# Gastroenterology Referral Guidance

**NHS Hounslow CCG**  
*(May 2013)*

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## Supplementary information

### Referral Forms

- **Lower GI Endoscopy Referral criteria**
- **Stoma Care Service at WMUH**
- **Contact Information WMUH**
- **Appendix: Abnormal LFTs**

## Version details

<table>
<thead>
<tr>
<th>Version No.</th>
<th>4</th>
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| Approved by | Ian Perry (GP)  
Dr Joel Mawdsley (WMUH Gastroenterology Consultant) |
| Approval date | May 2013 |
| Review date |      |

*Please email** hou-pct.HCCG@nhs.net for additional corrections, admissions or comments*
Gastroenterology Referral guidance for Hounslow Clinical Commissioning Group clinicians

This is intended to be a guide only. It is not exhaustive and appropriate clinical judgement should be used for individual cases.

When referring to Gastroenterology, please provide information in accordance with the core required information fields of the Standard generic referral letter with particular attention to the following sections:

- **Past history**: relevant family history, any co-morbidity, risk factors
- **Investigations**: state whether the patient has had any relevant investigations (and attach results if available)
  
  You may wish to consider certain investigations before referral (refer to relevant sections in the guidance).

Please note if you are concerned about your patient's condition and require urgent assessment it is not necessary to undertake routine tests unless this will significantly alter your referral decision.

It is important that you highlight what you – and your patient - expect from the referral. You should explicitly state whether you wish to continue management of the patient following investigations or if you would prefer the consultant to take over the case regardless of the outcome of initial assessment.

All new referrals for the attention of a Consultant Gastroenterologist should be sent via the Referral Facilitation Service (except for 999 Emergency admissions).

**When to Refer?**

<table>
<thead>
<tr>
<th>Traffic Light</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>Emergency admission likely to be appropriate</td>
</tr>
<tr>
<td>Yellow</td>
<td>Suggested referral to Secondary Care</td>
</tr>
<tr>
<td>Green</td>
<td>Continue to manage in Primary Care if appropriate</td>
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**RFS Information:**

- 2nd Floor, Sovereign Court, 15-21 Staines Road, Hounslow, Middlesex TW3 3HR.
- Tel: 05511 434900
- Fax: 0800 756 7754
- Hounslow.RFS@nhs.net

There is also a free phone number: 0800 756 7751 and a landline number: 020 3416 3611 (local rate) for patients to call.

**Note:** All follow up appointments following inpatient stays in hospitals, for the same condition, should be arranged via secondary care and NOT booked by GPs.
### Dyspepsia

**Common causes:**
- Functional dyspepsia 50%
- Endoscopy negative reflux 20%
- Oesophagitis 20%
- Peptic Ulcer Disease (PUD) 10%
- Upper GI Malignancy 1% (Only 0.3% of patients over 55yrs with uncomplicated dyspepsia have malignancy)
- Reflux-associated Barrett’s Oesophagus 2%

Remember other causes of upper abdominal pain: Hepatobiliary, Pancreatic, and Ischaemic Heart Disease.

### What to consider in Primary Care

#### Clinical history
- Onset, Duration, Timing
- Association with food or drink
- Dysphagia or Odynophagia (to solids or fluids)
- Weight loss or Loss of Appetite
- History of PUD, Hiatus Hernia, GORD, Barrett’s Oesophagus
- Drug History (including use of Alginate or PPI or previous H pylori eradication therapy)
- Family History
- Smoking History
- Alcohol History
Physical examination
- Abdominal exam
- Weight and BMI

Investigations
- Bloods
  - FBC

Primary Care Management

Patients under 55 with no alarm features do not require routine endoscopy.

Approach for patients under 55:
1. Exclude alarm symptoms (see referral to secondary care)
2. Review medication for causative agents (NSAID/aspirin, Bisphosphonates, Calcium antagonists)
3. Lifestyle modifications (Smoking cessation, alcohol consumption, diet & weight loss)

Therapeutic strategies (Both acceptable):
1. Empirical treatment with full dose PPI for 1-2 months
2. Testing and treating H.pylori
   - Stool antigen – Sensitivity 90%, specificity 95%. But these figures fall off very rapidly if sample is over 24 hours old (no PPI for 1 week prior to stool collection)
   - Carbon¹³-urea breath test. – Sensitivity 96%, specificity 99%. Still the gold standard non-invasive test.

Eradication Therapy:
NICE recommends 7 days of full dose PPI bd plus either:
- Metronidazole 400mg and Clarithromycin 250mg OR
- Amoxicillin 1g and clarithromycin 500mg

After initial treatment, attempt to decrease treatment to lower-dose PPI or H2 receptor antagonist as required, in association with diet and lifestyle modification
- If symptoms continue despite eradication, consider 2nd eradication therapy or non-urgent endoscopy.
- If endoscopy shows no significant H.pylori related pathology (such as a normal endoscopy) then repeat attempt at H.pylori eradication is not required.
- Referral for specialist opinion may then be required if low-dose strategy fails (see referral for secondary opinion).
- Symptoms which intermittently recur off medication do not necessitate referral provided there are no alarm features or major change in severity.
- Barium meal has poor sensitivity and specificity for mucosal lesions compared to endoscopy and so should not be requested as an alternative unless the patient is unwilling to consider endoscopy.
Endoscopy Referral Criteria for Dyspepsia

Direct Access Endoscopy Referral Criteria

At Any Age
- Progressive / Persistent Dyspepsia after PPI therapy and H.pylori eradication
- And a history of any of...
  - Barrett’s Oesophagus
  - Intestinal Metaplasia
  - Dysplasia
  - recent NSAID use
  - previous gastric surgery
  - strong family history

Or

Age ≥ 55 years
- (either) New onset dyspepsia...
  - Unexplained (upon history & examination) & Persistent (> 4 weeks)
  - in the absence of any other features
- (or) Unexplained worsening of dyspepsia...
  - And a history of any of...
  - Barrett’s Oesophagus
  - Intestinal metaplasia
  - Dysplasia
  - Atrophic gastritis
  - Peptic Ulcer surgery >20 years ago

Red Flags
- Chronic GI Bleed
- Progressive unintentional weight loss
- Progressive difficulty swallowing
- Persistent vomiting
- Iron Deficiency Anaemia
- Epigastric mass
- Suspicious Barium meal

No referral criteria for Dyspepsia

Management of Dyspepsia without Endoscopy

Urgent Referral For Endoscopy (under the 2 week wait rule)

Endoscopy shows Upper GI Malignancy

Upper GI Cancer MDT

Routine Referral For Endoscopy (Direct Access)

