Royal Australasian College of Surgeons

Research and Evaluation, incorporating ASERNIP-S

Explanatory notes for Upper Gastrointestinal Endoscopy categorisation guidelines for adults 2018
Introduction

Following the development of Colonoscopy Categorisation Guidelines, the Victorian Department of Health and Social Services (DHSS) has commissioned a group to develop transparent, reproducible Categorisation Guidelines for Upper Gastrointestinal Endoscopy based on a comprehensive review of the literature and expert opinion. The basic premises built on are: dysphagia is the single most important predictor of neoplasia, most single symptoms however are poorly predictive, although combinations of symptoms, especially in association with abnormal tests, improve reliability in some instances for both cancer and other conditions.

By comparison with colon cancer, there are relatively few research-backed Clinical Practice Guidelines (CPG) to be found in the literature. These recommendations are based on synthesis of these Guidelines undertaken by a Working Group of experts.

These Notes will help explain each row of the Upper Gastrointestinal Endoscopy Categorisation Guidelines we have developed.

General principles

Use of the age 55 years

Oesophageal and gastric cancer (OGC) incidence increases with age. Many of the larger studies examining symptoms which predict risk of OGC have used age > 55 years as the threshold. Consistent with this evidence, we have used this age cut-off as part of the criteria in combination with specific symptoms to determine urgency for upper gastrointestinal endoscopy. We recognise that there are different age cut-offs applied in the colonoscopy guidelines. This reflects differences in age-specific risks of different cancers and the age cut-offs used in existing studies that have informed these guidelines.

Additional symptoms

Combinations of specific symptoms increase the risk of OGC, especially in patients over 55 years.

Abnormal blood tests

Markers of iron deficiency anaemia or thrombocytosis (raised platelet count) predict risk of OGC. In the presence of a relevant symptom, this increases the risk of OGC.
**Indication A: Symptoms and investigation**

1. **Dysphagia**
   
   Based on five large studies in primary care, dysphagia is associated with a positive predictive value (PPV) or 5.5% for oesophageal or gastric cancer. It is the strongest single symptom predictor of OGC and warrants Category 1 endoscopy in any adult patient regardless of age (1).

2. **Haematemesis/Melaena**
   
   The majority of patients with haematemesis or melaena present as emergencies and are admitted acutely for inpatient management according to hospital protocols. Some patients with less severe haematemesis or melaena will present a few days after the acute event, often to their GP. Assuming that they are haemodynamically stable and do not have evidence of ongoing acute bleeding, such patients may not require immediate hospital admission. They do require referral for upper gastrointestinal endoscopy and are listed as a Category 1 referral but ideally require more urgent endoscopy than the 30-day limit to identify the possible source of bleeding (2).

3. **Anaemia and/or Iron deficiency**
   
   *Figure 1* provides a useful flow chart for the assessment of iron-deficiency anaemia, based on guidelines from The British Society of Gastroenterology (3). Anaemia, especially in the context of specific symptoms or age over 55 years is associated with increased risk of OGC (4). It is important to realise that a positive immunochemical faecal occult blood test (iFOBT) is specific to colonic bleeding. A positive iFOBT is therefore not an indication for a UGE.
Evidence of iron deficiency anemia
- Low Hb
- Low Ferritin
- Microcytosis
- Hypochromia

Check coeliac serology (tTG Ab)

Confirm coeliac disease with OGD and small bowel biopsy

Pre-menopausal woman

Upper GI symptoms

OGD

Normal

Manage detected condition

Colonoscopy or CT colography and OGD

Family history of colorectal cancer*

Colonoscopy or CT colography

Normal

Iron replacement.
Investigate further if response inadequate

Manage detected condition

CT = computed tomography scan
GI = gastrointestinal
Hb = haemoglobin
OGD = oesophagastroduodenoscopy
tTG Ab = tissue transglutaminase antibody


Figure 1. An abbreviated flow chart of the investigation of iron deficiency anaemia.
4. Abnormal imaging

This refers to any imaging, usually either ultrasound, CT, or MRI with abnormal findings suggestive of OGC. We have not included abnormal findings on clinical examination alone as we assume that imaging would be performed prior to consideration of a UGE.

5. Weight loss, unexplained

The definition of ‘unexplained’ weight loss is an important qualifier that requires clinical judgement. One widely accepted definition is: ‘weight loss of at least 5% of the patient’s usual body weight that occurs within the preceding 6 to 12 months, and that is not the expected consequence of treatment of a known illness.’ (5) Weight loss alone is too non-specific but, in combination with specific upper GI symptoms or relevant abnormal blood results is an important predictor of OGC, especially in patients aged 55 years or above.

