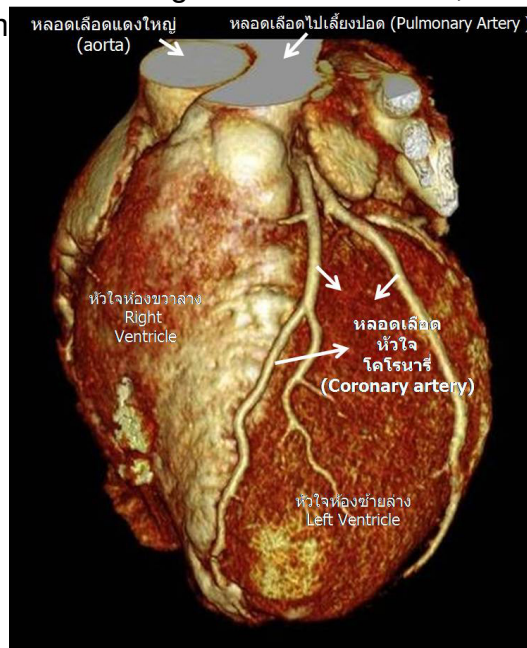


What is the Cardiac CT?

Cardiac computed tomography (cardiac CT), is a painless test that uses an x-ray machine to take clear, detailed pictures of the heart. During a cardiac CT scan, an x-ray machine will move around your body in a circle. The m



achine will take a picture of each part of your heart. A computer will put the pictures together to make a three-dimensional (3D) picture of the whole heart. Sometimes an iodine-based dye (contrast dye) is injected into one of your veins during the scan. The contrast dye travels through your blood vessels, which helps highlight them on the x-ray pictures. Since an x-ray machine is used, cardiac CT involves radiation. Although the amount of radiation used is considered small. The new cardiac CT methods are available that reduce the amount of radiation used for this test.

The following 3 parameters are studied

1. Calcium scoring
2. Coronary artery assessment

3. Functional assessment (wall motion and ejection fraction)

Indications for cardiac CT

The applications of cardiac CT include the following:

- o Detection of coronary artery diseases such as coronary artery occlusion, anomaly or aneurysms

- o Characterization of cardiac mass/tumor

- o Diagnosis of pericardial diseases

- o Diagnosis of congenital heart disease

- o Coronary vein mapping

- o Characterization of native and prosthetic cardiac valves.

- o Evaluation coronary artery post-bypass surgery to assess the status of bypass grafts.

Contraindication for cardiac CT

- o Chronic kidney disease: Iodinated intravenous contrast is used and may worsen kidney function. For all diabetics and any patient 65 or older, the lab requires an evaluation of renal function (creatinine) within three months of performing the cardiac CT. Patients with renal insufficiency should be prescribed a renal-protective agent (e.g. intravenous normal saline).

- o Patient is currently in irregular or rapid heart rate particularly over 75 beats per minute

- o Patients allergic to iodinated intravenous contrast

- o Pregnancy

Are there any dangers of dye injection?

0.5% percent of patients may get nausea and redness of the skin. Though severe reactions are known, these are very rare and uncommon.

Cardiac computed tomography (cardiac CT)

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UpToDate provides fast, free, Cardiac CT information? The handbook for use on 12/25/11
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