Endoscopy shows
- Non-Ulcer Dyspepsia
- GORD
- Peptic Ulcer Disease

Treat and monitor accordingly

References
- Dyspepsia – Management of dyspepsia in adults in primary care (NICE clinical guidelines 17, NICE, August 2002)
- Upper GI Endoscopy Direct Access Referral Form (NHS North-West London, April 2012)
Dr Ian Perry, GP Registrar and Darzi Fellow Hounslow CCG, January 2013
Management of Dyspepsia without Endoscopy

Common Medications that cause Dyspepsia
- NSAID
- Bisphosphonate
- Corticosteroid
- Nitrate
- Ca2+ Channel Antagonist
- Theophylline

Medication Review

Red Flags
- Chronic GI Bleed
- Progressive unintentional weight loss
- Progressive difficulty swallowing
- Persistent vomiting
- Iron Deficiency Anaemia
- Epigastric mass
- Suspicious Barium meal

Red Flag symptoms/signs or Referral Criteria for Upper GI endoscopy

No

Yes

2ww Referral or Routine Referral for Upper GI endoscopy

Lifestyle Advice
- Adjust diet
- Weight reduction
- Smoking cessation
- Use Antacid or Alginate for symptomatic relief

Unresponsive or Recurrence

High-dose PPI for 4 weeks

Unresponsive or Recurrence

H. pylori test and treat

Unresponsive

Low-dose treatment as required for symptomatic relief

Response to treatment

H2RA or Prokinetic agent for 4 weeks

Unresponsive or Recurrence

Reassurance regarding benign nature of Dyspepsia

Review of symptoms, for control/progression of Dyspepsia, and medications (annually)

Progression of symptoms or Inadequate response to treatment

Consider referral to Gastroenterology or Endoscopy

Reference
- Dyspepsia – Management of dyspepsia in adults in primary care (NICE clinical guidelines 17, NICE, August 2002)
- Dr Ian Perry, GP Registrar and Darsi Fellow Hounslow CCG, January 2013
**Referral Threshold**

**URGENT SECONDARY CARE REFERRAL**
Urgently Refer for direct access endoscopy or for secondary care opinion if the history-taking, physical examination or investigations show evidence of:

- Anorexia
- Progressive unintentional weight loss
- Dysphagia
- Persistent vomiting
- High risk factors for cancer i.e.: previous gastric surgery or ulcer, known Barrett’s or atrophic gastritis
- Epigastric mass
- Iron deficient anaemia
- Patients aged 55 years and older with unexplained and persistent recent onset dyspepsia (where ‘unexplained’ is defined as no clear cause identifiable such as NSAID use, and a sensible definition of persistent would be 4-6 weeks).

**ROUTINE SECONDARY CARE REFERRAL**
Routine Referral for direct access endoscopy or secondary care opinion:

- Persistent dyspepsia or inadequate response to treatment

**Secondary care resource:**
- Refer to Gastroenterologist

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**Referral Threshold**

**EMERGENCY SECONDARY CARE REFERRAL**

- Active GI Bleeding
- Marked abdominal tenderness on examination with rebound and guarding.

999 for emergency or urgent referral
Abnormal LFTs (Liver Function Tests)

Owner

Ian Perry

Joel Mawdsley

Version No

4

Approval date

May 2013

Review date

External resources

- BSG (British Society of Gastroenterology) Abnormal LFTs: [LINK]
- See Appendix: Abnormal LFTs (pages 32-33) for summary of guidelines
- GP Notebook Abnormal LFTs: [LINK]
- Patient.co.uk Abnormal LFTs: [LINK]
- Patient.co.uk NAFLD PIL: [LINK]

2.5% of a healthy population will have LFTs outside normal range. However, such a “healthy” population may have significant numbers of people with undiagnosed liver disease. When ALT or AST are persistently elevated, further investigation is warranted.

Non Alcoholic Fatty Liver Disease (NAFLD) is considered the most common cause of abnormal LFTs.

NAFLD

Diagnosis is based on persistently abnormal LFTs, normal Liver Screen, and USS Abdomen suggesting “fatty liver” (however, ultrasound is often normal in NAFLD).

The majority of Non-alcoholic fatty liver disease (NAFLD) patients have fatty infiltration only (without inflammation) on liver biopsy, and generally follow a benign course with cirrhosis developing in only 1-2% over 15-20 years. However, they are at increased risk of Diabetes and CVD.

Patients with both fatty infiltration and inflammation (Non-alcoholic steatohepatitis (NASH)) have a 12% chance of developing cirrhosis after 8 years and therefore require identification and aggressive management.

Clinically differentiating NAFLD from NASH is very difficult. The magnitude of the LFTs derangement may help and so is used as a referral threshold for “fatty liver” patients. It is impractical to perform liver biopsy on all NAFLD patients to identify those with NASH, due to large number of NAFLD patients and significant complications of liver biopsy.

What to consider in Primary Care

Clinical history

- Other diseases associated with NAFLD or NASH (Diabetes Mellitus, Hyperlipidaemia, Obesity) and Hepatitis (history of Autoimmune Disease)
- Drugs, prescription or over-the-counter (including statin, antibiotics, herbal remedy)
- Alcohol consumption
- Occupation
- Risk factors for Viral Hepatitis
  - Recent travel history
  - Tattoos or IVDU
  - Unprotected sexual intercourse
  - Blood (or blood-product) Transfusions
- **Family history of Chronic Liver Disease**
  - Autoimmune Disease (Autoimmune Hepatitis, Primary Biliary Cirrhosis, Primary Sclerosing Cholangitis)
  - Haemochromatosis, Wilson's Disease, Alpha 1-antitrypsin deficiency

**Examination**
- Any clues to the underlying cause (e.g. lymphadenopathy, tattoos, needlemarks)
- Stigmata of chronic liver disease (e.g. icterus/jaundice of skin or mucous membranes, bruising, palmar erythema, spider naevi, gynaecomastia)
- Abdomen
  - Hepatomegaly
  - Splenomegaly
  - Ascites
  - Obesity (associated with a fatty liver)
- Features suggestive of hepatic encephalopathy
- Weight and BMI

**Investigations**
- Bloods (consider step-wise approach, based upon persistence and degree of abnormal LFTs)
  - LFT
    - if ALP is raised, check GGT. If ALP is raised and GGT is normal, Osteomalacia more likely, check Bone Profile and Vitamin D
    - Bilirubin < 40 and normal LFT, most likely Gilbert's Syndrome, no referral necessary
  - FBC
  - Fasting lipids, glucose (for metabolic syndrome)
  - Viral hepatitis serology (HepBSAg (not HepBSAb) and HepC Ab)
  - Autoantibodies (AMA/Anti-Mitochondrial, Anti-LKM, Anti-Smooth Muscle, ANCA) screen for autoimmune liver disease and primary biliary cirrhosis
  - Ferritin (haemochromatosis)
- Ultrasound of Abdomen
### Primary Care Management

