Inside Out: Gastroenterology & Hepatology Workshop

Saturday 25 October 2025
Clinical Skills Development Service | RBWH

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Queensland Government
Metro North Health

GI bleeding

Dr Florian Grimpen
Director of Endoscopy
Deputy Director, Gastroenterology & Hepatology | RBWH

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Gastroenterology and Hepatology Workshop 25/10/2025

GI Bleeding

Florian Grimpen

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Deputy Director, Dept of Gastroenterology and Hepatology

RBWH

Overview

- Upper GI bleeding
- Lower GI bleeding
- Small bowel bleeding

Definitions

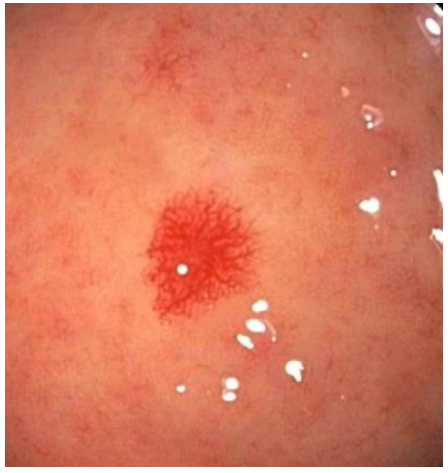
- Overt: visible blood (including melaena)
- Occult: invisible (+FOBT or IDA)
- Obscure: source not found after endo/colon/capsule
  - Obscure overt
  - Obscure occult

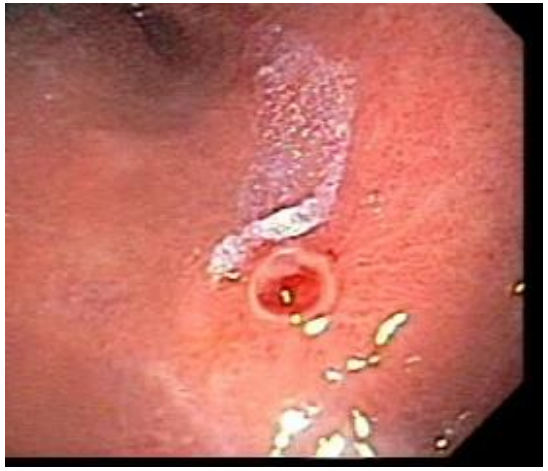
Upper GI bleeding: Epidemiology

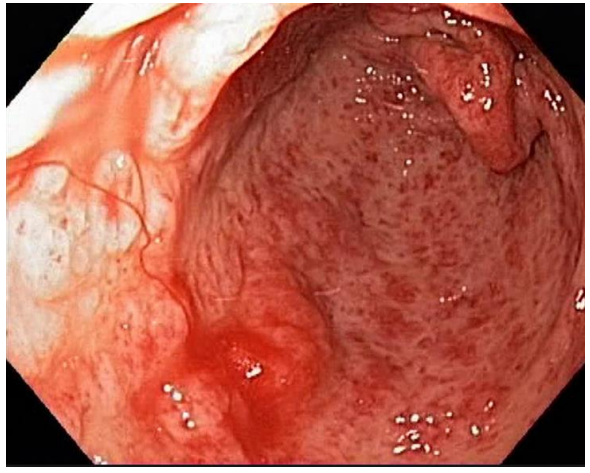
- Incidence 0.1%
  - Much higher than acute lower GI bleeding
- Male > female
- Increases with age

Upper GI bleeding: Causes

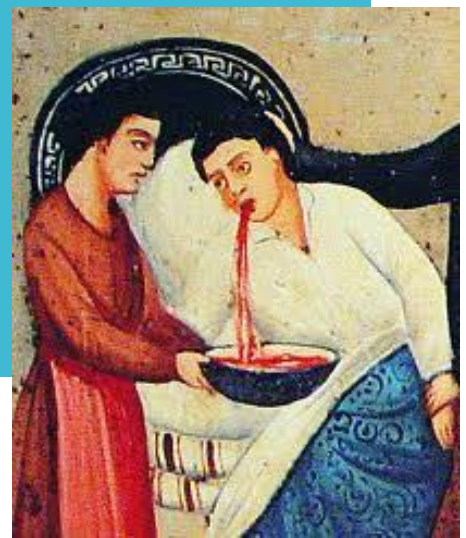
- Ulcers
  - NSAIDs >> Helicobacter
  - Tumours, anastomoses, GORD, ICU etc
- Varices
- Mallory-Weiss tear
- Angioectasia, Dieulafoy's lesion, GAVE gastric antral vascular ectasia



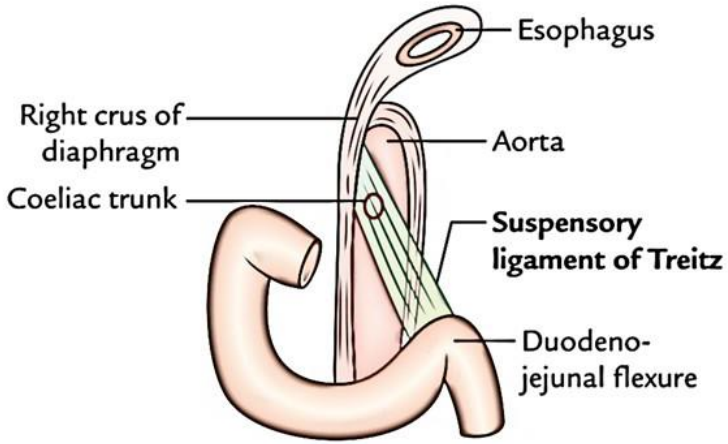


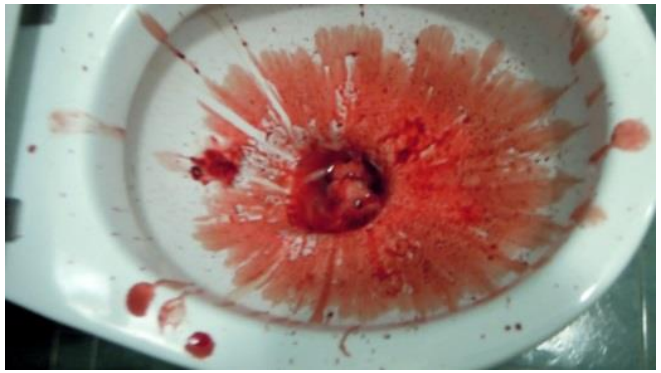


Upper GI bleeding: Presentation



- Haematemesis
  - Source prox to Ligament of Treitz
- Melaena
  - Most are upper GI
    - Acid + haemoglobin → haematin
    - But dark stool can be from oropharynx to right colon
- Haematochezia
  - In ≤15% of upper GI bleed with haemodynamic instability





Upper GI bleeding: Assessment

- History
  - NSAIDs, antiplatelets/anticoagulants, steroids etc
  - Iron tablets
  - Vomiting
  - History of ulcers
  - Portal hypertension

Assessment: Risk Score

- Glasgow Blatchford Score (GBS)
  - Predicts need for intervention

    <2 can be D/C from ETC
    - Trialling GBS 2-3 discharge

    >7 more likely to need intervention

  - Clinical judgment

Blatchford Score	Points
Systolic blood pressure (mmHg)	
100 -109	1
90-99	2
< 90	3
Serum urea (mmol/L)	
6.5-7.9	2
8.0-9-9	3
10-24.9	4
≥ 25.0	6
Haemoglobin for men (g/L)	
120-129	1
100-119	3
< 100	6
Haemoglobin for women (g/L)	
100-119	1
< 100	6
Other Risk Variables	
Pulse ≥ 100	1
Melaena	1
Syncope	2
Hepatic disease	2
Cardiac disease	2
Total Score	

Initial Management

- Fluid resuscitation
  - Crystalloid while cross-matching
- Define ARP
- NBM
- FBC, ELFTs, coags, G+H
- Aim for platelets > $50x10^9$/L, INR < 1.5, Fibrinogen > 1g/L
- Metoclopramide 10mg iv
- PPI infusion (or BD)

Antithrombotics in UGIB

- Pause anticoagulants, antiplatelets
- In dual antiplatelets, restart aspirin immediately, don't stop clopidogrel for more than 5 days
- Consider prothrombin complex concentrate for warfarin (+ Vit K)
- Consider idarucizumab for dabigatran
- Andexanet alfa – not used (>$35,000)
- Don't give platelets – no evidence it reverses clopidogrel effect
- Restart antithrombotics as soon as possible if strong indication

PPI pre endoscopy

- Fewer endoscopic signs of bleeding (i.e. visible vessel)
- Less endoscopic treatment required
- No change in mortality
- Usually PPI infusion
  - But 40mg BD iv equivalent

