The aim of this leaflet is to provide information regarding radiotherapy treatment to the prostate, including the process involved and the possible side effects.

Radiotherapy is the use of high-energy radiation beams to destroy tumour cells and is an effective treatment for prostate cancer, as it can significantly reduce the likelihood of the cancer returning. Treatment is given daily, Monday to Friday, as an outpatient for between 4 and 7 weeks, and is unlikely to cause any side effects which would prevent the patient from driving.

Radiotherapy is delivered by **male and female radiographers**. We are a teaching hospital and have student radiographers in the department everyday who are supervised by trained staff. Please speak to a member of staff if you would prefer not be treated by students or have any concerns.

**Bowel and Bladder Preparation**
To ensure accurate and consistent treatment to the prostate gland it is important that your bladder and bowel/rectum are prepared in the same way prior to your Radiotherapy Planning CT appointment and each visit for treatment.

We require the rectum to be as empty as possible – this is achieved using a daily micro-enema, the radiographers will supply you with the micro-enema when you attend for your Radiotherapy Planning.

In addition to having the rectum as empty as possible we require you to have a comfortably full bladder. In order to prepare your bladder for treatment you should now start to increase your daily fluid intake to at least 2 litres per day so that when you attend for your planning session you are used to holding a comfortably full bladder. Staying well hydrated is important during radiotherapy treatment as it reduces side effects/urinary symptoms.

The following instructions will guide you through the stages you need to follow for each appointment once you start your treatment:

1. To use the micro enema remove the nozzle cap from the Micro enema tube and gently squeeze out a small drop of fluid to lubricate the nozzle tip.
2. Gently insert the nozzle firmly into your anus / back passage. Squeeze out all the contents and then remove the nozzle, still squeezing the tube tightly.
3. After approximately 15-20 minutes you should feel the need to empty your bowels. **Even if you do not feel the need to go, please try and empty your bowels after 15-20 minutes.**
4. You should aim to be ready for treatment at your appointment time, all bowel and bladder preparation must be completed before the appointment time you have been given. We recommend that you arrive in the department 1 hour before the appointment you have been given.
5. When you are ready check in at reception. You will hear your name called over the tannoy when it is time to go to the treatment unit. Empty your bladder now and drink your specific amount of water. **Please sip**

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**Note:**
- Please ensure you have all necessary information before proceeding.
- If you have any questions or concerns, please speak to a member of staff.
- Staying well hydrated is crucial during radiotherapy treatment.
- Follow all instructions carefully to ensure accurate treatment planning.

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**Radiotherapy Treatment for Prostate Cancer**
the water to avoid feeling that you need to empty your bladder again. A water fountain is available near the radiotherapy treatment room or you may prefer to bring your own water or cordial from home.

**Do not empty your bladder again.** This is to ensure your bladder contains the same amount of fluid each visit.

**Please note that water should be sipped to avoid the need to empty your bladder again however, it should take no more than 5 minutes to drink your water.**

6. Each patient is different, please follow the guidelines you were given at CT regarding how much water you should drink and for how long you need to wait until you will be ready for your treatment,

NB. If there are any delays to treatment you will be informed by a member of staff and advised accordingly regarding your bladder status.

**Frequently asked questions**

**Q. When should I use the enema?**

**A.** You should always bring your micro enema with you to the hospital and use it on arrival. Please plan to arrive 1 hour prior to your appointment time in order to use the enema as soon as you arrive, please do not check in at reception for treatment until you have used your enema.

**Q. Should I have anything to eat/drink prior to my planning scan and/or treatment?**

**A.** Yes. Please eat and drink normally prior to your planning scan and treatments. Fasting prior to a scan or treatment may lead to a build-up of bowel gas which should be avoided.

**Q. I empty my bowels regularly in a morning do I still need to use the micro-enema?**

**A.** Yes. Even if you empty your bowels each morning you still need to use the micro-enema as we are aiming to achieve consistent positioning of the prostate.

**Q. I’ve used the micro-enema as instructed but nothing happened. I’m worried that it hasn’t worked?**

**A.** Please do not worry, the micro-enema is only a mild laxative, and you will only need to empty your rectum if the rectum is full. If the rectum is empty when you use the micro enema nothing will happen, you will not need to go to the toilet. You may find that a little bowel gas is released (passing wind). You do not need to use a second enema.

