

Continuous Medical Education Rounds



Department of
**Family and
Community Practice**

Vancouver Community of Care
Vancouver Coastal Health

Territory Acknowledgement

Vancouver Coastal Health is committed to delivering exceptional care to 1.25 million people, including the First Nations, Métis and Inuit, within the traditional territories of the Heiltsuk, Kitasoo-Xai'xais, Lil'wat, Musqueam, N'Quatqua, Nuxalk, Samahquam, shíshálh, Skatin, Squamish, Tla'amin, Tsleil-Waututh, Wuikinuxv, and Xa'xtsa.

We wish to acknowledge that the land on which we gather is the traditional and unceded territory of the Coast Salish Peoples, including the x^wməθk^wəy̓əm (Musqueam), Sk̓wx̓wú7mesh (Squamish) and səlilwətaɫ (Tsleil-Waututh) Nations.



Chronic Abdominal Pain

What to Investigate,
When to Stop, and How to Treat

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Disclosures

No financial or nonfinancial relationships to disclose

Several neuromodulator uses discussed are off-label

Recommendations distinguish evidence from clinical judgment

Learning objectives

By the end of this session, participants will be able to:

- 1** Apply a symptom-based framework to make a positive diagnosis of a disorder of gut–brain interaction and identify important alternative causes of chronic abdominal pain.
- 2** Formulate a targeted investigation and safety-netting plan that defines when to stop testing and when to reassess.
- 3** Select an individualized treatment plan incorporating explanation, dietary measures, gut-directed psychological therapies and neuromodulators.

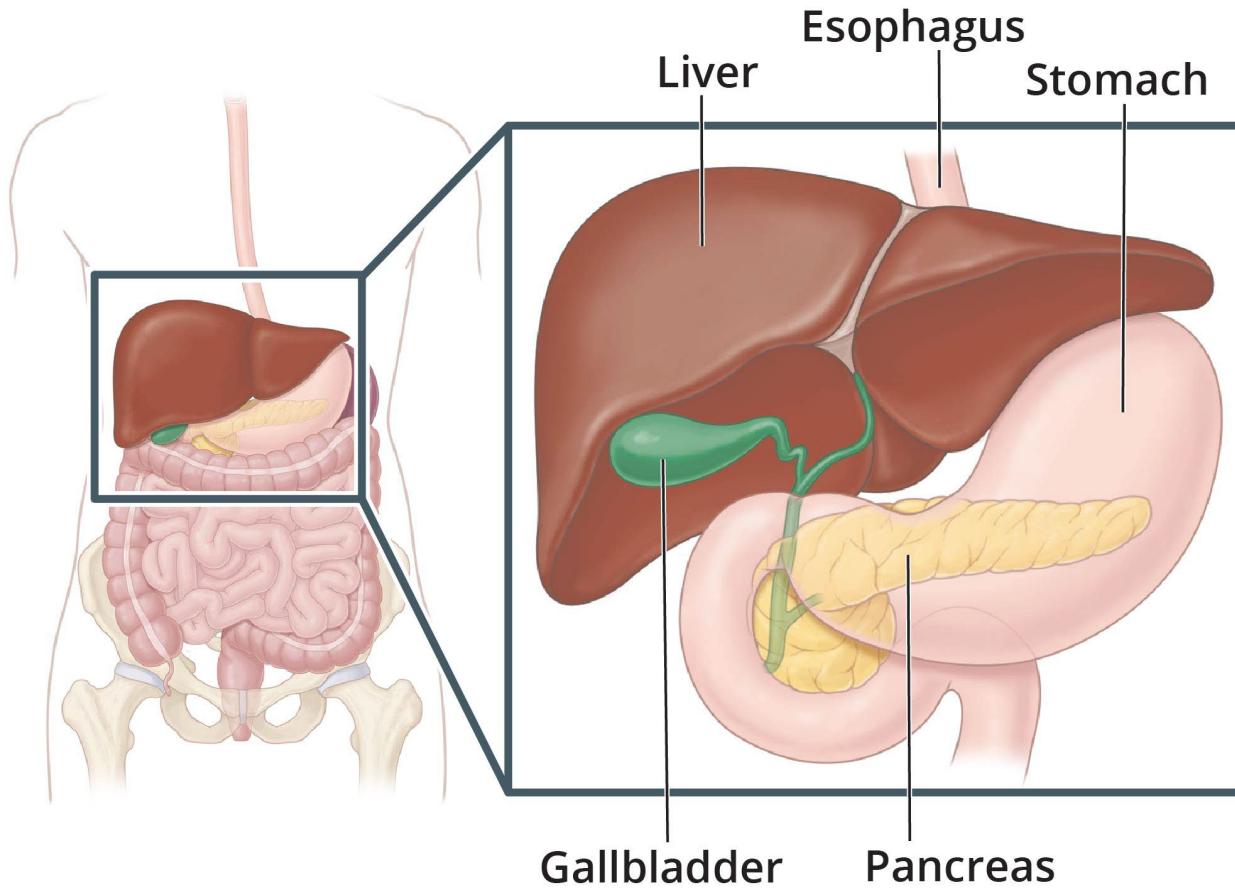
Table of contents

1	Pain patterns and differential	7–12
2	DGBI and Rome V criteria	13–17
3	Making a positive diagnosis	18–19
4	Choosing investigations	20–27
5	Stopping testing and treating pain	28–48
6	Putting the plan into practice	49–50

