Definition
Positron emission tomography (PET) scans make pictures that show activity in body tissues. Computed tomography (CT) scan uses a computer to take many x-rays of the body. A PET/CT scan is a test that combines PET and CT scans to take pictures of the body.

PET/CT scans can be done on any part of the body.

Reasons for Test
PET/CT scans give us details about the structure of a body part and how it is working.

The scans can:
• Diagnose cancer early
• Show a tumor and the function of the cells that make up the tumor. This can help tell cancerous and noncancerous growths apart.
• Show if cancer has spread to other parts of the body

Brain, endocrine, and heart disorders are also studied using PET/CT scans.

Possible Complications
Problems from the procedure are rare, but all procedures have some risk. Your doctor will review potential problems, like:

• Allergic reactions to the chemicals used
• Kidney damage from the contrast chemical used
• Long-term problems from the radiation used

What to Expect

Prior to Test

Bring a list of the medicines you take to the test. If you have diabetes, ask your doctor if you should take your medicine before the test. An abnormal blood glucose level may cause problems with the test results.

Let your doctor know if you have kidney problems. The doctor may need to take steps to keep your kidneys safe during the test.

If you are breastfeeding, talk to your doctor before you go for your test. Your doctor may tell you to pump breast milk to use until the contrast materials leave your body.

Several hours before the test you may need to:

• Stop eating after a certain time
• Avoid drinks with high sugar and calorie content
• Drink plenty of water

At the test center, the staff will ask if you have or ever have had:

• A reaction to contrast materials or iodine
• Allergies to contrast materials, iodine, or seafood
• Asthma
• Fear of small spaces or anxiety

Description of Test

If you are worried about being in small spaces, you may be given a medicine to help you relax. An IV will be placed in your arm. A small amount of the tracer substance (used for the PET part of the scan) will be injected through the IV. In some cases, the tracer substance will be breathed in or swallowed instead. You will wait about 60 minutes after this injection. You will be positioned on a table. More contrast material (used for the CT part of the scan) will be given. The table will move slowly through a doughnut-shaped ring. You will need to lie still for about 35 minutes while the pictures are taken.

After Test
You should drink extra water throughout the day after your scan. This helps to flush the tracer materials from your body. If you had medicine to help you relax, you will need to have someone drive you home. You can expect to return to your normal activities the same day as your test.

**How Long Will It Take?**

The scan takes about 2 hours. The injection is given about an hour before the scan. The scan itself takes about 35 minutes.

**Will It Hurt?**

You may have discomfort when the IV is put in. There should be no other pain. You may feel some flushing when the tracer material is injected.

**Results**

Based on the results, your doctor will decide if more tests or treatments are needed.

**Call Your Doctor**

Call your doctor if you have:

- Signs of allergic reaction, such as flushing, hives, and itching
- Swollen or itchy eyes
- Problems breathing or a feeling of tightness in your throat
- Nausea
- Less urine than normal

If you think you have an emergency, call for emergency medical services right away.

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