



Treating advanced bowel cancer

When bowel cancer has
spread to other parts of
the body



Bowel Cancer UK
Beating bowel cancer together

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About this booklet

This booklet is for anyone diagnosed with bowel cancer that has spread from the bowel to other parts of the body. This is called advanced bowel cancer. We hope it is also helpful for family and friends.

It provides an overview of what advanced bowel cancer is, your treatment options, dealing with your emotions and maintaining a good quality of life.

Support for you

As well as the information in this booklet, we also have a range of other information and support that you might find useful.

Online community

Join our online community for everyone affected by bowel cancer at [bowelcanceruk.org.uk/community](https://www.bowelcanceruk.org.uk/community)

Ask the Nurse

Contact our nurses if you have any questions or concerns at [bowelcanceruk.org.uk/nurse](https://www.bowelcanceruk.org.uk/nurse)

Publications

Download our free publications at [bowelcanceruk.org.uk/ourpublications](https://www.bowelcanceruk.org.uk/ourpublications)

Website

Find out more about bowel cancer at [bowelcanceruk.org.uk](https://www.bowelcanceruk.org.uk)

What is advanced bowel cancer?

Advanced bowel cancer is cancer that has spread from the bowel to other parts of the body. You may also hear it being called secondary, metastatic or stage 4 bowel cancer.

Bowel cancer can spread when parts of the tumour break away from the bowel and travel to another part of the body. The tumour in the bowel is called the primary tumour. The tumour that is in a different part of the body is called a secondary tumour, or metastasis.

The most common places for bowel cancer to spread are:

- the liver
- the lungs
- the peritoneum – a thin layer of tissue that covers the organs in your tummy (abdomen)

In rarer cases it can also spread to other parts of the body, such as the bones, ovaries and brain.

Even though the cancer has spread to other parts of the body, it is still bowel cancer and the cells are still bowel cancer cells.

Locally advanced bowel cancer

Some people may have locally advanced bowel cancer. This is when cancer has spread into tissues next to the bowel, such as the bladder or nearby lymph nodes. You may also hear it being called stage 3 bowel cancer. This is different to advanced bowel cancer.

Healthcare professionals may mean slightly different things when they use advanced and locally advanced bowel cancer. If you aren't sure, ask your healthcare team to explain what they mean.

The information in this booklet covers advanced bowel cancer; when cancer has spread to other organs in the body. It does not cover locally advanced bowel cancer.

For information about the staging of bowel cancer, visit our website **bowelcanceruk.org.uk**

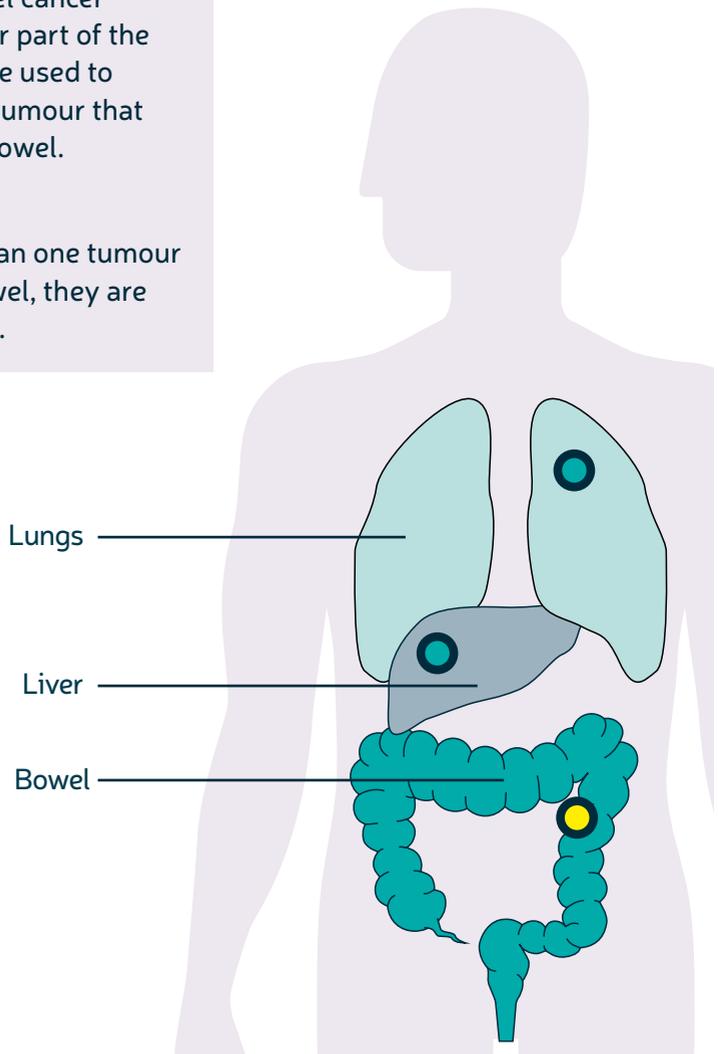
Definitions

Metastasis:

This is when bowel cancer spreads to another part of the body. It can also be used to describe a single tumour that is outside of the bowel.

Metastases:

If there is more than one tumour outside of the bowel, they are called metastases.



Key

-  Tumour
-  Metastasis

Coping with your diagnosis

When you are diagnosed with advanced bowel cancer, you may have lots of thoughts, emotions and questions. It can feel like being on an emotional rollercoaster, things may feel uncertain and some of your future plans and life goals may change.

These feelings can be more intense if you have advanced bowel cancer. Feeling uncertain when living with advanced bowel cancer is normal. Give yourself time to adjust to your diagnosis.

People react to the news in different ways. With the right information and support, some people feel more confident about managing their emotions and continuing with aspects of their everyday life. There are lots of ways to get support and manage your emotions to help you feel more able to cope.

How you might feel

Everyone responds to their diagnosis differently. There is no right or wrong way to react. Some people are shocked and don't know what to say and some people start to cry. Others get angry and scared or feel like they have no feelings at all. These feelings can be exhausting and at times difficult to manage.

They are all common reactions and usually change over time. Allowing yourself some time and space to take in what is happening can be helpful. You may want to be on your own or you might find it helpful to be with someone you are close to such as your partner, family and friends, work colleagues or neighbours.

Not all emotions are negative. Some people feel relieved that they now know what is causing the symptoms and that they can start treatment and discuss options for the future.

Some people find that having a positive attitude helps them cope. You may feel pressure from other people to avoid appearing low or negative. It is hard to be positive all the time and it is ok if you don't feel like this. Try not to put too much pressure on yourself, be kind and caring to yourself and ask for emotional support when needed.

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We were offered counselling and we didn't take it, but in hindsight we should have. We didn't notice that my husband was struggling with my diagnosis at the time. No one ever asks how he his. My advice to anyone going through this would be to seek counselling support.

Laura

”

Managing fear, anxiety and depression

You may feel anxious or stressed from time to time during your treatment. This is completely normal. Symptoms of anxiety include worrying a lot, struggling to control your emotions and feeling tense for a long time. The physical symptoms of anxiety include tiredness, breathlessness, being unable to sleep and/or dizziness. You can always ask for help from your healthcare team who will be able to find the best way to offer emotional support and a place to talk things through.

Some people with advanced bowel cancer experience low moods and periods of depression. Symptoms of depression include having a low mood most of the time, not getting pleasure from most activities, feeling hopeless, being irritable or lacking energy and motivation. If you are feeling any of these, speak to your healthcare team who will be able to consider your options for emotional support.

Talk about your feelings with someone who can help. You may find that your family and friends can help and support you. Some people speak to trained professionals who can help them manage their emotions, such as a counsellor, psychotherapist or mental health nurse. They may suggest a talking treatment such as cognitive behavioural therapy (CBT). Some people may also be prescribed medicines to help them cope.

