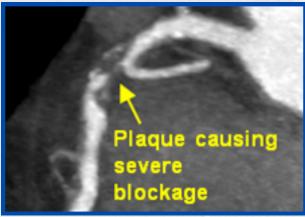
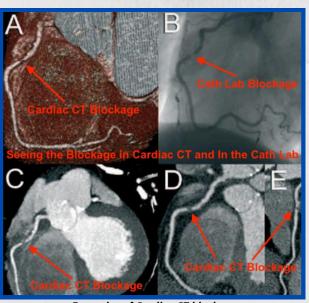
# What does a (Cardiac CT) Show?

(Coronary CT Angiogram)

Coronary CT angiogram shows the inside of the coronary arteries and detects whether plaque (a buildup of cells, debris, calcium, and cholesterol within the artery) is present, where plaques are found, and how much blockage is caused by each plaque.



Severe blockage in the right Coronary Artery on Cardiac CT



Examples of Cardiac CT blockage

## What are some common uses of the procedure?

Many physicians advocate the careful use of **CCTA** for patients who have:

- Suspected abnormal anatomy of the coronary arteries.
- Low or intermediate risk for coronary artery disease, including patients who have chest pain and normal, nondiagnostic or unclear lab and ECG results.
- Low to intermediate risk atypical chest pain in the emergency department.
- · Non-acute chest pain.
- · New or worsening symptoms with a previous normal stress test result.
- Unclear or inconclusive stress test results.
- New onset heart failure with reduced heart function and low or medium risk for coronary artery disease.
- Intermediate risk of coronary artery disease before non-coronary cardiac surgery.
- · Coronary artery bypass grafts.

## Are there any risks with having a CCTA? What is a CCTA?

It is best to speak to your consultant cardiologist if you are pregnant. In addition, contrast X-ray dye is given that can affect the kidneys and in rare cases can cause an allergic reaction.

# Should you have a **CCTA** done?



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Coronary computed tomography angiography (CCTA) is a non invasive 3D imaging test that identifies plaque and blockages or narrowing (stenosis) of the coronary arteries. It might be done to diagnose the cause of chest pain or other symptoms.

### What are the benefits?

- CCTA is not invasive. An alternative test, cardiac catheterization with a coronary angiogram, is invasive and has more complications and has a longer recovery time. A major advantage of CT is that it can view bone, soft tissue, and blood vessels all at the same time. It is therefore suitable to identify other reasons for discomfort such as an injury to the aorta or a blood clot in the lungs. CT scanning provides detailed images of many types of tissue and are fast and simple exams.
- CT has also been shown to be costeffective for a wide range of medical problems.



**3D Heart Model** 

# How is the procedure performed?

The nurse will give you a gown to wear during the procedure and will clean three small areas of your chest and place electrodes (small, sticky discs) on these areas. Men may require a small area of hair to be shaved on their chest to help the electrodes stick. The electrodes are attached to an electrocardiograph (ECG) monitor, which shows your heart's electrical activity during the test. An IV will be started to administer contrast material during your procedure. You may be given a beta blocker medication through the same IV line or by mouth to help slow your heart rate to improve image quality. Nitroglycerin, to dilate and improve visualization of the coronary arteries, may also be administered as a tablet, a spray underneath your tongue or a patch on your skin. Any motion, including breathing and body movements, can lead to artifacts on the images and cause a loss of image quality. Breathing during the scan creates blurring on the images and can result in an inconclusive exam. The CCTA scan usually takes about 30 minutes if the heart rate is slow and steady but may take longer if the baseline heart rate is fast, and beta-blocker is given to slow it down. If the beta-blocker is given by mouth, it will require at least one hour to take effect. If the medication is injected into a vein (intravenously), it may still require multiple doses and up to 20 minutes to reach the slower heart rate.

# Make an appointment today!

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