

First Report of National Consensus Guidelines for the Diagnosis and Treatment of *Helicobacter pylori* Infection in Iran.

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National Consensus Guidelines for the Diagnosis and Treatment of *Helicobacter pylori* Infection in Iran

This study guide provides a comprehensive overview of the first national consensus guidelines for managing *Helicobacter pylori* (*H. pylori*) infection in Iran, published in 2026. The guidelines address the unique epidemiological challenges, antibiotic resistance patterns, and clinical requirements specific to the Iranian healthcare context.

Key Concepts and Clinical Framework

1. Rationale for National Guidelines

While international guidelines for *H. pylori* exist, Iran faces specific challenges that necessitated a localized, evidence-based strategy:

- **High Prevalence:** A significant portion of the population is affected.
- **Antibiotic Resistance:** High levels of resistance, particularly to clarithromycin.
- **Gastric Cancer Burden:** A high incidence of gastric cancer linked to chronic infection.
- **Clinical Gaps:** Inconsistencies in previous local clinical practices.

2. Development Methodology

The guidelines were developed through a rigorous scientific process:

- **Panel:** A multidisciplinary group of experts from leading Iranian gastroenterology centers.
- **Timeline:** Convened between August 2023 and October 2025.
- **Framework:** Used the GRADE (Grading of Recommendations Assessment, Development, and Evaluation) framework for systematic literature reviews.
- **Consensus:** Defined as reaching at least 80% agreement across 12 structured meetings and a final national consensus conference.

3. Diagnostic Recommendations

The guidelines categorize diagnostic approaches based on patient risk and age:

- **Patients <45 Years (No Alarm Features):** Strong preference for non-invasive testing.
- **High-Risk Groups:** Endoscopic evaluation with targeted biopsies is required.
- **Confirmation of Eradication:** Must be performed at least 4 weeks after the completion of treatment using either a Urea Breath Test (UBT) or a monoclonal Stool Antigen Test (SAT).

4. Therapeutic Strategies

Due to local antimicrobial resistance patterns, the guidelines specify preferred treatment pathways:

- **Resistance Context:** Clarithromycin resistance in Iran is documented at >20%.
- **First-Line Treatment:** Bismuth Quadruple Therapy (BQT) for a duration of 10–14 days.
- **Alternative Therapy:** Non-bismuth concomitant therapy.
- **Acid Suppression:** The use of high-dose Proton Pump Inhibitors (PPI) or Potassium-Competitive Acid Blockers (P-CAB) is emphasized to increase the efficacy of eradication.
- **Susceptibility-Guided Therapy:** Encouraged when feasible, especially following the failure of initial treatment courses.

Short-Answer Practice Questions

1. What is the defined threshold for "consensus" in the development of these guidelines?

Consensus was reached when at least 80% of the multidisciplinary panel agreed on a statement.

2. Which framework was utilized to conduct systematic reviews and grade the evidence?

The GRADE framework.

3. Under what clinical circumstances is non-invasive testing strongly preferred?

In patients under the age of 45 who do not exhibit "alarm features."

4. Why is clarithromycin-based triple therapy not recommended as a primary first-line treatment in Iran?

Because the local clarithromycin resistance rate is higher than 20%.

5. What is the recommended duration for Bismuth Quadruple Therapy (BQT)?

10 to 14 days.

6. Which two tests are recommended for confirming the eradication of *H. pylori*?

The Urea Breath Test (UBT) and the monoclonal Stool Antigen Test (SAT).

7. How long should a clinician wait after treatment before testing for eradication?

A minimum of 4 weeks post-treatment.

8. What role do P-CABs play in the new treatment guidelines?

They are used for acid suppression to enhance the efficacy of the antibiotic eradication regimen.

9. When should susceptibility-guided therapy be prioritized?

It is encouraged whenever feasible, particularly after a patient has experienced treatment failure.

10. What are the three primary public health goals of these guidelines?

To optimize eradication rates, reinforce antibiotic stewardship, and contribute to the prevention of gastric cancer.

Essay Prompts for Deeper Exploration

1. **The Impact of Local Epidemiology on Global Medicine:** Analyze why international guidelines for *H. pylori* were insufficient for the Iranian clinical context. Discuss how local antibiotic resistance rates and disease prevalence dictate changes in first-line therapeutic recommendations.
 2. **Diagnostic Stratification and Resource Management:** Evaluate the guideline's recommendation to use non-invasive testing for patients under 45 without alarm features versus endoscopic evaluation for high-risk groups. What are the implications of this stratification for healthcare resource allocation and patient safety?
 3. **The Evolution of Acid Suppression in Eradication Therapy:** Discuss the significance of emphasizing high-dose PPIs and the introduction of P-CABs in the Iranian guidelines. How does the management of gastric pH level influence the success rates of antibiotic regimens in the context of high resistance?
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Glossary of Important Terms

Term	Definition
Bismuth Quadruple Therapy (BQT)	A four-drug treatment regimen involving bismuth, typically used as a first-line treatment in areas with high antibiotic resistance.
Clarithromycin Resistance	The ability of <i>H. pylori</i> to survive exposure to clarithromycin; in Iran, this rate exceeds 20%, necessitating alternative therapies.
GRADE Framework	A systematic approach to grading the quality of evidence and the strength of recommendations in healthcare.
Non-invasive Testing	Diagnostic methods that do not require entering the body physically (e.g., UBT or SAT), preferred for low-risk, younger patients.
P-CAB	Potassium-Competitive Acid Blocker; a class of drugs used to suppress gastric acid production.
PPI	Proton Pump Inhibitor; a medication that reduces stomach acid, used here to increase the effectiveness of antibiotics.
Stool Antigen Test (SAT)	A diagnostic test (monoclonal version preferred) used to detect <i>H. pylori</i> antigens in fecal matter.
Susceptibility-Guided Therapy	A treatment approach where antibiotics are chosen based on the specific sensitivity of the patient's bacterial strain to certain drugs.
Urea Breath Test (UBT)	A common non-invasive diagnostic test used to identify active <i>H. pylori</i> infection and confirm eradication.