



# A guide to...

## Colon Cancer and Rectal Cancer

*Patient information*

### How to contact us

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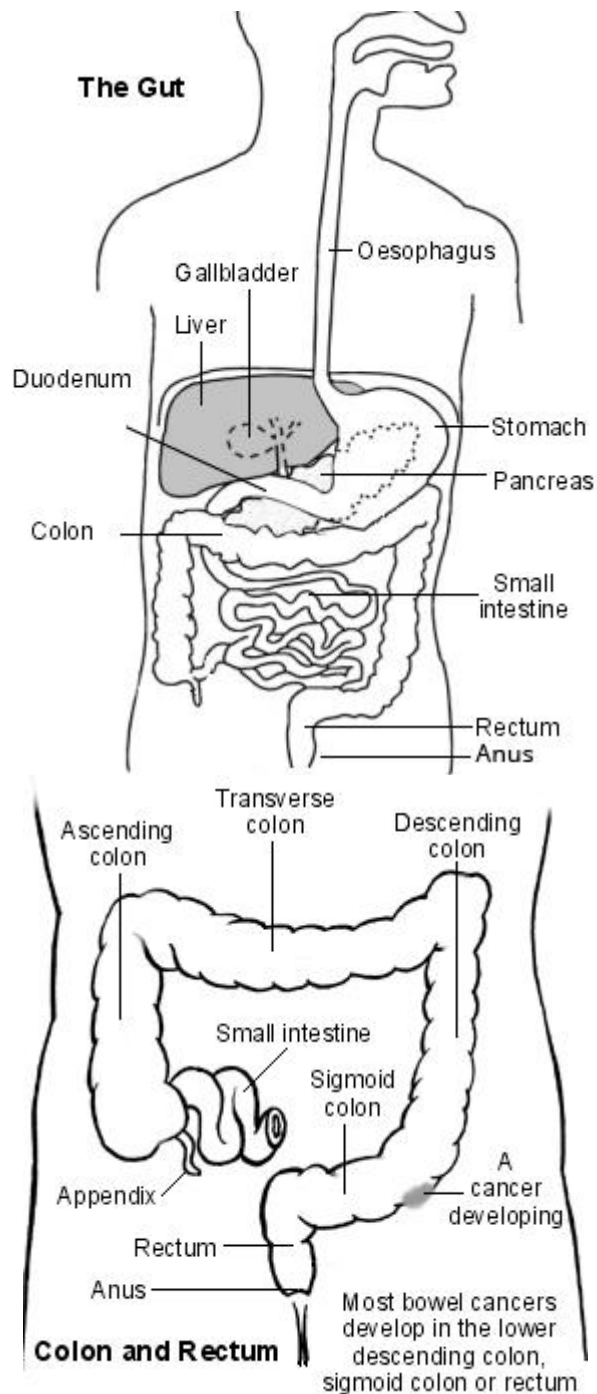
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Colon cancer and rectal cancer (also called colorectal cancer) are common in the UK. The colon and rectum are parts of your bowel. Most cases occur in people aged over 50. If bowel cancer is diagnosed at an early stage, there is a good chance of a cure. In general, the more advanced the cancer (the more it has grown and spread), the less chance that treatment will be curative. However, treatment can often slow the progress of the cancer.

### Where are the colons or rectum?

The colon and rectum are parts of the bowel or gut (gastrointestinal tract). The gut starts at the mouth and ends at the anus. When we eat or drink; the food and liquid travel down the oesophagus into the stomach. The stomach churns up the food and then passes it into the small intestine.



The small bowel (small intestine) is several metres long and is where food is digested and absorbed. Undigested food, water and waste products are then passed into the large bowel (large intestine). The main part of the large intestine is called the colon, which is about 150 cm long. This

is split into four sections: the ascending, transverse, descending and sigmoid colon. Some water and salts are absorbed into the body from the colon. The last part of the colon is called the rectum, which is about 15 cm long. The rectum stores stools (faeces) before they are passed out from the anus.

## **What is cancer?**

Cancer is a disease of the cells in the body. The body is made up from millions of tiny cells. There are many different types of cell in the body, and there are many different types of cancer which arise from different types of cell. What all types of cancer have in common is that the cancer cells are abnormal and multiply out of control.

