

## MOOSE Checklist

### **Immune signatures in patients with psoriasis vulgaris of blood-heat syndrome: a systematic review and meta-analysis**

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<b>Criteria</b>		<b>Brief description of how the criteria were handled in the meta-analysis</b>
<b>Reporting of background should include</b>		
√	Problem definition	Page 3: Psoriasis is a common, chronic, relapsing immune-mediated inflammatory disease. Psoriasis prevalence is on the rise, while studies investigating systemic immunity in patients with psoriasis vulgaris of blood-heat syndrome have used different serum markers and reported discrepant results.
√	Hypothesis statement	Page 4: The immunological serum markers IFN- $\gamma$ , IL-17, IL-23, TNF- $\alpha$ are elevated and IL-4, IL-10 are decreased in patients with psoriasis vulgaris of blood-heat syndrome compared with healthy controls.
√	Description of study outcomes	Page 4: IFN- $\gamma$ , IL-4, IL-17, IL-23, IL-6, TNF- $\alpha$ , and IL-10
√	Type of exposure or intervention used	Page 4: psoriasis vulgaris of blood-heat syndrome
√	Type of study designs used	Page 5: There were no limitations on the study design.
√	Study population	Page 5: We placed no restriction.
<b>Reporting of search strategy should include</b>		
√	Qualifications of searchers	Page 5: The credentials of the three investigators X.L.,

		Q.Q.X, and F.L.L. are indicated in the author list.
√	Search strategy, including time period included in the synthesis and keywords	Page 5: Time period: from January 1980 to May 2015. Keywords: psoriasis, blood-heat syndrome, IFN- $\gamma$ , IL-4, IL-17, IL-23, IL-6, TNF- $\alpha$ , and IL-10.
√	Databases and registries searched	Page 5: MEDLINE, Embase, Cochrane Central Register of Controlled Trials, China National Knowledge Infrastructure database (CNKI), Chinese Scientific Journals Full-Text Database (CQVIP), Wanfang Data Knowledge Service Platform, and Chinese Biomedical Literature Service System (SinoMed)
√	Search software used, name and version, including special features	Page 5: We did not employ a search software. EndNote was used to merge retrieved citations and eliminate duplications.
√	Use of hand searching	Pages 5-6: We hand-searched bibliographies of retrieved papers for additional references.
√	List of citations located and those excluded, including justifications	Pages 5-6: Details of the literature search process are outlined in the flow chart. The citation list is available upon request.
√	Method of addressing articles published in languages other than English	Page 5: We limited to the studies published in English or Chinese.
√	Method of handling abstracts and unpublished studies	Page 6: We have contacted authors for abstracts and unpublished studies.

