

Management of patient with Dyspepsia

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DEFINITION OF DYSPEPSIA

Dyspepsia was originally defined as any symptoms referable to the upper gastrointestinal tract

Dyspepsia refers to bothersome upper abdominal symptoms that are often meal related. The predominant symptoms are fullness (or bloating) after meals, early satiety (inability to finish a normal-sized meal because of postprandial discomfort), or epigastric pain (or burning) that may or may not be related to meals.

Clinically relevant definition of dyspepsia as **predominant epigastric pain** lasting at least 1 month. This can be associated with any other upper gastrointestinal symptom such as epigastric fullness, nausea, vomiting, or heartburn, provided epigastric pain is the patient's primary concern

Pain is not required to make a diagnosis of dyspepsia

ACG and CAG Clinical Guideline: Management of Dyspepsia

***Am J Gastroenterol* 2017; 112:988–1013; doi: 10.1038/ajg.2017.154; published online 20 June 2019**

Epidemiology

Dyspepsia is a common symptom with an extensive differential diagnosis

It occurs in up to 20 percent of the population

Although most people with dyspepsia do not seek medical evaluation for their symptoms , dyspepsia is still a common reason for outpatient medical visits.

ETIOLOGY

Approximately **25 percent** of patients with dyspepsia have an underlying organic cause. However, **up to 75 percent** of patients have functional (idiopathic or nonulcer) dyspepsia with no underlying cause on diagnostic evaluation.

1.Dyspepsia secondary to organic disease

Peptic ulcer disease , Gastroesophageal malignancy ,Biliary pain , Drug-induced dyspepsia , Other causes such as Celiac disease and chronic pancreatitis

2. Functional dyspepsia

INITIAL EVALUATION

The initial evaluation of individuals with new onset of dyspepsia includes a comprehensive history, focused physical examination, and laboratory testing

The goals of the initial evaluation are as follows:

Identify patients who require urgent evaluation, including those with alarm features for gastroesophageal malignancy ; whose initial evaluation should include upper endoscopy

Alarm features in dyspepsia

The presence or absence of alarm features is a key component of the evaluation

1. ***Unintentional weight loss***
2. ***Dysphagia***
3. ***Odynophagia***
4. ***Unexplained iron deficiency anemia***
5. ***Persistent vomiting***
6. ***Palpable mass or lymphadenopathy***
7. ***Family history of upper gastrointestinal cancer***
8. ***Jaundice***
9. ***Occult or gross gastrointestinal bleeding***

- Despite the overall limited value of age and alarm features :

persistent vomiting , dysphagia, and GI bleeding/anemia

are strong predictors for malignancy in patients aged <50 years.

Without these symptoms, cancer prevalence is negligible

History

- A comprehensive history includes a description of the timing, location, and characteristics of the patient's symptoms; medications; and aspects of the past medical, family, and social history that suggest an organic cause of dyspepsia

Physical examination

- We perform a thorough abdominal examination

- The physical examination in individuals with dyspepsia is usually normal. Although some individuals will endorse epigastric tenderness, its presence or absence does not accurately differentiate between functional and organic causes of dyspepsia.

Laboratory tests

- Laboratory testing can potentially identify alarm features (eg, iron deficiency anemia) or metabolic diseases that can cause dyspepsia (eg, diabetes, hypercalcemia, uremia)

- Testing typically includes a blood count and blood chemistries, including liver function tests and serum electrolytes, glucose, creatinine, calcium, lipase, and amylase

DIFFERENTIAL DIAGNOSIS



- *Peptic ulcer disease*
- *Helicobacter pylori gastritis*
- *Gastroesophageal reflux disease*
- *Gastroparesis*
- *Irritable bowel syndrome*
- *Cardiac ischemia*
- *Pancreatitis*
- *Infiltrative diseases of the stomach (eg, Crohn disease, sarcoidosis)*
- *Metabolic disturbances (hypercalcemia, hyperkalemia)*
- ……..

DIAGNOSTIC APPROACH

The diagnostic approach to a patient with dyspepsia is based on the:

clinical presentation

patient's age

and presence of alarm features

Our approach is largely consistent with guidelines from the American College of Gastroenterology, the American Gastroenterological Association, and the Canadian Association of Gastroenterology

Patients with alarm features

- In such patients, we perform prompt upper endoscopy, preferably within two to four weeks. Endoscopic evaluation ***should include*** gastric biopsies to test for *H. pylori*
- Clinically significant, unintentional weight loss (>5 percent usual body weight over 6 to 12 months)
- Overt gastrointestinal bleeding (eg, hematemesis, hematochezia, melena)
- Dysphagia
- Odynophagia
- Unexplained iron deficiency anemia
- Persistent vomiting
- Palpable mass or lymphadenopathy
- Family history of upper gastrointestinal cancer

Patients without alarm features

- In the absence of alarm features, our approach to individuals with dyspepsia depends on the patient's age.
- The age cut-off for performing Endoscopy in patients with Dyspepsia depends on Guideline's aimed at balancing ***cancer detection*** and ***avoiding unnecessary procedures*** in Low-risk individuals.