Abdominal pain: danger and disability

Clinical task	Examples from the differential
Recognize an immediate threat	Ischemia, ruptured aneurysm, perforation, ectopic pregnancy, ACS or DKA
Look for structural or inflammatory disease	Peptic ulcer, celiac disease, IBD, biliary/pancreatic disease or cancer
Recognize major loss of function	IBS, dyspepsia, endometriosis, bladder pain or abdominal wall pain

The differential extends beyond the bowel



GI and hepatobiliary

Meals, stool, bleeding

Vascular / cardiac / metabolic

Abrupt change, systemic illness

Pelvic / urinary

Menses, pregnancy, urination

Wall / nerves

Focal tenderness, movement

Medications / substances

Timing and exposure

Bowel pain: IBS, constipation and IBD

Diagnosis	Typical pain	Other findings	Tests and first treatment
Irritable bowel syndrome (IBS)	Pain/discomfort linked to defecation or altered stool form/frequency.	Bloating, diarrhea and/or constipation; no unexplained alarms.	Targeted blood/stool tests. Explain IBS; treat bowel pattern and pain. No routine CT/scope if low risk.
Chronic constipation	Cramping/bloating with hard or infrequent stools.	Straining, incomplete evacuation; pain may occur without IBS.	Medication review; rectal exam. Tests if indicated. Soluble fibre or PEG 17 g daily; review response.
Inflammatory bowel disease (IBD)	Cramping/focal; UC often lower, Crohn's RLQ or obstructive.	Persistent/nocturnal diarrhea, blood, weight loss or perianal disease.	CBC/CRP/albumin; stool calprotectin + infection tests. GI: scope, biopsies, therapy. ED if toxic, obstructed, dehydrated or bleeding.

Peptic ulcer, gallstone and hepatitis pain

Diagnosis	Typical pain	Other findings	Tests and first treatment
Peptic ulcer disease	Epigastric burning/gnawing; with food, fasting or at night.	H. pylori or NSAIDs; may present with bleeding or perforation.	H. pylori test ± EGD. PPI; review NSAIDs. Eradicate infection; confirm cure. ED for bleeding/peritonism.
Gallstone disease	Steady RUQ/epigastric attacks, usually minutes–hours (<6 h).	Nausea; fever, jaundice or persistent pain suggest complication.	RUQ US; liver tests ± lipase. Analgesia; symptomatic: surgery referral. Fever, jaundice or ongoing pain: same-day ED.
Hepatitis	Often painless; sometimes vague RUQ discomfort.	Fatigue, anorexia, nausea, dark urine or jaundice.	ALT/AST, ALP, bilirubin, INR. Cause-directed tests/treatment; review drugs/alcohol. Coagulopathy or confusion: ED.

Acute and chronic pancreatitis

Diagnosis	Typical pain	Other findings	Tests and first treatment
Acute pancreatitis	New, persistent and often severe epigastric pain. May radiate to the back.	Vomiting, tenderness and systemic illness. Lipase usually elevated.	Same-day ED assessment. Lipase, CBC, renal/liver tests + US. Analgesia, reassessed IV fluids. Early feeding as tolerated.
Chronic pancreatitis	Recurrent or persistent upper abdominal pain. May worsen after food.	Weight loss, steatorrhea or diabetes may develop. Lipase can be normal.	CT or MRI; nutrition/glucose review. Fecal elastase if EPI suspected. GI pain/nutrition plan; stop smoking. Pancreatic enzymes for EPI.

Ischemia and appendicitis

Diagnosis	Typical pain	Other findings	Tests and first treatment
Ischemic colitis	Sudden cramping, urgency; bloody diarrhea often follows.	Vascular risk or a low-flow event; bleeding may be absent.	Same-day ED: contrast CT, fluids, GI. Scope within 48 h if safe. Severe/right-sided disease: urgent surgery assessment.
Acute mesenteric ischemia	Severe new diffuse pain; early examination may appear mild.	Atrial fibrillation, vascular disease or low flow. Lactate may be normal.	ED now: immediate CT angiography. Resuscitation, antibiotics; urgent surgery/vascular assessment.
Appendicitis	Progressive RLQ pain; may migrate from around the umbilicus.	Anorexia, nausea/vomiting $\pm$ fever; often atypical.	Same-day ED/surgical assessment. Analgesia, acute-care imaging: CT often used in adults; US first in children/pregnancy.

DGBI and the Rome criteria

Disorders of gut–brain interaction

Altered motility, sensation and pain processing



1988

Rome congress

The working team

2016

Rome IV

DGBI terminology

2026

Rome V

Updated criteria

International evidence and consensus guide a positive diagnosis.