- For patients on a statin, consider a trial off statin, however this is rarely the cause, so Liver Screen should be performed, with referral to secondary care if appropriate.
- Management of LFTs less than 2x upper level of normal with normal liver screen, and normal USS or USS suggestive of NAFLD:
  - Lifestyle advice – weight loss, exercise, healthy diet, avoid or reduce alcohol intake
  - Optimise control of Diabetes and Hypertension
  - Treat hyperlipidaemia – statins may be used in NAFLD with 6 monthly monitoring of LFTs, and referral if worsening of LFTs
  - Manage associated disease
  - LFT monitoring (see Abnormal LFT pathway)

### Referral Threshold

**ROUTINE SECONDARY CARE REFERRAL:**

- Persistently abnormal LFTs with ALT/AST ≥ 200
- Positive findings on Liver Screen (e.g. positive viral serology or USS suggesting a focal (but non-malignant) lesion, requiring further characterisation or dilated biliary tree)

**URGENT SECONDARY CARE REFERRAL:**

- ALT/AST 200-1000 and/or
- ALP > 400 with raised GGT
- Anyone presenting with new onset Jaundice should be referred immediately without any investigation
  - If systemically well, for urgent referral
- Possible malignant lesion on ultrasound

**EMERGENCY SECONDARY CARE REFERRAL**

- Anyone presenting with new onset Jaundice should be referred immediately without any investigation
  - If systemically unwell, febrile or in pain, for immediate admission
- Marked elevation of ALT/AST (>1000)

### Secondary care resource:

- Refer to Gastroenterologist

**Telephone discussion with Consultant or SpR**

- West Middlesex University Hospital
- Specialist Registrar: 020 8560 2121 bleep: 171, 101 or 309
- Consultant via secretary: 0208 321 5351
Abnormal (Asymptomatic) Liver Function Test Pathway

- Assess lifestyle (Alcohol, Drugs, Medications)
  - Check HBV/HCV risk factors
    - Tattoo, IVDU, Unprotected sexual intercourse, immigrant from high-risk area, blood transfusion pre1991
  - Check Family History (Liver Disease, Autoimmune Disease)

**Abnormal ALT or AST or AlkPhos ≥ 2x upper limit of normal**

- Recheck LFTs after 1-2 weeks

**Abnormal ALT or AST or AlkPhos < 2x upper limit of normal**

- Modify risk factors
  - Stop alcohol
  - Stop hepatotoxic drugs
  - Lose weight (if BMI>25)

- Recheck LFTs after 3 months

**Perform Liver Screen:**
- Hepatitis serology (HepB sAg, HepC Ab)
- Liver autoantibodies (ANA, ANCA, AMA, ASMA, LKM)
- Ferritin
- Full Blood Count
- Fasting Lipids and Glucose
- Abdominal USS (if AlkPhos persistently raised...)
- GGT

**Bloods shows...**
- ALT or AST persistently raised
- AlkPhos persistently raised and raised GGT
- HepB sAg or HepC Ab positive
- Any Liver Autoantibody positive
- Ferritin > 500

**Abdominal USS shows...**
- Cirrhosis
- Portal Hypertension (ascites, splenomegaly)
- Biliary Tree duct dilatation

**Possibly Fatty Liver Disease if:**
- USS suggests fatty liver
- Liver Screen Bloods normal (no infectious or autoimmune aetiology)

- Modify risk factors
  - Diet (Lips & Glucose)
  - Alcohol
  - Exercise
  - Weight

- Monitor LFTs every 12 months
  (Refer if ALT or AST persistently raised)

- Referral to Gastroenterology OPC

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References
- Rational Testing: Investigating Mildly Abnormal Serum Aminotransferase Values (Coitbold JF, Arstee QN and Thomas HC) BMJ 2010;341:c297-299

Dr Ian Perry, GP Registrar and Darzi Fellow Hounslow, January 2013
The vast majority of patients with isolated rectal bleeding will have benign disease (e.g. haemorrhoidal bleeding). Common causes of rectal bleeding:

- haemorrhoids
- anal fissure
- fistula in ano
- diverticular disease
- Inflammatory Bowel Disease
- Angiodysplasia (*common in elderly*)

Most patients with colorectal cancer will not have rectal bleeding.

Age is a major risk factor for colorectal cancer.

- Age < 40 the risk of colorectal cancer is approximately 1 in 1,630
- Age 40 - 59 the prevalence of colorectal cancer increases to 1 in 114 in men and 1 in 145 in women

**What to consider in Primary Care**

**Clinical History**

- The quantity and nature of bleeding
  - Quantity is very difficult to assess from the history but it is important to get a description from the patient (e.g. egg-cup, mug-full, bowl-full)
  - Fresh bright red blood noticed on the toilet paper is usually from a perianal source (e.g. haemorrhoids, fissures)
  - Blood mixed in with the stool has usually originated higher in the GI tract.
- Change in bowel habit (both frequency of defecation and consistency of stool) must be noted.
• Tenesmus
• Anal symptoms (for example soreness, itching or prolapse, occur often with piles)
• Progressive unintentional weight loss
• Drug History (including warfarin and aspirin)
• Family history of bowel cancer or polyposis

Examination
• Abdominal exam
• DRE (check for haemorrhoids, tags, fissures, rectal mass)

Investigations
• Bloods
  o FBC
  o Ferritin

(Carcinoembryonic antigen (CEA) is not sufficiently sensitive or specific test for general population bowel cancer screening and should not be used)

PRIMARY CARE MANAGEMENT
If assessment suggests the source of bleeding is very likely to be local perianal disease such as simple haemorrhoids or anal fissure then secondary care referral may not be necessary. For example intermittent bright red blood noticed on the paper in a patient under 60 with no associated change in bowel habit and no alarm symptoms:
• Conservative management for 6 weeks (GP Note Book and Patient.co.uk PIL)
  o failure to respond should prompt a review of diagnosis and discussion with gastroenterologist
PR Bleeding Referral Pathway

At Any Age
- Abdominal or Rectal mass on examination
- Unexplained Iron Deficiency Anaemia
  [in men (Hb ≤ 11) or non-menstruating women (Hb ≤ 10)]
- Imaging demonstrates abnormal findings consistent with bowel cancer
  → Possibly Colorectal Cancer
  → Referral under 2ww
  (Gastroenterology / Colorectal OPC)
  For review +/- colonoscopy

