Introduction
Radiotherapy is given using high energy X-Rays on machines called Linear Accelerators. Treatment is normally given every day Monday to Friday, for about 4 weeks and takes 10 to 15 minutes each day. The number of treatments given may vary for a number of reasons including:
- General Health
- Type of Bladder Cancer
- Patient choice

Before treatment begins, each patient attends for a planning session so an individualised treatment plan can be produced which meets their own requirements.

Planning your Radiotherapy Treatment
Your first visit to the radiotherapy department will be for a ‘planning scan’ which is performed on one of our CT scanners. You will lie on a hard, flat bed with supports for your head and legs. This is the position you will be in each time you have your treatment.

For your scans and for your treatment, you will need to have an empty Bladder.

After the scan is complete the radiographers will mark your skin with 3 permanent tattoos the size of a pinhead. You will then be free to go - your future appointments will be posted to you.

Your Oncologist will then use the information from your scans to mark electronically the exact area of your body that needs to be treated and the planning physicists and radiographers will then design and calculate your treatment plan.
Once your individual treatment plan is finalised you may be asked to attend for a ‘verification’ scan. This scan should only take a few minutes after which you will start your radiotherapy treatment within a few days.

You will not normally see your Oncologist at either of these visits but if you have any questions or concerns tell the radiographers.

**Radiotherapy Treatment**

Treatment is painless and usually takes 10-15 minutes per day. You will be asked to lie in the same position as for your scans with an **empty bladder**. The radiographers will adjust your position on the treatment couch to make certain that you are in the correct place, then leave the room to switch on the machine but will watch you at all times on close circuit television. X-ray pictures are taken by the treatment machine to check that you are in the right position.

You will not feel anything during the treatment, will not become radioactive or be a danger to pregnant women or children. You will soon become used to the radiotherapy and get to know the radiographers who are treating you.

During the treatment you will have regular reviews with either your Oncologist or Specialist Radiographer. Between these reviews, your team of treatment radiographers will be happy to answer questions or give advice if you have any concerns.

**Side Effects**

Radiotherapy is a localised treatment so most of the side effects occur only in the part of your body that is being treated. With radiotherapy to the bladder this can affect bowel. Side effects can happen during, or shortly after the treatment (acute effects) or can start months or even years after the treatment has finished (late effects).

Not all patients have side effects and some have worse side effects than others. Which side effects you personally will get from the radiotherapy cannot be predicted before you start treatment. It is important that you do not miss any treatments unless it is unavoidable.

There should be no problems with driving to and from your radiotherapy treatment.

**Acute Effects**

Side effects often start during the second week of the radiotherapy and gradually build up throughout the remainder of the treatment.

Irritation of your bladder can lead to a temporary increase in the frequency of passing urine and a slowing of urinary flow, this is often worse at night. It can also cause burning or stinging when you pass urine. Drink plenty of liquid, at least 2 litres a day, but do not increase your tea, coffee or alcohol intake. We may wish to take a urine sample to rule out a urine infection, if you have moderate or severe bladder problems. Your radiographer or doctor will advise you if they feel it is necessary.
Some patients may also pass some blood in the urine. Unless it is a heavy loss of blood this should not be a cause for concern, but if you are worried tell your treatment radiographers.

Inflammation of your bowel can cause increased flatulence (wind), loose bowel motions and increased frequency of opening your bowels. You may also pass a small amount of blood or mucus or experience some discomfort in your back passage. If this is the case please inform your treatment team. We may wish to give you some dietary advice, tablets or steroid suppositories to ease the side effects.

You may become more tired as the treatment progresses. This is not unusual and should gradually resolve after the treatment has finished. Take regular, gentle exercise and ensure that you have adequate rest.

Your skin may become a little uncomfortable or red in the treatment area. Following the skin care advice form the start of treatment can help to minimise the radiotherapy skin reaction. You can continue with your usual skin care regime away from the area of treatment.

- Wash daily with a mild unperfumed soap, such as “Simple”. Alternatively a soap substitute such as Aqueous or Diprobase can be used to help to keep the skin moisturised.
- Bathing and showering are both fine, but avoid using bath oils, bubble bath or perfumed shower gel, and avoid soaking in the bath.
- Avoid rubbing and gently pat the treated area dry.
- Do not use thick creams. Avoid an excessive residual layer of cream on the skin prior to treatment. If there appears to be an excess of cream on the skin gently remove before the treatment session.
- Diprobase or E45 cream may be used to moisturise.
- Diprobase may be useful, particularly for itchy skin.
- Swimming in a chlorinated pool is permitted but should be avoided if it causes irritation to the skin or there are broken areas of skin.
- It may be advisable to avoid hydrotherapy during radiotherapy due to the raised water temperature.
- Avoid Jacuzzis, saunas and steam rooms.
- Avoid ice packs or hot water bottles in the treated area.
- Try to wear loose fitting cotton or cotton mix underwear.

If you have any side effects please tell the radiographers treating you. Some side effects may get a little worse in the first 1-2 weeks following radiotherapy. Acute side effects usually wear off within 4-6 weeks of finishing radiotherapy although some people find it takes a little longer. If you need repeat prescriptions of any medication prescribed during your treatment to help with the side effects, these should be available from your G.P.

Continue to drink plenty of liquid until the side effect settle. As soon as any skin irritation has settled you can return to using your usual soap and creams.
Late Effects
Late effects can be a continuation of the acute side effects that you experienced, or develop months, or less commonly years, after your treatment.

You may continue to pass urine more frequently, which is usually not more than a minor inconvenience, or pass blood in your urine. If you do see blood in your urine you should report it to your G.P. Incontinence is unlikely.

Many people will notice a minor change in their bowel habit following bladder radiotherapy but this is rarely troublesome. You may also pass mucus from your rectum. About 5% of patients will require tablets to help with diarrhoea or treatment for bleeding from the back passage. If you do experience bleeding from your bowel you should discuss it with your G.P. as many other conditions, such as piles, can cause bleeding. If bleeding persists you may be referred for investigations to rule out causes of rectal bleeding other than bladder radiotherapy.

How will I be followed up after the Radiotherapy?
You will receive an appointment to see your Oncologist, in your local hospital, about 8 weeks after the radiotherapy has finished. If you have not received notification of that appointment 6 weeks after the end of your treatment please telephone your local hospital and ask to speak to your Oncology Consultant’s secretary. At this visit your side effects from radiotherapy will be assessed, and you may then be referred back to see your Urologist for a check cystoscopy (internal examination of bladder).

Information for GP
For more details on the management of radiation induced skin reactions please follow this link http://connect/index.cfm?articleid=5118

Contacts/Further information
Andrew Styling, Specialist Radiographer 01223 596330 (has answer-phone)

Treatment Units:
LA3 (Tomotherapy unit) 01223 274667
LA4 (Tomotherapy unit) 01223 256761
LA7 01223 348051
LA8 01223 348052
Patient Information

We are now a smoke-free site: smoking will not be allowed anywhere on the hospital site. For advice and support in quitting, contact your GP or the free NHS stop smoking helpline on 0800 169 0 169.

**Other formats:**

If you would like this information in another language, large print or audio, please ask the department where you are being treated, to contact the patient information team: patient.info@addenbrookes.nhs.uk.

Please note: We do not currently hold many leaflets in other languages; written translation requests are funded and agreed by the department who has authored the leaflet.

**Document history**

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