INPLASY PROTOCOL

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Conflicts of interest: None declared.

The impact of tumor deposits on the prognosis of gastric cancer patients: a systematic review and meta-analysis

Zhang, Z[1]; Sun, YG[2]; Mao, WZ[3].

Review question / Objective: This study investigated the effect of cancer nodules on the prognosis of gastric cancer patients by searching clinical studies on cancer nodules and prognosis of gastric cancer.

Condition being studied: Gastric cancer ranks fifth and fourth in terms of new cases and deaths worldwide, respectively, and the TNM staging system is nowadays the most commonly used method to determine the prognosis of gastric cancer patients. However, more detailed staging strategies are needed to select better treatment options and to better predict the survival of gastric cancer patients.Tumor deposits were first identified in 1935 and are described as mesenteric satellites of colorectal cancer, usually defined as discontinuous macroscopic or microscopic deposits from the primary tumor without any residual lymph node structures. Tumor deposits was included in the TNM colorectal cancer staging manual in the 5th edition of the AJCC staging system and as an N1c category in the 7th edition . Tumor deposits is also frequently observed in gastric cancer, but it has been less studied and the results are controversial.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 22 March 2023 and was last updated on 22 March 2023 (registration number INPLASY202330081).

INTRODUCTION

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METHODS

Participant or population: Patients diagnosed with gastric cancer through pathology.

Intervention: Positive tumor deposits.

Comparator: Negative tumor deposits.

Study designs to be included: Cohort study.

Eligibility criteria: Inclusion criteria (1) Study type: cohort study; English literature; (2) Study population: pathological diagnosis of gastric cancer; (3) Study content: including positive rate of cancer nodes and prognostic parameters. Exclusion criteria: (1) studies on case reports, reviews, non-English literature; (2) studies not related to gastric cancer; (3) studies lacking basic prognostic parameters.

Information sources: PubMed, Embase, Cochrane Library , Web of science.

Main outcome(s): 1-year, 3-year and 5-year overall survival, 1-year, 3-year and 5-year disease-free survival

Quality assessment / Risk of bias analysis: NOS Scale.

Strategy of data synthesis: This study will use Stata 15.0 for statistical analysis of the data, and OR and its 95% CI will be used for statistical analysis of the dichotomous variable data. The heterogeneity between the observed outcomes of the studies will be tested using the I^2 test, and if $I^2 \leq 50\%$, the studies will be considered as having no significant heterogeneity in the outcomes and a fixed-effects model will be used; conversely, a random-effects model will be used. Stata 15.0 was used for statistical analysis of the data, and OR and its 95% CI were used for statistical analysis of dichotomous variable data. Heterogeneity among the observed outcomes of the studies was tested using the I^2 test, and if $I^2 \leq 50\%$, the studies were considered to have no significant heterogeneity in outcomes and a fixed-effects model was used; conversely, a random-effects model was used.

Subgroup analysis: The study will be stratified by follow-up time (<5 years vs ≥5 years), sample size (<1000 vs ≥1000) and whether PSM methods were used (yes vs no).

Sensitivity analysis: This study will use stata software for sensitivity analysis and will reflect the stability of the results by removing studies one by one.

Language restriction: English.

Country(ies) involved: China.

Keywords: gastric cancer; tumor deposits; Meta.

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