

Supplementary Materials

Search Strategy

eflowchart. Study flowchart

eChecklist. PRISMA checklist of current network meta-analysis

Search Strategy

pubmed Search Strategy

Search number	Query	Results
1	Psoriasis	64,289
2	(((Randomized Controlled Trial) OR (Randomized)) OR (Randomised)) OR (Randomization)) OR (Randomisation)	1,498,340

4	<p>((((((((((((((((Janus Kinase Inhibitors) OR (Apremilast)) OR (Phosphodiesterase 4 Inhibitors)) OR (Fumarates)) OR (cyclosporine)) OR (methotrexate)) OR (Ruxolitinib)) OR (INCB-018424)) OR (INCA24)) OR (Tofacitinib)) OR (tasocitinib)) OR (CP-690550)) OR (CP 690550)) OR (Baricitinib)) OR (LY3009104)) OR (Olumiant)) OR (INCB028050)) OR (peficitinib)) OR (ASP015K)) OR (Solcitinib)) OR (GSK2586184)) OR (Upadacitinib)) OR (Rinvoq)</p>	91,628
5	<p>(((((((TYK2 Inhibitors) OR (Tyrosine Kinase 2)) OR (Tyrosine Kinase 2 Inhibitors)) OR (deucravacitinib)) OR (BMS-986165)) OR (brepocitinib)) OR (PF-06700841)) OR (ropsacitinib)) OR (PF-06826647)</p>	2,259
6	<p>((((((((((((((((((((Janus Kinase Inhibitors) OR (Apremilast)) OR (Phosphodiesterase 4 Inhibitors)) OR (Fumarates)) OR (cyclosporine)) OR (Ruxolitinib)) OR (INCB-018424)) OR (INCA24)) OR (Tofacitinib)) OR (tasocitinib)) OR (CP-690550)) OR (CP 690550)) OR (Baricitinib)) OR (LY3009104)) OR (Olumiant)) OR (INCB028050)) OR (peficitinib)) OR (ASP015K)) OR (Solcitinib)) OR (GSK2586184)) OR (Upadacitinib)) OR (Rinvoq)) OR ((((((((((TYK2 Inhibitors) OR (Tyrosine Kinase 2)) OR (Tyrosine Kinase 2 Inhibitors)) OR (deucravacitinib)) OR (BMS-986165)) OR (brepocitinib)) OR (PF-06700841)) OR (ropsacitinib)) OR (PF-06826647))</p>	93,433
7	<p>(((psoriatic arthritis) OR (review)) OR (meta)) OR (case)) OR (conference)</p>	7,703,399
8	<p>(Psoriasis) AND (((((Randomized Controlled Trial) OR (Randomized)) OR (Randomised)) OR (Randomization)) OR (Randomisation))</p>	4,690

9	<p>((Psoriasis) AND (((((Randomized Controlled Trial) OR (Randomized)) OR (Randomised)) OR (Randomization)) OR (Randomisation))) AND (((((((((((((((((((Janus Kinase Inhibitors) OR (Apremilast)) OR (Phosphodiesterase 4 Inhibitors)) OR (Fumarates)) OR (cyclosporine)) OR (Ruxolitinib)) OR (INCB-018424)) OR (INCA24)) OR (Tofacitinib)) OR (tasocitinib)) OR (CP-690550)) OR (CP 690550)) OR (Baricitinib)) OR (LY3009104)) OR (Olumiant)) OR (INCB028050)) OR (peficitinib)) OR (ASP015K)) OR (Solcitinib)) OR (GSK2586184)) OR (Upadacitinib)) OR (Rinvoq)) OR (((((((((TYK2 Inhibitors) OR (Tyrosine Kinase 2)) OR (Tyrosine Kinase 2 Inhibitors)) OR (deucravacitinib)) OR (BMS-986165)) OR (brepocitinib)) OR (PF-06700841)) OR (ropsacitinib)) OR (PF-06826647)))</p>	510
10	<p>((Psoriasis) AND (((((Randomized Controlled Trial) OR (Randomized)) OR (Randomised)) OR (Randomization)) OR (Randomisation))) AND (((((((((((((((((((Janus Kinase Inhibitors) OR (Apremilast)) OR (Phosphodiesterase 4 Inhibitors)) OR (Fumarates)) OR (cyclosporine)) OR (Ruxolitinib)) OR (INCB-018424)) OR (INCA24)) OR (Tofacitinib)) OR (tasocitinib)) OR (CP-690550)) OR (CP 690550)) OR (Baricitinib)) OR (LY3009104)) OR (Olumiant)) OR (INCB028050)) OR (peficitinib)) OR (ASP015K)) OR (Solcitinib)) OR (GSK2586184)) OR (Upadacitinib)) OR (Rinvoq)) OR (((((((((TYK2 Inhibitors) OR (Tyrosine Kinase 2)) OR (Tyrosine Kinase 2 Inhibitors)) OR (deucravacitinib)) OR (BMS-986165)) OR (brepocitinib)) OR (PF-06700841)) OR (ropsacitinib)) OR (PF-06826647)))) NOT (((psoriatic arthritis) OR (review)) OR (meta)) OR (case)) OR (conference))</p>	216