Blood Transfusion

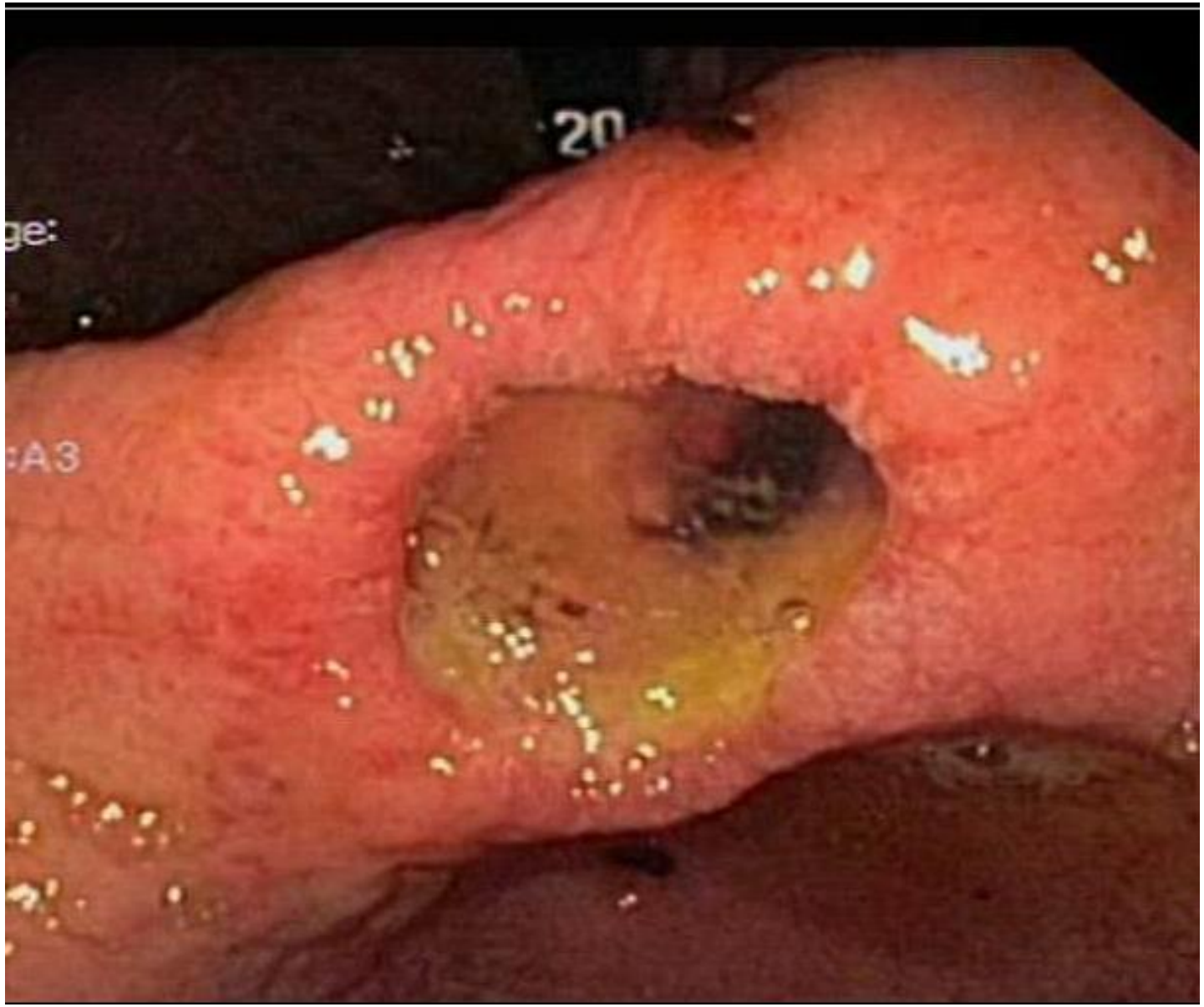
- Cut-off is controversial
- Restrictive blood transfusion better outcome
- Aggressive transfusion increases portal pressure, may inhibit coagulation (or correct the reactive hyper-coagulable state)
  - → higher risk of rebleeding
- No benefit shown in lower GI bleeding
- Some evidence in cardiac surgery, massive burns, etc

Initial Management – Patients with suspected variceal bleed

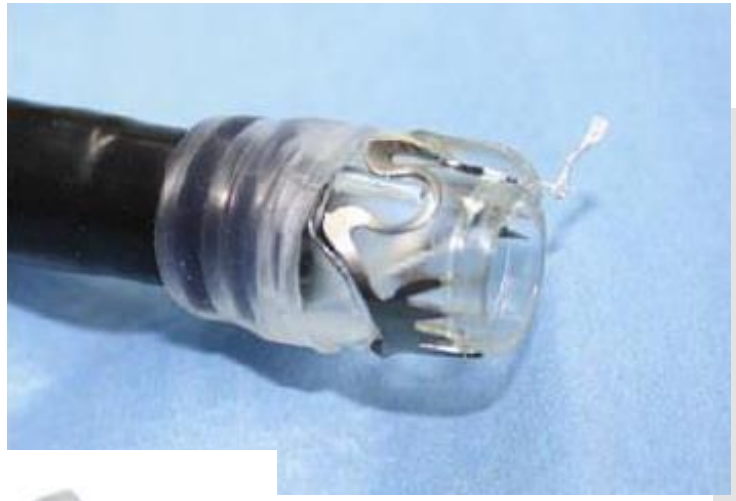
- Suspect variceal bleed if:
  - Known varices
  - Ascites
  - Platelet count <120
- Octreotide infusion - **For 72 hours**
- Ascites → diagnostic tap prior to any antibiotics if possible
- Ceftriaxone 1g IV daily for 5 days
- Transfuse judiciously (benefit from restriction)

