

Nuclear Medicine department

# Information about your PET-CT scan

## What is a PET-CT scan?

PET-CT (positron emission tomography with computerised tomography) is a scanning method that allows us to see how organs are working and helps us identify abnormalities in the body. For this scan we will give you an injection containing a small amount of radioactivity called a tracer.

## Is there any preparation for my PET-CT scan?

- You must tell us in advance if you know you are (or think you may be) pregnant, or breast feeding.
- If you are diabetic, please contact the department so that we can give you more detailed instructions about eating and taking your medication. Please read the information for diabetic patients on pages 3 and 4 of this leaflet.
- You should continue to take your usual medications on the day of the scan. Please bring a list of your current medication with you.
- Do not eat anything for 6 hours before your appointment time. You should drink plenty of plain water during this time. Avoid all other drinks including flavoured water, tea and coffee.
- Do not drink any alcohol for 24 hours before your appointment.
- Avoid strenuous exercise for 24 hours before your appointment, for example, running, cycling, or gym exercise.
- Try to leave all jewellery at home as you will need to remove all metal for the scan. We suggest you wear loose fitting, comfortable clothes to avoid having to change into a hospital gown.
- Allow plenty of time to get to your appointment. The tracer is individually ordered for you and has a very short shelf life so scans cannot normally be delayed.
- Please do not bring along anyone who is pregnant or under 18 years of age.
- Expect to be in the department for 2-3 hours.



## **What happens during my PET-CT scan?**

Our staff will fully explain the procedure to you when you arrive for your appointment. A cannula (small tube) will be inserted into a vein in either your hand or arm, and then the radioactive tracer will be given through it. The cannula may remain in place until the scan is complete.

If you have a central venous line (either a PICC or Hickman® line), we may be able to use it for your injection. If you have a totally implanted vascular access device (TIVAD or Portacath®) please let us know in advance of your appointment.

After your injection of tracer you will be asked to sit and relax quietly, alone, for 60 to 90 minutes before having the scan. In most cases you can listen to music, but you will not be allowed to read. This is because reading, or having a relative or carer with you who is talking, can affect where the tracer goes in the body, and we want to avoid these changes.

Just before the scan begins you will be asked to empty your bladder. We will then ask you to lie on the scan bed. We will make sure you are as comfortable as possible for the scan.

We may also give you some X-ray dye (contrast agent) during the scan. This is a colourless fluid that gives us more detailed images of your body. If you have this X-ray dye you will be asked to remain in the hospital for 30 minutes after your scan has finished.

Most scans last between 30-45 minutes.

## **Will I feel anything during my scan?**

There are no side effects from the tracer injection, it will not make you feel sleepy or affect your ability to drive.

If you are given the contrast agent, you may feel a warm sensation, but you should not feel any discomfort during the scan.

If you are in a lot of pain or find it difficult to keep still – please tell us on arrival and please bring your pain medication.

If you need medication to help with claustrophobia, please see your GP or consultant for a prescription as we cannot provide anything at this site.

## **What happens after my PET-CT scan?**

Continue to drink plenty of fluid for the rest of the day, and empty your bladder regularly.

A radiologist will report the scan and then the results will be sent to the consultant who referred you. We will not be able to give you any results on the day.

## **How safe is the examination?**

There are small risks associated from the tracer that you have been given.

However, the images give the doctors important information about your condition that helps in your treatment. The benefits of the information from the scan outweigh the small risks from the exposure to radiation.

As is possible with all medication, a small number of people may be allergic to the contrast agent, although this is rare, and usually mild. Please tell the staff attending to you if you have any allergies.

For the rest of the day following your scan, you should try to avoid long periods of close contact with other people. This is to minimise their exposure to a small, but unnecessary, dose of radiation.

## **What are the benefits of my PET-CT scan?**

A PET-CT scan allows us to perform 2 types of scan at the same time, without movement, giving us a more complete picture of your body. It allows us to look at both the structure (what it looks like) and function (how it works) of the organs and tissues. It is very detailed and sensitive, so will help the doctors looking after you to monitor your treatment.

## **What happens if I decide not to have a PET-CT scan?**

If you decide not to have the PET-CT scan, then please discuss this with the doctor who is looking after you.

**Please attend promptly at the time shown on the attached appointment letter.**

**If you have any questions about this appointment or any questions about the examination, please telephone the number below:**

**Tel: 0161 446 3942 or 3946 (Monday to Friday 9:00am - 5:00pm)**

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## **PET-CT information for diabetic patients**

**Important - patients with diabetes should read the information below.**

### **PET-CT scans in people with diabetes**

When you have a PET-CT scan you are given an injection of a radioactive sugar called 18-F fluorodeoxyglucose (18-F FDG). This special form of glucose is taken up by cells in the body, in the same way as normal glucose, from your blood.

#### **Diabetes can affect PET-CT scans in 2 ways:**

- If your own blood glucose levels are high, the 18-F FDG will not be taken up as efficiently and the scan will be adversely affected.
- If your insulin is high, this will also affect the scan results because the insulin encourages your own normal tissues and organs to take up the radiotracer and again the scan will be adversely affected.

Because blood glucose levels are so important for PET scans, all patients coming for a PET-CT scan will have their blood glucose measured before the radiotracer injection.

Ideally, your blood glucose level should be between 4 and 10 (millimoles per litre) before the scan. If the level is more than 12.5 mmol/l, the scan would usually need to be re-scheduled.

### **Having a PET-CT scan when you have diabetes**

If you have diabetes you should always let the scanning department know about this before your appointment day.

You will then be given advice on how to prepare for the scan – what and when to eat and what diabetic medications to take. You will also be given advice on what food and medications you should bring in with you when you come to the scanning department for your appointment.

The schedule of your scan may be guided by your recent blood glucose levels and whether you tend to have very low early morning glucose levels.

The amount of radioactive glucose you are given for the scan is not enough to affect your diabetes.

## Summary for diabetic patients

### Blood glucose levels are very important in PET-CT scans.

- If you test your blood glucose at home and it is regularly over 10mmols/l please contact your GP or practice nurse or your usual diabetes care provider for advice. Take this leaflet with you.
- Tell the scanning department in advance of your appointment that you have diabetes and what treatment you take for this.
- Follow the advice given by your scanning department about eating and taking medication before and after your scan.

If you need information in a different format, such as easy read, large print, BSL, braille, email, SMS text or other communication support, please tell your ward or clinic nurse.

The Christie is committed to producing high quality, evidence based information for patients. Our patient information adheres to the principles and quality statements of the Information Standard. If you would like to have details about the sources used please contact **[the-christie.patient.information@nhs.net](mailto:the-christie.patient.information@nhs.net)**

For information and advice visit the cancer information centres at Withington, Oldham, Salford or Macclesfield. Opening times can vary, please check before making a special journey.



Contact The Christie Hotline for  
urgent support and specialist advice  
**The Christie Hotline: 0161 446 3658**  
Open 24 hours a day, 7 days a week