Bowel (Colorectal) Cancer

Questions & Answers

GLASGOW COLORECTAL CENTRE
WWW.COLORECTALCENTRE.CO.UK

GLASGOW COLORECTAL CENTRE
Ross Hall Hospital
221 Crookston Road
Glasgow
G52 3NQ
Phone :
0141 810 3151 (main hospital switchboard)
0808 101 0337 (general pricing and bookings enquiries)

Bowel or colorectal cancer (also called cancer of the bowel or bowel cancer) is common in the UK. Most cases occur in people over 50. If colorectal 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.

What does colorectal mean?

Colorectal is a word which means 'the colon and rectum'. The colon and rectum are parts of the 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 (gullet) into the stomach. The stomach churns up the food and then passes it into the small intestine. The small intestine (sometimes called the small bowel) is several metres long and is where food is digested and absorbed. Undigested food, water and waste products are then passed into the large intestine (sometimes called the large bowel). 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 colon leads into the rectum (back passage) which is about 15 cm long. The rectum stores faeces (stools) 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'.

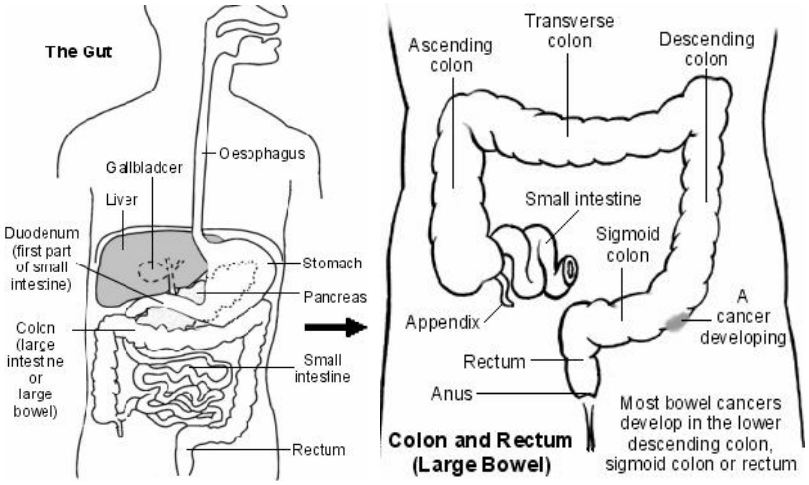
A malignant tumour is a 'lump' or 'growth' of tissue made up from cancer cells which continue to multiply. Malignant tumours invade into nearby tissues and organs which can cause damage.

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 get reliable information on treatment options and outlook.

What is colorectal cancer?

Colorectal cancer is a cancer of the colon or rectum. It is sometimes called 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.) Colorectal 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.



Colorectal cancer usually develops from a polyp which has formed on the lining of the colon or rectum (see below). Sometimes colorectal 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 metastasise (spread) to lymph nodes nearby or to other areas of the body, most commonly the liver and lungs.

Polyps and colorectal cancer

A polyp, or more strictly a particular type of polyp called an adenoma, starts as a tiny bump on the inside of the bowel (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.

At first, the genes give instructions for the polyp to grow in an orderly manner. Some polyps remain very small throughout their lives while others grow slowly larger. At this stage, the lump is still benign. Most polyps remain benign throughout life but about one in ten will turn into a cancer. Broadly speaking, the larger a polyp, the more likely it is to become cancerous -although cancer is unusual if the polyp is less than 1 cm in diameter. We believe that all malignancies of the bowel probably start off as benign polyps. If one does turn cancerous, the change usually takes place after a number of years. Most colorectal cancers develop from a polyp that has been present for 5-15 years. We know that removing benign polyps can prevent cancer developing later.

How common is bowel cancer?

Each year 35,000 people in Britain are diagnosed with cancer of the bowel, that is to say cancer of the colon and rectum. This makes it one of the commonest cancers. Unlike some malignant tumours, bowel cancer can often be cured by surgery and new treatments are being introduced to make survival even more likely. The earlier the bowel cancer is diagnosed, the greater the likelihood of cure.