Age ≥ 50 years and 6 week history of...
Either PR bleeding (without Change in Bowel Habit* or anal symptoms)
Or Change In Bowel Habit* (without PR bleeding)
  → Perform FBC + Ferritin
  (attach result to referral)
  → Urgent Referral
  (Gastroenterology / Colorectal OPC)
  For review +/- colonoscopy

Age ≥ 40 years and 6 week history of...
PR bleeding And Change In Bowel Habit*
  → Perform FBC + Ferritin
  (attach result to referral)

Age < 40 years and 6 week history of...
Change in Bowel Habit* And
Either PR bleeding Or Altered blood mixed in stools
  → Perform FBC + CRP
  Stool MICS + C.diff toxin
  (attach results to referral)
  → Routine Referral
  (Gastroenterology / Colorectal OPC)
  For review +/- colonoscopy

Age < 50 years and 6 week history of...
Fresh red PR bleeding and No Change In Bowel Habit*
  → Perform FBC + Ferritin
  (attach result to referral)
  → Referral for Direct Access
  Flexible Sigmoidoscopy

*Change In Bowel Habit is defined as
either looser stools or increased frequency of stools

Dr Joel Mawdsley (Gastroenterology Consultant West Middlesex University Hospital)
Dr Ian Perry (GP Registrar And Darzi Fellow Hounslow CCG) January 2013
Re:

Referral Threshold

SECONDARY CARE REFERRAL (UNDER 2 WEEK WAIT RULE)

- A palpable abdominal or rectal mass (at any age)
- Iron deficiency anaemia (in men Hb<11, in non-menstruating women Hb<10)
- Abnormality on imaging suggestive of Colorectal cancer

URGENT SECONDARY CARE REFERRAL

- Age > 40 Rectal bleeding with a change in bowel habit to increased/looser stool for more than 6 weeks
- Age > 50 Rectal bleeding without change in bowel habit/anal symptoms, for more than 6 weeks
- Age > 50 Change in bowel habit to increased/looser stool, without rectal bleeding, for more than 6 weeks
- A strong family history of Colorectal cancer

ROUTINE SECONDARY CARE REFERRAL

Patients under 60 with rectal bleeding not responding to initial management strategies.

DIRECT ACCESS FLEXIBLE SIGMOIDOSCOPY

Patients under 50 with persistent bright red rectal bleeding and no change in bowel habit, and no red flags, may be referred for direct access flexible sigmoidoscopy (go to referral form page30)

COLONOSCOPY

Colonoscopy, due to its invasive nature and NPSA guidelines on the prescription of bowel cleansing solutions, is not offered as a direct access investigation. Therefore if urgent colonoscopy is required please refer to the gastroenterology department

Referral Threshold

- Profuse, continuous rectal bleeding
- Severe abdominal pain associated with rectal bleeding

Secondary care resource:

- Refer to Gastroenterologist

For any queries regarding a case, speak to a Consultant Gastroenterologist at West Middlesex University Hospital (contact via switchboard 0208 560 2121)

999 for emergency admissions or contact surgical Registrar on-call (West Middlesex University Hospital)

Surgical SpR on call available via switchboard (020 8560 2121)
This guideline applies to patients with an established diagnosis of IBD (Crohn's disease (CD) or ulcerative colitis (UC))

Majority of IBD patients should be under joint primary/secondary care. Azathioprine/6MP, Methotrexate, Infliximab and Adalimumab should only be started by a specialist only.

New British Society of Gastroenterology surveillance guidelines for bowel cancer in UC/colonic CD are shown on page 21

What to consider in Primary Care (Assessing a patient with Inflammatory Bowel Disease)

History:
- GI symptoms: Stool frequency and consistency, rectal bleeding, abdominal pain
- Extra-intestinal manifestations: Skin, Joints, Eye
- General wellbeing: Malaise, fever, weight loss
- Drug History
- Smoking
- Recent travel history

Examination:
- Basic Observations – Pulse, Blood Pressure, Temperature, Weight
- Hydration status + Pallor
- Abdominal exam (distension, tenderness, palpable masses) and perineal/DRE examination (for fissure/fistula, PR bleeding)

Investigations:
- Bloods (FBC, U&E, CRP)
- Stool: Microscopy, culture and sensitivity, clostridium difficile toxin. (to exclude an infective aetiology)
**Classification of IBD severity** (based on the history and examination it should be possible to grade severity of IBD for consideration of treatment and referral threshold)

**Ulcerative Colitis**

<table>
<thead>
<tr>
<th>Mild</th>
<th>Moderate</th>
<th>Severe</th>
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<tbody>
<tr>
<td>• less than four stools daily, with or without blood&lt;br&gt; • without systemic disturbance&lt;br&gt; • normal ESR and CRP values</td>
<td>• Four to six stools a day&lt;br&gt; • minimal systemic disturbance</td>
<td>• more than six stools a day, containing blood&lt;br&gt; • Evidence of systemic disturbance (fever, tachycardia, anaemia, or hypoalbuminaemia)</td>
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**Crohn’s Disease** (CD is more heterogeneous, thus grading to assess severity is imprecise. Consider symptoms on a case-by-case basis)

<table>
<thead>
<tr>
<th>Mild</th>
<th>Moderate</th>
<th>Severe</th>
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<tr>
<td>• Less than four stools daily&lt;br&gt; • No or minimal abdominal pain&lt;br&gt; • Systemically well</td>
<td>• Four to six stools a day&lt;br&gt; • Mild abdominal pain&lt;br&gt; • minimal systemic disturbance</td>
<td>• more than six stools a day, containing blood&lt;br&gt; • Moderate/severe abdominal pain&lt;br&gt; • Evidence of systemic disturbance (fever, tachycardia, anaemia, or hypoalbuminaemia)</td>
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**PRIMARY CARE MANAGEMENT**

**Mild UC**

- Increase dose of 5-ASA to 4-5g/day (e.g. Asacol 2.4g BD, Pentasa 2g BD, Salofalk 4.5g OD) if not 5-ASA intolerant
- Add 5-ASA enema (Asacol, Pentasa, Salofalk) first line or Steroid enema (Predsol or Predfoam) second line (liquid or foam preparation choice is patient preference)
- Review after 2 weeks. For persistent symptoms, consider starting oral Prednisolone (reducing dose regimen) then refer for specialist review.

**Mild Crohn’s disease**

- Consider a course of oral Budesonide, for small bowel disease 9mg OD for 4 weeks, then reduce by 3mg per month to zero (see following notes on corticosteroid use)
- Consider a course of Prednisolone (reducing dose regimen), for other disease distribution (see following notes on corticosteroid use)
- Review after 2 weeks. For persistent symptoms, or further flare on reducing dose / cessation of steroids, or recurrent steroid courses required (>2 courses in 6 months), then refer for specialist review.

