Cancer of the colon: Investigations, Diagnosis and Treatment

Patient Information Leaflet
Your Colorectal Team

Consultant leading your care

Your Colorectal/stoma nurse/key worker leading your nursing care

Other doctors that may be involved in your care

Sigmoidoscopy - Inspection of the sigmoid colon with an illuminated telescope called a sigmoidoscope.

Stoma - An artificial opening of part of the intestine onto the abdominal surface.

Stricture - The narrowing of a portion of the bowel.

Suppository - A bullet-shaped solid medication put into the rectum.

Tenesmus - Persistent urge to empty the bowel.

Terminal Ileum - The last part of the ileum joining the caecum via the ileo-caecal valve.

Tumour - An abnormal growth, which may be benign (non-cancerous) or malignant (cancer).

Ulcerative Colitis - Ulceration and inflammation of the large bowel.

Ultrasound - Use of high pitched sound waves to produce pictures of organs on a screen for diagnostic purposes, by passing a transducer with conducting jelly over specific body cavity.

Please note that we hold all patient details with regards to your care on a computer program in the department.
Peritonitis - Inflammation of the peritoneum, often due to a perforation.

Polyp - A protruding growth from mucous membrane (lining of the bowel)

Prophylaxis - Treatment to prevent a disease occurring before it has started.

Proximal - Further up the bowel towards the mouth.

Radiologist - The doctor who interprets x-ray pictures to make a diagnosis.

Radiotherapy - The use of high energy rays which attack cancer cells.

Rectum - The large intestine, above the anus (the back passage).

Relapse - Return of the disease activity.

Remission - A lessening of symptoms of the disease and return to good health.

Sigmoid - The portion of the colon shaped like a letter "S" or "C" extending from the descending colon to the rectum.

Introduction

Your doctor may have explained that you have a possible cancer/a cancer of the colon and that requires further investigations to stage the disease.

This booklet aims to provide information to help you understand more about cancer of the colon, investigations that you may need and your proposed operation or other forms of treatment. We hope you find it useful and it will help you understand the care you will receive.

At the end of this booklet you will find a glossary of terms that you may need when you attend hospital appointments. There is also a list of useful organisations you may wish to contact to gain further information or support.

If you think that reading this booklet has helped you, you may want to pass it on to your family and/or friends who might find it useful. They too may want to be informed so that they can support you and help you cope with any problems you may have.

Colorectal cancer

Colorectal cancer is very common in the UK. It is the third most common cancer, with approximately 38,610 new cases diagnosed in 2007. It is generally a disease of the elderly; 8 in 10 bowel cancers in people aged 60 and over.
In most people the cause of colorectal cancer is still unknown. We do know however that there is evidence to suggest that colorectal cancer may be due to diet. It is thought that diet which is low in vegetables, fruit and fibre but includes lots of red and processed meat may increase the risk of developing colorectal cancer.

At least 1 in 10 colon cancers in the UK are related to overweight and obesity. People with a strong family history of colorectal cancer affecting people below 40 years have an increased risk of developing the disease. Patients with some long standing inflammatory disease of the bowel, such as Crohn’s Disease or Ulcerative Colitis may also have an increased risk of developing colorectal cancer.

People who have a rare genetic condition known as Familial Adenomatous Polyposis (FAP) or Adenomatous Polyposis Coli in which benign tumours called polyps are found in the lining of the colon, have an increased risk of developing bowel cancer.

What is cancer?

The tissues and organs of the body are made up of tiny building blocks called cells. These cells repair and reproduce themselves continually as they age and become damaged. Sometimes during this process, for some reason normal cells become abnormal and as they continue to divide they develop into a tumour. Tumours can either be cancerous (malignant) or non-cancerous (benign).

Inflammation - A natural defence mechanism of the body in which blood rushes to any site of damage or infection leading to reddening, swelling and pain.

Lesion - A term used to describe any abnormality in the body.

Malignant - Cancer.

Mucus - A white, slimy lubricant produced by the intestines.

Neutropenia - Reduction in the number of white cells.

