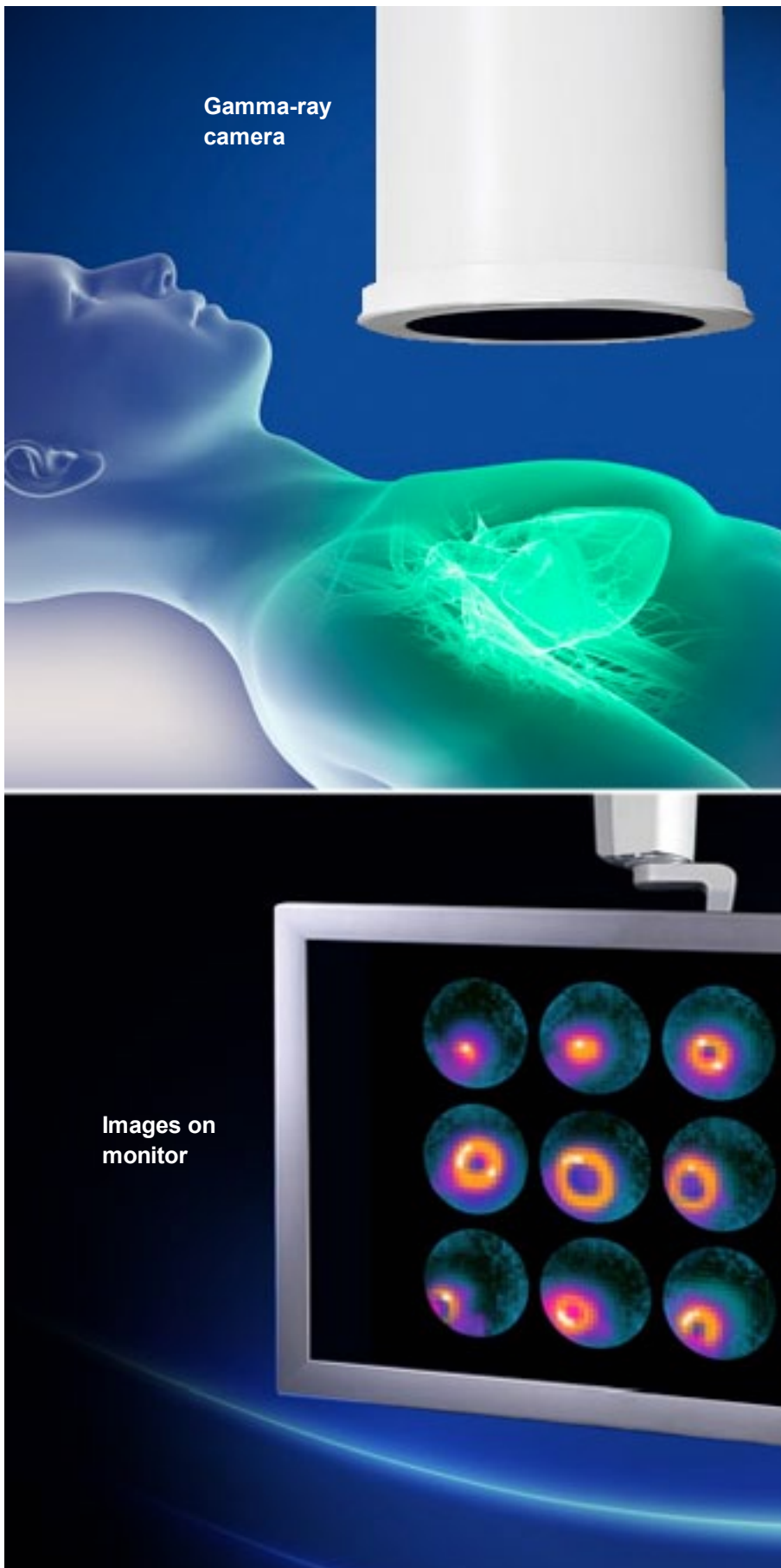


## Nuclear Stress Testing



### Overview

This diagnostic procedure creates images of blood flow through the heart while the heart is at rest and while the heart is beating quickly from physical exertion. It can reveal the structural and functional health of the heart, and can help in the diagnosis of coronary artery disease or other heart conditions.

### Preparation

In preparation for the test, adhesive electrodes are placed on the patient's chest, legs and arms. The electrodes are connected to an electrocardiogram machine, which will detect and record the electrical signals of the heartbeat.

### Raising the Heart Rate

As the test begins, the patient's heart rate is gradually increased. The patient may walk on a treadmill or ride a stationary bike to raise the heart rate, or the physician may administer an injection of drugs to stimulate the heart. Once the heart is brought to a target rate, the patient receives an injection of a radioactive substance into the bloodstream.

### Examining the Active Heart

The patient is transferred to an examination table, and the patient's chest is scanned with a gamma-ray camera. This camera detects the radioactive substance as it accumulates in the heart tissue, and images are displayed on a monitor. The images can reveal the size of the heart's chambers and how well the heart is performing. They can also show areas of heart muscle that are not receiving enough blood because of a blockage.

### Examining the Heart at Rest

After the exercise portion of the exam is complete, the patient is allowed to relax for a period of time so the heart can return to its resting rate. The injection and scan are then repeated, allowing the physician to compare the images of the active heart to the heart at rest.

### End of Procedure

After the second scan is complete, the patient is allowed to leave and resume normal activities. The radioactive substance is not harmful to the patient or to other people, and will be eliminated from the body naturally.