



## Patient information

### What is PET-CT?

PET-CT means Positron Emission Tomography with Computerised Tomography.

PET-CT is a Nuclear Medicine technique that consists of scanning patients after injection of a radioactive tracer. It can provide important information and has been proven to help make treatment decisions in a variety of diseases including cancer, inflammatory diseases, infection, heart and brain diseases.

### <sup>18</sup>F-FDG PET-CT

<sup>18</sup>F -FDG PET is the most frequently performed PET-CT scan. FDG stands for Fluorodeoxyglucose . FDG is attached to the radioactive tracer Fluorine-18 (<sup>18</sup>F). <sup>18</sup>F -FDG is very similar to glucose, and when injected into the body is absorbed into cells that use glucose. <sup>18</sup>F -FDG PET-CT is used to image certain cancers, infection and inflammatory conditions and some cardiac and neurological conditions, where glucose metabolism is altered, but usually increased.

### How long will the procedure take?

Please allow 2 to 3 hours for your appointment. It is very important to be on time because FDG, the radioactive tracer you will be injected with, has a short half life of less than 2 hours. This means that the amount of FDG will progressively decrease over time and we have a narrow window when you can be scanned in order for us to get the best image quality.

### How should I prepare for the scan?

- If you are or might be pregnant or are breastfeeding you need to tell your doctor and the team in the Nuclear Medicine department
- You must **HAVE NOTHING TO EAT or DRINK except water, tea or coffee but without sugar or milk for 6 HOURS** prior to your appointment (this includes chewing gum, cough sweets, cough syrup, cough lozenges and sweets). It is recommended that you drink water during this time (at least 1 litre). You may also drink tea/coffee but **WITHOUT MILK OR SUGAR.**
- You must not participate in vigorous physical activity for **24 HOURS** prior to your appointment.
- We also advise that you dress warmly on the day of your scan and remove all jewellery (you can keep rings on) and leave it at home.
- Apart from medications for diabetes (please see below) and steroids, you can take your usual medications with water on the day of the scan.



## Diabetic Patients

If you are a diabetic patient, please contact the department on 020 7830 2196 for specific instructions regarding your preparation.

## What will happen on the day of the scan? (for FDG PET scans)

You will be asked to change into a gown if necessary and your height and weight will be measured. A technologist will go through a brief questionnaire with you before putting a cannula into a vein in your arm. Your blood glucose levels will also be measured. You will receive a radioactive injection of 18F-FDG into the cannula (little tube) and rest for 60 minutes. During the rest period you need to lie in a reclined chair or lie in a bed and stay still. You will not be permitted to have family or friends with you, there will be staff present to monitor your needs at all times. Children are not allowed in the PET centre. You may bring music with you if you wish eg iPod, MP3 player.

Following the 60 minutes of rest, you will be taken through to the PET-CT scanner where your scan will take approximately 20-30 minutes. However, depending on the nature of your scan this time may vary.

After your scan is finished and we have checked your images, you will be allowed to leave the department. We will send the results of your scan to your referring doctor within 2 working days.

## How will I feel after the scan?

There are no side effects with this scan and once you finish your test you may resume normal activities, although we advise you not to have close prolonged contact (closer than 1 metre for more than 10 minutes) with pregnant women or small children for 6 hours following your scan.

## Pregnancy and breastfeeding

If there is a chance you may be pregnant or are breastfeeding, please inform us immediately. It is not recommended that you have a PET/CT scan whilst pregnant. If you are breastfeeding you can have the scan but you should discontinue breastfeeding for 6 hours after the radiotracer injection and discard any expressed milk during this period. We also recommend you do not spend too much time close to your baby (closer than 1 metre for more than 10 minutes) for 6 hours following the scan. Please ask to talk to a doctor or physicist if you have concerns or require more information.

## Should I be worried about the radiation from the scan? Is there any risk?

You will be exposed to a small amount of radiation for this scan. Since important information about your disease will be provided by the scan, it is considered that there is more benefit for you than there is risk from the radiation. The amount of radiation that you will receive from the scan is equivalent to 7 years of background radiation. If you have any concerns about radiation you can ask to talk to a physicist or a doctor in the Nuclear Medicine department.