

Radiotherapy for pancreatic cancer

This fact sheet is for people with pancreatic cancer who are having radiotherapy to treat their cancer, or to manage pain. It explains what radiotherapy is, how it is used depending on your diagnosis, and how it is given. It also lists the possible side effects and ways to manage these.

Each hospital may do things slightly differently, so use this fact sheet as a general guide. If you have any questions, speak to your doctor, nurse or another member of your radiotherapy team.

Contents

Key facts	2
What is radiotherapy?	2
Who can have radiotherapy?	3
Advantages and disadvantages of radiotherapy	4
What does radiotherapy involve?	5
Types of radiotherapy	5
How is radiotherapy given?	6
What should I expect when coming for treatment?	7
Check-ups after radiotherapy	9
Side effects of radiotherapy	10
Questions to ask your doctor or nurse	13
More information and support	14

Key facts

- Radiotherapy uses radiation to destroy the pancreatic cancer cells. You may have it on its own, or together with chemotherapy (chemoradiotherapy).
- Different types of radiotherapy are used for pancreatic cancer (see page 5). Your radiotherapy team will decide the best treatment for you.
- You will usually go to the hospital on weekdays (Monday to Friday) for your radiotherapy. Treatment usually lasts between three and six weeks.
- Each treatment session takes about 30 minutes, although this will vary. The treatment itself only takes a few minutes.
- Radiotherapy can cause side effects (see page 10) but these are often mild. They may include fatigue, feeling and being sick, and runny poo. Your medical team will help you manage them. If you have chemoradiotherapy, you may also get side effects from the chemotherapy.
- After your treatment finishes you will have a CT scan and a follow-up appointment with your oncologist.

If you have any questions about radiotherapy, you can speak to our specialist nurses on our confidential Support Line. Call free on **0808 801 0707** or email **nurse@pancreaticcancer.org.uk**

What is radiotherapy?

Radiotherapy uses radiation to destroy cancer cells. A machine called a linear accelerator (linac) is usually used to deliver radiotherapy for pancreatic cancer. This directs beams of radiation at the cancer from outside the body, destroying the cancer cells.

If you have pancreatic cancer, you may have radiotherapy on its own, or together with chemotherapy. This is called chemoradiotherapy (see page 6).

Who can have radiotherapy?

Radiotherapy is used in different ways depending on your diagnosis and the stage of the cancer.

Radiotherapy for borderline resectable pancreatic cancer

Borderline resectable cancer is cancer that has grown very close to the major blood vessels near the pancreas.

You may be offered chemotherapy on its own first. Chemotherapy together with radiotherapy (chemoradiotherapy – see page 6) may then be suitable for some people with borderline resectable pancreatic cancer. These treatments aim to shrink the cancer enough to make it possible to remove it with surgery. You will usually have a CT scan about four to six weeks after chemoradiotherapy, to check whether surgery might be possible.

Radiotherapy for locally advanced pancreatic cancer

Locally advanced pancreatic cancer is cancer that has spread to the large blood vessels near the pancreas, or to several lymph nodes.

You may be offered chemotherapy, and then radiotherapy together with chemotherapy (chemoradiotherapy – see page 6). Stereotactic ablative body radiotherapy (SABR) may also be an option for locally advanced cancer, usually after at least three months of chemotherapy (see page 6).

Chemoradiotherapy or SABR may help control the cancer and slow down its growth. For a very small number of people with locally advanced cancer, this may shrink the cancer enough for it to be removed with surgery. You will have a CT scan following radiotherapy to see how well it has worked (see page 9).

Radiotherapy for advanced pancreatic cancer

If you have cancer that has spread to other parts of the body (advanced or metastatic cancer) it may cause pain by pressing on other organs or nerves near the pancreas. You may be able to have radiotherapy to help relieve the pain. This is called palliative radiotherapy.

Palliative radiotherapy may also be helpful if the cancer has spread to other places such as the bones.