Oedema - Accumulation of excessive amounts of fluid in the tissues, resulting in swelling.

Oncologist - A doctor who specialises in cancer care using drugs and radiotherapy.

Palliative Care - Improving the quality of life by providing support and control of unpleasant symptoms.

Pathology - The study of the cause of the disease.

Perforation - An abnormal opening in the bowel wall to which causes the contents to spill into the normally sterile abdominal cavity.
In a benign tumour, the cells do not spread to other parts of the body. However if they continue to grow at the original site, they may cause a problem by putting pressure on the surrounding organs or causing a blockage to the bowel.

A malignant tumour consists of cancer cells that have the ability to spread away from the original site. If the tumour is left untreated, it may invade and destroy the surrounding tissue. By breaking away from the original cancer (primary) it can spread to other organs of the body through the bloodstream. When these cells reach a new site, they could continue to grow and form a new tumour (secondary or metastasis).

There are many different kinds of cancer. Colorectal Cancer is cancer of the colon (large bowel) and rectum. Cancer of the rectum is referred to as Rectal Cancer and the treatment will be outlined in this booklet.

**What is the large bowel?**

The large bowel is made up of the colon and rectum. It is the last part of the intestines and forms part of our digestive system. The food we eat travels from the mouth to the stomach where digestion starts and then passes through the small bowel where the essential nutrients are absorbed in the bloodstream. The digested food then enters the large bowel and the colon absorbs water.

Electrolytes - Salts in the blood e.g. sodium, potassium and calcium.

Endoscopy - A collective name for all visual inspections of body cavities with an illuminated telescope, e.g. colonoscopy, sigmoidoscopy.

Enema - A liquid introduced into the rectum to encourage the passing of motions.

Exacerbation - An aggravation of symptoms.

Faeces - The waste matter eliminated from the anus (other names - stools, motions).

Fistula - An abnormal collection, usually between two organs, or leading from an internal organ to the body surface.

Haemorrhoids - Swollen arteries and veins in the area of the anus, which bleed easily and may prolapse (protrude from the anus).

Heredity - The transmission of characteristics from patient to child.

Histology - The examination of tissues under the microscope to assist diagnosis.
The colon runs up the right side of the abdomen, across the abdomen and down the left side ending in a wider portion called the rectum (back passage).

As the colon absorbs water from the faeces it becomes more solid and is eventually passed from the body through the anus as a bowel motion.

**What are the symptoms of colon cancer?**

Colorectal cancer can cause many symptoms, which may include any of the following:

A change in bowel habit - symptoms can include going to the toilet more often and have looser motions, perhaps alternating with periods of constipation. You may see dark blood in the motion or pass mucous.

Bleeding - rectal bleeding that persists. The most common sign is blood in or on the stools.

Colonoscopy - Inspection of the colon by an illuminated telescope called a colonoscope.

Constipation - Infrequency or difficulty in the passage of bowel motions.

CT scans - A type of x-ray. A number of pictures are taken of the abdomen and fed into a computer to form a detailed picture of inside of the body.

Defaecation - The act of passing faeces.

Diagnosis - Determination of the nature of the disease.

Diarrhoea - An increase in frequency, liquidity and weight of bowel motions.

Distal - Further down the bowel towards the anus.

Diverticulum - Small pouch like projections through the muscular wall of the intestine, which may become infected, causing diverticulitis.

Dysplasia - Alteration in size, shape and organisation of mature cells that indicate a possible development of cancer.
Other symptoms - other signs are unexplained weight loss, tiredness or breathlessness without obvious reason (usually due to anaemia from loss of blood). Some people feel a lump in the tummy.

**How do we know that you have a colon cancer?**

The following tests/investigations are all used to make a diagnosis of colon cancer. They will allow us to determine the extent of your problem and plan your treatment.

Although we are aiming to identify your rectal cancer, it is important that we also look at your remaining large bowel and other organs that might be affected by this cancer. This can be achieved by a variety of different ways. These are selected to suit individual needs.

Barium enema - this is an x-ray examination using barium to outline the whole bowel. It will be done in the hospital X-ray Department.

