The ROYAL MARSDEN
NHS Foundation Trust

Having a CT scan

Patient Information

NHS

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Introduction

You have been referred by your consultant to have a Computed Tomography (CT) scan.

What is a CT scan?

A CT scan uses ionising radiation to provide detailed cross-sectional images of the body to help the doctors make a diagnosis, assess the response to treatment or for surveillance after finishing treatment.

For some CT scans you may need to have an injection of intravenous (IV) iodinated contrast media (dye) to enhance the images we take during scan. The contrast media highlights blood vessels and any abnormalities on the images and, overall improves the amount of information available to help make a diagnosis. The contrast used is not radioactive.

Is there any preparation?

Please do not eat for **two hours** before your appointment time. Please drink 500mls (about four cups) of water prior to your arrival to the CT department. We may also ask you to drink some more water when you arrive. You can include tea or, coffee (without milk), and any other still drinks, but please **do not** drink fizzy drinks or alcohol. This is to ensure that you are well hydrated prior to the injection of the contrast media, and to highlight the gastrointestinal tract on the scan.

It is important that you tell us if:

- You have had a CT scan within 28 days of this appointment
- There is any possibility you may be pregnant
- You have mobility problems
- You are allergic to CT contrast media.

Please contact your medical team before your scan if you need hospital transport arranged.

Metal can interfere with the clarity of the images we take. Try to wear clothes that have no metal in them such as t-shirt and leggings or tracksuit bottoms and please avoid wearing wired bras. However if you are wearing clothing containing metal we can provide you with a gown to change into.

For your safety and to prevent loss or damage. we kindly suggest that you do not bring any valuables, including jewellery, or non-essential personal items to your appointment.

Prior to your appointment, we will ask you to fill in a questionnaire to assess your suitability for the CT scan, and we will check this with you on the day of your scan. Please discuss any concerns with the radiology staff before your scan.

What happens during the CT scan?

If you require the contrast media injection, a small plastic tube (cannula) will be inserted into a vein – usually in the back of your hand, or in the crease of your elbow. This cannula will be used to give you the injection during the scan. The amount injected is normally between 50–150ml. (The amount injected is adjusted for children). You will be asked to lie on the CT table which will move slowly through the scanner to allow pictures to be taken. You will need to keep still and for some scans you will be given breathing instructions. If we are giving you the injection of IV contrast media, a radiographer will usually be present to check the contrast is going into the vein. You may experience a sensation of warmth (this can be felt in the pelvis, and pelvis and gives a sensation of needing to urinate) and a metallic taste during the injection.

Although we make every effort to scan you on time, please be aware that occasionally there may be delays due to emergency cases. The CT scan itself takes about 15 minutes, however, please allow longer for your appointment, up to approximately 1.5 hours. This takes into consideration preparation time and the 30 minutes you are asked to wait following contrast media injection (if you have had this).



CT Scanner

What are the risks of CT scans?

We will expose you to ionising radiation when we carry out this examination. We are all exposed to ionising radiation from naturally occurring sources such as cosmic rays, certain types of soil and rocks, and even food we eat. Ionising radiation can cause cell damage that in turn, after many years, may turn cancerous. The radiation associated with your exam will therefore carry a small risk which is less than 0.1%. This risk will be far outweighed by the benefits of having this exposure. We will also tailor the amount of radiation we use to you.

What are the risks of contrast media injections?

Contrast media are given to patients after considering the risks and benefits for the examination, and the lowest possible dose is given.

To assess your suitability for contrast media, we will ask you some questions regarding allergies, medications you might be taking, and certain conditions.

The contrast media may affect your kidney's function, although this is uncommon. To reduce the chances of this occurring, we will check that your kidneys are functioning properly before the scan. Therefore, your blood tests will be reviewed. We may ask you for a blood sample to be tested in the department if we do not have recent results available.

Allergic reactions

The injection you have for the CT scan is generally very safe. However, with every injection of the contrast media, there is a slight risk of a reaction.

Some people are allergic to the contrast media that is used. We will check whether you have had any allergies in the past before your scan. Some people may experience mild reactions symptoms (such as rash, itching or nausea. Rarely, there may be a more serious allergic reaction, which may require further urgent treatment and medicines. The radiology staff are trained to recognise these reactions, treat them, and contact other staff where needed.

