

# Calcium Scoring

## What is Calcium scoring?

Coronary heart disease remains a leading cause of death and morbidity in the western world. Despite our best efforts, many patients suffer heart attacks without any warning, and it is thought that in over half of cases there is no prior coronary stenosis or narrowing that could even be detected by exercise or stress testing. In the majority of those affected however, there are microscopic deposits of coronary calcification around the coronary arteries that indicates the presence of coronary plaque. Coronary calcification can **only** be detected in life using a very fast CT that has been gated to acquire at the correct point of the cardiac cycle based on the ECG.



The Coronary calcification index is the most accurate predictor of heart disease developing in the following years.

It adds considerably to knowledge about your personal situation following the stress ECG because it allows detection of coronary plaque that is NOT causing narrowing, but may cause occlusion in the future.

The test also examines the lung field in the area around the heart- and can thus sometimes detect early lung cancer.



These features make the Coronary Calcium score one of the most powerful predictors and useful screening tests for coronary artery disease in use today

Calcium scoring requires no injections and is painless. It is simpler, less expensive and uses less radiation than Cardiac CT Angiography- where an Iodine based dye is also given through a cannula in your vein.

## What are the common uses of the procedure?

A Coronary Calcium score is only used to predict future coronary events. It has also has some use in evaluating possible angina.



2 & 5 Huxley Road, Guildford, Surrey GU2 7RE  
t: 01483 467100 f: 01483 467120 www.scvc.co.uk

## How should I prepare for the examination?

The Calcium Score takes only 10 minutes to acquire and is best done after avoiding all stimulants and drugs (> 6 hours) that affect the heart rate- including Coffee, Tea and Caffeine drinks such as Red Bull and Cola.

Its best to wear suitable clothing - since you will be asked to strip to the waist to allow the electrodes to be attached across the chest. Avoid applying skin creams and oils to your skin on the day of the test since these will reduce electrical conductivity and may hamper the signal.

## What will I experience during the examination

The Radiographer will call you in to the CT scanner and check that there are no contraindications to having an X-Ray (such as Pregnancy) . You will then be connected to 3 ECG electrodes, and asked to recline on the CT table, which will then be moved into position inside the large doughnut shaped CT scanner. After one breath hold, the scan is complete and you can go home. The scan is then analysed by an experienced Radiologist and then passed to our Cardiologist.

## Are there risks involved?

A Calcium score requires very small amounts of Radiation exposure. It is recognized that provided the test is of value, the risk from radiation is easily justified in terms of the value of detecting early heart disease. It should however be realised that Calcium scoring need not be done annually or in most people under the age of 40 years..

## How will I get the results

Although the Calcium Score will be available minutes after the test, its main value is how this is interpreted by the Cardiologist *in context* of other tests and symptoms. For example small amounts of Coronary calcification associated with ST changes on a treadmill can signify critical coronary disease, and heavy coronary calcification despite an apparently normal stress ECG to stage one also need further investigation, so the true power of the investigation can only be realized when interpreted by an experienced Cardiologist who has been made aware of your history, any medical conditions, medication and whether you have symptoms.

Once these data are collected and presented to the Cardiologist, a report will be issued - and sent to your GP. If you have requested it, a copy can also be sent to you electronically, so that you or your physician can view it any time in the future. .

**HeartScreen Platinum**  **consists of a Nurse questionnaire, a 12 lead electrocardiogram, a screening Echocardiogram, a stress ECG, a Coronary calcium score and a Cardiologist report- all of which will be sent to the patient- since this examination can be requested without a GP referral**