GI Problems

David Rowbotham

Clinical Director & Consultant Gastroenterologist

Dept of Gastroenterology & Hepatology

Auckland City Hospital

AUCKLAND DISTRICT HEALTH BOARD
Te Toka Tumai

MACMURRAY GASTROENTEROLOGY
DIGESTIVE DISEASES & ENDOSCOPY

Specifically

- Eosinophilic oesophagitis
- Clinical Pathways (dyspepsia/GORD & IDA)
- *H. pylori* / Acid suppression
- Change in bowel habit (prioritisation criteria)
- Calprotectin
- IBD and drugs
- *C. difficile*-associated diarrhoea

MacMurray
GASTROENTEROLOGY
DIGESTIVE DISEASES & ENDOSCOPY

Eosinophilic oesophagitis

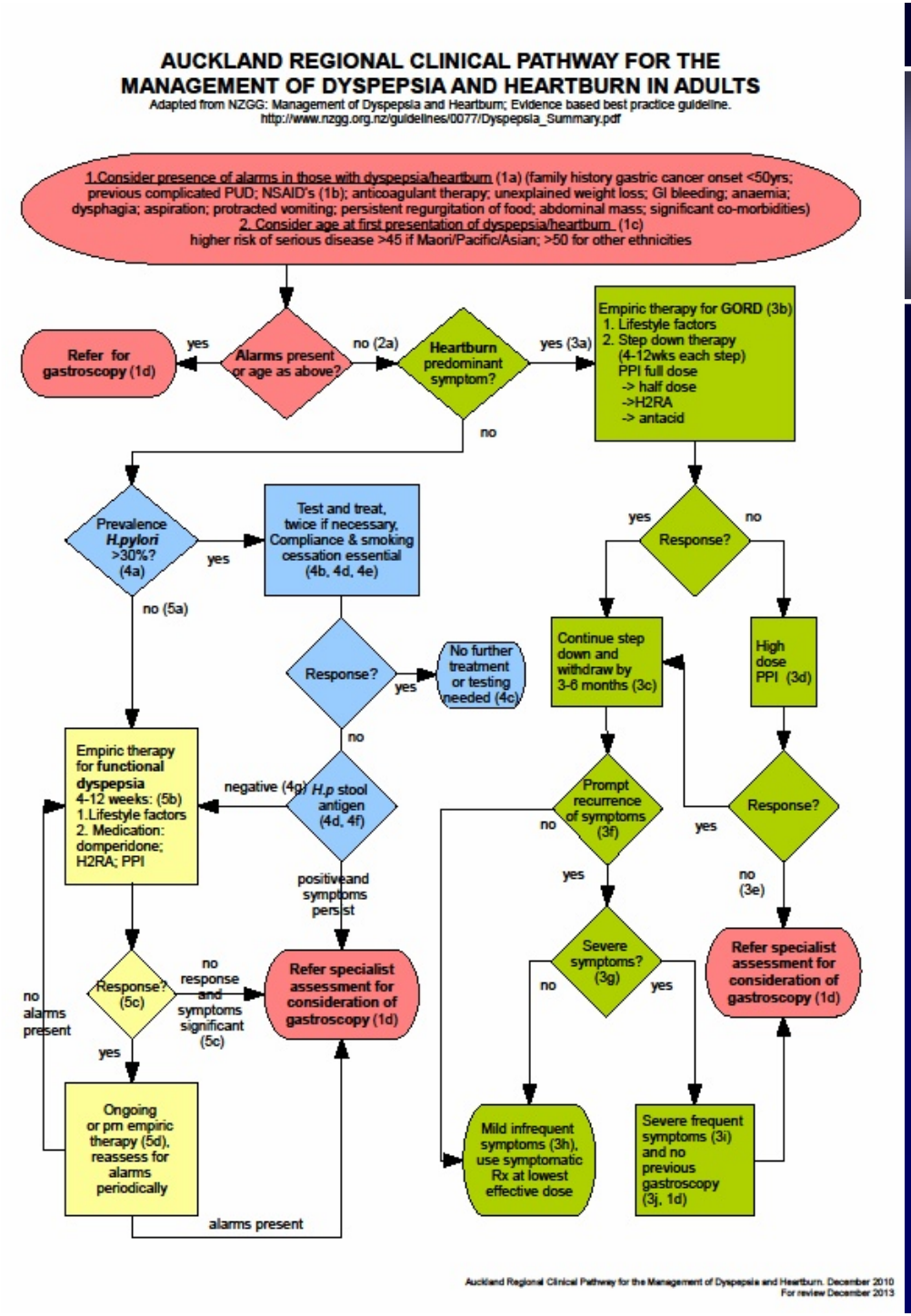
- Young (recurrent) dysphagia
- Think ?eosinophilic oesophagitis
- Reduced distensibility/fibrosis (bolus obstruction)
- Food allergens but many do improve with PPI

