**Supplement Table 1.** Quality assessment of the included randomized controlled trials according to the Cochrane Handbook for Systematic Reviews of Interventions.

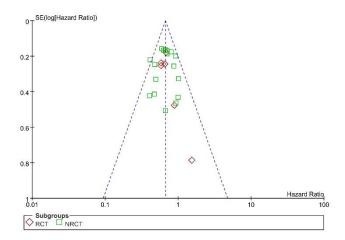
Study (year)	Sequence	Allocation	Blinding of	Blinding of	Blinding of	Study
	generation of	concealment	patients	personnel	outcome	quality
	randomization				assessment	
Izumi (1994)	YES	NO	Unknow	Unknow	Unknow	Moderate
Li J (1995)	YES	NO	Unknow	Unknow	Unknow	Moderate
Ewards (1998)	YES	NO	Unknow	Unknow	Unknow	Moderate
Li (2006)	YES	NO	Unknow	Unknow	Unknow	Moderate
Li Q (2012)	YES	NO	Unknow	Unknow	Unknow	Moderate
Peng (2009)	YES	YES	Unknow	Unknow	Unknow	High
Zhong (2009)	YES	YES	Unknow	Unknow	Unknow	High
Wei (2018)	YES	YES	Unknow	Unknow	Unknow	High
Wang Z (2018)	YES	YES	Unknow	Unknow	Unknow	High

**Supplement Table 2.** Quality assessment of the included non-randomized controlled trials based on the Newcastle-Ottawa scale.

Study (year)	Selection star	Comparability star	Outcome star	Total star	Study quality
Tanaka (1999)	2	2	1	5	Moderate
Ren (2004)	2	2	2	6	High
Xi T (2012)	2	2	1	5	Moderate
Li K (2012)	2	1	1	4	Moderate
Chen (2012)	3	2	2	7	High
Liu H (2012)	3	2	3	8	High
Li F (2014)	2	1	1	4	Moderate
Sun J (2015)	3	2	2	7	High
Jiang J (2015)	3	3	2	8	High
Liu W (2016)	2	2	2	6	Moderate
Qi Y (2016)	3	2	2	7	High
Bai (2016)	2	2	1	5	Moderate
Liu C (2016)	2	2	1	5	Moderate
Tong Y(2017)	3	2	2	7	High
Ye (2017)	3	2	2	7	High
Wang Y (2018)	3	2	2	7	High

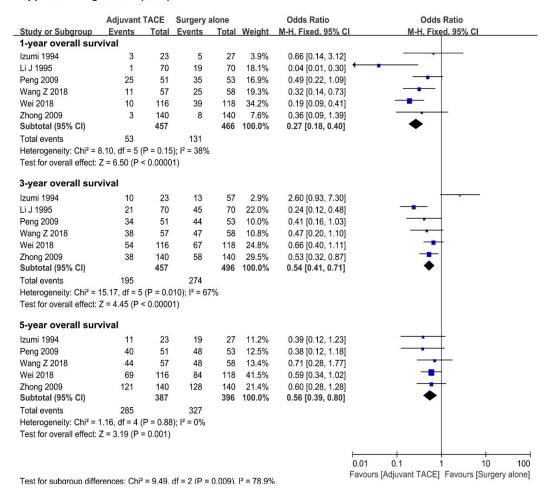
#### Supplement Figure 1. Funnel plot of the included studies.

#### Supplement Figure 1.



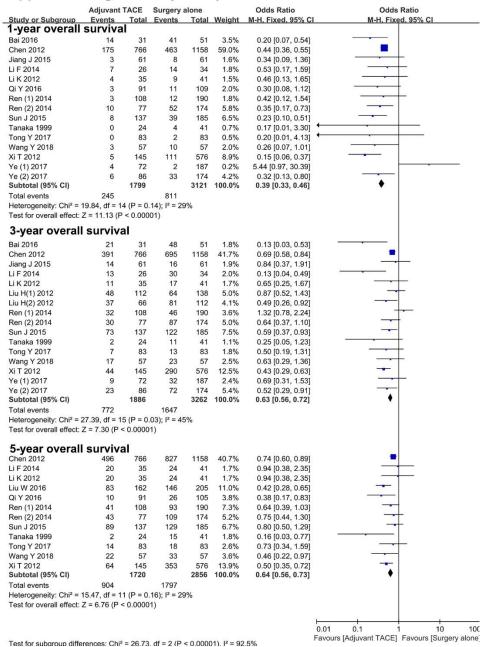
### Supplement Figure 2A. Forest plots comparing survival rates in all studies.

