Oxford University Hospitals
NHS Foundation Trust

The Radiotherapy Department

Radiotherapy for cancer of the pancreas, liver or bile duct

Information for patients
You have been given this leaflet as you have been recommended treatment with radiotherapy for cancer of the pancreas, liver or bile duct.

The **general Radiotherapy leaflet** will explain what having the treatment involves, common side effects and some general information about the department. This leaflet **Radiotherapy for cancer of the pancreas, liver or bile duct** will provide more detail, specific to the type of treatment planned for you, including how you can help yourself during and after treatment.

This leaflet is intended as a guide, because the timing and effects of treatment may vary from one person to another. It will highlight the key points of the discussions you will have had with your Oncology team. Family members and friends may also find it helpful.

We hope that this leaflet answers most of your questions, but if you have any concerns please speak to a member of the team.

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**Treatment plan**

The timing of the radiotherapy in your treatment plan will depend on your individual situation. Depending on the tumour you have, the amount of radiotherapy will vary. The number of treatment appointments can range from 3 to 30.

A small number of people have tumours suitable for stereotactic ablative radiotherapy (SABR). This is the precise delivery of high doses of radiotherapy to very small areas of the body.

The team will discuss with you which treatment has been recommended for you.

For your radiotherapy planning and treatment appointments, you may be asked to follow eating and drinking instructions. We may also use an additional piece of equipment to limit the movement of your abdomen when you breathe. The equipment does this by applying pressure to the centre of your abdomen, beneath your ribs. This may be uncomfortable, but shouldn’t be painful.
Radiotherapy with chemotherapy

Radiotherapy can be given with chemotherapy to control the growth of the tumour. This can reduce the chance of spread or can occasionally lead to a cure, alongside further surgical treatment.

Radiotherapy is usually given in combination with an oral chemotherapy drug called capecitabine, which you will need to take twice a day on the days of your radiotherapy. If it is not suitable to give you capecitabine, you may be given a different drug called gemcitabine, which is given as an intravenous drip weekly during radiotherapy. Please read the chemotherapy patient information given to you for more information.

Radiotherapy to help symptoms

Radiotherapy can be given to treat symptoms when the growth of the tumour presses on parts of the body, causing pain. The treatment relieves this pressure by shrinking the tumour.

In these situations, it may be possible to control the growth of the cancer for a while with radiotherapy, but it will not be possible to get rid of it completely. This type of radiotherapy is called **palliative** treatment and is usually given in 5 or 10 daily treatments.
Side effects

Radiotherapy treatment itself is painless. However, there are some side effects which are associated with radiotherapy. You will notice some of them gradually developing over the course of your treatment.

Side effects gradually increase in severity as you go through treatment and then slowly settle over a few weeks. During this time, you should continue to follow the advice you have been given during your treatment. Continue to take any prescribed medication for the side effects, as directed by your doctor. You may also need to continue with your medications for a few months after your treatment has completed.

Long term side effects can occur many months to years after radiotherapy has finished and are more likely to develop if you are having a longer course of radiotherapy. These late side effects are hard to predict and can be permanent.

We avoid treating the healthy surrounding areas of the tumour as much as possible, to reduce these side effects. Your doctor has recommended radiotherapy, as the risk of developing serious late side effects is small, compared to the chance of the radiotherapy treatment being beneficial.

It is rare for one person to experience all of the side effects. The location of your tumour and radiotherapy treatment will affect which side effects you are likely to experience. Please notify your treatment team if you experience any side effects.
More than 20 out of 100 people will have these side effects:

• **Tiredness**
  Listen to your body and allow yourself extra time to rest. This is likely to continue for a few weeks (rarely months) after the radiotherapy treatment has finished, but should improve by itself.

• **Skin reaction**
  You may develop skin redness or soreness on or around your abdomen. Please refer to the general Radiotherapy leaflet, which will tell you how to care for the skin in this area. The reaction may peak at about 10 to 14 days after radiotherapy. Some people develop skin colour changes, which may be permanent.