- Western guideline : e.g ACG, AGA , CAG …… 60 y
- Asian, Eastern European and Latin Guideline …… 50y

- Iran ????
- Our Region ????

- **Age ≥60 years**

We perform an upper endoscopy to evaluate dyspepsia in patients aged ≥60 years and obtain gastric biopsies to test for *H. pylori*

Although the optimal age cutoff for endoscopic evaluation in patients with dyspepsia is controversial, the diagnostic yield of upper endoscopy increases with age

Age cutoffs vary between countries and depend in part on the prevalence of gastric cancer

- **Age <60 years**

In individuals who are younger than age 60 years without alarm features or other findings on initial evaluation that suggest an organic cause of dyspepsia, we perform testing for *H. pylori* as the next step in the diagnostic evaluation

test and treat" approach

- We recommend that successful eradication of *H. pylori* after 'test and treat' is only confirmed in patients with an increased risk of gastric cancer (recommendation: strong; quality of evidence: low).

- We recommend that urgent abdominal CT scanning is considered in patients aged ≥60 years with abdominal pain and weight loss to exclude pancreatic cancer (recommendation: strong; quality of evidence: very low).





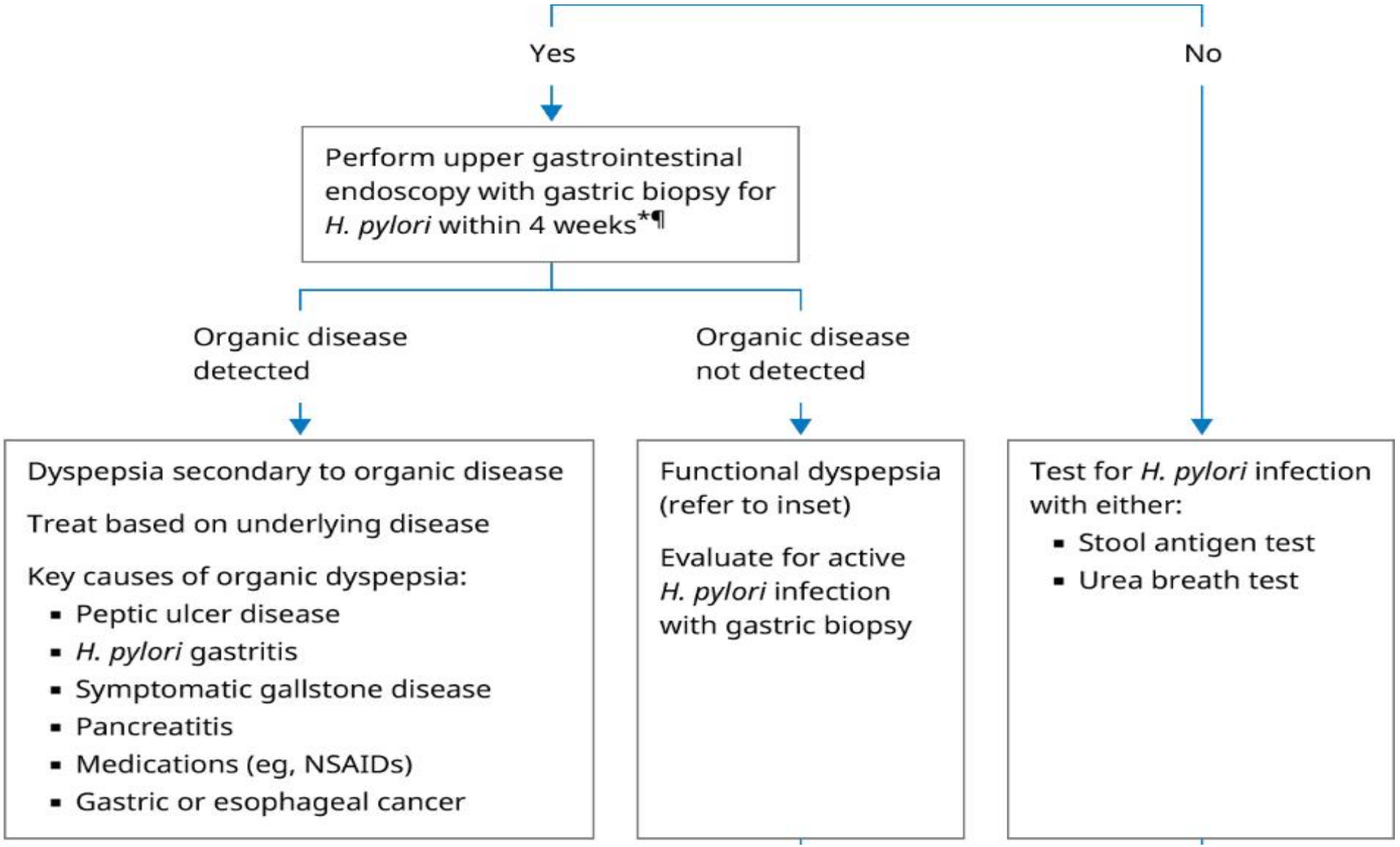
Does patient have any of the following:

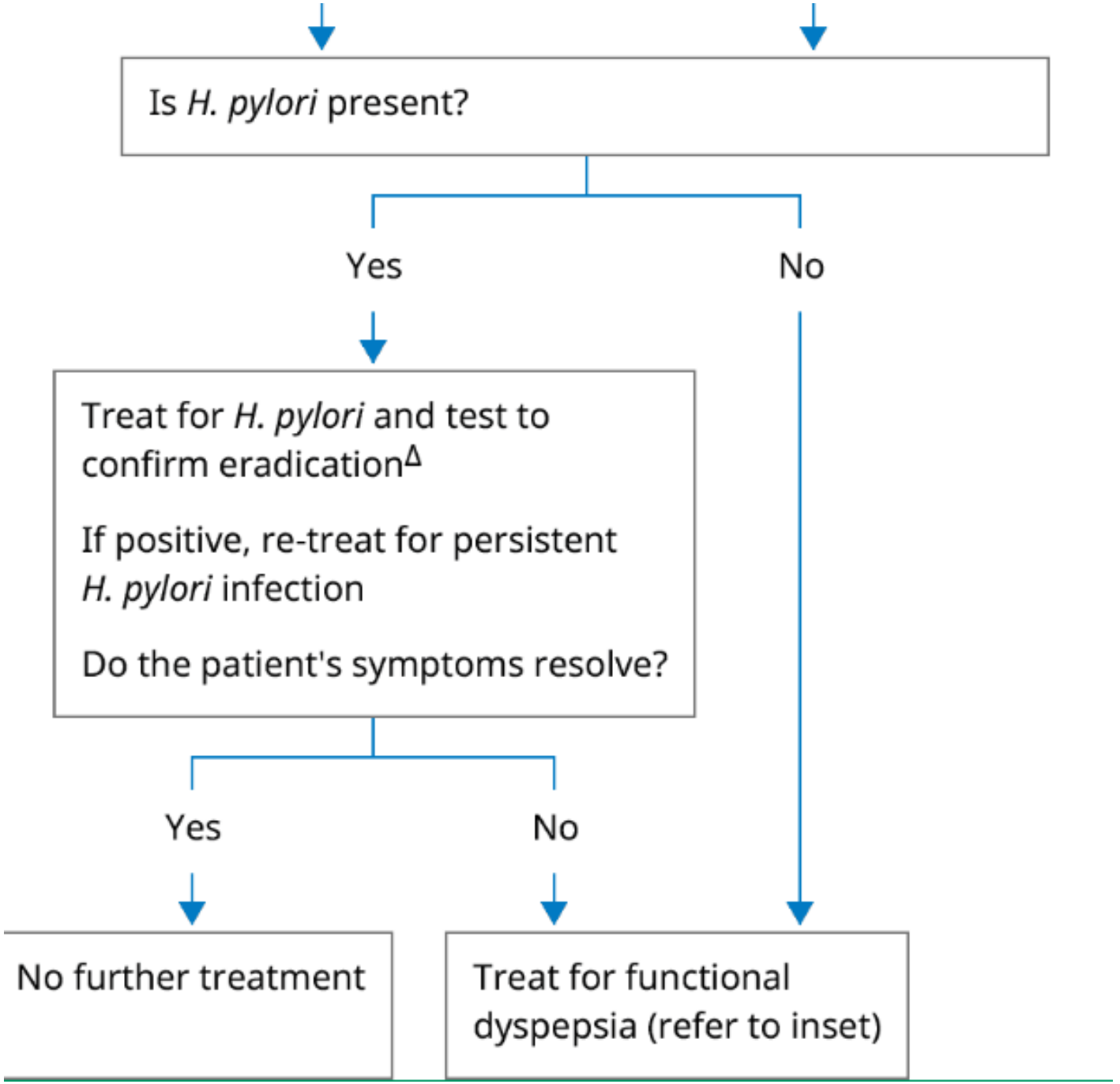
- Age ≥60 years
- Clinically significant weight loss (>5% usual body weight over 6 to 12 months)
- Overt gastrointestinal bleeding
- Rapidly progressive alarm features
- 2 or more of the following alarm features:
  - Unintentional weight loss
  - Progressive dysphagia
  - Odynophagia
  - Unexplained iron deficiency anemia
  - Persistent vomiting
  - Palpable mass or lymphadenopathy
  - Family history of upper gastrointestinal cancer

Yes

No

Perform upper gastrointestinal endoscopy with gastric biopsy for *H. pylori* within 4 weeks*¶


Yes
No
Perform upper gastrointestinal endoscopy with gastric biopsy for *H. pylori* within 4 weeks*¶
Organic disease detected
Organic disease not detected
Dyspepsia secondary to organic disease
Treat based on underlying disease
Key causes of organic dyspepsia:
Peptic ulcer disease
H. pylori gastritis
Symptomatic gallstone disease
Pancreatitis
Medications (eg, NSAIDs)
Gastric or esophageal cancer
Functional dyspepsia (refer to inset)
Evaluate for active *H. pylori* infection with gastric biopsy
Test for *H. pylori* infection with either:
Stool antigen test
Urea breath test


Is *H. pylori* present?
Yes
No
Treat for *H. pylori* and test to confirm eradication[Δ]
If positive, re-treat for persistent *H. pylori* infection
Do the patient's symptoms resolve?
Yes
No
No further treatment
Treat for functional dyspepsia (refer to inset)

Functional dyspepsia

- Seventy-five to 80 percent of patients have functional dyspepsia, which is also referred to as idiopathic or nonulcer dyspepsia

- The diagnosis of functional dyspepsia requires the exclusion of other organic causes of dyspepsia

Functional dyspepsia (FD)

- Functional dyspepsia (FD) is defined as a condition chronically presenting symptoms centered in the upper abdomen, such as epigastric pain or discomfort, in the absence of any organic, systemic, or metabolic disease that is likely to explain the symptoms.