A malignant tumour is a lump or growth of tissue made up from cancer cells which continue to multiply. Malignant tumours invade into nearby tissues and organs, which can cause damage. Malignant tumours may also spread to other parts of the body. This happens if some cells break off from the first (primary) tumour and are carried in the bloodstream or lymph channels to other parts of the body. These small groups of cells may then multiply to form secondary tumours (metastases) in one or more parts of the body. These secondary tumours may then grow, invade and damage nearby tissues and can spread again.

Some cancers are more serious than others, some are more easily treated than others (particularly if diagnosed at an early stage), some have a better outlook (prognosis) than others.

So, cancer is not just one condition. In each case it is important to know exactly what type of cancer has developed, how large it has become and whether it has spread. This will enable you to obtain reliable information on treatment options and outlook.

## **What is colon or rectal cancer?**

Cancer of the colon or rectum is sometimes called colorectal cancer, bowel cancer or cancer of the large intestine. It is one of the most common cancers in the UK. (In contrast, cancer of the small intestine is rare.) Bowel cancer can affect any part of the colon or rectum. However, it most commonly develops in the lower part of the descending colon, the sigmoid colon, or rectum.

Bowel cancer usually develops from a small fleshy growth (polyp) which has formed on the lining of the colon or rectum (see below). Sometimes bowel cancer begins from a cell within the lining of the colon or rectum which becomes cancerous.

(Some rare types of cancer arise from various other cells in the wall of the colon or rectum. For example carcinoid, lymphoma, and sarcomas; these are not dealt with further in this leaflet.) As the cancer cells multiply they form a tumour. The tumour invades deeper into the wall of the colon or rectum. Some cells may break off into the lymph channels or bloodstream. The cancer may then spread (metastasise) to lymph nodes nearby or to other areas of the body - most commonly, the liver and lungs.

## **Polyps and bowel cancer**

A bowel polyp (adenoma) is a small growth that sometimes forms on the inside lining of the colon or rectum. Most bowel polyps develop in older people. About 1 in 4 people over the age of 50 develop at least one bowel polyp. Polyps are non-cancerous (benign) and usually cause no problems.

However, sometimes a benign polyp can turn cancerous. If one does turn cancerous, the change usually takes place after a number of years. Most bowel cancers develop from a polyp that has been present for 5-15 years.

## **What causes colon or rectal cancer?**

The exact reason why a cell becomes cancerous is unclear. It is thought that something damages or alters certain genes in the cell. This makes the cell abnormal and multiplies out of control.

## **Risk factors**

Although bowel cancer can develop for no apparent reason, there are certain risk factors which increase the chance that bowel cancer will develop. Risk factors include:

- Ageing: bowel cancer is more common in older people. Eight out of ten people who are diagnosed with bowel cancer are older than 60 years.
- If a close relative has had bowel cancer (there is some genetic factor).
- If you have familial adenomatous polyposis or hereditary non-polyposis bowel cancer. However, these are rare inherited disorders.
- If you have ulcerative colitis or Crohn's disease (conditions of the colon) for more than 8-10 years.
- Obesity.
- Lifestyle factors: little exercise, drinking a lot of alcohol.
- Protective factors

There is a reduced risk of developing bowel cancer in:

- Women who take hormone replacement therapy (HRT).
- People who eat a lot of fruit and vegetables.
- People on aspirin. Several recent research studies have found that taking aspirin each day may reduce the risk of developing bowel cancer. However, there are other risks of taking aspirin (for example, bleeding from the stomach). So, at the moment it is not recommended that people take aspirin only to lower their risk of developing bowel cancer. This advice may change in the future when the results of other studies become available.

## **What are the symptoms of colon or rectal cancer?**

When a bowel cancer first develops and is small it usually causes no symptoms. As it grows, the symptoms that develop can vary, depending on the site of the tumour.

The most common bowel cancer symptoms to first develop are:

- Bleeding from the tumour. You may see blood mixed up with your stools (faeces). Sometimes the blood can make the faeces turn a very dark colour. The bleeding is not usually severe and in many cases it is not noticed, as it is just a small trickle which is mixed with the faeces. However, small amounts of bleeding that occur regularly can lead to anaemia which can make you tired and pale.
- Passing mucus with the faeces.
- A change from your usual bowel habit. This means you may pass faeces more or less often than usual, causing bouts of diarrhoea or constipation.
- A feeling of not fully emptying the rectum after passing faeces.
- Tummy (abdominal) pains.

