

Cardiac PYP Scan

How to prepare and what to expect

This handout explains what a cardiac PYP scan is, how it works, what to expect, and how to get your results.

What is a cardiac PYP scan?

Cardiac means related to the heart. PYP stands for *pyrophosphate*. A *cardiac PYP scan* uses a radioactive form of PYP called *Tc99m-PYP*.

Why is the scan done?

This scan can be used to find out if you have a rare disease called *cardiac amyloidosis* (am-uh-loi-DO-sis). It can also tell:

- What form of amyloidosis you have. There are 2 kinds:
 - *Amyloid light chain (AL)*
 - *Transthyretin-related cardiac amyloidosis (ATTR)*
- How severe the disease is.
- How your body responds to treatment.

What is cardiac amyloidosis?

Cardiac amyloidosis occurs when a protein called *amyloid* builds up in your heart. Amyloid is produced in your bone marrow. It can be deposited in any tissue or organ. If you have this disease, it can cause heart failure.

Why do I need this scan?

Treatment is different for each form of the disease, so your doctor needs to know whether you have AL or ATTR.



You will lie inside a SPECT/CT camera for this scan.

The results of your cardiac PYP scan will help your doctor know what treatment will work best for you.

How does it work?

We will inject a small dose of Tc99m-PYP into an arm vein. This is called an *intravenous* (IV) injection. The radioactive *tracer* will:

- Give off gamma rays as it moves through your body
- Gather in the areas where there is ATTR

The gamma rays are picked up by a special SPECT/CT camera. This camera takes 2 types of pictures:

- The SPECT (*single-photon emission computed tomography*) scan shows where the tracer has collected in your body.
- The CT (*computed tomography*) scan creates pictures of your body structures.

Together, the SPECT and CT images provide 3-dimensional (3D) images of your heart structures. These images help your doctor diagnose and monitor your condition.

How do I prepare?

- You must not have had a heart attack within 6 days before this scan.
- While the SPECT/CT camera takes pictures, you must lie very still on a table inside the camera. Before the scan, tell your doctor if you:
 - Are *claustrophobic* (feel anxious in closed spaces)
 - Cannot lie still for 30 minutes
- If needed, you can take a mild *sedative* (medicine to make you relax) for this scan. If you want to use a sedative:
 - You may use Ativan (lorazepam) or Valium (diazepam).
 - You must fill the prescription yourself.
 - Do **not** take the sedative at home. **Bring it with you on the day of your scan.** The technologist will tell you when to take it.
- *Women:* Tell the scheduler if you are pregnant or breastfeeding, or think you may be pregnant.

How is the scan done?

- The technologist will inject the Tc99m-PYP into your arm vein.
- About 1 hour later, we will ask you to lie on your back on an exam table. The technologist will help make you comfortable.
- The table will move inside the SPECT/CT camera.
- You must lie very still, with your arms above your head, while the camera hovers over your chest. If you move, the pictures will be blurry and may have to be repeated.
- You will be inside the camera for about 30 minutes.

What will I feel during the scan?

- You may feel some minor discomfort from the IV.
- Lying still on the exam table may be hard for some people.

What happens to the radioactive tracer?

Most of the Tc99m-PYP passes out of your body in your urine or stool. The rest simply goes away over time.

Who interprets the results and how do I get them?

A nuclear medicine doctor will review your images, prepare a report, and talk with your provider about the results. Your provider will talk with you about the results of your scan.

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

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

Questions?

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

**UW Medical Center
Imaging Services:**
206.598.6200

**Harborview Medical
Center Imaging Services:**
206.744.3105