How is bowel cancer diagnosed?

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As part of your diagnosis you usually begin by seeing your local doctor, who will examine you and refer you to hospital for some tests. The tests or scans you have depend on your symptoms and what is available at your hospital or treatment centre. You may have two or more tests to diagnose bowel cancer.

The types of tests include:

• General tests to check your overall health and body function.
• Tests to find cancer.
• Tests to work out if the cancer has spread (metastasised).

Some tests may be repeated after your diagnosis to check how well the treatment is working.

General tests

Physical examination

Your doctor may feel your abdomen for any swelling.

You may also have a digital rectal examination. Your doctor inserts a gloved finger into your rectum to feel for any lumps or swellings. While this test only finds cancer in the early part of the bowel, it’s a good initial examination.

The digital rectal examination may be uncomfortable but shouldn’t be painful. Trying to relax during the test usually helps. The test may make you feel like you are going to open your bowels but it is very unlikely that this will happen.

Faecal occult blood test

Blood in your stools (faeces) may be a sign of bowel cancer. Some people have a faecal occult blood test (FOBT) to check their faeces for traces of blood that can only be seen with a microscope.

The FOBT can be done at home using a special kit. If the test is positive (you have blood in your stool) contact your doctor. In some cases blood in the stool is due to haemorrhoids or another benign condition. However it may be a symptom of bowel cancer so it is important to have further tests.
**Blood test**

You may have a blood test to assess your general health and to measure a protein molecule called carcinoembryonic antigen (CEA), which is produced in high quantities by some cancer cells.

Doctors usually perform further tests if your blood tests show that you have a high CEA level as other conditions, such as smoking, may also increase CEA levels. The blood test may also measure chemicals that are found or made in your liver.

You may have a blood test to check for anaemia (low red blood cell levels). Anaemia is common in people with bowel cancer but may also be caused by other conditions.

**Bowel preparation**

Before some diagnostic tests, such as a sigmoidoscopy or a colonoscopy, you will have to clean out your bowel. This will help the doctor see inside the bowel clearly.

This cleaning process may vary from hospital to hospital your health professional will give you specific instructions.

**Tests to find cancer**

**Sigmoidoscopy**

This test allows the doctor to see the lower part of the colon. To have a sigmoidoscopy you will need to have an empty bowel.

Before the test your doctor may give you a light anaesthetic. You will lie on your side on an examination table and a rigid or flexible tube (sigmoidoscope) will be gently inserted into your anus.

The sigmoidoscope blows air into the bowel. This inflates the bowel slightly and allows the doctor to see the bowel wall more clearly. Any unusual areas can be seen with the light at the end of the tube. The doctor can also use the sigmoidoscope to remove a piece of tissue (such as a polyp) for examination. This is called a biopsy.

A sigmoidoscopy takes about 10 to 20 minutes. Though it may feel uncomfortable it should not be painful. Cramping and pressure in your lower abdomen will ease when the air leaves your colon after the test is over.

**Colonoscopy**

A colonoscopy examines the whole length of the large bowel. Before a colonoscopy you will have a bowel preparation to clean your bowel.

On the day of the procedure you will probably be given an anaesthetic to make you drowsy or put you to sleep during the examination.

Your doctor inserts a flexible tube with a camera on the end, called an endoscope, into your anus and up into your rectum and colon. Your doctor will pump air into your colon. If polyps are found during the procedure they will be removed for further examination (biopsy). A colonoscopy usually takes about 20 to 30 minutes.

The main side effect of a colonoscopy is temporary flatulence and wind pain which is caused by air pumped into the large bowel during the procedure. More serious but rare complications that may occur include puncturing of the bowel or bleeding. Your doctor will talk to you about the risks of this procedure.
You’ll need to arrange to have someone take you home after the colonoscopy as you may feel drowsy or weak.

A colonoscopy is the most accurate test for assessing the colon and rectum.

**Virtual colonoscopy**

Some people have a virtual colonoscopy. This is a medical imaging procedure that uses a CT or MRI scanner to create images of the colon and rectum and display them on a screen instead of putting an endoscope into your bowel.

Before a virtual colonoscopy you will have a bowel preparation to clear out your bowel.