#	Search Query	Results
1	TS=(Psoriasis) and Preprint Citation Index (Exclude – Database)	138147
2	(((((TS=(Randomized Controlled Trial)) OR TS=(Randomized)) OR TS=(Randomised)) OR TS=(Randomization)) OR TS=(Randomisation)) and Preprint Citation Index (Exclude – Database)	1377700
3	((((((((((((((TS=(Janus Kinase Inhibitors)) OR TS=(JAK Inhibitor)) OR TS=(Janus Kinase Inhibitor)) OR TS=(Ruxolitinib)) OR TS=(INCB-018424)) OR TS=(INCA24)) OR TS=(Tofacitinib)) OR TS=(tasocitinib)) OR TS=(CP-690550)) OR TS=(CP690550)) OR TS=(Baricitinib)) OR TS=(LY3009104)) OR TS=(Olumiant)) OR TS=(INCB028050)) OR TS=(peficitinib)) OR TS=(ASP015K)) OR TS=(Solcitinib)) OR TS=(GSK2586184)) OR TS=(Upadacitinib)) OR TS=(Rinvoq) and Preprint Citation Index (Exclude – Database)	30262
4	((((((((((((((TS=(TYK2 Inhibitors)) OR TS=(deucravacitinib)) OR TS=(BMS-986165)) OR TS=(brepocitinib)) OR TS=(PF-06700841)) OR TS=(ropsacitinib)) OR TS=(PF-06826647)) OR TS=(Tyrosine Kinase 2)) OR TS=(Tyrosine Kinase 2 Inhibitors)))) OR TS=(Apremilast)) OR TS=(Phosphodiesterase 4 Inhibitors)) OR TS=(Fumarates)) OR TS=(cyclosporine)) OR TS=(methotrexate) and Preprint Citation Index (Exclude – Database)	355872
5	(((((TS=(psoriatic arthritis)) OR TS=(review)) OR TS=(meta)) OR TS=(case)) OR TS=(conference) and Preprint Citation Index (Exclude – Database)	15086943
6	#2 AND #1 and Preprint Citation Index (Exclude – Database)	4656
7	#4 OR #3 and Preprint Citation Index (Exclude – Database)	379065
8	#6 AND #7 and Preprint Citation Index (Exclude – Database)	1066
9	(#8) NOT #5 and Preprint Citation Index (Exclude – Database)	455