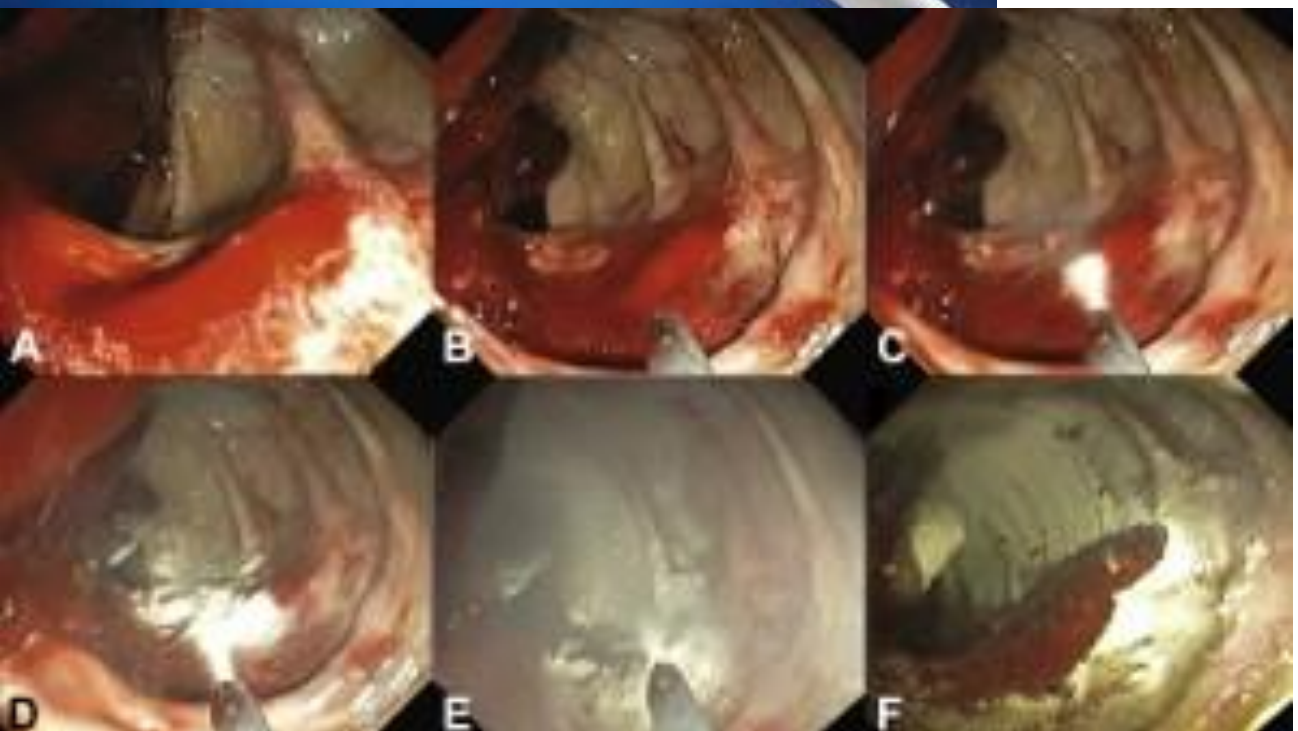

Dräger
Dräger
Mavito
RBWH
ENDOSCOPY
OLYMPUS
OLYMPUS

Ulcer




1 in 10,000
Adrenaline-Link
DILUTE ADRENALINE
INJECTION

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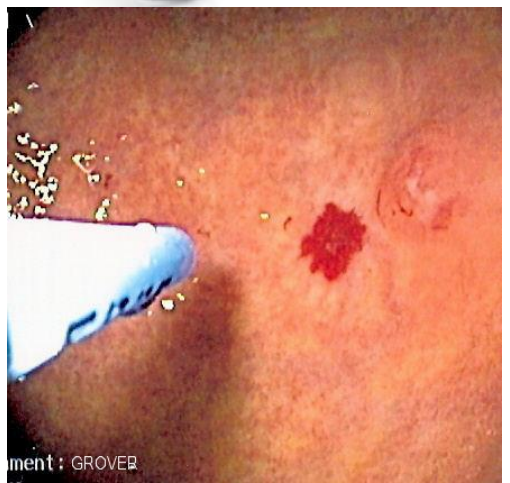
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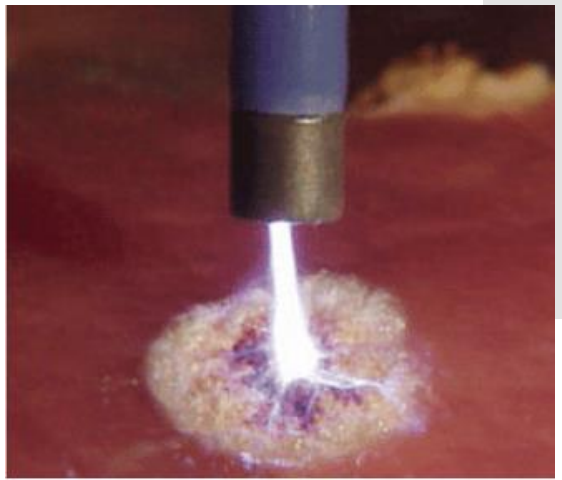
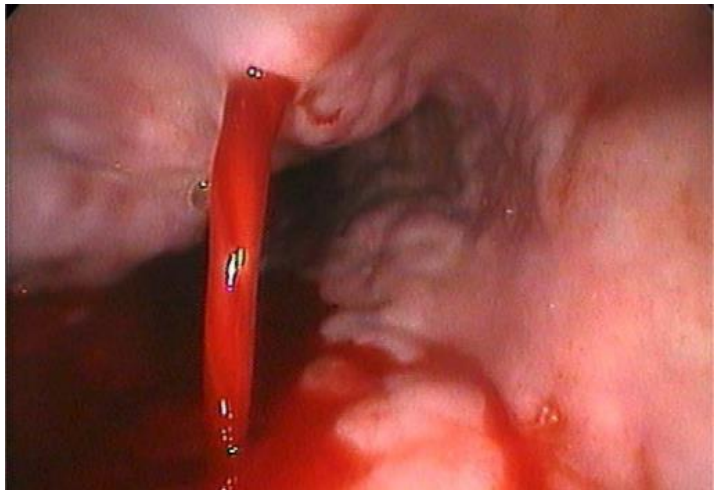
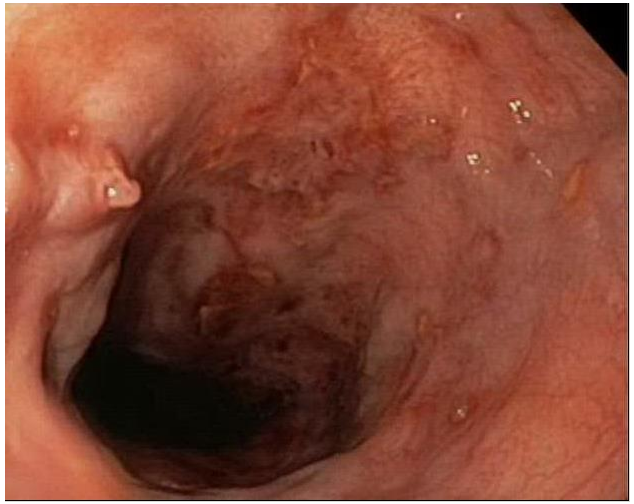
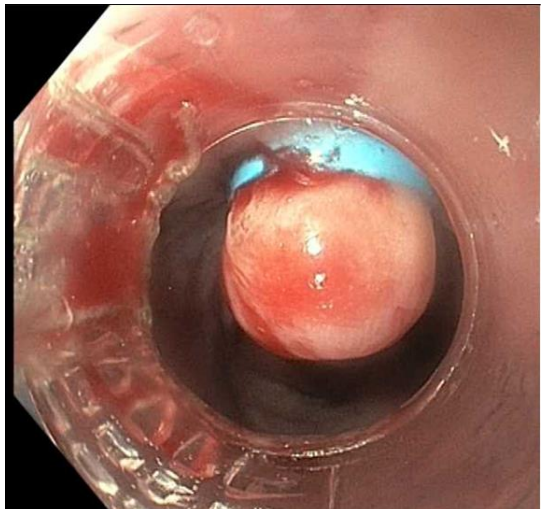


