mos	Aquatic Training: 3x per week, continuous water aerobic routine, 32 minutes each session, from 6-24 weeks after surgery	Bicycling Training: 3x per week, continuous bicycling program, 32 minutes each session, from 6-24 weeks after surgery	Mean Difference	0.4 (0.02, 0.78)	**Aquatic Training**
Chen, 2022	Low	60 degrees/s extension	3 mos	Aquatic Training: 3x per week, continuous water aerobic routine, 32 minutes each session, from 6-24 weeks after surgery	Bicycling Training: 3x per week, continuous bicycling program, 32 minutes each session, from 6-24 weeks after surgery	Mean Difference	-21.8 (-44.80, 1.20)	NS
Chen, 2022	Low	60 degrees/s extension	6 mos	Aquatic Training: 3x per week, continuous water aerobic routine, 32 minutes each session, from 6-24 weeks after surgery	Bicycling Training: 3x per week, continuous bicycling program, 32 minutes each session, from 6-24 weeks after surgery	Mean Difference	-8.1 (-33.69, 17.49)	NS
Chen, 2022	Low	60 degrees/s flexion	3 mos	Aquatic Training: 3x per week, continuous water aerobic routine, 32 minutes each session, from 6-24 weeks after surgery	Bicycling Training: 3x per week, continuous bicycling program, 32 minutes each session, from 6-24 weeks after surgery	Mean Difference	-12.3 (-26.43, 1.83)	NS
Chen, 2022	Low	60 degrees/s flexion	6 mos	Aquatic Training: 3x per week, continuous water aerobic routine, 32 minutes each session, from 6-24 weeks after surgery	Bicycling Training: 3x per week, continuous bicycling program, 32 minutes each session, from 6-24 weeks after surgery	Mean Difference	-4.1 (-16.53, 8.33)	NS
Chen, 2022	Low	180 degrees/s extension	3 mos	Aquatic Training: 3x per week, continuous water aerobic routine, 32 minutes each session, from 6-24 weeks after surgery	Bicycling Training: 3x per week, continuous bicycling program, 32 minutes each session, from 6-24 weeks after surgery	Mean Difference	-6.3 (-25.26, 12.66)	NS
Chen, 2022	Low	180 degrees/s extension	6 mos	Aquatic Training: 3x per week, continuous water aerobic routine, 32 minutes each session, from 6-24 weeks after surgery	Bicycling Training: 3x per week, continuous bicycling program, 32 minutes each session, from 6-24 weeks after surgery	Mean Difference	-3.5 (-20.11, 13.11)	NS
Chen, 2022	Low	180 degrees/s flexion	3 mos	Aquatic Training: 3x per week, continuous water aerobic routine, 32 minutes each session, from 6-24 weeks after surgery	Bicycling Training: 3x per week, continuous bicycling program, 32 minutes each session, from 6-24 weeks after surgery	Mean Difference	-8.1 (-15.94, -0.26)	**Bicycling Training**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Chen, 2022	Low	180 degrees/s flexion	6 mos	Aquatic Training: 3x per week, continuous water aerobic routine, 32 minutes each session, from 6-24 weeks after surgery	Bicycling Training: 3x per week, continuous bicycling program, 32 minutes each session, from 6-24 weeks after surgery	Mean Difference	-5.4 (-12.43, 1.63)	NS
Chen, 2022	Low	Y-Balance Test (Anterior)	3 mos	Aquatic Training: 3x per week, continuous water aerobic routine, 32 minutes each session, from 6-24 weeks after surgery	Bicycling Training: 3x per week, continuous bicycling program, 32 minutes each session, from 6-24 weeks after surgery	Mean Difference	9.9 (4.00, 15.80)	**Aquatic Training**
Chen, 2022	Low	Y-Balance Test (Anterior)	6 mos	Aquatic Training: 3x per week, continuous water aerobic routine, 32 minutes each session, from 6-24 weeks after surgery	Bicycling Training: 3x per week, continuous bicycling program, 32 minutes each session, from 6-24 weeks after surgery	Mean Difference	0.8 (-5.86, 7.46)	NS
Chen, 2022	Low	Y-Balance Test (Posteromedial)	3 mos	Aquatic Training: 3x per week, continuous water aerobic routine, 32 minutes each session, from 6-24 weeks after surgery	Bicycling Training: 3x per week, continuous bicycling program, 32 minutes each session, from 6-24 weeks after surgery	Mean Difference	11.1 (3.50, 18.70)	**Aquatic Training**
Chen, 2022	Low	Y-Balance Test (Posteromedial)	6 mos	Aquatic Training: 3x per week, continuous water aerobic routine, 32 minutes each session, from 6-24 weeks after surgery	Bicycling Training: 3x per week, continuous bicycling program, 32 minutes each session, from 6-24 weeks after surgery	Mean Difference	7.6 (0.15, 15.05)	**Aquatic Training**
Chen, 2022	Low	Y-Balance Test (Posteromedial)	3 mos	Aquatic Training: 3x per week, continuous water aerobic routine, 32 minutes each session, from 6-24 weeks after surgery	Bicycling Training: 3x per week, continuous bicycling program, 32 minutes each session, from 6-24 weeks after surgery	Mean Difference	12.3 (6.14, 18.46)	**Aquatic Training**
Chen, 2022	Low	Y-Balance Test (Posteromedial)	6 mos	Aquatic Training: 3x per week, continuous water aerobic routine, 32 minutes each session, from 6-24 weeks after surgery	Bicycling Training: 3x per week, continuous bicycling program, 32 minutes each session, from 6-24 weeks after surgery	Mean Difference	2.5 (-4.51, 9.51)	NS
Chen, 2022	Low	Y-Balance Test	3 mos	Aquatic Training: 3x per week, continuous water aerobic routine, 32 minutes each session, from 6-24 weeks after surgery	Bicycling Training: 3x per week, continuous bicycling program, 32 minutes each session, from 6-24 weeks after surgery	Mean Difference	13.6 (7.43, 19.77)	**Aquatic Training**
Chen, 2022	Low	Y-Balance Test	6 mos	Aquatic Training: 3x per week, continuous water aerobic routine, 32 minutes each session, from 6-24 weeks after surgery	Bicycling Training: 3x per week, continuous bicycling program, 32 minutes each session, from 6-24 weeks after surgery	Mean Difference	3.4 (-2.86, 9.66)	NS
Lind, 2013	Moderate	KOOS ADL	1 yrs	Restricted Rehabilitation w/ Bracing: 6 weeks of hinged brace use with a gradual increase ROM to 90 degrees and only touch weightbearing during the 6 weeks.	Rehabilitation: 2 weeks range of motion, 0 - 90 degrees, no brace, and touch weightbearing, with unrestricted activity and free ROM allowed thereafter.	Mean Difference	-1 (-8.06, 6.06)	NS
Lind, 2013	Moderate	KOOS ADL	2 yrs	Restricted Rehabilitation w/ Bracing: 6 weeks of hinged brace use with a gradual increase ROM to 90 degrees and only touch weightbearing during the 6 weeks.	Rehabilitation: 2 weeks range of motion, 0 - 90 degrees, no brace, and touch weightbearing, with unrestricted activity and free ROM allowed thereafter.	Mean Difference	-2 (-8.00, 4.00)	NS
Lind, 2013	Moderate	KOOS Sports/Rec	1 yrs	Restricted Rehabilitation w/ Bracing: 6 weeks of hinged brace use with a gradual increase ROM to 90 degrees and only touch weightbearing during the 6 weeks.	Rehabilitation: 2 weeks range of motion, 0 - 90 degrees, no brace, and touch weightbearing, with unrestricted activity and free ROM allowed thereafter.	Mean Difference	-4 (-21.84, 13.84)	NS
Lind, 2013	Moderate	KOOS Sports/Rec	2 yrs	Restricted Rehabilitation w/ Bracing: 6 weeks of hinged brace use with a gradual increase ROM to 90 degrees and only touch weightbearing during the 6 weeks.	Rehabilitation: 2 weeks range of motion, 0 - 90 degrees, no brace, and touch weightbearing, with unrestricted activity and free ROM allowed thereafter.	Mean Difference	-9 (-22.82, 4.82)	NS
Lind, 2013	Moderate	Tegner Score	1 yrs	Restricted Rehabilitation w/ Bracing: 6 weeks of hinged brace use with a gradual increase ROM to 90 degrees and only touch weightbearing during the 6 weeks.	Rehabilitation: 2 weeks range of motion, 0 - 90 degrees, no brace, and touch weightbearing, with unrestricted activity and free ROM allowed thereafter.	Mean Difference	0.3 (-0.79, 1.39)	NS
Lind, 2013	Moderate	Tegner Score	2 yrs	Restricted Rehabilitation w/ Bracing: 6 weeks of hinged brace use with a gradual increase ROM to 90 degrees and only touch weightbearing during the 6 weeks.	Rehabilitation: 2 weeks range of motion, 0 - 90 degrees, no brace, and touch weightbearing, with unrestricted activity and free ROM allowed thereafter.	Mean Difference	-0.4 (-1.53, 0.73)	NS