Search strategies in Cochrane

- #1 psoriasis 9778
#2 (Janus Kinase Inhibitors):ti,ab,kw OR (JAK Inhibitor):ti,ab,kw OR (Ruxolitinib):ti,ab,kw OR (INCB-018424):ti,ab,kw OR (INCA24):ti,ab,kw (Word variations have been searched) 2742
#3 (Tofacitinib):ti,ab,kw OR (tasocitinib):ti,ab,kw OR (CP-690550):ti,ab,kw OR (CP690550):ti,ab,kw OR (Baricitinib):ti,ab,kw (Word variations have been searched) 1787
#4 (LY3009104):ti,ab,kw OR (Olumiant):ti,ab,kw OR (INCB028050):ti,ab,kw OR (peficitinib):ti,ab,kw OR (ASP015K):ti,ab,kw (Word variations have been searched) 152
#5 (GSK2586184):ti,ab,kw OR (Solcitinib):ti,ab,kw OR (GSK2586184):ti,ab,kw OR (Upadacitinib):ti,ab,kw OR (Rinvoq):ti,ab,kw (Word variations have been searched) 676
#6 (Phosphodiesterase 4 Inhibitors):ti,ab,kw OR (Apremilast):ti,ab,kw OR (Fumarates):ti,ab,kw OR (Cyclosporine):ti,ab,kw OR (methotrexate):ti,ab,kw (Word variations have been searched) 21961
#7 (Tyrosine Kinase 2 Inhibitors):ti,ab,kw OR (TYK2 Inhibitors):ti,ab,kw OR (deucravacitinib):ti,ab,kw OR (BMS-986165):ti,ab,kw OR (brepocitinib):ti,ab,kw 193
#8 (PF-06700841):ti,ab,kw OR (ropsacitinib):ti,ab,kw OR (PF-06826647):ti,ab,kw OR (Tyrosine Kinase 2):ti,ab,kw 3374
#9 #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 28347
#10 #1 AND #9 1590
#11 (psoriatic arthritis):ti,ab,kw OR (arthritis):ti,ab,kw OR (meta):ti,ab,kw OR (review):ti,ab,kw 110647
#12 #10 NOT #11 963
#13 (Randomized Controlled Trial):ti,ab,kw OR (Randomized):ti,ab,kw OR (Randomised):ti,ab,kw OR (Randomization):ti,ab,kw OR (Randomisation):ti,ab,kw 1129331
#14 #12 AND #13 603

Search strategies in Embase

No.	Query	Results
#1	'psoriasis'/exp	118013

#2	'randomized controlled trial'/exp OR 'randomized controlled trial' OR ('randomized controlled trial':ab,ti AND topic:ab,ti)	1075243
#3	'janus kinase inhibitor'/exp OR 'janus kinase inhibitor' OR ruxolitinib:ab,ti OR tofacitinib:ab,ti OR baricitinib:ab,ti OR peficitinib:ab,ti OR solcitinib:ab,ti OR upadacitinib:ab,ti OR 'incb 018424':ab,ti OR 'cp 690550':ab,ti OR ly3009104:ab,ti OR olumiant:ab,ti OR incb028050:ab,ti OR asp015k:ab,ti OR gsk2586184:ab,ti OR rinvoq:ab,ti	32893
#4	'tyk2 inhibitors' OR (tyk2 AND ('inhibitors'/exp OR inhibitors)) OR deucravacitinib:ab,ti OR 'bms 986165':ab,ti OR brepocitinib:ab,ti OR 'pf 06700841':ab,ti OR ropsacitinib:ab,ti OR 'pf 06826647':ab,ti OR 'tyrosine kinase 2':ab,ti OR apremilast:ab,ti OR 'phosphodiesterase iv inhibitor':ab,ti OR hydroxyurea:ab,ti OR cyclosporine:ab,ti OR methotrexate:ab,ti	145019
#5	'psoriatic arthritis'/exp OR 'psoriatic arthritis' OR (psoriatic AND ('arthritis'/exp OR arthritis)) OR review:ab,ti OR meta:ab,ti OR case:ab,ti OR conference:ab,ti	5785660
#6	#1 AND #2	7442
#7	#3 OR #4	174014
#8	#6 AND #7	1584
#9	#8 NOT #5	467