Sometimes the cancer can spread to the bones in the spine or tissues around the spinal cord and can press on the spinal cord. This is called metastatic spinal cord compression (MSCC). It is rare but it can be serious. Radiotherapy is the most common treatment for MSCC.

You can talk to our specialist nurses on our free Support Line with any questions about radiotherapy and your treatment options.

Read more

Read about chemotherapy in our fact sheet:

[Chemotherapy for pancreatic cancer](#)

Or on our website at: pancreaticcancer.org.uk/chemotherapy

Read about surgery in our fact sheet:

[Surgery to remove pancreatic cancer](#)

Or at: pancreaticcancer.org.uk/surgery

Read about ways to manage pain in our booklet:

[Pain and pancreatic cancer](#)

Or at: pancreaticcancer.org.uk/pain

Advantages and disadvantages of radiotherapy

If you are offered radiotherapy, speak to your doctor about the advantages and disadvantages of this treatment. We have a list of questions that might help on page 13.

What are the advantages?

- The main advantage of radiotherapy is that it may help to control the growth of the cancer.
- For a small number of people with borderline resectable pancreatic cancer and locally advanced cancer, radiotherapy may help to make surgery possible.
- Each treatment session will take about 30 minutes, or longer for SABR. You won't usually need to stay in hospital.
- You may be able to carry on with your daily life, such as going to work, if you feel up to it.
- If you have advanced cancer, radiotherapy can help control symptoms and relieve pain.

What are the disadvantages?

- Radiotherapy can cause side effects including tiredness, sickness and runny poo (diarrhoea), but these are usually mild.
- If you have chemoradiotherapy, you may also get side effects from the chemotherapy. There are ways to manage side effects.
- If you have borderline resectable or locally advanced cancer, you may have to go to hospital five days a week for several weeks for your radiotherapy, although this may vary.

What does radiotherapy involve?

Radiotherapy is used in different ways to treat pancreatic cancer, depending on your diagnosis.

Types of radiotherapy

There are different types of radiotherapy used for pancreatic cancer in the UK. They all aim to focus the radiation on the cancer and limit the amount of radiation to surrounding organs and healthy tissues. The radiotherapy team will decide which is the best treatment for you.

- **Intensity modulated radiotherapy (IMRT)** uses at least five radiation beams arranged at different angles so that the tumour gets the maximum amount of radiation.
- **Volumetric modulated arc radiotherapy (VMAT)** is a type of IMRT that uses one continuous beam to deliver radiotherapy as it moves around your body.
- **Stereotactic ablative body radiotherapy (SABR)** or stereotactic body radiotherapy (SBRT) delivers higher doses of radiation in a shorter time and over fewer sessions than IMRT or VMAT. SABR is an option for locally advanced cancer, usually after at least three months of chemotherapy.
- **3D conformal radiotherapy** also shapes the radiation beam to the cancer. It may be used for palliative radiotherapy.

How is radiotherapy given?

Radiotherapy treatment will vary depending on your pancreatic cancer diagnosis and the type of radiotherapy you are having. You will go to the hospital for each treatment but you won't need to stay overnight.

How long will my treatment last?

Each treatment session is called a **fraction**. How long treatment lasts will vary with the type of radiotherapy you have and the hospital where you are being treated.

- You will usually have radiotherapy every day, Monday to Friday.
- Most treatment courses last three to six weeks (15-30 fractions).
- If you have SABR you will have five fractions spaced out, typically every other day, over one to two weeks.
- If you are having palliative radiotherapy, you will usually have fewer treatment sessions (1, 5 or 10) over one to three weeks. The overall dose is usually lower. This can reduce the risk of side effects.

How is radiotherapy combined with chemotherapy?

Sometimes radiotherapy is used with chemotherapy. This is called chemoradiotherapy. The chemotherapy may make the cancer cells more sensitive to the radiotherapy, making it more effective.

You will usually have chemotherapy on its own for three to six months. You will then have a CT scan. If this shows that the cancer has not grown, you will start chemoradiotherapy.