It is important that the bowel is empty so that a clear picture can be seen. Therefore on the day before your test, you will be asked to take a preparation to empty your bowel and to drink plenty of fluids.

On the morning of your barium enema you should not have anything to eat. The X-ray Department will send you an instruction sheet to follow.

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**Anaemia** - A reduction in the number of red cells, haemoglobin (iron) or volume of packed cells in the body.

**Analgesia** - Pain relief.

**Anastomosis** - The joining together of two ends of healthy bowel after diseased bowel has been cut out (resected) by the surgeon.

**Anus** - The opening to the back passage.

**Barium Enema** - A diagnostic x-ray of the large bowel (colon).

**Benign** - Non-cancerous.

**Biopsy** - Removal of small pieces of tissue from parts of the body (e.g. colon - colonic biopsy) for examination under the microscope for diagnosis.

**Caecum** - The first part of the large intestine forming a dilated pouch into which the ileum, the colon and the appendix opens.

**Chronic** - Symptoms occurring over a long period of time.

**Chemotherapy** - Drug therapy used to attack cancer.

**Colon** - The large intestine extending from the caecum to the rectum.
A small tube is placed in the anus and the liquid barium and some air are introduced. It is important to keep the mixture in the bowel until all the x-rays have been taken. The barium outlines the bowel and x-rays are taken to show any abnormal areas.

For a couple of days after your enema you may notice that your stools are white. This is the barium being removed from the body and is nothing to worry about.

Sigmoidoscopy - this test allows the doctor to look at the inside of the rectum or the lower part of the large bowel. It is usually done in the hospital Outpatients Department or Gastro Intestinal Unit (GI Unit).

For this test you will be asked to lie curled up on your left side, while the doctor gently passes a tube into your back passage. A small hand pump is attached to the tube so that air can be pumped into the bowel. With the assistance of a light on the inside of the tube, which is about 12 inches long, the doctor can see any abnormalities. If necessary, a small sample of tissue (called a biopsy) can be taken painlessly for examination under a microscope to check for cancer cells.

Colonoscopy - if your doctor wants to look inside the whole length of the large bowel, you may have a colonoscopy. Colonoscopies are the flexible telescopes which are used for the test. This will usually be done in the GI Unit.

National Association for Colitis and Crohn's Disease (NACC)
4 Beaumont House, Sutton Road
St. Albans, Hertfordshire, AL1 5HH
Tel: 017277 844296 (Information line 10am - 1pm weekdays)
www.nacc.org.uk

Dudley Citizen Advice Bureau
Marlborough House
11 St James Road, Dudley, DY1 1JG
Tel: 01384 816222 (advice line)
08080486486 (care & disability line CADAL) Mon-Fri 9am-4pm
Email: dudleybureau@dudleycabx.org CADAL@dudleycabx.org
www.adviceguide.org.uk

Glossary of terms

These are some of the medical words and terms you may come across during your appointments for colorectal investigation.

Abscess - A localised collection of pus in a cavity formed by decay of diseased tissues.

Acute - Sudden onset of symptoms.

Adjuvant therapy - Chemotherapy and radiotherapy in addition to surgery.

Aetiology - Cause.
The bowel has to be completely empty, this means taking a preparation similar to that used for the barium enema. The hospital will provide you with this and also the instructions of how and when to take it.

Just before the test you may be given a mild sedative to help you relax. Once you are lying on your side the doctor will gently pass a flexible tube into your back passage which can pass around the curves of the bowel. A light on the inside of the tube helps the doctor to see any abnormal areas or swelling.

During the test, photographs and samples of the abnormal area (biopsy) can be taken from the inside of the large bowel. The procedure can be uncomfortable but the sedative will help you relax.

Therefore you must arrange for someone to collect you from the hospital, as you should not drive for 24 hours following the sedative.