Avoid anti-diarrhoea medications (eg loperamide) because they do not reduce stool frequency in colitis and increase the risk of toxic megacolon.
**Notes on corticosteroid use**

- Ensure stool cultures are negative before prescribing
- Commence prednisolone at 30-40mg po od and reduce by 5mg per week
- Budesonide is an oral steroid with a high first-pass metabolism. It has lower potency than Prednisolone but has significantly fewer systemic side effects. It is therefore generally better tolerated and longer courses can be prescribed
  - Warn patients of potential side effects of steroids (impaired diabetic control, weight gain, moon face, insomnia, labile mood and, rarely, psychosis)
- Steroids should not be used for maintenance therapy. If patient requires more than 2 courses in 12 months refer for specialist review.

### Referral Threshold

**SECONDARY CARE REFERRAL** (do not delay whilst awaiting investigations or outcome of treatment)

**Moderate Ulcerative Colitis**
- Contact IBD team caring for patient and expedite clinic review
- Maximise 5-ASA therapy as for mild colitis
- Consider interim course of oral corticosteroids

**Moderate Crohn’s Disease**
- Contact IBD team caring for patient to expedite clinic review
- Consider interim course of oral corticosteroids

### Secondary care resource:

- Refer to Gastroenterologist
- For any queries regarding a case, speak to a Consultant Gastroenterologist at West Middlesex University Hospital (contact via switchboard 0208 560 2121)

### Referral Threshold

**EMERGENCY SECONDARY CARE REFERRAL**

- Severe Ulcerative Colitis
- Severe Crohn’s Disease

Contact IBD team to consider immediate admission

West Middlesex University Hospital
COLITIS SURVEILLANCE

SCREENING COLONOSCOPY AT 10 YEARS
(preferably in remission, pancolonic dye-spray)

LOWER RISK
Extensive colitis with NO ACTIVE endoscopic/histological inflammation
OR left-sided colitis
OR Crohn's colitis of <50% colon

5 Years

INTERMEDIATE RISK
Extensive colitis with MILD ACTIVE endoscopic/histological inflammation
OR post-inflammatory polyp
OR family history CRC in FDR aged 50+

3 Years

HIGHER RISK
Extensive colitis with MODERATE/SEVERE ACTIVE endoscopic/histological inflammation
OR stricture in past 5 years
OR dysplasia in past 5 years declining surgery
OR PSC / transplant for PSC
OR family history CRC in FDR aged <50

1 Year

BIOPSY PROTOCOL
Pancolonic dye spraying with targeted biopsy of abnormal areas is recommended, otherwise 2-4 random biopsies from every 10 cm of the colorectum should be taken

OTHER CONSIDERATIONS
Patient preference, multiple post-inflammatory polyps, age & comorbidity, accuracy & completeness of examination

CRC – colorectal cancer
FDR – first degree relative
PSC – primary sclerosing cholangitis
Consider IBS in anyone who has had any of the following for at least 6 months:

- Abdominal Pain or Discomfort
- Bloating
- Change In Bowel Habit

**What to consider in Primary Care (Diagnosis of IBS)**

**Clinical History**

A patient must have **abdominal pain or discomfort** that is either relieved by defecation or associated with altered bowel frequency or stool form. This should be **accompanied by at least two of the following four symptoms**:

- symptoms made worse by eating
- abdominal bloating (more common in women than men), distension, tension or hardness
- altered stool passage (straining, urgency, incomplete evacuation)
- passage of mucus

**Examination**

- Abdominal examination + Weight

**Investigations** (for patients who meet the IBS diagnostic criteria, the following tests should be undertaken to exclude other diagnoses)

- Full Blood Count (FBC)
- C-Reactive Protein (CRP) and Erythrocyte Sedimentation Rate (ESR) – to exclude IBD (especially patients who have diarrhoea-predominant symptoms)
- Tissue TransGlutaminase Antibody (TTG Ab) – to exclude Coeliac Disease
The following tests are not necessary to confirm diagnosis in people who meet the IBS diagnostic criteria:

- Faecal Ova Cysts and Parasite or Faecal Occult Blood
- thyroid function test
- ultrasound
- rigid/flexible sigmoidoscopy, colonoscopy, barium enema
- hydrogen breath test (for lactose intolerance and bacterial overgrowth)

**IBS symptoms and exclusion of other pathology (recommendation by Gastroenterology consultant at WMUH)**

- Diarrhoea-predominant (IBD? Coeliac Disease?) or Constipation-predominant (Hypothyroidism? Hypercalcaemia? Hypocalcaemia?)

- In a young patient (under 45 years of age) who experiences diarrhoea and no bloody stools, nearly every day for more than 4 weeks, that does not respond to conservative management of IBS symptoms, consider an atypical presentation of IBD (non-bloody diarrhoea, and normal results for FBC, CRP, ESR and TTG Ab) and the judicious use of Faecal Calprotectin as a screening test.

**Notes on Faecal Calprotectin** (£50 per request) (NICE guidelines in development, projected publication in October 2013)

- It is a Calcium and Zinc binding protein that has significant sensitivity and specificity (approximately 90%) for IBD. Refer to specialty if positive (>50µg/ml))

- It should not be used for patients with…
  - diarrhoea that responds to conservative management of IBS symptoms
  - diarrhoea that is not persistent nearly every day for more than 4 weeks
  - bloody stools, who require a referral to specialty for assessment (urgent or emergency)

**Primary Care Management** (majority of IBS patients require management in primary care)

- Dietary advice (NICE IBS Diet Sheet)
  - avoid exacerbators, most commonly wheat, dairy, caffeine (tea and coffee), excessive fibre
- Loperamide (if diarrhoea-predominant)
- Laxatives (if constipation-predominant, but may exacerbate bloating)
- Antispasmodics
  - Mebeverine 135mg TDS
  - Peppermint oil
- Low dose TCA - Amitryptiline 10mg ON and titrate up to 25mg over six weeks (NB anti-muscarinic side effects, e.g. constipation, fatigue) or SSRI for concomitant depression
**Referral Threshold**

**URGENT SECONDARY CARE REFERRAL**
Consider urgent referral to secondary care to exclude alternative diagnosis if any of the following are present in the history, examination or investigation:
- Unintentional or unexplained weight loss
- Rectal bleeding
- Change in bowel habit to looser and/or more frequent stools persisting for more than 6 weeks in person older than 60yrs
- Nocturnal symptoms (pain or diarrhoea)
- Family history of bowel or ovarian cancer
- Anaemia
- Abdominal mass
- Rectal mass
- Raised Inflammatory markers