Oesophageal varices

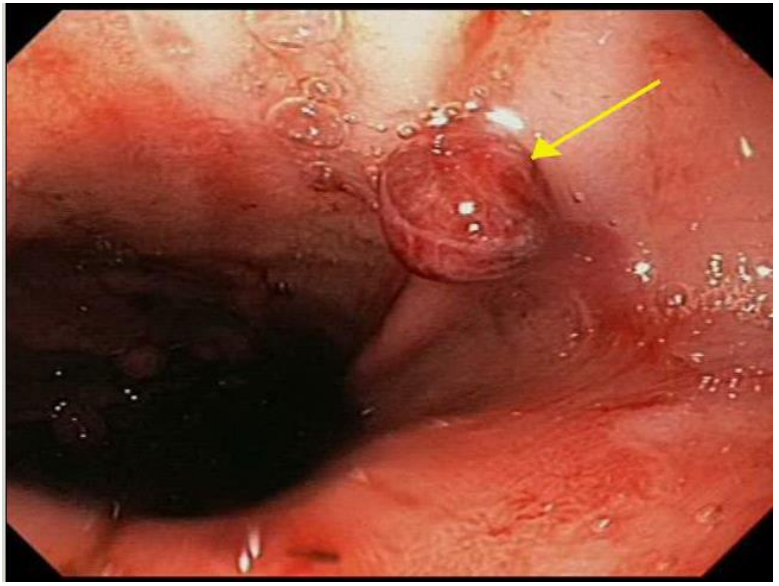


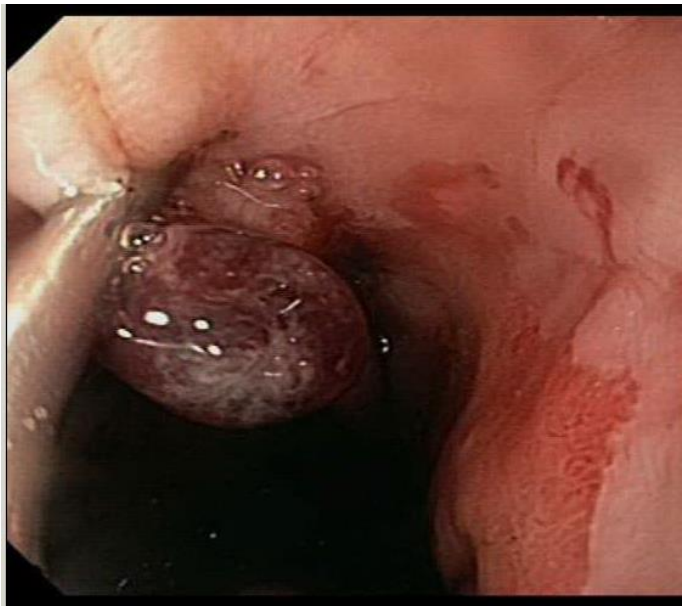
Band ligation

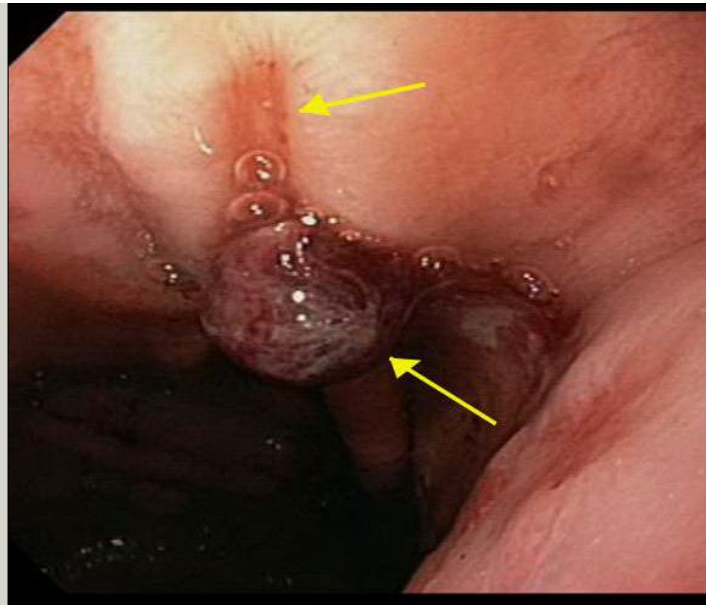


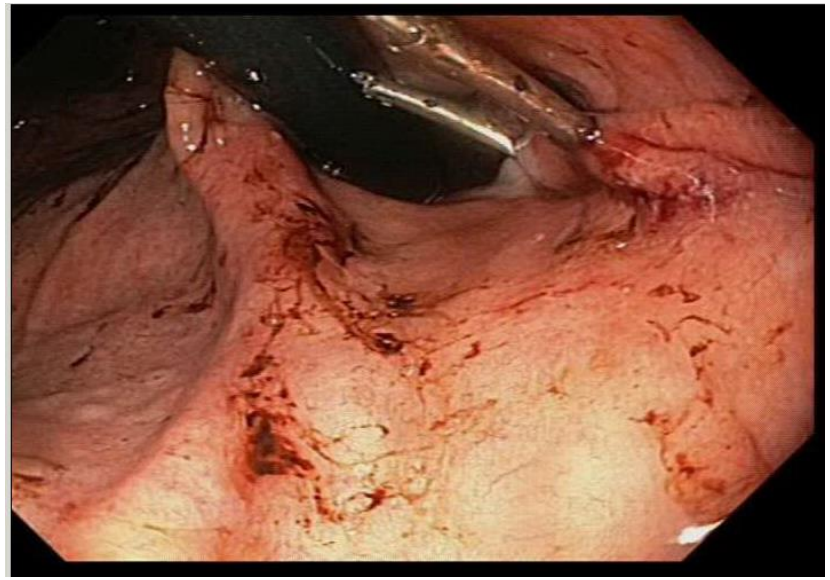


Mallory Weiss Tear

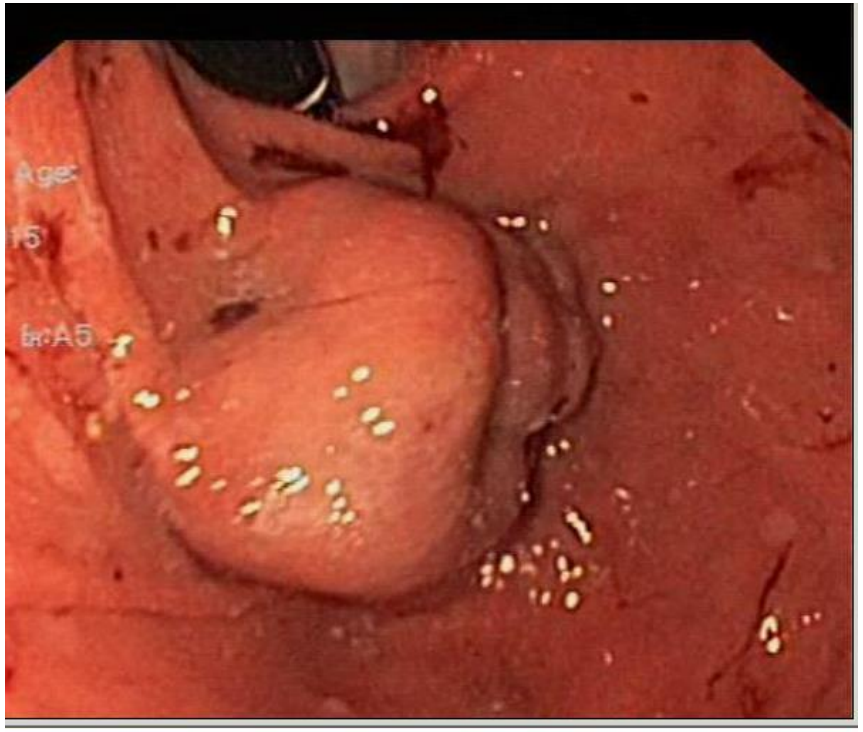




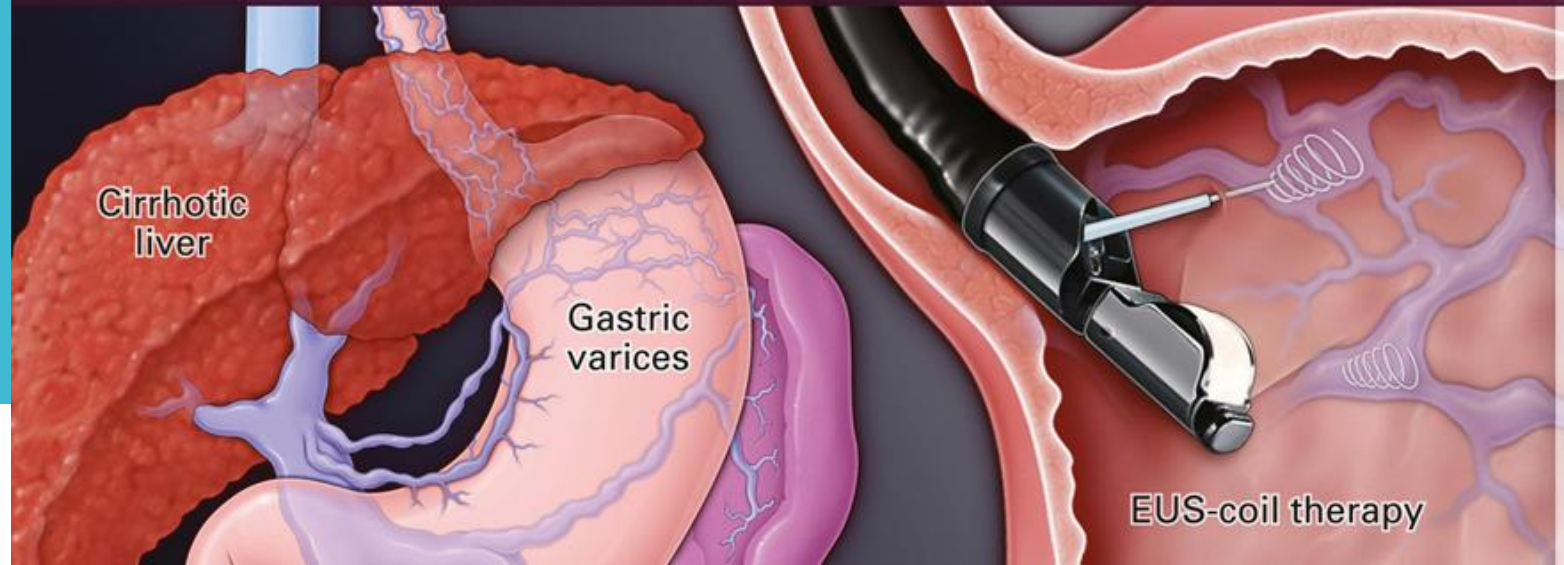




Gastric varices

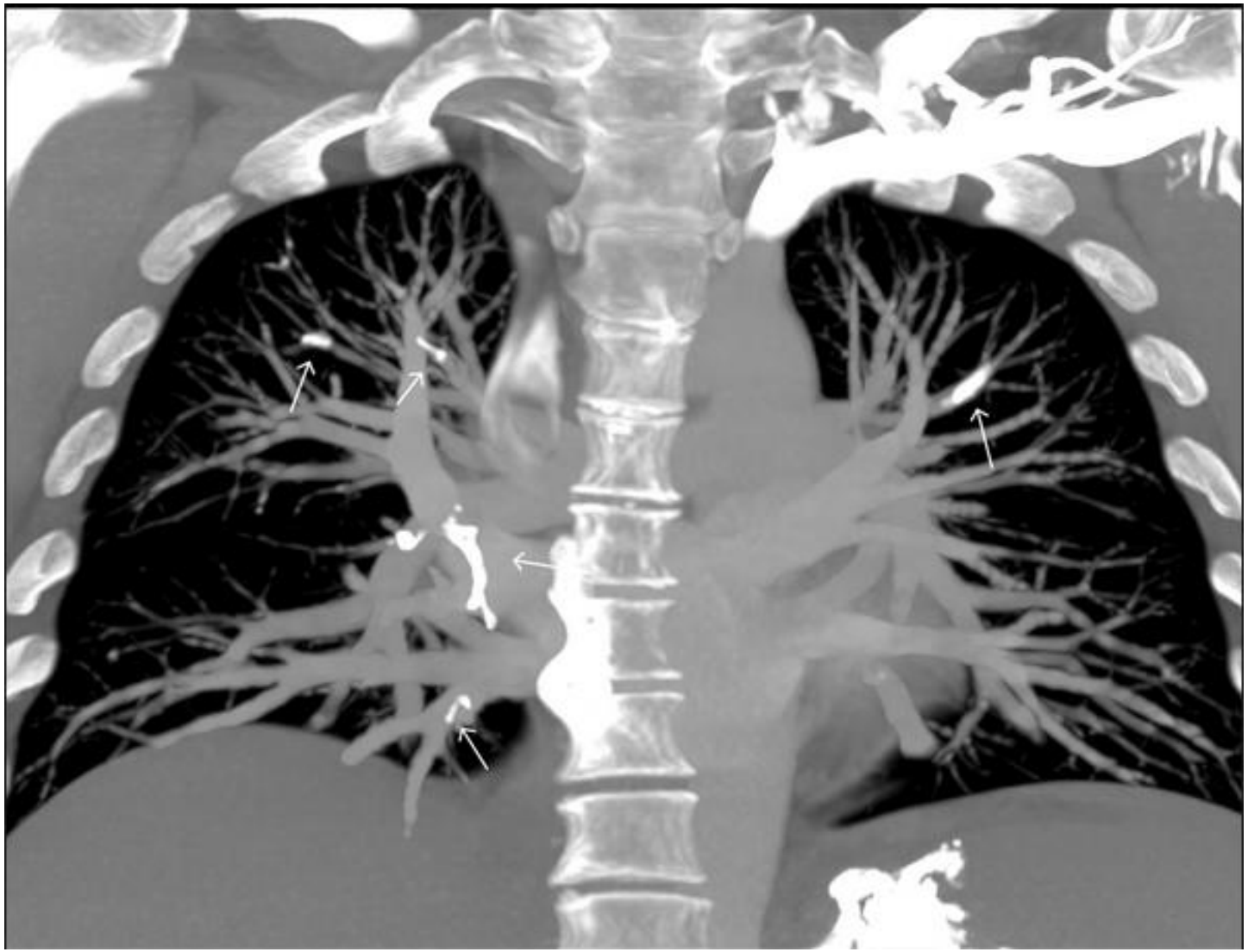


Endoscopic Ultrasound-Guided Coil Injection Therapy in the Management of Gastric Varices



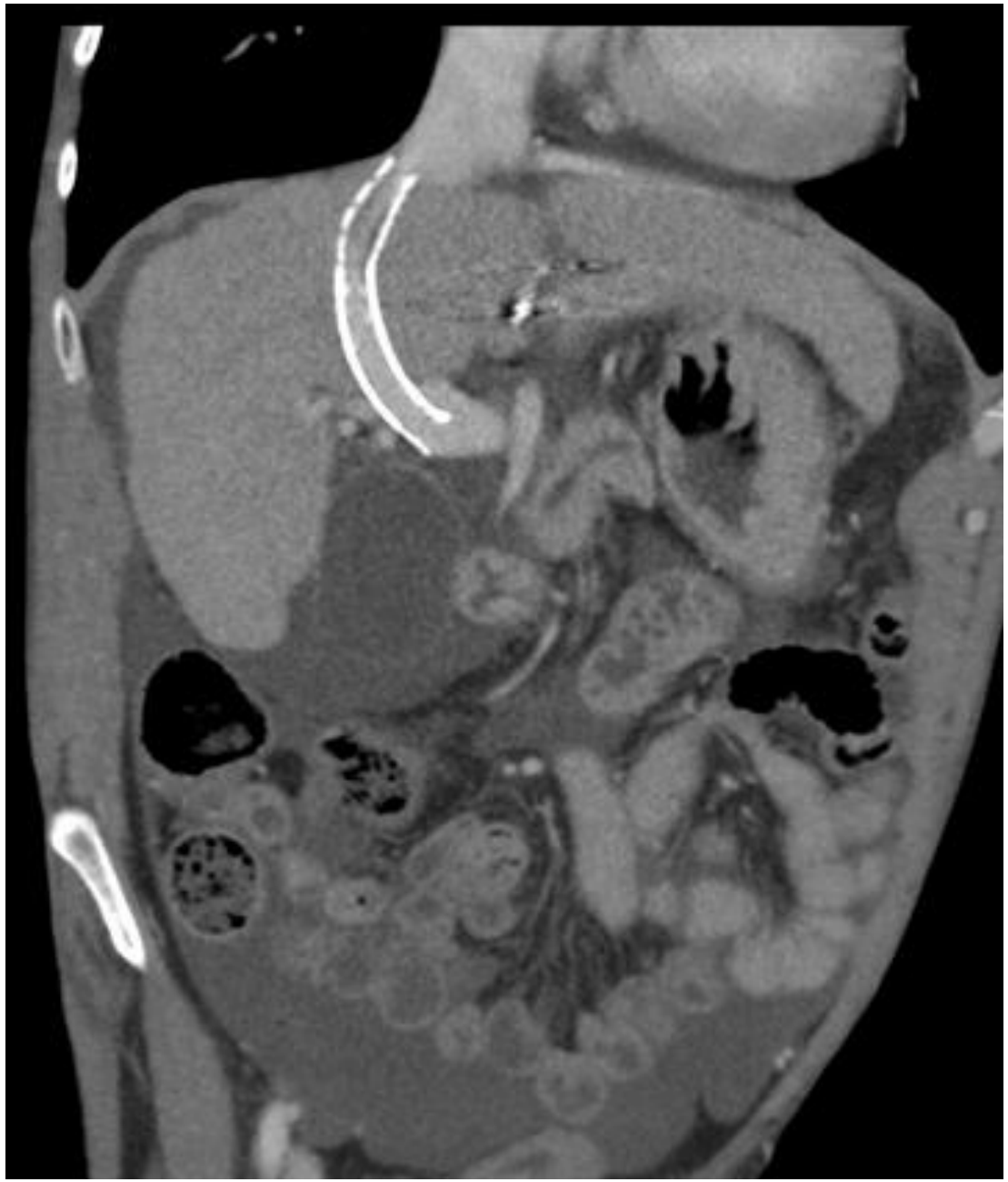
Primary outcomes	
Technical Success	106/106 (100%)
Clinical Success	94/106 (88.7%)
Adverse Events	
Intraprocedural	**2 (1.8%)**
Active bleeding from puncture site	1 (0.9%)
Systemic embolization	1 (0.9%)
Post procedure	**5 (4.7%)**
Transient Fever	3 (2.8%)
Abdominal pain	1 (0.9%)
Systemic embolization	1 (0.9%)

PE after glue injection



TIPS

Transjugular intrahepatic porto-systemic shunt



Interventional Radiology

- TIPS for variceal bleeding
  - Rescue for failed endoscopy
  - Gastric varices deemed too large for endoscopic Mx
  - Secondary prevention in high risk varices

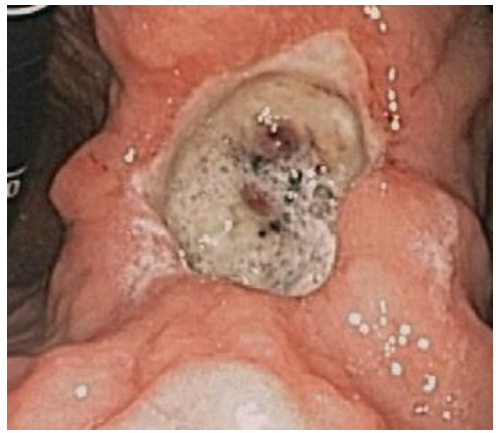
- For failed endoscopy for non-variceal UGIB:
  - Superselective angiography