Where you can get support

Your healthcare team can refer you to lots of places so that you can get the right support for you.

- Ask your healthcare team to refer you for professional emotional support
- Join a support group. This could be online or face to face
- Contact other charities such as Macmillan Cancer Support, Cancer Research UK and Maggie's

Some people find it helpful to speak to someone who understands what it is like to live with advanced bowel cancer. Our online community is a welcoming place for everyone affected by bowel cancer to ask questions, read about people's experiences and support each other. Join at [bowelcanceruk.org.uk/community](https://www.bowelcanceruk.org.uk/community)

Tips for managing day to day life

- Talk to people you are close to such as your partner, family, friends, work colleagues or neighbours
- Be kind and caring to yourself
- Try and keep to a healthy diet
- Try to stay as active as possible
- Find ways to help you relax. This might include things like practising mindfulness
- Get plenty of sleep. It might help to get into a routine of regular sleep and wake times, avoid excess eating, smoking or drinking alcohol before you sleep

More support

If you are struggling to cope, ask for help. There are lots of places where you can get emotional, practical and spiritual support. There is also a list of useful contacts at the end of this booklet where you can find further support.



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I blog my cancer journey online as it helps me mentally. I've also learnt to listen to my body when it is telling me to rest and accept help from family and friends with looking after my son and household chores.

Sophie

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Your healthcare team

A team of healthcare professionals will work together to treat and support you during your bowel cancer treatment. This is known as a multi-disciplinary team (MDT).

You will be under the care of the bowel cancer MDT and experts who specialise in the parts of the body that your bowel cancer has spread to. This could include specialists in treating the liver, lungs or peritoneum.

Your MDT will meet to discuss your treatment. Your consultant or specialist nurse will talk to you about the outcomes of these meetings. They will make sure your wishes are taken into account and that you fully understand any treatment decisions that are suggested.

Remember

You can ask your healthcare team whether your case has been referred to another specialist team. For example, if your bowel cancer has spread to the liver, ask if your case has been reviewed by a liver surgeon.

Your healthcare team is likely to include:

Medical and clinical oncologist

A doctor with expertise in treating cancer patients with chemotherapy and other specialised drugs. Clinical oncologists can also give radiotherapy treatment.

Surgeon

A doctor with specialist training in surgery. You may have different surgeons depending on where your bowel cancer has spread. For example, colorectal surgeons specialise in bowel surgery, hepatobiliary surgeons specialise in liver surgery and thoracic surgeons specialise in lung surgery.

Clinical nurse specialist (CNS)

A colorectal clinical nurse specialist is a specialist nurse who has expert knowledge and experience in caring for bowel cancer patients. You may also meet CNSs who specialise in other parts of the body, depending on where your cancer has spread. They are usually your first point of contact if you have any questions or concerns.

Radiologist

A doctor with expertise in X-rays and other specialised imaging machines (for example ultrasound, CT, PET and MRI). Diagnostic radiologists use scans to locate and measure where the cancer is in the body. Interventional radiologists use scans and non-surgical techniques to help treat cancer.

Histopathologist

A specialist doctor who uses laboratory equipment to look at patient tissue under a microscope and confirm a diagnosis.

Palliative care specialist

A doctor or nurse with extra training and experience to support patients and their families to improve quality of life and help manage symptoms through psychological and practical support.

Research nurse

A nurse who helps recruit, manage and support patients who are taking part in a clinical trial.

Counsellor

A professional who uses non-medical therapies and techniques to support people to deal with emotional issues and problems. This service may also be offered to your family.

Dietitian and nutritionist

Professionals who support you if you have problems with eating and/or drinking, or if you need help with managing your weight.

Occupational therapist

A professional trained to help you regain independence and cope with home or work life after surgery or other treatment.

Clinical psychologist

A professional trained to treat and support you if you are having trouble coping with emotional or behavioural problems. This service may also be offered to your family.

Physiotherapist

A professional trained to help you gain strength, movement and balance after surgery.

It can be helpful to know the names of the healthcare professionals looking after you. Here's some space for you to write their contact details.

My healthcare team

Name:

Tel:

Email:

Name:

Tel:

Email:

Name:

Tel:

Email:

Name:

Tel:

Email:

Tests for advanced bowel cancer

You will have a series of tests to find out the size of your tumour, where the cancer has spread and to check how you are responding to treatment. There are some examples of tests you might have below.

Scans

CT (computerised tomography) scan

X-rays are used to produce a 3D image of the body. You lie on a bed which slides slowly backwards and forwards through a doughnut-shaped machine.

MRI (magnetic resonance imaging) scan

Strong magnets and radio waves are used to produce detailed images of your body. You lie on a bed which then slides into a tunnel. The scanner is quite noisy so some departments will provide ear plugs.

PET (positron emission tomography) scan

Low-dose radioactive solution is injected into a vein, usually in your arm, to see if your tumour has spread to other parts of your body that can't be seen on other scans. You rest on a bed which slides into a doughnut-shaped scanner. Sometimes a PET scan can be

combined with a CT or MRI scan to produce an even more detailed image. These are called PET-CT or PET-MRI scans.

Other tests

CEA test

A CEA (carcinoembryonic antigen) test is a blood test that is used to check how well treatment is working. You may hear CEA being referred to as a tumour marker. You might have CEA tests during follow up appointments after treatment. Although they can be a useful guide, they aren't always reliable on their own and so you may have other tests too.

Biomarker test

A biomarker test can be used to see if you might be able to have a targeted therapy. See [page 29](#) for information about biomarker tests.

Deciding your treatment plan

Every bowel cancer patient is different and not all treatments will be suitable for every patient. It is important that you understand and agree with the treatment suggested for you and any possible side effects.

Working out what treatment is best for you depends on lots of factors. These can include:

- how big the tumour is
- how many tumours there are
- how healthy the rest of the affected organ is
- where the cancer is
- whether your bowel cancer has changes (mutations) in certain groups of genes
- your general health and fitness
- which treatments you have already had
- how you are responding to other treatments, such as chemotherapy
- the side effects of treatments

Your doctor or clinical nurse specialist will talk you through the benefits and possible risks and answer any questions you may have. Once you are fully informed, your healthcare team will help you make a decision on which treatment is best for you.



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Having a full understanding of what was going to happen ahead of my operations calmed my nerves. I wanted to know when I would be given an anaesthetic or what side effects I might have. I got comfort from being able to picture how things might happen over the coming days or weeks.

Tim

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Questions to take to your hospital appointments

You might find it useful to take a list of questions with you to your hospital appointments. Here are some examples:

Where is my bowel cancer?

Are there any clinical trials suitable for me?

What are my treatment choices?

What emotional support is available?

Are there any other treatments available at another hospital?

Will I need extra help at home after treatment?

Does this treatment aim to help me live longer or control my symptoms?

What support or information is there for my family or children?

How much longer am I likely to live for if I have treatment?

What financial support is available?

What are the side effects?

When will I start to feel the benefits of the treatment?

Some people find it useful to take someone with them to their medical appointments to help them take notes and remind them what was discussed.

Clinical trials

Some patients may be able to take part in a clinical trial. These aren't suitable for everyone. Clinical trials are research studies that aim to look at whether a treatment being tested is safe and how well it works compared to what is currently available.

Taking part in a trial may mean you are able to access treatment that isn't currently available on the NHS. This doesn't necessarily mean the treatment you get through a trial is better than treatment you would normally receive. Clinical trials are carefully monitored, with lots of checks to make sure that you are fully supported.

Sometimes clinical trials are only available in certain hospitals and you may have to travel to take part. Your medical team can advise if there are any suitable trials for you.

You can find out more about clinical trials on our website at **bowelcanceruk.org.uk**

Getting a second opinion

Your treatment and care will have been discussed with specialists who have expert knowledge and experience.