Rome V: irritable bowel syndrome

Recurrent abdominal pain or discomfort

On average **≥ 3 days/month**. Symptoms are **not continuous**.

At least two associations:

- 1 Defecation
- 2 A change in stool frequency
- 3 A change in stool form

Red text marks changes from Rome IV.

Symptoms for the last 3 months; onset ≥ 6 months before diagnosis.

Rome V: functional dyspepsia

PDS or EPS, without a structural, systemic or metabolic explanation

Postprandial distress syndrome

≥2 days/week

Fullness after meals that limits activity and/or early satiation that prevents finishing a usual-sized meal.

Symptoms begin or worsen within 2 hours of eating.

Both: predominant nausea or persistent vomiting excludes the diagnosis.

Symptoms for the last 3 months; onset ≥6 months before diagnosis.

Epigastric pain syndrome

≥1 day/week

Epigastric pain and/or burning that limits activity. May occur with meals or independently.

PDS criteria are not met.

Rome V: centrally mediated abdominal pain

Centrally mediated abdominal pain syndrome (CAPS)

All of the following are required:

- 1 Continuous abdominal pain**
- 2 No association (A) or variable association (B) with physiological events**
- 3 Pain limits at least one domain of daily life
- 4 Symptoms are not deliberately fabricated
- 5 No other GI or non-GI disorder explains the continuous pain

Symptoms for the last 3 months; onset $\geq$ 6 months before diagnosis.

Rome V: adult abdominal migraine

New adult Rome V category

All attack-pattern criteria

Stereotyped severe pain lasting ≥ 1 hour to several days

Weeks or months between attacks

≥ 3 in the past year AND ≥ 2 in the previous 6 months

Attacks prevent usual activities

At least two associated categories

Personal migraine history

Family migraine history

Appetite loss / nausea / vomiting*

Photophobia

Pallor

Preceding aura or prodrome

*With attacks; these symptoms count as one category.

No other condition fully explains the attacks after appropriate evaluation.

Pattern present ≥ 6 months.

Maya's third visit

“I've started skipping breakfast so I can get through the commute.”

38 years old. Nine months of intermittent pain and loose stools.

Pain changes after defecation. Weight is stable.

Normal CBC, chemistry and CT. Celiac testing still pending.

Avoiding meals and missing shifts. Ten minutes to make a plan.

A positive diagnosis starts with the pattern

Pattern	Useful question	Working diagnosis
Stool-associated pain	Does pain track changes in bowel habit?	IBS
Upper abdominal symptoms	Pain/burning, fullness or early satiation?	Functional dyspepsia
Continuous pain	How does pain interfere with everyday life?	CAPS

Alarm features determine the next action

Finding	Action
Shock, peritonism, major bleed; obstruction or severe dehydration	ED now; EMS if unstable. Hospital admission when indicated.
Weight loss + diarrhea; unexplained IDA or bleeding	Expedited GI + ileocolonoscopy. Right and left colon biopsies for persistent diarrhea.
Progressive dysphagia; persistent vomiting	Expedited GI / upper endoscopy. Food impaction or inability to hydrate: ED.
New IBS-like symptoms ≥ 50 ; high-risk family history	Outpatient colonoscopy for new symptoms ≥ 50 ; earlier with high-risk family history.

Tests to arrange for each presentation

Presentation	Tests to arrange
Typical IBS pattern	CBC; tTG-IgA while eating gluten (total IgA reflexed by the BC laboratory)
Persistent diarrhea	CRP + fecal calprotectin when feasible (suspected IBS-D) Giardia antigen/PCR for chronic watery diarrhea If bile-acid diarrhea suspected: SeHCAT / C4 if available
Dyspepsia	H. pylori urea breath test or stool antigen Upper endoscopy: age ≥ 60 , or selected higher-risk patients
Atypical / focal features	Biliary: ALT/AST, ALP, bilirubin + RUQ ultrasound Suspected acute pancreatitis: lipase Urinary: urinalysis $\pm$ culture if infection suspected Pelvic: hCG if pregnancy possible; US if structural concern

CRP and fecal calprotectin

Guidance	Position
CAG IBS 2019	Against routine CRP/calprotectin in typical IBS
ACG IBS 2021	CRP plus fecal marker in suspected IBS with diarrhea
AGA diarrhea 2019	Fecal markers preferred over CRP/ESR

My BC approach: CRP + fecal calprotectin for suspected IBS-D, when feasible.

When a scope or CT will change care

Typical low-risk IBS under 50: no routine colonoscopy

New dyspepsia at ≥ 60 : arrange upper endoscopy

Younger dyspepsia: H. pylori pathway and risk review

Repeat CT: a new clinical question is required

More tests do not guarantee a better outcome

Low-risk population	Randomized comparison	What changed?
Typical IBS 302 adults, no alarms	Positive diagnosis vs extensive exclusion testing: similar symptoms and QoL.	Initial testing cost was ~18× higher with exclusion. Denmark; 2011–12 tariffs.
Dyspepsia 500 adults, no alarms	H. pylori test-and-treat vs prompt endoscopy: similar symptoms at 1 year.	Test-and-treat used 60% fewer endoscopies over the first year.