#### Supplement Figure 2A. (RCT)

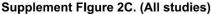


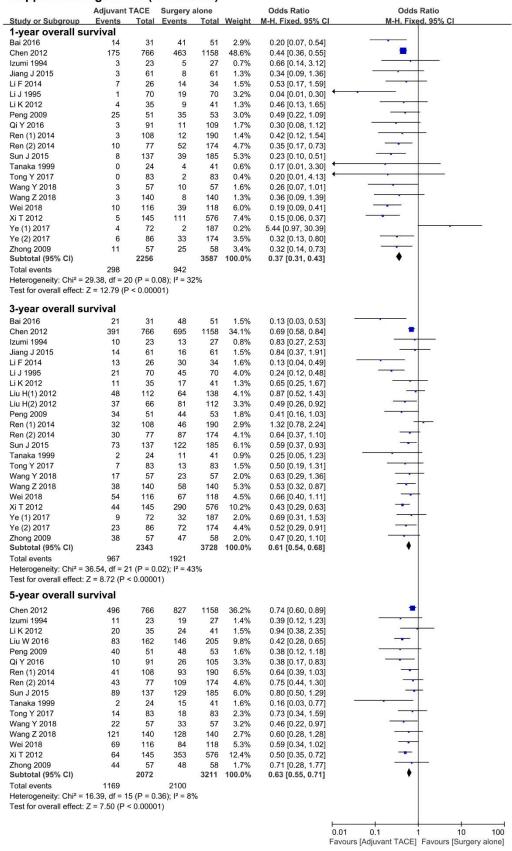
#### **Supplement Figure 2B.** Forest plots comparing survival rates in RCTs.

### Supplement Figure 2B. (NRCT)



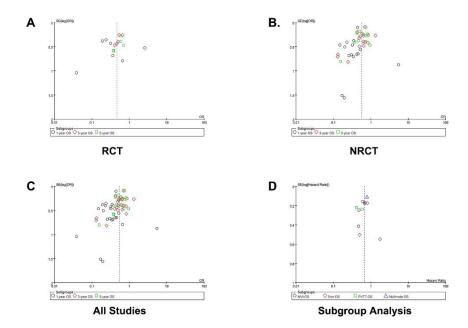
#### **Supplement Figure 2C.** Forest plots comparing survival rates in NRCTs.