Table 63: Rehabilitation Type vs. Rehabilitation Type - Pain

Reference Title	Quality	Outcome Details	Duration	Treatme 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Lind, 2013	Moderate	KOOS Pain	1 yrs	Restricted Rehabilitation w/ Bracing: 6 weeks of hinged brace use with a gradual increase ROM to 90 degrees and only touch weightbearing during the 6 weeks.	Rehabilitation: 2 weeks range of motion, 0 - 90 degrees, no brace, and touch weightbearing, with unrestricted activity and free ROM allowed thereafter.	Mean Difference	0 (-10.19, 10.19)	NS
Lind, 2013	Moderate	KOOS Pain	2 yrs	Restricted Rehabilitation w/ Bracing: 6 weeks of hinged brace use with a gradual increase ROM to 90 degrees and only touch weightbearing during the 6 weeks.	Rehabilitation: 2 weeks range of motion, 0 - 90 degrees, no brace, and touch weightbearing, with unrestricted activity and free ROM allowed thereafter.	Mean Difference	-5 (-13.00, 3.00)	NS

Table 64: Rehabilitation Type vs. Rehabilitation Type - QOL

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Lind, 2013	Moderate	KOOS QOL	1 yrs	Restricted Rehabilitation w/ Bracing: 6 weeks of hinged brace use with a gradual increase ROM to 90 degrees and only touch weightbearing during the 6 weeks.	Rehabilitation: 2 weeks range of motion, 0 - 90 degrees, no brace, and touch weightbearing, with unrestricted activity and free ROM allowed thereafter.	Mean Difference	3 (-12.09, 18.09)	NS
Lind, 2013	Moderate	KOOS QOL	2 yrs	Restricted Rehabilitation w/ Bracing: 6 weeks of hinged brace use with a gradual increase ROM to 90 degrees and only touch weightbearing during the 6 weeks.	Rehabilitation: 2 weeks range of motion, 0 - 90 degrees, no brace, and touch weightbearing, with unrestricted activity and free ROM allowed thereafter.	Mean Difference	1 (-12.58, 14.58)	NS

Figure 20: Insole vs. Control – Summary of Findings

↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Moderate Dammerer, 2019
Composite	
IKDC	●
KOOS Symptoms	●
Function	
KOOS ADL	↓
KOOS Sports/Rec	↑
SF-12 Physical	●
MARX	●
Pain	
KOOS Pain	↑
QOL	
KOOS QOL	↑
SF-12 Mental	↓

Table 65: Insole vs. Control - Composite

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Dammerer, 2019	Moderate	IKDC	1.5 mos	Insole Group: lateral wedge insole worn for a minimum of 5h a day for 12 weeks	Control	Mean Difference	-0.6 (-11.04, 9.84)	NS
Dammerer, 2019	Moderate	IKDC	3 mos	Insole Group: lateral wedge insole worn for a minimum of 5h a day for 12 weeks	Control	Mean Difference	-7.4 (-19.23, 4.43)	NS
Dammerer, 2019	Moderate	IKDC	6 mos	Insole Group: lateral wedge insole worn for a minimum of 5h a day for 12 weeks	Control	Mean Difference	4.2 (-7.44, 15.84)	NS
Dammerer, 2019	Moderate	IKDC	1 yrs	Insole Group: lateral wedge insole worn for a minimum of 5h a day for 12 weeks	Control	Mean Difference	8.7 (-2.85, 20.25)	NS
Dammerer, 2019	Moderate	KOOS Symptoms	1.5 mos	Insole Group: lateral wedge insole worn for a minimum of 5h a day for 12 weeks	Control	Mean Difference	5.6 (-5.62, 16.82)	NS
Dammerer, 2019	Moderate	KOOS Symptoms	3 mos	Insole Group: lateral wedge insole worn for a minimum of 5h a day for 12 weeks	Control	Mean Difference	-2.2 (-13.46, 9.06)	NS
Dammerer, 2019	Moderate	KOOS Symptoms	6 mos	Insole Group: lateral wedge insole worn for a minimum of 5h a day for 12 weeks	Control	Mean Difference	4 (-6.16, 14.16)	NS
Dammerer, 2019	Moderate	KOOS Symptoms	1 yrs	Insole Group: lateral wedge insole worn for a minimum of 5h a day for 12 weeks	Control	Mean Difference	4.9 (-7.84, 17.64)	NS

Table 66: Insole vs. Control - Function

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Dammerer, 2019	Moderate	SF-12 Physical	1.5 mos	Insole Group: lateral wedge insole worn for a minimum of 5h a day for 12 weeks	Control	Mean Difference	-2.5 (-9.50, 4.50)	NS
Dammerer, 2019	Moderate	SF-12 Physical	3 mos	Insole Group: lateral wedge insole worn for a minimum of 5h a day for 12 weeks	Control	Mean Difference	-4.3 (-10.31, 1.71)	NS
Dammerer, 2019	Moderate	SF-12 Physical	6 mos	Insole Group: lateral wedge insole worn for a minimum of 5h a day for 12 weeks	Control	Mean Difference	1.8 (-4.04, 7.64)	NS
Dammerer, 2019	Moderate	SF-12 Physical	1 yrs	Insole Group: lateral wedge insole worn for a minimum of 5h a day for 12 weeks	Control	Mean Difference	1.4 (-5.17, 7.97)	NS
Dammerer, 2019	Moderate	MARX	1.5 mos	Insole Group: lateral wedge insole worn for a minimum of 5h a day for 12 weeks	Control	Mean Difference	0 (-1.36, 1.36)	NS
Dammerer, 2019	Moderate	MARX	3 mos	Insole Group: lateral wedge insole worn for a minimum of 5h a day for 12 weeks	Control	Mean Difference	-1.4 (-3.87, 1.07)	NS
Dammerer, 2019	Moderate	MARX	6 mos	Insole Group: lateral wedge insole worn for a minimum of 5h a day for 12 weeks	Control	Mean Difference	-0.6 (-2.55, 1.35)	NS
Dammerer, 2019	Moderate	MARX	1 yrs	Insole Group: lateral wedge insole worn for a minimum of 5h a day for 12 weeks	Control	Mean Difference	0.3 (-1.73, 2.33)	NS
Dammerer, 2019	Moderate	KOOS ADL	1.5 mos	Insole Group: lateral wedge insole worn for a minimum of 5h a day for 12 weeks	Control	Mean Difference	4.4 (-6.60, 15.40)	NS
Dammerer, 2019	Moderate	KOOS ADL	3 mos	Insole Grousoup: lateral wedge insole worn for a minimum of 5h a day for 12 weeks	Control	Mean Difference	-31.3 (-45.83, -16.77)	**Control**
Dammerer, 2019	Moderate	KOOS ADL	6 mos	Insole Group: lateral wedge insole worn for a minimum of 5h a day for 12 weeks	Control	Mean Difference	-24.7 (-38.84, -10.56)	**Control**
Dammerer, 2019	Moderate	KOOS ADL	1 yrs	Insole Group: lateral wedge insole worn for a minimum of 5h a day for 12 weeks	Control	Mean Difference	-8.6 (-23.87, 6.67)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Dammerer, 2019	Moderate	KOOS Sports/Rec	1.5 mos	Insole Group: lateral wedge insole worn for a minimum of 5h a day for 12 weeks	Control	Mean Difference	17.6 (0.54, 34.66)	**Insole Group**
Dammerer, 2019	Moderate	KOOS Sports/Rec	3 mos	Insole Group: lateral wedge insole worn for a minimum of 5h a day for 12 weeks	Control	Mean Difference	-6.7 (-23.12, 9.72)	NS
Dammerer, 2019	Moderate	KOOS Sports/Rec	6 mos	Insole Group: lateral wedge insole worn for a minimum of 5h a day for 12 weeks	Control	Mean Difference	12.7 (-4.18, 29.58)	NS
Dammerer, 2019	Moderate	KOOS Sports/Rec	1 yrs	Insole Group: lateral wedge insole worn for a minimum of 5h a day for 12 weeks	Control	Mean Difference	14 (-3.89, 31.89)	NS