A low-yield test still has a cost

Investigation	A useful risk estimate	How to use it
Colonoscopy	BC screening cohort: 44 serious events / 10,000; 6 perforations / 10,000.	Use when benefit is plausible. These older FIT-positive patients differ from Maya.
CT abdomen/pelvis	Typical adult exposure: about 7.7 mSv. Dose varies by protocol.	Avoid repeat CT when the clinical question and examination are unchanged.
“One more normal colonoscopy”	458 younger IBS patients: no greater reassurance after a normal colonoscopy.	Explain what the completed workup means and provide a treatment/follow-up plan.

Back to our case: Maya is losing weight

Eight weeks later: 72 → 68 kg, unintentionally.

Diarrhea persists. She has stopped going to work.

More anxiety, caregiving stress and food avoidance.

Stable observations; no peritonism or dehydration.

What is the next step?

- A Escalate IBS treatment
- B GI referral + colonoscopy with biopsies
- C Repeat CT for reassurance

Fictional composite • eight weeks after the initial visit

Maya: normal colonoscopy and biopsies

Expedited ileocolonoscopy: normal ileum and colon.

Right and left colon biopsies: no microscopic colitis.

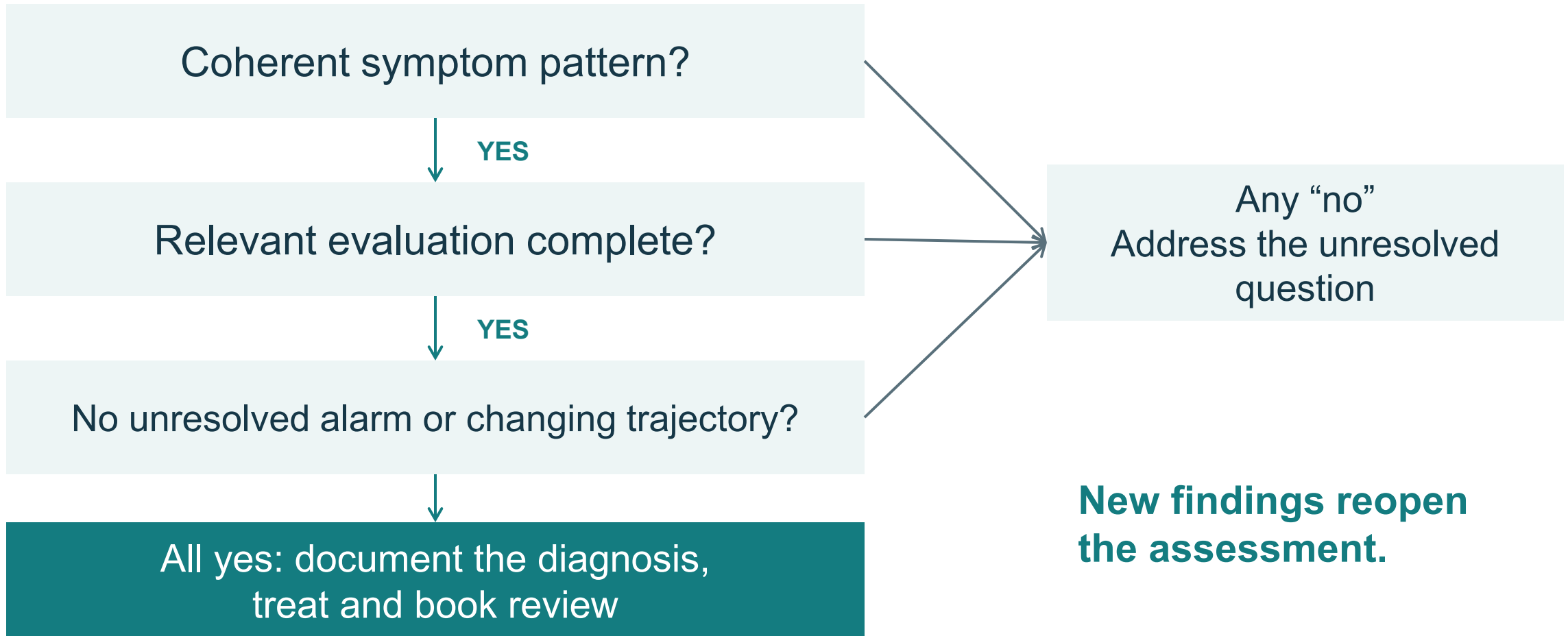
Celiac serology, blood tests and fecal calprotectin reassuring.

Intake reviewed; weight stabilizes over the next month.

What does she need from us now?

If weight continues to fall, reassess. A normal scope does not settle every cause.