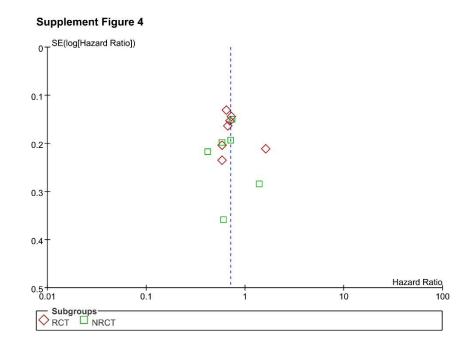


## Supplement Figure 3. Funnel plot of the included studies.

## Supplement Figure 3.

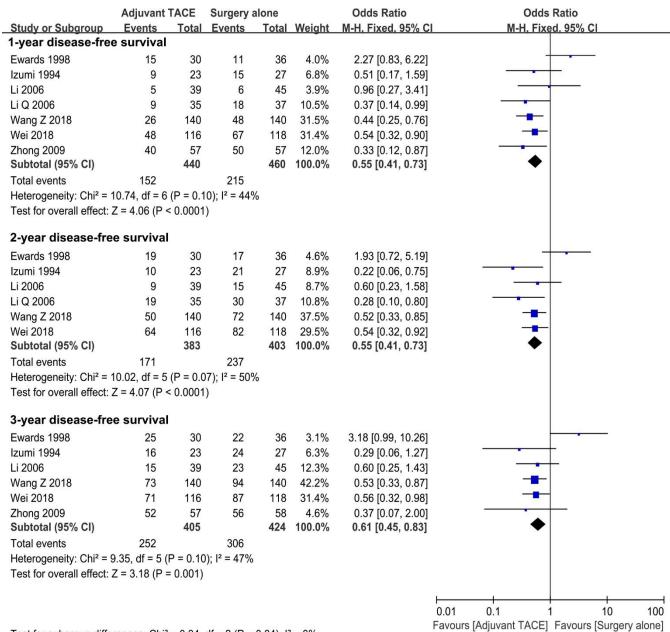


## Supplement Figure 4. Funnel plot of the included studies.



#### Supplement Figure 5A. Forest plots comparing disease-free survival rates in all studies.

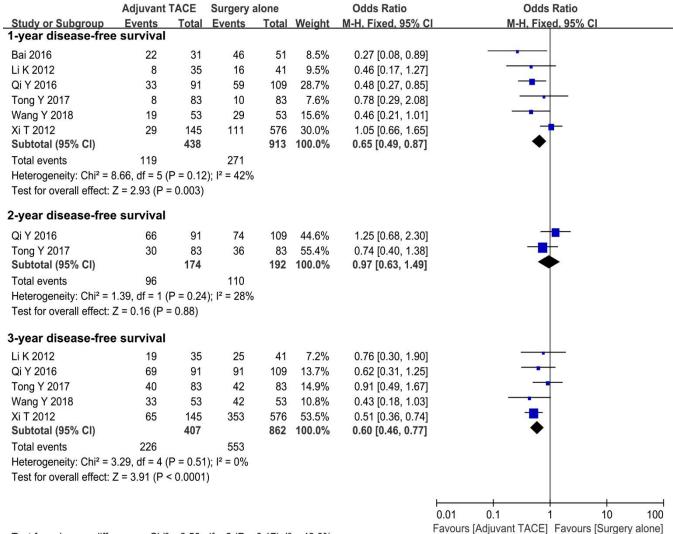
#### Supplement Figure 5A. (RCT)



Test for subgroup differences:  $Chi^2 = 0.34$ . df = 2 (P = 0.84).  $I^2 = 0\%$ 

#### Supplement Figure 5B. Forest plots comparing disease-free survival rates in RCTs.

#### Supplement Figure 5B. (NRCT)



Test for subaroup differences:  $Chi^2 = 3.56$ . df = 2 (P = 0.17).  $I^2 = 43.8\%$ 

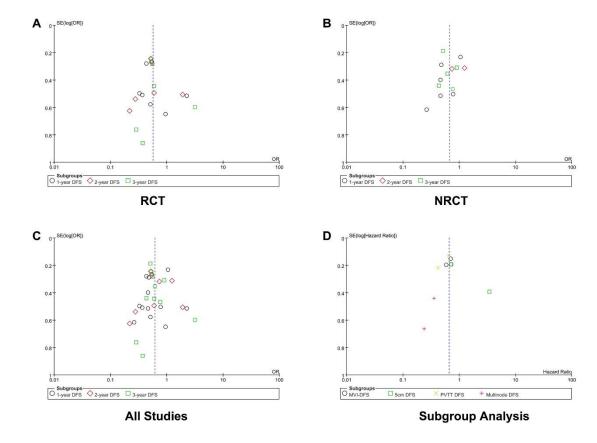
# Supplement Figure 5C. Forest plots comparing disease-free survival rates in NRCTs.