Table 67: Insole vs. Control - Pain

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Dammerer, 2019	Moderate	KOOS Pain	1.5 mos	Insole Group: lateral wedge insole worn for a minimum of 5h a day for 12 weeks	Control	Mean Difference	10.8 (0.12, 21.48)	**Insole Group**
Dammerer, 2019	Moderate	KOOS Pain	3 mos	Insole Group: lateral wedge insole worn for a minimum of 5h a day for 12 weeks	Control	Mean Difference	-0.3 (-12.04, 11.44)	NS
Dammerer, 2019	Moderate	KOOS Pain	6 mos	Insole Group: lateral wedge insole worn for a minimum of 5h a day for 12 weeks	Control	Mean Difference	0 (-11.94, 11.94)	NS
Dammerer, 2019	Moderate	KOOS Pain	1 yrs	Insole Group: lateral wedge insole worn for a minimum of 5h a day for 12 weeks	Control	Mean Difference	8.4 (-4.48, 21.28)	NS

Table 68: Insole vs. Control - QOL

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Dammerer, 2019	Moderate	SF-12 Mental	1.5 mos	Insole Group: lateral wedge insole worn for a minimum of 5h a day for 12 weeks	Control	Mean Difference	-4.3 (-10.53, 1.93)	NS
Dammerer, 2019	Moderate	SF-12 Mental	3 mos	Insole Group: lateral wedge insole worn for a minimum of 5h a day for 12 weeks	Control	Mean Difference	-6 (-11.52, -0.48)	**Control**
Dammerer, 2019	Moderate	SF-12 Mental	6 mos	Insole Group: lateral wedge insole worn for a minimum of 5h a day for 12 weeks	Control	Mean Difference	-4.1 (-9.11, 0.91)	NS
Dammerer, 2019	Moderate	SF-12 Mental	1 yrs	Insole Group: lateral wedge insole worn for a minimum of 5h a day for 12 weeks	Control	Mean Difference	2.3 (-2.70, 7.30)	NS
Dammerer, 2019	Moderate	KOOS QOL	1.5 mos	Insole Group: lateral wedge insole worn for a minimum of 5h a day for 12 weeks	Control	Mean Difference	3.4 (-10.66, 17.46)	NS
Dammerer, 2019	Moderate	KOOS QOL	3 mos	Insole Group: lateral wedge insole worn for a minimum of 5h a day for 12 weeks	Control	Mean Difference	0.4 (-15.22, 16.02)	NS
Dammerer, 2019	Moderate	KOOS QOL	6 mos	Insole Group: lateral wedge insole worn for a minimum of 5h a day for 12 weeks	Control	Mean Difference	12.7 (-19.76, 45.16)	NS
Dammerer, 2019	Moderate	KOOS QOL	1 yrs	Insole Group: lateral wedge insole worn for a minimum of 5h a day for 12 weeks	Control	Mean Difference	16.7 (0.27, 33.13)	**Insole Group**

PICO 15: Meniscal Augmentation

No included evidence

Meta Analyses

Likelihood Threshold Key

Positive Likelihood Ratio	Negative Likelihood Ratio	Test strength	Interpretation
≥10	≤0.1	Strong	Large and conclusive change in probability of tear
≥5 but <10	>0.1 but ≤0.2	Moderate	Moderate change in probability of tear
>2 and <5	>0.2 but <0.5	Weak	Small (but sometimes important) change in probability of tear
≤2	≥0.5	Poor	Small (and rarely important) change in probability of tear

PICO 1

McMurray Test- Statistics (Medial Meniscus)

Parameter:	**Estimate [95% CI]**
Sensitivity:	0.74 [0.39, 0.93]
Specificity:	0.76 [0.42, 0.93]
Positive Likelihood Ratio:	3.1 [1.1, 8.8] (Weak)
Negative Likelihood Ratio:	0.34 [0.12, 0.96] (Weak)
Diagnostic Odds Ratio:	9 [2, 48]

Figure 4 McMurray Test- Positive and Negative Likelihood Ratios (Medial Meniscus)

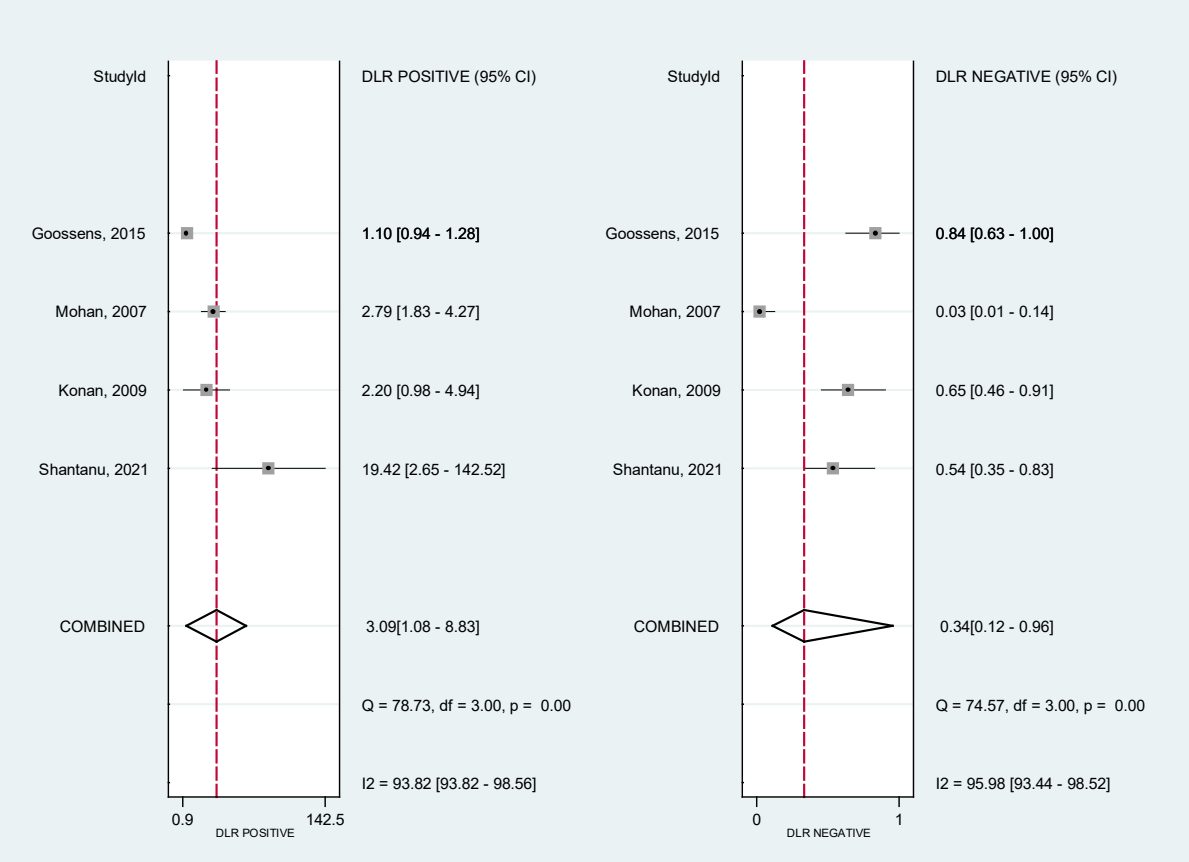
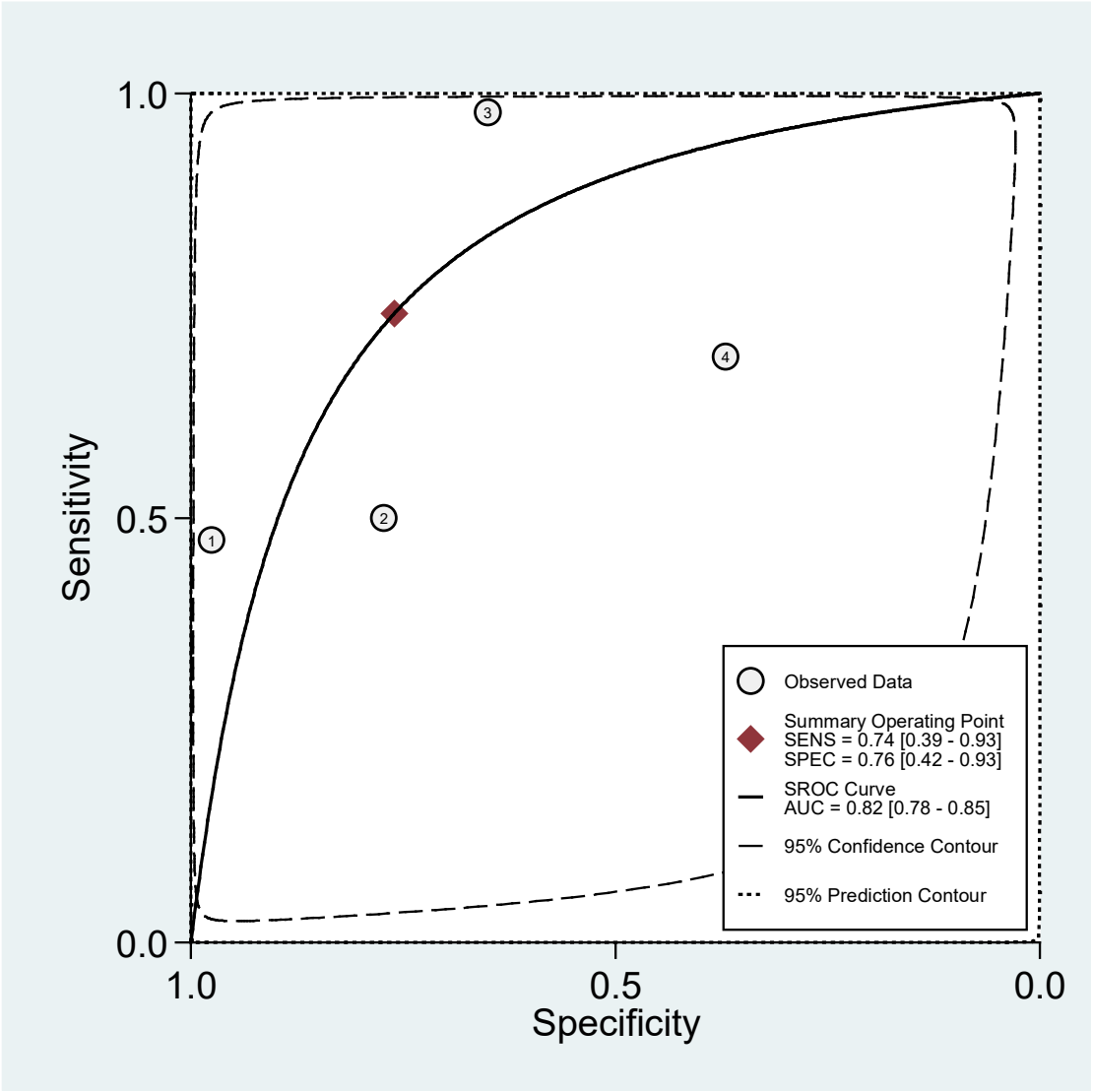