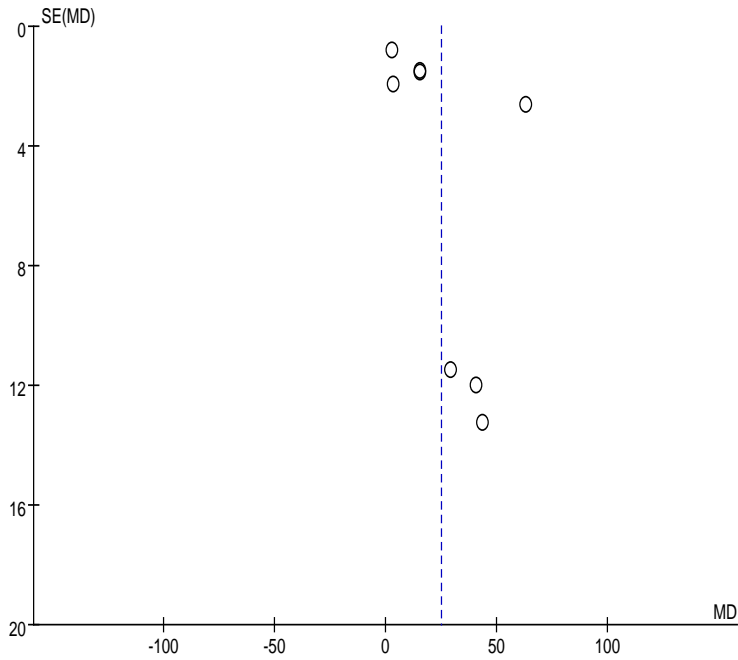
√	Description of any contact with authors	Page 6: We have contacted with J. Liu and J.W. Li for their full texts, as adequate information for the performance of this review was unavailable from abstracts.
<b>Reporting of methods should include</b>		
√	Description of relevance or appropriateness of studies assembled for assessing the hypothesis to be tested	Pages 5-6: Detailed inclusion and exclusion criteria were described in the study selection section.
√	Rationale for the selection and coding of data	Page 6: Data extracted from each of the studies were relevant to the first author, study characteristics, characteristics of participants, outcome characteristics.
√	Assessment of confounding	Not applicable.
√	Assessment of study quality, including blinding of quality assessors; stratification or regression on possible predictors of study results	Page 6: The Newcastle-Ottawa Scale was used to assess the study quality, by categorizing it into three dimensions: selection, comparability and exposure for case-control studies; and selection, comparability and outcome for cohort studies.
√	Assessment of heterogeneity	Pages 6-7: Heterogeneity of the studies were explored within two types of study designs using $I^2$ test that provides the relative amount of variance of the summary effect due to the between-study heterogeneity.

√	Description of statistical methods in sufficient detail to be replicated	Pages 6-7: Description of methods of meta-analyses was detailed in the data synthesis and analysis section.
√	Provision of appropriate tables and graphics	We included 1 flow chart, 1 summary tables and 4 figures.
<b>Reporting of results should include</b>		
√	Graph summarizing individual study estimates and overall estimate	Figure 3
√	Table giving descriptive information for each study included	Table 1
√	Results of sensitivity testing	Not applicable.
√	Indication of statistical uncertainty of findings	Pages 8-9: 95% confidence intervals were presented with all summary estimates.
<b>Reporting of discussion should include</b>		
√	Quantitative assessment of bias	Assessed using funnel plots (see below)
√	Justification for exclusion	Pages 10-11: Papers were excluded on the basis of exclusion criteria listed. We did not systematically exclude any studies on the basis of language or study population size.

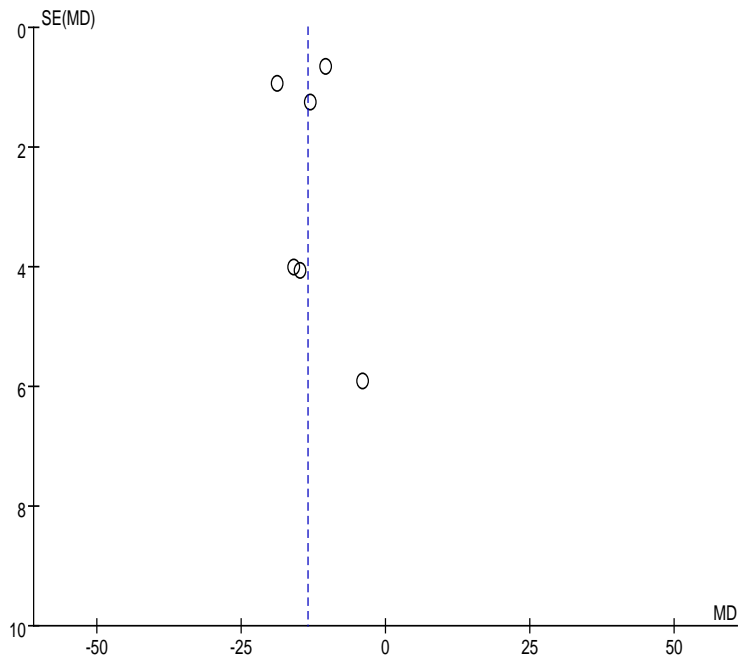
√	Assessment of quality of included studies	The Newcastle-Ottawa Scale was used to assess the study quality. Details are outlined in Table 1.
<b>Reporting of conclusions should include</b>		
√	Consideration of alternative explanations for observed results	Page 11: We discussed the limitations of this study. We were unable to measure the progression of psoriasis vulgaris of blood-heat syndrome using serum markers in pretherapeutic patients, and only three/four eligible observation studies that reported serum IL-23/IL-6 levels were reviewed. We noted that more high-quality studies, with a low risk of bias and adequate sample sizes, are required to fully clarify the effects.
√	Generalization of the conclusions	Page 12: Patients with psoriasis vulgaris of blood-heat syndrome show significantly elevated levels of IFN- $\gamma$ , IL-17, IL-23, and TNF- $\alpha$ and decreased levels of IL-4 and IL-10.
√	Guidelines for future research	Page 11: We recommend future studies on the effect of clearing heat and cooling blood therapy on markers of immunology.
√	Disclosure of funding source	Page 16: Description of the detail in the acknowledgments section.