CT Scan or CT Colonogram - Special scans are used to produce pictures as if the body were sliced across. The scan gives information about the rectal tumour that helps the doctor plan your treatment. You will usually be asked to arrive before the scan time so that you can drink some special fluid beforehand to highlight the bowel on the scan pictures.
Sometimes, a slightly different technique is used called 'CT Pneumocolon' or 'CT Colonogram'. Here, you will be sent the fluid beforehand to drink over several days along with some mild laxatives.

The scanner itself looks like a large 'Polo Mint' and you will lie on a table that moves through the hole. An injection into an arm vein is usually given during the scan - this highlights the blood vessels and certain organs on the pictures. During a 'CT Colonogram', a tube is also inserted into the back passage so that the bowel can be distended with air.

You will be in the scanner room for several minutes though the scan itself takes just 60 seconds or so. Many pictures are generated. A doctor (known as a Radiologist) will look at these afterwards, but interpreting them takes a while so the report is sent to your specialist later.

What happens after I have had all my tests/investigations performed?

Surgery is usually the first treatment for colon cancer. The type of operation you need depends on your individual circumstances. Your operation details will be fully discussed with you by your consultant colorectal surgeon and your colorectal nurse specialist. Your care is led by your surgical consultant and discussed at a colorectal multidisciplinary team meeting (MDT).

List of useful addresses and contact details

Cancer Support - The White House, 10 Ednam Road, Dudley, DY1 1JX Tel: 01384-231232 Email: info@support4cancer.org.uk

Beating Bowel Cancer 36 Crown Road, Twickenham, TW1 3EJ Tel: 020 8892 5256, www.beatingbowelcancer.org.uk

British Colostomy Association 15 Station Road, Reading, Berkshire, RG11 1LG Tel: 01189 391 537

Cancer BACUP 3 Bath Place, Rivington Street London, C2A 3JR Tel: 0808 800 1234, www.cancerbacup.org.uk

Colon Cancer Concern 9 Rickett Street, London, SW6 1RU Tel: 08708 506050, www.coloncancer.org.uk

Digestive Disorders Foundation PO Box 251, Middlesex, HA8 6HG www.digestivedisorders.org.uk
The role of the Colorectal Cancer Multi-disciplinary Team

The National Health Service (NHS) guidelines states "everyone diagnosed with colorectal cancer should be under the care of a multi-disciplinary team". This is a team of health professionals who work together to discuss your case and how best to manage your treatment, the benefits of treatments available, and decide on the most appropriate type/s of treatment to meet your individual needs.

The colorectal cancer multi-disciplinary team meetings are held on Monday lunchtimes (except for bank holidays). Your consultant, MDT Co-ordinator or Specialist Nurses will list you for discussion when all your investigations have been completed and a treatment plan formulated.

After this meeting, your treatment plan will be discussed with you by the consultant (in the outpatients clinic) who will give you your treatment (this may be different to the consultant you saw in the first instance).

The Colorectal Multi-disciplinary Team

Consultant Colorectal Surgeons
Mr Kawesha, Mr Patel, Mr Savage, Mr Stonelake, Miss MacLeod

Consultant Gastroenterologists
Dr Fisher, Dr Cooper, Dr Ishaq, Dr Shetty, Dr De Silva
Consultant Pathologists
Dr Shinde, Dr Ramaiha, Dr Sherrif

Consultant Radiologists
Dr Hall, Dr Maleki

Consultant Medical Oncologist
Professor Ferry

Consultant Clinical Oncologist (Chemo/DXT)
Dr Churn (New Cross Hospital)

Clinical Nurse Specialist
Kath Parry

Colorectal/Stomacare Sisters
Sam Cook, Helen Hill, Janet Whittaker

Stoma care Higher Level Clinical Support Worker
Amanda Chater

MDT Co-ordinator
Denise Weaver

Colorectal/Stomacare Secretary
Mandy Clarke

In every instance, a suitably qualified practitioner must administer complementary therapies and it is strongly advised that you speak to your consultant before embarking on a course of therapy to ensure that it will not interfere with your conventional treatment.

Cancer support provides a wide range of complementary therapies for both patients and their family/carers. They have specific knowledge and expertise concerning cancer related issues (see list of addresses for contact details).