Search strategies in Medline

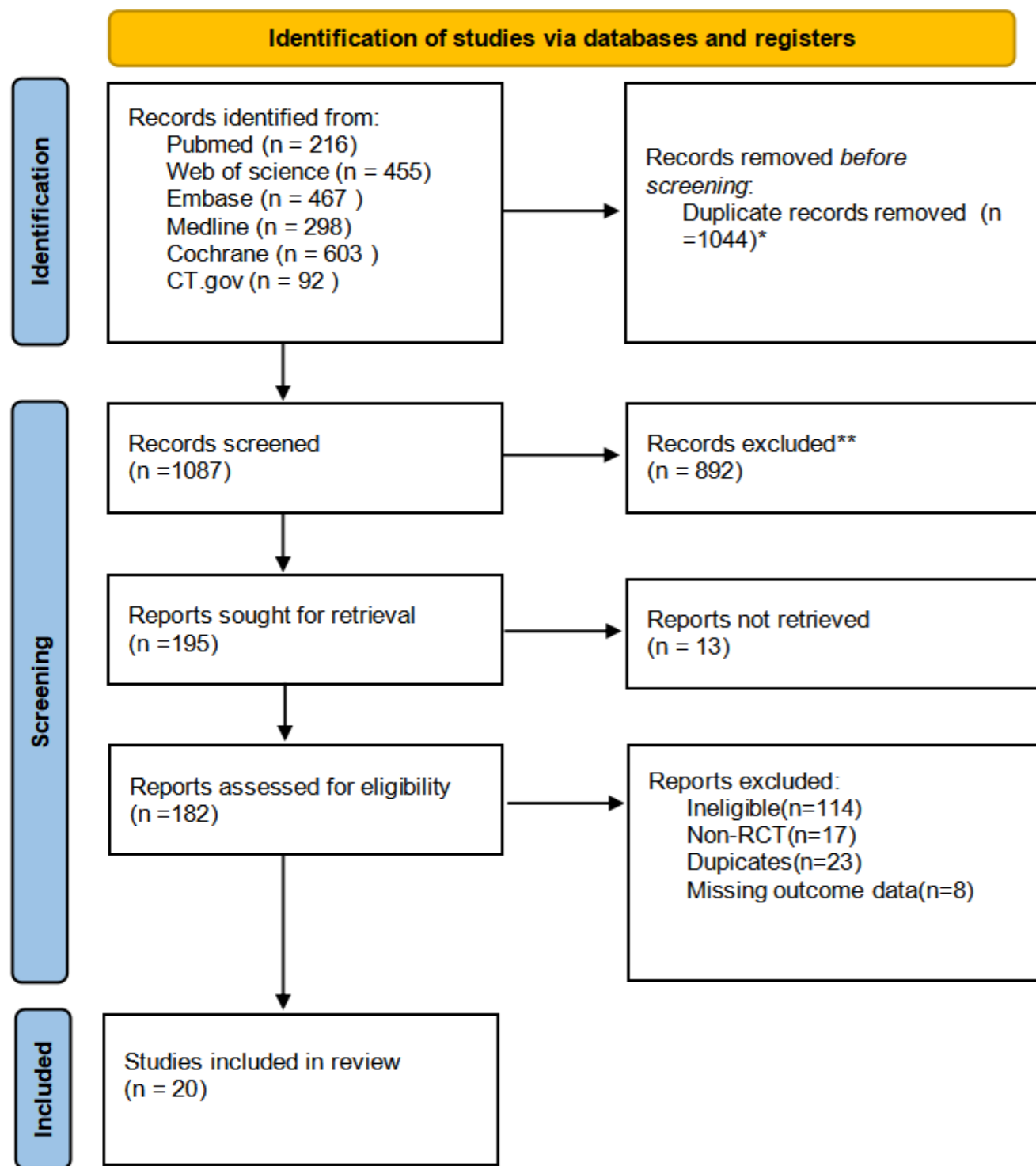
- 1 psoriasis.m_titl. 32137
- 2 (Janus Kinase Inhibitors or JAK Inhibitor or Janus Kinase Inhibitor or (Ruxolitinib or INCB-018424 or INCA24 or Tofacitinib or tasocitinib or CP-690550 or CP690550 or Baricitinib or LY3009104 or Olumiant or INCB028050 or peficitinib or ASP015K or Solcitinib or GSK2586184 or Upadacitinib or Rinvoq or Apremilast or Phosphodiesterase 4 Inhibitors or Fumarates or Cyclosporine or methotrexate) or (Tyrosine Kinase 2 or TYK2 Inhibitors or Tyrosine Kinase 2 Inhibitors)).af. 118918
- 3 (deucravacitinib or BMS-986165 or brepocitinib or PF-06700841 or ropsacitinib or PF-06826647).af. 142
- 4 (Randomized Controlled Trial or Randomized or Randomised or Randomization or Randomisation).af. 1105447
- 5 2 or 3 118946
- 6 1 and 4 2709
- 7 5 and 6 401
- 8 (psoriatic arthritis or meta or case or conference).af. 4464718
- 9 7 not 8 298