How does bowel cancer start?

Throughout our lives, the lining of the bowel constantly renews itself. This lining contains many millions of tiny cells which grow, serve their purpose and then new cells take their place. Each one of these millions of cells contains genes which give instructions to the cell on how to behave. When genes behave in a faulty manner, this can cause the cells to grow too quickly which eventually leads to the formation of a growth that is known as a polyp. This is the first step on the road towards cancer.

How does a polyp turn to cancer?

In some polyps, the instructions that the genes give he cell on how to grow become increasingly disordered. When this happens, the cells grow so quickly and in such a strange way that they grow not just on the lining of the bowel but into the wall of the intestines. At that stage we would say the polyp is no longer benign but has become malignant - in other words, the polyp has become a cancer. As the tumour advances, it grows through the wall of the bowel to invade nearby tissues and can spread more widely throughout the body, particularly to the liver and the lungs. When cancer spreads far away from its primary site (in this case the bowel) to distant parts oft he body, we call these 'secondaries', or more technically/ metastases'.

What proctects against bowel cancer?

A diet rich in fresh vegetables and fruit, and low in red meat seems to help protect against bowel cancer. A high calcium intake may be protective as may be the regular ingestion of some anti-inflammatory medicines such as aspirin although at the moment these are not used routinely.

What are the symptoms of bowel cancer?

The development of a bowel cancer from a polyp may take between five and ten years. When a colorectal 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 symptoms to first develop are:

- Bleeding from the tumour. You may see blood mixed up with your faeces (stools or motions). Sometimes the blood can make the faeces turn a very dark colour. The bleeding is not usually severe and in many cases the bleeding 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, pale and a decreased ability to work and exercise.
- 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 of diarrhoea or constipation.
- A feeling of not fully emptying the rectum after passing faeces.
- 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 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 colorectal cancer.

Does early diagnosis make a difference?

Achieving a complete cure of bowel cancer depends on detecting it early on. The larger the growth and the more deeply and widely it has spread, the less likely it is to be curable. If people wait too long before reporting symptoms, the opportunity to remove the cancer completely may be lost. An early diagnosis can also be made in the absence of symptoms by the use of screening.

Aren't some of those symptoms similar to those of irritable bowel syndrome?

Yes they are and this can sometimes cause difficulty in making a diagnosis. A prolonged change in bowel habit lasting more than two or three months should always be investigated, and rectal bleeding is not a symptom of irritable bowel syndrome.

How is the diagnosis made?

Sometimes, the doctor will be able to detect a lump in the abdomen or on rectal examination but usually tests are needed. The most commonly used are:

- Barium enema x-ray (after taking laxatives to empty the colon, it is filled with a combination of barium and air to outline its lining)
- Flexible sigmoidoscopy after an enema a flexible telescope is passed through the anus, into the rectum and this can reach the lowest half of the colon
- Colonoscopy-like a barium enema, this requires laxatives to clear out the bowel. A flexible telescope is passed through the anus into the rectum but the tube is long enough to examine all of the large bowel. The procedure is a little uncomfortable and most patients are offered an injection to ease any discomfort.
- CT colonoscopy or CT pneumocolon also involves taking bowl preparation is a relative newcomer and has the advantage, (which many people appreciate) of not involving a tube being passed through the anus. It is not yet as reliable as colonoscopy but its quality is steadily improving and it seems likely to be used increasingly often.
- Barium enema x-ray (after taking laxatives to empty the colon, it is filled with a combination of barium and air to outline its lining). This investigation is now rarely performed as a first investigation to investigate bowel symtoms

The above tests are used in slightly different situations depending upon the symptoms that patients may have and the availability of the investigations.

