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Association between tertiary lymphoid structure and HNSCC: a systematic review and 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: INPLASY202380031

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 08 August 2023 and was last updated on 08 August 2023.

INTRODUCTION

Review question / Objective To conduct a systematic review and meta-analysis to assess the predictive value of tertiary lymphoid structure for the grade and prognosis of head and neck squamous cell carcinoma.

Condition being studied Head and neck squamous cell carcinoma (HNSCC) is a prevalent form of head and neck tumors, ranking sixth in terms of incidence and constituting approximately 3% of all diagnosed malignancies. HNSCC exhibits a high degree of malignancy and is susceptible to lymph node and distant metastases, resulting in a dismal prognosis and low survival rate. Despite advancements in treatment modalities, the overall 5-year survival rate for HNSCC remains unsatisfactory. Consequently, the exploration of novel prognostic biomarkers and the

development of therapeutic targets hold significant importance for the diagnosis and treatment of this disease.

METHODS

Participant or population Studies focused on the association between TLS and clinic-pathological characteristics and outcomes of patients with HNSCC will be included. Lack or inability to extract the required data will be excluded.

Intervention HNSCC patients with the presence of TLS.

Comparator HNSCC patients without the presence of TLS Absence of TLS in HNSCC.

Study designs to be included Cohort study will be included.

Eligibility criteria None.

Information sources PubMed, EMBASE and Cochrane Library.

Main outcome(s) Overall survival (OS), disease free survival (DFS), recurrence free survival (RFS), disease special survival (DSS) and disease special death (DSD).

Additional outcome(s) None.

Quality assessment / Risk of bias analysis

Quality evaluation was performed independently by two researchers using Newcastle-Ottawa scales. The NOS conducts a comprehensive evaluation from three aspects of the study: selection, comparability and outcome. The quality of the study was assessed as follow: low quality =0-3; moderate quality = 4-6; and high quality = 7-9.

Strategy of data synthesis Survival outcome was estimated using the hazard ratio (HR) with 95% confidence interval (CI). Binary outcomes were calculated as odds ratio (OR) and 95% CI. Statistical heterogeneity among studies was evaluated using Cochran's Q test and Higgins I² statistics. The fixed-effect model was selected if I²< 50% or P> 0.1, while the random-effect model was selected if I²> 50% or P< 0.1.

Subgroup analysis We will consider subgroups such as clinic type and location.

Sensitivity analysis Excluding low quality studies, using different statistical models to analyze same data.

Country(ies) involved China.

Keywords tertiary lymphoid structure (TLS), head and neck squamous cell carcinoma (HNSCC), disease-free survival, overall survival.

Contributions of each author

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