6. Dyspepsia (≥55 years) and 7. Dyspepsia (any age)

There is no universally accepted definition of dyspepsia. It can include a range of symptoms such as upper abdominal pain or discomfort, heartburn, nausea and reflux. There is some potential for ‘double counting’ of some symptom clusters within this guideline and therefore patients being classified as Category 1 who are not at higher risk of OGC. The additional symptoms of weight loss or vomiting, or abnormal blood tests or imaging, in combination with either dyspepsia, reflux or upper abdominal pain, are probably of greater significance than the combination of upper abdominal pain and reflux alone.

Several international guidelines now recommend *H. pylori* testing as part of the initial assessment of patients with dyspepsia (6) (7) (8) (7). See Figure 2 for a flow chart of this test-and-treat approach. Patients with *H. pylori*-associated dyspepsia which resolves after *H. pylori* eradication do not require upper gastrointestinal endoscopy.

Patients with dyspepsia and known atrophic gastritis, intestinal metaplasia/gastric dysplasia or a family history of an upper GI cancer as at increased risk of OGC. Intestinal metaplasia/gastric dysplasia are associated with higher risk and therefore patients of any age with these conditions and dyspepsia are considered Category 1 (9) (10).

INDICATION A
Test for *H. pylori* using a carbon-13 urea breath test or a stool antigen test, or laboratory-based serology where its performance has been locally validated.

- Perform re-testing for *H. pylori* using a carbon-13 urea breath test. (There is currently insufficient evidence to recommend the stool antigen test as a test of eradication.)

Adults with dyspepsia or reflux symptoms have a **2-week washout period** before a test for *H. pylori* if they are receiving proton pump inhibitor therapy.

**Do not use** office-based serological tests for *H. pylori* because of their inadequate performance.

<table>
<thead>
<tr>
<th>Proton Pump Inhibitor</th>
<th>Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Esomeprazole or</td>
<td>20mg</td>
</tr>
<tr>
<td>Lansoprazole or</td>
<td>30mg</td>
</tr>
<tr>
<td>Omeprazole or</td>
<td>20-40mg</td>
</tr>
<tr>
<td>Pantoprazole or</td>
<td>40mg</td>
</tr>
<tr>
<td>Rabeprazole</td>
<td>20mg</td>
</tr>
</tbody>
</table>

### with either

- amoxicillin and either – clarithromycin or metronidazole (take into account previous exposure to clarithromycin or metronidazole)

### if allergic to penicillin – clarithromycin and metronidazole

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**Source:** *Gastro-oesophageal reflux disease and dyspepsia in adults: investigation and management.*

*NICE Guidelines CG184 (2014)* (11).

**Figure 2. Helicobacter pylori test and treat policy**

**INDICATION A**
8. GORD (recent onset) and 9. GORD (non-responsive)
In some guidelines this term is used only for endoscopically defined oesophagitis. However, for the purpose of triage, we have used the broader definition of reflux-type symptoms. We define non-responsive GORD as that in which significant symptoms persist after 6-8 weeks of full dose proton pump inhibitor (PPI) treatment. Upper gastrointestinal endoscopy is not indicated for extra-oesophageal symptoms potentially due to GORD such as choking, persistent cough, chronic sore throat or dental erosions (12) (13) (14).

10. Upper abdominal pain
As discussed under Dyspepsia, upper abdominal pain is often considered within the symptom cluster of dyspepsia. Consistent with several other guidelines, the expert consensus group agreed to treat this as a separate symptomatic entity. In many cases, in the absence of additional upper GI symptoms or abnormal blood tests/imaging, we recommend further specialist assessment before determining the need and urgency for upper gastrointestinal endoscopy.

11. Persistent nausea and vomiting
There are various definitions of persistent nausea and vomiting. We have applied the definition in several studies which informed the NICE guidelines on Suspected Cancer, namely nausea and/or vomiting for > 2 weeks although recognise the importance of clinical judgment in defining ‘persistent’ (1).

12. Inflammatory bowel disease in adults
One CPG recommended a baseline upper gastrointestinal endoscopy (Category 2) in patients with upper GI symptoms (nausea, vomiting or epigastric pain) at the time of diagnosis of inflammatory bowel disease (15).

13. Pernicious anaemia (endoscopically diagnosed)
One CPG discussed pernicious anaemia in the context of gastric cancer risk. Patients with suspected pernicious anaemia (i.e. with low B12 levels and antibodies to intrinsic factor or parietal cells) require a diagnostic upper gastrointestinal endoscopy. Patients with known pernicious anaemia (and atrophic gastritis) are at increased risk of gastric cancer and require upper gastrointestinal endoscopy if they develop relevant symptoms (9).
14. Coeliac disease

Three CPGs included recommendations regarding coeliac disease. All recommended duodenal biopsy to confirm the diagnosis of coeliac disease in patients with positive serology (16) (17) (18). Repeat upper gastrointestinal endoscopy is required in patients with persistent symptoms or serology despite following a gluten-free diet for 12 months.