Biopsy - to confirm the diagnosis

Both flexible sigmoidoscopy and colonoscopy have the advantage that a small sample or biopsy can be taken to look at under the microscope. A biopsy is when a small sample of tissue is removed from a part of the body. The sample is then examined under the microscope to look for abnormal cells. If you have a colonoscopyor 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 colorectal cancer, further tests may be done to assess if it has spread. For example, blood test, a CT scan, an MRI scan, an ultrasound scan. 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 colorectal cancer, it may not be possible to give an accurate staging until after an operation to remove the tumour.

Not only will the size of the primary tumour be assessed as fully as possible but the specialist will also want to know if there is any sign of secondary spread. Armed with all the relevant information they have gathered about the cancer, the specialists will decide how best to advise you on the most appropriate treatment.

A common staging system for colorectal cancer is called the Dukes' classification.

- Duke A: the cancer is just in the inner lining of the colon or rectum.
- Duke B: the cancer has grown to the muscle layer in the wall of the colon or rectum.
- Duke C: the cancer has spread to at least one lymph node near to the colon or rectum.
- Duke D: the cancer has spread to other parts of the body ('metastases' or secondary tumours). The most common site for colorectal cancer to spread to is the liver. Other places include the lungs and brain.

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 colorectal 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 colorectal 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 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 surgically remove the primary tumour. 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 (or anastomosed) together.

- Sometimes a temporary colostomy is done to allow the joined ends to heal without 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. Fortunately, modern surgical techniques have made the need for a stoma to be much less likely nowadays than it used to be in the past.

A colostomy is where an opening (hole) is made through the wall of the 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.

How are cancers of the rectum treated?

Unless they are very small and can be removed by a local operation, most cancers of the rectum need to be very carefully checked pre-operatively by various scans. This will help decide whether or not the cancer should be shrunk down by radiotherapy Cancers in the lower part of the rectum will be removed together with the immediately surrounding tissue which is called the mesorectum. This operation which aims to cure the cancer is called total mesorectal excision (often abbreviated to TME).

How are cancers of the colon treated?

Once a check has been made to see that there is no spread anywhere else most colon cancers are treated by surgery This will usually involve removing the cancer together with the lymph glands alongside the blood vessels supplying that section of the bowel. In most cases, the two ends of the bowel are joined together again (anastomosis) but if the cancer has led to an emergency it may not be possible to join the bowel together straight away. Once the bowel cancer and surrounding tissue have been removed they will be examined under the microscope and only then will it be possible to determine fully the stage of the cancer. If the cancer is confined to the bowel wall then surgical removal alone may be all that is needed. If there is any sign of spread to the local lymph glands a course of chemotherapy postoperatively may well be advised.

Will I need 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 drugs which kill cancer cells or stops them from multiplying. Chemotherapy is increasingly being used for people with colorectal cancer.
- Radiotherapy is a treatment which uses high energy beams of radiation which are focussed on cancerous tissue. This kills cancer cells, or stops cancer cells from multiplying. It is most commonly used for colorectal cancer when the tumour is in the rectum.

When chemotherapy or radiotherapy are 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 happens after surgery?

While you are recovering, the specialist team will meet to consider whether further treatment is advisable. Such decisions are based largely on the information we have about how advanced the primary cancer was. After the operation, the treatment options will be explained and if there is a need for further treatment such as chemotherapy - this will be arranged. The specialist team will wish to see you again in the months and years after surgery to check on how you are doing.

Very often, you will be offered blood tests, scans or follow-up colonoscopy to detect whether the cancer has come back. If it does recur, that is obviously bad news but there are still options for cure even if the tumour has come back.

What is the prognosis (outlook)?

There has been a substantial improvement in the prognosis of people with colorectal cancer over the past decade. Without treatment, a colorectal cancer is likely to get 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 colorectal 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 is likely to respond to treatment.

What is advanced bowel cancer?

