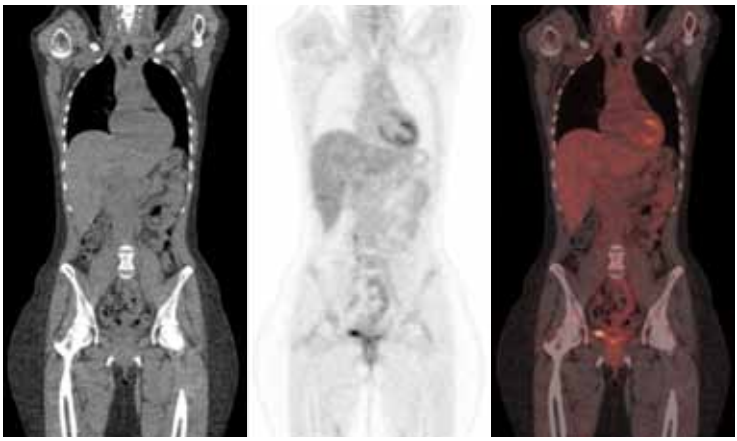
Critical Care, Theatre & Diagnostics

King's College Hospital NHS
NHS Foundation Trust

Introducing the PET-CT service at Denmark Hill

Information for referrers and healthcare professionals



King's

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An Academic Health Sciences Centre for London

Pioneering better health for all

Why choose King's College Hospital (KCH) department of Nuclear Medicine to have a PET-CT scan?

The technology

- We are a prestigious London teaching hospital that provides newly installed, state-of-the-art facilities.
- We offer a comprehensive range of PET-CT scans using F18-FDG, F18-Na for bone scanning, F18-Choline for prostate, F18-amyloid imaging agent for the brain and Ga68-Dotatate for certain types of cancer, mainly neuroendocrine tumours. These may be combined with a diagnostic CT.
- As a referring doctor, you can rely on the unmatched spatial resolution and superior fine detail attained with our state-of-the-art 64-slice GE Discovery PET-CT scanner.
- Common reasons for a PET-CT scan:
    - identifying malignant potential in equivocal lesions
    - tumour staging
    - response assessment and monitoring of remission
    - identifying an unknown primary
    - investigating paraneoplastic syndromes
    - investigating occult infection including PUO
    - inflammatory conditions including sarcoid and arteritis.

The people

- Our clinical team comprises of experienced technologists, clinical scientists, nurses and radiologists, who are certificated in PET-CT.
- Our nuclear medicine team is committed to working with referring clinicians to investigate each patient using the most appropriate test and to provide a diagnosis in a safe and professional environment.

The process

- Within a day of receiving a referral for a PET-CT scan, we will contact your patient to arrange a convenient time for their appointment. This means you can make earlier and more informed decisions about your patient and their management and KCH patients no longer have the inconvenience of having to travel to other Trusts for PET-CT scans
- Our administrative staff ensure that patients receive all the information they need to prepare for their scan.
- We have a dedicated booking service where patients may call to enquire about their appointment or rearrange on **020 3299 3153**.

After the scan

- The scan report is available **within 24 hours**. Reports are agreed upon by two highly qualified radiologists, specialised in interpreting PET-CT. Images are available for the referring doctor.
- We can send reports and images for referrals from other organisations electronically.
- Private patients receive a CD-ROM of their scan to take away with them.

Directions to Department

PET-CT is part of the Nuclear Medicine Department of KCH at Denmark Hill. We are located on the Lower Ground floor of the Golden Jubilee Wing.

How to refer

We accept referrals by letter, fax or email. PET-CT scans can also be requested via King's EPR system. For paper copies of the referral forms, email us at **kch-tr.NucMedReferral@nhs.net**

Department of Nuclear Medicine
Lower Ground Floor, Golden Jubilee Wing,
King's College Hospital
Denmark Hill, London SE5 9RS

Fax: **020 3299 3516**
Email: **kch-tr.NucMedReferral@nhs.net**

What is PET-CT?

- PET (Positron Emission Tomography) is a molecular imaging technique used to provide information about the function of organs and tissues within the body by measuring the distribution of a radioactive tracer (most commonly F18-FDG (fluorine-18 fluorodeoxyglucose) - a radioactive form of sugar that is taken up into cells in the same way as glucose).
- Imaging of F18-FDG depicts metabolic activity within the body and can be used to identify areas of abnormal function such as cancer cells. A CT (Computed Tomography) scan uses X-rays to produce high resolution 3D images of the anatomy. PET-CT combines the PET and CT imaging into a single integrated system, and has been shown to be more accurate for the characterisation and localisation of lesions than either PET or CT alone.
- PET-CT plays a significant role in the diagnosis and management for oncology patients, where the accuracy of staging can be limited using conventional imaging such as CT, MRI and gamma camera nuclear medicine. F18-FDG PET can distinguish between malignant and benign lesions and enables detection of metabolic changes in cancer cells before anatomical changes become visible.