15. Cirrhosis

A UGE is recommended for all patients with a diagnosis of cirrhosis to screen for oesophageal or gastric varices (19). Subsequent surveillance of identified varices is covered below.
**Indication B: Surveillance**

**16. Barrett’s Oesophagus**
As recommended by Australian Cancer Council Guidelines (20). These are thoroughly researched (21) and locally developed guidelines that have been accepted into Australian practice.

**17. Adenomatous polyposis syndrome**
There is little information on this condition regarding surveillance, but in those with a documented adenomatous polyposis syndrome, commencing upper gastrointestinal endoscopy screening between 25-30 years of age is recommended (22). Ongoing timing of screening is determined by Spigelman Stage identified at initial and subsequent endoscopy (23).

**18. Gastric ulcer**
It is recommended by NICE Guidelines (16) that patients with gastric ulcer and *H. pylori* should be offered repeat endoscopy 6-8 weeks after beginning eradication treatment, depending on the size of lesion. We also recommend that any *H. pylori* negative gastric ulcer should be similarly checked for healing after 6-8 weeks treatment.

**19. Eosinophilic Oesophagitis**
Two CPGs were identified for this indication; one low quality (24), the other moderate quality (25). Both CPGs recommended that endoscopy should be used to diagnose eosinophilic oesophagitis and agreed that endoscopy should be performed following a six week to three month course of PPIs, diet modification or steroids in patients with, or with suspected, oesophageal eosinophilia (24, 25).

**20. Severe erosive oesophagitis**
Three CPGs were included for gastro-oesophageal reflux disease (GORD). Two were very low quality (12, 13) and one was moderate quality (14). All three CPGs recommended that endoscopy be used to reassess patients that have persistent or progressive GORD symptoms following a one to three month therapeutic trial of proton pump inhibitors (PPIs) or medical therapy (12-14). Two CPGs also recommended endoscopy for patients with severe erosive oesophagitis after a two month course of PPIs to assess healing and to rule out underlying Barrett’s oesophagus (13, 14).
21. Gastric dysplasia/intestinal metaplasia
Two papers, one high quality (9) and one moderate (10), gave good direction for surveillance of this group of patients. The grade and extent of change being critical in determining a plan. Importantly, any defined lesion needs to be removed, rather than being submitted to a surveillance programme. Following EMR of HGD or Early (T1a) cancer oesophagus or stomach, endoscopic surveillance is recommended 3 monthly for the first year, 6 monthly in the second year, and then yearly thereafter (26).

22. Lynch syndrome
Recommended that these patients have baseline UGE between the ages 30-35 years (22) and then, for practical efficiency, annually at the same time as their surveillance colonoscopy.

23. Oesophageal varices
Two CPGs of moderate quality were identified in Acute UG Bleeding literature (19, 27) and another of very low quality identified in portal hypertension management. They all have well aligned & specific recommendations, dependant on the Grade of varices found. One CPG recommended a diagnostic upper gastrointestinal endoscopy in patients with suspected cirrhosis who present with acute upper GI bleeding within 12 hours of haemodynamic resolution. This is to check for and treat oesophageal varices. In general, cirrhotic patients without varices should undergo endoscopy at two to three year intervals and those with varices should undergo endoscopy yearly (19, 27). Following successful treatment of varices, surveillance endoscopy should occur after 1 to 3 months to check for and treat recurrent bleeding/varices and every 3 to 12 months thereafter (19, 27).

24. Previous therapeutic procedure
Patients following definitive chemoradiation for SCC oesophagus (ESMO guidelines) (28), recommended 3 months after completion of therapy then 3 monthly for the first year, 6 monthly for second year and symptomatically after this time.
Patients following oesophagectomy (ESMO Guidelines) (28), no role routine endoscopy but should be performed if nutritional or symptomatic issues
Patients following gastrectomy (ESMO Guidelines) (29), no role routine endoscopy but may be used for symptomatic issues or as surveillance in partial gastrectomy where concern of field defect, as per Indications 7. and 21.
**Indication C: Therapeutic**

25. to 28.
These procedures are self-explanatory.

29. Other
Can be used by requestor to identify any other procedure.

**Indication D: Pre-operative assessment**

30. to 31.
The timing of these procedures is entirely driven by the Elective Surgical Waiting list categorisation.
References


INDICATION B
Appendix A

The explanatory notes defined herein are resultant from a Clinical Practice Guideline literature review that examined upper gastrointestinal endoscopy. The included studies from that review are included below. Noting the numbering sequence below is per that literature review, citations for the these explanatory notes are provided in the earlier ‘References’ section.


APPENDIX A


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