

# INPLASY PROTOCOL

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**Support:** None.

**Review Stage at time of this submission:** Data extraction.

**Conflicts of interest:**  
None declared.

## Comparative Effectiveness and safety of Vonoprazan-based treatment regimens for antibiotic resistant strains of *Helicobacter pylori*: A systematic review with network meta-analysis

Zou, S<sup>1</sup>; Cheng, Q<sup>2</sup>; Xu, C<sup>3</sup>; Feng, C<sup>4</sup>; Sun, M<sup>5</sup>.

**Review question / Objective:** To compare the efficacy and safety of Vonoprazan-based therapy for antibiotic resistant strains of *Helicobacter pylori*.

**Information sources:** We will search the following electronic bibliographic databases: PubMed, EMBASE, Web of Science, OVID, The Cochrane Library. The search strategy will include terms relating to or describing the intervention. We also handsearched references of all identified trials, relevant review articles, conference abstracts .antibiotic resistant strains

**INPLASY registration number:** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 17 April 2022 and was last updated on 17 April 2022 (registration number INPLASY202240100).

### INTRODUCTION

**Review question / Objective:** To compare the efficacy and safety of Vonoprazan-based therapy for antibiotic resistant strains of *Helicobacter pylori*.

**Condition being studied:** Patients with *Helicobacter pylori* infection.

### METHODS

**Participant or population:** Patients with *Helicobacter pylori* infection.

**Intervention:** Vonoprazan-based therapy of *Helicobacter pylori* eradication therapy.

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**Comparator:** Vonoprazan-based and PPI-based therapy of *Helicobacter pylori* eradication therapy.

**Study designs to be included:** We will include randomised trials and non-RCTs to assess the beneficial effects of the treatments, and will supplement these with observational studies (including cohort and case-control studies) for the assessment of harms.

**Eligibility criteria:** *H. pylori*-infected adult patients were treated with Vonoprazan-based therapy with studies of antibiotic resistant strains.

**Information sources:** We will search the following electronic bibliographic databases: PubMed, EMBASE, Web of Science, OVID, The Cochrane Library. The search strategy will include terms relating to or describing the intervention. We also handsearched references of all identified trials, relevant review articles, conference abstracts .antibiotic resistant strains.

**Main outcome(s):** The *Helicobacter pylori* eradication efficacy in different Vonoprazan-based treatment methods.

**Quality assessment / Risk of bias analysis:** Two independent authors will assess the risk of bias of the included studies using the Cochrane Handbook for Systematic Reviews of Interventions (Version 5.2.0). The following items will be assessed: random sequence generation; allocation concealment; blinding of participants, personnel, and outcome assessors; incomplete outcome data; selective reporting; and other sources of bias. Discrepancies will be resolved by discussion and consensus by two authors. If no agreement can be reached, a third author will be consulted.

**Strategy of data synthesis:** The network meta-analysis will be conducted using three analytical models: the fixed-effects model assumed homogeneity, or absence of intra-trial difference in mean changes from baseline among trials included; the random-effects model accounts for

heterogeneity, or assumed presence of systematic intra-trial differences and the hierarchical Bayes model.

**Subgroup analysis:** None planned.

**Sensitivity analysis:** None planned.

**Language:** English, Japanese.

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

**Keywords:** Vonoprazan; network meta-analysis; antibiotic resistant strains; *Helicobacter pylori*.

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