**Q. How will I know when to fill my bladder?**

**A.** The Radiographers call you around for your planning scan or for treatment. Please empty your bladder. When you attend for your planning scan the radiographers will tell you when to start drinking – the amount you will be asked to drink and the time needed before you can be scanned or treated is individual to you and this will be established at your CT appointment. When you attend for treatment you should start drinking when you have been called around to the treatment set (you will be called over the tannoy system). Please keep a note of the time you finish and record this using the paper in the waiting area so that the Radiographers can time when treatment can commence.

**Q. What happens if I need the toilet after I’ve filled my bladder?**

**A.** If you need to go to the toilet please let the radiographers know that you have emptied your bladder. You will need to have 2 more cups (250mls) of water to re-fill your bladder and wait an additional 20minutes.
The planning and treatment process is as follows

After you have seen the Oncologist in clinic and you have consented to have radiotherapy treatment, the Pre-Treatment Radiographers will contact you to confirm your Group pre-assessment appointment. At this meeting you will be given your CT appointment and enemas ready for your first visit. At the CT scan the Radiographers will check that you have read and understood the bowel and bladder preparation instructions. Your planning appointment usually takes approx. 1 hour (including bowel and bladder preparation) and involves a CT scan of your pelvis.

You will need to use a micro-enema prior to the planning CT scan, and you will need to have a comfortably full bladder. In order to ensure consistent bladder filling you will be asked to empty your bladder – the radiographers will then provide you with a measured volume of water to drink.

Planning Scan with Intravenous Contrast Injection

Your consultant may request us to perform the CT scan with an Intravenously Injected Contrast Agent – a needle is used to puncture a vein (typically on the back of the hand or in the arm) and insert a small plastic tube known as a cannula. A contrast agent is then injected to enhance the visibility of structures on the scans. If you are required to have a CT with IV Contrast, you will need to have an up to date blood test (Full Blood Count with Urea & Electrolytes) in order to assess your suitability for the injection. Blood tests can be carried out after your pre assessment

The Planning CT Scan

The radiographers will position you on the CT scanner couch and will place some reference marks onto your skin surface. When you are in the correct position the radiographers will leave the room to switch on the CT scanner. It only takes a couple of minutes to perform the CT scan. After the CT scan the radiographers will permanently mark your skin using ink and a needle (tattoo marks). The permanent marks enable us to position you accurately each day for treatment. At the CT appointment we will check measurements for your bladder and bowel. We have very tight limits on these measurements and if these are outside of our limits we will not be able to proceed with your scan and will give you advice and rebook you to attend at a later date. Please ensure you are well hydrated and have eaten normally before your CT appointment. At the end of the planning CT appointment you will be given an appointment card detailing the date and time of your first treatment appointment.

Your Consultant will use the images from the CT scan to produce a treatment plan for your radiotherapy.

Radiotherapy Treatment

You will need to follow your bowel and bladder preparation instructions again prior to each treatment – the treatment radiographers will check that you have done this before treating you. Treatment usually takes place on a daily basis, on weekdays and takes 10 – 15 minutes for each session (excluding bowel and bladder preparation time). Most of the time in the treatment room is taken to position you correctly – once the radiographers are satisfied that your treatment has been accurately set they will leave the room to switch the machine on. It is important to keep as still as possible during the treatment process. When the machine is switched on you will not feel anything from the treatment, you may hear the machine buzz as it delivers a portion of the dose. The treatment dose is delivered from a number of positions – the machine delivers each portion then automatically moves around to the next position until all of the planned treatment has been delivered.

X-rays are taken during the treatment to check/verify the treatment against the treatment plan. To ensure consistent treatment, these x-rays are repeated on a weekly basis for the remainder of your treatment.
Side Effects

Side effects may occur as the radiation beam will also affect healthy cells along with any tumour cells. The side effects are produced as the body recovers its healthy cells and disposes of destroyed tumour cells. Side effects are categorised as either **EARLY SIDE EFFECTS**, which occur during the latter half of the treatment period and may last for 6 – 10 weeks after completion, or **LATE SIDE EFFECTS** which may be noticed 1 – 5 years after completion of treatment.

You will be supported through treatment by a dedicated team of radiographers who will check on your wellbeing on a daily basis. The radiographers are part of a highly trained experienced team who can deal with any treatment related problems you may have. In addition during your treatment course you will attend an ‘On Treatment Review Clinic’, where you will be reviewed and monitored by the Review Radiographer.