Figure 5 McMurray Test- ROC Curves (Medial Meniscus)



McMurray Test- Statistics (Lateral Meniscus)

Parameter:	**Estimate [95% CI]**
Sensitivity:	0.61 [0.30, 0.86]
Specificity:	0.89 [0.58, 0.98]
Positive Likelihood Ratio:	5.7 [1.2, 26.5] (Moderate)
Negative Likelihood Ratio:	0.43 [0.20, 0.95] (Weak)
Diagnostic Odds Ratio:	13 [2, 89]

Figure 6 McMurray Test- Positive and Negative Likelihood Ratios (Lateral Meniscus)

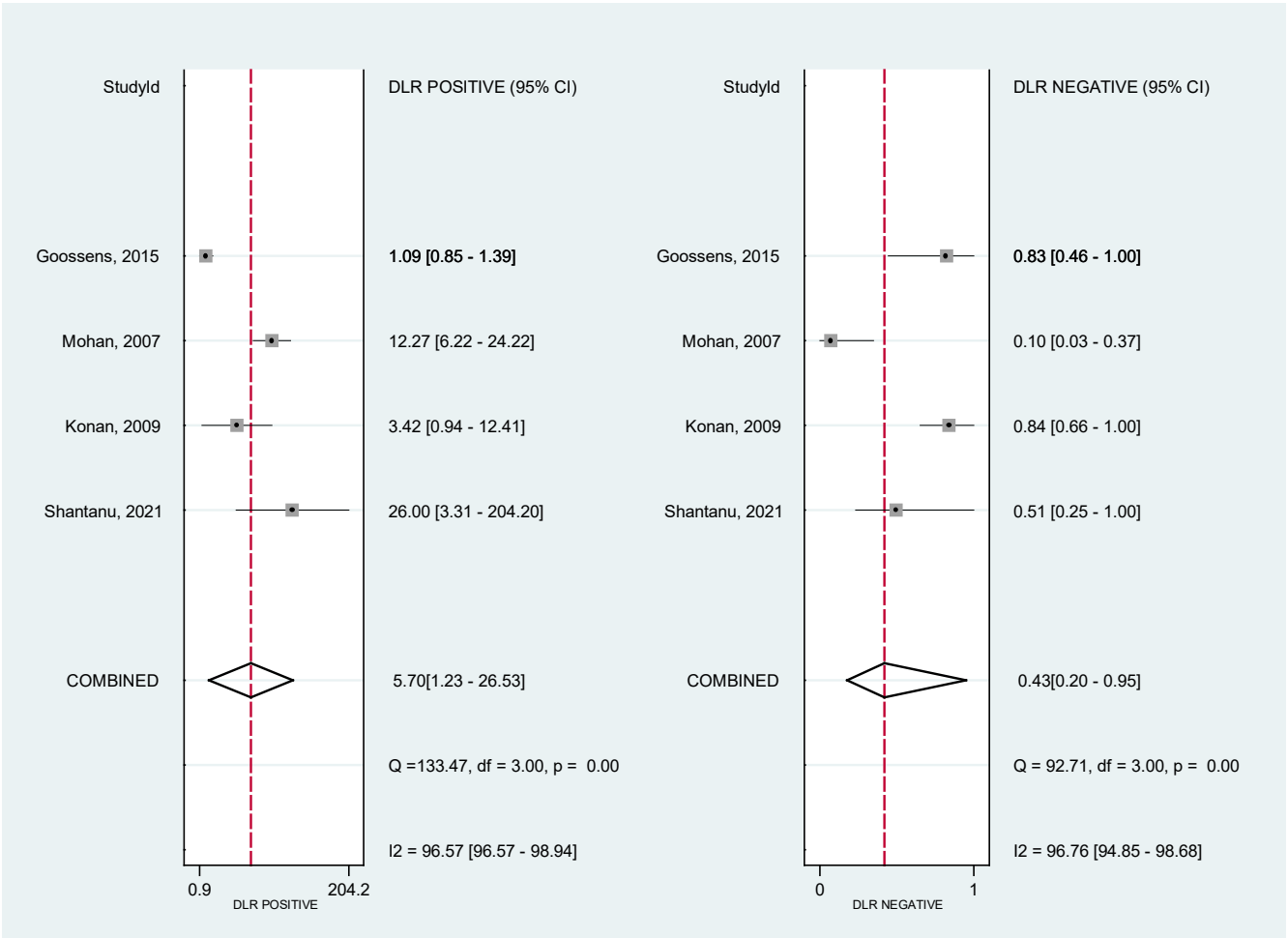
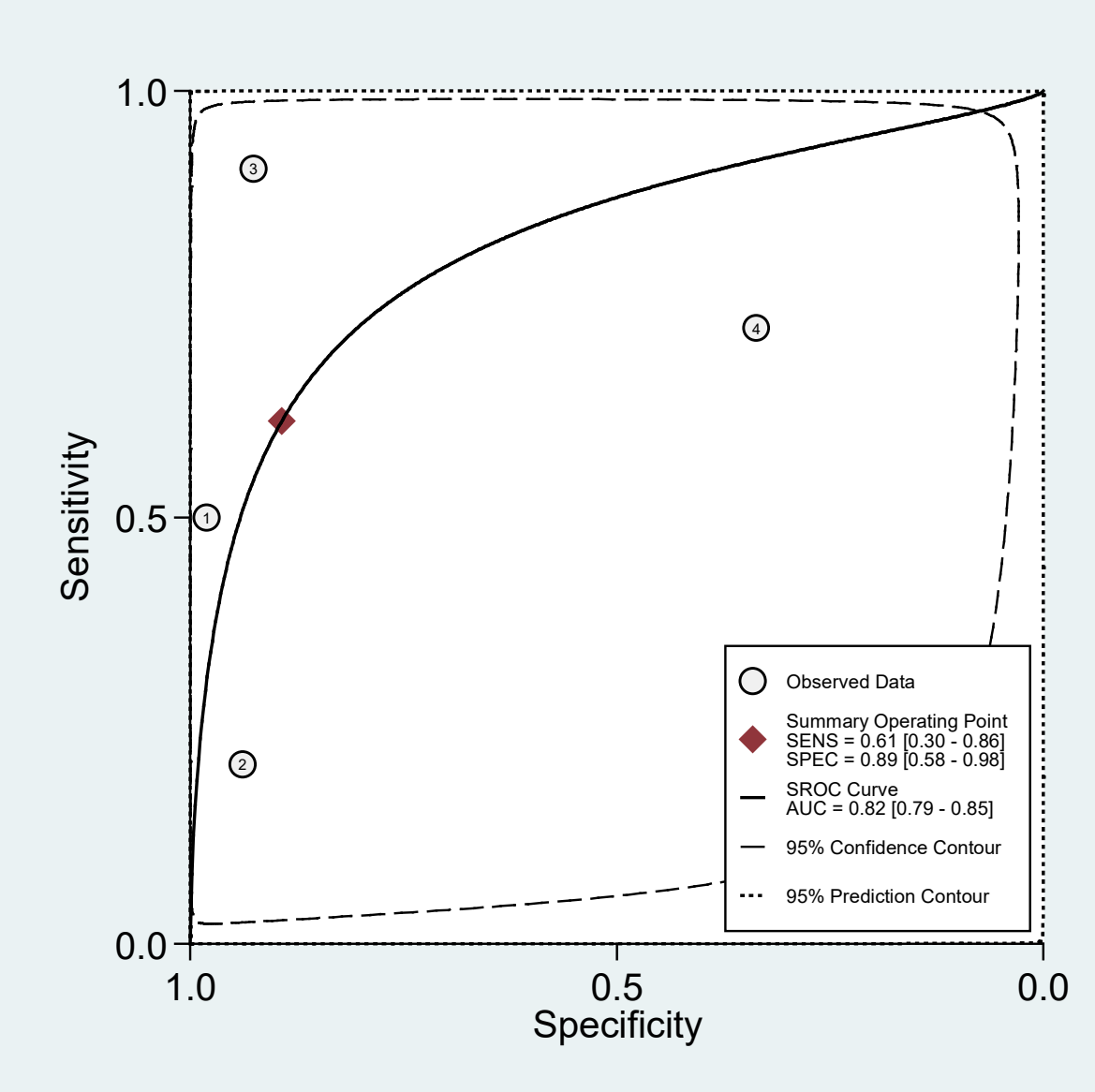


