INPLASY PROTOCOL

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Review Stage at time of this submission: Preliminary searches.

Conflicts of interest:
None declared.

Computed tomography-based predictive model for the probability of preoperative lymph node metastasis in gastric cancer: a meta-analysis

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Review question / Objective: To investigate the role of computed tomography-based predictive model for the preoperative prediction of lymph node metastasis in gastric cancer.

Eligibility criteria: Inclusion criteria for this meta-analysis were studies investigatingthe diagnostic performance of CT-based model in predicting LN metastasis in gastric cancer subjects. Theparticipants clinically suspected of gastric cancer and diagnosed with gastric cancer by postoperative pathology were recruited; the diagnosis ofpositive lymph node (N+) was based on pathology after surgery;true-positive, false-positive, true-negative, and false-negativeresults of CT were available or allowed for calculation fromoriginal articles

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 21 February 2023 and was last updated on 21 February 2023 (registration number INPLASY202320091).

INTRODUCTION

Review question / Objective: To investigate the role of computed tomography-based predictive model for the preoperative prediction of lymph node metastasis in gastric cancer.

Condition being studied: Lymph node (LN) metastasis is one of the main prognostic factors for gastric cancer, and it plays a pivotal role in the selection of appropriate candidates for neoadjuvant chemotherapy therapy. Therefore, accurate prediction of LN metastasis in gastric cancer is crucial for clinical decision-making and the improvement of prognosis.

METHODS

Search strategy: ((((computed tomography) OR (CT)) AND (gastric cancer)) AND (lymph

node metastasis)) AND ((((prediction) OR (predictive)) OR (predictor)) OR (assessment)).

Participant or population: Patients with gastric cancer.

Intervention: Patients with LN metastasis.

Comparator: Patients without LN metastasis.

Study designs to be included: Diagnostic accuracy articles.

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Information sources: PubMed, Web of science, Cochrane library

Main outcome(s): Sensitivity, Specificity, and ROC.

Quality assessment / Risk of bias analysis: The risk of bias was assessed by the Quality Assessment of Diagnostic Accuracy Studies (QUADAS-2) tool.

Strategy of data synthesis: The sensitivity and specificity were calculated for each study on a per-patient based analysis. A summary receiver operating characteristics (sROC) curve was constructed for recruited studies and area under ROC curve (AUC) was calculated to estimate the overall accuracy. A preferred test has an AUC close to 1, while a poor test has an AUC close to 0.5.

Subgroup analysis: Yes.

Sensitivity analysis: No.

Language restriction: English.

Country(ies) involved: China.

Keywords: Gastric cancer, Lymph node, CT, Prediction.

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Author 4 - Jia Lin.
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