  - Embolisation (coils, cyanoacrylate)
  - High success rate
  - Low complication rate
    - Ischaemic complications rare prox to Ligament of Treitz – collateral blood supply)

Post endoscopy

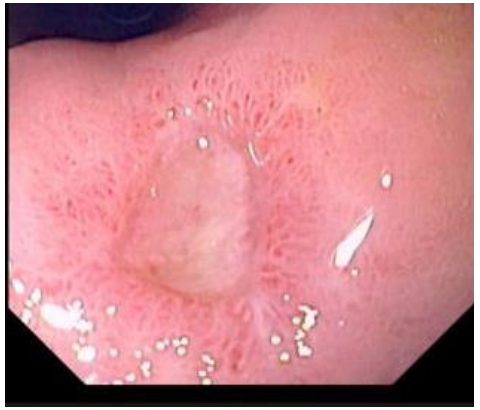
- Monitor Hb + urea
- Consider H pylori serology
  - Biopsy, UBT, stool test difficult in acute situation
- Plan for antiplatelets / anticoagulation / NSAIDs
- PPI

PPI post endoscopy

- If high risk stigmata at endoscopy:
  - Reduces risk of rebleeding (7 vs 23%)
  - Reduces need for surgery



- High risk stigmata at endoscopy:
  - Continue PPI infusion for 72 hours
  - Or 40mg BD iv
  - Then oral dosing (BD if high risk)
- Low risk stigmata:
  - Oral PPI



Follow-up post ulcer bleed

- Gastric ulcer: often a repeat endo after 2 months
- Duodenal ulcer: follow-up endo not usually required

- PPI individualised
  - Usually higher dose for 1-2 months
  - Then maintenance dose unless cause found and treated

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TRIAL

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UPPER GASTROINTESTINAL BLEEDING PATHWAY

(Haematemesis/Coffee-ground emesis/Melaena)

Clinical Pathways never replace clinical judgement.