A stopping rule with a follow-up plan



What “stopping” sounds like

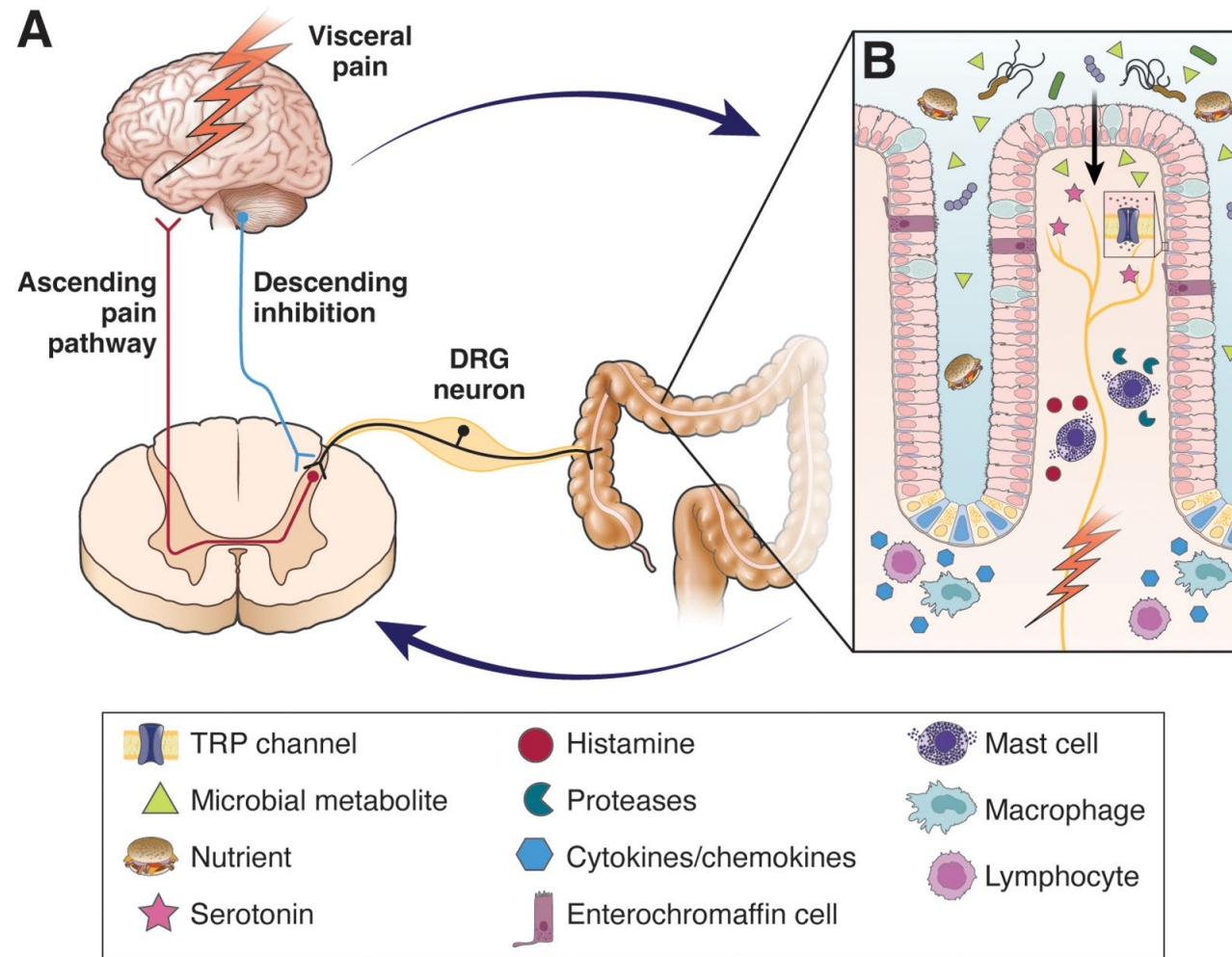
“The completed tests and your symptom pattern fit IBS.”

“Another scan is unlikely to guide treatment today.”

“We have a treatment plan and a review date.”

“New findings would change that plan.”

Why normal digestion can hurt



Gut signals can be amplified

Pain is modulated in both directions

The pain is real, and the system is treatable

A 60-second explanation

“Your pain is real. This pattern fits IBS.”

“Normal digestion can hurt when the nerves are sensitive.”

“We can work on the bowel symptoms and the pain signals.”

What improved, and what still needs treatment?

At follow-up	Next clinical question
Stools improve, pain persists	Does the pain need a different treatment target?
Soft stool, difficult evacuation	Is there a defecatory disorder?
Urgency improves, avoidance persists	Would GI-focused therapy help restore activity?
No useful improvement	Was treatment accessible, tolerated and adequately tried?

