INPLASY

Immunotherapy as a Potential First-Line Regimen for Dedifferentiated Liposarcoma: A Meta-Analysis

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ADMINISTRATIVE INFORMATION

Review Stage at time of this submission - Preliminary searches.

Conflicts of interest - None declared.

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Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 8 February 2025 and was last updated on 8 February 2025.

INTRODUCTION

*R*eview question / Objective The aim of this study is to examine the efficacy of immune checkpoint inhibitors in the treatment of liposarcoma, and all the selected studies were single-arm clinical studies.

Condition being studied Liposarcomas (LPS) are rare malignancies. When metastatic, they carry a poor prognosis, and although various efforts have been made to improve the outlook for advanced LPS, success has been limited to date. Immune checkpoint inhibitors (ICPIs) have significantly improved outcomes for many cancer types; however, their role in the treatment of LPS remains unclear.

METHODS

Participant or population This review focuses on patients with histologically confirmed liposarcoma (LPS) who have received immune checkpoint inhibitors (ICIs), excluding those with round cell or myxoid liposarcoma.

Intervention Immune checkpoint inhibitors, ICIs.

Comparator None.

Study designs to be included Single-arm clinical studies.

Eligibility criteria (1) The primary study subjects were patients with histologically confirmed liposarcoma (LPS), excluding round cell liposarcoma and myxoid liposarcoma; (2) Clinical trials utilizing immune checkpoint inhibitors (ICIs) were included, irrespective of randomization status. ICI could be administered either as monotherapy or in combination with other therapies (e.g., radiotherapy, chemotherapy, surgery, or targeted therapy).

Information sources PubMed, Embase and Cochrane Library.

Main outcome(s) ORR.

Quality assessment / Risk of bias analysis The Methodological Index for Non-randomized Studies (MINORS) checklist was used to assess the quality of the included studies.

Strategy of data synthesis All statistical analyses were performed using STATA software version 15.1 (STATA, College Station, Texas 77845 USA). The metaprop command was used to perform a meta-analysis, in which data were pooled to calculate odds ratios (OR) and their 95% confidence intervals (CI), and a forest plot was generated for visualization. A Q test with $P > 0.05$ or $I^2 < 50\%$ indicated that there was no significant heterogeneity among the studies, so a fixed-effect model was adopted; otherwise, a random-effects model was used.

Subgroup analysis Subgroup analyses were conducted based on Accepted Line of Therapy (0 or ≥1) and Medications of Intervention (ICI monotherapy, ICI combination therapy, and ICI combined with othertreatments).

Sensitivity analysis Sensitivity analysis was performed using the metainf command in Stata software to assess the reliability of the data.Sensitivity analysis was performed using the metainf command to assess the reliability of the data.

Country(ies) involved China.

Keywords ICIs, Liposarcoma, Odds ratio, Immunotherapy, Systmatic therapy.

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