Auckland Regional Clinical Pathways

- Dyspepsia / GORD
- IDA

MacMurray
GASTROENTEROLOGY
DIGESTIVE DISEASES & ENDOSCOPY

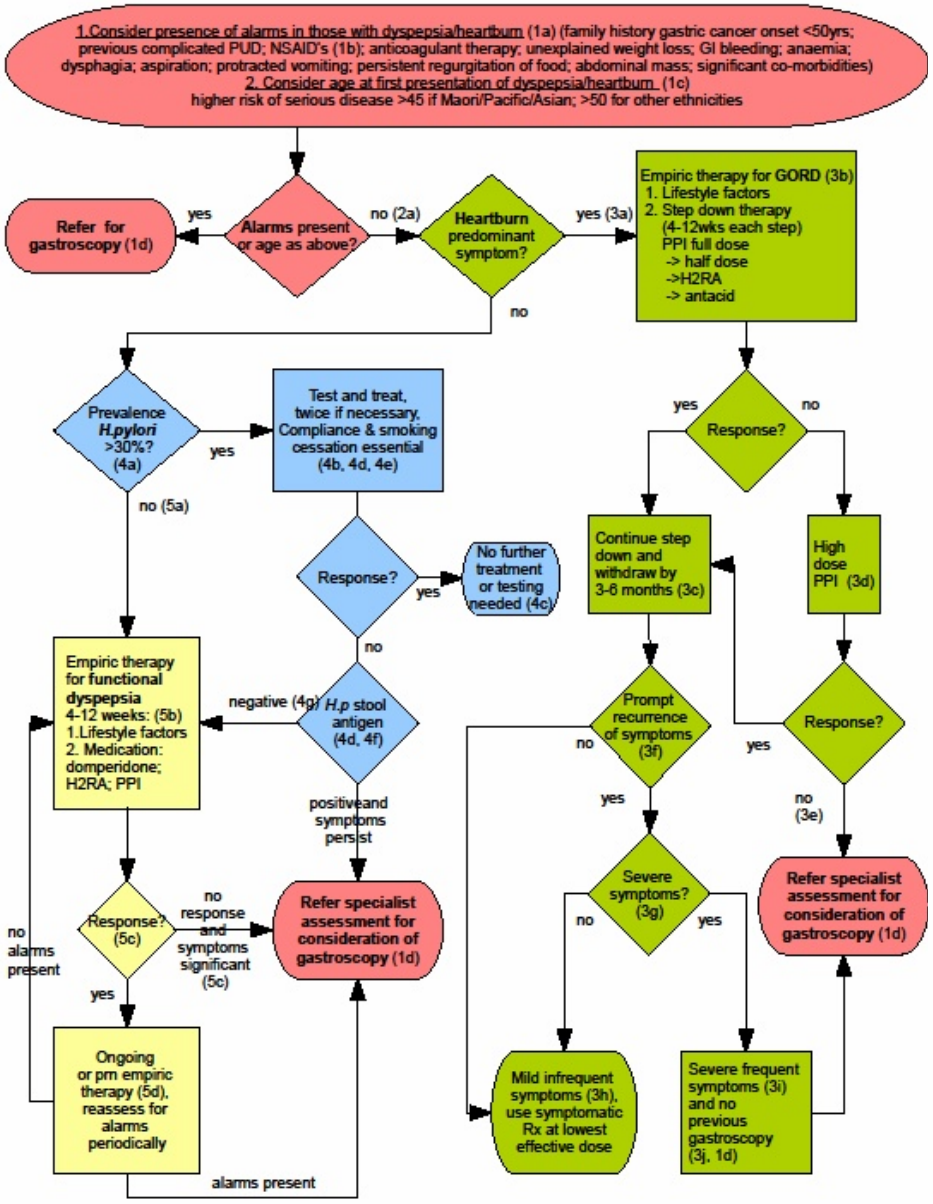
Clinical Pathways



MacMurray Gastroenterology
Digestive Diseases & Endoscopy

AUCKLAND REGIONAL CLINICAL PATHWAY FOR THE MANAGEMENT OF DYSPEPSIA AND HEARTBURN IN ADULTS

Adapted from NZGG: Management of Dyspepsia and Heartburn; Evidence based best practice guideline.
http://www.nzgg.org.nz/guidelines/0077/Dyspepsia_Summary.pdf



AUCKLAND REGIONAL CLINICAL PATHWAY FOR THE MANAGEMENT OF DYSPEPSIA & HEARTBURN IN ADULTS – EXPLANATORY NOTES

Section 1: Alarms:

1a:

- Alarms: family history gastric cancer onset <50yrs; previous complicated PUD; ingestion of NSAID's in those at risk (**1b**); anticoagulant therapy; unexplained weight loss; GI bleeding; anaemia; dysphagia; aspiration, protracted vomiting or persistent regurgitation of food, abdominal mass; significant co-morbidities
- These with alarms, older age are at higher risk of gastric cancer; and increased mortality and morbidity from complications of GORD and PUD.
- Those with significant co-morbidity eg CHF, IHD, severe COPD etc are at higher risk of morbidity/mortality from an upper GI bleed.

1b: NSAID use: GI toxicity is a systemic effect regardless of route of administration.

- Risk factors: history previous peptic ulcer or GI bleeding or NSAID gastropathy; significant co-morbidity, use of corticosteroids, anticoagulants, biphosphonates, aspirin; high dose NSAID.
- Age <65 + two risk factors or age >65 + one risk factor – refer for gastroscopy (see note 1d) if develop dyspepsia on NSAID; and co-prescribe PPI if asymptomatic and require NSAID.
- Low risk group: For those who develop dyspepsia on an NSAID, options include stopping the NSAID if possible or co-administering PPI. If dyspepsia continues despite these measures, refer gastroscopy.

1c:

- All those >50 years old, or >45 years old if Maori/Pacific/Asian, with new onset of significant dyspepsia/heartburn, should be referred for gastroscopy (see note 1d). The latter ethnic groups have a higher rate of gastric cancer due to higher rate of H.pylori infection as well as a genetic predisposition.
- Offer referral to Maori Health, Pacific Health, or Asian Health for support, translation, transport, DNA's etc.