Figure 7 McMurray Test- ROC Curves (Lateral Meniscus)



PICO 2

MRI General Statistics – using arthroscopy as a reference standard

Parameter:	**Estimate [95% CI]**
Sensitivity:	
Specificity:	0.83 [0.45, 0.97]
Positive Likelihood Ratio:	5.5 [1.4, 21.9] (Moderate)
Negative Likelihood Ratio:	0.08 [0.02, 0.34] (Poor)
Diagnostic Odds Ratio:	68 [16,289]

Figure 8 MRI General positive and negative likelihood ratios – using arthroscopy as a reference standard

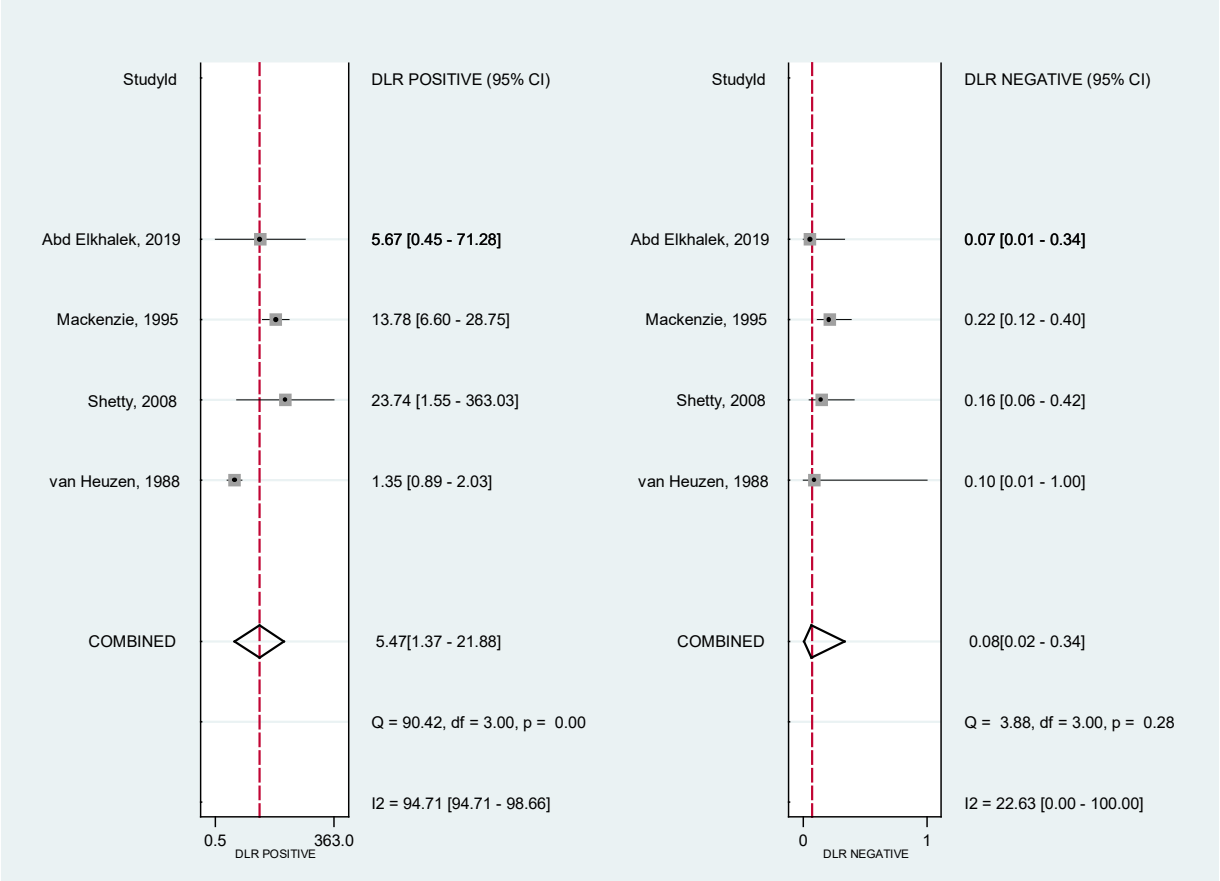
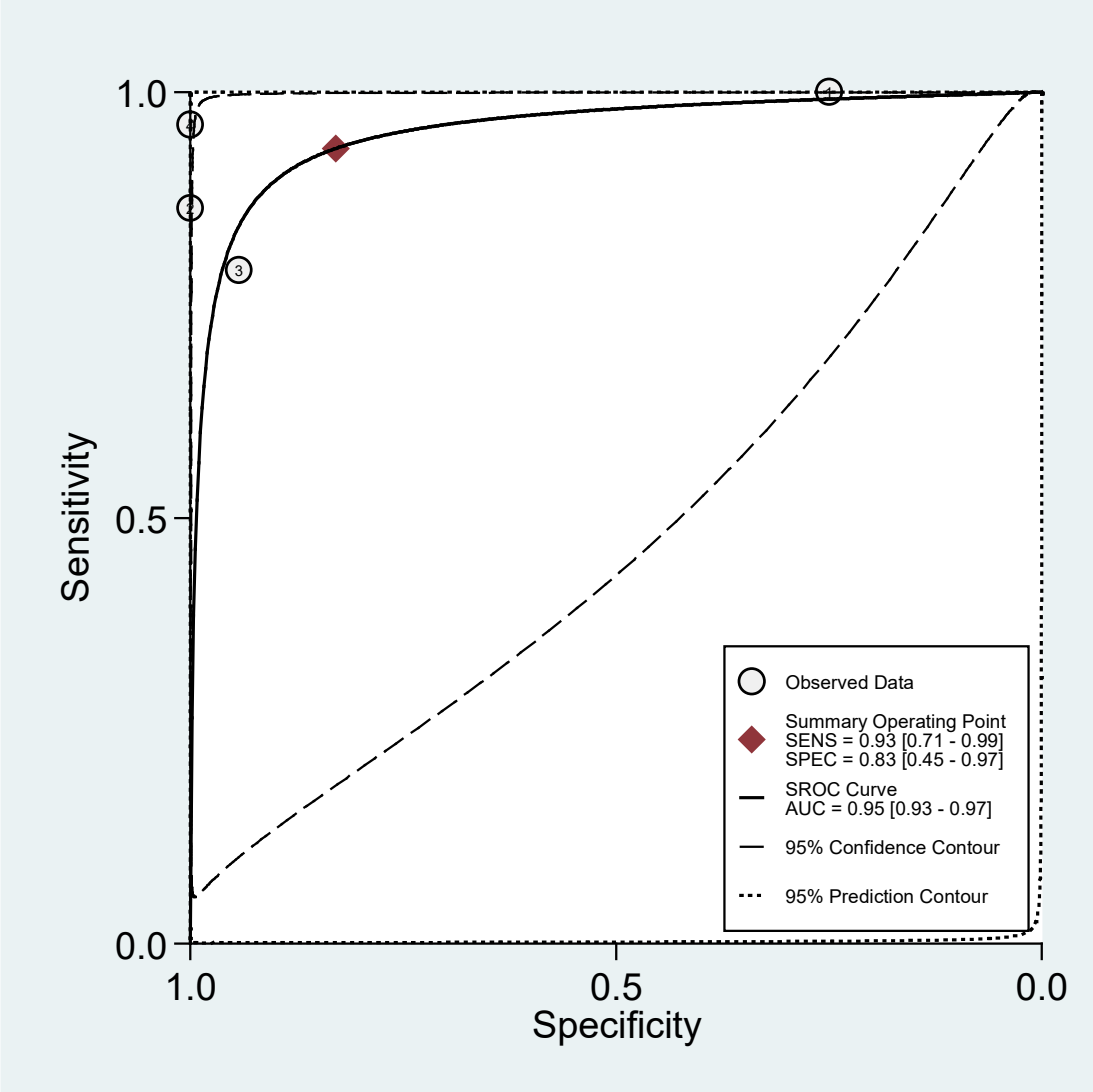