**Follow up care**

You will have an appointment following discharge about six weeks after your surgery. Your consultant surgeon will discuss your histology results. When the part of the bowel containing the cancer has been removed and examined by a pathologist, we can say if further treatment in the form of chemotherapy, is advisable. If this is the case, you will be referred to a medical oncologist who will discuss this treatment with you.

Follow up appointments often include a physical examination, blood tests including CEA, visualisation of the colon and a scan. Your consultant will inform you when he plans to do these tests.

Most people feel overwhelmed when they are told that they have cancer. Many different emotions arise which can cause confusion and frequent changes in mood. However, reactions differ from one person to another.
Complications related to stent deployment include dislocation and migration, stent obstruction, colonic/rectal perforation, faecal impaction, bleeding abdominal pain and tenesmus.

However, complications are usually minor in the majority of patients and on the whole, unwanted complications resolve within 48 hours with minimal medical intervention.

**Complementary therapies**

Complementary therapies are holistic natural therapies, which can be used with conventional medical and nursing treatments. However, they should not replace traditional care.

Complementary therapies encompass a large span of treatment kinds and commonly include: -

Counselling, acupuncture, aromatherapy, homeopathy, meditation, visualisation, healing, relaxation, massage, osteopathy, reflexology, hypnosis and dietary treatments.

The aim of these therapies is to relieve physical symptoms and help emotional reactions including stress and anxiety and therefore enhance well being. Frequent symptoms that complementary therapies aim to improve are flatulence, sleep disorders, fatigue, worry and pain.

**Treatment options**

**Surgery**

As previously mentioned earlier in this booklet, surgery is the first line treatment for colon cancer.

Your specialist Nurse will give you appropriate written information regarding your surgery.

**Staging the disease**

The Dukes Grading System looks at the degree of differentiation of the tumour cell and the spread of the tumour through the different layers of the bowel.

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<thead>
<tr>
<th>Dukes' Stage</th>
<th>Extent of Cancer</th>
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<tbody>
<tr>
<td>A</td>
<td>Cancer is confined to the wall of the bowel</td>
</tr>
<tr>
<td>B</td>
<td>Cancer has spread through the wall of the bowel</td>
</tr>
<tr>
<td>C</td>
<td>Cancer has spread to the lymph nodes</td>
</tr>
<tr>
<td>D</td>
<td>Cancer has spread to other organs</td>
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The Tumour, Node and Metastases (TNM) takes account of the histopathology of the tumour and the extent of the spread. This is a more detailed type of staging classification, describing the degree of tumour invasion (T1 to T4).
Node involvement from N0 - no lymph nodes are affected. N2 where there are 4 or more lymph nodes affected.

Whether distant Metastases (secondaries) are present or not. M0 means cancer has not spread. M1 means that it has.

Which treatment will I have if I have advanced bowel cancer?

Advanced colorectal cancer means the cancer has spread to other parts of the body from where it started in the bowel or back passage. Your cancer may be advanced when it is first diagnosed. Or it may come back some time after you are first treated. Once a bowel cancer has spread to another part of the body, it is unlikely to be curable. But treatment can often keep it under control for quite a long time.

The choice of treatment depends on the cancer type, the number of secondary cancers and where they are, and the treatment you have already had. Surgery can be used in some situations to treat advanced colorectal cancer and often result in a stoma. Chemotherapy and/or radiotherapy can be used to shrink a cancer and control symptoms.

Alternative treatment

Self-Expanding Mental Stents (SEMS) have added a new dimension to the management of obstructing rectal tumours as they provide rapid relief of distressing symptoms in patients not considered fit for surgery.

SEMS are being increasingly used for patients with bowel obstruction as they are considered to be a safe and effective method of achieving palliative relief in patients with advanced colorectal cancer.

Although considered to be a convenient and safe technique, several complications directly attributable to the use of SEMS have been reported. Stenting carries a mortality rate of around two per cent, however, it should be remembered that this is a lower risk than the twenty per cent mortality rate associated with emergency surgery. Stents are prone to different complications within the gastrointestinal tract depending on the location.