INPLASY PROTOCOL

To cite: Peng et al. A Systematic Review and meta-analysis of the efficacy of immunotherapy in the treatment of non-small cell lung cancer. Inplasy protocol 202260094. doi: 10.37766/inplasy2022.6.0094

Received: 23 June 2022

Published: 23 June 2022

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Support: **No financial support.**

Review Stage at time of this submission: **Data analysis - Completed but not published.**

Conflicts of interest:
None declared.

A Systematic Review and meta-analysis of the efficacy of immunotherapy in the treatment of non-small cell lung cancer

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Review question / Objective: **This study aimed to compare the effectiveness of different ICIs in the treatment of NSCLC, and to provide a theoretical basis for clinical selection of different regimens.**
Condition being studied: **Immunotherapy is a relatively new treatment method for non-small cell lung cancer (NSCLC), and clinical studies confirmed that immune checkpoint inhibitors (ICIs) showed prominent efficacy in the treatment of NSCLC patients. This study aimed to compare the effectiveness of different ICIs in the treatment of NSCLC, and to provide a theoretical basis for clinical selection of different regimens.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 23 June 2022 and was last updated on 23 June 2022 (registration number INPLASY202260094).

INTRODUCTION

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and to provide a theoretical basis for clinical selection of different regimens.

METHODS

Search strategy: The following is the search formula of PubMed database: Search ((non-small cell lung cancer) OR (NSCLC)) AND ((randomized controlled trial) OR (randomized)) AND ((pembrolizumab) OR (ipilimumab) OR (atezolizumab) OR (nivolumab) OR (bevacizumab) OR (avelumab)) Sort by: Best Match Filters: Clinical Trial; Publication date from 2004/01/01 to 2022/02/05 PubMed, EMBASE, and Cochrane Library databases.

Participant or population: Patients with pathologically diagnosed advanced NSCLC treated with ≥2 lines of immunotherapy.

Intervention: ICIs, chemotherapeutics, and bevacizumab that have therapeutic effects on NSCLC.

Comparator: Immunotherapy or conventional chemotherapy.

Study designs to be included: Observational studies including cohort studies, case-control studies and cross-sectional studies.

Eligibility criteria: Inclusion criteria(1) Subjects: patients with advanced non-small cell lung cancer confirmed by pathological studies.(2) Research type: randomized controlled trials (RCTs).(3) Studies included at least one efficacy indicators.(4) RCTs that used immunotherapy as ≥2line treatment settings. Exclusion criteria(1) Studies of interventions used for maintenance therapy.(2) The study of non-two-arm test.(3) Retrospective analysis.(4) Repeated published studies.

Information sources: PubMed, EMBASE, and Cochrane Library databases.

Main outcome(s): Progression-free survival and overall survival, and their Hazard Ratios (HRs) and 95% CIs were also extracted.

Additional outcome(s): None.

Quality assessment / Risk of bias analysis: Assessment of risk of bias in the included RCTs was performed according to the Cochrane Handbook, which includes the following domains: random sequence generation, allocation concealment, blinding of participants and personnel, blinding of outcome assessment, incomplete outcome data, and selective reporting.

Strategy of data synthesis: The data analysis of network meta-analysis was performed using the R.3.6.1 gemtc package. For survival-related time-event data (PFS and OS), HR was used as the effect size. All data were combined using a fixed effects model. The model convergence degree test is done by trajectory diagram, density map and Brooks-Gelman-Rubin diagnostic plot.

Subgroup analysis: None

Sensitivity analysis: None.

Language: None restriction.

Country(ies) involved: China.

Other relevant information: None.

Keywords: immunotherapy; immune checkpoint inhibitors; non-small cell lung cancer; meta-analysis.

Contributions of each author:

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