What chemotherapy drugs are used with radiotherapy?

The chemotherapy drug most often used with radiotherapy is capecitabine, which is a tablet that you can take at home. You will have radiotherapy and capecitabine every day from Monday to Friday, for three to six weeks.

Occasionally a chemotherapy drug called gemcitabine is used. This is an infusion (a drip) into a vein that you have at the hospital as an outpatient. You will usually have radiotherapy every day from Monday to Friday for three weeks, together with one infusion of gemcitabine each week.

Ask your oncologist if chemoradiotherapy is a suitable treatment for you, and if it's available in your hospital. You could also ask about clinical trials using chemoradiotherapy.

Read more

Read about chemotherapy in our fact sheet:

[Chemotherapy for pancreatic cancer](#)

Or on our website at: pancreaticcancer.org.uk/chemotherapy

Read about capecitabine on our website at:

pancreaticcancer.org.uk/capecitabine

Read about gemcitabine at: pancreaticcancer.org.uk/gemcitabine

What should I expect when coming for treatment?

Planning the radiotherapy

Before your radiotherapy starts you will normally have a planning session.

- You may be asked not to eat for two hours before your planning session, but you might be asked to drink some water during your appointment. You will normally have to do the same before each treatment session.
- You will have a CT scan to work out the best position for you to lie in on the radiotherapy table during treatment. Some people may also have an MRI scan to help with planning.
- The radiographers will then make tiny permanent dots (tattoos) on your skin around the area being treated. These help make sure they get you into exactly the right position for each treatment session.

Different hospitals do things slightly differently and your oncologist and the radiotherapy team will discuss the process in detail with you. Ask them any questions you have.

After the planning session, the radiotherapy team will produce a treatment plan for you. There will usually be a gap of two to three weeks between planning and the start of treatment.

Read about CT and MRI scans on our website at:

pancreaticcancer.org.uk/tests

Having treatment

- The radiotherapy machine is called a linear accelerator or linac.
- The radiographers will position you on the radiotherapy table (often called a couch) using the tattoos. You might feel the couch move as the radiographers adjust the position from outside the room. They may move the radiotherapy machine around you to different angles to check the measurements.
- With most standard radiotherapy machines, you will have a scan before the treatment is delivered. This is to help make sure the radiotherapy is delivered accurately, but it won't check how well the treatment is working.
- The radiographers will leave the room to deliver your treatment but will watch you using cameras. They can talk to you over an intercom and you may be able to talk to them.
- You should try to relax and lie as still as you can. The machine will not touch you and the treatment isn't painful.

The whole process will take about 30 minutes, but this may vary. For SABR it will be longer – 45 minutes to more than an hour. The treatment itself only takes a few minutes. You can go home as soon as each treatment session is finished.

Radiotherapy and chemoradiotherapy can be tiring, so having someone to drive you to hospital can be helpful, especially towards the end of treatment. After radiotherapy, it's safe to be around other people, including pregnant women and children.

Check-ups after radiotherapy

If you had radiotherapy for locally advanced or borderline resectable cancer, you will have a check-up appointment with your oncologist. This will usually be four to six weeks after you finish radiotherapy treatment, though this may vary. This is often called a follow-up appointment.

You can use the check-up appointment to discuss any questions or concerns. It's a good idea to write down any questions you have before the appointment. We have some suggested questions you could ask (see page 13).

CT scan after radiotherapy

Radiotherapy may continue to affect the cancer after your treatment has finished. You will have a CT scan to check how well the treatment has worked.

- For borderline resectable pancreatic cancer, this will be about four to six weeks after chemoradiotherapy.
- For locally advanced cancer, this will be about 12 weeks after radiotherapy. If you have had SABR, you may have a CT scan 6-12 weeks after having treatment.

Care after palliative radiotherapy

If you have had palliative radiotherapy to control symptoms, you will continue to see your oncologist or palliative care team (specialists in managing symptoms). They will check how well the radiotherapy has worked, whether you need any more radiotherapy, and help manage any other symptoms.