**Supplementary Figures 1 a to g. Funnel plots identifying publication bias for all studied outcomes (Funnel plot of MD for included studies).**

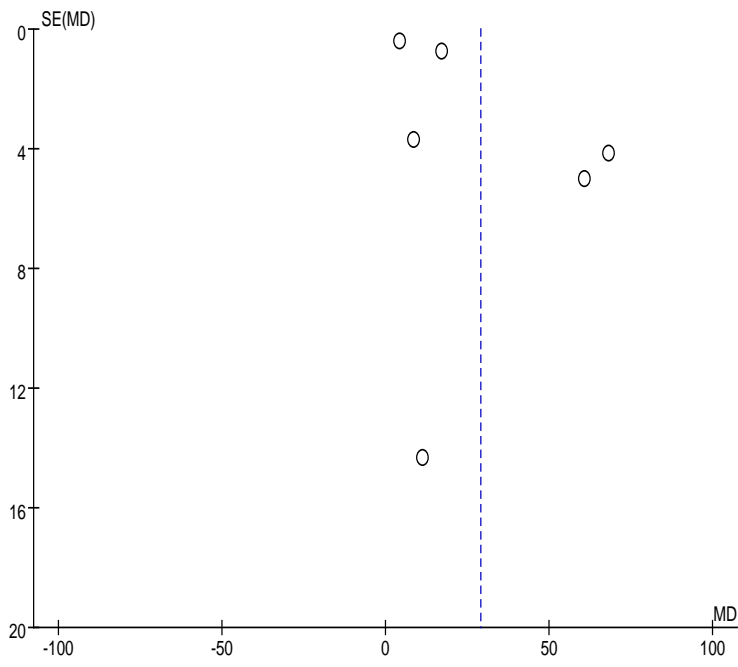
