INPLASY

Impact of prognostic nutritional indices on the prognosis of patients with gastric and gastroesophageal union tumors treated with immune checkpoint inhibitors

INPLASY202450133
doi: 10.37766/inplasy2024.5.0133
Received: 29 May 2024
Published: 29 May 2024

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ADMINISTRATIVE INFORMATION

Support - None reported.

Review Stage at time of this submission - Data extraction.

Conflicts of interest - None declared.

INPLASY registration number: INPLASY202450133

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 29 May 2024 and was last updated on 29 May 2024.

INTRODUCTION

Review question / Objective Study subjects: Patients with gastric or gastroesophageal cancer receiving immune checkpoint inhibitors; Intervention methods: immune checkpoint inhibitors; Control group: patients with different levels of prognostic nutrition index; Outcome measures: overall survival and progression-free survival; Methods: Meta-analysisThe purpose of this study was to explore the difference of prognostic nutritional index (PNI) among patients with gastric cancer and gastroesophageal junction cancer treated with immune checkpoint inhibitors, so that PNI can be used as an indicator to predict the prognosis of patients with immunotherapy and provide guidance for clinicians before treatment; Subjects: Patients with gastric or gastroesophageal junction cancer receiving immune checkpoint therapy.

Condition being studied Gastric cancer and gastroesophageal junction cancer are common tumor diseases in the world. At present, there are many treatment methods, such as surgical resection in the early stage, and chemotherapy and immunotherapy can be used for patients in the advanced stage who lose the opportunity for surgery. Currently, the common immunotherapy is immune checkpoint inhibitors, pdL1 inhibitors and CLAT4 inhibitors. Tumor mutation load and microsatellite instability are common prognostic indicators, but they require relatively expensive tumor tissues. We tried to find a new marker that could easily predict the prognosis of patients treated with immunosuppressants, and the prognostic nutritional index = serum albumin number +5× the total number of peripheral blood lymphocytes. We attempted to use meta-analysis to verify its feasibility as a prognostic indicator.

METHODS

Participant or population Inclusion criteria: (1) patients with (GC/GEJC) who met the pathologic criteria (2) had received ICIs, either in combination with chemotherapy or as a stand-alone drug.

Intervention The main intervention measures are immune checkpoint inhibitors, including pd1/pdL1, CLAT4 and other drugs.

Comparator The prognosis of patients was compared according to the level of PNI before treatment.

Study designs to be included Includes randomized controlled trials.

Eligibility criteria Inclusion criteria: (1) provided survival data in the distant future such as overall survival (OS) or progression-free survival (PFS), and the existence of feedback of therapeutic data such as the objective remission rate (ORR) or the disease control rate (DCR); (2) the literature published in English (3) Data such as HR and 95% CI can be obtained in the literature directly or indirectly.
Exclusion criteria: (1) articles such as abstracts, conferences, case reports, reviews, etc. will be excluded (2) there is data reuse (3) the literature fails to provide complete raw data information.

Information sources Pubmed; SpringerLink; Embase; web of science; cochrane library.

Main outcome(s) Overall survival (OS) and progression-free survival(PFS).

Quality assessment / Risk of bias analysis Newcastle-Ottawa Scale (NOS) for quality assessment; Funnel plot, egger's test and begger's' test were used to assess the risk of bias.

Strategy of data synthesis We will search, with no time restrictions, the following databases for relevant English language literature: pubmed; SpringerLink; Embase; web of science; cochrane libraryThe search string will be built as follows: (Prognostic Nutritional Index) AND (Immune checkpoint inhibitor) AND (gastric cancer OR Gastroesophageal Junction). The electronic database search will be supplemented by a manual search of the reference lists of included articles.

Subgroup analysis We considered a subgroup analysis of patient age, region, and sample size of the article.

Sensitivity analysis The sensitivity was analyzed by excluding one article one by one.

Country(ies) involved China.

Keywords gastric cancer; immune checkpoint inhibitors; gastroesophageal junction tumors; Prognostic Nutritional Index; Meta-analysis.

Contributions of each author

Author 1 - Shufu Hou - Author 1 conceived and planned the experiment and provided the resources and analytical toolsAuthor 1 conceived and designed this experiment, Resources and analysis tools are provided.
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