The contrast media that is used contains iodine which some people are allergic to. We will check whether you have had any allergies in the past before your scan. Some people may develop a rash and a few people may experience a mild asthma attack. Rarely, the dye may result in a more serious allergic reaction, which may need to be treated with medicines. The radiographers are trained to recognise these reactions and to treat them. Should it be necessary, other staff are at close hand to assist.

Extravasation

During injection there is a very low risk of contrast leaking outside the vein, into the surrounding tissue. This may cause an aching pain, stinging, swelling, or skin changes where the cannula (small plastic tube) is placed. It can lead to discomfort and aching stiffness in the limb where the contrast media or medicine extravasated, or rarely tissue damage.

The radiographers are trained to recognise the signs and to treat them. If extravasation occurs, a doctor or advanced nurse practitioner will see you before you leave the department. You will also be provided with further information regarding extravasation.

If you experience any of the following symptoms during or after the scan, please tell the radiographer immediately:

- Wheeziness, difficulty in breathing, tightness or pain in the chest
- Skin rash, lumps, itchy spots blisters on skin and in mouth, red/itchy eyes, cough, running nose, sneezing or other allergic symptoms (these reactions may appear several hours or days after the injection)
- Dizziness or feeling faint
- Swelling of your face
- An unexpected change in the amount of urine produced and/or its appearance
- Pain at or near the injection site during or immediately following the injection.

Other, much rarer side effects which may occur during or after the scan include:

- Temporary change in taste
- Pain around the injection site
- Increased/abnormal sweating
- Cold feeling
- Headache
- Flushing
- Feeling sick (nausea), vomiting
- Chest pain
- Severe skin rash with peeling.

What happens after the CT scan?

If you were given a contrast media injection, you will be asked to stay in the area where you were given the injection for 30 minutes. You should not drive or operate machinery for one hour after the injection. During the rest of the day, you should drink 500ml extra fluids to rehydrate your body. This can be tea, coffee, water or any soft drink. You may eat normally.

Children should be encouraged to drink freely. Parents should look for skin or other reactions and contact the Children's Unit if advice is needed. The scans will be carefully analysed and interpreted by a radiologist, who will prepare a report and send it to your doctor. Your doctor will discuss the results with you at your next appointment.

Where can I get further information?

The staff in the Radiology department will be happy to answer any questions you may have. Please ask at the time of your appointment or telephone the department at any time.

Radiology Reception, Cavendish Square	**020 7811 8941**
CT Reception, Chelsea (Reuben Imaging Centre)	**020 7808 2575**
CT Reception, Sutton	**020 8661 3222**

If you have any queries or feel unwell after the scan, please call for advice.

The Royal Marsden Hotline **020 8915 6899**

You can ring the hotline 24 hours a day, 7 days a week.

Call us straight away if you are feeling unwell or are worried about the side effects of cancer treatments.

This service provides specialist advice and support to all Royal Marsden patients, as well as to their carers, and both hospital and community-based doctors and nurses caring for Royal Marsden patients.

Notes and questions

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This booklet is evidence based wherever the appropriate evidence is available, and represents an accumulation of expert opinion and professional interpretation.

Details of the references used in writing this booklet are available on request from:

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The information in this booklet is correct at the time of going to print.

Should you require information in an alternative format, please contact The Royal Marsden Help Centre.

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The ROYAL MARSDEN Cancer Charity

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The Royal Marsden publishes a number of booklets and leaflets about cancer care. Here is a list of information available to you.



Diagnosis

- A beginner's guide to the BRCA1 and BRCA2 genes
- Having a CT scan
- MRI scan
- Having an Ultrasound scan
- A beginner's guide to Lynch syndrome

Patient Information



Treatment

- Central venous access devices
- Chemotherapy
- Clinical trials
- Radiotherapy
- Radionuclide therapy
- Your operation and anaesthetic

Patient Information



Supportive care

- Eating well when you have cancer
- Reducing the risk of healthcare associated infection
- Support at home
- Your guide to support, practical help and therapies

Patient Information



Your hospital experience

- Help Centre
- How to raise a concern or make a complaint
- Your health information, your confidentiality

Patient Information

Please visit **www.royalmarsden.nhs.uk/patientinfo** where many patient information booklets are available to download.



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