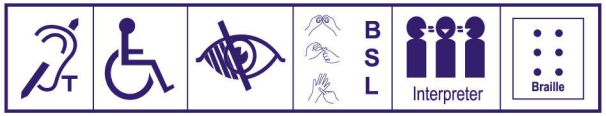
Ashford and St. Peter's Hospitals NHS
NHS Foundation Trust



We can provide interpreters for a variety of languages, information in larger print or other formats (e.g. audio) - please call us on 01932 723553.

To use the Text Relay service, prefix all numbers with 18001.

اگر نیاز به ترجمه دارید، لطفا با شماره 01932 723553 تماس بگیرید.

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اگر آپ اِس کا اُردو زبان میں ترجمہ چاہتے ہیں، تو براہِ کرم اِس فون نمبر 01932 723553 پر رابطہ کریں

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Jeżeli chcemy, aby te informacje w innym języku, proszę zadzwonić 01932 723553

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NHS
Ashford and St. Peter's Hospitals
NHS Foundation Trust

PET/CT Scans

Imaging Department

Patient Information

Further Information

We endeavour to provide an excellent service at all times, but should you have any concerns please, in the first instance, raise these with the Matron, Senior Nurse or Manager on duty.

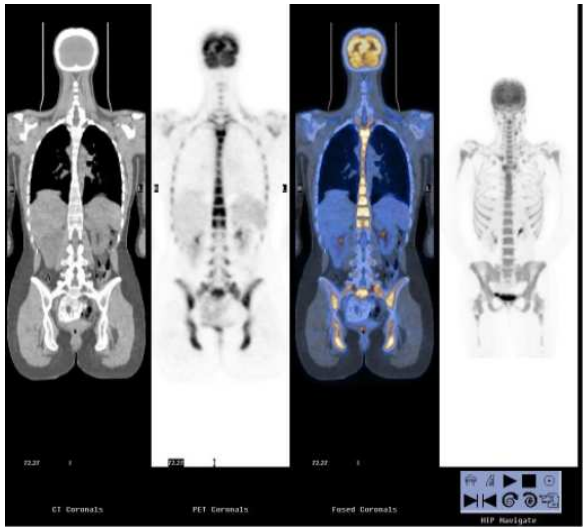
If they cannot resolve your concern, please contact our Patient Experience Team on 01932 723553 or email asp-tr.patient.advice@nhs.net. If you remain concerned, the team can also advise upon how to make a formal complaint.

Author: Dr Vineet Prakash **Department:** Imaging
Version: 3 **Published:** Mar 2018 **Review:** Mar 2020

It is safe to say that 48 hours after the scan there will be an insignificant amount of radioactivity left in your body.

What is PET/CT?

PET/CT is a unique imaging technique that combines structural and functional information to produce a fused picture of the body showing **anatomy** and **metabolic activity**.



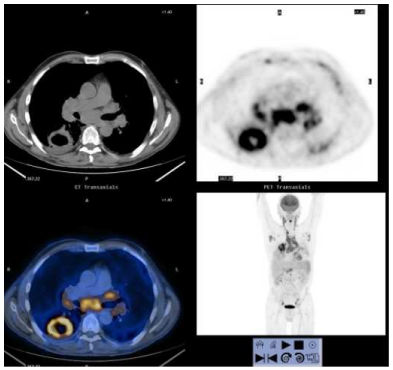
How it works

Normal CT scanning on its own produces wonderful images of the body to allow the radiologist to detect regions of abnormality. There is however an overlap between some harmless areas of abnormality such as scarring or benign lesions and more sinister disease such as cancer.

PET (Positron Emission Tomography) uses a small dose of radioactivity coupled to glucose (FluoroDeoxyGlucose, FDG) to

detect areas of increased metabolism in the body. Many cancers show significantly increased glucose uptake over normal surrounding tissues and this can be detected by a special camera placed around the body.

The images produced are not as clear as those obtained with CT, however by fusing the PET image with the exact position on the CT scan it is possible to show which areas of the body are showing abnormal activity and potentially harmful.



What will happen to me?

You will be asked not to eat for 6 hours prior to the test and drink only water. The labelled glucose is given by a small intravenous injection. After the injection, you will be asked to rest for an hour before the scan begins. This resting phase is vital to obtaining high quality PET/CT images. Pathology is demonstrated because areas of disease use sugar more rapidly than the surrounding tissue. This means that the FDG injection will travel to areas of disease and demonstrate them on the scan.

Working muscles also use this form of sugar as an energy supply. The FDG injection will therefore travel to these muscles if they are being used.

By completely resting for a period of 1 hour after the injection, there is more chance of the FDG going to areas of disease, rather than normal tissues.

The scan

After resting for an hour you will be asked to empty your bladder. You are then placed on the scanner and undergo a normal CT examination. You will be asked to keep very still, as after the CT scan you will have the PET scan immediately. This is performed in the same machine which contains both the CT scanner and the PET scanner.
After the scan you will be allowed home.
A specialist Consultant trained in PET/CT will then review all the images and send a report to your referring doctor.

Radioactivity and safety

The radioactive component of the PET/CT scan is called Fluorine – 18. Radioactivity is often described in terms of its half-life. Half-life is defined as the time taken for radioactivity to fall to half its initial level. Fluorine has a half life of 110 minutes. This means that the level of radioactivity remaining in your system halves every 110minutes.