Figure 9 MRI General ROC curves – using arthroscopy as a reference standard



MRI medial tear statistics

Parameter:	**Estimate [95% CI]**
Sensitivity:	0.94[0.89, 0.97]
Specificity:	0.78[0.66, 0.86]
Positive Likelihood Ratio:	4.2[2.7, 6.6] (Weak)
Negative Likelihood Ratio:	0.08[0.04, 0.15] (Poor)
Diagnostic Odds Ratio:	55[24, 125]

Figure 10 MRI medial tear pooled positive and negative likelihood ratios

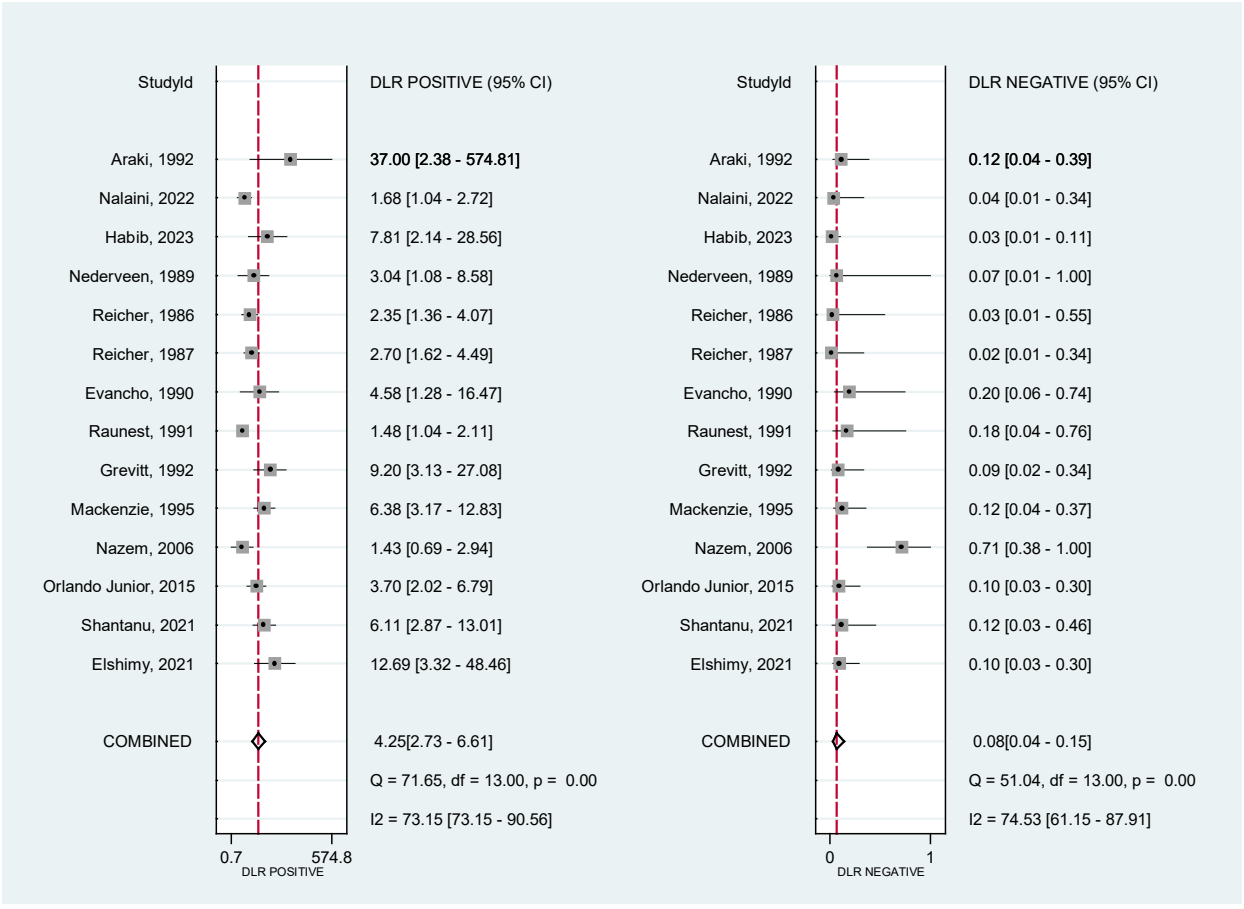
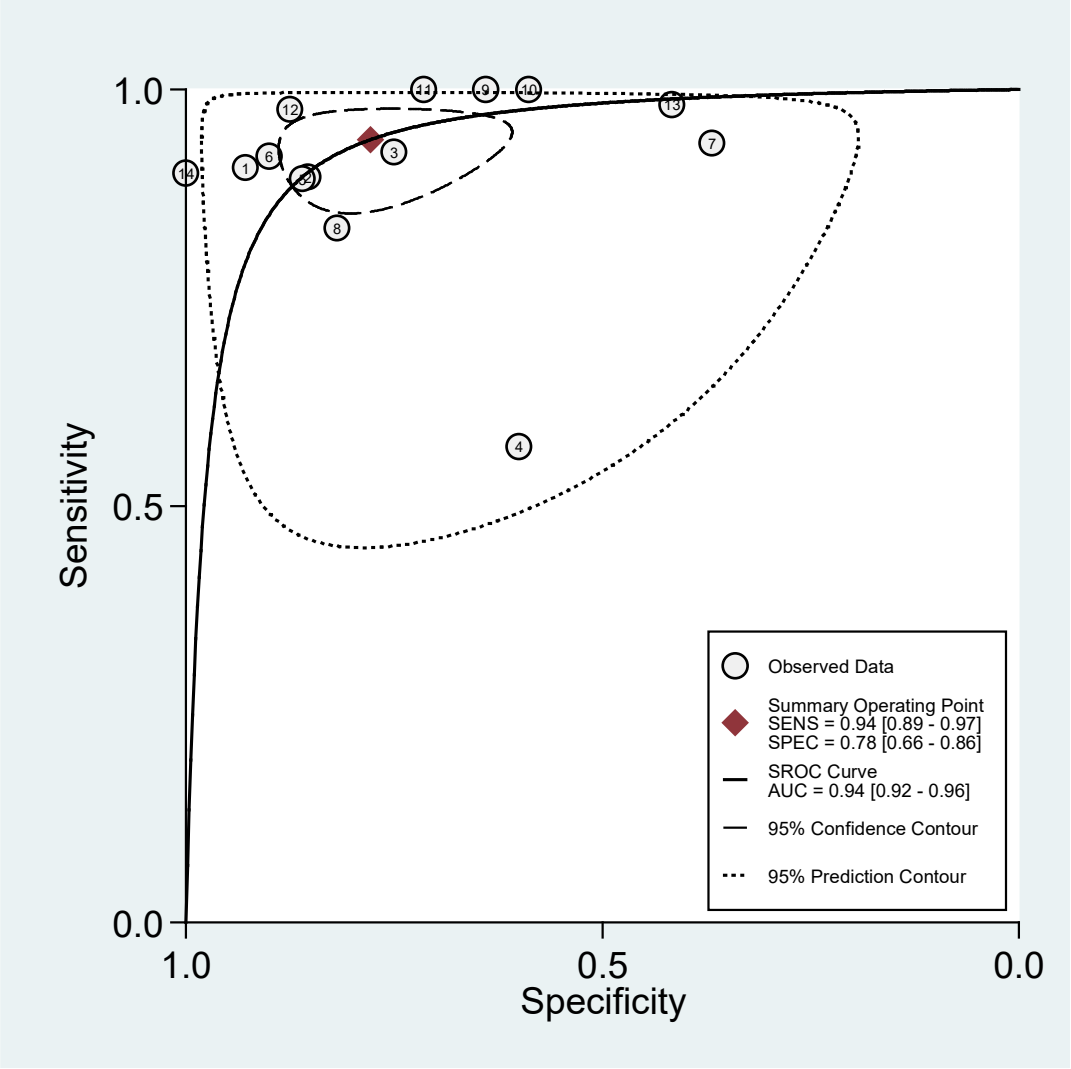