# Supplement Figure 5C. (All studies)

		_			Odds Ratio	Odds Ratio
	Total	Events	Total	Weight	M-H, Fixed, 95% CI	M-H, Fixed, 95% CI
						66
22	31	46	51		Commence of the Commence of th	- 100
			36			<u> </u>
		15	27		0.51 [0.17, 1.59]	<del></del>
		6			0.96 [0.27, 3.41]	
8	35	16	41		0.46 [0.17, 1.27]	
9	35	18	37	5.3%	0.37 [0.14, 0.99]	•
33	91	59	109	14.1%	0.48 [0.27, 0.85]	-
8	83	10	83	3.7%	0.78 [0.29, 2.08]	<del></del>
19	53	29	53	7.6%	0.46 [0.21, 1.01]	-
26	140	48	140	16.1%	0.44 [0.25, 0.76]	-
48	116	67	118	16.0%	0.54 [0.32, 0.90]	-
29	145	111	576	14.7%	1.05 [0.66, 1.65]	+
40	57	50	57	6.1%	0.33 [0.12, 0.87]	
	878		1373	100.0%	0.60 [0.49, 0.73]	•
271		486				
20.14, df = 12	2 (P = 0.	06); $I^2 = 40$	0%			
Z = 4.92 (P <	0.0000	1)				
survival						
	30	17	36		Not estimable	
				6.9%		
					-	
						<del></del>
						<del></del>
04		02				<b>♦</b>
248	021	330	000	1001070	0.01 [0.11, 0.10]	,
	(P = 0.0)		%			
		35.03	70			
eurvival						
	30	22	36	1 3%	3 18 [0 99 10 26]	
					167 2 6	
13			41	4.2%	E	
10	25			4.270	0.76 [0.30, 1.90]	
19	35	25 91				<del></del>
69	91	91	109	7.9%	0.62 [0.31, 1.25]	
69 40	91 83	91 42	109 83	7.9% 8.6%	0.62 [0.31, 1.25] 0.91 [0.49, 1.67]	-
69 40 33	91 83 53	91 42 42	109 83 53	7.9% 8.6% 6.3%	0.62 [0.31, 1.25] 0.91 [0.49, 1.67] 0.43 [0.18, 1.03]	<del>-</del>
69 40 33 73	91 83 53 140	91 42 42 94	109 83 53 140	7.9% 8.6% 6.3% 17.8%	0.62 [0.31, 1.25] 0.91 [0.49, 1.67] 0.43 [0.18, 1.03] 0.53 [0.33, 0.87]	
69 40 33 73 71	91 83 53 140 116	91 42 42 94 87	109 83 53 140 118	7.9% 8.6% 6.3% 17.8% 13.2%	0.62 [0.31, 1.25] 0.91 [0.49, 1.67] 0.43 [0.18, 1.03] 0.53 [0.33, 0.87] 0.56 [0.32, 0.98]	
69 40 33 73 71 65	91 83 53 140 116 145	91 42 42 94 87 353	109 83 53 140 118 576	7.9% 8.6% 6.3% 17.8% 13.2% 31.0%	0.62 [0.31, 1.25] 0.91 [0.49, 1.67] 0.43 [0.18, 1.03] 0.53 [0.33, 0.87] 0.56 [0.32, 0.98] 0.51 [0.36, 0.74]	
69 40 33 73 71	91 83 53 140 116 145 57	91 42 42 94 87	109 83 53 140 118 576 58	7.9% 8.6% 6.3% 17.8% 13.2% 31.0% 1.9%	0.62 [0.31, 1.25] 0.91 [0.49, 1.67] 0.43 [0.18, 1.03] 0.53 [0.33, 0.87] 0.56 [0.32, 0.98] 0.51 [0.36, 0.74] 0.37 [0.07, 2.00]	
69 40 33 73 71 65 52	91 83 53 140 116 145	91 42 42 94 87 353 56	109 83 53 140 118 576 58	7.9% 8.6% 6.3% 17.8% 13.2% 31.0%	0.62 [0.31, 1.25] 0.91 [0.49, 1.67] 0.43 [0.18, 1.03] 0.53 [0.33, 0.87] 0.56 [0.32, 0.98] 0.51 [0.36, 0.74]	
69 40 33 73 71 65 52	91 83 53 140 116 145 57 812	91 42 42 94 87 353 56	109 83 53 140 118 576 58 1286	7.9% 8.6% 6.3% 17.8% 13.2% 31.0% 1.9%	0.62 [0.31, 1.25] 0.91 [0.49, 1.67] 0.43 [0.18, 1.03] 0.53 [0.33, 0.87] 0.56 [0.32, 0.98] 0.51 [0.36, 0.74] 0.37 [0.07, 2.00]	
69 40 33 73 71 65 52 478 12.63, df = 10	91 83 53 140 116 145 57 <b>812</b>	91 42 42 94 87 353 56 859 24); I <sup>2</sup> = 2 <sup>7</sup>	109 83 53 140 118 576 58 1286	7.9% 8.6% 6.3% 17.8% 13.2% 31.0% 1.9%	0.62 [0.31, 1.25] 0.91 [0.49, 1.67] 0.43 [0.18, 1.03] 0.53 [0.33, 0.87] 0.56 [0.32, 0.98] 0.51 [0.36, 0.74] 0.37 [0.07, 2.00]	
69 40 33 73 71 65 52	91 83 53 140 116 145 57 <b>812</b>	91 42 42 94 87 353 56 859 24); I <sup>2</sup> = 2 <sup>7</sup>	109 83 53 140 118 576 58 1286	7.9% 8.6% 6.3% 17.8% 13.2% 31.0% 1.9%	0.62 [0.31, 1.25] 0.91 [0.49, 1.67] 0.43 [0.18, 1.03] 0.53 [0.33, 0.87] 0.56 [0.32, 0.98] 0.51 [0.36, 0.74] 0.37 [0.07, 2.00]	