- We recommend that the diagnosis of FD, its underlying pathophysiology and the natural history of the condition, including common symptom triggers, should be explained to the patient. FD should be introduced as a disorder of gut–brain interaction (DGBI), together with a simple account of the gut–brain axis and how this is impacted by diet, stress, cognitive, behavioural and emotional responses to symptoms and postinfective changes (recommendation: strong, quality of evidence: very low).

in the Rome IV criteria, FD is defined as the presence of one or more of four symptoms:

Postprandial fullness

Early satiation

Epigastric pain

Epigastric burning

and no evidence of structural disease (including at upper endoscopy) to explain the symptoms.

The symptoms should have started at least six months before diagnosis and occurred during the last three months.

- **Functional dyspepsia subtypes** – Rome IV criteria define two subtypes of functional dyspepsia :

•**Postprandial distress syndrome** – Postprandial distress syndrome is characterized by bothersome postprandial fullness and/or early satiation.

•**Epigastric pain syndrome** – Epigastric pain syndrome is characterized by bothersome epigastric pain or burning that is not exclusively postprandial.

Initial approach

We recommend that all patients with FD are advised to take regular aerobic exercise (recommendation: strong, quality of evidence: very low).

We test all individuals with dyspepsia for H. pylori and select initial treatment based on the test result

Testing for *H. pylori* should utilize a test that detects active infection

(stool antigen assay, urea breath test, or biopsy performed at the time of upper endoscopy)

- **Patients with *H. pylori***

We suggest treatment for *H. pylori* in individuals with dyspepsia who test positive for *H. pylori* infection

- **Patients without *H. pylori***

For individuals with a normal initial evaluation for dyspepsia who test negative for *H. pylori* or who remain symptomatic four weeks after eradication of *H. pylori*, we suggest treatment with a once-daily proton pump inhibitor (PPI) for four to eight weeks

- Proton pump inhibitors (PPIs) are an efficacious treatment for FD. There does not appear to be a dose response, so the lowest dose that controls symptoms should be used. These drugs are well tolerated (recommendation: strong, quality of evidence: high).

Subsequent approach

- **Neuromodulators**

In patients with functional dyspepsia whose symptoms do not improve after eight weeks of PPI therapy, we initiate a trial of a low-dose neuromodulator, most commonly a tricyclic antidepressant (TCA) or the atypical antidepressant mirtazapine. We typically prefer a TCA

- **Prokinetic agents**

We reserve prokinetics for individuals in whom other therapies have failed

- There is no evidence that selective serotonin reuptake inhibitors (SSRIs) and serotonin norepinephrine reuptake inhibitors (SNRIs) used as gut–brain neuromodulators are an efficacious second-line drug for global symptoms in FD (recommendation: weak, quality of evidence: moderate).

- The efficacy of potassium-competitive acid blockers (P-CABs) cannot be evaluated because of little evidence. [Recommendation Weak (77%), evidence level C]

- Referral of patients with FD to gastroenterology in secondary care is appropriate where there is

✓diagnostic doubt

✓where symptoms are severe

✓refractory to first-line treatments

✓where the individual patient requests a specialist opinion

(recommendation: weak, quality of evidence: low).

Therapies with limited or unclear role

- Psychotherapy
- Dietary modification
- Antiemetic agents
- Fundic relaxant drugs
- Antinociceptive agents
- Bioelectric neuromodulation
- Virtual reality
- Complementary and alternative medicines

