



## PET Scans: Patient Information

PET is short for “Positron Emission Tomography” which is an imaging technique that displays the energy consumption of an organ or tissue, rather than just its structure as seen on CT or ultrasound scans. PET is extremely sensitive for detecting the early stages of diseases such as cancer. Small amounts of tumour may be found, even if they are undetectable by other imaging procedures. This can have a major impact on choosing the best treatment for you, such as surgery, radiation treatment and chemotherapy.

PET can also help to monitor the effectiveness of therapy. Therefore you may need more than one PET scan in the course of your disease to optimise treatment.

Combining PET with CT further improves the information. From PET-CT the radiologist can detect the presence of abnormal tissue, and its exact whereabouts in the body.

### What will the procedure involve?

When having a PET-CT scan, you will receive an injection of a radioactive compound called 18F-FDG. This is a sugar substance that is taken up in active tissues, including many types of cancer.

After this injection you will need to lie down and rest for approximately 60 minutes, while the radioactive sugar circulates around your body. Sugar naturally goes to muscles that are moving, so to prevent these muscles from taking up the radioactive sugar and obscuring abnormal areas, you will need to lie quietly during the resting period.

Depending on the area being examined, it may be necessary to administer a muscle relaxing drug, or a mild sedative, especially for patients who feel claustrophobic or anxious.

For some examinations, a urinary catheter is inserted into the bladder.

You should plan to spend about 3 hours at Southern Cross Radiology.

### How are the images obtained?

The PET-CT scanner detects the radiation released from the radioactive sugar injection and uses this to create pictures of your body. These pictures are superimposed on the CT images and displayed on computer. The actual scan takes between 30 and 45 minutes, depending on the body area being scanned.

### What are the risks of the scan?

PET-CT is a very safe and routine procedure. Millions of PET-CT scans have been done around the world without complication.

The radiation dose of PET-CT is similar to conventional CT scans, but it is recommended that you keep some distance from pregnant women and children for 4 hours after the scan, until the radioactivity in your body has subsided. Also, please notify the technologist before the scan if you are pregnant or breastfeeding.

As with conventional CT, you may be required to have an injection of iodinated contrast. There is a very small risk of allergy, and you will be asked about any previous allergic reactions before any such injection is given.

#### What happens if I'm claustrophobic or need sedation?

If you do require mild sedation for the PET-CT scan, this will be given at the time of the examination. It is essential you have someone to drive you home. You will not be able to operate a machine or drive a car for 12 hours following sedation.

#### When will the results be available?

The results of the PET-CT scan should be with your referring doctor within approximately 3 working days.

You will need to contact that doctor to obtain the results.

#### What preparation is required?

A personalised instruction sheet will be sent to you with the exact preparation that you will need for the scan.

You will be asked to fast (no food, and only water to drink) for at least 4 hours before the PET-CT scan, as the radioactive sugar will otherwise become diluted by the natural sugar in your blood.

#### Further information?

If you have any questions or concerns, or require further information before your scan, please feel free to contact us.

#### Contact Details:

Christchurch Radiology Group's PET/CT scanning facility is located at:

Southern Cross Radiology

129 Bealey Avenue (cnr Bealey Avenue and Durham Street)

Christchurch.

Telephone: 0800 TOXRAY or 0800 869 729 or 03 366 5788,

Fax: 03 366 5755

Email: [petct@crq.co.nz](mailto:petct@crq.co.nz)