69 40 33 73 71 65 52 478 12.63, df = 10	91 83 53 140 116 145 57 <b>812</b>	91 42 42 94 87 353 56 859 24); I <sup>2</sup> = 2 <sup>7</sup>	109 83 53 140 118 576 58 1286	7.9% 8.6% 6.3% 17.8% 13.2% 31.0% 1.9%	0.62 [0.31, 1.25] 0.91 [0.49, 1.67] 0.43 [0.18, 1.03] 0.53 [0.33, 0.87] 0.56 [0.32, 0.98] 0.51 [0.36, 0.74] 0.37 [0.07, 2.00]	0.01 0.1 1 10 1
1	Events  E survival  22 15 9 5 8 9 33 8 19 26 48 29 40  271 20.14, df = 12 Z = 4.92 (P <  E survival  19 10 9 19 66 30 50 64  248 11.02, df = 6 Z = 3.93 (P <  E survival  25 16 15	22 31 15 30 9 23 5 39 8 35 9 35 33 91 8 83 19 53 26 140 48 116 29 145 40 57 878 271 20.14, df = 12 (P = 0.2) Z = 4.92 (P < 0.0000) E survival 19 30 10 23 9 39 19 35 66 91 30 83 50 140 64 116 527 248 11.02, df = 6 (P = 0.0 Z = 3.93 (P < 0.0001) E survival 25 30 16 23 15 39	Events Total Events  E survival  22 31 46 15 30 11 9 23 15 5 39 6 8 35 16 9 35 18 33 91 59 8 83 10 19 53 29 26 140 48 48 116 67 29 145 111 40 57 50 878  271 486 20.14, df = 12 (P = 0.06); l² = 40 2 = 4.92 (P < 0.00001)  E survival  19 30 17 10 23 21 9 39 15 19 35 30 66 91 74 30 83 36 50 140 72 64 116 82 527 248 330 11.02, df = 6 (P = 0.09); l² = 469 Z = 3.93 (P < 0.0001)  E survival  25 30 22 16 23 24 15 39 23	Events   Total   Events   Total	Events Total Events Total Weight E survival  22 31 46 51 4.2% 15 30 11 36 2.1% 9 23 15 27 3.5% 5 39 6 45 2.0% 8 35 16 41 4.7% 9 35 18 37 5.3% 33 91 59 109 14.1% 8 83 10 83 3.7% 19 53 29 53 7.6% 26 140 48 140 16.1% 48 116 67 118 16.0% 29 145 111 576 14.7% 40 57 50 57 6.1% 878 1373 100.0% 271 486 20.14, df = 12 (P = 0.06); l² = 40% Z = 4.92 (P < 0.00001) E survival  19 30 17 36 10 23 21 27 6.9% 9 39 15 45 6.7% 19 35 30 37 8.4% 66 91 74 109 11.6% 30 83 36 83 14.4% 50 140 72 140 29.1% 64 116 82 118 22.9% 527 559 100.0% 248 330 11.02, df = 6 (P = 0.09); l² = 46% Z = 3.93 (P < 0.0001) E survival	Events Total Events Total Weight M-H, Fixed, 95% CI e survival  22 31 46 51 4.2% 0.27 [0.08, 0.89] 15 30 11 36 2.1% 2.27 [0.83, 6.22] 9 23 15 27 3.5% 0.51 [0.17, 1.59] 5 39 6 45 2.0% 0.96 [0.27, 3.41] 8 35 16 41 4.7% 0.46 [0.17, 1.27] 9 35 18 37 5.3% 0.37 [0.14, 0.99] 33 91 59 109 14.1% 0.48 [0.27, 0.85] 8 83 10 83 3.7% 0.78 [0.29, 2.08] 19 53 29 53 7.6% 0.46 [0.21, 1.01] 26 140 48 140 16.1% 0.44 [0.25, 0.76] 48 116 67 118 16.0% 0.54 [0.32, 0.90] 29 145 111 576 14.7% 1.05 [0.66, 1.65] 40 57 50 57 6.1% 0.33 [0.12, 0.87] 878 1373 100.0% 0.60 [0.49, 0.73]  271 486 20.14, df = 12 (P = 0.06);  ² = 40% Z = 4.92 (P < 0.00001)  8 survival  19 30 17 36 Not estimable 10 23 21 27 6.9% 0.22 [0.06, 0.75] 9 39 15 45 6.7% 0.60 [0.23, 1.58] 19 35 30 37 8.4% 0.28 [0.10, 0.80] 66 91 74 109 11.6% 1.25 [0.68, 2.30] 30 83 36 83 14.4% 0.74 [0.40, 1.38] 50 140 72 140 29.1% 0.52 [0.33, 0.85] 64 116 82 118 22.9% 0.54 [0.32, 0.92] 248 30  11.02, df = 6 (P = 0.09);  ² = 46% Z = 3.93 (P < 0.0001)  8 survival  25 30 22 36 1.3% 3.18 [0.99, 10.26] 16 23 24 27 2.7% 0.29 [0.06, 1.27] 15 39 23 45 5.2% 0.60 [0.25, 1.43]