Dietary modification

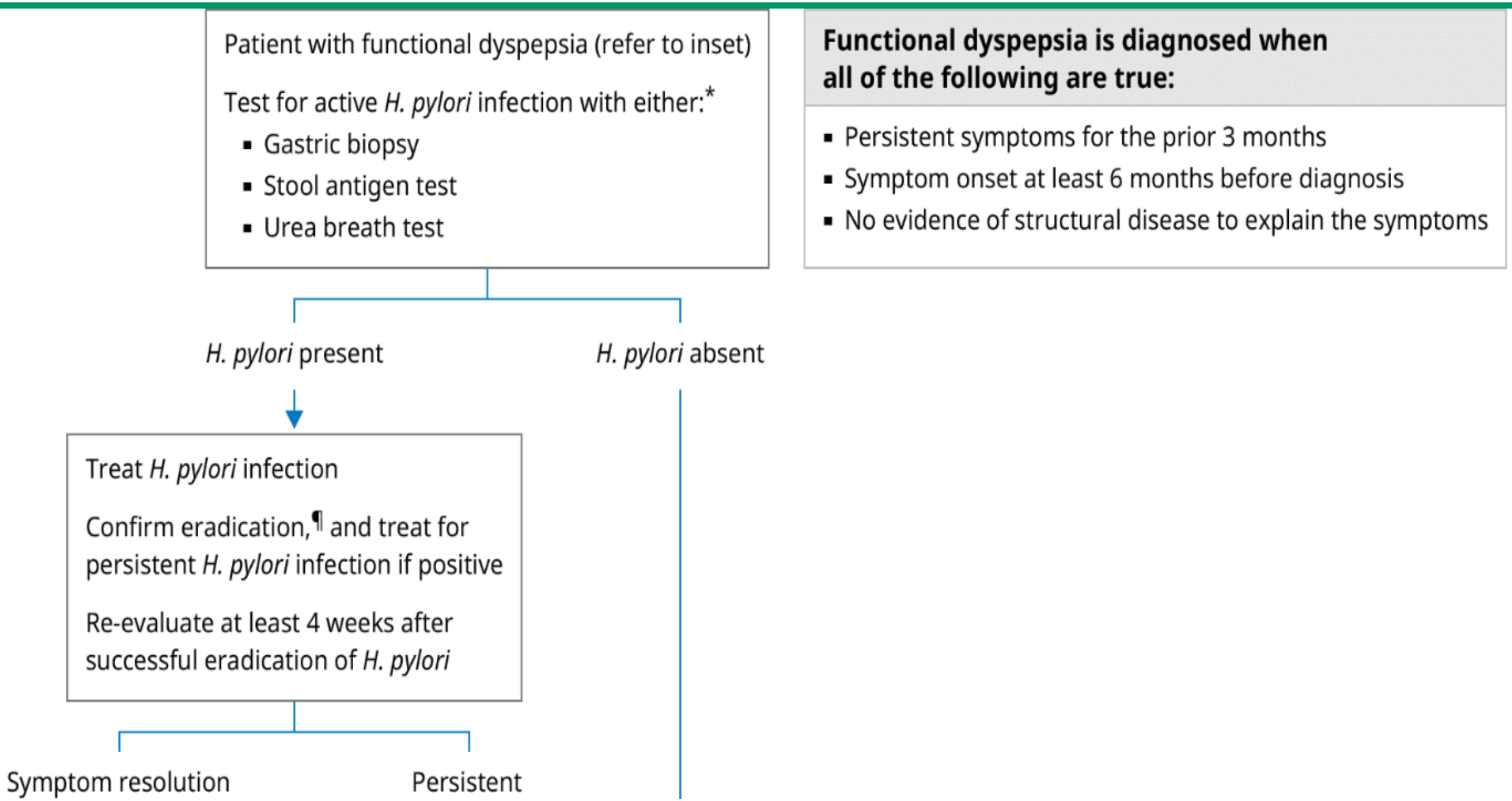
- The efficacy of dietary interventions for managing functional dyspepsia is unclear
- The postprandial timing of symptoms suggests a role for dietary modification
- Data regarding the efficacy of a low fermentable oligosaccharides, disaccharides, monosaccharides, and polyols (FODMAP) diet are inconsistent
- There is insufficient evidence to recommend dietary therapies, including a diet low in fermentable oligosaccharides, disaccharides and monosaccharides, and polyols in FD (recommendation: weak; quality of evidence: very low).

