

*The* ROYAL MARSDEN

NHS Foundation Trust

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Having a positron  
emission tomography  
(PET/CT) scan  
(F-18 Choline)

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**Nuclear Medicine**

**Patient information**



**NHS**

## **Introduction**

Your doctor has recommended that you have an F-18 Choline PET/CT scan. This is a nuclear medicine test combining a PET scan and a CT scan.

## **What is positron emission tomography (PET)?**

PET is a medical imaging technique in which a radioactive tracer is injected into a vein. The tracer used is Fluorine-18 Choline. This radioactive tracer has a short shelf life and is made on the day of the scan. Appointments may be cancelled at short notice if there are tracer production problems.

## **What is CT?**

A CT (Computerised Tomography) scan uses x-rays to produce images of the body. By combining PET and CT, we are able to provide important information about many conditions affecting the different organs of your body. This will help your doctor to plan appropriate treatment for you.

## **Is there any risk from the radiation?**

We will expose you to ionising radiation when we carry out this examination. We are all exposed to ionising radiation from naturally occurring sources such as cosmic rays, certain types of soil and rocks and even food we eat. Ionising

radiation can cause cell damage that after many years may turn cancerous. The radiation associated with your exam will therefore carry a small risk which is less than 0.1%. This risk will be far outweighed by the benefits of having this exposure. We will also tailor the amount of radiation we use to you.

**However, please read the *Important points* section below. If you have any concerns please contact us.**

## **What preparation do I need for my F-18 Choline PET/CT scan?**

You must not eat or drink apart from plain tap water for **four hours** prior to your appointment.

## **How is a F-18 Choline PET/CT scan carried out?**

When you arrive at the department we will ask you to change into a hospital gown and remove all jewellery. You will then be taken to a preparation room to lie on a couch. We will give you a small injection of radioactive tracer into a vein and we will ask you to remain lying down for about one hour before your scan.

After one hour, we will ask you to move into the scanning room and onto the scanning bed. The scan will take about 20 to 30 minutes. You will be scanned with your arms raised above your head. Occasionally we may also scan you with your arms by your sides.

## Are there any side effects?

The tracer that we inject will not produce any side effects. You can continue with your usual daily activities. In particular it will not make you drowsy and so will not prevent you from driving a car.

## What happens after my F-18 Choline PET/CT scan?

Once the scan is completed you will be able to leave the department immediately. You will be able to eat and drink what you like. You may go anywhere you wish but you should avoid prolonged close contact with pregnant individuals and children for the rest of the day. This is to avoid exposing children to unnecessary radiation.

## How will I get the results of my F-18 Choline PET/CT scan?

Your F-18 Choline PET/CT scan will be reported on by the nuclear medicine consultant within 24 hours of completion. The results of your test will then be made available to the doctor who referred you.

## Important points

- Due to the nature of these investigations we advise that **you should not be accompanied by anyone who is pregnant and should not bring young children to the department.**

With most of these investigations the level of radioactivity will have decreased to a safe level by the time you arrive home after the scan. However, some investigations need more specific restrictions with regards to contact with young children and these will be explained.

- We are committed to ensuring patients are free from discrimination regardless of their gender or sexual orientation. If your gender was female at birth and you are transgender or non-binary, please inform a member of staff as we legally need to rule out the possibility of pregnancy before we can go ahead with some of our examinations. This information will not be recorded or shared without your consent.
- If you are afraid of needles you can ask for a spray to numb the area, before your injection.
- If you are pregnant or breastfeeding please contact the department as soon as possible to find out if you can have this test. Generally, nuclear medicine tests are not carried out on pregnant individuals unless absolutely necessary and then the dose of radioactivity will probably be reduced.

## Contact us

If you have any questions, please contact us:

### **Nuclear Medicine Department**

Sutton: 020 8661 3762/3287

Chelsea: 020 7811 8541

Email:

rmh-tr.rmnuclearmedicine@nhs.net

### **The Royal Marsden Macmillan Hotline: 020 8915 6899**

(available 24 hours a day, 7 days a week)

Should you require information in an alternative format, please contact The Royal Marsden Help Centre.

## References

This leaflet is evidence based wherever the appropriate evidence is available, and represents an accumulation of expert opinion and professional interpretation.

Details of the references used in writing this leaflet are available on request from:

The Royal Marsden Help Centre

Freephone: 0800 783 7176

Email: patientcentre@rmh.nhs.uk

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