

## When do people with abdominal symptoms need a fast-track referral?

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*This is a plain English summary of an [original research](#) article*

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Most people with abdominal symptoms such as pain or bloating are not referred for urgent tests because their risk of serious disease is not seen to be high enough. New research suggests that GPs could combine people's risk of cancer with their risk of inflammatory bowel disease (IBD). This approach would make many more people eligible for fast-track specialist assessments, and some might be diagnosed earlier.

One in ten people who visit their GP report a symptom in their abdomen. These include indigestion, bloating, difficulty swallowing, a change in bowel habit, or finding blood in poo (rectal bleeding).

Most people with these abdominal symptoms do not meet the national threshold for a fast-track referral for specialist assessment. The chances of successful treatment for either disease are better when they are diagnosed early, but both cancer and IBD are associated with delayed diagnoses. Furthermore, many of the tests used to diagnose abdominal cancers are the same as those for IBD. Combining the risks could potentially lead to earlier diagnosis of both these conditions.

This large study was based on the primary care data of more than 1.9 million people. It suggests that combined assessment of the risks of cancer and of IBD can be useful. This would support decisions by GPs to request urgent specialist assessment for more people with abdominal symptoms.

This study provides new and detailed information about the risk associated with each symptom for different groups of people. For example, rectal

bleeding in people of all ages would trigger urgent referral. Pain or a change of bowel habit would lead to referral only in the over 60s. The findings could inform future updates to clinical guidelines and will help GPs decide which patients can benefit from referral.

## What's the issue?

Common symptoms that occur in the abdomen, or tummy area, include pain, bloating, and changes in bowel habit. [About one in ten people visiting their GP](#) are reporting on a new symptom in this part of the body.

Most abdominal symptoms resolve quickly. However, occasionally, they can indicate that someone has cancer, or IBD, which is a long-term condition involving inflammation of the gut. These are both serious conditions which are difficult to diagnose. GPs need to decide whether to refer someone, which tests or scans they need, and which specialist they should see.

Cancer and IBD can take a long time to diagnose in some patients. The delay reduces patients' chances of successful treatment.

[Current guidelines advise](#) GPs to fast-track people to hospital for further investigation when their abdominal symptom means they have an estimated risk of cancer of 3% or higher. To help GPs decide when to refer someone, the risk associated with each abdominal symptom has previously been estimated.

The positive predictive value (PPV) describes how many people with a given symptom are expected to have cancer. For example, of 100 people who have difficulty swallowing (dysphagia), on average, 5 or 6 will have stomach cancer. This risk (or PPV) of 5.5% is higher than the threshold (3%), and therefore GPs would refer someone with dysphagia for urgent assessment. These people should have an endoscopy (to examine oesophagus, stomach, and upper intestine) within two weeks.

IBD and many cancers share similar symptoms and may require similar specialist investigation. For these reasons, the authors of this study decided to study the combined risks of cancer and IBD in people with common abdominal symptoms.

## What's new?

The study was based on anonymous data from about 1.9 million patients who visited their GP between 2000 and 2016. Researchers assessed the likelihood of cancer and of IBD in people with six common abdominal symptoms: tummy pain, indigestion (dyspepsia), rectal bleeding (blood in poo), changes in bowel habits (such as a change in poo consistency), bloating and difficulty swallowing.

Diagnoses of cancer and of IBD during the year after someone complained to their GP about one or more of these abdominal symptoms were analysed. Then, for each abdominal symptom, researchers estimated the risk that someone with that symptom would develop cancer, or IBD, within a year of the GP consultation.

The research team then combined the risks of cancer and IBD. They found that the threshold for urgent investigation was exceeded in:

- people of all ages, with difficulty swallowing or rectal bleeding
- people over 60, with tummy pain, change in bowel habit, or indigestion.

Having two or more symptoms, rather than just one, was more likely to be linked to cancer or IBD. A change in bowel habit combined with any other symptom markedly increased the risk. The highest risks of IBD or cancer (between 5% and 8%) came from a change in bowel habit in combination with rectal bleeding.

The study gave new and detailed information on the specific risks among different groups of people. For cancer alone, the threshold for urgent investigation was exceeded in:

- men aged 50 and over, with difficulty swallowing
- men aged 60 and over, with a change in bowel habit or rectal bleeding
- men aged 70 and over, with tummy pain, indigestion, or bloating
- women aged 60 and over, with difficulty swallowing or rectal bleeding
- women aged 70 and over, with a change in bowel habit.

Risk of IBD was similar across age groups. In women and younger men, the risk of cancer was similar to the risk of IBD. In men over the age of 60, cancer was more likely than IBD.

## Why is this important?

Most abdominal symptoms do not trigger urgent investigation. However, if people's risks of IBD and cancer were combined, many more could be referred to specialist services. This could lead to more prompt investigations and diagnosis of either IBD or cancer.

The findings show the increased risks to people with more than one symptom, and they add to the small amount of existing research about the symptoms and incidence of IBD.

This new information can help GPs decide which tests and scans their patient is most likely to need, and which specialist hospital service they should be referred to.

## What's next?

The findings will help GPs decide which patients can benefit from referral and could inform future updates to clinical guidelines.

The researchers would like to examine more closely the risks among people who approach their GP with more than one symptom.

In future, they plan to use a similar approach to explore the joint risks of cancer and other diseases. These studies would help assess the risk of serious illness in people with non-specific symptoms.

## You may be interested to read

The paper this NIHR Alert is based on: Herbert A and others. [Predictive values for different cancers and inflammatory bowel disease of 6 common abdominal symptoms among more than 1.9 million primary care patients in the UK: A cohort study](#). *PLoS Medicine* 2021;18:e1003708

[A summary of current NICE guidelines for suspecting cancer in primary care](#) from Cancer Research UK.

An article explaining the meaning of predictive values: Altman DG and Bland JM. [Statistics Notes: Diagnostic tests 2: predictive values](#). *BMJ* 1994;309;102

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