However, some patients may want to ask for a second opinion about their treatment. This might be:

- to check all treatment options have been explored
- because they are not happy with the recommended treatment
- to confirm the diagnosis
- because they don't feel that they can talk to their current doctor about their treatment

You can ask your GP or consultant to refer you to another specialist for a second opinion. This may be another doctor at the same hospital or at a different hospital.

It is important to remember that a second opinion doesn't necessarily mean that you will be offered a different treatment or that you will change to a different team or hospital. It could also mean the start of your treatment is delayed.

Don't worry about whether you are offending your first healthcare professional. Treatment plans can be complicated and it is common for healthcare professionals to ask their colleagues for advice.

Types of treatment for advanced bowel cancer

Treatment for advanced bowel cancer can include surgery, chemotherapy, radiotherapy and targeted therapy. Some treatments are specific to the part of the body that the cancer has spread to.

The type of treatment you have will depend on the aim of the treatment. The aim could be:

- to remove the tumour to try and be clear of bowel cancer
 - to shrink the tumour. In some cases, it might be possible to remove the tumour at a later stage
 - to keep the cancer under control. This is a type of palliative care that aims to prolong and improve quality of life and to help you remain active for as long as possible. You may have palliative care for several years. It can also be referred to as supportive care. Some patients have such good responses that the cancer can be removed
- to help manage the symptoms of bowel cancer, reduce the side effects of treatment and to improve your quality of life. This is a type of palliative care that is sometimes called end of life care. The change to end of life care is gradual and your healthcare team will support you in deciding how to continue your treatment

Treatment plans can be complicated and can change. Between treatments it can be useful to see how you are feeling, what has been achieved and to think about the next steps. Speak to your healthcare team if you have any questions or concerns about your treatment, symptoms or side effects.

Surgery

You may be able to have an operation as your first treatment or after another type of treatment. Surgery is not suitable for every bowel cancer patient.

The type of surgery you have depends on where the bowel cancer has spread. There is more information about surgery for bowel cancer that has spread to the liver on [page 36](#), lungs on [page 42](#), peritoneum on [page 46](#) and other parts of the body on [page 48](#).

It can take days, weeks or months before you have surgery. Sometimes you might need to have another type of treatment first. If you have another treatment first, it doesn't mean that you will definitely have surgery afterwards. Speak to your healthcare team if you have any questions about your operation.

You may have open surgery or keyhole (laparoscopic) surgery.

Open surgery is when the surgeon makes one opening to remove the cancer.

Keyhole surgery is when the surgeon makes a few small openings to remove the cancer. The surgeon passes special instruments and a thin flexible tube with a light and camera on the end through the small openings to remove the tumour.

Bowel surgery

You may have surgery to remove tumours in your bowel. This could be before or after surgery on other parts of your body, depending on what is best for you. This may be your first time having bowel surgery or you may have it because the cancer has come back. When bowel cancer comes back, it is called recurrence or recurrent cancer.

This may be carried out as keyhole or open surgery. You can read more about bowel surgery on our website at bowelcanceruk.org.uk

Radiotherapy

Radiotherapy uses high energy waves called radiation to destroy cancer cells. If it is given at the same time as chemotherapy it is called chemoradiation.

There are different types of radiotherapy. External radiotherapy is delivered from outside of the body by a machine and only takes a few minutes. The radiotherapy beam doesn't touch you and you won't feel anything during the treatment.

Internal radiotherapy (also known as brachytherapy or contact radiotherapy) is delivered from inside the body. It means a high dose of radiation can be given to the cancer and limit damage to the tissue and organs around it.

There are other types of radiotherapy that can be used when bowel cancer has spread to other parts of the body.

Information about these specialised radiotherapy treatments can be found on [page 39](#) for liver, [page 44](#) for lung and [page 48](#) for other parts of the body

Radiotherapy can be used to relieve the symptoms of advanced bowel cancer. This is called palliative radiotherapy.

Like all treatments, radiotherapy can cause side effects. Your healthcare team should give you written information about possible side effects. They won't be able to tell you in advance exactly which side effects you will get or how long they will last. Speak to your healthcare team if you have any new or ongoing side effects. You may be able to have treatment to help.

There is more information about radiotherapy on our website at bowelcanceruk.org.uk

Chemotherapy

Chemotherapy is a treatment that uses drugs to treat bowel cancer. You may have chemotherapy on its own or together with other treatments.

Chemotherapy is usually given as an injection, drip or infusion into your vein (intravenous) or as a tablet (oral).

You might be given chemotherapy directly into your blood stream in the following ways:

- **Cannula** – a thin flexible tube that goes into the back of your hand or arm each time you have chemotherapy
- **Central line** – a longer flexible tube that goes into a vein in your chest. This can stay in place for many months
- **PICC line** – a longer flexible tube that goes into the upper part of your arm. This can stay in place for many months
- **Portacath** – a small chamber that sits under the skin

The treatment could take a few minutes, hours or days in some cases.

Chemotherapy phases

There are different phases of chemotherapy treatment. The first chemotherapy treatment that you are given is called first-line therapy. This is the best treatment for you at the time.

Sometimes first-line therapy stops working or starts to cause more serious side effects. Your healthcare team will then review how you are and they may recommend a different chemotherapy. This is called second-line therapy. Some patients may have third- or fourth-line therapy.

When is chemotherapy given?

Before surgery

You may have chemotherapy to shrink the tumour as much as possible before surgery. This is called neoadjuvant chemotherapy.

Not everyone can have surgery after chemotherapy. Whether you can have surgery depends on your response to chemotherapy. This can vary between different people.

After surgery

You may have chemotherapy after surgery to help stop the cancer coming back. This is called adjuvant chemotherapy.

Maintenance therapy

Some people may have chemotherapy after treatment to stop the cancer from coming back or to keep the cancer under control in between treatments. This is called maintenance therapy.

Palliative therapy

You might have chemotherapy to keep the cancer under control or ease symptoms. The aim of the treatment is to help you have a good quality of life for as long as possible. This is called palliative chemotherapy. You may have palliative chemotherapy for several years. Some patients have such good responses that the cancer can be removed.

Chemotherapy drugs

Fluorouracil (also known as 5FU)

Fluorouracil is a common chemotherapy treatment for bowel cancer. It is usually given as an infusion through a tube into a vein. You will be given it in cycles which might be repeated every week, every two weeks or monthly. It is often given with folinic acid. Folinic acid isn't a chemotherapy drug but can help the chemotherapy treatment work better.

Capecitabine (Xeloda®)

Capecitabine is a drug that breaks down in your body to form fluorouracil. It is given as tablets twice a day.

Oxaliplatin (Eloxatin®)

Oxaliplatin is given as an injection or drip into a vein. It can take between two to six hours.

Irinotecan (Campto®)

Irinotecan is given as an injection or drip into a vein. This can take between 30 to 90 minutes. It can be given on its own or in combination with other treatments.

Raltitrexed (Tomudex®)

Raltitrexed is given as an injection or drip into a vein. The treatment usually takes around 15 minutes.

Trifluridine-tipiracil hydrochloride (Lonsurf®)

Trifluridine-tipiracil hydrochloride is given as a tablet twice a day.

Chemotherapy combinations

You might be given more than one chemotherapy at the same time. Some common combinations used to treat bowel cancer include:

FOLFOX

- Folinic acid
- Fluorouracil
- Oxaliplatin

FOLFIRI

- Folinic acid
- Fluorouracil
- Irinotecan

FOLFOXIRI

- Folinic acid
- Fluorouracil
- Oxaliplatin
- Irinotecan

CAPOX or XELOX

- Capecitabine
- Oxaliplatin

XELIRI

- Capecitabine
- Irinotecan

Chemotherapy side effects

Each chemotherapy drug has its own side effects. Not everyone will experience the same side effects and most of them can be controlled easily. Some side effects occur during chemotherapy and they may improve once you finish treatment. For some people the side effects can last months or years after treatment or may be permanent.