1d:

- OGD is the more accurate term here – stands for oesophago-gastro-duodenoscopy. However the term "gastroscopy", although essentially inaccurate, is better known and used more commonly in primary care, thus has been chosen for the purposes of this pathway. Gastroenterologists prefer the term "OGD" as it more accurately describes the procedure.
- Barium meal has no indication in primary care for investigation of dyspepsia

Section 2: Low risk groups:

2a: The remainder are at low risk of serious disease:

- Most (~60-70% depending on population studied) will have functional dyspepsia, a low risk condition (see note 5 for management).
- The other 30-40% will have either GORD or Helicobacter related disease, most cases of which may be successfully managed in primary care.(see notes 3 and 4)

Section 3: GORD:

3a:

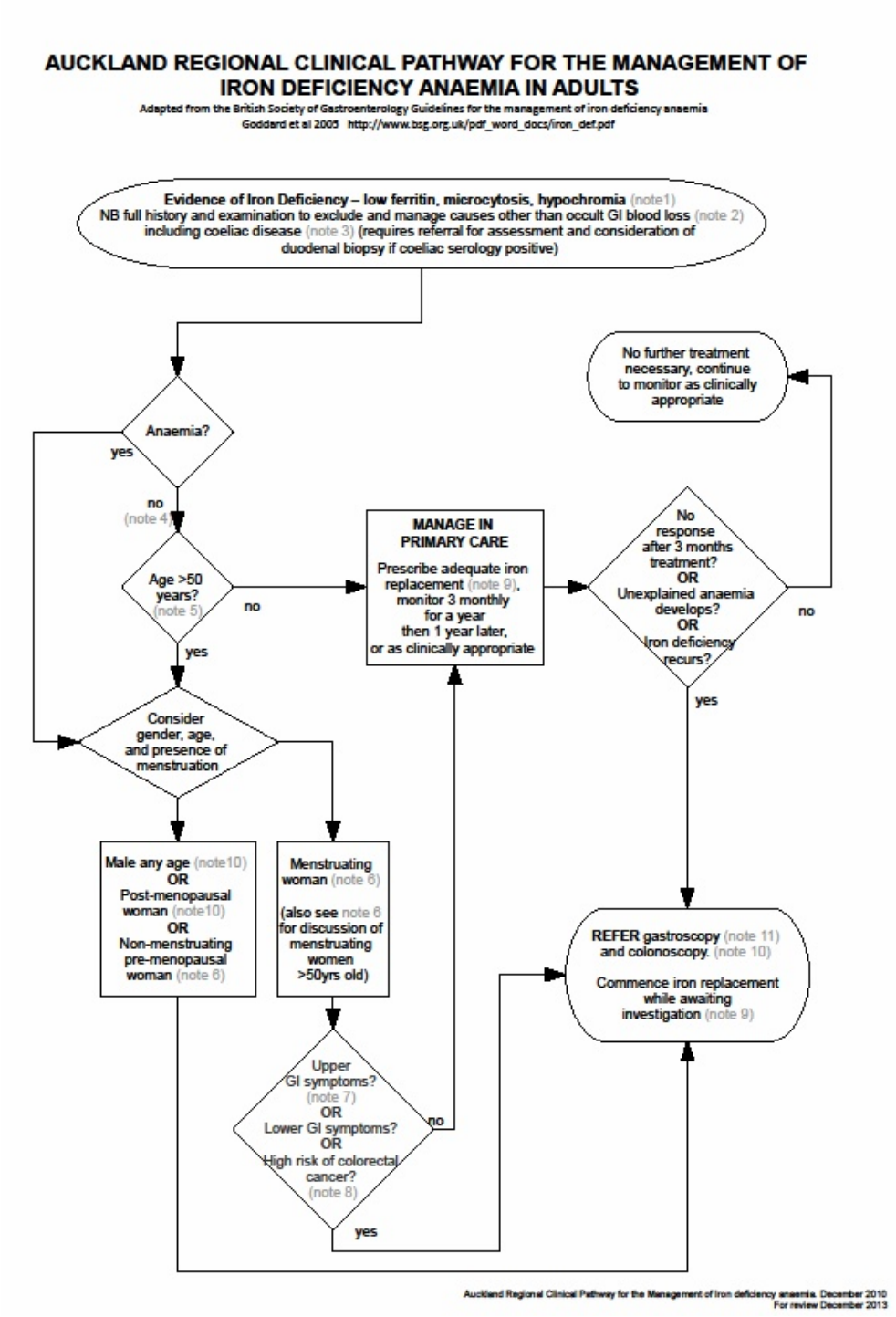
- Typical symptoms of reflux classic symptoms such as heartburn (burning feeling rising from the epigastrium into the chest and up towards the neck) and acid regurgitation are highly predictive of the presence of GORD.
- Some patients may present with atypical symptoms such as unexplained chest pain, asthma, cough and hoarseness.
- Severity of symptoms is not reliably predictive of severity of grading and ~50% have no inflammation seen at gastroscopy (see note 1d) ie severe symptoms do not necessarily mean high grade GORD.
- Complications predominantly occur only in the presence of high grade GORD and are rare (e.g. strictures, haemorrhage).

