INPLASY PROTOCOL

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Support: None.

Review Stage at time of this submission: Data analysis.

Conflicts of interest: None declared.

A meta-analysis of platelet-lymphocyte ratio: a merit attention prognostic factor in renal cell carcinoma

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Review question / Objective: The aim of this meta-analysis of retrospective study is to evaluate the efficacy of platelet-lymphocyte ratio as a factor of prognostic of renal cell carcinoma.

Condition being studied: The prognostic value of plated-lymphocyte ratio (PLR) in multiple malignancies had been in vestigated in previous studies; however, its prognostic value in renal cell carcinoma (RCC) remains controversial.This study was performed to assess the prognostic value of PLR in RCC patients.

Information sources: We will search articles in three electronic database including PubMed, EMBASE and Cochrane Library. All the English publications until 9 June 2021 will be searched without any restriction of countries or article type. Reference list of all selected articles will independently screened to identify additional studies left out in the initial search.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 21 September 2021 and was last updated on 21 September 2021 (registration number INPLASY202190064).

INTRODUCTION

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performed to assess the prognostic value of PLR in RCC patients.

METHODS

Participant or population: Patients with renal cell carcinoma (as diagnosed by a clinician, or using any recognized diagnostic criteria) will be included.

Intervention: High level platelet-lymphocyte ratio.

Comparator: Low level platelet-lymphocyte ratio.

Study designs to be included: Retrospective study; prospective study; RCTs.

Eligibility criteria: None.

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Main outcome(s): Os, css, pfs. Measures of effect: HRs.

Quality assessment / Risk of bias analysis: Two reviewers will independently assesses the quality of the selected studies according to the Newcastle-Ottawa Scale. Items will be evaluated in three categories: Low risk of bias, unclear bias and high risk of bias. The following characteristics will be evaluated: Random sequence generation (selection Bias) Allocation concealment (selection bias) Blinding of participants and personnel (performance bias) Incomplete outcome data (attrition bias) Selective reporting (reporting bias) Other biases Results from these questions will be graphed and assessed using Review Manager 5.3.

Strategy of data synthesis: Hazard Ratio (HR) for both fixed and random effects models(weighting by inverse of variance) will be used. Between-study heterogeneity will be assessed using the τ^2, X^2(Cochran Q) and I^2 statistics. According to the Cochrane handbook, the I^2 will be considered non-important (< 30%), moderate (30%-60%) and substantial (> 60%). Results will be assessed using forest plots and presented as HRs for the main outcome and secondary outcomes. A subgroup analysis will be performed to ascertain the results of the meta-analysis and identify the resource of heterogeneity. A sensitivity analysis will be performed to ascertain the results of the meta-analysis by excluding each of the individual studies. Publication bias will be assessed by a funnel plot for meta- analysis.Statistical analysis will be conducted using Review Manager 5.3.

Subgroup analysis: We will consider subgroups such as year of publication, country where the study was conducted, Tumor stage, statistical approach, total number of people included in the study, pathological characteristics and therapies, and PLR value.

Sensitivity analysis: A sensitivity analysis will be performed to ascertain the results of the meta-analysis by excluding each of the individual studies.

Language: English.

Country(ies) involved: China.

Keywords: renal cell carcinoma, platelet-lymphocyte ratio, prognostic.

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