

TABLE E-1 Search Strategy for MEDLINE, EMBASE, and CINAHL

Search strategy for search in MEDLINE, CINAHL, and EMBASE with use of OVID interface.

- **CARTILAGE**
 1. cartilage, articular/
 2. cartilage/
 3. Chondrocytes/
 4. cartilage.tw.
 5. chondrocyte\$/
 6. or/1-5
- **ANATOMICAL LOCALIZATION**
 7. Knee/
 8. exp knee joint/
 9. Knee injuries/
 10. Patella/in
 11. ((medial or lateral) adj condyle\$.tw.
 12. trochlea\$.tw.
 13. patella\$.tw.
 14. knee\$.tw.
 15. or/7-14
- **TREATMENT; MFX**
 16. microfracture.tw.
 17. micro fracture.tw.
 18. microfracture\$.tw.
 19. micro fractur\$.tw.
 20. micro fracture/
 21. microfracture/
 22. or/16-21
- **COMBINED; MFX**
 23. 6 and 15 and 22
- **TREATMENT; MOSAICPLASTY (OATS)**
 24. mosaic plasty.tw.
 25. mosaicplasty.tw.
 26. OATS.tw.
 27. (osteocondral adj5 transplant\$.tw.
 28. (osteocondral adj5 implant).tw.
 29. or/24-29
- **COMBINED; MOSAICPLASTY**
 30. 6 and 15 and 29
- **TREATMENT; PERIOST TRANSPLANTATION**
 31. (periost\$ adj5 transplant\$.tw.
 32. (periost\$ adj5 implant\$.tw.
 33. or/31-32
- **COMBINED**
 34. 6 and 15 and 33
- **TREATMENT; ACT**
 35. transplantation, autologous/
 36. transplant\$.tw.
 37. Cell Transplantation/
 38. implant\$.tw.
 39. ((autogen\$ or autolog\$) adj (implant\$ or transplant\$)).tw.
 40. tr.fs.
 41. or/35-40
- **COMBINED; ACT**
 42. 6 and 15 and 41
- **COMBINED; MFX, OATS, PERIOST, ACT**
 43. 23 or 30 or 34 or 42

TABLE E-2 Coleman Methodology Score
The modified Coleman Methodology Score criteria used on the studies reporting outcome after surgical cartilage repair.

Section	Number or factor	Score
PART A: Only one score to be given for each section		
1. Study size – number of patients	>60	10
	41-60	7
	20-40	4
	<20, not stated	0
2. Mean follow-up (months)	>24	5
	12-24	2
	<12, not stated or unclear	0
3. Number of different surgical procedures included in each reported outcome.		
More than one surgical technique may be assessed but separate outcomes should be reported.		
	One surgical procedure	10
	More than one surgical procedure, but >90% of subjects undergoing the one procedure	7
	Not stated, unclear, or <90 % of subjects undergoing the one procedure	0
4. Type of study	Randomized controlled trial	15
	Prospective cohort study	10
	Retrospective cohort study	0
5. Diagnostic certainty	In all	5
	In >80%	3
	In <80%	0
6. Description of surgical procedure given	Adequate (technique stated and necessary details of that type of procedure given)	5
	Fair (technique only stated without elaboration)	3
	Inadequate, not stated, or unclear	0
7. Description of postoperative rehabilitation		
	Well described	10
	Not adequately described	5
	Protocol not reported	0
PART B: Scores may be given for each option in each of the three sections if applicable		
1. Outcome criteria	Outcome measures clearly defined	2
	Timing of outcome assessment clearly stated (e.g., at best outcome after surgery or follow-up)	2
	Use of outcome criteria that has reported good reliability	3
	Use of outcome with good sensitivity	3
2. Procedure for assessing outcomes	Subjects recruited (results not taken from surgeons files)	5
	Investigator independent of surgeon	4
	Written assessment	3
	Completion of assessment by subjects themselves with minimal investigator assistance	3
3. Description of subject selection process	Selection criteria reported and unbiased	5
	Recruitment rate reported	
	>80 % or	5
	<80 %	3
	Eligible subjects not included in the study satisfactorily accounted for, or 100 % recruitment	5

TABLE E-3 Identified Articles
Modified Coleman Methodology Score for included studies (n=61)

Study	Number of patients	Type of therapy*	Coleman Methodology Score
Peterson et al.(10)	94	ACI	48
Micheli et al.(20)	50	ACI	67
Peterson et al.(21)	61	ACI	52
Visna et al.(22)	14	ACI	46
Robinson et al.(23)	8	ACI	57
Pavesio et al.(24)	67	ACI	35
Ochi et al.(25)	26	ACI	51
Henderson et al.(26)	57	ACI	54
Haddo et al.(27)	30	ACI	58
Erggelet et al.(28)	24	ACI	48
Cherubino et al. (29)	11	ACI	42
Peterson et al.(30)	58	ACI	59
Minas(31)	169	ACI	54
Brittberg et al.(8)	23	ACI	49
Peterson (75)	59	ACI	37
Yates(32)	24	ACI	38
Loehnert et al.(33)	20	ACI	44
Krackhardt et al.(34)	22	ACI	29
Bahuaud et al.(35)	24	ACI	43
Steadman et al.(36)	72	mfx	55
Steadman et al.(37)	25	mfx	29
Zmerly and Pellacci(38)	49	mfx	26
Blevins et al.(5)	236	mfx	48
Passler(39)	162	mfx	48
Miller et al.(40)	81	mfx	45
Jakob et al.(41)	52	OATS	44
Meenen and Rischke(42)	52	OATS	44
Laprell and Petersen(43)	35	OATS	49
Klinger et al.(44)	21	OATS	65
Kish et al.(45)	52	OATS	41
Hangody et al.(9)	652	OATS	43
Hangody et al.(46)	44	OATS	58
Hangody and Fules(47)	831	OATS	40
Horas and Schnettler (48)	20	OATS	55
Fabbriciani et al.(49)	12	OATS	29
Marcacci et al.(50)	13	OATS	26
Hangody et al.(51)	57	OATS	42
Bobic(52)	12	OATS	12
Andres et al.(53)	19	OATS	42
Klinger et al.(54)	38	OATS	36
Wirth et al.(55)	12	OATS	33
Traub et al.(56)	67	OATS	54
Nebelung et al.(57)	5	OATS	37
Attmanspacher et al.(58)	18	OATS	25
Ditzen et al.(59)	30	OATS	31
Rettl and Paszicsnyek(60)	28	OATS	33
Kaltenecker et al.(61)	10	OATS	31
Liebau et al.(62)	45	OATS	51
Maynou et al.(63)	5	OATS	20
Lorentzon et al.(64)	26	periost	41
Alfredson and Lorentzon (65)	57	periost	46
Angermann et al.(66)	14	periost	37
Hoikka et al.(6)	13	periost	25
Korkala and Kuokkanen(67)	6	periost	41
Niedermann et al.(68)	5	periost	32
Jensen and Bach(69)	3	periost	25
Alfredson et al.(70)	7	periost	49
Horas et al.(71)	40	RCT	65
Bentley et al.(72)	100	RCT	56
Horas et al.(73)	40	RCT	60
Knutsen et al.(74)	80	RCT	73

*ACI = autologous chondrocyte implantation, OATS = autologous osteochondral transplantation, MFX = microfracture, periost = periosteal transplantation, and RCT = randomized controlled trial.