Auckland Regional Clinical Pathways

- Dyspepsia / GORD
- IDA

MacMurray
GASTROENTEROLOGY
DIGESTIVE DISEASES & ENDOSCOPY

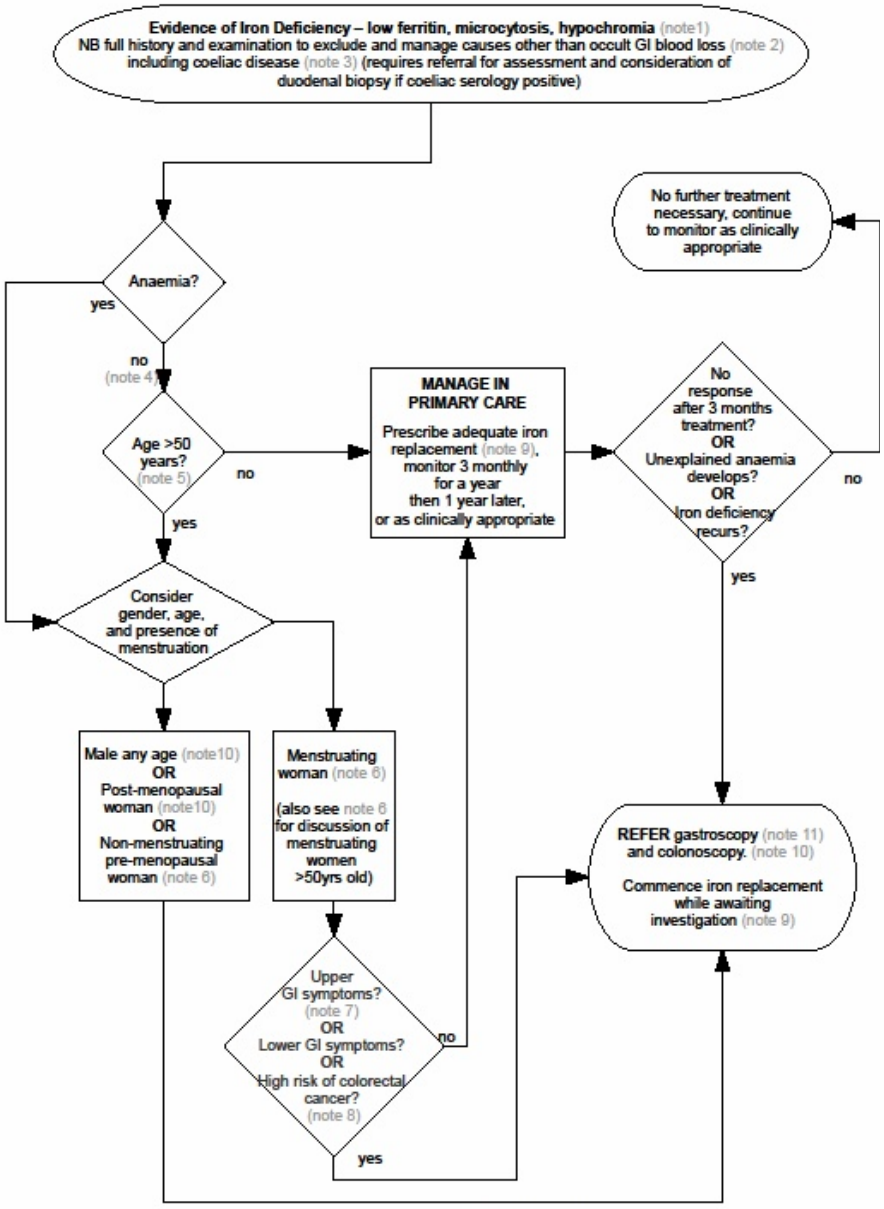
Clinical Pathways



MacMurray Gastroenterology
Digestive Diseases & Endoscopy

AUCKLAND REGIONAL CLINICAL PATHWAY FOR THE MANAGEMENT OF IRON DEFICIENCY ANAEMIA IN ADULTS

Adapted from the British Society of Gastroenterology Guidelines for the management of iron deficiency anaemia
Goddard et al 2005 http://www.bsg.org.uk/pdf_word_docs/iron_def.pdf



AUCKLAND REGIONAL CLINICAL PATHWAY FOR THE MANAGEMENT OF IRON DEFICIENCY ANAEMIA IN ADULTS – EXPLANATORY NOTES

1. Iron deficiency should be confirmed by a *low serum ferritin, red cell microcytosis or hypochromia in the absence of chronic disease or haemoglobinopathy* eg thalassaemia.

2. *Full history and examination and consideration of possible causes* are recommended before referral for specialist assessment/gastroscopy (see note 11)/colonoscopy:

- Anaemia is defined as haemoglobin below the lower limit of normal for the laboratory performing the assay. The BSG recommend investigating any level of iron deficiency anaemia.
- Family history may be helpful e.g. coeliac disease, bleeding disorder, other rare inherited conditions
- Consider the presence of chronic disease or haemoglobinopathy i.e. the possibility that this is not a true IDA. (see note 1)
- Occasionally chronic iron deficiency may co-exist with anaemia of chronic disease, and in that context iron studies may be equivocal, making it difficult to confirm iron deficiency. Haematologist interpretation of iron studies and soluble transferrin receptor measurements may help to resolve the precise diagnosis – thus discussion with a haematologist is recommended.
- Consider dietary intake, use of aspirin/NSAID's, other significant sources of blood loss (e.g. heavy menstrual blood loss, frequent blood donation, severe epistaxis)
- Those with previous gastrectomy commonly have IDA as a result of poor absorption, but also have a 2-3 fold increase in gastric cancer risk after 20 years. Gastroscopy (see note 11) is recommended for investigation of post-gastrectomy patients >50 years with IDA.
- Perform urine dipstix: haematuria from a renal malignancy accounts for ~1% of all cases of IDA and ~one third of patients with renal cell carcinoma will have anaemia.
- Consider rectal examination.
- Faecal occult blood testing is of no benefit in the investigation of IDA due to its low sensitivity and specificity.

3. *Coeliac disease* accounts for 4-6% of all cases of IDA. This is confirmed at OGD (oesophago-gastro-duodenoscopy), and a biopsy demonstrating gluten enteropathy is necessary for subsidy by Special Authority for funded gluten-free foods (specialist-only application). The lifetime risk of GI malignancy is increased for these patients, and if IDA occurs in such a patient with treated coeliac disease, who is diet-compliant, GI investigation should be considered.

4. *In iron deficiency without anaemia*, there is a very low prevalence of GI malignancy (0.9% of men and post-menopausal women, and 0% of pre-menopausal women). Men >50 and post-menopausal women should be considered for GI screening for the investigation of iron deficiency without anaemia, only after assessment for other causes (see note 2)

5. Age is the strongest predictor of pathology in the iron deficient patient.

6. 5-12% of pre-menopausal women who are menstruating have IDA.

- The commonest overall cause of IDA is menstrual blood loss (20-30% of all IDA). ~30-40% of young menstruating women may have low ferritin with usually normal iron studies and no anaemia or microcytosis - this is termed "latent iron deficiency" and is due to a negative iron balance where iron loss due to menstruation exceeds dietary intake.