This is when the cancer has spread from the large bowel itself to other sites in the body. This may have already happened when the cancer is first diagnosed or may occur at a later date. The most common site for the cancer to spread is to the liver. Chemotherapy in this situation can be effective in controlling symptoms and prolonging life. Chemotherapy does not cure the disease and treatment is selected to provide a balance between the side effects and the benefits gained from treatment.

If I have already had bowel cancer, what can I do to stop it coming back?

A healthy life-style, a diet rich in fresh fruit and vegetables and a positive mental attitude together with attendance at follow up programmes seem to be the best advice.

Are there any implications for my family?

If a person is young (40-50years of age) when bowel cancer is diagnosed or if cancer is very common in the family, it may be that there is an inherited genetic abnormality. In such circumstances, brothers, sisters and children may be referred to a specialist for advice. If the risk of inherited disease is high enough some relatives may be advised to undergo a regular colonoscopy.

There are uncommon and inherited conditions including familial adenomatous polyposis (FAP) in which numerous polyps develop throughout the bowel and the cancer risk is greatly increased. The family of these patients has to be carefully screened.

Has screening for bowel cancer being done?

Mass screening of the population for bowel cancer has now started in the UK. Because polyps may bleed, one of the screening methods involves testing the stools chemically for traces of blood, then carrying out further investigations of the bowel if the test is positive. Eventually, this form of screening will be offered to everyone aged between 55-75 years. Screening is to examine the lower part of the bowel with a flexible sigmoidoscope in persons between the ages of 55-65.Trials of using these techniques on individuals who have no bowel symptoms have shown that more early cancers are being diagnosed and that early detection improves your chance of survival.

What research is being performed?

New surgical techniques are being used to try and reduce the size of the abdominal wound and even remove cancers from within the bowel. Chemotherapy has certainly been increasingly successful over the last few years as a number of new drugs has become available. Aspirin-like medicines are being studied for their effects on polyps and cancer. Vaccines against cancer and magic bullets to target treatment specifically against tumours are in the very earliest stages of development. Better tests for population screening are being investigated so that in the future it will be easier to identify cancer at an early stage.

Further help and information

Bowel Cancer UK
7 Rickett Street, London, SW6 1RU
Tel: 08708 50 60 50 (Bowel Cancer Advisory Service) Web: www.bowelcanceruk.org.uk
Is dedicated to raising awareness, improving the quality of life of those affected and ultimately, reducing deaths from bowel cancer.

Beating Bowel Cancer
Harlequin House, 7 High Street, Teddington TW11 8EE
Tel: 08450 719 300 Tel (Nurse helpline): 08450 719 301 Web: www.beatingbowelcancer.org
A national charity working to raise awareness of symptoms, promote early diagnosis and encourage open access to treatment choice for those affected by bowel cancer.

Bowel Cancer Wales
Sherwood, Llandraw Woods, Maesycoed, Pontypridd R.C.T, CF37 1EX
Tel: 01443 408813 Web: www.bowelcancerwales.com
Aims to raise awareness of the disease and raise funds to research bowel cancer in Wales

Macmillan Cancer Support
Tel: 0808 800 1234 Web: www.cancerbacup.org.uk
They provide information and support to anyone affected by cancer.

Cancer Research UK
Web: www.cancerhelp.org.uk provides facts about cancer including treatment choices.

NHS Bowel Cancer Screening Programme
England - Helpline: 0800 707 60 60 Web: www.cancerscreening.nhs.uk/bowel/index.html
Scotland - Helpline: 0800 012 1833 Web: www.bowelscreening.scot.nhs.uk
Wales - Helpline: 0800 294 3370 Web: www.wales.nhs.uk/sites3/home.cfm?orgid=747
Northern Ireland - watch out for news at www.cancerni.net

NICE - National Institute for Health and Clinical Excellence
Web: www.nice.org.uk/guidance/index.jsp?action=byTopic&o=7174
This link takes you to various guidelines relating to colorectal cancer. Each guideline usually has a corresponding 'information for the public' to explain things in plain English.