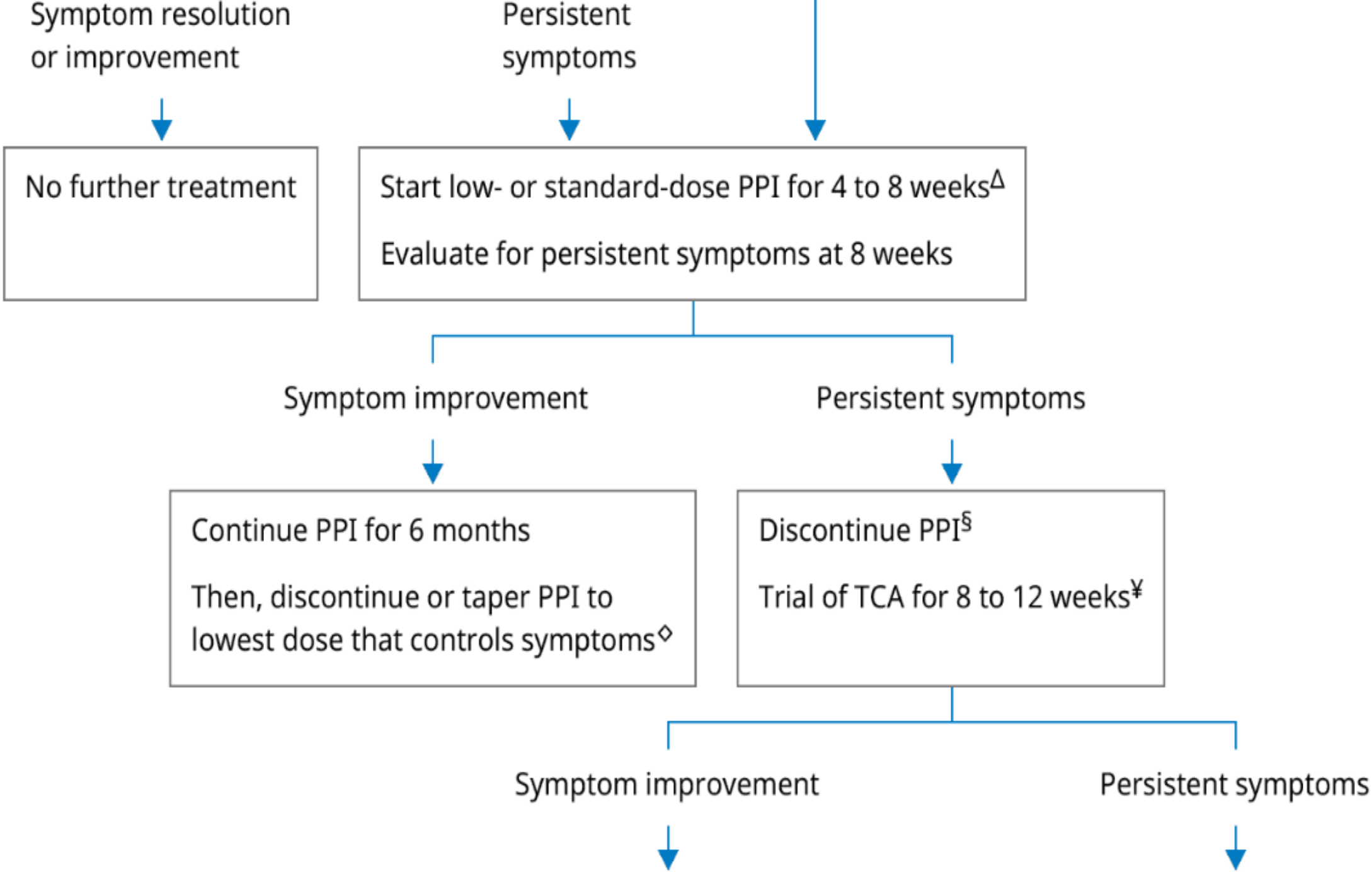
Management of severe or refractory FD

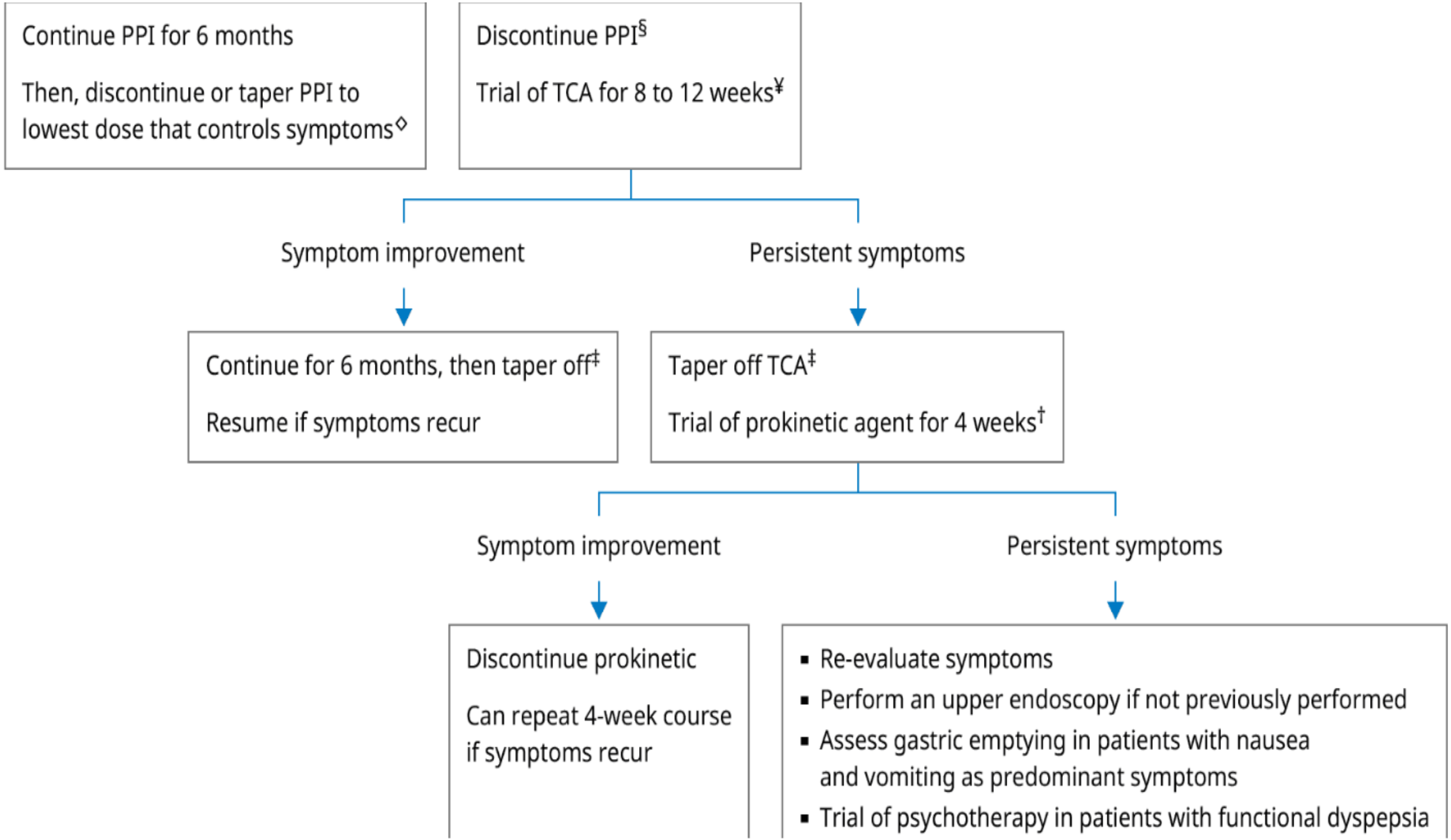
- We recommend a multidisciplinary support team should be involved for patients with severe or refractory FD (recommendation: strong, quality of evidence: low).