**ROUTINE SECONDARY CARE REFERRAL**
Patients with diagnosed IBS who are not responding to primary care management

**Secondary care resource:**
- Refer to Gastroenterologist
- For any queries regarding a case, speak to a Consultant Gastroenterologist at West Middlesex University Hospital (contact via switchboard 0208 560 2121)

**EMERGENCY SECONDARY CARE REFERRAL**
Patients with IBS rarely need emergency admission. If symptoms are sufficiently severe to warrant an immediate admission then the diagnosis should be reconsidered.
- Acute abdomen
- Severe intractable abdominal pain
- Rectal bleeding (see rectal bleeding guidelines)

999 for emergency admissions or contact surgical Registrar on-call
(West Middlesex University Hospital)
Surgical SpR on call available via switchboard (020 8560 2121)
Of an average population

- up to 9% will have at least one first degree relative (FDR e.g. sibling, parent or child)
- over 20% will have at least one second degree relative (SDR e.g. Grandparent, uncles, aunts, half siblings) with bowel cancer.

For the majority of these, there is no proven benefit for increased surveillance above that of the rest of the population (National Bowel Cancer Screening Programme, NBCSP). However a significant proportion may benefit from outpatient assessment for screening interventions and/or genetic testing.

Information about the NBCSP for GPs, including referral guidelines, is contained in the link above.

What to consider in Primary Care (Assessment of a patient with a family history of bowel cancer)

Clinical history

- Full family history
  - details of relationships to the patient of all family members diagnosed with bowel cancer and their age at diagnosis
  - details of any other (extracolonic) cancer(s) of all family members (including relationship to patient, site of cancer and age of diagnosis)
- Specific details of previous genetic testing (with written documentation if possible)
- Patients other risk factors
  - Age
  - Gender
  - BMI
  - Physical activity
  - Diet
  - Smoking and alcohol consumption
• Symptoms – often these patients are asymptomatic, but consider any alarm symptoms and refer irrespective of family history, according to NICE referral guidelines
  o Abdominal mass
  o PR bleeding
  o Change in bowel habit
  o Progressive unintentional weight loss

Examination
• Abdominal examination + DRE – for any palpable mass
• Superficial lesions including naevus, buccal pigmentation, etc.

Investigations
• Bloods (?Iron Deficiency Anaemia)
  o FBC
  o Ferritin

Low risk groups (many of these patients may seek reassurance, but do not require screening above and beyond the rest of the population), according to national guidelines
  • 1 FDR over age 50 years at diagnosis.
  • 2 SDRs
    • Family history of any relative with < 10 polyps found on colonoscopy.

PRIMARY CARE
They may be offered lifestyle modification advice in addition to reassurance. Lifestyle interventions proven to reduce risk of bowel cancer include…
• Weight loss (if obese) to achieve a normal BMI
• Regular physical activity
• Diet: High fibre, low red meat, 5 pieces of fruit & veg per day
• Smoking cessation
• Moderate or low alcohol consumption (any alcoholic beverage)
**Referral Threshold**

**Moderate risk groups** should be referred for assessment for screening from the age of 50 years onwards and not before in the absence of other indications.

- 1 FDR under age 50 years at diagnosis.
- ≥ 2 FDRs any age.
- 1 FDR and 1 SDR same side of the family any age.

**High risk groups** should be referred at any age. They account for approximately 5% of all bowel cancer.

- 3 FDR with bowel cancer - one diagnosed under age 50 (e.g. Lynch Syndrome or Hereditary non-polyposis colorectal cancer (HNPCC)).
- A family history with multiple affected members in more than one generation
- A previously characterised high risk patient or relative (i.e. with a known cancer syndrome such as Familial Adenomatous Polyposis Coli (FAP)) not currently undergoing surveillance.
- The presence of a germline pathogenic mutation in a colorectal cancer susceptibility gene if previously tested.

**Secondary care resource:**

- Refer to Gastroenterologist

For any queries regarding a case, speak to a Consultant Gastroenterologist at West Middlesex University Hospital (contact via switchboard 0208 560 2121)
Direct Access for Upper GI Endoscopy

This form is provided for GPs to request Upper GI endoscopy when a patient meets the North West London agreed clinical criteria. Fax or email this form to your provider of choice using your nhs.net email account.

Provider Unit Chosen: xxxxxxxxxxxxxxx

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**Alarm Features (ANY AGE)**
- Progressive Unintentional Weight Loss
- Iron Deficiency Anaemia
- Dysphagia
- Persistent Vomiting
- Epigastric Mass

Complete 2ww Cancer referral form (do not complete this form)

**THRESHOLDS FOR ENDOSCOPY**: Patients must meet at least one of the following criteria:

**PATIENTS WITH DYSPEPSIA**

Please refer to the NICE and SIGN guidance on treating dyspepsia
http://www.sign.ac.uk/pdf/grg68.pdf

Dyspepsia + > 55 years with:
- Unexplained, persistent recent onset dyspepsia in the absence of any other features
- Unexplained worsening of dyspepsia with
- Barretts’ Oesophagus
- Known dysplasia
- Atrophic gastritis
- Intestinal metaplasia
- Peptic Ulcer surgery >20 years ago

- Any age with a change of or persistent dyspepsia symptoms despite PPI therapy and treatment for HP, with a history of Barretts, metaplasia, dysplasia, recent NSAID use, previous gastric surgery or strong family history

**PATIENTS WITHOUT DYSPEPSIA (any age)**
- Dysphagia
- Unexplained Weight loss or Iron deficiency anaemia
- Palpable Upper GI Mass or incidental mass found on imaging
- Obstructive Jaundice
- Persistent vomiting without dyspepsia
- Patients with Liver disease to detect oesophageal varices
- For confirmatory biopsy of coeliac disease
- Post treatment for cancer/Barrett’s oesophagus surveillance
- Repeat endoscopy following gastric or oesophageal ulcer treatment
- Screening in polyposis – familial adenomatous polyposis
- Oesophageal dilatation follow up
ADDITIONAL INFORMATION REQUIRED

1. Special Nursing Requirements
   - None
   - Transport required: wheelchair, stretcher
   - Unable to Consent (Form 4)
   - Interpreter required
     - please state language required
   - Hoist
   - Large bed
   - Special Mattress (pressure sores)

2. Investigations Performed
   - H Pylori test result (stool antigen or breath test)
     - Result and Date
   - Previous Gastroscopy
     - Result and date
   - (in Iron Deficiency Anaemia)
     - Haemoglobin level (g/dl) AND Ferritin level
     - Result and date

3. Comorbidities and medication
   - None of the below
   - Warfarin
     - Indication
   - Clopidogrel
     - Indication
   - Aspirin
     - Indication
   - Valvular heart disease
   - NYHA Heart Failure >II
   - Diabetic (Insulin / Tablet, diet)
   - Severe respiratory disease
   - Cognitive impairment/Communication difficulties

Any Additional information

Provider Use only
- Meets criteria, book endoscopy
- Does not meet criteria, send back to GP with advice below
**Direct Access for Flexible Sigmoidoscopy**

Fax or email this form to your provider of choice using your nhs.net email account.

