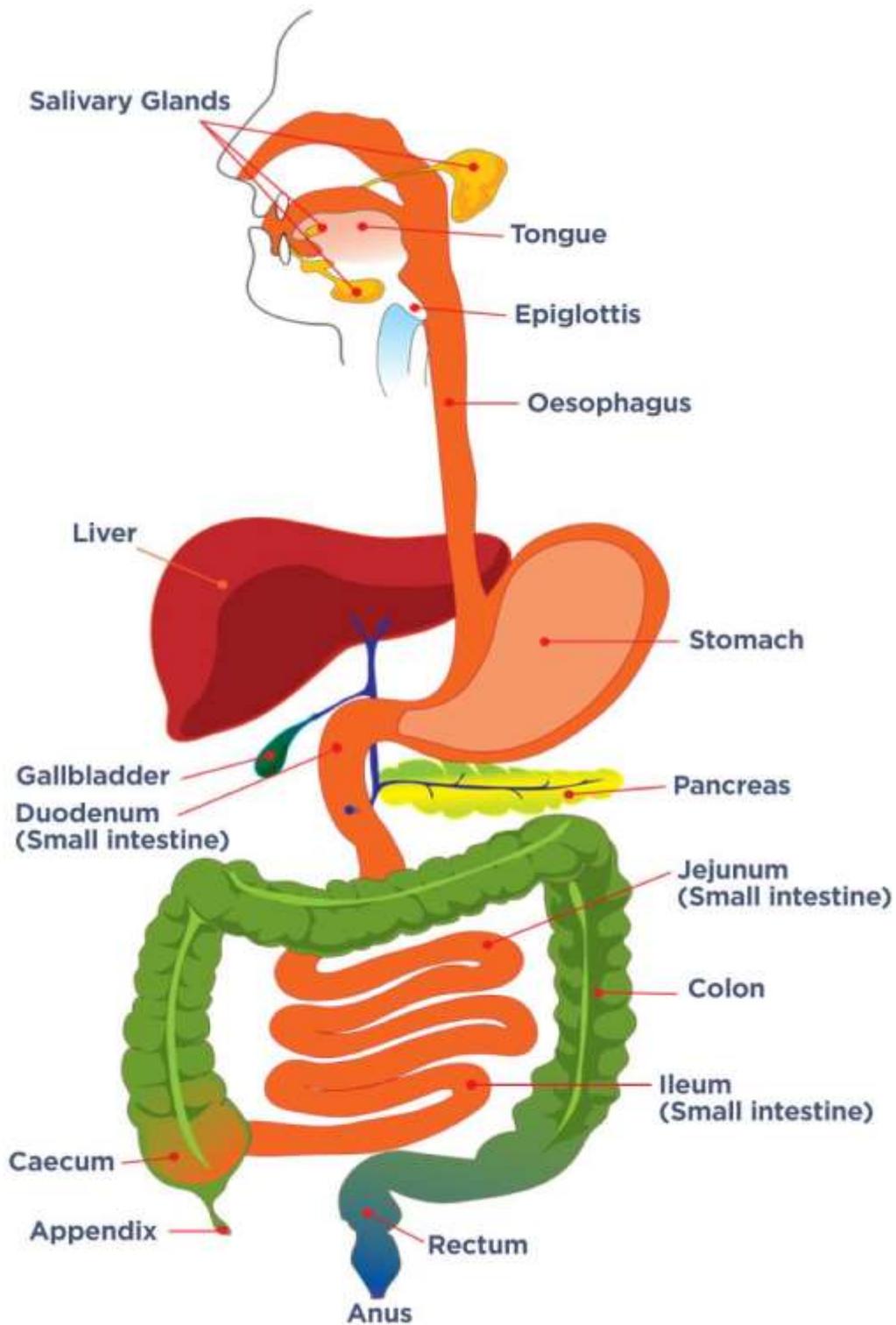
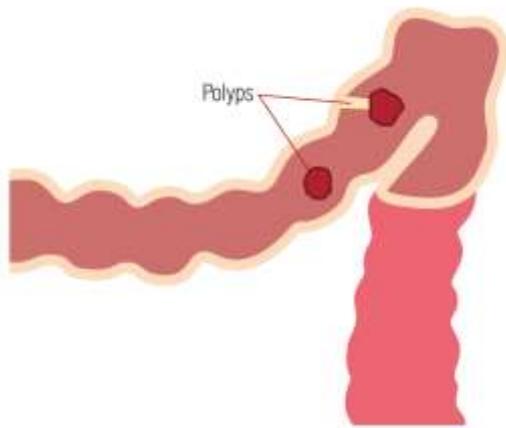


THE DIGESTIVE SYSTEM



This factsheet is about bowel cancer

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 that 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.