Care outlined in the pathway must be altered if it is not clinically appropriate for the individual patient

(Affix patient identification label here)

URN:

Family Name:

Given Names:

Address:

Date of Birth: Sex: ☐ M ☐ F ☐ I

Initial assessment – *Tick the group that applies*

Date: / /

Name: Position:

Time: : Blatchford Score:

☐ SUSPECTED VARICEAL BLEED

If any of the following:

- Known varices
- Platelets < 120 (without other explanation)
- Ascites

☐ GROUP 1

Haemodynamically unstable
(with any Blatchford Score)
OR
Blatchford Score ≥ 7 PLUS > 30% volume loss, as evidenced by:

- Postural tachycardia or hypotension
- Syncope
- Clinically dry or low urine output
- End-organ dysfunction
- Lactate > 4

☐ GROUP 2

Haemodynamically stable and Blatchford Score ≥ 7 without signs of significant volume loss
OR
Haemodynamically stable and Blatchford Score 2-6

☐ GROUP 3

Haemodynamically stable, Blatchford Score 0-1, and no other indication for inpatient care

SUSPECTED VARICEAL BLEEDS

Notify Liver Registrar
(0830-1630 Monday – Friday)
OR
On-Call Gastroenterology Registrar
(After-hours)

- Specific management *(see over)*
- **Aim for endoscopy within 12 hours**
- Acute resuscitation as below

ACUTE RESUSCITATION

(See reverse for details)
Re-assess at 1 hour, THEN
Notify Gastroenterology "Scopes" Registrar
(0830-1630 Monday – Friday)
OR
On-Call Gastroenterology Registrar
(After-hours)

- Admit under General Medicine (or as advised by Gastroenterology)

☐ UNSTABLE

- Haemodynamically unstable
- Ongoing bleeding as evidenced by
  - Fresh PR bleeding
  - Ongoing haematemesis

Plan for Emergency Endoscopy
(Liaise with Gastroenterology Registrar)

☐ RESPONDING TO RESUSCITATION

(Stable, no ongoing bleeding)
Notify EPIC Registrar
(0830-2200 hrs Monday – Sunday)
OR
Night Medical Registrar
(After-hours)
Phone 73544 for both

- Plan for inpatient endoscopy
- Early endoscopy may be facilitated by Gastroenterology if availability and patient is stable

Final assessment – *Tick the final outcome*

Date: / /

Name: Position:

Time: : Category:

EMERGENCY ENDOSCOPY

(Urgent endoscopy in endoscopy suite or theatres)
☐ **Category A** – Haemodynamically unstable (within 1 hour)
☐ **Category B** – Physiologically stable but may deteriorate if left untreated (within 4 hours)

Gastroenterology Registrar to arrange

- Remain in DEM or EPIC Monitored Bed until endoscopy

Patient condition unstable or not responding to resuscitation

TRANSFER TO AN EPIC MONITORED BED

(If not available, stay in DEM for ongoing resuscitation)

- Continued transfusion and resuscitation
- 15 minute blood pressure monitoring + stool chart

Repeat Venous Blood Gas at 4-6 hours
Assess for signs of instability
(See reverse for details; call Gastro Registrar if unsure)

Patient condition now stable

NON-EMERGENT ENDOSCOPY

Transfer to general ward
Admit under General Medical Team (unless otherwise agreed)
☐ **Non-emergent endoscopy – timing as below:**
Suspected variceal bleed – within 12 hours
Other bleeds – within 24-48 hours
If news signs of instability, notify Gastroenterology team

CONSIDER DISCHARGE HOME

Provide oral Proton Pump Inhibitor script
Consider GP referral for outpatient endoscopy

UPPER GASTROINTESTINAL BLEEDING PATHWAY

Lower GI bleeding

- Severe lower bleeding less common than upper GI bleeding
  - **Diverticular bleeding**
  - Angioectasia / Dieulafoys / postpolypectomy / anorectal
  - IBD / infection if bloody diarrhoea
  - Ischaemic colitis – pain first
  - Could be severe upper bleed
- Minor bleeding (i.e. anorectal cause) very common
  - Most common cause in younger patients
  - Cancer / polyps more likely as IDA or FOBT

Diverticular bleeding

- Most common cause of LGIB
- Painless haematochezia
- 80-90% will stop spontaneously, some will recur
- Increase with age
- Mostly from left colon

Management

- Severe LGIB → Emergency assessment
- Minor LGIB
  - ID +/- anaemia / FOBT – Cat 1 referral
    - ID(A) will need endo/colon in males and post-menopausal women, and in pre-menopausal women if unexplained
    - FOBT colonoscopy Cat 1
  - If bright red blood, not mixed in, +/- haemorrhoids seen or suspected, then review after 6-8 weeks. If recurrent then may be a Cat 2 GE or surgical assessment

Management of severe LGIB

- ABC
- Fluid resuscitation – crystalloids
- Crossmatch
- FBC, ELFTs, lactate, coags
- Consider pausing antithrombotics
- Transfusion
- If unstable – CT angiogram
  - If bleeding vessel seen can be embolised

Management of severe LGIB

- Colonoscopy
  - Timing controversial, but needs prep
  - Individualised
  - Never emergent / if unstable
  - Often in first 1-3 days of admission
  - Can be delayed if bleeding settled, then diagnostic
  - Usually finds cause of bleeding
    - Can clip diverticular bleeding vessel
    - Angioectasias can be burnt with APC
    - Dieulafoys can be clipped

Suspected Small Bowel Bleeding

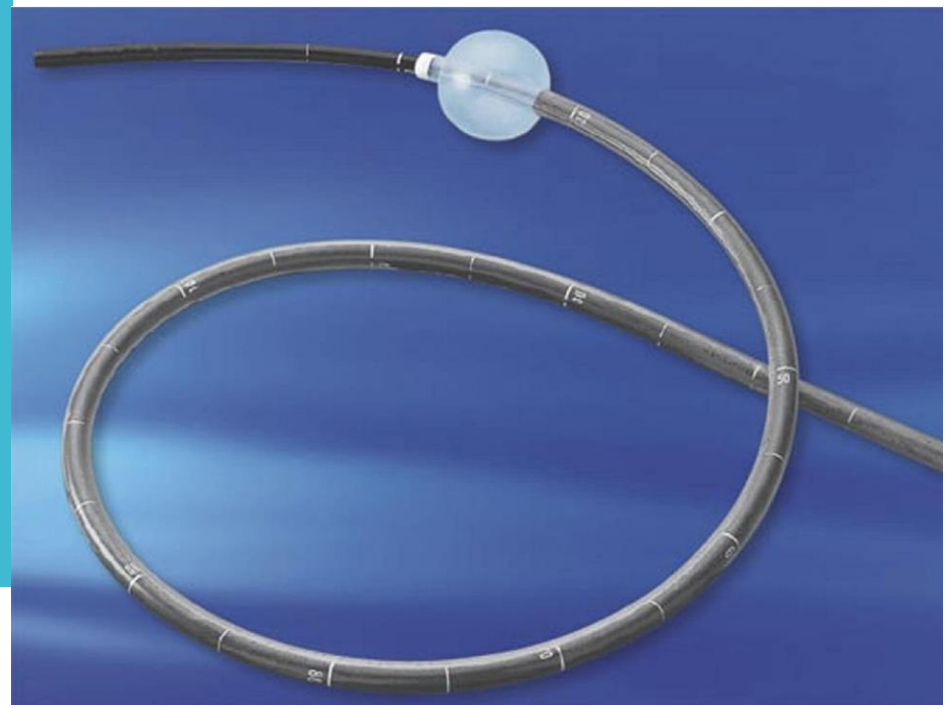
- Overt vs occult
- Overt:
  - Never with haematemesis
  - Often dark red PR bleeding
  - Very dark stool if proximal small bowel
  - Colonoscopy: sometimes see blood from proximal to terminal ileum
  - Can be unstable, but more often subacute / recurrent
  - Causes:
    - Dieulafoy or diverticulum if unstable
    - Angioectasia overall most common
    - Meckel's in younger adults
    - Rarely varices, vascular fistulas, tumours, ulcers (incl anastomotic)
    - <25% missed cause in upper/lower GIT

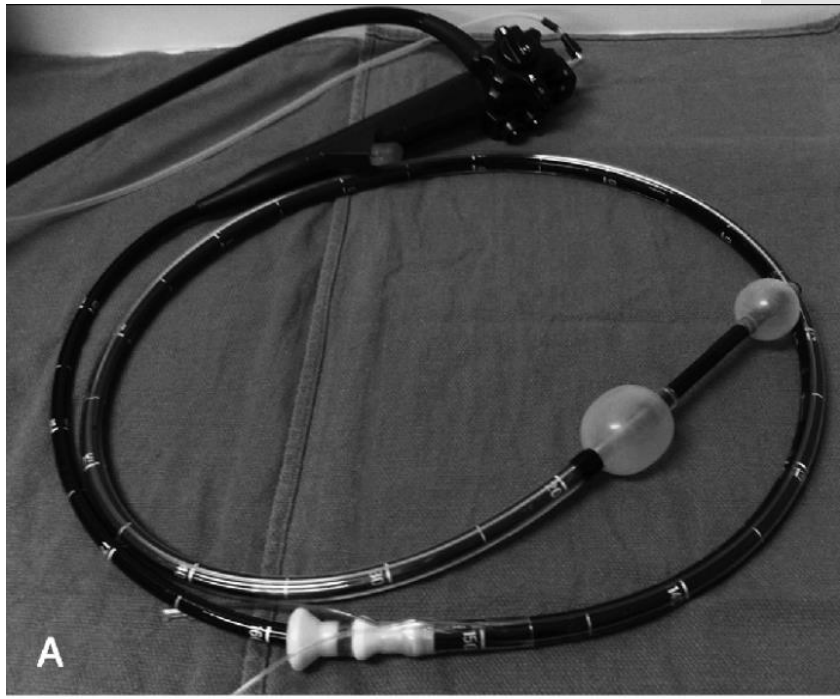
Suspected Small Bowel Bleeding

- For significant overt bleeding:
  - Inpatient management – challenging
  - CT angiogram if unstable
  - Capsule endoscopy – roadmap
  - Balloon enteroscopy – oral vs rectal approach
    - Can clip, burn, inject varices
  - Sometimes no cause found (obscure GI bleeding)
    - Repeat endo / colon/ capsule / enteroscopy
    - Labelled red cell scan combined with CT

