International Platform of Registered Systematic Review and Meta-analysis Protocols

INPLASY

Prognostic and clinicopathological impacts of systemic immune-inflammation index on patients with diffuse large B-cell lymphoma: a meta-analysis

INPLASY202380106

doi: 10.37766/inplasy2023.8.0106

Received: 25 August 2023

Published: 25 August 2023

Fan, ZJ[1]; Shou, LH[2].

Corresponding author:
Lihong Shou

hzzx1995@163.com

Author Affiliation:
Huzhou Central Hospital.

ADMINISTRATIVE INFORMATION

Support - This work was supported by Zhejiang Province Traditional Chinese Medicine Science and Technology Plan Program (Grant No. 2023ZL171).

Review Stage at time of this submission - Completed but not published.

Conflicts of interest - None declared.

INPLASY registration number: INPLASY202380106

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 25 August 2023 and was last updated on 25 August 2023.

INTRODUCTION

Review question / Objective Systemic immune-inflammation index (SII) represents the immunoinflammatory score and prognostic marker, however, its relation with diffuse large B-cell lymphoma (DLBCL) patient prognosis is still conflicting. The present meta-analysis was conducted for the comprehensive evaluation on relation of SII with DLBCL patient prognosis.

Condition being studied PubMed, Web of Science, Embase, and Cochrane Library databases were comprehensively searched from inception till March 16, 2023. We determined combined HRs together with 95%CIs for estimating SII with regard to its significance in predicting OS and PFS of DLBCL. Besides, correlations of SII with clinicopathological features of DLBCL were analyzed by using odds ratio (ORs) and their 95% CIs.

METHODS

Search strategy (Systemic-immune-inflammation index OR SII OR systemic immune-inflammation index) AND (diffuse large B-cell lymphoma OR lymphoma large B-cell OR DLBCL OR lymphoma).

Participant or population DLBCL was verified based on histology or pathology.

Intervention The relationship between SII and survival of DLBCL patients was provided and the threshold of SII was provided.

Comparator DLBCL patients with low SII.

Study designs to be included Cohort studies, including prospective and retrospective cohorts.

Eligibility criteria Studies which conformed to criteria below were contained: (1) DLBCL was verified based on histology or pathology; (2)

relationship between SII and survival of DLBCL patients was provided; (3) hazard ratios (HRs) as well as 95% confidence intervals (CIs) regarding survival outcomes could be available; (4) the threshold of SII was provided; and (5) English studies.

Information sources PubMed, Web of Science, Embase, and Cochrane Library databases were comprehensively searched from inception till March 16, 2023. Additionally, references in included studies were scanned to identify other relevant reports.

Main outcome(s) Overall survival (OS) was deemed as our primary outcome, whereas progression-free survival (PFS) as secondary outcome.

Additional outcome(s) Besides, correlations of SII with clinicopathological features of DLBCL were analyzed by using odds ratio (ORs) and their 95% CIs.

Quality assessment / Risk of bias analysis The Newcastle–Ottawa Scale (NOS), which covers three aspects of selection, comparability and outcome, was employed for assessing the enrolled study quality, yielding the total score of 0–9 points. Studies of NOS score ≥6 were high-qualitystudies. In addition, we utilized the funnel plot and Begg's test for detecting publication bias.

Strategy of data synthesis We determined combined HRs together with 95%CIs for estimating SII with regard to its significance in predicting OS and PFS of DLBCL. Besides, correlations of SII with clinicopathological features of DLBCL were analyzed by using odds ratio (ORs) and their 95% CIs. Cochran Q test along with Higgin I2 statistic was applied in detecting heterogeneities across those enrolled articles. In the presence of obvious heterogeneity (I2 > 50%), the random-effects model should be selected, or else, the fixed-effects model should be applied.

Subgroup analysis Subgroup analysis was carried out for detecting potential source of heterogeneity and for further investigations.

Sensitivity analysis None.

Language restriction English.

Country(ies) involved China.

Keywords systemic immune-inflammation index; meta-analysis; DLBCL; survival; evidence-based medicine.

Contributions of each author

Author 1 - Zaijing Fan.
Email: fanzaijing27@163.com
Author 2 - Lihong Shou.
Email: hzzx1995@163.com