AUCKLAND REGIONAL PRIORITY ACCESS CRITERIA FOR OUTPATIENT OGD

Priority 1: next possible list, within 2 weeks

- Haematemesis , melaena >3 days ago, stable.
- Iron deficiency anaemia – symptomatic, severe
- Dysphagia - complete, or only liquids able to be taken
- Intractable vomiting/regurgitation of food, significant ongoing nocturnal aspiration
- Radiological evidence of gastric cancer
- Dyspepsia plus abdominal mass

Priority 2: within 6 weeks

- Dyspepsia plus alarms as per NZGG (family history gastric cancer <50 yrs, NSAID use in high risk group, anticoagulant use, significant unexplained weight loss, dysphagia (partial or intermittent), iron deficiency anaemia, previous complicated PUD, significant co-morbidities)

Priority 3: Within 3 months

- New onset dyspepsia/heartburn >45 years Maori/Pacific/Asian OR >50 years European ethnicity.
- Iron deficiency anaemia without dyspepsia - as per pathway

Priority 4: Within 6 months

- Dyspepsia (<45yrs old if Maori/Pacific/Asian OR <50yrs old if European ethnicity) after two failed appropriate test and treat regimens for *h.Pylori* OR failed 3 months trial of appropriate acid suppression and pro-kinetics.
- Reflux, unresponsive to 3 months' double dose PPI's.
- Surveillance and screening

Return to GP:

- Patient <45/50 years and
  - no trial of appropriate test and treat x2 for *h.Pylori* if appropriate
  - no trial of empiric therapy acid suppression and pro-kinetic therapy for functional dyspepsia if appropriate
  - no trial of adequate acid suppression for reflux (or previous OGD : normal or showing low grade GORD)
- Iron deficiency not appropriately investigated in primary/secondary care as per pathway

If GP's feel a higher grading should be applied eg significant social impact of symptoms, this is to be discussed telephonically with consultant on call and annotated such on the letter with name of consultant and outcome of discussion, otherwise normal grading will be applied.

Referrals not easily fitting into one category will be considered on an individual basis by consultant.

Gastric / oesophageal issues

- PPI's don't stop people refluxing
- *H. pylori* serology doesn't tell you anything about whether patients have active infection
- Eradicating *H. pylori* can cause symptoms of GORD to get worse
- All tests for eradication of *H. pylori* can be falsely negative (ABs; acid suppression)

Change in bowel habit

- Not all change is the same
- Loose stool *vs.* Constipation
- Northern Regional Prioritisation Criteria for Colonoscopy

Northern Regional Prioritisation Criteria for Colonoscopy

- P1 = < 2 weeks
- P2 = < 6 weeks
- P3 = < 3 months
- P4 = < 6 months
- P5 = Return referral

MacMurray
GASTROENTEROLOGY
DIGESTIVE DISEASES & ENDOSCOPY

Northern Regional Prioritisation Criteria for Colonoscopy

P1 (< 2 weeks)

- Known CRC / pre-op check for synchronous CRC
- Abdominal mass
- Radiology suggestive of CRC
- IBD with severe symptoms

MacMurray
GASTROENTEROLOGY
DIGESTIVE DISEASES & ENDOSCOPY

Northern Regional Prioritisation Criteria for Colonoscopy

P2 (< 6 weeks)

- Change bowel habit (looser, more frequent) >60 yrs
- Rectal bleeding without anal symptoms >60 yrs
- Rectal bleeding + changed bowel habit (looser, more frequent)
- Fe def anaemia (male Hb<110 any age; female Hb<100 + post-menopausal/GI symptoms/FHx)
- +ve FOB (appropriately collected) >50 yrs
- IBD diagnostic

Northern Regional Prioritisation Criteria for Colonoscopy

P3 (< 3 months)

- Imaging / sigmoidoscopy shows polyp >10 mm
- Changed bowel habits (looser, more frequent) age 40 – 60 yrs

MacMurray
GASTROENTEROLOGY
DIGESTIVE DISEASES & ENDOSCOPY

Northern Regional Prioritisation Criteria for Colonoscopy

P4 (< 6 months)

- Imaging / sigmoidoscopy shows polyp <10 mm
- Younger patients (age <40 yrs) after FSA Gastroenterologist / Surgeon

