INPLASY

Effect of FGFR Alteration on Prognosis of Urothelial Carcinoma Patients with Immune Checkpoint Inhibitors: A Meta-Analysis

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ADMINISTRATIVE INFORMATION

Support - None.

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

Conflicts of interest - None declared.

INPLASY registration number: INPLASY202430081

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 019 March 2024 and was last updated on 19 March 2024.

INTRODUCTION

Review question / Objective The aim of this study was to compare prognosis and response to immune checkpoint inhibitors (ICIs) between fibroblast growth factor receptor (FGFR)-altered urothelial carcinoma (UC) patients and FGFR-wildtype UC patients.

Condition being studied UC patients treated with ICIs.

METHODS

Participant or population UC patients treated with ICIs.

Intervention UC patients with FGFR alteration.

Comparator UC patients without FGFR alteration.

Study designs to be included Cohort studies.

Eligibility criteria None.

Information sources Pubmed, Embase, Medline, Cochrane Library and ClinicalTrial.gov were systematically searched prior to 1st February, 2024 in order to identify published articles in English.

Main outcome(s) Overall survival (OS) and tumor response assessment.

Quality assessment / Risk of bias analysis Newcastle-Ottawa Scale.

Strategy of data synthesis In assessing the relationship between OS and FGFR alteration in UC with ICIs, hazard ratios (HR) with corresponding 95% confidence intervals (CI) were employed. For the association between tumor response assessment and FGFR alteration in UC with ICIs, odds ratios (OR) with 95% CI were utilized. Heterogeneity among enrolled studies was gauged via Cochrane's Q test and Higgins I2 statistic. Absence of obvious heterogeneity (P>0.05 for Cochrane's Q test and I2<50%) led to

the application of fixed-effect models; otherwise, random-effect models were employed. The statistical significance of pooled results was evaluated using the Z-test. Statistical analysis was conducted via Review Manager (version 5.3; The Cochrane Collaboration) and Stata (version 12.0; Stata Corporation).

Subgroup analysis Subgroup analyses were performed based on lines of ICI treatment and FGFR3 status.

Sensitivity analysis Sensitivity analysis measured the stability and robustness of pooled results using the leave-one-out method.

Country(ies) involved China.

Keywords immune checkpoint inhibitors; fibroblast growth factor receptor; urothelial carcinoma.

Contributions of each author
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