

**HC**  
marbella

PET-TC UNIT



## What is PET-CT?

PET-CT is a diagnostic scan that gives a combination of a PET image (positron emission tomography) and a CT image (computed tomography) of low energy inside the same machine. The two techniques provide different types of information on the human body.

The PET scan shows the metabolic activity of glucose uptake when the substance is used as a marker, which – in a pathological process such as tumour growth – is considerably higher than the uptake of healthy tissue; the CT shows images of anatomical structures. The combination of the two techniques provides vital diagnostic information which helps to diagnose diseases as well as plan treatments and subsequently evaluate the response to treatment and carry out early detection of relapses in treated processes.

The PET-CT scan is simple, painless and safe. Exposure to radiation is low because it occurs over a short period of time. In addition, the quantity is so low that it does not affect the normal processes of the body.

## Why do I need to have a PET-CT?

The aim of the scan is to study different processes that are fundamentally cancerous. The PET-CT technique is proven to be highly sensitive in the detection of different malignancies.

The results of the PET-CT scan bring considerable added value to the diagnostic tests carried out by the doctor, who is then able to determine staging and initial assessment of the disease, subsequently allowing more appropriate planning of treatment and supervision of its effectiveness.

## Who carries out the PET-CT scan?

Your doctor will request the scan but nuclear and radiology specialists will perform the PET-CT scan. Both specialists are experts in diagnostic imaging. The doctors are assisted by technicians with extensive training in medical imaging equipment.

This highly qualified team of professionals ensures that the PET-CT scan images are of the highest quality and that the patient feels as comfortable as possible throughout the test.

## How long does the scan take?

**The usual amount of time** the patient spends in the PET-CT Unit **ranges from 1-2 hours**. The patient will be resting most of the time (around 45 minutes) in a comfortable private cubicle after the contrast medium is injected and given time to travel around the whole body. The patient is in the examination room for 15-25 minutes.

# What do I need to do before the scan?

**The day before the test we will contact you to confirm the time of your appointment.**

If you have to cancel your appointment for any reason it is very important that you do so with enough notice so that your place can be given to another patient.

You should be as relaxed as possible when you come in for the test; it is better to come with a companion and to arrive by car rather than walk, so as to avoid any physical exertion that might alter the results of the examination.

It is also important to inform us of the following before the test:

- If you are diabetic – you should come with your blood sugar levels under control; if you have insulin-dependent diabetes – you should not receive insulin for 4-6 hours before the test
- If you are pregnant or breastfeeding
- If you have any special requirements or needs
- If you weigh more than 100kg (220 lbs / 15 stone)
- If you have to attend an appointment or have other tests carried out the same day
- If you have had any kind of operation recently (biopsy or surgery)
- If you have or recently have had an infection
- If you have recently undergone chemotherapy or radiotherapy

## 1. Before the scan you should fast for several hours:

Given that the radioactive tracer that will be injected is a glucose analogy (FDG), in order to avoid any interference with the test you will need **to fast for 4-6 hours before the test is carried out.**

During that time you may only drink water or sugar-free liquid. It is not necessary for you to stop taking your medication. As this radiopharmaceutical is eliminated in the urine, we advise you to **stay well hydrated before and especially after the test.** You should drink enough water the previous day and on the day of the test (at least 1 litre).

## 2. Do not do any physical exercise for 24 hours before the test.

3. It is important that you do not come to your appointment with children or pregnant women.

# What should I do when I arrive at the Hospital?

Go straight to the PET-CT Unit located towards the back of the main building with a separate entrance (see map enclosed).

At Reception your details will be entered into the registration system and you will be given the Informed Consent form for the test, which you should read and sign if you give your consent.



Next you will be interviewed by a technician from the Unit who:

1. Will ask some brief questions about your state of health and the treatments you are receiving or are due to be given
2. Will measure your glucose levels
3. Will accompany you to your private cubicle where you will remove some of your clothing and will be given a hospital gown for your comfort, which you will need to wear during the scan
4. Will measure and weigh you in order to calculate and correctly administer the radioactive tracer (known as 18F-FDG)

## What happens when the test is carried out?

After your medical history has been reviewed, you will go into a **designated cubicle** where you will be given an injection of 18F-FDG.

You will remain in this cubicle for 45-50 minutes (in low lighting and staying as relaxed as possible), the time it takes for the drug to travel around the body.

Afterwards, you will go into the **scanning room** where a technician will ask you to lie down on your back and show you how to position your arms.

During the test you will be asked to stay as still as possible, because movement may interfere with the results.

It is recommended that your breathing remain gentle and shallow, avoiding any sudden movements. You will not feel any discomfort during the test, which can last **from 15-20 minutes**.

## After the test

Once the test has finished and the quality of the images obtained has been confirmed, you will be able to go home and eat and drink normally, following these recommendations:

1. Drink 1 litre of water throughout the rest of the day in order to help eliminate the drug
2. Do not have any contact with pregnant women or small children for 8 hours after the test
3. If you are breastfeeding, it is recommended that you do not breastfeed for 24 hours after the test.

## Possible risks and complications

From the radioactive tracer: as you are aware, the radioactive tracer is a minor source of radiation, and the dose you receive is lower than or similar to a CT scan. Side effects are extremely rare because the doses used are so low.

**From the CT:** the dose is minimal and sufficient only to obtain anatomical data.

**Personal risks:** related to each patient's situation. If any complication should arise, you can be confident that all of the doctors at the hospital are available to resolve the issue.

The **results** will be provided **that same day**.



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