

**ABOUT RHODE ISLAND  
MEDICAL IMAGING:**

For over 75 years Rhode Island Medical Imaging (RIMI) has provided world class care driving innovation, research and educational excellence. RIMI has a network of 12 private state-of-the-art medical diagnostic imaging facilities staffed by over 80 board certified radiologists with broad-based experience and subspecialty training. RIMI radiologists also perform and interpret imaging for nine Rhode Island hospitals and one Massachusetts hospital.

RIMI is accredited by the American College of Radiology (ACR) including being the first outpatient Diagnostic Imaging Center of Excellence in Rhode Island. RIMI is an ACR Breast Imaging Center of Excellence with two flagship comprehensive centers in Johnston and East Greenwich. RIMI is also a designated ACR Lung Cancer Screening Center. Most of RIMI's radiologists are also faculty members at The Warren Alpert Medical School of Brown University.

For more information, please visit our website at: [www.rimirad.com](http://www.rimirad.com).



**MAKE AN APPOINTMENT**

To make an appointment for a Coronary/Cardiac CT Angiography (CCTA) exam please call Rhode Island Medical Imaging at **401.432.2400**.

Date: \_\_\_\_\_

Time: \_\_\_\_\_



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# Coronary/ Cardiac CT Angiography (CCTA)



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### WHAT IS CORONARY/CARDIAC CTA?

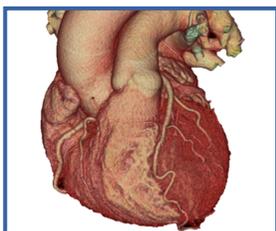
Coronary/Cardiac CT Angiography (CCTA) is an imaging study used to identify blockages of the coronary arteries which are the blood vessels that supply the heart. These blockages - also called stenoses - are caused by atherosclerotic plaque that builds up in the wall of the arteries. Over time they can reduce or completely block blood flow, which in turn can cause serious health complications.

The CCTA test uses a computed tomography (CT) scanner and an intravenous (IV) injection of contrast, takes just a few minutes to perform, and is highly accurate for detecting blockages.

### AM I A GOOD CANDIDATE FOR CCTA?

It is important to talk about your risk factors with your health care professional. You may be referred for a CCTA if you have:

- Stable chest pain with low or intermediate risk of coronary artery disease (CAD).
- New or worsening symptoms (e.g. chest pain or shortness of breath) with a previously normal stress test result.
- Had an unclear or inconclusive stress test.
- New onset heart failure with reduced heart function.



**3D CCTA - Figure 1**  
CCTA 3D reconstruction of the heart.

### THE TEST

A good quality CCTA examination requires that your heart rate is < 65-70 beats per minute. In order to help ensure a low heart rate at the time of the study, your doctor or healthcare provider may prescribe you a small dose of oral medication to be taken one hour prior to arrival at our facility.

Once you arrive to our office, a RIMI technologist will take you to the changing area to put on a gown and explain the procedure. An IV will be started in your arm and your heart rate and blood pressure will be measured. Based on these parameters, you may be given additional small doses of intravenous medication. Once your heart rate is satisfactory, we will bring you into the CT suite and have you lie face-up on the table. We will place a small nitroglycerin tablet below your tongue immediately before the CCTA exam which helps to dilate the coronary arteries.

The CT table will move slowly and the images will be taken as an IV contrast agent (“dye”) is administered. You may be asked to hold your breath at times and to lie as still as possible.

Even though the technologist will be in an adjacent room, they will be able to see you through a window and speak with you as well.

The entire test typically takes less than 10-15 minutes. Once completed, we will briefly monitor your heart rate and blood pressure. You will then be able to leave our facility.

### WHAT THE FINDINGS MEAN

A RIMI doctor with subspecialty training will analyze and interpret the images to identify the presence of coronary artery disease and the severity of any blockages that may be present. The radiologist will generate a report of the results that will be sent back to your doctor or healthcare provider.

For patients with stable chest pain, a normal or near normal examination essentially rules out coronary disease as a cause of the symptoms.

### Normal CCTA - Figure 2

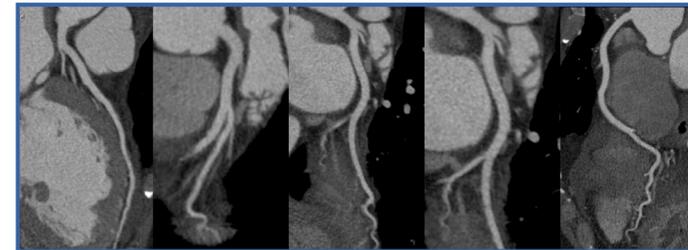


Figure 2 shows normal coronary arteries by CCTA. Figure 3 shows a severe left main coronary blockage by CCTA (arrow) that was confirmed at angiography (the bright dots are calcification in the wall). The patient went on to have cardiac bypass surgery.



**Abnormal CCTA - Figure 3**