

Supplementary table 1. Checklist of items to include when reporting a systematic review (with or without meta-analysis)

Section/Topic	#	Checklist Item	Reported on Page #
TITLE			
Title	1	Identify the report as a systematic review, meta-analysis, or both.	Page 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.	Page 2
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known.	Page 3
Objectives	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	Page 4
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.	Page 4
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.	Page 5
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.	Page 5
Search	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	Page 5
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).	Page 5

Section/Topic	#	Checklist Item	Reported on Page #
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.	Page 5–6
Data items	11	List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.	Page 5–6
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.	Page 5–6
Summary measures	13	State the principal summary measures (e.g., risk ratio, difference in means).	Page 6
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.	Page 6
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).	Page 5–6
Additional analyses	16	Describe methods of additional analyses (e.g., sensitivity or subgroup analyses, meta-regression), if done, indicating which were pre-specified.	not applicable
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.	Page 6–7
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.	Page 6–7
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).	Page 6–7
Results of individual studies	20	For all outcomes considered (benefits or harms), present, for each study: (a) simple summary data for each intervention group and (b) effect estimates and confidence intervals, ideally with a forest plot.	Page 6–7

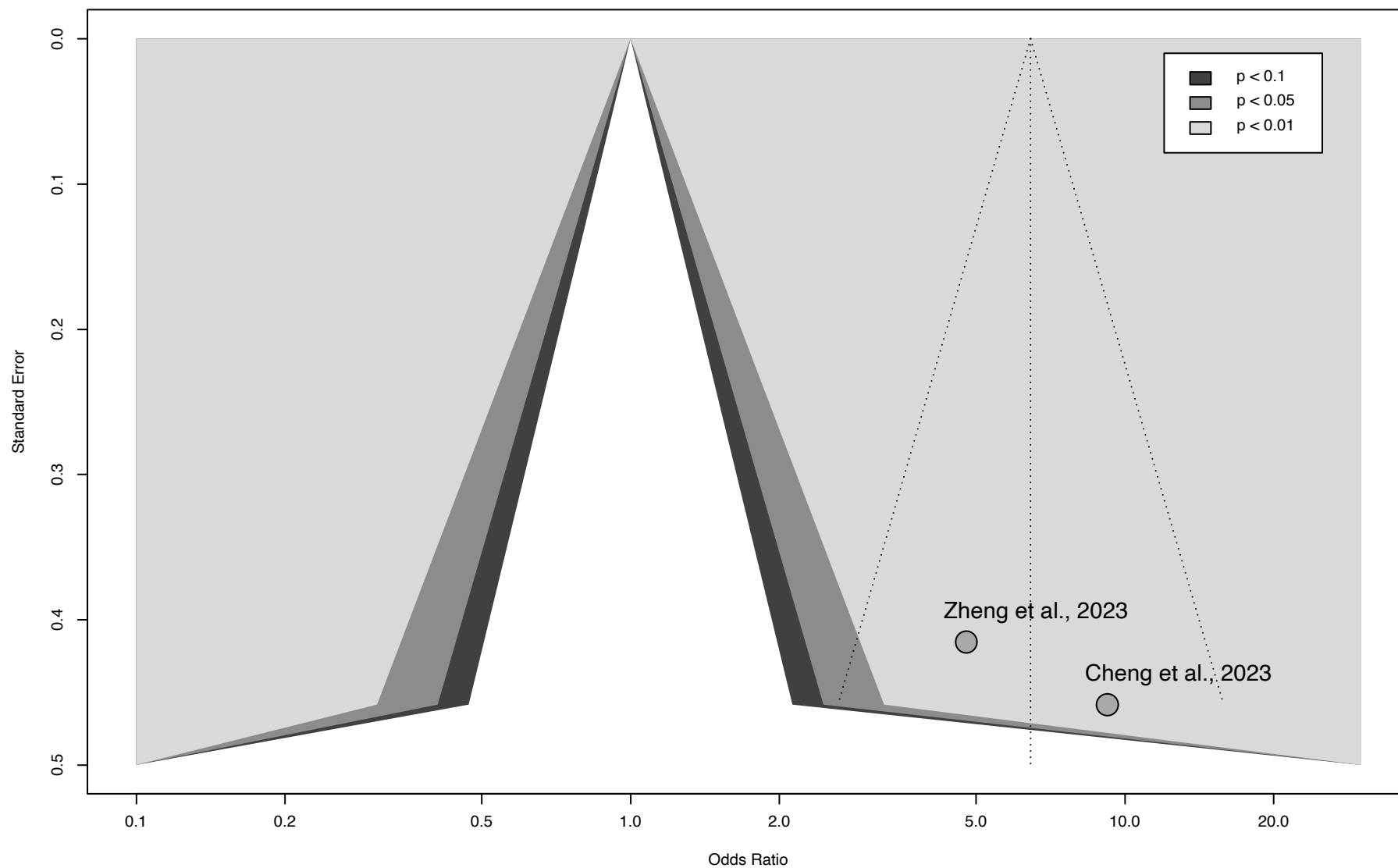
Section/Topic	#	Checklist Item	Reported on Page #
Synthesis of results	21	Present results of each meta-analysis done, including confidence intervals and measures of consistency.	Page 12
Risk of bias across studies	22	Present results of any assessment of risk of bias across studies (see Item 15).	Page 10–11
Additional analysis	23	Give results of additional analyses, if done (e.g., sensitivity or subgroup analyses, meta-regression [see Item 16]).	not applicable
DISCUSSION			
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., health care providers, users, and policy makers).	Page 12–13
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).	Page 13–14
Conclusions	26	Provide a general interpretation of the results in the context of other evidence, and implications for future research.	Page 14
FUNDING			
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.	Page 15