MacMurray
GASTROENTEROLOGY
DIGESTIVE DISEASES & ENDOSCOPY

Faecal Calprotectin

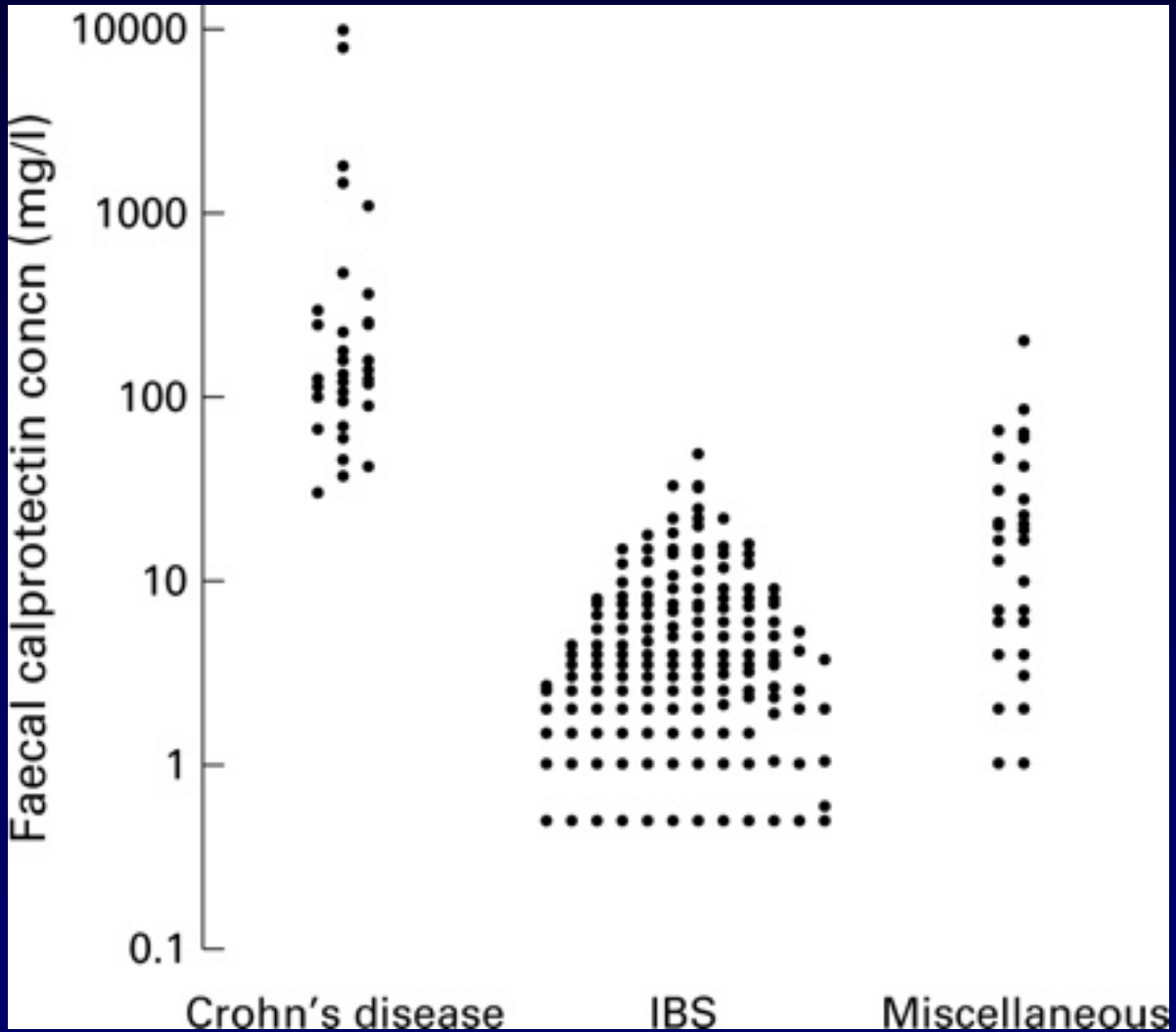
- Who uses faecal calprotectin?
- Who knows the cost?

- $95 + GST

MacMurray
GASTROENTEROLOGY
DIGESTIVE DISEASES & ENDOSCOPY

Inflammation in Crohn's disease

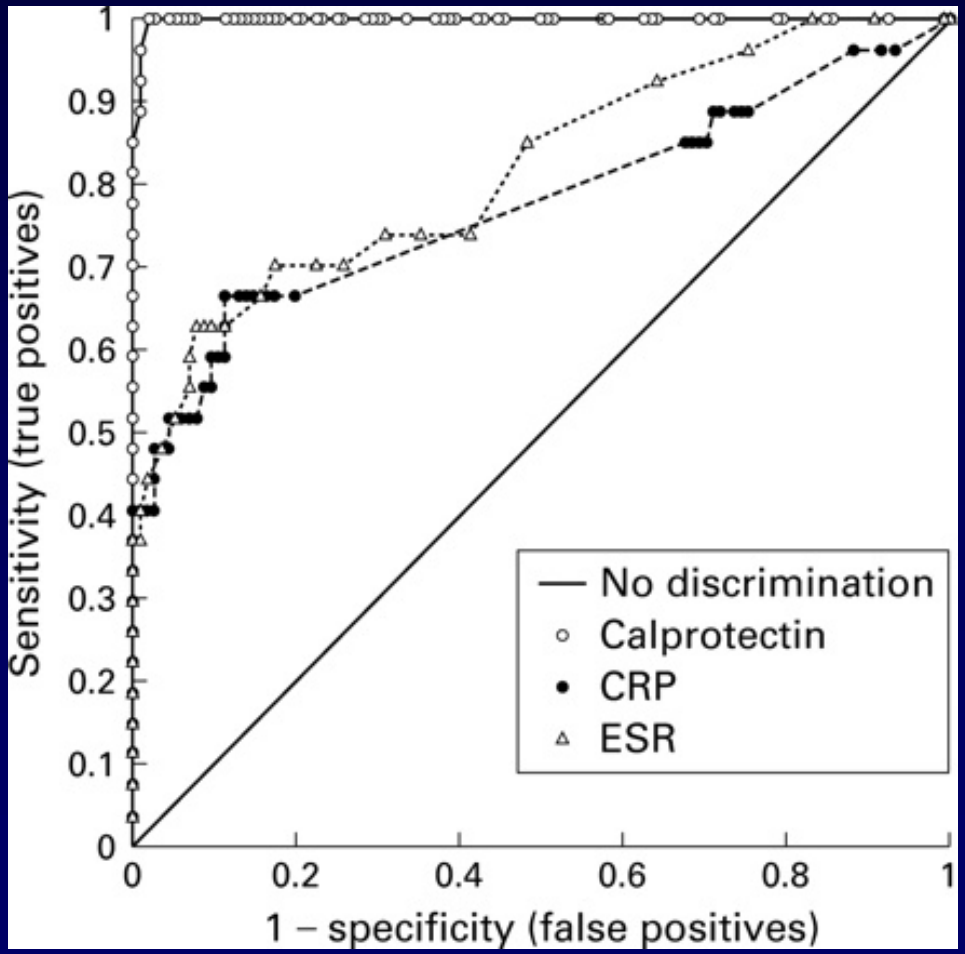
Tibble et al. Gut 2000



MacMurray
GASTROENTEROLOGY
DIGESTIVE DISEASES & ENDOSCOPY

A simple method for assessing intestinal inflammation in Crohn's disease

Tibble et al. Gut 2000



MacMurray
GASTROENTEROLOGY
DIGESTIVE DISEASES & ENDOSCOPY

Faecal Calprotectin

YES

- Unexplained GI symptoms atypical for IBS
- Symptomatic IBD patient + ? functional symptoms

NO

- Patient with IBD flaring
- Patient over 55 yrs with change of bowel habit
- Patient with red flags

Drug therapies for IBD

- Probiotics
- Mesalazine daily dose
- Additional topical 5-ASA use if required
- Immunosuppression
  - Increasing rapidly
  - New agents
  - Combination therapy
  - What are the risks?