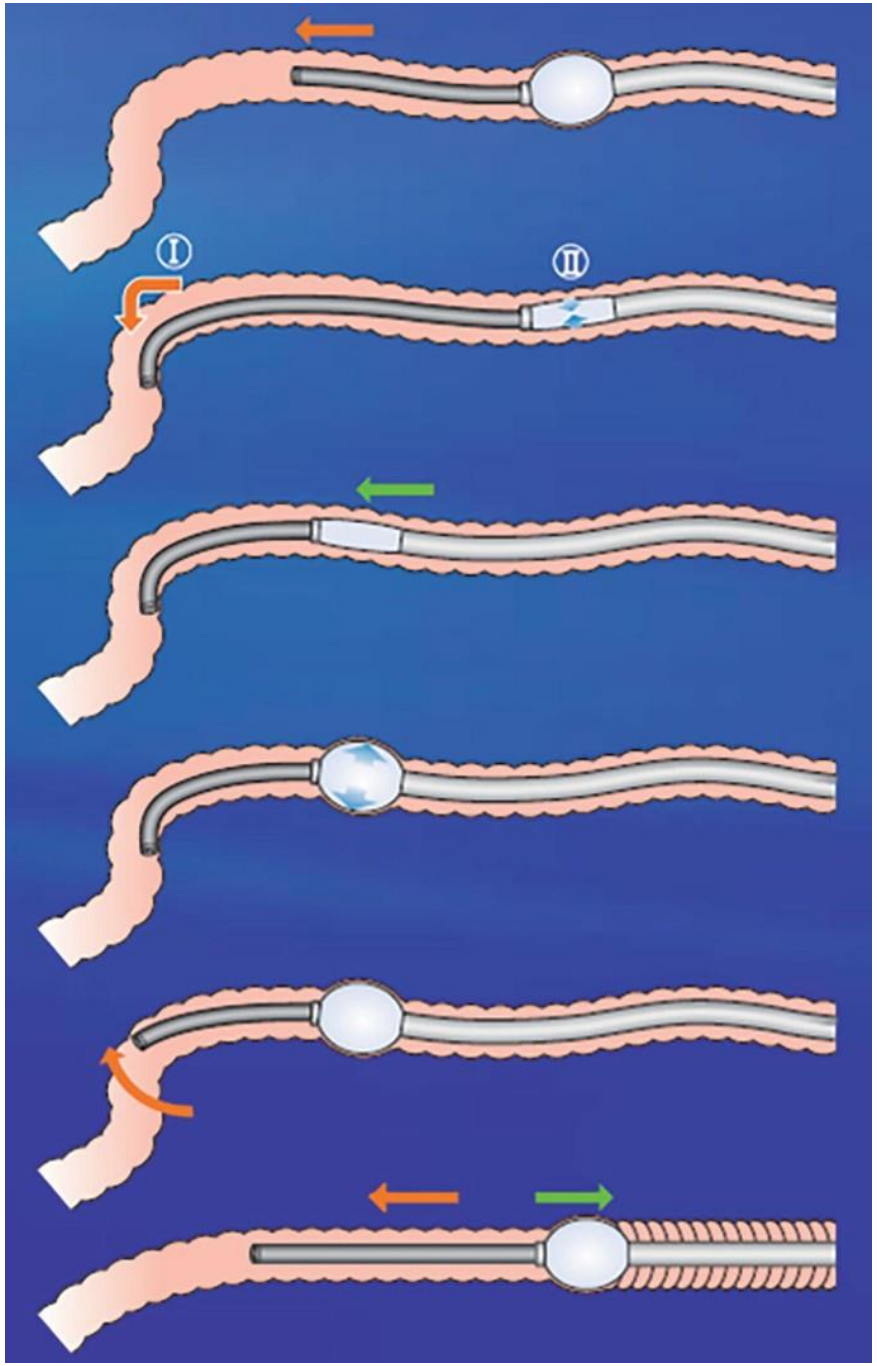
Balloon Enteroscopy

- Available at referral centres
- Single balloon system more common
- Double balloon system more complex, gets slightly deeper





Balloon Enteroscopy



Suspected Small Bowel Bleeding (SSBB)

- Most small bowel bleeding is occult: capsule endoscopy

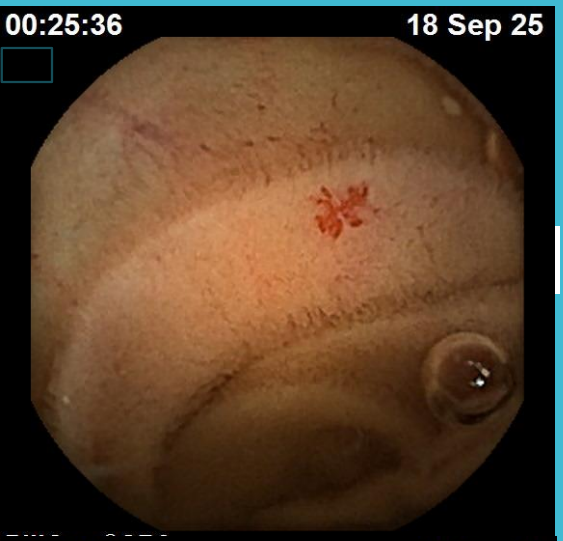
- Medicare indications for capsule endoscopy:
  - Significant ***overt*** SSBB

    or
  - IDA (excluding coeliac disease, and have considered menorrhagia)

    and
  - Have had endo/colon

  - Also: Peutz Jeghers Syndrome (every 2 years)
- FOBT is not a valid indication
  - Does not indicate SSBB