# Supplement Figure 6. Funnel plot of the included studies.

## Supplement Figure 6.





# **PRISMA 2009 Checklist**

Section/topic	#	Checklist item	Reported on page #
TITLE	•		
Title	1	Identify the report as a systematic review, meta-analysis, or both.	1
ABSTRACT			
Structured summary	2	Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria, participants, and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number.	3
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known.	4
Objectives	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	5
METHODS			
Protocol and registration	5	Indicate if a review protocol exists, if and where it can be accessed (e.g., Web address), and, if available, provide registration information including registration number.	NA
Eligibility criteria	6	Specify study characteristics (e.g., PICOS, length of follow-up) and report characteristics (e.g., years considered, language, publication status) used as criteria for eligibility, giving rationale.	5-6
Information sources	7	Describe all information sources (e.g., databases with dates of coverage, contact with study authors to identify additional studies) in the search and date last searched.	6
Search	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	6
Study selection	9	State the process for selecting studies (i.e., screening, eligibility, included in systematic review, and, if applicable, included in the meta-analysis).	6
Data collection process	10	Describe method of data extraction from reports (e.g., piloted forms, independently, in duplicate) and any processes for obtaining and confirming data from investigators.	6
Data items	11	List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.	6
Risk of bias in individual studies	12	Describe methods used for assessing risk of bias of individual studies (including specification of whether this was done at the study or outcome level), and how this information is to be used in any data synthesis.	6-7
Summary measures	13	State the principal summary measures (e.g., risk ratio, difference in means).	7
Synthesis of results	14	Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g., $I^2$ ) for each meta-analysis.	7



# **PRISMA 2009 Checklist**

Section/topic	#	Checklist item	Reported on page #
Risk of bias across studies	15	Specify any assessment of risk of bias that may affect the cumulative evidence (e.g., publication bias, selective reporting within studies).	7
Additional analyses	16	Describe methods of additional analyses (e.g., sensitivity or subgroup analyses, meta-regression), if done, indicating which were pre-specified.	
RESULTS			
Study selection	17	Give numbers of studies screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally with a flow diagram.	8
Study characteristics	18	For each study, present characteristics for which data were extracted (e.g., study size, PICOS, follow-up period) and provide the citations.	8
Risk of bias within studies	19	Present data on risk of bias of each study and, if available, any outcome level assessment (see item 12).	8-9
Results of individual studies	20	For all outcomes considered (benefits or harms), present, for each study: (a) simple summary data for each intervention group (b) effect estimates and confidence intervals, ideally with a forest plot.	9
Synthesis of results	21	Present results of each meta-analysis done, including confidence intervals and measures of consistency.	9-11
Risk of bias across studies	22	Present results of any assessment of risk of bias across studies (see Item 15).	9
Additional analysis	23	Give results of additional analyses, if done (e.g., sensitivity or subgroup analyses, meta-regression [see Item 16]).	NA
DISCUSSION	<del>-</del>		
Summary of evidence	24	Summarize the main findings including the strength of evidence for each main outcome; consider their relevance to key groups (e.g., healthcare providers, users, and policy makers).	11-13
Limitations	25	Discuss limitations at study and outcome level (e.g., risk of bias), and at review-level (e.g., incomplete retrieval of identified research, reporting bias).	13-14
Conclusions	26	Provide a general interpretation of the results in the context of other evidence, and implications for future research.	14
FUNDING	<u> </u>		
Funding	27	Describe sources of funding for the systematic review and other support (e.g., supply of data); role of funders for the systematic review.	14

From: Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLoS Med 6(7): e1000097. doi:10.1371/journal.pmed1000097

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