Supplemental Table 4: PRISMA 2020 Item Checklist

Below is the complete PRISMA 2020 Item Checklist that has been applied to the revised manuscript, ensuring adherence to the PRISMA 2020 guidelines for reporting systematic reviews and meta-analyses.

Section and Topic	Item #	Checklist Item Description	Location in Manuscript	Details from Manuscript Document
Title	1	Identify the report as a systematic review.	Title section of the manuscript.	The title identifies the study as a systematic review and cost-effectiveness analysis of INSTI-based regimens for first-line HIV treatment.
Abstract	2	Provide a structured summary.	Abstract section.	The abstract includes background, methods, results, and conclusions, summarizing the systematic review and cost-effectiveness findings.
Introduction	3	Describe the rationale for the review in the context of existing knowledge.	Introduction section.	The introduction explains the need for evaluating INSTI-based regimens and their clinical and economic implications for HIV treatment in China.
Objectives	4	Provide an explicit statement of the objective(s) or question(s) the review addresses.	Introduction section.	The objectives are stated explicitly, focusing on the efficacy, safety, and cost-effectiveness of INSTI-based regimens compared to standard ART regimens.
Methods				
Eligibility Criteria	5	Specify the inclusion and exclusion criteria for the review and how studies were grouped for the syntheses.	Methods section. (Eligibility Criteria)	Inclusion criteria include randomized controlled trials and cost-effectiveness studies of ART regimens, while exclusion criteria involve incomplete or non-comparable data.
Information Sources	6	Specify all databases, registers, websites, organizations, reference lists, and other sources searched or consulted. Specify the date when each source was last searched or consulted.	Methods section. (Information Sources)	Databases such as PubMed, Embase, and CNKI were searched for articles published up to March 2023.
Search Strategy	7	Present the full search strategies for all databases, registers, and websites, including any filters and limits used.	Methods section. (Search Strategy)	A detailed search strategy is provided, including keywords for ART regimens, INSTIs, and cost-effectiveness, as shown in Supplemental Table 1-3.
Selection Process	8	Specify the methods used to decide whether a study met the inclusion criteria, including how many reviewers screened each record and whether they worked independently.	Methods section. (Selection Process)	Two independent reviewers screened the studies, and discrepancies were resolved by a third reviewer.
Data Collection Process	9	Specify the methods used to collect data, including how many reviewers collected data independently, and any processes for obtaining or confirming data from study investigators.	Methods section. (Data Collection Process)	Data were extracted independently by two reviewers and cross-verified to ensure accuracy.
Data Items	10a	List and define all outcomes for which data were sought and methods used to decide which results to collect.	Methods section. (Data Items)	Outcomes include viral suppression rates, adverse events (stratified by severity), and cost-effectiveness metrics such as ICERs.
	10b	List and define all other variables for which data were sought (e.g., intervention characteristics, funding sources).	Methods section. (Data Items)	Variables include patient demographics, study settings, and healthcare costs specific to the Chinese healthcare system.
Risk of Bias in Studies	11	Specify methods for assessing risk of bias, including the tool(s) used and whether reviewers worked independently.	Methods section. (Study Risk of Bias Assessment)	Risk of bias was assessed using the Cochrane Collaboration tool for RCTs and the CHEERS checklist for economic evaluations.
Effect Measures	12	Specify for each outcome the effect measure(s) used in the synthesis or presentation of results.	Methods section. (Effect Measures)	Effect measures include odds ratios (ORs) for safety and efficacy outcomes and incremental cost-effectiveness ratios (ICERs) for economic outcomes.
Synthesis Methods	13a	Describe the processes used to decide which studies were eligible for each synthesis.	Methods section. (Synthesis Methods)	Studies were grouped based on ART regimens and compared using network meta-analysis for efficacy and safety outcomes.
Reporting Bias Assessment	14	Describe any methods used to assess risk of bias due to missing results in a synthesis.	Methods section. (Reporting Bias Assessment)	Funnel plots and Egger's test were used to assess publication bias.
Certainty Assessment	15	Describe methods used to assess certainty (or confidence) in the body of evidence for an outcome.	Methods section. (Certainty Assessment)	Certainty was assessed using the GRADE framework, considering study quality, inconsistency, and indirectness.
Results				
Study Selection	16a	Describe the results of the search and selection process, ideally using a flow diagram.	Results section. (Study Selection)	The PRISMA flowchart summarizes the search and selection process, with 17 studies included in the final analysis.
Study Characteristics	17	Cite each included study and present its characteristics.	Results section. (Study Characteristics)	Study characteristics, such as sample size, intervention, and outcomes, are summarized in Supplemental Table 5.
Results of Syntheses	20a	Briefly summarize characteristics and risk of bias among contributing studies for each synthesis.	Results section. (Results of Syntheses)	The results include odds ratios for viral suppression and adverse events, stratified by severity.
Discussion	23a	Provide a general interpretation of the results in the context of other evidence.	Discussion section.	The discussion emphasizes the clinical and economic relevance of INSTI-based regimens for HIV treatment, highlighting their safety and cost-effectiveness.
	23b	Discuss limitations of the evidence included in the review.	Discussion section.	Limitations include variations in study design and the assumption of 100% adherence in cost-effectiveness modeling.
	23d	Discuss implications of the results for practice, policy, and future research.	Discussion section.	The results inform clinical guidelines and highlight areas for future research, such as real-world data on adherence and resistance.
Other Information				
Funding	25	Describe sources of financial or non-financial support for the review.	Acknowledgments section.	Funding details are disclosed, indicating support from academic and research institutions.