INPLASY

Prognostic and clinicopathological role of systemic inflammation response index (SIRI) in patients with cervical cancer: a meta-analysis

INPLASY202520002
doi: 10.37766/inplasy2025.2.0002
Received: 1 February 2025
Published: 1 February 2025

Corresponding author:
Xieyan Yu

yuxieyan@163.com

Author Affiliation:
Huzhou Maternity & Child Health Care Hospital.

Zhang, XX; Ni, DM; Zhu, K; Yu, XY.

ADMINISTRATIVE INFORMATION

Support - None.

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

Conflicts of interest - None declared.

INPLASY registration number: INPLASY202520002

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 1 February 2025 and was last updated on 1 February 2025.

INTRODUCTION

Review question / Objective Systemic inflammation response index (SIRI) is evaluated for the value for forecasting cervical cancer (CC) prognosis, but findings were controversial. This study focused on identifying SIRI's accurate prognostic significance for CC by conducting a meta-analysis.

Condition being studied The present work systemically searched PubMed, Web of Science, Embase, Cochrane Library, and CNKI until December 6, 2024 to determine SIRI's effect on forecasting CC overall survival (OS) as well as progression-free survival (PFS) through calculating combined hazard ratios (HRs) and 95% confidence intervals (CIs).

METHODS

Participant or population Patients with cervical cancer.

Intervention Studies investigated association of SIRI with survival outcomes in CC cases with reporting or having computable hazard ratios (HRs) and 95% confidence intervals (CIs).

Comparator CC patients with normal SIRI.

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

Eligibility criteria Following articles were enrolled: (1) CC diagnosed based on pathology; (2) those investigating association of SIRI with survival outcomes in CC cases; (3) those reporting or having computable hazard ratios (HRs) and 95% confidence intervals (CIs); (4) those with available SIRI threshold; and (5) no language restriction was applied. Following articles were eliminated: (1) reviews, letters, abstracts, cancer reports, and comments; (2) those with unavailable survival information; (3) those with duplicate cases; and (4) animal studies.

Information sources PubMed, Web of Science, Embase, Cochrane Library, and CNKI were searched until December 6, 2024.

Main outcome(s) OS and PFS.

Quality assessment / Risk of bias analysis The Newcastle-Ottawa Scale (NOS) was applied in evaluating cohort study quality.

Strategy of data synthesis We determined pooled HRs and 95%CIs for estimating SIRI's effect on forecasting CC overall survival (OS) and progression-free survival (PFS). Cochrane Q statistic and the I2 test were employed for evaluating among-study heterogeneities, with $I2>50\%$ and $p<0.10$ standing for obvious heterogeneity, and then the random-effects model must be utilized; otherwise, the fixed-effects model should be adopted.

Subgroup analysis We implemented subgroup analyses based on various variables for further investigating SIRI's prognostic role in diverse patient populations.

Sensitivity analysis We carried out a sensitivity analysis to ensure stable combined results, assessing the role of one article in total estimate through omitting them in sequence.

Country(ies) involved China.

Keywords cervical cancer; meta-analysis; prognosis; systemic inflammation response index; evidence-based medicine.

Contributions of each author

Author 1 - Xiaoxing Zhang.
Email: zhangyst@163.com
Author 2 - Dongmei Ni.
Email: ndmwl@163.com
Author 3 - Kai Zhu.
Email: 39074799@qq.com
Author 4 - Xieyan Yu.
Email: yuxieyan@163.com