Table 1. Opportunistic Infections in IBD Patients Evaluated at the Mayo Clinic Between January 1, 1998, and December 31, 2003 (Cases)

Organism	Sites of infection or clinical syndromes	Number of patients[a]
Herpes zoster	Shingles	28
Candida albicans	Esophagus, blood, perianal	26
Herpes simplex	Esophagus, extremities, face	18
Cytomegalovirus	Lung, liver, intestine, blood	12
Epstein–Barr virus	Liver, pharynx, blood, intestine	8
Histoplasma capsulatum	Lung, disseminated	2
Blastomyces dermatitidis	Lung	1
Streptococcus	Blood	1
Escherichia coli	Peritoneum	1
Mycobacterium marinum	Extremity	1
M fortuitum	Catheter site	1
Cryptococcus neoformans	Lung	1
M gordonae	Lung	1

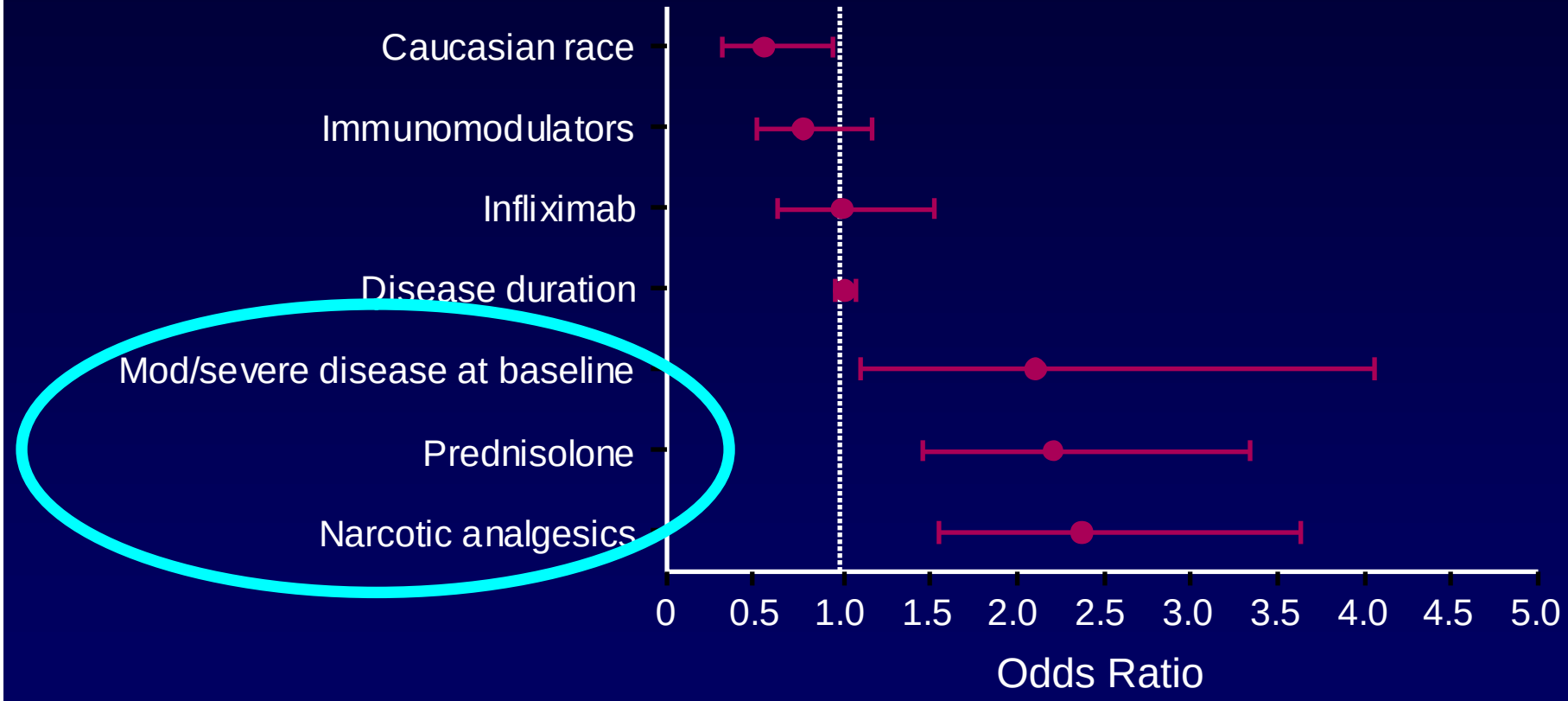
[a]One patient was co-infected with *C albicans* and *E coli*.

