Quick reference guide

### NICE
- Patients over the age of 55, with recent onset, unexplained and persistent dyspepsia (over 4-6 weeks) should be referred urgently for endoscopy to exclude cancer.\(^{1D}\)

#### WHEN SHOULD I TEST FOR HELICOBACTER PYLORI?
- Patients with uncomplicated dyspepsia unresponsive to lifestyle change and antacids, following a single one month course of proton pump inhibitor (PPI), without alarm symptoms.\(^{2D,3A,4A,5A,6A}\)
  - Note: Options should be discussed with patients, as the prevalence of HP in developed countries is falling, and is lower than 15% in many areas in the UK.\(^{10B,11D}\)
  - A trial of PPI should usually be prescribed before testing, unless the likelihood of HP is higher than 20% (older people; people of North African ethnicity; people living in a known high risk area), in which case the patient should have a test for HP first, or in parallel with a course of PPI.
- Patients with a history of gastric or duodenal ulcer/bleed who have not previously been tested.\(^{11C}\)
- Patients before taking NSAIDs, if they have a prior history of gastro-duodenal ulcers/bleeds.
  - Note: Both HP and NSAIDs are independent risk factors for peptic ulcers, so eradication will not remove all risk.\(^{11A}\)
- Patients with unexplained iron-deficiency anaemia, after negative endoscopic investigation has excluded gastric and colonic malignancy, and investigations have been carried out for other causes, including: cancer; idiopathic thrombocytopenic purpura; vitamin B12 deficiency.\(^{11D}\)

#### WHEN SHOULD I NOT TEST FOR HELICOBACTER PYLORI?
- Patients with proven oesophagitis, or predominant symptoms of reflux, suggesting gastro-oesophageal reflux disease (GORD).\(^{2D,11D,12A+}\)
- Children with functional dyspepsia.\(^{13A+,14A+}\)

#### WHICH NON-INVASIVE TEST SHOULD BE USED IN UNCOMPLICATED DYSPEPSIA?
- Urea breath tests (UBTs)\(^{15A+,16C,17B+}\) and stool antigen tests (SATs) are the preferred tests.\(^{11A+}\)
  - **Urea Breath Test (UBT):** most accurate test.\(^{2D,15A+,16C,17B+}\)
    - needs a prescription and staff time to perform
  - **Stool Helicobacter Antigen Test (SAT):** check test availability.\(^{18A+,19A+}\)
    - pea-sized piece of stool sent to local laboratory
  - **Serology:** whole blood in plain bottle; low cost, lower accuracy.\(^{2D,16A+,23A+}\)
    - not recommended for most patients, and positives should be confirmed by a second test such as UBT, SAT\(^{24D}\) or biopsy\(^{11D,15A+}\)
    - has very good negative predictive value at current; low prevalence in the developed countries.\(^{76+,8B-,9B+,10B+,11D}\)
    - most useful in patients with acute gastrointestinal bleed, to confirm negative UBT or SAT, when blood and PPI use interacts with tests\(^{19A+}\)
    - detects IgG antibody;\(^{25A+}\) does not differentiate active from past infection\(^{19A+}\)

#### WHEN SHOULD I TREAT HELICOBACTER PYLORI?
- **HP POSITIVE**
  - Reassure, as NPV of all tests is >95%.\(^{16C}\)
  - Only retest for HP if DU, GU, family history of cancer, MALToma, or if test was performed within two weeks of PPI, or four weeks of antibiotics.\(^{21B+,27C}\)
- **HP NEGATIVE**
  - Treat H. pylori\(^{2D,11D,22A+,26B-}\)
- **ASYMPTOMATIC post-HP treatment**\(^{2D,3A,4A}\)
  - If H. pylori negative, treat as functional dyspepsia. Step down to lowest dose PPI or H2A needed to control symptoms. Review annually, including PPI need.\(^{2D,28D}\)
Check antibiotic history as each additional course of clarithromycin, metronidazole or quinolone increases resistance risk. Stress the importance of compliance.

**NO PENICILLIN ALLERGY**

- **FIRST-LINE:** 7 days, PPI twice daily
  - PLUS amoxicillin 1g BD
  - PLUS either clarithromycin 500mg BD OR metronidazole 400mg BD

- **ONGOING SYMPTOMS** after first-line

  - **SECOND-LINE:** 7 days, PPI twice daily
    - PLUS amoxicillin 1g BD
    - PLUS second antibiotic not used in first line, either clarithromycin 500mg BD OR metronidazole 400mg BD

**PENICILLIN ALLERGY**

- **FIRST-LINE:** 7 days, PPI twice daily
  - PLUS clarithromycin 500mg BD
  - PLUS metronidazole 400mg BD

  - First-line with previous CLAR exposure
  - OR Second-line with previous levofloxacin exposure

  - 7 days, PPI twice daily
    - PLUS clindamycin 450mg BD OR levofloxacin 250mg BD OR second antibiotic not used in first line, either clarithromycin 500mg BD OR metronidazole 400mg BD

- **ONGOING SYMPTOMS** after first-line AND previous exposure to MZ and CLAR

  - **SECOND-LINE:** 7 days, PPI twice daily
    - PLUS amoxicillin 1g BD
    - PLUS second antibiotic, either tetracycline hydrochloride 500mg QDS OR levofloxacin 250mg BD

**WHEN SHOULD I RETEST FOR HELICOBACTER PYLORI?**

- As 64% of patients with functional dyspepsia will have persistent recurrent symptoms, do not routinely offer re-testing after eradication.

  - if compliance poor, or high local resistance rates
  - persistent symptoms, and HP test performed within two weeks of taking PPI, or within four weeks of taking antibiotics
  - patients with an associated peptic ulcer or MALT lymphoma, or after resection of an early gastric carcinoma
  - patients requiring aspirin, where PPI is not co-prescribed
  - patients with severe persistent or recurrent symptoms, particularly if not typical of GORD

**WHAT SHOULD I DO IN ERADICATION FAILURE?**

- Reassess need for eradication. In patients with GORD or non-ulcer dyspepsia, with no family history of cancer or peptic ulcer disease, a maintenance PPI may be appropriate.

**WHEN SHOULD I REFER FOR ENDOSCOPY, CULTURE AND SUSCEPTIBILITY TESTING?**

- Patients in whom the choice of antibiotic is reduced due to hypersensitivity, known local high resistance rates, or previous use of clarithromycin, metronidazole, and a quinolone
- Patients who have received two courses of antibiotic treatment, and remain HP positive
- For any advice, speak to your local microbiologist, or the Helicobacter Reference Laboratory.