You might find it helpful to keep a note of any that you experience. Your healthcare team will give you information about the side effects that are most likely to affect you and how to manage them.

Diarrhoea

Some people have diarrhoea whilst on chemotherapy. Your healthcare team will give you advice on what medicine is best for you and about what you should eat and drink.

For tips on how to manage diarrhoea through diet, see our booklet Eating well at bowelcanceruk.org.uk

A sore mouth

You may find that the inside of your mouth is sore, you have mouth ulcers, a dry mouth or bad breath. This can happen if you have fluorouracil and will usually go after you have finished chemotherapy.

It may help to avoid eating spicy, salty or sharp foods. Your healthcare team may be able to give you painkillers or a mouthwash to help you.

Feeling and being sick

Your healthcare team can provide anti-sickness medication to help reduce or stop you from feeling sick. These can be given to you as tablets, injections, through a drip into a vein, capsules that you put up your bottom called suppositories, or as a skin patch.

Tiredness

Extreme tiredness (fatigue) is one of the most common effects of cancer and its treatment. It can feel completely draining and can affect all areas of your life. Resting and sleeping often don't help.

Ask your family and friends to help you with daily tasks. If you are able to, do some gentle physical activity such as walking or yoga, as this can help boost your energy levels in the long run. If you have severe tiredness, speak to your healthcare team as soon as possible as you may have anaemia. This is when you have fewer red blood cells. Your healthcare team will be able to treat you.

Increased risk of infection

Chemotherapy can reduce the number of white blood cells which help fight infection. This means there is an increased risk of infection, a condition called neutropenia.

You can help protect yourself from infection by washing your hands with soap regularly, having the annual flu jab and avoiding close contact with people who have an infection.

You should be given information about infections by your chemotherapy team. If you think you might have an infection, you should contact your medical team as soon as possible.

Tingling or numb hands and feet

Chemotherapy can damage the nerve endings in your hands, feet and lower legs. This is called peripheral neuropathy. You may have it if you have oxaliplatin.

Some people find keeping their hands and feet warm and wearing gloves helps manage the symptoms.

Skin reactions on hands and feet

Some people find that their hands and feet become sore, red and peel. This is called hand-foot or palmar-plantar syndrome and is a side effect of capecitabine.

It might help to keep your hands and feet cool and avoid hot water. Some people find avoiding wearing tightly fitting gloves also helps. Your healthcare team can also give you medicines and creams to help control the symptoms.

Fertility

Chemotherapy can cause temporary or permanent infertility in both men and women. Speak to your healthcare team if you have any questions. They will discuss with you your options about fertility treatment and can refer you to a fertility specialist.

Both men and women should use contraception during chemotherapy and for about a year after treatment ends.

Get support

Tell your doctor or nurse about any side effects you have. They will be able to help you manage your symptoms. If you're feeling very unwell or have a high temperature, you should contact a doctor or nurse straight away. You can also get advice and support about side effects by calling your hospital 24/7 helpline.



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To help manage the tingling feeling in my hands, I wear gloves when getting things out of the fridge. It also helps to take the vegetables out an hour before I prep them so that they aren't as cold to touch.

I also always carry hand gel to reduce my chances of getting an infection. Carrying a thermometer with me helps me keep an eye on my temperature.

Bridget

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Serious side effects

Some patients experience rare, but serious side effects to cancer treatments. Your consultant or specialist nurse will explain the risks of these side effects to you.

DPD deficiency

Some patients have a rare but serious reaction to fluorouracil and capecitabine. In some cases, this can be life threatening.

The reaction is linked to a protein called DPD (which stands for dihydropyrimidine dehydrogenase). Some people have low or no levels of this protein in their body. This is known as DPD deficiency.

DPD helps the body to break down capecitabine and fluorouracil. If a person has a DPD deficiency, these drugs can build up in the body. This can lead to severe reactions.

You should speak to your medical team if you are worried about DPD deficiency. They might be able to offer you a test.

Acute cholinergic syndrome

Acute cholinergic syndrome is a side effect that some people may have when they are treated with irinotecan. Side effects can include diarrhoea, stomach cramps, producing a lot of saliva and sweating more than usual. This can happen within 24 hours of having treatment. These side effects can be treated easily. Tell your medical team if you have any of these.

Heart problems

Some people experience changes in their heart beat when they have fluorouracil. You might have tests to check how your heart is working. If you have any existing heart problems, chest pain or tightness, let your healthcare team know.

Targeted therapy

What is targeted therapy?

A targeted therapy helps your body control the way cancer cells grow. There are different types of targeted treatment that destroy cancer in different ways.

Targeted therapy can be used on its own or with chemotherapy.

Access to targeted therapies

Not all targeted therapies are available on the NHS in England, Scotland and Wales, or the Health and Social Care service in Northern Ireland. If your doctor thinks you might benefit from this type of treatment, they will discuss it with you. Your cancer specialist can apply for funding for a treatment if you both agree that you would benefit from it. This can be a difficult process and it's not always successful.

Who can have targeted therapy?

Targeted therapies don't work for everyone. Your healthcare team might offer you a test to help find out if there are any targeted therapies that could work for you. This is called a biomarker test. The test could be a blood test or a test on a sample of your tumour from a biopsy.

Speak to your healthcare team to see if a biomarker test is appropriate for you.

Biomarkers

Your cancer cells may have changes (mutations) in sections of your DNA called genes. These changes are described as biomarkers. They can affect how the cancer grows. The most common mutations found in bowel cancer are in genes called RAS, BRAF and mismatch repair (MMR) genes.

The biomarker test is used to see if you have mutations in RAS, BRAF and mismatch repair genes. Finding out which mutations you have can help decide which treatment is more likely to work for you.

RAS genes

RAS genes help cells grow, survive and multiply. If the cancer has a normal RAS gene, it is known as RAS wild type. If it has a mutation, it is called a mutated RAS gene. There are different types of RAS genes called KRAS and NRAS. You may have a test to see if you have mutations in both of these RAS genes.

If you have the wild type RAS gene, you may be able to have the targeted treatments, cetuximab or panitumumab. These treatments are not suitable for patients with mutated RAS genes. For more information on cetuximab or panitumumab see [page 32](#).

BRAF genes

BRAF genes help cells grow and multiply. If the cancer has a normal BRAF gene it is known as BRAF wild type. If it has a mutation, it is called mutated BRAF. The most common mutation is called BRAF V600E.

If you have the wild type BRAF gene, you may be able to have cetuximab and panitumumab. If you have the mutated BRAF gene, the drugs cetuximab and panitumumab are unlikely to work.

If you have the BRAF V600E mutation, you may be able to have the drugs cetuximab with encorafenib. Read more about these drugs on [page 32](#).

Mismatch repair genes

Some bowel cancers develop due to mutations in the genes that usually repair DNA. These are known as mismatch repair genes (MMR).

These bowel cancers often have a high number of mutated genes. This is referred to as deficient mismatch repair (dMMR) or MSI-High.

If you have this type of mutation, you might be able to have the immunotherapy drugs nivolumab or pembrolizumab. Read more information about immunotherapies on [page 34](#).

Types of targeted therapies

Cetuximab (Erbitux®)

You may have cetuximab if you have a wild type RAS gene. It is given to you through an infusion or drip into a blood vessel in your arm or hand. You will have it once a week. You may have this alongside chemotherapy.

Panitumumab (Vectibix®)

You may have panitumumab if you have a wild type RAS gene. It is given to you as an infusion into a blood vessel into your arm or hand. You may have this alongside chemotherapy.

Bevacizumab (Avastin®)

You may have bevacizumab given to you as an infusion through a drip into your vein. This can be every two or three weeks. You are likely to have it alongside chemotherapy.