You will probably lie on your back or stomach for the procedure. A thin tube will be inserted into your rectum and air will be pumped into your colon. This may feel uncomfortable, talk to your doctor if you are concerned.

After your colon is inflated you will be moved into the scanner. The scanner will create 3D images of your colon while you hold your breath for short intervals.

A virtual colonoscopy is a less invasive procedure than a colonoscopy, but your doctor will not be able to see a detailed picture of your colon or take samples of tissue. If any abnormalities are suspected or if the scan results are unclear, you will have a standard colonoscopy.

**Barium enema**

A barium enema is a type of x-ray procedure of the bowel. Barium is a special white contrast liquid that shows up on x-rays. Before having this procedure you will have a bowel preparation.

During a barium enema you will lie on an x-ray table while a barium-filled tube is inserted into your rectum and released into your colon. The doctor may also pump air into your colon to force the enema fluid into creases in the bowel wall.

The barium will show up any lumps or swellings and x-rays of your inflated colon will then be taken. This 30-minute test can be uncomfortable but is not usually painful.

For a couple of days after the barium enema your stools may be white. This is the barium being removed from the body. The barium can also cause constipation and you may need to take a mild laxative for a couple of days.

**Further tests**

If the tests described above show you have bowel cancer, you will have more tests to see if the cancer has spread to other parts of your body. You may have to have more than one type of scan. Scans are painless and are usually done as an outpatient. Most people are able to go home as soon as the procedure is over.

**CT (computerised tomography) scan**

This uses x-ray beams to form a more detailed picture of the inside of the body.

Before the scan a dye may be injected into one of your veins to help create clearer pictures. The dye may make you feel hot all over for a few minutes and may also leave a strange taste in your mouth.

It usually takes about 30 minutes to set up the scan. However the scan itself takes about five to 10 minutes. The CT scanner is large and round like a doughnut. You will lie on a table that moves in and out of the scanner and takes pictures.
MRI (magnetic resonance imaging) scan

This uses both magnetism and radio waves to build up detailed cross-section pictures of the body. An MRI may give you more detail than a CT scan. A special dye may be injected into your veins before the scan.

You will lie on a table that slides into a metal cylinder that is open at both ends. Some people find lying in the narrow metal cylinder noisy and claustrophobic. Let your health care team know if you are uncomfortable as they may be able to give you a mild sedative to make you feel more relaxed. People who have a pacemaker or certain other metallic objects in their body cannot have an MRI due to the effect of the magnet.

The dye used for a CT or MRI scan is called a contrast solution and may contain iodine. If you are allergic to iodine, fish or dyes, let the person performing the scan know in advance.

PET (positron emission tomography) scan

During this scan you will be injected with a small amount of radioactive glucose solution. It takes 30 to 90 minutes for the solution to circulate around your body, and you will be asked to sit quietly during this time.

Your body will be scanned for high levels of the radioactive glucose. Cancer cells show up brighter on the scan because they are more active and take up more of the glucose solution than normal cells. Though it may take several hours to prepare for and have a PET scan, it is usually done on an outpatient basis.

Abdominal ultrasound

This scan may be used to look at the liver. This test uses soundwaves to build up a picture of the inside of the body. A gel is spread over your abdomen to conduct the soundwaves and a small device called a transducer is passed over the abdominal area.

The device sends out soundwaves that echo when they encounter something dense, like a tumour. The ultrasound images are projected onto a computer screen. An ultrasound is painless and takes about 15 to 20 minutes.

Endorectal ultrasound

This is usually performed if other tests have detected cancer in your rectum or anus. This type of ultrasound finds abnormalities in the rectal area and helps your doctor determine the size of the cancer and if it has spread into the bowel wall. It may also be used to help a surgeon plan surgery or decide whether further treatment is needed.

A short device called a probe is inserted through the anus into your rectum. The soundwaves that are generated from the probe will form a picture on a computer screen. You will probably experience some discomfort but the procedure is not painful.

An endorectal ultrasound usually takes about 10 minutes. After the ultrasound there may be some bleeding from the rectum, though this should settle within a few days.

Chest x-ray

A chest x-ray may be taken to check if the cancer has spread to the lungs or lymph nodes in your chest.

Want to know where this information comes from? Click here.