# PET/CT Scan

# Patient Education & Preparation Instructions

You have been referred to Aspirus Riverview Hospital's imaging department for a PET/CT exam. All exams are interpreted by a radiologist, a physician who specializes in imaging diagnosis. The results are sent to your physician in writing, or in the case of an emergency, by telephone.

#### What is a PET/CT Scan?

PET/CT combines the functional information from positron emission tomography (PET) with the anatomical information from computed tomography (CT) into a single exam.

A PET scan detects changes in cellular function, specifically, the rate of sugar metabolism in any given tissue. Since these functional changes take place before physical changes occur, PET can provide information that enables your physician to make an early diagnosis.

A CT scan uses a combination of x-rays and computers to give the radiologist a noninvasive way to see inside your body. One advantage of CT is its ability to rapidly acquire two-dimensional pictures of your anatomy. Using a computer, these 2-D images can be presented in 3-D for in-depth clinical evaluation.

The PET exam pinpoints metabolic activity in cells and the CT exam provides an anatomical reference. When these two scans are combined, your physician can view metabolic changes in the proper anatomical context of your body.

#### Why Do I Need this Exam?

Your PET/CT exam results may have a major impact on your physician's diagnosis of a potential health problem - and, should a disease be detected, how a treatment plan is developed and managed.

A PET/CT exam not only helps your physician diagnose a problem, it also helps predict the likely outcome of various therapeutic alternatives, pinpoint the best approach to treatment, and monitor your progress. If you're not responding as well as expected, you can be switched to a more effective therapy immediately.

#### What Should I Expect When I Arrive?

When you arrive, we will take a review of your history and any past exams.

For the PET portion of the exam, you will receive a radiopharmaceutical injection. This is a radioactive tracer that must pass multiple quality control measures before it is used for any patient injection. PET radiopharmaceuticals lose their radioactivity very quickly (two minutes to two hours) and only very small amounts are injected. In all cases, little or no radioactivity will remain in your body ten minutes to six hours after injection.

For most studies, you will have to wait for the radiopharmaceutical to distribute itself – typically 30 minutes to an hour. During this time, you will be asked to relax.

#### What will the Scan be Like?

You will lie on a comfortable padded table. The table will move slowly through the tube-shaped PET/CT scanner as it acquires the information needed to generate diagnostic images.

You will be asked to lie very still during the scan because movement can interfere with the results. For the CT scan, you will be asked to hold your breath for a few seconds to minimize body movements. During the scan, you may hear a humming noise, but you will not feel anything unusual. You may feel the table move while images are being taken at certain locations on your body. The technologist will monitor you during the exam. The specific details of your upcoming exam will be explained fully by the technologist or your physician.

#### How Long will the Exam Take?

The PET/CT scan should last from 20 to 45 minutes. The exam procedure can vary depending on what we are looking for and what we discover along the way. Plan to spend two to three hours with us.

## What Happens After the Exam?

You may leave as soon as the exam is complete. Unless you have received special instructions, you will be able to eat and drink immediately. Drinking lots of fluids soon after the exam will help remove any of the radiopharmaceutical that may still be in your system.

In the meantime, we will prepare the results for review by our radiologist, and then by your physician, who will tell you what we have learned.

#### **Safety of PET/CT Exams**

Be assured that PET/CT exams are a safe and effective diagnostic procedure. The radiopharmaceuticals used in PET do not remain in your system long, so there is no reason to avoid interacting with other people once you have left. To be extra safe, wait a few hours before getting too close to an infant or anyone who is pregnant.

## **How to Prepare for Your Exam:**

#### **All Patients**

- Wear loose, comfortable clothing (avoid metallic objects, zippers, buttons, underwire bras, etc.). If you wear any of these items, you will need to change into a hospital gown.
- If you feel feverish, please let us know.
- Please let us know if you might be pregnant or are currently breastfeeding.
- Call Aspirus Riverview Hospital's imaging services department at 421-7430 if you have any questions.

#### **Non-Diabetic Patients**

- Do not eat or drink anything other than water eight hours before the exam.
- You may drink water. (Drink about 32 ounces of water about 1-2 hours before the exam.)
- Your last meal should be high in protein and low in carbohydrates (avoid breads, pastas, cereals, grains, fruit, candy and other high carbohydrate/sugar foods).
- Take morning medications with water only.
- Avoid physical activity for 24 hours before the exam (heavy lifting, vigorous exercise, etc.).

# **Diabetic Patients - Insulin Dependent**

- Eat a light, high-protein meal four hours before the exam.
- Take your insulin injection with this meal.
- Do not eat or drink anything other than water (in moderation) for four hours before the exam.
- Bring your diabetes medications to your exam.

#### **Diabetic Patients - Non-Insulin Dependent**

- Eat a light, high-protein meal four hours before the exam.
- Do not eat or drink anything other than water (in moderation) for four hours before the exam.
- Take Glucophage or other oral diabetes medications as usual.
- Bring your diabetes medications to your exam.

Aspirus Riverview Hospital Imaging Services Department 715-421-7430

#### PRE-REGISTRATION REQUIRED

Stop by the Registration Department in Aspirus Riverview Hospital's Lobby Rotunda Monday—Thursday 8 am-5:30 pm; Friday 8 am-5 pm; Or call 715-421-7499

If you are unable to keep your appointment, you <u>must</u> notify Aspirus Riverview Hospital's imaging services department at least two days before your scheduled appointment time, or you may be charged for the imaging agent, which is very expensive and must be ordered a minimum of 24 hours in advance.



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