Figure 11 MRI medial tear ROC curve



MRI Lateral tear statistics – sensitivity analysis 1 using 2d MRI observation from Araki 1992 study

Parameter:	**Estimate [95% CI]**
Sensitivity:	0.80 [0.70, 0.87]
Specificity:	0.94 [0.86,0.97]
Positive Likelihood Ratio:	13.3 [5.5,32.1] (Strong)
Negative Likelihood Ratio:	0.22[0.14, 0.34] (Weak)
Diagnostic Odds Ratio:	61[20, 191]

Figure 12 MRI lateral tear pooled positive and negative likelihood ratios – sensitivity analysis 1 using 2d MRI observation from Araki 1992 study

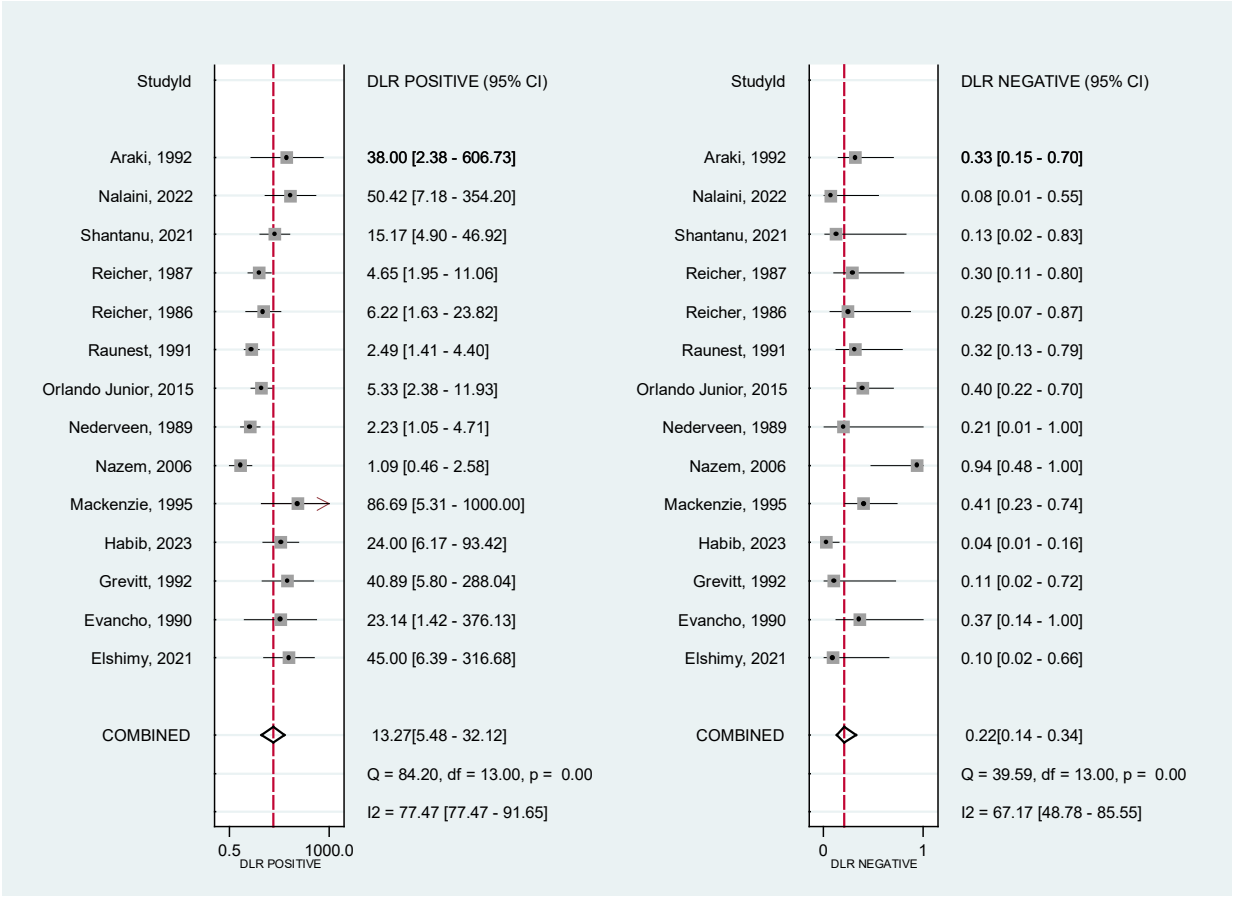
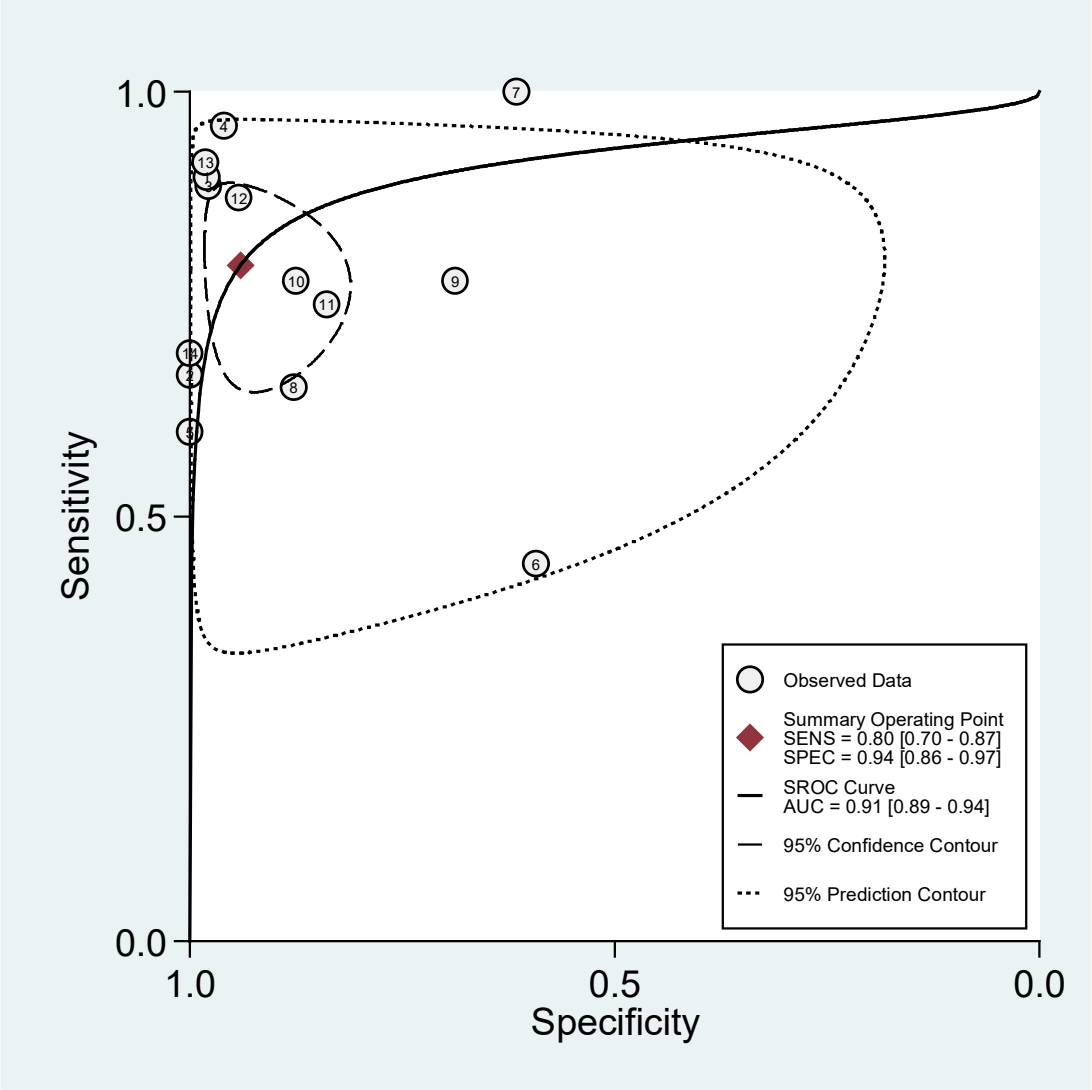