**a. IFN- $\gamma$**



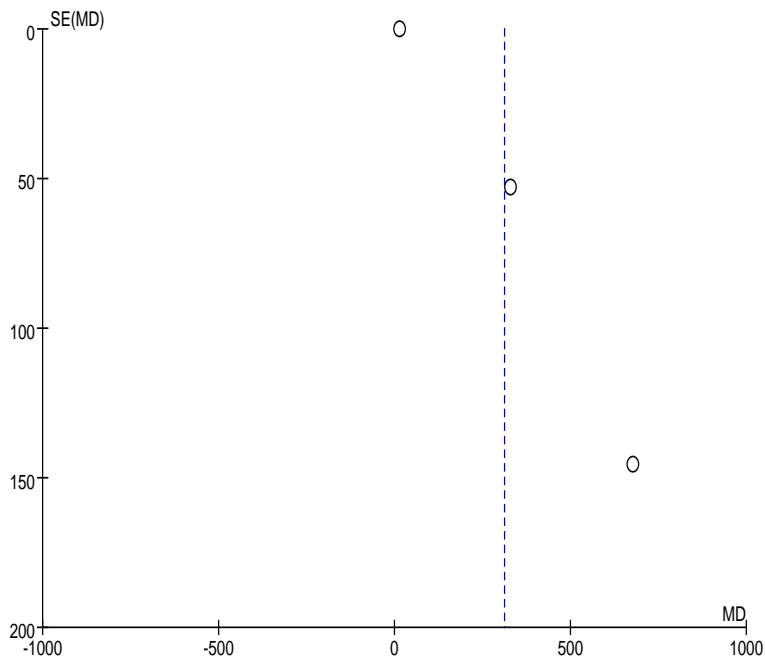
**b. IL-4**



**c. IL-17**

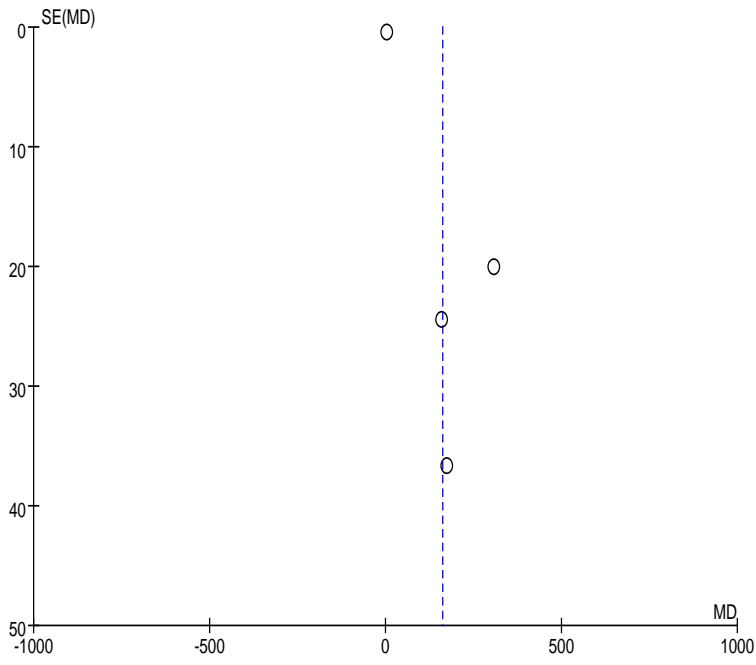


**d. IL-23**

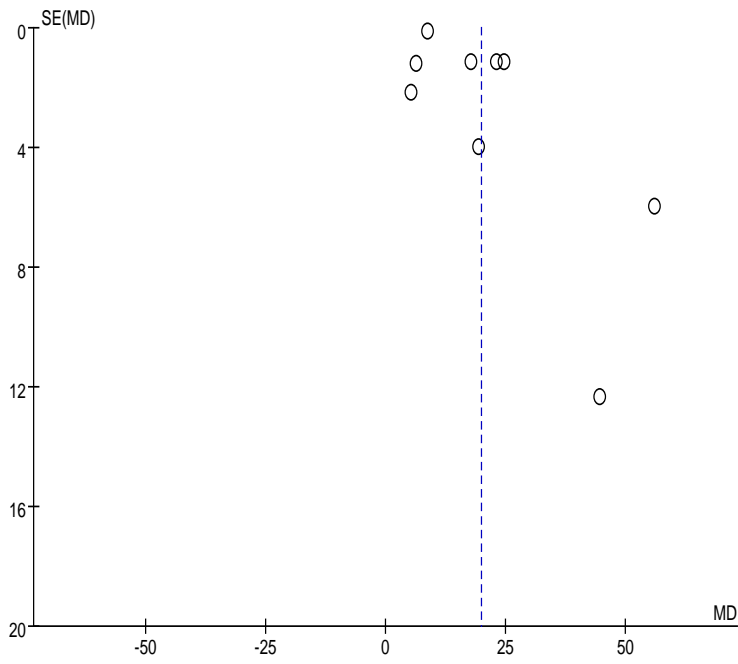




**e. IL-6**



**f. TNF- $\alpha$**



**g. IL-10**