Search strategies in ClinicalTrials.gov

1. psoriasis and Ruxolitinib
2. psoriasis and INCB-018424
3. psoriasis and INCA24
4. psoriasis and Tofacitinib
5. psoriasis and tasocitinib
6. psoriasis and CP-690550
7. psoriasis and CP690550
8. psoriasis and Baricitinib
9. psoriasis and LY3009104
10. psoriasis and Olumiant
11. psoriasis and INCB028050
12. psoriasis and peficitinib
13. psoriasis and ASP015K
14. psoriasis and Solcitinib
15. psoriasis and GSK2586184
16. psoriasis and Upadacitinib
17. psoriasis and Rinvoq
18. psoriasis and deucravacitinib
19. psoriasis and BMS-986165
20. psoriasis and brepocitinib
21. psoriasis and PF-06700841
22. psoriasis and ropsacitinib

23. psoriasis and PF-06826647
24. psoriasis and Phosphodiesterase 4 Inhibitors
25. psoriasis and Apremilast
26. psoriasis and Fumarates
27. psoriasis and Cyclosporine
28. psoriasis and methotrexate

Total=92



Study flowchart as per the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) criteria. CENTRAL, Cochrane Central Register of Controlled Trials; RCT, randomized controlled trial.

*Duplicate records were removed by automation tools. **Exclusion was done by humans exclusively