This considerable advantage allows us to identify tumours earlier and improve staging for certain cancers, compared with other imaging techniques.

- PET-CT neuroimaging also has added value in the assessment of patients with suspected dementia, brain tumours or epilepsy. Metabolic abnormalities detected using F18-FDG PET may be used to highlight specific regions within the brain, which may otherwise have been hidden on MRI.

Meet the Team

Dr Gill Vivian FRCR FRCP
Chief of Service, Consultant Radiologist and Nuclear Medicine Physician

Gill has over 30 years' experience in Diagnostic imaging, specialising in nuclear medicine since 1987. She has clinical and research experience in oncological imaging, particularly endocrine oncology and therapy. She has worked with the NHS PET-CT diagnostic imaging service and established the PET-CT at King's in 2013.

Dr Nicola Mulholland FRCR FRCP MA (Cantab) MSc
Consultant Radiologist and Nuclear Medicine Physician

Nicola has over 15 years' experience in diagnostic imaging. She read medicine at the University of Cambridge and University of London, qualifying in 1995. She trained in radiology at King's and nuclear medicine at Guy's Hospital. She is lead for haemato-oncology imaging and established the SPECT-CT and PET-CT service at King's.

Dr Amy Eccles MA MB BChir (Cantab) FRCR
Consultant Radiologist

Amy qualified from the University of Cambridge in 2004 and was awarded Fellowship of Royal College of Radiologists in 2011. She completed her radiology training with subspecialty interest in radionuclide radiology in January 2014 and joined King's in March 2014. Her areas of interest include hybrid and neuro-endocrine imaging (SPECT-CT and PET-CT).

Nick Gulliver BSc(Hons) MSc MIPEM
Clinical Service Manager

Nick has over 15 years' experience in nuclear medicine as a clinical technologist, medical physicist and service manager. He trained at Guy's Hospital and St George's Hospital in London and has lectured at national and international conferences and courses on PET-CT and general nuclear medicine. He joined King's in February 2014.

Information for your patient

How should they prepare for the scan?

- Have **nothing to eat for 6 hours** prior to their appointment start time (this includes chewing gum). During these 6 hours, they should drink plenty of **plain (not fizzy)** water. If they do not fast, this can cause inaccurate scan results and their appointment may have to be rescheduled.
- Avoid any strenuous physical activity for **24 hours** prior to their appointment start time e.g. running, cycling and exercising in a gym.

- Continue to take any prescribed medications as usual, unless instructed otherwise.
- Wear warm, comfortable clothes that do not have any metal zips/ studs or an underwired bra. Leave any jewellery at home.
- If the patient is **diabetic**, they should contact the department **prior to their appointment** for specific instructions on preparing for the scan.

What happens on the day of their scan?

When the patient arrives, the procedure will be fully explained by our staff.

We will insert a needle into a vein in their arm or hand to inject the radioactive tracer.

They will need to rest for an hour before having the scan. This is known as the 'uptake period' and allows time for their body to take up the radioactive tracer. During this time it is important that they lie still and relax quietly.

After the uptake period they will be directed to the scanner room and asked to lie on their back on the scanner couch. The scan will take approximately 30 minutes and they will need to lie still with their arms placed above their head.

How long is the appointment?

Patients should allow between two-three hours for their appointment, for both preparation and scanning.

What happens after their scan?

Patients may eat and drink as normal. They should drink plenty of fluids for the rest of the day and empty their bladder regularly. They

should avoid close contact with young children and pregnant women for six hours after their scan.

What are the risks?

Radiation Dose: The scan will involve exposure to x-rays and gamma rays (from the radioactive tracer), which are a form of radiation similar to x-rays. We use as little radiation as possible and the tracer will remain in the patient's body for just a few hours after injection.

Pregnancy and breast feeding

PET-CT is not recommended for patients who are pregnant as there may be a risk to the foetus.

Patients should not breastfeed for six hours after the scan. We recommend that patients avoid close contact with babies during this time.

Will it hurt?

The needle may hurt a little during the injection. There are no side effects from the injection or scan.

Can patients bring a friend or relative with them?

Due to limited capacity and the nature of the test, patients should not bring friends or relatives with them unless it is absolutely necessary.

For further information please call the Department of Nuclear Medicine on 020 3299 2020.

www.kch.nhs.uk
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