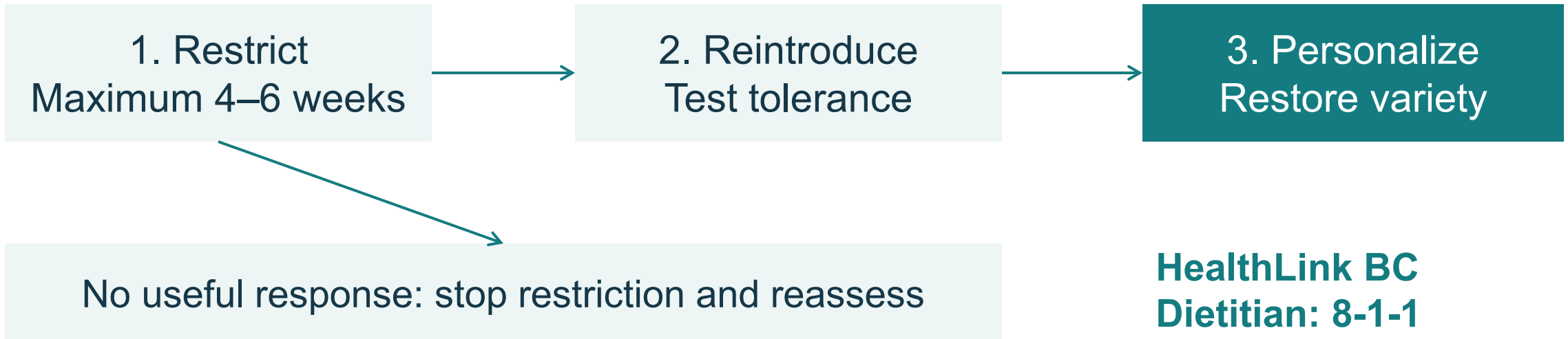
Diet: restriction is only the first phase

Before restricting food: what is the patient already avoiding?

Weight loss, food fear or a very narrow diet: nutrition support first.

For suitable patients with IBS: a low-FODMAP trial

If useful



HealthLink BC
Dietitian: 8-1-1

Low-FODMAP food swaps



Green kiwifruit

Photo: Luc Viatour / Lucnix.be
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Apple or pear

→ **Green kiwifruit or orange**

Regular cow's milk

→ **Lactose-free cow's milk**

Onion or garlic pieces

→ **Chives or garlic-infused oil**

Wheat-based pasta

→ **Rice, or suitable rice/corn/quinoa pasta**

Portion matters. Reintroduce and personalize.

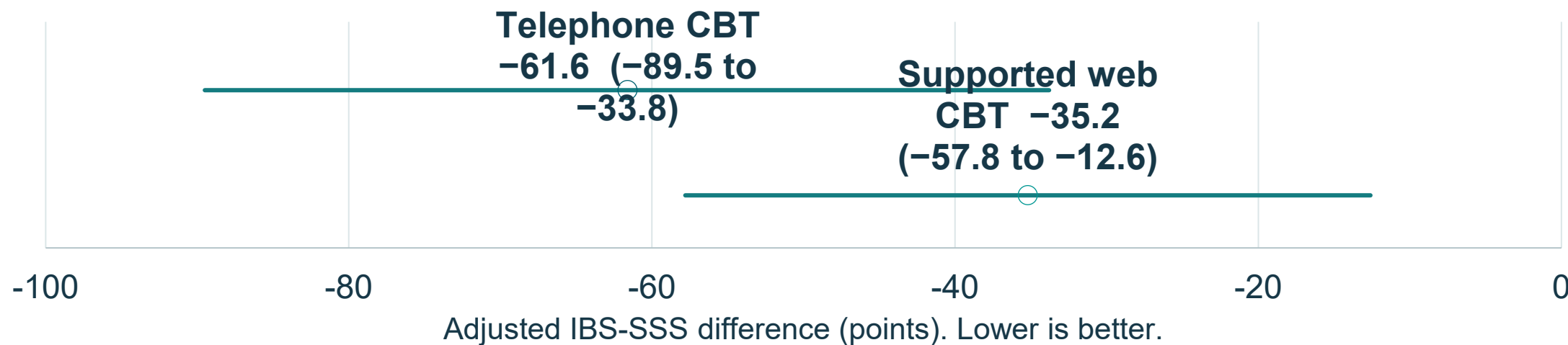
What gut–brain therapies actually do

Therapy	What the patient practises	A useful fit
GI-focused CBT	Identify symptom–fear loops; reframe predictions; gradually resume avoided activities.	Fear of symptoms is shrinking meals, travel or daily life.
Gut-directed hypnotherapy	Focused attention, relaxation and gut-specific imagery; repeated home practice.	Prefers guided audio and can practise consistently.

Treat gut symptoms and restore function; depression is not a prerequisite.

IBS-focused CBT improves symptoms

ACTIB: symptom severity versus usual care at 12 months



Points: adjusted effect. Lines: 95% CI. 558 randomized; 70% followed at 12 months.

Refractory IBS; usual care versus telephone or supported web CBT.

Trained therapists. Homework and exposure. Web treatment was not self-guided.

Hypnotherapy: trial evidence, including Nerva

Primary trial	Treatment and comparator	Reported result
IMAGINE 354 randomized	Six therapist sessions: individual or group hypnosis vs educational support.	Adequate relief at 3 months: 41% individual; 33% group; 17% control.
Nerva 244 randomized	42 daily digital sessions with hypnosis vs active digital program without it.	≥50-point IBS-SSS reduction at program completion: 81% vs 63% (p = .002).

Different endpoints and delivery methods: do not compare percentages across trials.

Give the patient a route to start

Therapist route: ask specifically for GI-focused CBT or gut-directed hypnotherapy.

