INPLASY

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Prognostic Factors for Invasive Mucinous Adenocarcinoma of the Lung: Systematic Review and Meta-analysis

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ADMINISTRATIVE INFORMATION

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

Conflicts of interest - None declared.

INPLASY registration number: INPLASY202410015

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 05 January 2024 and was last updated on 05 January 2024.

INTRODUCTION

Review question / Objective This study aimed to comprehensively identify and summarize the prognostic factors associated with IMA. All statistical analyses were performed with STATA software version 15.1.The pooled hazard ratio (HR) and corresponding 95% confidence intervals (CI) of overall survival (OS) and/or disease-free survival (DFS) were obtained to evaluate potential prognostic factors (gender, age, TNM stage, smoking status, metastasis, genetic status, pathological features, and CT signs).

Condition being studied Invasive mucinous adenocarcinoma of the lung (IMA) is a unique and rare subtype of lung adenocarcinoma with poorly defined prognostic factors and highly controversial studies. We have collected sufficient data for meta-analysis and have professional personnel and data processing tools to conduct the analysis.

METHODS

Participant or population Invasive mucinous adenocarcinoma of the lung.

Intervention Patients with a certain prognostic factor (gender, age, TNM stage, smoking status, metastasis, genetic status, pathological features, and CT signs) in IMA.

Comparator Corresponding patients without a certain prognostic factor in IMA.

Study designs to be included Randomized controlled trial or Cohort study.

Eligibility criteria Inclusion criteria: (1) Patients with pathologically or histologically confirmed IMA; (2) Cohort studies or case-control studies published between the establishment of the database and June 2023; (3) Studies assessing the correlation of gender, age at the time of diagnosis,

TNM stage, smoking status, metastasis status, genetic inheritance status, pathological characteristics and CT manifestations, and prognosis through OS and/or DFS (data with at least one prognostic factor); and (4) studies that provided sufficient information for extraction or estimation of the HR and 95% CI of OS and/or DFSPatients with pathologically or histologically confirmed IMA. Exclusion criteria: (1) Inadequate data for calculating the HR and 95% CI; (2) Invasive mucinous adenocarcinoma of the lung secondary to other neoplasms; or (3) Reviews, case reports, abstracts, animal studies, unpublished or ongoing trials.

Information sources The PubMed, Embase, Cochrane, and Web of Science databases were searched for all English studies published from their inception to June 2023.

Main outcome(s) The pooled hazard ratio (HR) and corresponding 95% confidence intervals (CI) of overall survival (OS) and/or disease-free survival (DFS) were obtained to evaluate potential prognostic factors.

Quality assessment / Risk of bias analysis The methodological quality of the included studies was assessed by the Newcastle–Ottawa Quality Assessment Scale (NOS).

Strategy of data synthesis All statistical analyses were performed with STATA software version 15.1. $P<0.05$ was considered statistically significant. We used I2 to assess heterogeneity among studies. When heterogeneity existed (P50%), a random effects model was used; otherwise, a fixed effects model was used.

Subgroup analysis No subgroup analysis conducted.

Sensitivity analysis No sensitivity analysis conducted.

Country(ies) involved China.

Keywords Invasive Mucinous Adenocarcinoma of the Lung, Prognostic factors, Meta-analysis, Systematic review.

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