We recommend early dietitian involvement in patients with severe or refractory FD to avoid an overly restrictive diet (recommendation: strong, quality of evidence: very low).

Management of functional dyspepsia in adults

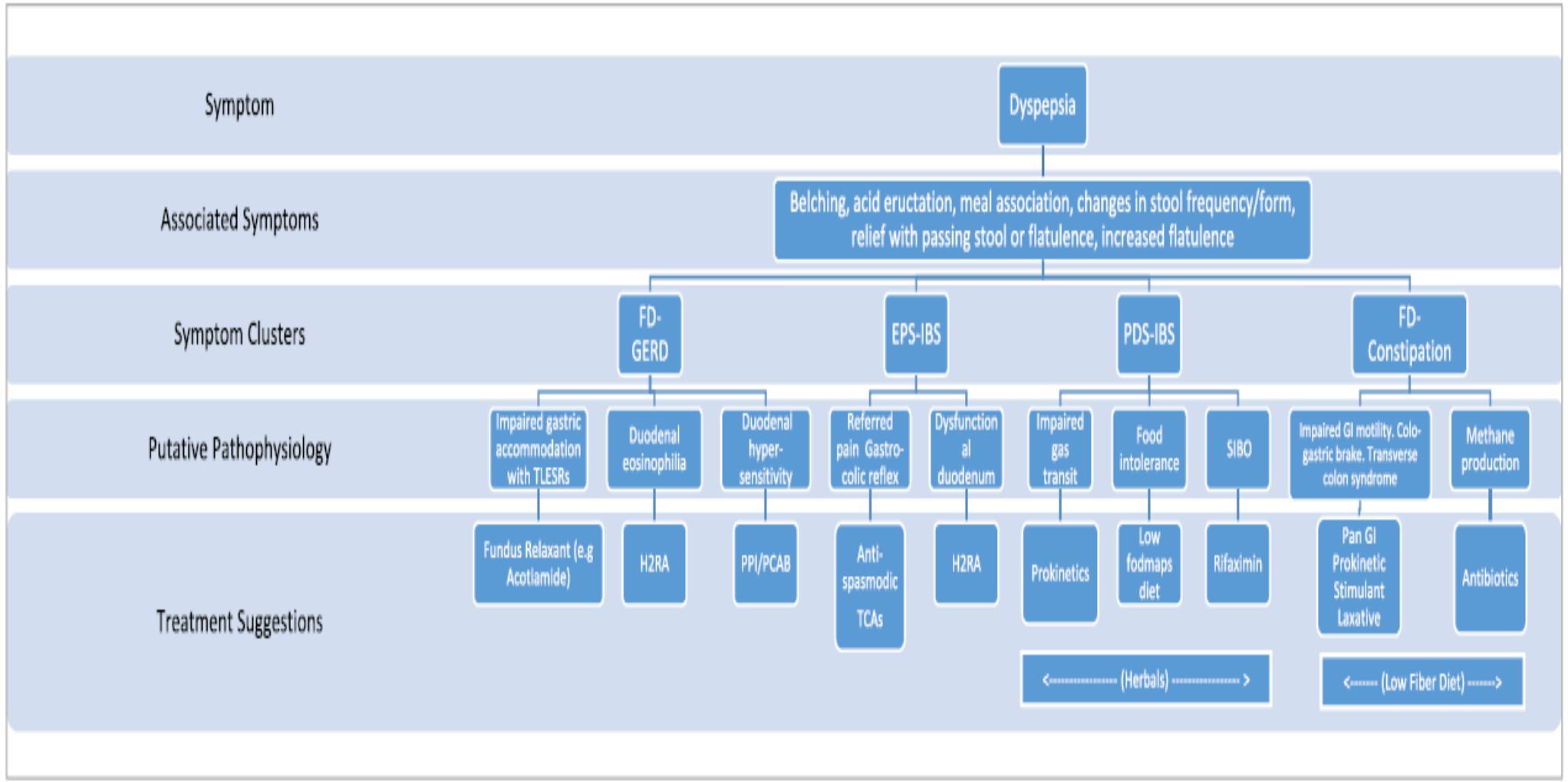



Symptom resolution or improvement
Persistent symptoms
No further treatment
Start low- or standard-dose PPI for 4 to 8 weeks[Δ]
Evaluate for persistent symptoms at 8 weeks
Symptom improvement
Persistent symptoms
Continue PPI for 6 months
Then, discontinue or taper PPI to lowest dose that controls symptoms[◇]
Discontinue PPI[§]
Trial of TCA for 8 to 12 weeks[¥]
Symptom improvement
Persistent symptoms