**Provider Unit Chosen:** xxxxxxxxxxxxxxx

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**PATIENTS WITH PR BLEEDING (AGE < 50)**

- 6 week history of fresh bright red PR bleeding and No Change In Bowel Habit*
  (Likely perianal pathology)
- Check FBC and attach result to this referral
- Referral to Direct access Flexible Sigmoidoscopy (tria to endoscopy list that treats haemorrhoids)

*Change In Bowel Habit is defined as either looser stools or increased frequency of stools

**ADDITIONAL INFORMATION REQUIRED**

1. **Special Nursing Requirements**
   - None
   - Transport required: wheelchair
   - Stretcher
   - Unable to Consent (Form 4)
   - Interpreter required
   (please state language required)
   - Hoist
   - Large bed
   - Special Mattress (pressure sores)

2. **Investigations Performed**
   - Previous Endoscopy
   - Result
   - Date
   - For Iron Deficiency Anaemia
     - Haemoglobin level (g/dl)
     - Ferritin level (ng/ml)
     - Result
     - Date

3. **Comorbidities and medication**
   - None of the below
   - Warfarin
     - Indication
   - Clopidogrel
     - Indication
   - Aspirin
     - Indication
   - Valvular heart disease
   - NYHA Heart Failure >II
   - Diabetic (Insulin / Tablet, diet)
   - Cognitive impairment/Communication difficulties

**Any Additional information**

Provider Use only

- Meets criteria, book endoscopy
- Does not meet criteria, send back to GP with advice below
Urgent Lower GI endoscopy (2 weeks or less)

Urgent Lower GI endoscopy is reserved for cases with a reasonable likelihood of a diagnosis of colorectal cancer. NICE guidelines for urgent referral for suspected colorectal cancer are shown below.

i. Rectal bleeding
Patients over 40 with rectal bleeding and a change in bowel habit towards looser stool and/or increased frequency of stool persisting for 6 weeks or more
Patients over 40 with rectal bleeding for 6 weeks or more and a strong family history of colorectal cancer
Patients over 60 with rectal bleeding for 6 weeks or more but without a change in bowel habit

ii. Change in bowel habit
Patients over 60 with a change in bowel habit towards looser stool and or more frequent stool persisting for 6 weeks or more

iii. Abdominal/Rectal mass
Patients with a right lower abdominal mass which could involve large bowel
Patient with a palpable rectal mass

iv. Iron deficiency anaemia (Defined as a low haemoglobin and low ferritin, or low serum iron and raised total iron binding capacity)
Men with a Hb < 11g/dl
Non-menstruating women with a Hb < 10g/dl
Women greater than 50 with a HB<10g/dl
Women less than 50 with Hb<10g/dl and lower GI symptoms or a strong family history of colorectal cancer

v. Abnormality on other imaging
Any patient with a lesion seen on alternative imaging which is thought to be suggestive of malignancy

Routine Lower GI Endoscopy

i. Rectal bleeding
Patients between 40 and 60 with rectal bleeding persisting for six weeks or more but without a change in bowel habit towards looser stool and/or increased frequency of stool
Patients under 40 passing altered blood or blood mixed with stool for 6 weeks or more but without a family history of colorectal cancer

ii. Altered bowel habit
Patients under 60 with a change in bowel habit towards looser stool and or more frequent stool persisting for 6 weeks or more
Recent onset altered bowel habit in the over 60 but without a tendency to looser stool

Dr. J M + Sr. R H ENDO 09/09
Stoma Care Service at West Middlesex University Hospital

Indications for referral
The service is happy to see any problems related to stoma care. Typical examples of problems suitable for referral to this service include: appliance failure, leakage, sore skin / erythema, para-stomal herniation, stomal prolapse and symptoms indicative of recurrent disease.

Referral sources
The Nurse Specialists who lead the service recognise that timely help and support reduces the negative effects on self esteem and quality of life. With this in mind the service has been created to allow easy access for referrers. Referrals from General Practitioners, Community Nurses, Community Pharmacists, other Specialist Colleagues, and all Allied Health Care Professionals are accepted. There is also an open access policy for existing stoma patients, who are encouraged to self refer back to a nurse led stoma care assessment clinic when any problems arise. Early referral is encouraged as more costly interventions may be required if referrals are delayed.

Possible interventions
Following referral, advice can be given over the telephone or patients can be seen in the stoma/colorectal follow up clinic or at home depending on the most appropriate setting. A three-day standard is offered to accommodate for Friday referrals. However many patients are seen on the same day if deemed necessary.

Contact details:
Tracey Virgin-Elliston
Lead Nurse Specialist – Stoma Care.
Susan Firth
Nurse Specialist – Stoma Care

Stoma Care Department
Clinic 4
The West Middlesex Hospital
Twickenham Road
Isleworth
Middlesex
TW7 6AF

Office: 0208 321 5822 (24 hour answer phone)
Fax: 0202 321 5024.
Email: tracey.virgin@wmuh.nhs.uk
Susan.firth@wmuh.nhs.uk

(Please send emails to both addresses in case of annual leave.)
West Middlesex Hospital Contact Information

**Dyspepsia - For information:**
WMUH
Nelson Coghill Endoscopy Unit
Tel 0208 321 5752
Email: Jill.staples@wmuh.nhs.uk

**Rectal Bleeding - For information:**
Gastroenterology Department
West Middlesex Hospital
Twickenham Road, Isleworth, TW6 7AF
Phone: 020 8321 5351

**Irritable Bowel Syndrome - For information:**
Gastroenterology Department
West Middlesex University Hospital
Twickenham Road, Isleworth, Middlesex, TW7 6AF
Phone: 020 8321 5351
Email: IBDgastro@wmuh.nhs.uk
Email: Joel.Mawdsley@wmuh.nhs.uk

**Family History of Bowel Cancer - For information:**
Gastroenterology Department
West Middlesex Hospital
Twickenham Road, Isleworth, TW6 7AF
Phone: 020 8321 5351
Email: Kevin.monahan@wmuh.nhs.uk
Appendix: Abnormal LFTs
(Adaptation from the BSG “Management of Abnormal LFT in Asymptomatic Patients” Guidelines)
http://www.bsg.org.uk/pdf_word_docs/ablft_draft05.doc

These guidelines were commissioned by the liver section of the British Society of Gastroenterology. Guidelines are not rigid protocols and do not replace clinical judgement. These guidelines can be used by clinicians as a basis for managing most asymptomatic patients with abnormal LFTs.

