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Prognostic significance of programmed cell death 1 expression on CD8-T cells in various cancers: a systematic review and meta-analysis

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ADMINISTRATIVE INFORMATION

Support - This work was supported by the Leshan City science and technology plan project (21SZD151).

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

Conflicts of interest - The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

INPLASY registration number: INPLASY2024110075

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 18 November 2024 and was last updated on 18 November 2024.

INTRODUCTION

Review question / Objective Population: This study involved patients who were diagnosed with cancer.
Intervention: The intervention under consideration was the presence of programmed cell death 1 expression on CD8-T cells.
Comparison: The comparison was conducted to assess the presence of programmed cell death 1 expression on CD8-T cells on survival.Outcomes: OS and/or PFS and/or DFS in the presence of programmed cell death 1 expression on CD8-T cells.
Study design: Case–control.

Condition being studied Articles were included if they met the following inclusion criteria: (1) detected PD-1expression on CD8+T cells of cancer patients; (2) reported hazard ratio (HR) and 95% confidence interval (95% CI) of PD-1+CD8+ T cells in association with OS and/or PFS and/or DFS, or provided sufficient data to calculate HR and 95% CI.

METHODS

Participant or population Patients with cancers.

Intervention The intervention under consideration was the presence of programmed cell death 1 expression on CD8-T cells.

Comparator The comparison was conducted to assess the presence of programmed cell death 1 expression on CD8-T cells on survival.

Study designs to be included Articles were included if they met the following inclusion criteria: (1) detected PD-1expression on CD8+T cells of

cancer patients; (2) reported hazard ratio (HR) and 95% confidence interval (95% CI) of PD-1+CD8+ T cells in association with OS and/or PFS and/or DFS, or provided sufficient data to calculate HR and 95% CI.

Eligibility criteria Articles were included if they met the following inclusion criteria: (1) detected PD-1expression on CD8+T cells of cancer patients; (2) reported hazard ratio (HR) and 95% confidence interval (95% CI) of PD-1+CD8+ T cells in association with OS and/or PFS and/or DFS, or provided sufficient data to calculate HR and 95% CI.

Information sources PubMed, Web of Science, Embase databases.

Main outcome(s) OS and/or PFS and/or DFS in the presence of programmed cell death 1 expression on CD8-T cells.

Quality assessment / Risk of bias analysis To evaluate the quality of the included articles, the Newcastle–Ottawa scale (NOS), which was used to assess the quality of cohort studies and case–control studies.

Strategy of data synthesis Stata 12.0 was adopted for the meta-analysis, and p.

Subgroup analysis Subgroup analyses were performed for area, specimen type, cancer type, treatment, detected method and cancer stage.

Sensitivity analysis Due to significant heterogeneity was observed. In order to find the potential source of this heterogeneity, we carried out sensitivity analysis. Sensitivity analysis indicated that the results of our meta- analysis were robust and not significantly influenced by any single study.

Country(ies) involved China (The People's Hospital of Leshan).

Keywords PD-1+CD8+ T cells, overall survival , progression- free survival, disease-free survival,cancer.

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