You can talk to our specialist nurses on our free Support Line about your follow-up and any questions you may have.

Side effects of radiotherapy

Side effects of radiotherapy affect everyone differently. Many people will only have mild side effects. Severe side effects are not common. If you have chemoradiotherapy, you may also get side effects from the chemotherapy. See below for a list of possible side effects and what can help with them.

Can side effects be managed?

Ask your radiotherapy team about the possible side effects, and how they will plan your treatment to reduce these. Side effects can usually be managed, and you will have regular check-ups during treatment where you can discuss them. Let the radiographers know as soon as you start to get any side effects.

How long do side effects last?

Side effects usually last for a few weeks after your treatment has finished but can sometimes last longer. They may get worse after your final treatment before they start to get better.

If you have any questions about side effects or how to manage them, speak to your doctor or nurse.

You can also call our specialist nurses on our free Support Line.

What are the side effects?

Fatigue (extreme tiredness)

Fatigue is a common side effect of radiotherapy for pancreatic cancer. Travelling to hospital every day can make it worse. Tiredness can last for several weeks or months after treatment has finished.

Read about managing fatigue in our booklet:

[Fatigue and pancreatic cancer](#)

Or on our website at: pancreaticcancer.org.uk/fatigue

Feeling and being sick (nausea and vomiting)

During radiotherapy, organs such as the stomach and bowel will get some of the radiation. This may make you feel sick (nausea). A few people might be sick (vomiting). Nausea or vomiting may get worse as treatment goes on, and last for a few weeks after treatment. It may be worse if you have chemoradiotherapy.

You may be given anti-sickness medicines. Your medical team will tell you how to take these.

Read about coping with nausea and vomiting on our website at:

pancreaticcancer.org.uk/sickness

Runny poo (diarrhoea)

You might get diarrhoea because the stomach and bowel get some of the radiation during treatment.

What helps?

- Try to drink as much fluid as you can to avoid getting dehydrated (where your body loses more water than it takes in).
- If you have diarrhoea more than four to six times a day or if you can't drink much fluid, speak to your medical team. They can give you tablets to control the diarrhoea.
- Ask a dietitian at the hospital about any changes to your diet that might help.

Read our tips for coping with diarrhoea on our website at:

pancreaticcancer.org.uk/tips_poo

Problems with eating and drinking

You might not feel like eating and may lose weight. Keeping your weight stable may improve how you feel generally and help you cope better with pancreatic cancer and its treatment.

What helps?

- Speak to your dietitian, nurse or doctor if you are struggling to maintain your weight. They can give you advice.
- They can also prescribe pancreatic enzyme replacement therapy (PERT) if you haven't already been given this, which might help.
- If you haven't seen a dietitian, ask to be referred to one.

Read more about eating, pancreatic enzymes and dealing with weight loss in our booklet: [Diet and pancreatic cancer](#)

Or on our website at: pancreaticcancer.org.uk/diet

Indigestion

Some people also find that they have indigestion or heartburn after radiotherapy. Talk to your medical team about this if it's a problem. They might be able to give you medicine to help.

Tummy pain

Sometimes SABR can cause tummy pain. This is usually worse after two weeks and settles down within six weeks. Your medical team can give you painkillers to manage it.

It's important you tell your medical team about any pain after radiotherapy. They will check what's causing it and how best to treat it.

Skin reactions

Some people's skin can react to radiotherapy although this is rare. The skin may become drier and more rarely, sore, itchy or darker, often on your back. Any skin reaction will usually settle down two to four weeks after treatment finishes.

Your medical team may suggest you use moisturiser to reduce the risk of skin problems. If you do get any skin reactions, your medical team can give you advice on managing them.

Bowel damage

It is very rare, but there is a small risk of long term bowel damage from radiotherapy. This can happen months or years after treatment. Symptoms include severe tummy pain, persistent nausea and vomiting, vomiting blood, or poo like black tar. If you have any of these symptoms at any time, go to A&E straight away.