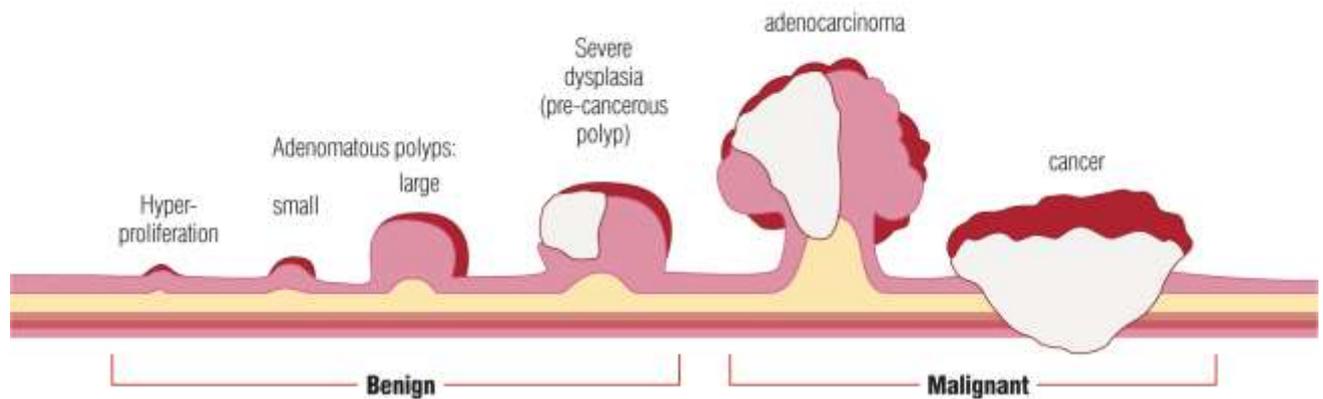


What are the causes of bowel cancer?

We believe that all malignancies of the bowel probably start off as benign polyps. A polyp, or more strictly a particular type of polyp called an adenoma, starts as a tiny bump on the inside of the bowel. Some polyps remain very small throughout their lives while others grow slowly larger. At this stage, the lump is still benign (non-cancerous).

In some polyps, the instructions that the genes give the 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 start to extend through the wall of the bowel. The polyp is no longer benign but has become malignant (cancer).

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 - cancer is unusual if the polyp is less than 1cm in diameter. We know that removing benign polyps can prevent cancer developing later.



Can bowel cancer be hereditary?

If a person is young (40-50 years 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, such as Lynch Syndrome, a condition that increases the risk of bowel cancer. 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.

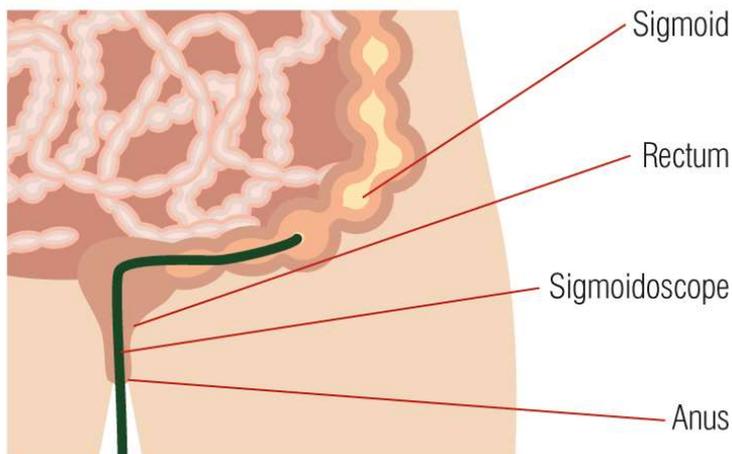
There are uncommon and inherited conditions including familial adenomatous polyposis (FAP) in which numerous polyps develop throughout the bowel and the cancer risk is greatly increased. The family of these patients must be carefully screened.

What is bowel cancer screening?

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. 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 the chance of survival.

Mass screening of the population for bowel cancer has now started in the UK and is currently taking the following format:

- Those over the age of 55 are automatically invited for a one-off flexible sigmoidoscopy (lower bowel examination) if it is available in their area.
- Those between the ages of 60 to 74, are automatically invited to do a home testing every two years. In August 2018 the Governments in England and Wales committed to lowering the screening age from 60 to 50, though plans on how to implement this change are still undeveloped.
- Those over the age of 75 can ask for a home testing kit every two years by calling the free bowel cancer screening helpline on 0800 707 60 60.



What are the usual symptoms of bowel cancer?

The development of a bowel cancer from a polyp may take between five and ten years, and early on there may be no symptoms at all.

The most common symptoms are bleeding from the bowel, a change in bowel habit, such as unusual episodes of diarrhoea or constipation and an increase in the amount of mucus in the stool. A bowel cancer can enlarge causing partial or complete blockage of the bowel leading to abdominal pain, constipation and bloating. Sometimes tiny amounts of bleeding may go unnoticed but result in the development of anaemia, which may cause tiredness and a decreased ability to work and exercise. Unexplained weight loss is also a symptom.

Some of these symptoms are similar to those of Irritable Bowel Syndrome (IBS). However, a prolonged change in bowel habit lasting more than two or three months should always be investigated. If you have a family history of bowel cancer you should visit your doctor within a few weeks of any changes.

