PRISMA-DTA Checklist

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PRISMA-DTA Checklist

Study: Diagnostic Accuracy of Speckle-Tracking Echocardiography for Sepsis-Induced Cardiomyopathy: A Systematic Review of Reference Standard Limitations

Reference: McInnes MDF, Moher D, Thombs BD, McGrath TA, Bossuyt PM, The PRISMA-DTA Group (2018). *Preferred Reporting Items for a Systematic Review and Meta-analysis of Diagnostic Test Accuracy Studies: The PRISMA-DTA Statement.* JAMA. 2018 Jan 23;319(4):388-396. doi: 10.1001/jama.2017.19163.

TITLE / ABSTRACT

#	Item	Page	Notes
1	**Title:** Identify the report as a systematic review of diagnostic test accuracy (DTA) studies.	1	Title contains “Systematic Review of Diagnostic Accuracy”
2	**Abstract:** See PRISMA-DTA for abstracts.	1	Structured abstract (Background/Objectives/Methods/Results/Conclusions)

INTRODUCTION

#	Item	Page	Notes
3	**Rationale:** Describe the rationale for the review in the context of what is already known.	2-3	Reference standard limitations as primary motivation
D1	**Clinical role of index test:** State the scientific and clinical background, including the intended use and clinical role of the index test.	2	STE described as load-independent deformation imaging; no minimal accuracy threshold pre-specified for descriptive synthesis
4	**Objectives:** Provide an explicit statement of the question(s) in terms of participants, index test(s), and target condition(s).	3	Participants: adults with sepsis; Index test: STE parameters; Target condition:

			SICM/RVD

METHODS

#	Item	Page	Notes
5	**Protocol and registration:** Indicate if a review protocol exists, where it can be accessed, and provide registration information.	3-4	PROSPERO: CRD420261371085
6	**Eligibility criteria:** Specify study and report characteristics used as criteria for eligibility, giving rationale.	4	Adults; STE for SICM/RVD; AUROC/sensitivity/specificity reported; peer-reviewed only; no language or date restrictions
7	**Information sources:** Describe all information sources and date last searched.	4-5	PubMed/MEDLINE and Cochrane Library (inception-April 16, 2025); no citation tracking
8	**Search:** Present full search strategies for all sources searched.	18	Appendix 1: complete PubMed and Cochrane strategies
9	**Study selection:** State the process for selecting studies.	5	Two reviewers independently screened; disagreements resolved by discussion or third reviewer (L.Z.)
10	**Data collection process:** Describe method of data extraction from reports.	5-6	Piloted standardized form on two studies; authors not contacted for missing data
11	**Definitions for data extraction:** Provide definitions used in data extraction.	6	Six categories: study design, sepsis definition, index test/threshold, reference standard, accuracy metrics, sample size; SICM recorded per study's own reference standard
12	**Risk of bias and applicability:** Describe methods for assessing risk of bias and concerns regarding applicability.	6	Expanded QUADAS-2: Domain 3a (definition validity) + 3b (execution independence)
13	**Diagnostic accuracy measures:** State the principal accuracy measure(s) and unit of assessment.	4, 7	AUROC, sensitivity, specificity; per-patient
14	**Synthesis of results:** Describe methods of handling data and combining results, including variability.	6-7	SWiM descriptive synthesis; grouped by reference standard strategy (Table 2); between-study variability treated as structural feature
D2	**Meta-analysis:** Report statistical methods for meta-analyses, if performed.	N/A	Not applicable: meta-analysis precluded by heterogeneous reference standards
16	**Additional analyses:** Describe methods of additional analyses, if done.	N/A	Not applicable: no sensitivity/subgroup analyses performed

RESULTS

#	Item	Page	Notes
17	**Study selection:** Provide numbers of studies at each stage with reasons for exclusions, ideally with flow diagram.	7-8	128 citations screened; 105 excluded at title/abstract; 8 excluded at full-text; 5 retained (Figure 1)
18	**Study characteristics:** For each included study provide key characteristics.	16-17	Table 1: participant characteristics, clinical setting, design, target condition definition, index test, reference standard, sample size, funding
19	**Risk of bias and applicability:** Present evaluation of risk of bias for each study.	17-18	Table 3: QUADAS-2 assessments
20	**Results of individual studies:** Report 2x2 data (TP, FP, FN, TN) with accuracy estimates.	16-18	Partial: complete 2x2 tables unavailable in most studies; AUROCs and sensitivity/specificity reported where available
21	**Synthesis of results:** Describe test accuracy, including variability.	11-12	Narrative synthesis (SWiM); no pooled estimates due to structural heterogeneity
23	**Additional analysis:** Give results of additional analyses, if done.	N/A	Not applicable

DISCUSSION

#	Item	Page	Notes
24	**Summary of evidence:** Summarize main findings including strength of evidence.	12-13	Principal findings with GRADE-DTA ratings (very low certainty)
25	**Limitations:** Discuss limitations from included studies and review process.	13-14	Risk of bias (all very high in Domain 3a); incomplete retrieval not applicable (comprehensive search performed)
26	**Conclusions:** Provide general interpretation and implications.	14	STE as adjunct, not definitive diagnostic test; call for consensus disease definition

FUNDING

#	Item	Page	Notes

27	**Funding:** Describe sources of funding and role of funders.	13	No external funding declared

PRISMA-DTA for Abstracts Checklist

#	Item	Page	Notes
1	Background	1	Context and rationale provided
2	Objectives	1	Primary objective stated
3	Data sources	1	PubMed/MEDLINE, Cochrane Library, April 16, 2025
4	Study selection	1	Inclusion criteria stated; exclusion criteria not detailed (Methods provides full list)
5	Data extraction	1	Two reviewers; piloted form not mentioned (space limitation)
6	Risk of bias	1	Expanded QUADAS-2 described
7	Results of studies	1	Five studies; AUROC range 0.77->0.90; very low certainty
8	Synthesis of results	1	Meta-analysis not performed; SWiM used
9	Limitations	1	Very low certainty mentioned; full limitations in Discussion
10	Conclusions	1	Interpretation and implications stated
11	Registration	1	PROSPERO CRD420261371085
12	Funding	13	No external funding

Status Legend: - **N/A** = Not applicable (descriptive synthesis only; no meta-analysis or additional analyses) - **Partial** = Item #20: complete 2x2 tables unavailable in majority of included studies

Page numbers verified against final Word manuscript (April 30, 2026).