• **Diarrhoea/constipation**
  This may occur because of inflammation of the bowel, but can be controlled with medication. You may also experience an urgent need to open your bowels, increased “wind” or occasional abdominal cramps. It is important to keep eating and drinking as normally as possible, but you may need to avoid high fibre foods. If you experience diarrhoea or constipation then please tell a member of your treatment team.

• **Feeling sick or being sick**
  We will give you anti-sickness tablets to take before each treatment. It is important to continue to eat and drink; try eating small meals more frequently. If nausea continues or you are vomiting (being sick) despite taking anti-sickness medication, please tell your therapeutic radiographer or radiotherapy nurse.

• **Temporary, symptom-free changes to your liver blood tests.**
Between 1 and 20 in every 100 people will have these side effects:

- **Loss of appetite**
  Eating smaller amounts of food more frequently or eating things that you particularly like may help. If you are losing weight or are concerned about your diet, we can arrange for you to see a dietitian for advice. Please talk to a therapeutic radiographer or radiotherapy nurse.

- **Bleeding**
  This is caused by inflammation of the stomach/bowel. If you experience blood in your vomit, you must seek medical help immediately.

- **Heartburn**

- **Rib fracture**

- **Damage to your liver within 3 months of starting radiotherapy**
  This could affect how well your liver works and can cause yellow skin and eyes. There is a greater risk of side effects to the liver if you have a large tumour or previous history of liver disease.

- **Pancreatic insufficiency**
  Enzymes from the pancreas may not work efficiently, which can cause an inability to digest food properly. Diabetes may develop or get worse.
Fewer than 3 out of every 100 patients will have these side effects:

- **Perforation (a small hole in the stomach/bowel)**
  This is rare and caused by inflammation of the stomach/bowel. If you develop sudden severe pain in your abdomen during or after completion of radiotherapy, you must immediately go to your nearest Emergency Department.

- **Bleeding caused by a low number of platelets (blood cells that clot blood)**

- **Kidney injury**
  It may not be possible to treat your tumour without affecting a part of your kidney/s, but this is usually a small part and unlikely to have a serious impact on their function.

- **Radiation-induced liver disease (RILD)**
  This may involve a diagnosis of fluid in the abdomen, enlargement of the liver and changes in your liver tests, that may occur 2 weeks to 3 months after radiation to the liver. RILD can lead to liver failure, but this can be managed with medication.

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### After treatment

You will be asked to return to the Outpatients Clinic to be reviewed by your oncology team. Radiotherapy takes time to work, so it is at this appointment your doctor will assess and discuss your progress. They will also talk about any continuing side effects with you and will plan future appointments.

In the meantime, if you have any worries about your treatment or side effects, please contact your oncology team or specialist dietitian.
How to contact us

If you have any queries during your radiotherapy, please speak to a member of staff treating you or the radiotherapy nurse practitioner:
Tel: **01865 235 472**
(Monday to Friday, 8.00am to 6.00pm)

**Outside** of these hours, please contact the **Oxford triage assessment team**:
Tel: **01865 572 192**
(24 hours)

After your treatment has finished you can also contact the Upper GI nurse practitioner:
Tel: **01865 235 706** or **01865 741841**
Or call the Hospital Switchboard and ask to bleep 1977 or 1891

Upper GI Specialist Dietitian
Tel: **01865 741 841**
Or call the Hospital Switchboard and ask to bleep 4176

**Hospital Switchboard**
Tel: **0300 304 7777**

The contact details of helpful organisations can be found in the general Radiotherapy leaflet. The following organisations may also have useful information:

-Oesophageal Patients Association
Website: www.opa.org.uk

-Oxford OesophagoGastric Centre
Website: www.oxforduppergi.org.uk

If you have a specific requirement, need an interpreter, a document in Easy Read, another language, large print, Braille or audio version, please call **01865 221 473** or email **PALS@ouh.nhs.uk**