Figure 13 MRI lateral tear ROC curve – sensitivity analysis 1 using 2d MRI observation from Araki 1992 study



MRI Lateral tear statistics – sensitivity analysis 2 using 3d MRI observation from Araki 1992 study

Parameter:	**Estimate [95% CI]**
Sensitivity:	0.83 [0.72, 0.90]
Specificity:	0.94 [0.86, 0.98]
Positive Likelihood Ratio:	13.9 [5.7, 34.2] (Strong)
Negative Likelihood Ratio:	0.18 [0.11, 0.32] (Moderate)
Diagnostic Odds Ratio:	75 [21, 267]

Figure 14 MRI lateral tear pooled positive and negative likelihood ratios – sensitivity analysis 2 using 3d MRI observation from Araki 1992 study

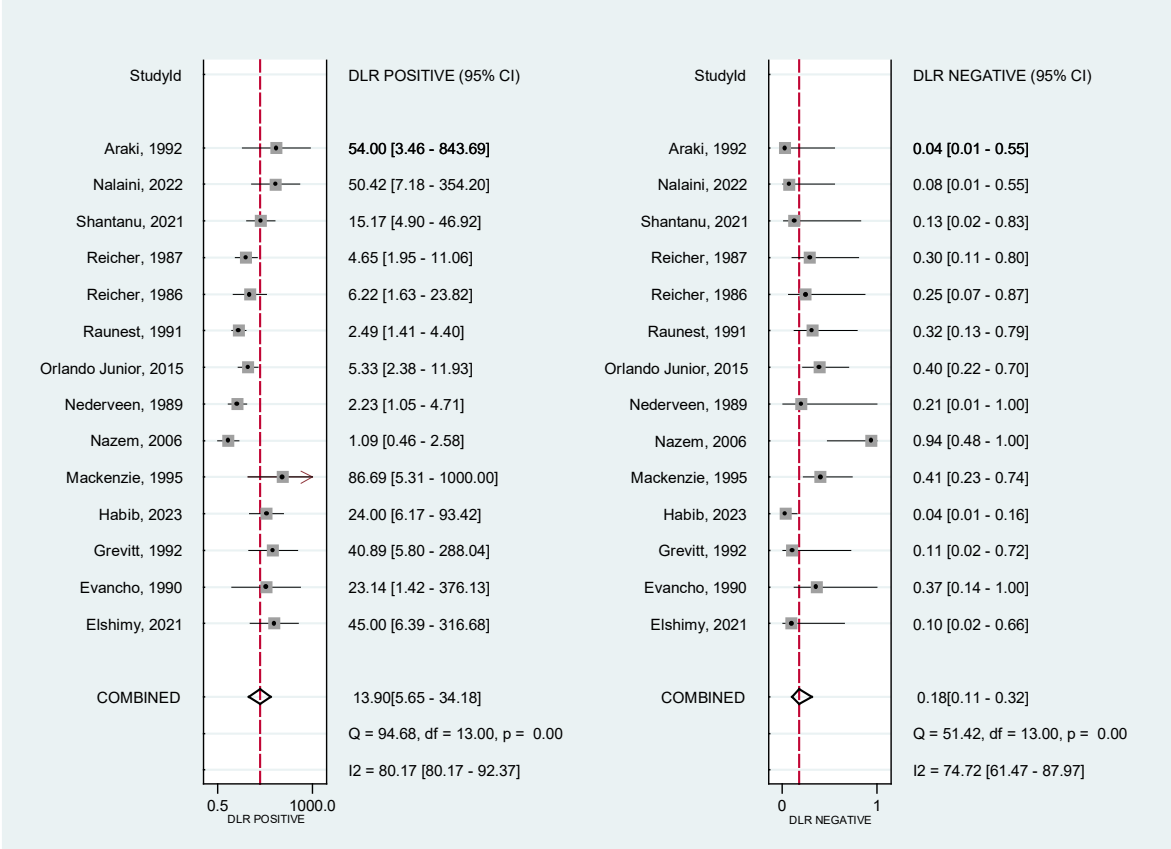
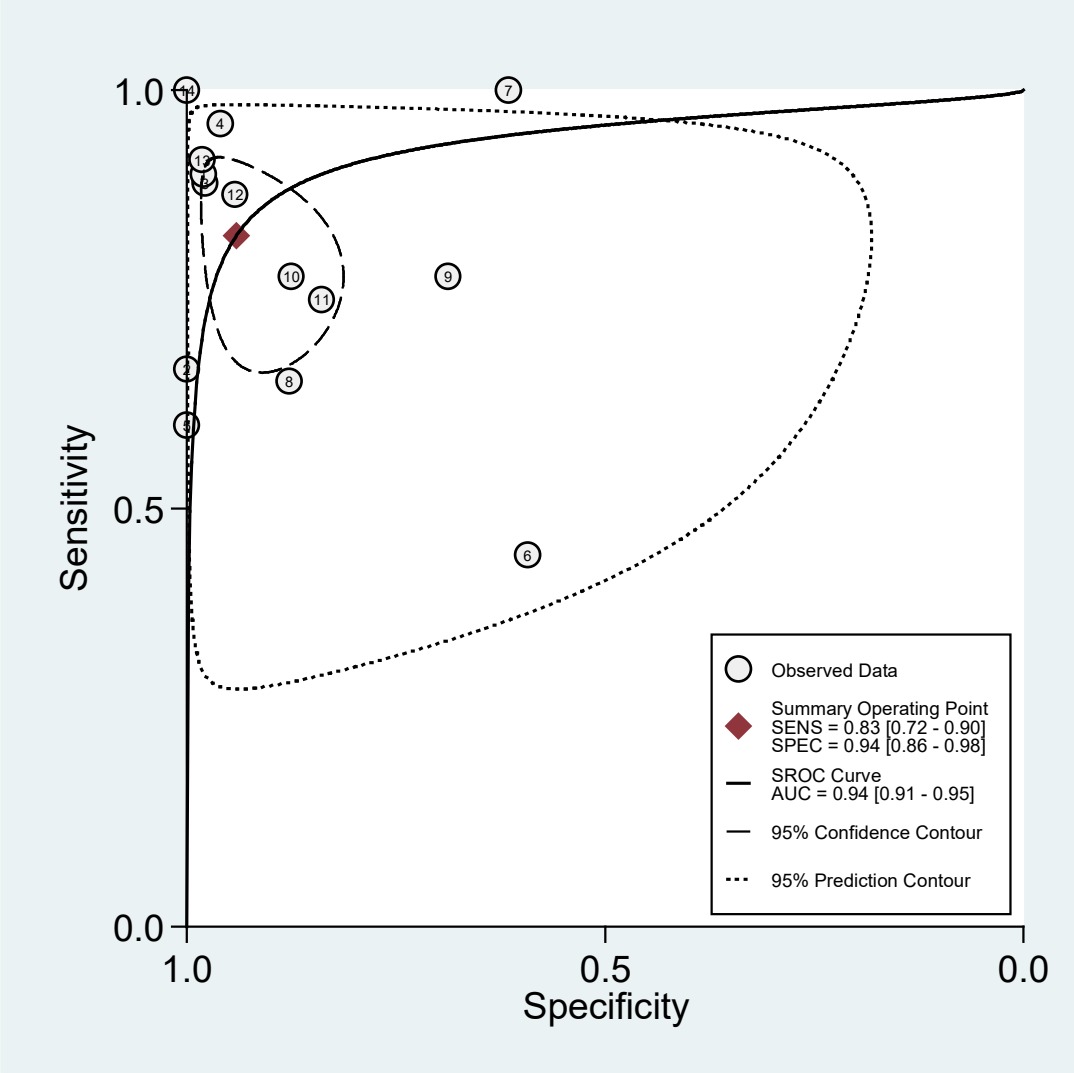


Figure 15 MRI lateral tear ROC curve – sensitivity analysis 2 using 3d MRI observation from Araki 1992 study



PICO 4

Bracing - KOOS Pain 1 yr FU

Lind: Restricted Rehabilitation with Bracing

Dammerer: Bracing