

## Having a CT (Computerised Tomography) scan for radiotherapy planning

Your doctor has recommended that you have a course of radiotherapy. This factsheet explains what you can expect when you come for your radiotherapy CT pre-treatment appointment. If you feel unsure about anything, please discuss it with the radiographers.

### What is radiotherapy CT planning?

A radiotherapy CT planning scan is part of the preparation for the course of radiotherapy. This CT scan is only used to plan your radiotherapy and is not used for making a diagnosis. The images from the scan will give us information about the structure and position of individual organs in your body and are used to produce your personalised radiotherapy plan.

### What preparation do I need for the scan?

You may need some preparation for your radiotherapy CT planning scan. Please follow the instructions next to the box ticked below. If more than one box is ticked, please read both carefully and arrive using the longer time. For example, if you have been asked to have an injection of contrast medium **and** you need to empty your bowel and fill your bladder, you should arrive one hour and 30 minutes before the time of your scan.

- No preparation needed. Please arrive **20 minutes** before your scanning appointment time.
- You will be given an injection of contrast medium which helps to provide clearer images. Please arrive **one hour** before your scanning appointment. Do not have anything to eat for **two hours** before your scanning appointment time. You can drink as normal. You will have a cannula (thin plastic tube) inserted into a vein to inject the contrast.
- You will need to have a full bladder (this can reduce some side effects of radiotherapy). Please arrive **one hour** before the time of your scan. You will be asked to empty your bladder and then given either 350mls or 525mls of water to drink straight away. The radiographers will tell you what amount is needed. You will have your scan 45 minutes after drinking when your bladder has filled.
- You will need to empty your bowels and have a full bladder. Please arrive **one hour and 30 minutes** before the time of your scan. This preparation will improve the reproducibility of your internal organs (make them in the same place every day) and reduce side effects. We will give you an additional information leaflet to explain this preparation in more detail.
- You will need to drink some water or liquid before your scan. Please arrive **40 minutes** before your appointment. Do not have anything to eat or drink for **two hours** before the appointment. We will



give you 200mls of water or liquid contrast to drink 15 or 30 minutes before the scan. This helps to provide clearer images. The radiographers will tell you what time you need to drink according to when they will be ready for you.

### **What will happen when I arrive for my appointment?**

When you arrive, a radiographer will confirm your identity. They may take a digital, passport-style photograph. This will help the identification process once your treatment starts, but is not a legal requirement and you can choose not to consent. This ID photo is stored in your electronic radiotherapy treatment record and is deleted once your treatment has finished.

Your clinician has requested radiotherapy treatment that requires an exposure to radiation. As radiographers, it is our professional duty and legal responsibility to ensure that we protect patients from unnecessary exposures to radiation. This is particularly relevant when considering any potential exposure of an unborn baby to ionising radiation, as they are at greater risk from the harmful effects of radiation. If you are an individual of childbearing capacity, we will ask you if there is any possibility that you could be pregnant. We will offer you an opportunity to discuss this further.

### **What happens during the scanning process?**

We will ask you to remove clothing in the area for treatment and put on a gown. You will then need to lie on the scanner couch in a position that allows treatment to be directed at the correct area. Sometimes we will use pads or special equipment to help you stay in position. You will need to lie still, so please tell the radiographers if you are uncomfortable. If any special breathing instructions are required during the scan, the radiographers will discuss this with you.

Once you are in position, we may put several pen marks on the area being scanned. Additionally, some small plastic markers will be placed on your skin in the area we are scanning. These markers will show up on the scan and are used to help us direct your treatment. These will be used to make tiny permanent reference marks (tattoos). These reference marks are produced using a fine sterile needle to insert a little ink under the skin surface. They are used for the accurate day to day set-up of your treatment. We will ask for your consent to having these tattoos. The plastic markers will be removed after your scan.

To scan the treatment area, the couch will move smoothly in and out through the scanner. The radiographers will be behind a screen as the scan is carried out but they can see, hear and speak to you at all times.

During the set up for the scan and once the scanning is complete, we may take some more photographs to show your position on the couch and the position of any supporting pads or equipment. The photos will be used along with written instructions to help us to reproduce your position accurately for your treatment. These digital photographs will only be available in your electronic treatment notes for viewing by the doctors and radiographers supervising your treatment.

If you have any concerns about your privacy or dignity during the CT planning procedure, please discuss this with the radiographers before the CT procedure begins.



Please see our policy on monitoring in radiotherapy in The Royal Marsden booklet *Radiotherapy; your questions answered*.

### What happens after my scan?

- If you did not need any contrast medium injected for your scan you may leave the department straight away.
- If you have had contrast medium for your scan you will need to stay in the hospital for 45 minutes afterwards so that we can make sure you have no reaction to the injection. You can have something to eat and drink during this time. We recommend that you drink 500mls of fluid after having contrast injected to help your body to excrete the contrast.
- If you were asked to have a full bladder, you may empty your bladder after the scan.

We will give you a date and time to start your radiotherapy treatment and you can arrange the rest of your appointments before you leave the department.

### Contact details

If you have any questions or concerns about your scan or your treatment, please contact your clinical nurse specialist or clinical oncology consultant team.

Alternatively, please call:

**The Royal Marsden Macmillan Hotline:** 020 8915 6899  
(available 24 hours a day, 7 days a week)

If you are unable to attend your appointment or need to reschedule it, please call the radiotherapy **bookings** team on 0208 915 6018 (Monday to Friday, 9am-5pm)

Further guidance and information can be found in The Royal Marsden booklet, *Radiotherapy; your questions answered*.