Aflibercept (Zaltrap®)

You will be given aflibercept as an infusion through a drip into your arm. You'll receive it every two weeks.

Encorafenib (BRAFTOVI®)

You may have encorafenib alongside the drug cetuximab if you have the BRAF V600E mutation. It is given to you as a tablet that you take once a day.

Regorafenib (Stivarga®)

You will have regorafenib as a tablet that you can take once a day for three weeks. After this you will have a week off therapy, before starting the treatment cycle again.

Ramucirumab (Cyramza®)

Ramucirumab is given to you as an infusion through a drip into your vein. You are likely to have it alongside chemotherapy. You will receive it every two weeks.

Remember

Some of these treatments haven't been approved for use on the NHS (in England, Scotland and Wales) or the Health and Social Care service (in Northern Ireland). Speak to your healthcare team to find out if you can have these treatments.

Side effects

Like most treatments, targeted treatments can cause side effects. Many of them will stop once you have finished treatment. Speak to your healthcare team if you are worried. They will be able to help you manage them.

Common side effects can include:

- tiredness (fatigue)
- diarrhoea, feeling or being sick (vomiting)
- rashes on your skin
- rapid or uncomfortable breathing
- weight loss or loss of appetite



Despite a rocky start with severe side effects on panitumumab, the treatment is manageable with support from your healthcare team.

The skin toxicity can be difficult to manage. Sun factor 50 face creams are essential even on cloudy winter days to prevent flares.

There are lots of tips from patients on the Bowel Cancer UK online community that were so helpful to me.

Jane



New treatments

Research is ongoing to try and find new targeted treatments for advanced bowel cancer. These therapies may not always be available through the NHS but they may be available through a clinical trial. Not everyone is suitable for clinical trials. There is more information about clinical trials on [page 16](#). Speak to your healthcare team to discuss these options.

Immunotherapy

There is lots of research looking into new immunotherapy drugs. Immunotherapy is a type of targeted treatment that helps your own immune system to destroy the cancer. Some patients may be able to have them by taking part in clinical trials. Immunotherapies don't work for everyone.

Nivolumab (Opdivo®)

You will be given nivolumab as an infusion through a drip into your arm. You may have it on its own or you may have it combined with another drug called ipilimumab. You may be able to have it if your bowel cancer has changes (mutations) in mismatch repair genes (dMMR). You can read more about dMMR on [page 31](#).

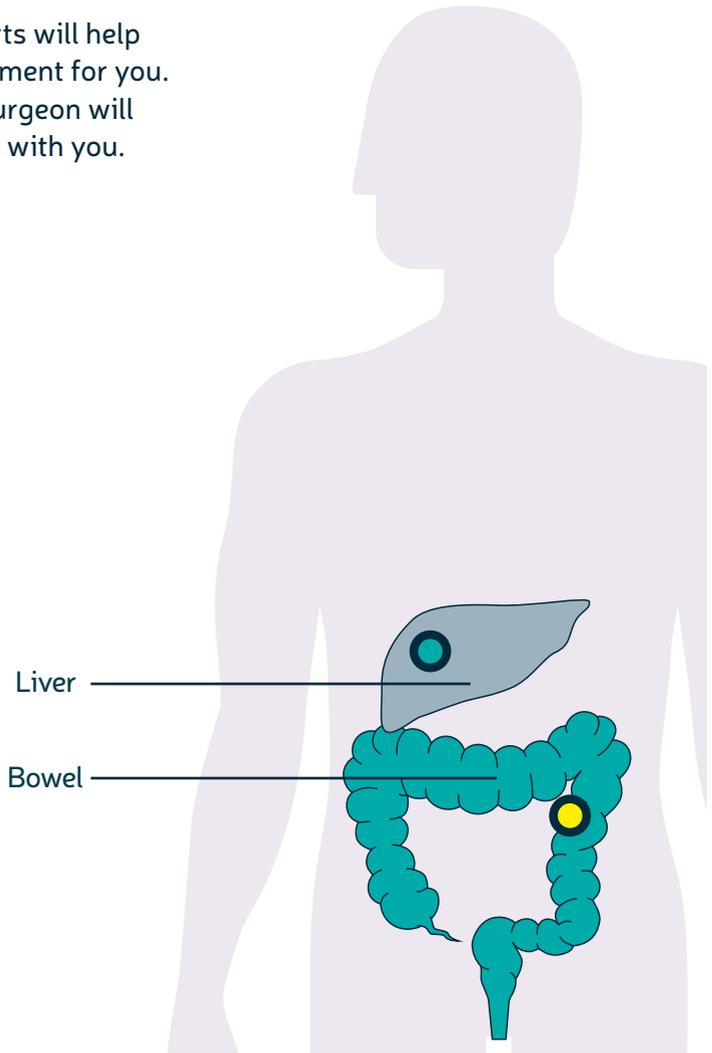
Pembrolizumab (Keytruda®)

You may have pembrolizumab as an infusion through a drip into your arm. You may be able to have it if your bowel cancer has changes (mutations) in mismatch repair genes (dMMR). You can read more about dMMR on [page 31](#).

Bowel cancer that has spread to the liver

When bowel cancer spreads to the liver it is called liver metastasis. This is the most common place for bowel cancer to spread. The liver is an organ that sits above your stomach on the right side of your body, underneath your ribs.

A team of liver experts will help decide the best treatment for you. Your oncologist or surgeon will discuss your options with you.



Key

-  Tumour
-  Metastasis

Liver surgery

You may have surgery to remove the cancer from your liver. This is called a liver resection. The liver can still work normally even after parts of it have been removed during surgery.

Liver surgery is always carried out in specialist regional hospitals with expert teams. This means that it may not be available in your local hospital and you might have to travel to have your operation.

Types of liver surgery

Your surgeon will try to remove all of the tumour(s) and leave as much healthy liver as possible. Some people might need to have half of their liver removed. The liver does grow back (regenerate) after surgery. If the right side of your liver is removed the operation is called a right hemihepatectomy. If you have the left side removed it is called a left hemihepatectomy.

For some patients, it may be possible to have surgery that removes tumours from both sides of the liver. This may need to be done in two separate operations several weeks apart. This depends on whether you

are well enough to have surgery and there aren't any other signs of cancer in your body. This is called a two-stage hepatectomy.

Liver operations are sometimes performed during open surgery through one opening in your stomach area (abdomen). This usually takes around five or six hours.

The operation may also be done as keyhole surgery. Keyhole surgery isn't suitable for everyone and sometimes the surgeon will need to switch from keyhole to open surgery during the operation. Speak to your surgeon about the risks and benefits of both types of surgery and which option is best for you.

Before surgery

You may need to have treatment before surgery to shrink the tumour. This is called neoadjuvant therapy. It can include chemotherapy and other specialised techniques.

Some patients might have treatment to encourage healthy parts of their liver to grow before surgery. This is called a portal vein embolisation. A needle is put into stomach area (abdomen) that is guided by x-ray to a blood vessel in your liver. You will have a local anaesthetic. The procedure takes about an hour and you will probably stay in hospital for one night.

After surgery

After surgery, you may have a short stay in a high dependency unit or a liver intensive therapy unit.

If you have open surgery, you will probably stay in hospital for around five to seven days. It can take around six to eight weeks to recover.

If you have keyhole surgery, you will probably stay in hospital for two to three days and it may take around three to four weeks to recover.

You are likely to have some pain and discomfort after surgery, but your healthcare team can help you manage this. They can provide pain relief, which will help you to get up and move around comfortably and speed up your recovery. Let your medical team know if you feel your pain is not controlled.

Other liver treatments

Not everyone can have liver surgery. If you can't have surgery there could be different treatment options that are suitable for you. Your healthcare team will discuss these with you.

