



MUGA Scan (nuclear)

Preparation Needed:

Cancellations require 24-hour advance notice.

Brief Description of Test:

The *MUGA scan* (Multiple Gated Acquisition scan) is a noninvasive tool for assessing the function of the heart. The MUGA scan produces a moving image of the beating heart, and from this image several important features can be determined about the health of the cardiac ventricles (the heart's major pumping chambers).

A MUGA scan is performed by attaching a radioactive substance to red blood cells, and then injecting the red blood cells into the patient's bloodstream. The patient is subsequently placed under a special camera (a gamma camera), which is able to detect the labeled red cells. Since the red blood cells (including those that are radio-labeled) fill the cardiac chambers, the image produced by the gamma camera is essentially an outline of those chambers. With some fancy computer manipulation, the final product is a movie of the heart beating.

Why Am I Taking This Test?

Several important features of cardiac function can be measured from the MUGA scan. If a patient has had a heart attack, or any other disease that affects the heart muscle, the MUGA scan can localize the portion of the heart muscle that has sustained damage, and assess the degrees of damage. But more importantly, the MUGA scan gives an accurate and reproducible means of measuring and monitoring the ejection fraction of the cardiac ventricles. The left ventricle ejection fraction (LVEF) is an excellent, and the most commonly used, measure of overall cardiac function. The ejection fraction is simply the proportion of blood that is expelled from the ventricle with each heart beat. The MUGA scan is ideal for detection subtle changes in a patient's cardiac function over time.

Please call our office with additional questions.