As the tumour grows in the colon or rectum, symptoms may become worse and can include:

- The same symptoms as above, but more severe.

- You may feel generally unwell, tired or lose weight.

If the cancer becomes very large, it can cause a blockage (obstruction) of the colon. This causes severe abdominal pain and other symptoms such as being sick (vomiting).

Sometimes the cancer makes a hole in the wall of the colon or rectum (perforation). If this occurs, the faeces can leak into the abdomen. This causes severe pain.

If the cancer spreads to other parts of the body, various other symptoms can develop. The symptoms depend on where it has spread to.

All the above symptoms can be due to other conditions, so tests are needed to confirm bowel cancer.

If a doctor suspects that you may have bowel cancer, he or she will examine you. The examination will usually include a rectal examination. This is where a doctor inserts a gloved finger through your anus into your rectum to feel if there is a tumour in the lower part of the rectum. However, often the examination is normal, especially if the cancer is in its early stages. It is likely your doctor will refer you to a specialist. One or more of the following tests may be arranged:

- Colonoscopy. A colonoscopy is a test in which a long, thin, flexible telescope (a colonoscope) is passed through your anus into your rectum and colon. This enables the whole of your colon and rectum to be looked at in detail.
- Flexible sigmoidoscopy. This is similar to colonoscopy. The difference is that a shorter telescope is used which is inserted only into the rectum and sigmoid colon.
- CT colonography. This test uses X-rays to build up a series of images of your colon and rectum. A computer then organises these to create a detailed picture that may show polyps or anything else unusual on the surface of your colon or rectum.
- Barium enema. This X-ray test obtains pictures of your colon and rectum. The colon and rectum do not show up very well on ordinary X-ray pictures. However, if barium liquid is placed in the colon and rectum, their outline shows up clearly on X-ray pictures. This test is not done so much since colonoscopy became available.

## **Biopsy: to confirm the diagnosis**

A biopsy entails a small sample of tissue being removed from a part of the body. The sample is then examined under the microscope to look for abnormal cells. If you have a colonoscopy or sigmoidoscopy, the doctor or nurse can take a biopsy of any abnormal tissue. This is done by passing a thin grabbing instrument down a side channel of the colonoscope or sigmoidoscope. It can take up to two weeks for the result of a biopsy.

## **Assessing the extent and spread**

If you are confirmed to have bowel cancer, further tests may be done to assess if it has spread. For example, a CT scan, an MRI scan, or an ultrasound scans. This assessment is called staging of the cancer. The aim of staging is to find out:

- How much the tumour in the colon or rectum has grown, and whether it has grown partially or fully through the wall of the colon or rectum.
- Whether the cancer has spread to local lymph nodes.
- Whether the cancer has spread to other areas of the body (metastasised).
- By finding out the stage of the cancer, it helps doctors to advise on the best treatment options. It also gives a reasonable indication of outlook (prognosis). For bowel cancer, it may not be possible to give an accurate staging until after an operation to remove the tumour. The tumour, node, metastasis (TNM) classification system is being increasingly used to stage bowel cancer.

## **What is the treatment for a bowel polyp?**

If a polyp is found during a colonoscopy (or sigmoidoscopy) it can often be easily removed as described above.

Most polyps do not contain cancer cells. However, removing the polyp prevents the risk that it may become cancerous sometime in the future.

Some polyps contain cancer cells. If these cells are confined to within the polyp then the removal of the polyp is curative. If the cells look as if they had begun to spread to the wall of the colon or rectum then an operation may be needed to remove that section of colon or rectum.

## **What are the treatment options for colon or rectal cancer?**

Treatment options that may be considered include surgery, chemotherapy and radiotherapy. The treatment advised for each case depends on various factors such as the stage of the cancer (how large the cancer is and whether it has spread), and your general health.

You should have a full discussion with a specialist who knows your case. They will be able to give the pros and cons, likely success rate, possible side-effects and other details about the various possible treatment options for your type of cancer.

You should also discuss with your specialist the aims of treatment. For example:

Treatment may aim to cure the cancer. Some bowel cancers can be cured, particularly if they are treated in the early stages of the disease. (Doctors tend to use the word remission rather than the word cured. Remission means there is no evidence of cancer following treatment. If you are in remission, you may be cured. However, in some cases a cancer returns months or years later. This is why some doctors are reluctant to use the word cured.)

