

## What is PET/CT?

PET/CT is a diagnostic imaging study that combines the best features of positron emission tomography (PET) and computed tomography (CT).

The PET portion of the PET/CT exam provides for very sensitive detection of disease. The patient is injected with a small amount of a sugar called fluorodeoxyglucose (FDG), which accumulates more in diseased tissues than in normal tissues. Once there, the FDG produces gamma rays, which are similar to X-rays. These gamma rays are recorded by the PET/CT scanner and are processed by a computer into images that display the diseased tissue. PET not only detects diseased tissue, but it can also measure the metabolism in order to gauge the severity of the disease, and detect any change in the disease over time.

The CT portion of the PET/CT exam provides for very precise localization of structures in the body. It also allows for accurate determination of the size and shape of normal structures and lesions. CT uses X-rays which are processed by a computer into very detailed images of the body.

Together, PET and CT sensitively identify and precisely pinpoint the location of diseased tissue, and provide a way to measure response to treatment and changes over time. As an added bonus, the combined exam means the patient makes only one visit and one preparation.

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### \* MIDTOWN I

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(512) 519-3456

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(512) 519-3402

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Suite 220  
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### SOUTHWOOD

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(512) 428-9090

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Building H, Suite 200  
Austin, TX 78746  
(512) 328-4984

### WILLIAM CANNON

2501 W. William Cannon Drive  
Building 5  
Austin, TX 78745  
(512) 346-7311

### WILSON PARKE

11714 Wilson Parke Ave.  
Suite 175  
Austin, TX 78726  
(512) 519-3457

### WOMEN'S IMAGING CENTER - CENTRAL

1600 W. 38th Street  
Suite 100  
Austin, TX 78731  
(512) 275-0013

\* Locations offering PET/CT

## PET/CT

### Understanding your PET/CT exam



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Jan 2019

SCHEDULING  
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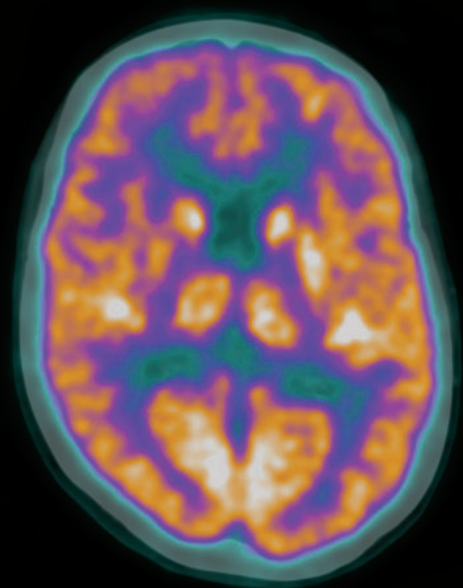
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DIAGNOSTIC IMAGING

## Preparation for the study

Starting at 12:00 pm on the day before your exam, you will be asked to follow a no-sugar and no-carbohydrate diet. Detailed instructions are available by mail, fax, or email through the PET/CT scheduling coordinators. You will also be asked to refrain from strenuous exercise or activity for 24 hours prior to the exam. You should take all your medications on the day of the exam unless you are having a PET/CT brain scan. Patients having a PET/CT of the brain should review their medications with our staff. There are additional instructions for diabetic patients; these are provided by the PET/CT scheduling coordinators.

There is no restriction on drinking water. Please drink plenty of water the day prior to your exam and up to 4 hours prior to your appointment on the day of your exam. Dress warmly for your PET/CT appointment. Your study will come out best if you are warm starting the morning of your exam. All jewelry and clothing that has metal must be removed. You can remain in your own clothes if they are metal-free.



## What will happen during the exam?

Please plan on spending approximately three hours at the facility to allow enough time for registration, the uptake period and your scan.

If your clothing has metal, you will be asked to change into a patient gown. Your blood sugar will be checked, and you will be injected with FDG sugar through an IV catheter. Then you will rest comfortably for one hour while the FDG sugar is metabolized.

Afterward, you will be escorted to the PET/CT scanner for the exam. The length of time on the PET/CT table will be 25 to 45 minutes depending on the exam requested by your physician. Radio or recorded music is provided during the exam if you wish. You may also bring your own music CD to listen to during the scan.

The technologist will be in close contact with you during the uptake period and scan and can provide any assistance you need.

**Note:** In case of unexpected delays, we recommend allowing an additional hour after the expected completion of your exam before scheduling any other appointments.

## Sedation and pain management

ARA Diagnostic Imaging has qualified nurses and paramedics on staff to accommodate patients with claustrophobia or pain that may interfere with lying still for the required 25- to 45-minute scan time. When you are scheduling your PET/CT appointment, please inform the PET/CT coordinator if you feel you may need sedation or pain management. The PET/CT coordinator will then make arrangements in advance for a nurse or paramedic to assist you.

## Special arrangements for imaging children

Children have higher metabolism in their body fat than adults, and this can result in errors on the scan. These errors can be reduced using several methods, including sedation. For this reason, sedation is strongly

recommended for children of all ages, and it is provided by our highly trained technologists or paramedics for the exam. Parents, please contact our staff on the day prior to your child's study for further instructions.

## Intravenous contrast

Your physician may ask that intravenous contrast be used for the CT portion of your study. This is used to highlight organs such as the liver or lymph nodes. When intravenous contrast is injected there may be a feeling of warmth; this passes quickly.

**Note:** Some people are allergic to intravenous contrast. If you know you are allergic, please notify the PET/CT scheduling coordinator at the time you set your appointment. That way, medication can be prescribed to prevent the allergic reaction. A minimum of one day's notice prior to your exam is required for a prescription to be called in to your pharmacy.

## After the exam

You may resume your regular diet and activity immediately following the study. Drink additional fluids for several hours after the study to help flush out any residual FDG.

A radiologist who specializes in the interpretation of PET/CT scans will read the study, and the results will be sent to your referring physician.

## PET/CT applications

**Oncology** - PET/CT allows for early detection of cancer, accurate staging of cancer, and evaluation of the effectiveness of cancer therapy.

**Neurology** - PET/CT can assess patients with various forms of dementia, such as Alzheimer's disease, Parkinson's disease, and Huntington's disease. PET/CT can also localize areas of the brain causing epileptic seizures to help guide surgical treatment.

**Cardiology** - PET/CT can help diagnose myocardial viability.