Ablative therapies

Ablative therapies use different energy waves to destroy the cancer. Probes (known as electrodes) are placed into the tumour through your skin. A CT or an ultrasound scan may be used to guide the electrodes into place.

Energy waves are then directed into the tumour to destroy the cancer cells. You will have either a general or local anaesthetic. Sometimes ablative therapies are used at the same time as surgery to treat tumours in difficult locations.



“

After having an ablation to remove a tumour from my liver, I had some discomfort on my right shoulder. My physio suggested some shoulder exercises to do, which really helped to reduce any nerve pain.

Tom

”

There are different types of ablative procedures that are used to destroy tumours in the liver.

Radiofrequency ablation (RFA)

Radiowaves are used to heat up the cancer cells to high temperatures and destroy them.

Microwave ablation

Probes that release microwaves are used to heat up and destroy cancer cells. Your healthcare team may recommend microwave ablation if the tumour is large or close to important blood vessels.

Irreversible electroporation (IRE)

This is also known as NanoKnife. Electrical pulses are used to destroy the cancer cells. This treatment is only available in certain areas of the UK through the NHS. Sometimes it can only be received as part of a clinical trial.

Stereotactic ablative body radiotherapy (SABR)

Cyberknife is one form of SABR. Small radiation beams are directed from many angles so that they overlap at the tumour. This gives a very high dose of radiotherapy to the cancer. You may need to have small metal markers put into your liver before the procedure. These markers are guided by a CT scan. This treatment is only available in a few specialist hospitals at the moment.

High intensity frequency ultrasound (HIFU)

HIFU is a new treatment that is being tested and may be available to some patients through a clinical trial. Not everyone can take part in clinical trials. Speak to your healthcare team for more information.

HIFU uses a high-energy focused ultrasound beam to heat the tumour in the liver and destroy it. This treatment is carried out under general anaesthetic and can be carried out more than once.

Embolisation treatment

Embolisation treatments use very small beads to block (embolise) blood vessels so that less blood goes to a part of the liver. The beads are delivered to your liver through a catheter. They stop blood going to the tumour which means the cancer cells are starved and can be destroyed. You will have either a general or local anaesthetic.

DEBIRI-TACE

Small beads loaded with the chemotherapy drug, irinotecan, are put into the liver. The beads block the blood supply and deliver chemotherapy to the cancer.

This procedure usually takes around one to two hours. After the procedure, you will usually stay in hospital overnight.

Selective internal radiation therapy (SIRT)

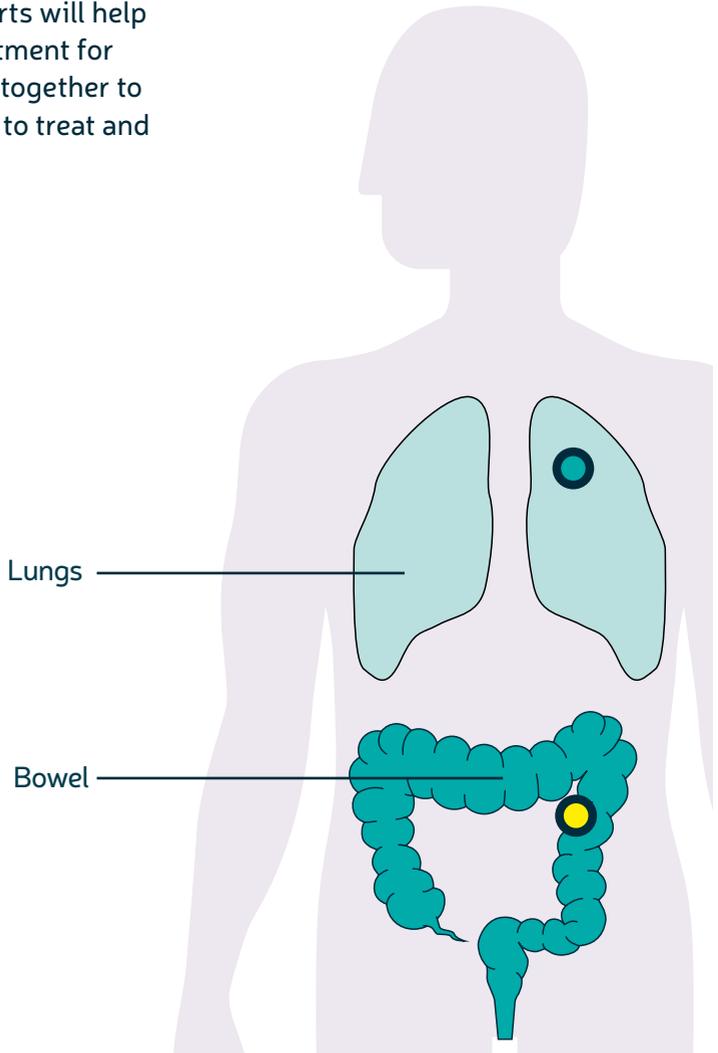
Small radioactive beads are injected into the liver. The beads block the blood supply and release radiation directly onto the cancer cells and destroy them.

This treatment can take between two to three hours. You may have it repeated. You can normally go home either the same day or the day after.

Bowel cancer that has spread to the lungs

When bowel cancer spreads to the lungs it is called lung metastasis. The lungs are one of the more common sites for bowel cancer to spread. The lungs are breathing organs that are in your chest.

A team of lung experts will help decide the best treatment for you. They will work together to decide the best way to treat and support you.



Key

-  Tumour
-  Metastasis

Lung surgery

You may have surgery to remove the cancer from your lungs. This is also known as a lung resection. If your cancer has spread to both lungs, you might need two operations. Surgery is carried out in specialist hospitals, so you may need to travel.

Types of lung surgery

Your surgeon will try to remove all of the tumour(s) and leave as much of the healthy lung as possible.

If your tumour is small or near the edge of the lung, you might have an operation to remove a small section of the lung. This is called a wedge resection.

If the tumour is larger or near the middle of the lung you may have an operation called a segmentectomy. If you need to have a lobe of your lung removed, it is called a lobectomy.

If your cancer has spread to both lungs, it may be possible to treat one lung at a time. This might mean you need a combination of different treatments.

Lung operations are often carried out by keyhole surgery. Sometimes it is not possible to remove the cancer by keyhole surgery and you may need to have open surgery. This is also called a thoracotomy.

You can find out more about open and keyhole surgery on [page 19](#).

Before surgery

You may need to have treatment before surgery to shrink the tumour. This is called neoadjuvant therapy. It can include chemotherapy and other specialised techniques.

After surgery

If you have open surgery you are likely to stay in hospital for about five days, with at least another few weeks at home to recover. If you have keyhole surgery you may be in hospital for up to four days after the operation.

You are likely to have some pain and discomfort after surgery, but your healthcare team can help you manage this. They can provide pain relief which will help you to get up and move around comfortably and speed up your recovery. Let the team know if you feel your pain is not controlled.

Other lung treatments

Not everyone can have lung surgery. If you can't have lung surgery, there may be other treatments you can have instead. Your healthcare team will discuss these with you.

Ablative therapies

Ablative therapies use different energy waves to destroy the cancer. Probes (known as electrodes) are placed into the tumour either through your skin or during surgery. A CT scan or an ultrasound scan may be used to guide the electrodes into place.

Energy waves are then directed into the tumour and destroy the cancer cells. You will have either a general or local anaesthetic.

There are different ablative procedures that are used to destroy the tumours in the lung.

Radiofrequency ablation (RFA)

Radiowaves are used to heat up the cancer cells to high temperatures and destroy them.

Microwave ablation

Probes that release microwaves are used to heat up and destroy cancer cells. Your healthcare team may recommend microwave ablation if the tumour is large or close to important blood vessels.