A thorough history should be part of a ‘Liver Screen’, because not all chronic liver diseases can be diagnosed by blood tests alone. The history should elicit alcohol consumption, drug use (prescribed or otherwise) current and recently used, risk factors for viral hepatitis (e.g intravenous drug use and blood transfusion prior to 1990), the presence of autoimmune disease, family history of chronic liver disease, previous neurological symptoms and the presence of diabetes or obesity.

LIVER FUNCTION TEST COMPONENTS
(Commonly)
- Bilirubin
- Alanine aminotransferase (ALT) and/or Aspartate aminotransferase (AST)
- Alkaline phosphatase

(Variably)
- Gamma-glutamyl transferase (GGT)
- Albumin
- Prothrombin time
- Lactate dehydrogenase

Bilirubin
- A breakdown product of the haem component of red blood cells.
- Water-insoluble unconjugated form is converted by the liver enzyme UDP-glucuronyltransferase into the water-soluble conjugated form, Bilirubin glucuronide.
- Normally it is the total serum bilirubin that is measured.
- A raised serum bilirubin may therefore reflect increased unconjugated bilirubin production (haemolysis), impaired conjugation in the liver (usually Gilbert’s syndrome), impaired secretion of conjugated bilirubin into the bile (e.g severe chronic liver disease) or extrahepatic biliary obstruction (e.g common bile duct stones or carcinoma of the head of the pancreas).
- The commonest cause of an isolated raised bilirubin in an asymptomatic patient is likely to be Gilbert’s syndrome which affects up to 5% of the population. An increase in the bilirubin with fasting (or coincident illness) and confirmation of a predominant unconjugated hyperbilirubinaemia makes the diagnosis of Gilbert’s syndrome virtually certain. This is not a disease, does not cause symptoms and therefore the patient can be completely reassured.

Alanine aminotransferase (ALT) and Aspartate aminotransferase (AST)
- ALT and AST are enzymes present in hepatocytes that participate in gluconeogenesis. They are released into the blood stream in increased amounts during hepatocellular injury or cell death.
- ALT is often considered to be more liver specific as it is present in much lower concentrations in extrahepatic tissues, but it can still be elevated in conditions other than liver diseases such as myositis.
- AST is also abundantly present in other tissues such as heart muscle, skeletal muscle and blood cells. AST was used historically as a ‘cardiac enzyme’ to detect myocardial infarction or may indicate myositis or haemolysis.
- ALT and AST are transiently raised in a variety of acute illnesses including acute hepatitis when a patient may or may not be symptomatic.
- The ratio of ALT to AST can give a clue to the aetiology of the liver disorder. In most chronic liver diseases, ALT levels are higher than AST except when cirrhosis has developed. However an AST to ALT ratio greater than 2 is suggestive of alcoholic liver disease.
Alkaline phosphatase (ALP)
- ALP is produced mainly in the liver and bone but also in smaller quantities by the intestines, kidneys, and white blood cells.
- Physiologically higher in childhood and pregnancy where it comes from the placenta.
- Pathologically higher in cholestatic liver disease (e.g. primary biliary cirrhosis, primary sclerosing cholangitis, common bile duct obstruction, intrahepatic duct obstruction (metastasis) and drug induced cholestasis), bone disease (e.g. Paget’s disease and fractures), and right-side heart failure.
- There is no data on the most likely causes of a raised ALP in an asymptomatic population. In a hospitalised population, a raised ALP often resolves spontaneously or if persists is most often associated with significant extra-hepatic disease.

Gamma glutamyltransferase (GGT)
- GGT is abundant in the liver and other tissues such as kidney, intestine, prostate and pancreas.
- It is not present in bone, however, hence the usefulness of this enzyme in determining the source of an elevated ALP. GGT should be measured to establish the hepatic origin of the ALP.
- A raised GGT is not confined to alcoholic liver disease as it can be induced by drugs and is also elevated in NAFLD. It is not always raised in chronic alcoholics; hence it is not sensitive for occult alcohol abuse. Furthermore, patients drinking excess alcohol who have an isolated raised GGT are also unlikely to have significant liver damage.
- In asymptomatic patients with a raised GGT alone who do not drink excessively, hepatic fibrosis is present in only 5% of cases.

WHY INVESTIGATE ASYMPTOMATIC PATIENTS WITH ABNORMAL LFT?
- The rationale for considering investigation of asymptomatic patients with abnormal LFTs is based upon knowledge that a significant number of patients with chronic liver disease have no symptoms or non-specific symptoms. Specific symptoms may only occur once cirrhosis has developed, yet cirrhosis is usually irreversible and associated with reduced life expectancy.
- Increasing death rates from cirrhosis almost certainly reflect increasing rates of alcoholic liver disease and the burden of chronic hepatitis C. The obesity epidemic will also cause non-alcoholic fatty liver disease (NAFLD) associated cirrhosis to further increase liver disease mortality in the future.
- Cirrhosis is associated with a reduced life expectancy, cirrhosis is caused by chronic liver diseases and abnormal LFTs may be the only indication of chronic liver disease. There is now some evidence that increasing LFT levels (ALT and AST) are directly associated with increased liver related mortality rates.
- In the UK there is evidence that the causes of abnormal LFTs are often not investigated. When thorough investigation is performed however, the majority of patients are found to have significant disease warranting treatment or follow up.

DO ABNORMAL LIVER FUNCTION TESTS OUTSIDE THE NORMAL RANGE ALWAYS INDICATE LIVER DISEASE?
- By definition some healthy people will have abnormal LFTs, because the normal range for any LFT is based on the mean ± 2 standard deviations of the mean from a healthy population. 2.5% of healthy people will therefore have any particular LFT above the normal range when tested.
- Consider physiological and non-hepatic pathological causes of abnormal LFT (pregnancy, bone disease, presence of macroenzymes, haemolysis of blood sample)

DO NORMAL LIVER FUNCTION TESTS INDICATE ABSENCE OF LIVER DISEASE?
- Normal LFTs do not exclude the presence of significant liver disease, thus patients still require assessment in the presence of signs of liver disease or significant risk factors for chronic liver disease (e.g. exposure to hepatitis C or family history of haemochromatosis).
- It is well-established that certain liver disease patients can have normal LFTs and still have significant liver disease (e.g. chronic hepatitis C, haemochromatosis, and primary sclerosing cholangitis) which may progress to cirrhosis.