

The ROYAL MARSDEN

NHS Foundation Trust

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

Nuclear Medicine

Patient information



NHS

Introduction

Your doctor has recommended that you have an F-18 Choline Brain 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. Please note that 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 in turn, 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.

Please read the *Important points* section towards the end of this leaflet. If you have any concerns, please contact us.

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

No special preparation is required for this scan.

How is an F-18 Choline Brain PET/CT scan carried out?

When you arrive at the department you will be taken to a preparation room, where the staff will take a brief history from you. We will insert a small cannula into a vein in your hand in preparation for the scan, and discuss the procedure with you.

When the camera is available, we will ask you to move into the scanning room and onto the scanning bed with your arms by your sides. You will then have a CT scan performed of your head, after which the imaging staff will come in and administer the radioactive tracer through the cannula in your hand. The PET scan

will be started at the same time as the injection and will take 30 to 45 minutes.

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 we ask you to avoid prolonged close contact with pregnant women 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.
- If you are afraid of needles you can ask for a spray to numb the area, before the 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 women unless absolutely necessary and then the dose of radioactivity will probably be reduced.

Contact details

If you have any queries please contact us on:

Royal Marsden, Sutton

Tel: 020 8661 3762 / 3286

Royal Marsden, Chelsea

Tel: 020 7811 8541

Email:

rmh-tr.rmnucllearmedicine@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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