Supplementary table 2. Risk of bias summary for randomized controlled trials

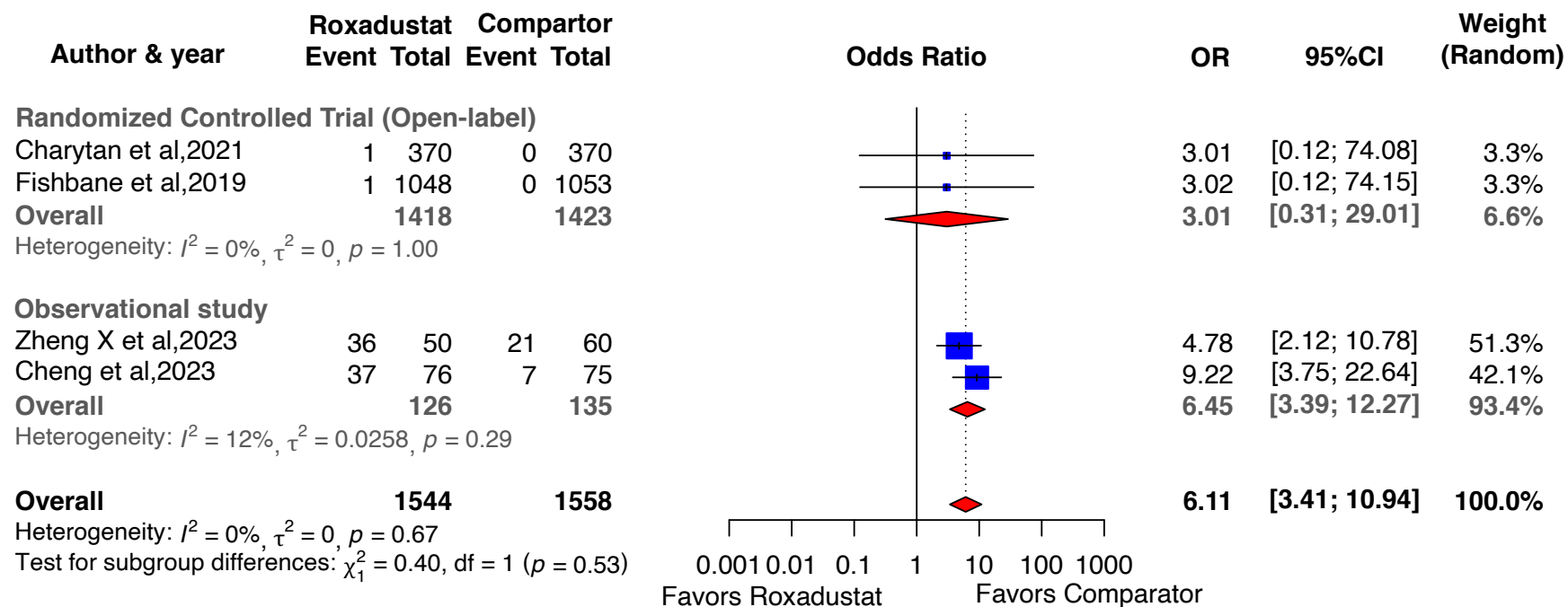
Author, year	Bias domain: Version 2 of the Cochrane risk-of-bias assessment tool for randomized trials					Overall
	Domain 1	Domain 2	Domain 3	Doman 4	Domain 5	
Charytan et al., 2021 [1]	Low	Low	Low	High	Low	High
Fishbane et al., 2022 [2]	Low	Low	Low	High	Low	High

Domain 1: Bias arising from the randomization process, Domain 2: Bias due to deviations from intended intervention, Domain 3: Bias due to missing outcome data, Domain 4: Bias in measurement of the outcome, Domain 5: Bias in selection of the reported result

NOTE: The risk of bias for all outcomes in randomized controlled trials was assessed using version 2 of the Cochrane Risk-of-Bias tool (RoB 2) for randomized trials [\[3\]](#)



Supplementary Fig 1. Contour-enhanced funnel plot of the studies included in the meta-analysis



Supplementary Fig 2. Forest plot comparing the suppression of thyroid function or hypothyroidism in patients treated with roxadustat and an erythropoiesis-stimulating agent

CI, confidence interval; ESA, erythropoiesis-stimulating agent; OR, odds ratio

References

1. Charytan C, Manllo-Karim R, Martin ER, Steer D, Bernardo M, Dua SL, et al. A randomized trial of roxadustat in anemia of kidney failure: SIERRAS study. *Kidney Int Rep.* 2021;6:1829–39.
2. Fishbane S, Pollock CA, El-Shahawy M, Escudero ET, Rastogi A, Van BP, et al. Roxadustat versus epoetin alfa for treating anemia in patients with chronic kidney disease on dialysis: Results from the randomized phase 3 Rockies study. *J Am Soc Nephrol.* 2022;33:850–66.
3. Chandler J, Cumpston M, Li T, Page M, Welch V, Higgins J, et al. *Cochrane Handbook for Systematic Reviews of Interventions.* version 6.4. Cochrane. 2023. <https://training.cochrane.org/handbook/current>.