Video Capsule Endoscopy (VCE)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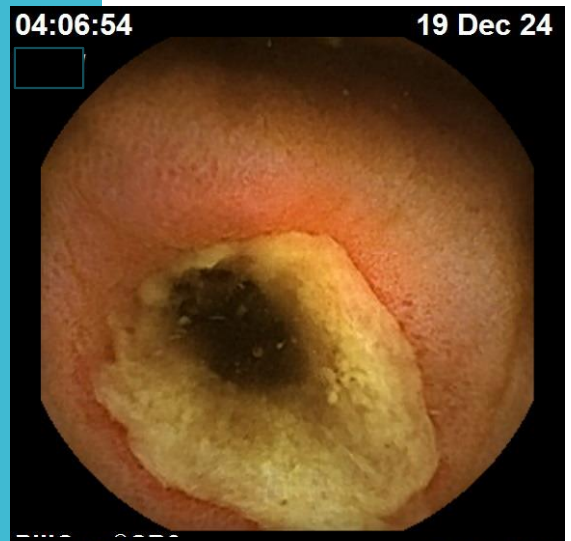
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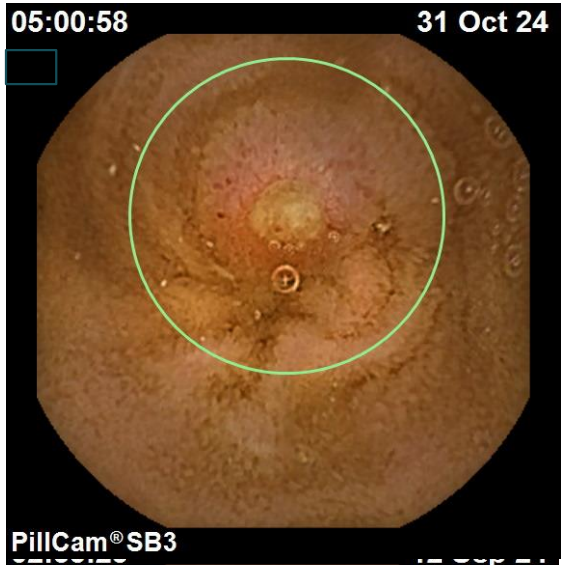
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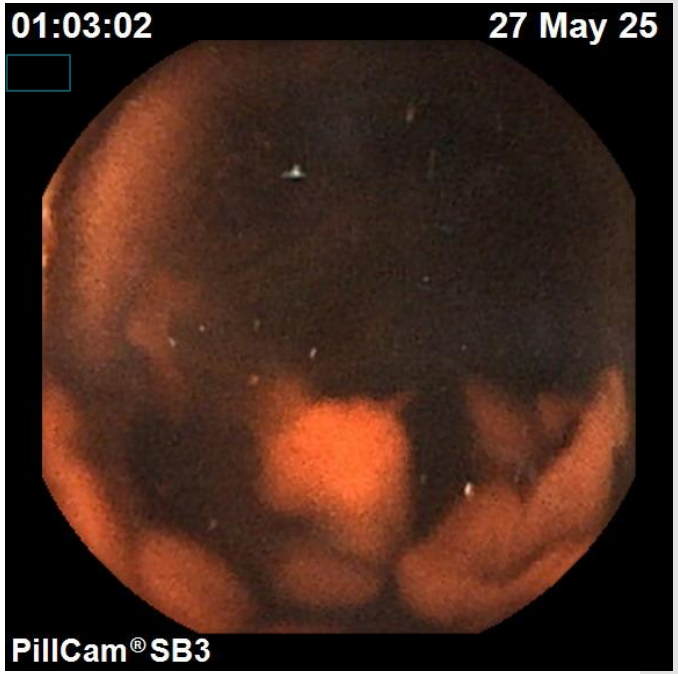
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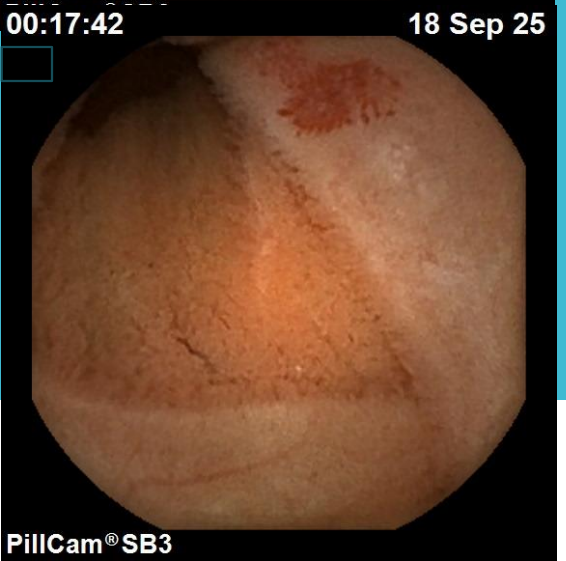
PillCam®SB3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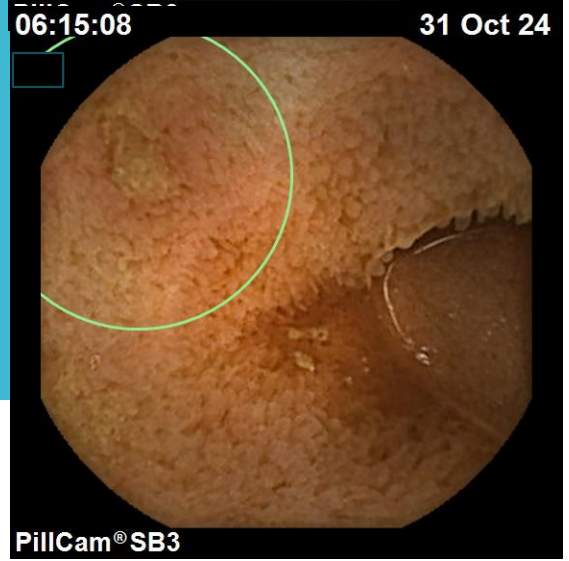
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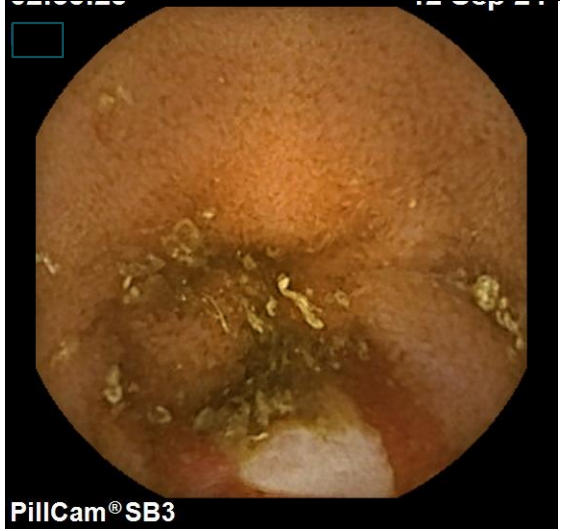
PillCam®SB3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VCE

- Most common cause of small bowel bleeding: angioectasias
  - 40-50% of studies
- If normal, could be missed cause upper/lower GIT
  - i.e. Cameron's erosions
- Capsule excellent diagnostic tool
- Plan management:
  - Nothing
  - Avoid NSAIDs
  - Iron supplementation
  - Oral vs rectal approach balloon enteroscopy
  - Further imaging
- Safe, no sedation, small risk of retention (NSAIDs)
- Preparation:
  - clear fluids after lunch day prior
  - Stop iron tablets 1 week prior

Thank you

Queensland Government | Smart Referrals

Dr Fred Findacure

Patient name: Nicole METRONORTH DoB: 29 Sep 1977

Request information

Request date	21 Oct 2025
* Request type	New referral | Update | Continuation | Request for advice
* Reason for referral	(•) New condition requiring specialist consultation ( ) Deterioration in condition, recently discharged from outpatients < 12 months ( ) Other
* Priority	Urgent | Routine
* Provider	QHSR | Private

Consents

* Date patient consented to request	21 Oct 2025
* Patient is willing to have surgery if required?	Yes | No | Not applicable
* Condition and Specialty	Gastroenterology - Rectal bleeding (Gastroenterology) (Adult) HealthPathways
Suitable for Telehealth?	Yes | No
* Are you the patient's usual GP?	Yes | No

Request recipient

* Service/Location	Please select
Specialist name	
Organisation details	

Gastroenterology	ROYAL BRISBANE & WOMEN'S HOSPITAL	6.4 km	
Gastroenterology	THE PRINCE CHARLES HOSPITAL	12.2 km	
Gastroenterology	REDCLIFFE HOSPITAL	31.5 km	
Gastroenterology	CABOOLTURE HOSPITAL	47.4 km	
Gastroenterology	PRINCESS	1.8 km	Out of catchment

Condition specific clinical information +

Investigations and imaging +

Standard clinical information +

Patient information +

Insurance information +

Rectal bleeding

Emergency department referrals

All urgent cases must be discussed with the on call Gastroenterology Registrar to obtain appropriate prioritisation and treatment. Contact through

- Royal Brisbane and Women's Hospital (07) 3646 8111
- The Prince Charles Hospital (07) 3139 4000
- Redcliffe Hospital (07) 3883 7777
- Caboolture Hospital (07) 5433 8888

Urgent cases accepted via phone must be accompanied with a written referral and a copy faxed immediately to the Central Patient Intake Unit: 1300 364 952.

If any of the following are present or suspected, refer the patient to the emergency department (via ambulance if necessary) or seek emergent medical advice if in a remote region.

- Potentially life-threatening symptoms suggestive of:
  - acute upper GI tract bleeding
  - acute severe lower GI tract bleeding
  - oesophageal foreign bodies/food bolus
  - acute Severe Colitis*
  - bowel obstruction
  - abdominal sepsis
- Severe vomiting and/or diarrhoea with dehydration

*Acute severe colitis as defined by the Truelove and Witts criteria – all patients with ≥ 6 bloody bowel motions per 24 hours plus at least one of the following:

- temperature at presentation of > 37.8°C,
- pulse rate at presentation of > 90 bpm,
- haemoglobin at presentation of < 105 gm/l, CRP >30mg/dl at presentation (or ESR > 30 mm/hr)

Does your patient wish to be referred?

Minimum referral criteria

Does your patient meet the minimum referral criteria?

Category 1
Appointment within 30 days is desirable

- Rectal bleeding with any of the following **concerning features**
  - dark blood coating or mixed with stool
  - weight loss, ≥5% of body weight in previous 6 months
  - abdominal / rectal mass
  - iron deficiency in males and postmenopausal women or unexplained iron deficiency in premenopausal women
  - patient and family history of bowel cancer (1st degree relative <55 years old)

Category 2
Appointment within 90 days is desirable

- Rectal bleeding without any **concerning features**

Other Gastroenterology conditions

Send referral

Hotline: 1300 364 938

Electronic:
GP Smart Referrals (preferred)
eReferral system templates
Medical Objects ID: MQ40290004P
HealthLink EDI: qldmnhhs

Mail:
Metro North Central Patient Intake
Aspley Community Centre
776 Zillmere Road
ASPLEY QLD 4034

Health pathways

Access to Health Pathways is free for clinicians in Metro North Brisbane.

For login details email:
healthpathways@brisbanenorthphn.org.au

Login to Brisbane North Health Pathways:
brisbanenorth.healthpathwayscommunity.org

Locations

Caboolture Hospital
Redcliffe Hospital
Royal Brisbane and Women's Hospital
The Prince Charles Hospital

Resources

Specialists list
General referral criteria