Achieving a complete cure of bowel cancer usually depends on detecting it early on and 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.

How is bowel cancer diagnosed?

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

- **Flexible sigmoidoscopy:** after an enema a flexible telescope is passed through the anus, into the rectum and this can visualise the lowest half of the colon.
- **Colonoscopy:** a flexible telescope is passed through the anus into the rectum but the tube is long enough to examine the entire large bowel. The procedure is a little uncomfortable and most patients are offered an injection to ease any discomfort.
- **Barium enemas:** these are rarely used nowadays. Instead you may be offered a test called a CT enema (sometimes called a CT pneumocolon or CT colonography) where laxatives are taken to

empty the colon and air or carbon dioxide gently pumped into the colon to outline its lining. Sometimes a contrast dye may also be needed.

- **CT scanning:** this is an x-ray procedure, which has the advantage (that 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 may become more common use in years to come. However if a polyp is detected, a colonoscopy will be necessary to remove it.

Both flexible sigmoidoscopy and colonoscopy have the advantage that a small sample or biopsy can be taken to look at under the microscope. The above tests are used in slightly different situations depending upon the symptoms that patients may have and the availability of the investigations.

What happens if bowel cancer is diagnosed?

Once all the relevant information including histology, blood test and imaging have been collated, the case will be presented at a Multi-Disciplinary Meeting (MDM) where a diagnosis and management plan will be discussed and agreed. The oncologist will then explain this decision to the patient and answer any questions they may have. At this time the patient will probably be introduced to a clinical nurse specialist who is a senior nurse with expert knowledge of colorectal cancer. He or she will be fundamental to the patient's treatment pathway, ensuring that it runs as smoothly as possible and that the patient feels supported throughout what can be a very distressing time. The clinical nurse specialist will, rather than the doctors, usually be the first point of contact throughout the whole process.

What treatment is available for bowel cancer?

Unless the tumours are very small and can be removed by a local operation, most cancers of the rectum need to be carefully assessed (usually at the MDM as above) before any surgery takes place.

- **Chemotherapy or Radiotherapy:** the MD team will decide whether or not the cancer can be shrunk down by radiotherapy or chemotherapy before surgery as this can often improve the outcome of the cancer. If so any treatment will usually be given every day for five weeks, Monday to Friday, followed by a 12-week break. The patient will then be rescanned and discussed again at the colorectal MDM where a decision will be made on surgery.
- **Surgery:** once a check has been made to ensure 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 an emergency operation needs to take place, it may not be possible to join the bowel together straight away.
- **Staging:** 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 post-operatively may well be advised. The staging and biology of a cancer can certainly impact on the curative outcome and your specialist will be able to explain your specific diagnosis.
- **Post-surgery treatment:** soon after the operation, the MDT will meet again to review all the information from the operation including analysis of the tumour which will reveal the specific stage of the cancer (staging). Further treatment will be dependent on those results and the decisions

made will be explained. If there is need for further treatment such as chemotherapy, then this will be arranged.

Will I need a colostomy (stoma)?

A cancer of the rectum very near the anal canal will be difficult to remove completely and in this situation it may be necessary to remove the rectum as well as the anus and make a permanent opening of the colon into the skin of the abdomen (called a colostomy or stoma).

Although stomas are often used when emergency surgery is needed, they may not always be permanent. Many of the planned procedures carried out for colon cancer result in a temporary stoma to allow the bowel join (anastomosis) to heal without any faecal matter going through that area. Fortunately, modern surgical techniques have made the need for a stoma to be much less likely nowadays than in the past.

How will I be monitored over time?

If no further treatment is needed, patients will be followed up for a period of five years with a mixture of clinic appointments, blood tests, colonoscopies and scans. The follow up will be different if the patient has a hereditary cancer such as Lynch Syndrome. If the cancer does recur, there are still many options for a positive outcome.

How can I prevent the cancer from 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. Experts also believe that exercise has a positive impact on lowering the risk of recurrent disease.

What is Secondary bowel cancer?

As the tumour advances, it grows through the wall of the bowel to invade nearby tissues and, via the blood and lymphatic systems can spread to other areas of the body. The most common areas for secondary bowel cancer to have spread to are the liver and the lungs and this may have already happened when the cancer is first diagnosed, or may occur at a later date. We call these 'secondaries' or, more technically, 'metastases'.

Treatment

Recently there have been many highly effective advances in the treatment of secondary cancers including targeted therapy for liver and lungs, surgery and a technique called Radio Frequency Ablation (RFA). Chemotherapy does not cure the disease but can be effective in controlling symptoms and prolonging life and is selected to provide a balance between the side effects and the benefits gained from treatment.

What developments are being made in the treatment of bowel cancer?

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 have 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



Bowel Cancer Information Leaflet

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.

For more information about research in this area please contact Guts UK Charity on

Telephone: 0207 486 0341

Email: info@gutscharity.org.uk