

PET/CT Cardiac Viability Scan

For patients with normal blood sugar

This handout explains a PET/CT cardiac viability scan for patients with normal blood sugar.

What is a cardiac viability scan?

A *cardiac viability scan* is done to assess how much heart muscle has been damaged by a heart attack or heart disease. It checks:

- Blood supply to your heart
- How well your heart muscle works (*viability*)

The scan uses a radioactive *tracer* to help your doctor see details of your heart. We can use this scan to find out if you need *angiography* (an X-ray of the heart that looks more closely at your blood vessels), heart bypass surgery, a heart transplant, or other procedures.

What are PET and CT?

PET and CT are 2 types of nuclear medicine scans.

- PET stands for *positron emission tomography*. This type of scan shows where the tracer has collected in your body.
- CT stands for *computed tomography*. This type of scan provides detailed pictures of your heart tissues and structures.

Together, these 2 scans will provide the images your doctor needs to fully assess your heart muscle.



A technologist will help you get in position for your PET/CT scan.

Where will the scan be done?

Your scan will be done in the Nuclear Medicine Clinic at UW Medical Center (UWMC) - Montlake campus. The clinic is on the 2nd floor of the hospital. To find us:

- Enter the hospital through the main entrance. You will be on the main level (3rd floor).

- Turn right and go down the main hall. When the hall ends, you will see the Pacific elevators on your left.
- Take the Pacific elevators down to the 2nd floor.
- Follow the signs to Radiology. Check in at the Radiology front desk.

How do I prepare?

- Call the Nuclear Medicine Clinic at 206.598.4240 if it is hard to place an *intravenous* (IV) line in your arm.
- You will need to lie flat on your back for up to 20 minutes at a time so that we can take clear pictures of your heart. If you feel that you cannot lie flat on your back for up to 20 minutes, please tell your healthcare provider.
- *If you were assigned female at birth:* Tell your provider if you are pregnant or breastfeeding, or if there is any chance you could be pregnant.
- **Plan to be at the hospital for up to 4 hours for this scan.**

Day of Your Scan

- Do **not** eat or drink for 6 hours before your appointment. It is OK to drink water.
- You may take all your normal medicines.
- **Please arrive on time.** The exact timing of this scan is very important. If you are more than 20 minutes late, we may need to reschedule your scan.
- Wear comfortable clothes.

What can I expect?

- When you arrive at the clinic, a technologist will talk with you about what you can expect during your scan.
- *If you were assigned female at birth:* Tell the technologist if there is any chance you could be pregnant.
- We will:
 - Start an *intravenous* (IV) line in each of your arms. We will take a sample of your blood and send it to the lab to check your potassium levels.
 - Test your blood sugar many times during this test. To do this, we will make a quick needle prick to one of your fingers each time.

- Ask you to drink a sweet orange drink call Glucola to raise your blood sugar levels.
- Ask you to lie on a table inside the PET/CT camera.
- Inject your IV line with a small amount of tracer called Rubidium-82. This tracer will allow us to take pictures of the blood flow your heart is receiving. It is very rare to have allergic reactions to this tracer.
- The technologist will use the PET/CT scanner to take pictures of your heart. This will take about 15 minutes.
- After these first images are taken, we will test your blood sugar again. A nurse will adjust your blood sugar level as needed to reach a stable level less than 140 mg/dL. This may involve injecting insulin into your IV line. We will test your blood sugar many times.
- Once your blood sugar reaches a stable level less than 140mg/dL, we will inject your IV line with another tracer called F-18 FDG. It is very rare to have allergic reactions to this tracer.
- We will take more images of your heart 1 hour later. These images will take about 20 minutes.
- We will test your blood sugar again before you leave.

Who reads the scan and when will I get the results?

Your PET/CT scan will be read by a nuclear medicine doctor or nuclear cardiologist, or both. The provider who referred you for this scan will receive your results within 3 days. Your provider will give you your scan results.

You and your provider will then decide the next step, such as treatment for a problem, as needed.

You may also read your results on your MyChart page. If you need copies of your images on disc, call 206.598.6206.

Questions?

Your questions are important. Call your doctor or healthcare provider if you have questions or concerns.

- UWMC Nuclear
Medicine/Imaging
Services: 206.598.6200
- Harborview Imaging
Services: 206.744.3105
- Harborview Nuclear
Medicine: 206.744.4473