Nerva: a self-guided option at nervahealth.com — about 15 minutes daily for 6 weeks.

Paid subscription after a 7-day trial; check Canadian price and renewal terms.

Agree on a functional goal and review symptoms, adherence and benefit.

Neuromodulators treat pain signalling

Enteric nervous system

Local gut circuits coordinate movement and secretion.

Brain and spinal cord

Central circuits interpret and modulate incoming pain signals.

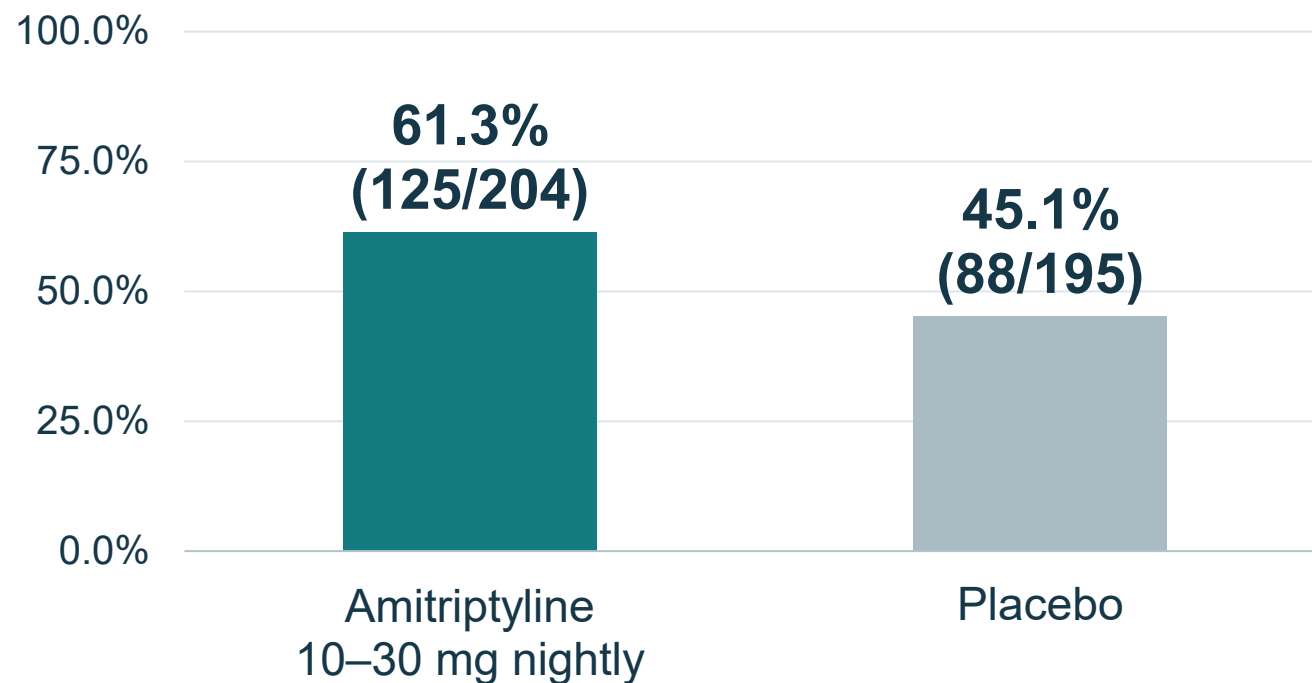
Shared chemical messengers; different circuits and drug effects.

“I suggest a neuromodulator to reduce the pain response.”

“The same medicine is also used for depression. Here, our target is gut pain.”

Amitriptyline: the ATLANTIS trial

ATLANTIS: global symptom relief at 6 months



Relief = somewhat, considerably or completely relieved.

Observed secondary endpoint. Adjusted OR 1.78 (95% CI 1.19–2.66).

ATLANTIS: Wright-Hughes et al. HTA 2024, Tables 17–18 [V5]. CC BY 4.0.

463 adults

IBS despite first-line treatment

Double-blind RCT

10–30 mg amitriptyline vs placebo

Primary outcome

IBS-SSS difference –27 points (95% CI –47 to –7)

A low-dose TCA for IBS pain

Agent	Start and titrate	Clinical fit and limits
Amitriptyline	10 mg at bedtime Add 10 mg every 1–2 weeks Initial IBS range: 10–30 mg	Pain ± diarrhea Strongest direct IBS evidence Watch sedation and constipation
Nortriptyline	10 mg at bedtime Add 10 mg every 1–2 weeks Common pain range: 25–50 mg	May cause fewer anticholinergic effects Less direct DGBI evidence FD trials were negative

Before prescribing: cardiac assessment / ECG, interactions, retention, falls and overdose risk.

SNRIs: selected alternatives, with a clear plan

Agent	Practical starting approach	Evidence and monitoring
Duloxetine	30 mg daily After 1–2 weeks: 60 mg if needed and tolerated	Broader pain / TCA intolerance Limited direct IBS evidence BP/HR; renal and liver status
Venlafaxine XR	37.5 mg daily for ~1 week → 75 mg Then consider 112.5 → 150 mg Later steps ≥2 weeks apart	Selected use; no established DGBI target Small IBS trial; FD RCT negative BP, pulse and withdrawal risk

Use the lowest useful dose. These are off-label clinical approaches, not equivalent proven regimens.

