

Diagnostic imaging in clinical practice

Evidence-based clinical guidelines, such as Diagnostic Imaging Pathways from the Western Australian Department of Health, can help to support your decisions for diagnostic imaging in clinical practice.

KEY POINTS

- ▶ 'Diagnostic Imaging Pathways' can help you to select the most appropriate type of diagnostic imaging for your patient, recognising the importance of clinical history and examination to supporting your decision making.
- ▶ The imaging pathways contain recommendations for a wide variety of conditions.
- ▶ Other helpful resources about medical imaging can be found on the NPS MedicineWise website at nps.org.au/medical-imaging.

How can Diagnostic Imaging Pathways help you?

Diagnostic Imaging Pathways (DIP) are arranged by organ system and presented as a series of flow charts. These charts demonstrate the most appropriate diagnostic imaging for a variety of clinical situations,¹ such as chronic abdominal pain (Fig. 1).

Limiting the use of diagnostic imaging tests to when they are clinically indicated, should help to reduce the risk of false-positive or false-negative results,² incidental findings³ and, in some cases, the risk of unnecessary radiation exposure.⁴

Each pathway contains a recommended course of action, not a rigid set of rules – as individual patients and their situations should always be considered.¹

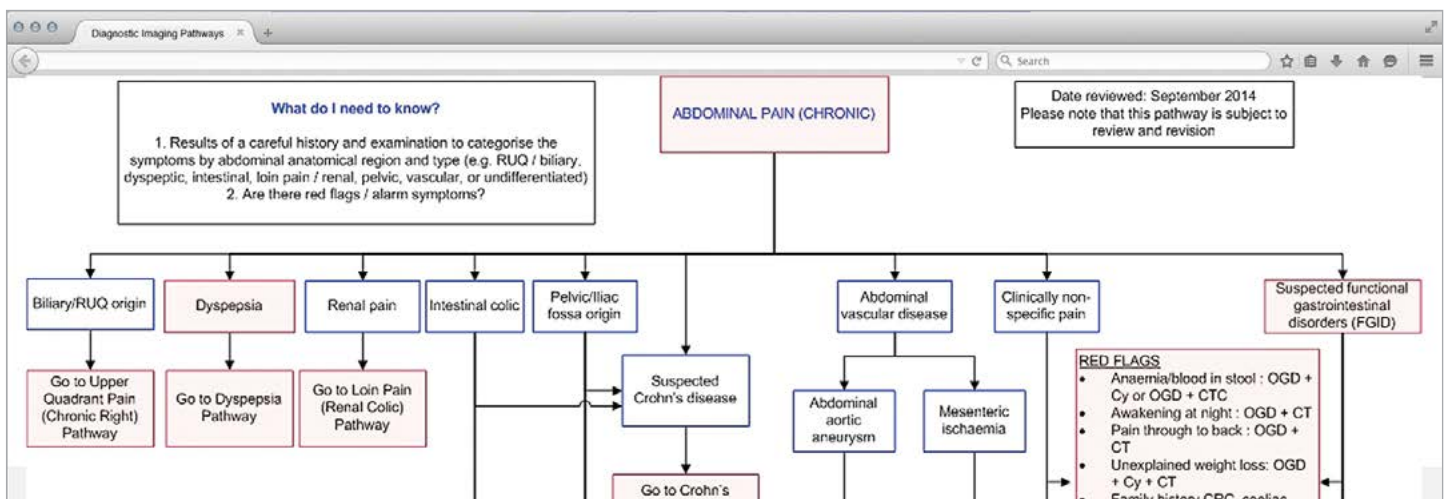


Figure 1. DIP for chronic abdominal pain. After selecting the relevant organ system, navigate to the relevant clinical scenario to find recommendations on appropriate diagnostic imaging.

Guidance for investigating chronic abdominal pain in adults

Abdominal pain is one of the most common patient presentations in general practice.⁵ As an example, the following are top-line recommendations from DIP, for patients with chronic abdominal pain.⁶

Key recommendations

- ▶ When imaging is appropriate, ultrasound is often the primary imaging investigation tool of choice – particularly for children, adolescents and women who are pregnant or of child-bearing age.
- ▶ Use ultrasound to investigate suspected biliary disease and upper right quadrant pain.
- ▶ Imaging is not usually needed for patients with suspected irritable bowel syndrome (IBS) - unless alarm symptoms or signs are present or warranted based on individual clinical context.

Alarm symptoms/signs when considering IBS include:⁶

- ▶ anaemia
- ▶ blood in stool
- ▶ unexplained weight loss
- ▶ awakened by gastrointestinal symptoms
- ▶ family history of colon cancer
- ▶ antibiotic use
- ▶ symptom onset after age 50 years

- ▶ Imaging for dyspepsia is not usually needed unless warning features are present in combination with a normal endoscopy result. Selection of imaging modality depends on whether the problem is suspected to be biliary (ultrasound) or pancreatic (CT).

Warning features for dyspepsia include:⁶

- ▶ age >55 years and recent onset of symptoms
- ▶ daily constant pain
- ▶ weight loss
- ▶ NSAID use
- ▶ vomiting
- ▶ history of gastric ulcer or gastric surgery
- ▶ anaemia
- ▶ dysphagia
- ▶ bleeding
- ▶ epigastric mass

- ▶ Limit use of diagnostic imaging for non-specific chronic abdominal pain to patients with red flags or situations such as:
 - suspected pancreatic disease (CT)
 - pain through to the back (CT)
 - suspected Crohn's disease: First-line diagnostic imaging is commonly ultrasound, followed by colonoscopy and biopsy. CT or MRI may be required to assess extent and extramural disease, or when the patient fails to respond to treatment.
 - renal loin pain: If younger than 50 years old at first presentation (ultrasound or CT depending on clinical situation) or if pregnant (ultrasound). If older than 50 years, CT is usually preferable
 - pelvic pain (ultrasound or CT, depending on suspected diagnosis).

Note: This is a general summary of the guidance for investigating chronic abdominal pain in adults. To see the complete guidance visit the DIP and select abdominal pain (chronic).

Further information

Diagnostic Imaging Pathways from the WA Department of Health - www.imagingpathways.health.wa.gov.au

- Now available as an iPhone app - visit www.dipmobileapp.com/

Imaging for chronic abdominal pain – Australian Prescriber, April 2015. www.australianprescriber.com/magazine/38/2/49/54

When to use imaging for chronic abdominal pain – nps.org.au/imaging-abdominal-pain/when-to-use-imaging

Essentials in an imaging referral – nps.org.au/imaging-abdominal-pain/essentials-in-a-referral

CT = computed tomography, MRI = magnetic resonance imaging

References

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