

# INPLASY PROTOCOL

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**Support:** None.

**Review Stage at time of this submission:** Preliminary searches.

**Conflicts of interest:**  
None declared.

## Diagnostic performance of various liquid biopsy methods in the detection of gastric cancer: A Systematic Review and Meta-Analysis

Wang, HY<sup>1</sup>; Wang, Y<sup>2</sup>; Chen, XF<sup>3</sup>.

**Review question / Objective:** The aim of the study is to investigate the diagnostic value of liquid biopsy for gastric cancer.

**Condition being studied:** Gastric cancer (GC) is a common malignant tumor, with the fifth most common cancer in the world and the fourth leading cause of cancer-related mortality, with approximately 1,089,000 new cases and about 769,000 associated deaths in 2020. In the past decade, with the improvement of clinical treatment level, the 5-year survival rate of early gastric cancer has increased significantly (over 90%), but due to its high recurrence rate and late diagnosis of gastric cancer, 30%-44% of patients usually at an advanced stage or with signs of metastasis, the 5-year survival rate is about 20%.

**INPLASY registration number:** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 29 July 2022 and was last updated on 29 July 2022 (registration number INPLASY202270123).

### INTRODUCTION

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and the fourth leading cause of cancer-related mortality, with approximately 1,089,000 new cases and about 769,000 associated deaths in 2020. In the past decade, with the improvement of clinical treatment level, the 5-year survival rate of early gastric cancer has increased significantly (over 90%), but due to its high recurrence rate and late diagnosis of

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## METHODS

**Participant or population:** included gastric cancer, healthy controls, Chronic gastritis controls.

**Intervention:** Not applicable.

**Comparator:** Not applicable.

**Study designs to be included:** Original article.

**Eligibility criteria:** Studies were included if they met the following criteria: (1) the study participants were gastric cancer patients; (2) assessed the diagnostic value of liquid biopsy for gastric cancer. The exclusion criteria were as follows: (1) review articles, case ports, letters, or posters, conference abstracts or animal experiments; (2) duplicated publications or studies without extractable data; and (3) case reports, editorials, or conference records.

**Information sources:** PubMed, MEDLINE, Embase, the Cochrane Central Register of Controlled Trials (CENTRAL) and Web of Science.

**Main outcome(s):** Sensitivity; Specificity; AUC

**Quality assessment / Risk of bias analysis:** QUADAS (Quality Assessment of Diagnostic Accuracy Studies)-2.

**Strategy of data synthesis:** sensitivity, specificity, DOR, SROC.

**Subgroup analysis:** Study design such as randomised/non-randomised trial, retrospective/prospective study, detection methods, cut-off value, participant characteristics such as male/female, stages of gastric tumour, age.

**Sensitivity analysis:** We conducted a sensitivity analysis to investigate the

influence of a single study on the overall risk estimate by omitting one study. All data were collected using Stata software (version 14.0; Stata Corp., College Station, TX, USA).

**Country(ies) involved:** China.

**Keywords:** liquid biopsy, gastric cancer, diagnose.

**Contributions of each author:**

Author 1 - Hao Yu Wang.

Author 2 - Yu Wang.

Author 3 - Xue Feng Chen.