

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 make sure you tell us when you phone to confirm, so that we can give you more detailed instructions about eating and your medication. Please read the information for diabetic patients, which is enclosed with this letter.
- 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.
- You should not drink any alcohol for 24 hours before your appointment.
- Please avoid strenuous exercise for 24 hours before your appointment, for example, running, cycling, or gym exercise.
- Please 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.
- Please 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.
- You should expect to be in the department for 2 to 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 will 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 give you your injection through that. If you have a Totally Implanted Vascular Access Device (TIVAD or Portacath®) you will need to ring the Nuclear Medicine Department (department 31) at The Christie on the number given at the end of this leaflet **before your appointment** to discuss getting it accessed.

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 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 with your arms raised above your head or by your sides. We will make sure you are as comfortable as possible for the scan as it is extremely important that you remain as still as you can.

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 to 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.

What happens after my PET-CT scan?

We will ask you to sit in the waiting room for about 15 minutes while we check the technical quality of your scan, and that we have all the information we need.

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 with the radiation that you will be exposed to for this test. 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 two 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:

0161 446 3942 or 3946

(Monday to Friday 9:00am - 5:00pm)

PET/CT information for diabetic patients

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 two 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

- **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.
- The diabetes specialist nurse at The Christie NHS Foundation Trust can be contacted for further advice if required on **07990 530161**.

This patient information leaflet is part of the management of patients with diabetes or at risk of developing diabetes policy version 2 December 2015

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**

For information and advice visit the cancer information centres at Withington, Oldham or Salford. 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