Cryoablation

Probes are used to freeze the tumour and destroy the cancer cells. The tumour is thawed for 15 minutes and then refrozen multiple times in cycles.

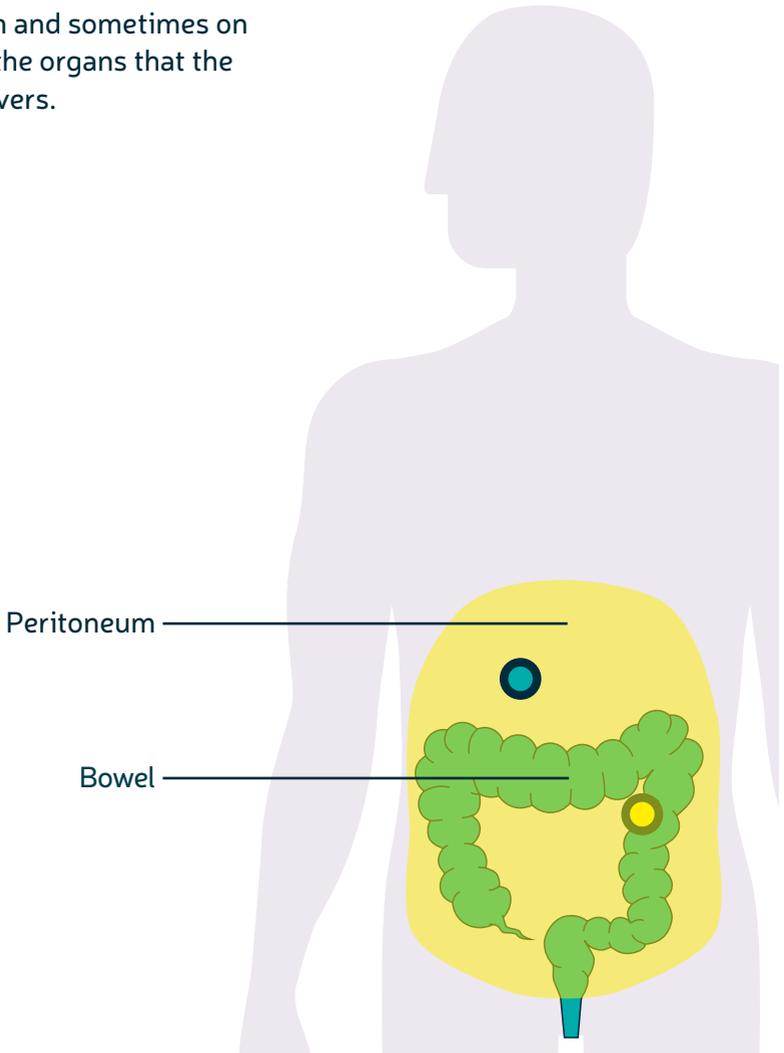
Stereotactic ablative body radiotherapy (SABR)

Cyberknife is one form of SABR. Small radiation beams are directed from many angles so that they overlap at the tumour. This gives a very high dose of radiotherapy to the cancer. You may need to have small metallic markers put into your lung before the procedure. These markers are guided by a CT scan. This treatment is only available in a few specialist hospitals at the moment.

Bowel cancer that has spread to the peritoneum

When bowel cancer spreads to the peritoneum it is called **peritoneal metastasis**. The peritoneum is a thin layer of tissue that lines the inside of the tummy, including your stomach, liver and bowel.

Bowel cancer tumours can form on the peritoneum and sometimes on the surface of the organs that the peritoneum covers.



Key

-  Tumour
-  Metastasis

Treatment for peritoneal metastases

Hyperthermic intraperitoneal chemotherapy (HIPEC)

A team of experts will help decide the best treatment for you. They may be in a different hospital and it may take a few weeks to provide an opinion.

Peritoneal surgery

Some patients might be able to have surgery to remove all visible tumours from the peritoneum. This is called cytoreductive surgery. If there are tumours on the surface of other organs in your tummy (abdomen), you may have parts of these organs removed too.

The surgeon usually makes one opening in your tummy to remove the cancer. It can take around eight to ten hours but sometimes takes longer. Some patients might be able to have keyhole surgery, but this is rare.

HIPEC stands for hyperthermic intraperitoneal chemotherapy. It is a specialised type of chemotherapy.

This treatment is given at the same time as cytoreductive surgery. Not everyone can have HIPEC. Speak to your healthcare team to find out if this is suitable for you.

After the surgeon has removed all or most of the tumours, they will put a heated chemotherapy solution into your tummy (abdomen). This destroys any cancer cells that can't be seen by eye. It is heated up to help it work better. The chemotherapy is then drained from your body.

If you have surgery followed by HIPEC, you will usually stay in hospital for around two to three weeks. Speak to your healthcare team if you have any questions or concerns about your treatment.

Pressurised intraperitoneal aerosolised chemotherapy (PIPAC)

New research is looking into a potential treatment called PIPAC. This means that this treatment is only available to some patients through clinical trials. Not everyone can have PIPAC. Speak to your healthcare team if you are interested in taking part in a clinical trial.

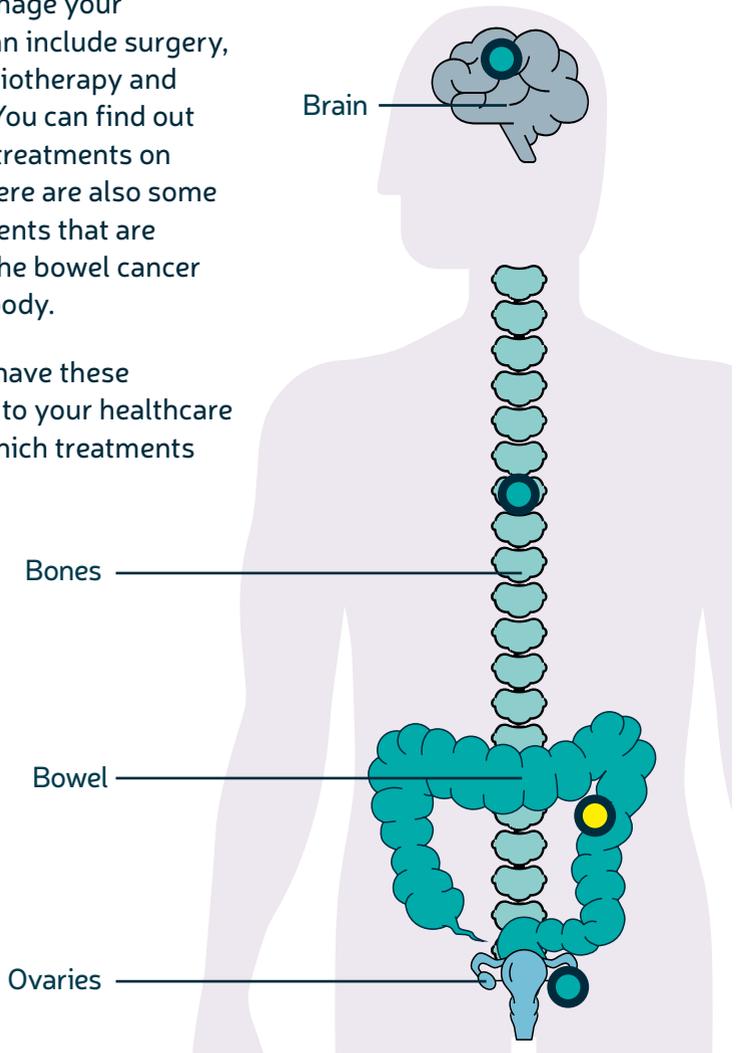
PIPAC is a specialised type of chemotherapy. It is given directly into a patient's tummy (abdomen) during surgery. It is used to try and shrink the tumours in the peritoneum as much as possible.