If you have any questions or concerns during or after treatment talk to your nurse or treatment team.

You can also speak to our specialist nurses on our free Support Line. They can answer questions and talk through any worries.



Questions to ask your doctor or nurse

- Why is radiotherapy recommended for me?
- Will radiotherapy help control my cancer or help me to live longer?
- Will radiotherapy help any of my symptoms?
- How long will I have radiotherapy for?
- How long will each session last?
- Will I have chemotherapy as well as radiotherapy?
- What side effects might I get?
- How can the side effects be managed?
- Who do I contact if I have side effects?
- Will I have any long term side effects?
- Which hospital will I go to for radiotherapy?
- Are there any clinical trials using radiotherapy or chemoradiotherapy that I could take part in?
- How soon will I know if the treatment is working?
- Are there any other treatment options that would be suitable for me?

More information and support

We are here for you

If you or someone you care about has pancreatic cancer, we are here to help.

Find out more at: pancreaticcancer.org.uk/support

Our specialist nurse Support Line

Our specialist nurses are experts in pancreatic cancer. They can talk for as long as you need, as often as you like. Whether you have a long list of questions or don't know where to start, they will provide practical, honest information to help you make the right choice for you.

Call free on **0808 801 0707** or email nurse@pancreaticcancer.org.uk

Information about pancreatic cancer

Our website, videos and publications can answer your questions. The information can help you understand what you have heard from your medical team, and make decisions about your treatment and care.

Go to: pancreaticcancer.org.uk/information

Download or order our free publications at:

pancreaticcancer.org.uk/publications or call **0808 801 0707**

Our online community, Circles

Circles is our supportive online community which connects you to others currently affected by pancreatic cancer. You can join groups on Facebook and WhatsApp. Share the highs and lows with people who understand and 'just get it'.

Go to: pancreaticcancer.org.uk/circles

Webinars

Our regular webinars cover topics including diet, wellbeing and treatment. They are hosted by our friendly nurses and other experts, are informal, and you can ask questions. You can look back at previous sessions, or sign up to one.

Go to: pancreaticcancer.org.uk/webinars

Useful organisations

Cancer Focus Northern Ireland

cancerfocusni.org

Nurse line: 0800 783 3339 (Mon, Weds, Fri, 9am-1pm)

Care and support for people affected by cancer and their families in Northern Ireland.

Cancer Research UK

cancerresearchuk.org

Helpline: 0808 800 4040 (Mon-Fri 9am-5pm)

Information for anyone affected by cancer.

Macmillan Cancer Support

macmillan.org.uk

Support Line: 0808 808 0000 (7 days a week, 8am-8pm)

Provide practical, medical, emotional and financial support for anyone affected by cancer.

Maggie's

maggies.org

Tel: 0300 123 1801

Centres around the UK and online offer free, comprehensive support for anyone affected by cancer.

Tenovus Cancer Care

tenovuscancercare.org.uk

Tel: 0808 808 1010

Advice and support for people affected by cancer in Wales.

This fact sheet has been produced by the Support and Information Team at Pancreatic Cancer UK.

We make every effort to make sure that our services provide up-to-date, accurate information about pancreatic cancer. We hope this will add to the medical advice you have had, and help you make decisions about your treatment and care. This information should not replace advice from your medical team – please speak to your doctor, nurse or other members of your medical team about any questions.

Email us at publications@pancreaticcancer.org.uk for references to the sources of information used to write this fact sheet.

Give us your feedback

We hope you have found this information helpful. We are always keen to improve our information, so let us know if you have any comments or suggestions. Email us at publications@pancreaticcancer.org.uk or write to our Information Manager at the address below.

Pancreatic Cancer UK

Queen Elizabeth House
4 St Dunstan's Hill
London
EC3R 8AD

020 3535 7090

enquiries@pancreaticcancer.org.uk
pancreaticcancer.org.uk