eflowchart. Study flowchart

Section and Topic	Item #	Checklist item	Location where item is reported
TITLE			
Title	1	Identify the report as a systematic review.	P1
ABSTRACT			
Abstract	2	See the PRISMA 2020 for Abstracts checklist.	NA
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of existing knowledge.	P2
Objectives	4	Provide an explicit statement of the objective(s) or question(s) the review addresses.	NA
METHODS			
Eligibility criteria	5	Specify the inclusion and exclusion criteria for the review and how studies were grouped for the syntheses.	Supplementary Materials
Information sources	6	Specify all databases, registers, websites, organisations, reference lists and other sources searched or consulted to identify studies. Specify the date when each source was last searched or consulted.	Supplementary Materials
Search strategy	7	Present the full search strategies for all databases, registers and websites, including any filters and limits used.	Supplementary Materials
Selection process	8	Specify the methods used to decide whether a study met the inclusion criteria of the review, including how many reviewers screened each record and each report retrieved, whether they worked independently, and if applicable, details of automation tools used in the process.	Supplementary Materials
Data collection process	9	Specify the methods used to collect data from reports, including how many reviewers collected data from each report, whether they worked independently, any processes for obtaining or confirming data from study investigators, and if applicable, details of automation tools used in the process.	Supplementary Materials
Data items	10a	List and define all outcomes for which data were sought. Specify whether all results that were compatible with each outcome domain in each study were sought (e.g. for all measures, time points, analyses), and if not, the methods used to decide which results to collect.	Supplementary Materials
	10b	List and define all other variables for which data were sought (e.g. participant and intervention characteristics, funding sources). Describe any assumptions made about any missing or unclear information.	Supplementary Materials
Study risk of bias assessment	11	Specify the methods used to assess risk of bias in the included studies, including details of the tool(s) used, how many reviewers assessed each study and whether they worked independently, and if applicable, details of automation tools used in the process.	Supplementary Materials
Effect measures	12	Specify for each outcome the effect measure(s) (e.g. risk ratio, mean difference) used in the synthesis or presentation of results.	Supplementary Materials
Synthesis methods	13a	Describe the processes used to decide which studies were eligible for each synthesis (e.g. tabulating the study intervention characteristics and comparing against the planned groups for each synthesis (item #5)).	Supplementary Materials
	13b	Describe any methods required to prepare the data for presentation or synthesis, such as handling of missing summary statistics, or data conversions.	Supplementary Materials
	13c	Describe any methods used to tabulate or visually display results of individual studies and syntheses.	Supplementary Materials
	13d	Describe any methods used to synthesize results and provide a rationale for the choice(s). If meta-analysis was performed, describe the model(s), method(s) to identify the presence and extent of statistical heterogeneity, and software package(s) used.	Supplementary Materials
	13e	Describe any methods used to explore possible causes of heterogeneity among study results (e.g. subgroup analysis, meta-regression).	Supplementary Materials
	13f	Describe any sensitivity analyses conducted to assess robustness of the synthesized results.	Supplementary Materials
Reporting bias assessment	14	Describe any methods used to assess risk of bias due to missing results in a synthesis (arising from reporting biases).	Supplementary Materials
Certainty assessment	15	Describe any methods used to assess certainty (or confidence) in the body of evidence for an outcome.	Supplementary Materials
RESULTS			
Study selection	16a	Describe the results of the search and selection process, from the number of records identified in the search to the number of studies included in the review, ideally using a flow diagram.	P2
	16b	Cite studies that might appear to meet the inclusion criteria, but which were excluded, and explain why they were excluded.	P2
Study characteristics	17	Cite each included study and present its characteristics.	P2
Risk of bias in	18	Present assessments of risk of bias for each included study.	P2

studies			
Results of individual studies	19	For all outcomes, present, for each study: (a) summary statistics for each group (where appropriate) and (b) an effect estimate and its precision (e.g. confidence/credible interval), ideally using structured tables or plots.	P2
Results of syntheses	20a	For each synthesis, briefly summarise the characteristics and risk of bias among contributing studies.	P2
	20b	Present results of all statistical syntheses conducted. If meta-analysis was done, present for each the summary estimate and its precision (e.g. confidence/credible interval) and measures of statistical heterogeneity. If comparing groups, describe the direction of the effect.	P2
	20c	Present results of all investigations of possible causes of heterogeneity among study results.	Supplementary Materials
	20d	Present results of all sensitivity analyses conducted to assess the robustness of the synthesized results.	Supplementary Materials
Reporting biases	21	Present assessments of risk of bias due to missing results (arising from reporting biases) for each synthesis assessed.	Supplementary Materials
Certainty of evidence	22	Present assessments of certainty (or confidence) in the body of evidence for each outcome assessed.	Supplementary Materials
DISCUSSION			
Discussion	23a	Provide a general interpretation of the results in the context of other evidence.	P7-10
	23b	Discuss any limitations of the evidence included in the review.	P7-10
	23c	Discuss any limitations of the review processes used.	P7-10
	23d	Discuss implications of the results for practice, policy, and future research.	P7-10
OTHER INFORMATION			
Registration and protocol	24a	Provide registration information for the review, including register name and registration number, or state that the review was not registered.	Supplementary Materials
	24b	Indicate where the review protocol can be accessed, or state that a protocol was not prepared.	
	24c	Describe and explain any amendments to information provided at registration or in the protocol.	
Support	25	Describe sources of financial or non-financial support for the review, and the role of the funders or sponsors in the review.	P1
Competing interests	26	Declare any competing interests of review authors.	P1
Availability of data, code and other materials	27	Report which of the following are publicly available and where they can be found: template data collection forms; data extracted from included studies; data used for all analyses; analytic code; any other materials used in the review.	Supplementary Materials

eChecklist. PRISMA checklist of current network meta-analysis