Continue PPI for 6 months
Then, discontinue or taper PPI to lowest dose that controls symptoms◇
Discontinue PPI§
Trial of TCA for 8 to 12 weeks¥
Symptom improvement
Persistent symptoms
Continue for 6 months, then taper off‡
Resume if symptoms recur
Taper off TCA‡
Trial of prokinetic agent for 4 weeks†
Symptom improvement
Persistent symptoms
Discontinue prokinetic
Can repeat 4-week course if symptoms recur
Re-evaluate symptoms
Perform an upper endoscopy if not previously performed
Assess gastric emptying in patients with nausea and vomiting as predominant symptoms
Trial of psychotherapy in patients with functional dyspepsia

Asia-Pac functional dyspepsia overlap

K-A Gwee *et al.*



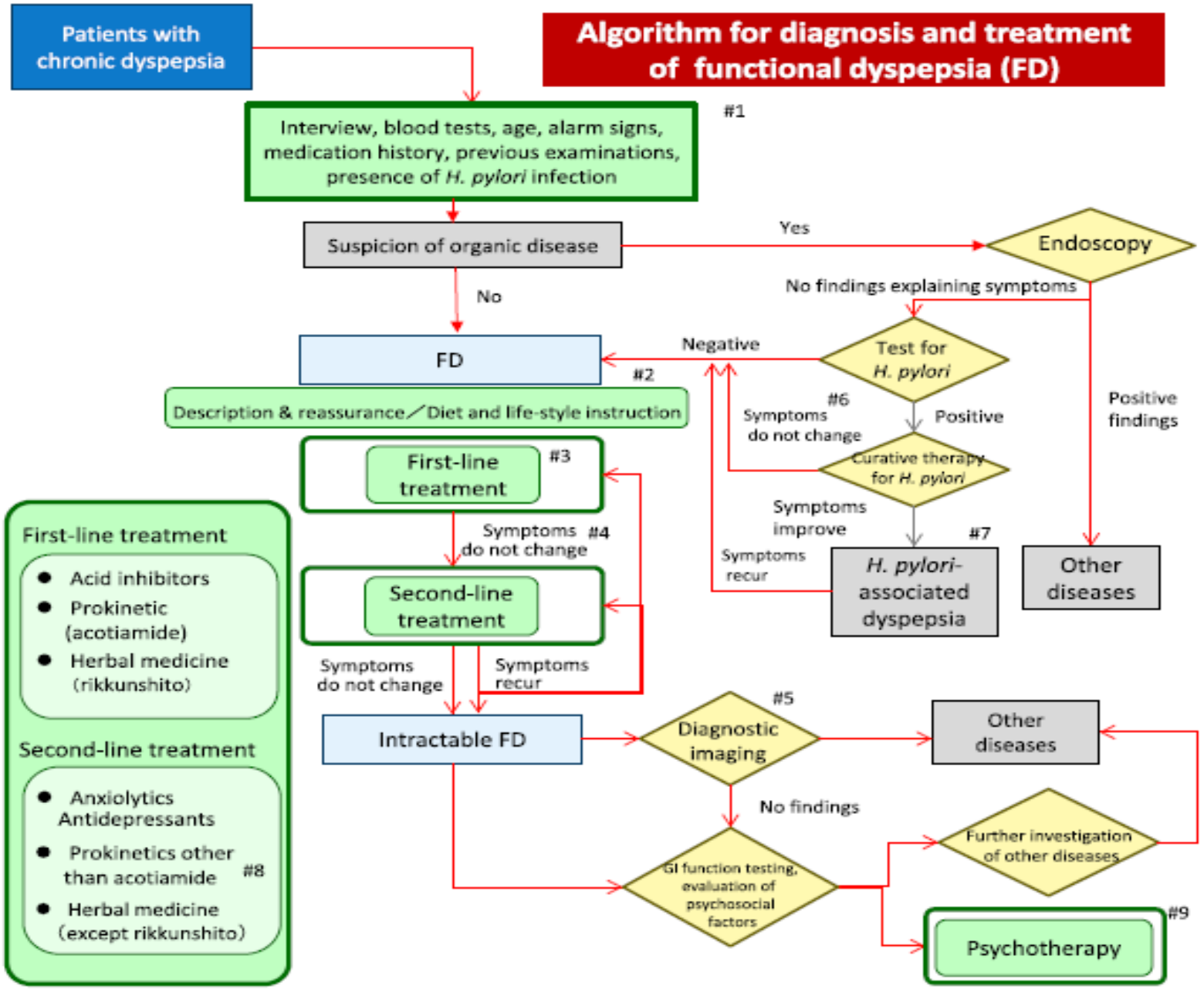


Fig. 1 Algorithm for the diagnosis and treatment of functional dyspepsia (FD)

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Thank
you