Table 5. Association of Immunosuppressive Medication* Combinations With Opportunistic Infection

	Cases (n = 100)	Controls (n = 200)	OR (95% CI)[a]	*P* value
Number of immunosuppressive medications[b]				
None	38 (38%)	129 (64%)	1.0 (reference)	
1	38 (38%)	59 (29%)	2.9 (1.5–5.3)	<.001[c]
2 or 3	24 (24%)	12 (6%)	14.5 (4.9–43)	<.001[c]
Age at first Mayo Clinic visit for IBD			1.1 (1.0–1.2)	.02
Specific combinations[b]				
No medications	39 (39%)	129 (65%)	1.0 (reference)	
Corticosteroids alone	16 (15%)	27 (14%)	2.2 (1.0–4.9)	.04
AZA/6MP alone	20 (20%)	31 (15%)	3.4 (1.5–7.5)	.002[c]
Infliximab alone	3 (3%)	2 (1%)	11.1 (0.8–148)	.07
AZA/6MP + corticosteroids	16 (16%)	6 (3%)	17.5 (4.5–68)	<.001[c]
AZA/6MP + infliximab	1 (1%)	5 (2%)	1.6 (0.1–19)	.72
AZA/6MP + infliximab + corticosteroids	5 (5%)	0 (0%)	Infinite	<.001[c]
Age at first Mayo Clinic visit for IBD			1.1 (1.0–1.2)	.01

Steroids and Infection

TREAT Registry

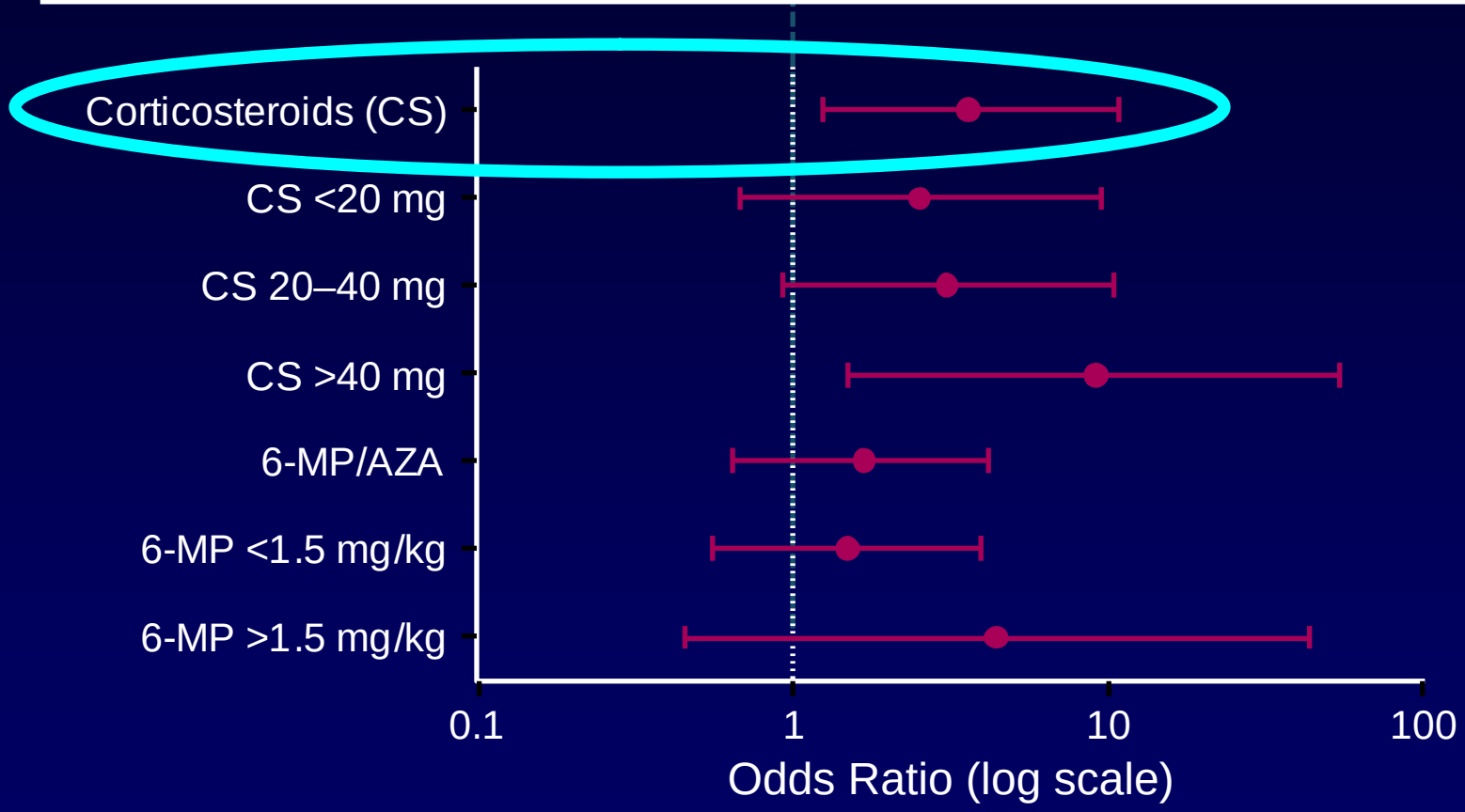


Multivariate analysis of "serious infections" for patients in the TREAT registry. Sex, age at enrolment and disease distribution are not significant

Lichtenstein GR, *et al. Clin Gastroenterol Hepatol* 2006:4;621–30

MacMurray Gastroenterology
Digestive Diseases & Endoscopy

Steroids and post-operative infection



Multivariate analysis of any postoperative infection with pre-operative medicine use from a retrospective case-control study

Aberra FN, *et al. Gastroenterology* 2003:125;320-7

C. difficile-associated diarrhoea

- Acute: Rx oral Metronidazole 2/52
- Relapse: Rx oral Vancomycin 2/52
  +/- Rx oral Metronidazole 2/52
- Chronic relapsing:
  - Stop PPI (OR up to 6-8)
  - *Saccharomyces*
  - Probiotic
  - “Bacteriotherapy”

Take Home Messages

- Eosinophilic oesophagitis: think about it
- Clinical Pathways (dyspepsia/GORD & IDA)
- Acid suppression
- Change in bowel habit: - loose stool
- IBD and drugs: - 5-ASA first and last
  - beware steroids
- *Clostridium difficile* - acid suppression

MacMurray Gastroenterology
Digestive Diseases & Endoscopy