Bowel cancer that has spread to other parts of the body

In rarer cases, bowel cancer can spread from the bowel to other parts of the body. This could include the bones, ovaries and the brain.

You may have treatment to control the cancer and manage your symptoms. This can include surgery, chemotherapy, radiotherapy and targeted therapy. You can find out more about these treatments on [pages 18 to 34](#). There are also some specialised treatments that are specific to where the bowel cancer has spread in the body.

Not everyone can have these treatments. Speak to your healthcare team to find out which treatments are best for you.



Key

-  Tumour
-  Metastasis

Bones

When bowel cancer spreads to the bones it is called bone metastasis. A team of experts will help decide the best treatment for you. Your oncologist or surgeon will discuss these options with you.

You may have drugs that help keep your bones strong. These can include bisphosphonate therapy and a drug called denosumab. Denosumab is also known as Prolia® or Xgeva®. You may have these drugs alongside other treatments, such as chemotherapy or radiotherapy.

Radiotherapy might be used to relieve any pain from the cancer. This is called palliative radiotherapy.

Ovaries

When bowel cancer spreads to the ovaries it is called ovarian metastasis. A team of experts will help decide the best treatment for you.

More information

You may hear the tumour being described as a Krukenberg tumour, which is a type of ovarian metastasis.

Surgery is not an option for all patients. Speak to your healthcare team to find out which treatment is best for you.

Brain

When bowel cancer spreads to the brain, it is called brain metastasis. A team of experts will help decide the best treatment for you. You may have some of these treatments on their own or combined with other treatments.

Tumours in the brain can cause swelling. You might have steroids to help reduce swelling in your brain. This is called steroid therapy. You will usually have a drug called dexamethasone. You could be given it as a tablet, injection or syrup. You may have it every day for a few days, weeks or months.

Some patients might have an operation to remove the tumour. This is also called a resection.

You may also be able to have stereotactic radiosurgery. This is sometimes called Gamma Knife surgery. Stereotactic radiosurgery is not a type of surgery and no openings are made in your body. It is similar to having a scan. Beams of radiation are directed at the tumour to try and destroy it. You will be lying on your back and you can communicate with the healthcare professionals treating you. After radiosurgery, you can usually go home the same day.

You might be offered a type of radiotherapy called whole brain radiation therapy. This shrinks the tumours on your brain. The treatment is given in small doses and you may have it multiple times.

Taking a break from treatment

Some people may want to have a short delay or take a break from treatment. If you want to take a break, speak to your healthcare team who will be able to give you advice and support about the next steps.

People take a break from treatment for a range of reasons. For example, it could be for a special occasion, going on holiday or wanting more time to recover from some side effects of treatment.

Sometimes taking a break can help you both physically and mentally, but you may need treatment to control the cancer first. If you decide to take a break, you will still be monitored and in regular contact with your healthcare team to make sure that any changes you may go through are investigated straight away.

You may decide you want to stop treatment altogether. You might hear this being called best supportive care. This can be a difficult decision to make but can provide a sense of relief for some people. You can discuss this with your oncologist or clinical nurse specialist. They will continue to provide support and give you medicines to help relieve any symptoms to help improve your quality of life. For more information about palliative care, visit our website at **bowelcanceruk.org.uk**

Other useful organisations

ACAS

- W [acas.org.uk](https://www.acas.org.uk)
- T 0300 123 1100

Provides free information and advice on problems in the workplace and employment law.

Age UK

- W [ageuk.org.uk](https://www.ageuk.org.uk)
- T 0800 678 1602

Provides health support, care and help specifically for older people.

Bladder and Bowel Community

- W [bladderandbowel.org](https://www.bladderandbowel.org)

An organisation providing support and products for people with bladder and bowel control problems.

Cancer Research UK

- W [cancerresearchuk.org](https://www.cancerresearchuk.org)
- T 0808 800 4040

Information and advice for people affected by cancer.

Carer's Trust

- W [carers.org](https://www.carers.org)

Provides services and support to unpaid carers across the UK.

Chartered Society of Physiotherapy

- W [csp.org.uk](https://www.csp.org.uk)

Website includes information on physiotherapy and cancer.

Citizens Advice

- W [citizensadvice.org.uk](https://www.citizensadvice.org.uk)

Provides free, confidential advice on money, work and housing. You can find details of your local Citizens Advice on their website or in your phone directory.

Colostomy UK

- W [colostomyuk.org](https://www.colostomyuk.org)
- T 0800 328 4257

Provides support, reassurance and practical information to anyone who has or is about to have a stoma.

Cruse Bereavement Care

W cruse.org.uk

T 0808 808 1677

Provides support, advice and information when someone dies.

Cruse Bereavement Care Scotland

W crusescotland.org.uk

T 0845 600 2227

Provides support, advice and information for Scottish citizens when someone dies.

Healthtalk.org

W healthtalk.org

Watch videos of people sharing their stories about health issues including bowel cancer. Topics include diagnosis, treatment, talking to children and daily living.

IA (Ileostomy and Internal Pouch Support Group)

W iasupport.org

T 0800 018 4724

A support group run by and for people with an ileostomy or ileo-anal (internal) pouch.

Lynch Syndrome UK

W lynch-syndrome-uk.org

Raises awareness of Lynch syndrome and provides information and support.

Macmillan Cancer Support

W macmillan.org.uk

T 0808 808 0000

Provides support and information on cancer, money, benefits and work.

Maggie's

W maggies.org

Provides free practical, emotional and social support to people with cancer and their family and friends. Maggie's has centres at some NHS hospitals as well as an online centre.

Marie Curie

W mariecurie.org.uk

T 0800 090 2309

Provides information on living with a terminal illness, accessing health services, supporting someone at the end of life and coping when someone dies.

NHS

W nhs.uk

Provides health and lifestyle information, including general information about diet, physical activity, sleep problems, fatigue and emotional support.

nidirect

W nidirect.gov.uk

Government website for Northern Ireland citizens. Includes information on help with health costs.

Pelvic Radiation Disease Association

W prda.org.uk

T 01372 744338

Provides support and information for people who have had pelvic radiotherapy.

Penny Brohn UK

W pennybrohn.org.uk

T 0303 3000 118

Helps people live well with cancer by offering a range of services, including wellbeing courses and complementary therapies.

Sue Ryder

W sueryder.org

Provides information and palliative support to people living with a terminal illness.

Winston's Wish

W winstonswish.org

Provides childhood bereavement support services.

More support



Online community

Our online community is a welcoming place for everyone affected by bowel cancer to ask questions, read about people's experiences and support each other. Join us at [bowelcanceruk.org.uk/community](https://www.bowelcanceruk.org.uk/community)



Publications

We produce a range of expert information to support anyone affected by bowel cancer. Download our free publications at [bowelcanceruk.org.uk/ourpublications](https://www.bowelcanceruk.org.uk/ourpublications)



Ask the Nurse

If you have any questions about bowel cancer, contact our nurses at [bowelcanceruk.org.uk/nurse](https://www.bowelcanceruk.org.uk/nurse)



Website

Visit our website for a range of information about bowel cancer including symptoms, risk factors, screening, diagnosis, treatment and living with and beyond the disease. Visit [bowelcanceruk.org.uk](https://www.bowelcanceruk.org.uk)

Bowel Cancer UK is the UK's leading bowel cancer charity. We're determined to save lives and improve the quality of life of everyone affected by the disease.

We support and fund targeted research, provide expert information and support to patients and their families, educate the public and professionals about bowel cancer and campaign for early diagnosis and access to best treatment and care.

To donate or find out more visit
[bowelcanceruk.org.uk](https://www.bowelcanceruk.org.uk)

 [/bowelcanceruk](https://www.facebook.com/bowelcanceruk)

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Please contact us if you have any comments about the information in this booklet: feedback@bowelcanceruk.org.uk