**Early Side Effects**

**Tiredness**

During the latter half of your treatment course you may feel more tired than usual. Ensuring that you have adequate rest, drink plenty of fluids (reducing your intake of caffeine) and eating a healthy balanced diet can help this. Light moderate exercise will also help; you will be given an exercise sheet at the Pre-assessment meeting, if you would like any more information please contact the Get Active Feel Good team on 07543827531

**Skin Reaction**

Although skin reactions usually occur during the latter half of your treatment course we advise you to take care of your skin (in the area being treated) from the first day of treatment. This involves using tepid water, washing, showering and bathing as normal. Gently pat dry, do not rub and scrub. Apply a moisturiser in the treatment area. There is also an increased risk of sunburn in the treatment areas and an increased sensitivity for up to 2 years. It is therefore advisable to use a high factor sun cream (at least SPF 25) or a total sunblock in the treated area. By following these steps any skin reaction can be minimised. A full leaflet regarding skin instructions is available.

**Urinary Symptoms**

Some patients may notice an increased need to empty their bladder both during the day and at night. Along with this they may notice a reduction in the flow of urine and sometimes a burning sensation when passing urine. To minimise these effects it is important to drink plenty of fluids to reduce the concentration of the urine. If the symptoms worsen please discuss with the radiographers who can advise on methods to reduce the discomfort.

**Bowel Symptoms**

Some patients may experience abdominal cramps or diarrhoea due to the radiotherapy. Any changes in bowel habit or pain when opening the bowels should be discussed as soon as possible with the radiographers who will be able to offer advice.

**Rectal Symptoms**

A small part of the rectum is likely to be included within the treatment area and this may result in patients experiencing a small degree of inflammation called ‘proctitis’. This will give the urge to open the bowel several times during the day even when the rectum is empty. Towards the end of the treatment course you may also notice your stools are mixed with mucus and occasionally blood. This is a perfectly normal treatment reaction, which may require pain relief or steroid medication. If you already have haemorrhoids
(piles) these may worsen towards the end of treatment. The radiographers will advise you on which products are suitable to use during radiotherapy.

**Late Side Effects**

These side effects may occur months or years after completing a course of radiotherapy. Less than 5-10% of patients will experience serious late damage.

Effects to be aware of are:

- Dryness and darkening of the skin in the treated area: this can be minimised by regularly using a moisturiser.
- In a small number of cases there may be prolongation in the difficulty in passing urine, dribbling or inability to hold urine. There may also be narrowing of the urethra which may need to be treated surgically.
- Chronic proctitis may occur, bowel adhesions (particularly if pelvic surgery was performed before radiotherapy), persistent looseness of the bowel, abdominal pain, passing of blood with the stool, chronic discomfort when opening the bowels and blockage of the bowels.
- Erectile dysfunction: the risk of this can be as high as 40-50%.
- There is a very small risk of developing a fistula (small hole) between the rectum and bladder. The risk of this occurring as a result of radiotherapy alone is very low.

**Follow Up**

Treatment for cancer is individualised, your doctor will discuss with you the best way to monitor your response to the treatment. In some cases the treatment is given to reduce the chance of the cancer recurring and there may not be a specific scan or test that will be helpful directly after treatment as there is no cancer left to measure. You can speak to your clinical nurse specialist or oncologist to discuss any concerns.

**Contacts**

This is a time when you may feel stressed, anxious or even depressed. The Hamar Help and Support Centre offers support for you and your family or carers. The staff at the centre provide information, help and specific counselling to suit your individual needs.

Please feel free to discuss any concerns with your Oncologist, Treatment Radiographer, Surgeon or Specialist Nurse.

**Further information is available from;**

**Patient Advice and Liaison Service (PALS)**
PALS will act on your behalf when handling patient and family concerns; they can also help you get support from other local or national agencies. PALS, is a confidential service.

- **Royal Shrewsbury Hospital**
  - 0800 783 0057
  - 01743 261691

- **Princess Royal Hospital**
  - 01952 282888

- **Radiotherapy Treatment Enquiries**
  - 01743 261179
- **Hamar Help and Support Centre**
  - 01743 261035
- **Ward 23, RSH**
  - 01743 261423
Macmillan Information & Support Service 01743 261000
                                                                                     ext 1957

The Prostate Cancer Charity 0845 300 8383
E-mail: info@prostate-cancer.org.uk
Website: www.prostate-cancer.org.uk

Macmillan 0808 808 0000
www.macmillan.org.uk

Urostomy Association 01952 400971
Shropshire and mid Wales branch
www.uagbi.org

ROYAL SHREWSBURY HOSPITAL
Mytton Oak Road
Shrewsbury
Shropshire
SY3 8XQ
Telephone: 01743 261000
Fax: 01743 261006