Treatment may aim to control the cancer. If a cure is not realistic, with treatment it is often possible to limit the growth or spread of the cancer so that it progresses less rapidly. This may keep you free of symptoms for some time.

Treatment may aim to ease symptoms. If a cure is not possible, treatments may be used to reduce the size of a cancer, which may ease symptoms such as pain. If a cancer is advanced then you may require treatments such as nutritional supplements, painkillers or other techniques to help keep you free of pain and any other symptoms.

## **Surgery**

It is often possible to remove the primary tumour surgically. Removing the tumour may be curative if the cancer is in an early stage. The common operation is to cut through the colon or rectum above and below the tumour. The affected section is then removed and, if possible, the two cut ends are sewn together.

Sometimes a temporary colostomy is done to allow the joined ends to heal without stools (faeces) passing through. The colostomy is often reversed in a second operation a few months later when the joined ends of the colon or rectum are well healed.

If the tumour is low down in the rectum, then the rectum and anus need to be removed. You would then need a permanent colostomy.

A colostomy is where an opening (hole) is made through the wall of the tummy (abdomen). A section of colon is then cut and the edges are attached to the opening in the abdominal wall. This is called a stoma and it allows faeces to pass out from the colon into a disposable bag which is stuck over the stoma.

Even if the cancer is advanced and a cure is not possible, surgery may still have a place to ease symptoms. For example, a stent can be inserted to ease a blocked colon. A stent is a thin metal tube which is placed through a narrowed or blocked section of colon. It can then be opened wide and remains in the colon to prevent a further blockage.

## **Chemotherapy and radiotherapy**

One or other of these treatments may be advised depending on the site and stage of the cancer.

- Chemotherapy is a treatment of cancer by using anti-cancer medicines which kill cancer cells or stop them from multiplying. Chemotherapy is increasingly being used for people with bowel cancer. See separate leaflet called Chemotherapy for details.
- Radiotherapy is a treatment which uses high-energy beams of radiation which are focused on cancerous tissue. This kills cancer cells, or stops cancer cells from multiplying. It is most commonly used for bowel cancer when the tumour is in the rectum. See separate leaflet called Radiotherapy for details.

When chemotherapy or radiotherapy is used in addition to surgery it is known as adjuvant chemotherapy or adjuvant radiotherapy. For example, following surgery you may be given a course of chemotherapy or radiotherapy. This aims to kill any cancer cells which may have spread away from the primary tumour site. Sometimes, adjuvant chemotherapy or radiotherapy is given before surgery, to shrink a tumour so that the operation to remove the tumour is easier for a surgeon to do and is more likely to be successful.

## **What is the outlook (prognosis)?**

There has been a substantial improvement in the prognosis of people with bowel cancer over the past decade. Without treatment, a cancerous tumour in the bowel is likely to become larger and spread to other parts of the body. However, in many cases it grows slowly and may remain confined to the lining of the colon or rectum for some months before growing through the wall of the colon or rectum, or spreading. You have a good chance of a cure if you are diagnosed and treated when the cancer is in this early stage.

Figures published in 2009 from the National Cancer Intelligence Network showed that people diagnosed at an early stage (stage A) have more than a 9 in 10 chance of surviving the disease. At present, only about 1 in 7 people with bowel cancer are diagnosed at stage A, as the disease does not often cause symptoms at this early stage. But, screening (see below) may greatly increase the number of people diagnosed at stage A.

If the cancer is diagnosed when it has grown through the wall of the colon or rectum, or spread to other parts of the body, there is less chance of a cure. However, treatment can often slow down the progression of the cancer.

The treatment of cancer is a developing area of medicine. New treatments continue to be developed and the information on outlook above is very general. Your specialist can give more accurate information about your particular outlook, and how well your type and stage of cancer are likely to respond to treatment.

## **Screening for colon or rectal cancer**

A screening test aims to detect a disease before it has caused symptoms and when treatment is likely to be curative.

A simple screening test for bowel cancer, which tests for traces of blood in the stools (faeces), has recently been introduced in the UK. This bowel cancer screening test is to be offered to all people of certain older ages. In addition, some younger people may be offered screening if they have a higher-than-average risk of developing bowel cancer.

## **Acknowledgment**

The Trust would like to thank the Patient website (<https://patient.info/>) for allowing us to reproduce part of their work on **Colon Cancer and Rectal Cancer**.