Mirtazapine for selected functional dyspepsia

Selected FD: early satiation, poor intake and weight loss after appropriate evaluation

Mirtazapine: 15 mg at bedtime is the studied FD dose

Monitor daytime sedation, appetite and weight; do not automatically escalate

Every prescription needs a review and a stopping rule

Choose one symptom goal and one functional goal; review in 2–4 weeks

At about 8–12 weeks: useful benefit, tolerable harms and an adequate dose trial?

No useful benefit or persistent intolerance: reassess and plan to stop

Serious adverse effects or a new alarm: assess promptly; do not simply escalate

Stopping neuromodulators: tapering

Reduce the daily dose in steps; use smaller reductions near the end.

Let symptoms set the pace: weeks, sometimes months or longer.

Dizziness, “brain zaps” and nausea can be withdrawal. Pause or slow down.

Venlafaxine XR example: 150 → 112.5 → 75 mg

Review each step. Later reductions may need pharmacy support; avoid alternate-day dosing.

Opioids and cannabis can perpetuate symptoms

Exposure	Clinical clue	Next step
Opioids	Pain worsens despite dose escalation	Recognize narcotic bowel. Coordinated reduction
Cannabis	Recurrent stereotyped vomiting	Consider CHS. Cessation and reassessment

Avoid opioids for DGBI pain. Evidence does not support routine cannabis treatment.

Match the allied clinician to the problem

Referral	A useful trigger	What to ask for
GI dietitian	Food triggers, a shrinking diet, or nutritional risk.	Adequate intake; tailored advice; short restriction only if suitable, then reintroduction.
GI-focused psychotherapy	Symptoms are driving fear, avoidance or loss of function.	GI-focused CBT or gut-directed hypnotherapy. Depression is not required.
Pelvic-floor biofeedback	Persistent straining, blockage or incomplete evacuation despite soft stools.	Assess for defecatory disorder: DRE → manometry/balloon test; then evacuation retraining.

Build a team with a shared treatment target

Approach	What it can offer	Evidence and limits
Pain physiotherapy	Graded activity, confidence in movement and return to valued activities.	Supportive IBS activity trial; broader pain evidence. Not proven visceral manipulation.
Acupuncture	An optional adjunct if the patient values it and can assess benefit/cost.	Older sham trials negative; 2025 IBS-D trial positive: 58% vs 41% response.
Integrated care	Coordinate nutrition, bowel function, gut–brain therapy and medication.	MANTRA: improvement 84% integrated vs 57% GI-only. One clinic; open-label trial.

Back to Maya: her treatment and flare plan

“I am eating more regularly. I am planning my return to work.”

Weight stable. Nutrition support and GI-focused CBT. Discuss neuromodulation.

Goal: breakfast and a graded return to work. Review in 2–4 weeks.

Usual flares: familiar cramps and urgency. Follow the agreed symptom plan.

Write down medication limits and when to contact the clinic.

New weight loss or bleeding: reassess. Severe deterioration: urgent care.

Five things to take into clinic

- 1 Name the disorder from the pattern
- 2 Investigate new concerns; stop unhelpful repetition
- 3 Explain the pain before prescribing
- 4 Match treatment to symptoms, risks and access
- 5 Book follow-up and measure function

SIBO, microbiome and food-sensitivity tests

Test	What changes care?
SIBO breath tests	Guidelines disagree on routine testing in IBS. Anatomy, motility and test protocol matter.
Commercial microbiome profiles	Routine IBS treatment selection lacks proven clinical utility. A dysbiosis score does not establish a treatment plan.
Food-specific IgG panels	They do not diagnose food allergy. New IBS assay trials need separate appraisal. Avoid blanket exclusions based on a panel alone.

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[\[V1\] NIDDK / NIH: abdominal anatomy. Stomach, Pancreas, and Gallbladder with English Labels. Asset 23133. Copyright-free institutional image.](#)

[Rome Foundation: official logo. Official colour logo, 2026. Reproduced intact for identification; no endorsement implied.](#)

[Luc Viatour: kiwifruit photograph. Kiwi \(*Actinidia chinensis*\), 2008. CC BY-SA 2.5. Reproduced intact.](#)

[\[V2\] Ford et al. Gastroenterology 2024;166:976–994. Figure 1: pain pathways. Reproduced intact. CC BY-NC-ND 4.0.](#)

[\[V3\] Sultan et al. J Neurogastroenterol Motil 2022;28:343–356. Figure 1: FODMAP phases. Simplified and adapted. CC BY-NC 4.0.](#)

[\[V4 / V5\] ACTIB and ATLANTIS: primary trial data. Editable charts redrawn from Everitt et al. Table 3 \(CC BY-NC 4.0\) and Wright-Hughes et al. Tables 17–18 \(CC BY 4.0\).](#)

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