



## MEDICAL POLICY

Date Reviewed: 02/25/00, 03/24/00, 09/28/01, 06/17/03, 11/02/05, 04/20/07, 02/15/08, 01/23/09, 02/05/10, 01/14/11

Subject: Coronary Calcium Screening

Description: The use of a chest CT (computed tomography) to evaluate the presence of calcium in the coronary arteries and quantify the degree of atherosclerosis.

Indications of Coverage:

None

Limitations of coverage:

Review contract and endorsements for exclusions and prior authorization or benefit requirements.

CT scanning for coronary artery calcium screening is considered investigational as there is insufficient peer reviewed scientific literature documenting the superior effectiveness of this scan over standard diagnostic techniques.

Documentation required:

Office notes

Radiology report

Rationale: CT scans can identify calcium in the coronary arteries and electron beam computed tomography (EBCT) is better at detecting coronary calcium than other types of CT. However, whether coronary artery calcium is a predictor of adverse cardiac events has not been established. Studies have shown that calcium does not necessarily collect at the sites of greatest stenosis (narrowing) and that many plaques causing stenosis are not calcified, and would therefore not be visible to CT scanning. Additionally, merely identifying areas of increased calcification does not identify the lesions most likely to be symptomatic.

Neither the American Heart Association, the American College of Cardiology, the American College of Radiology, or the US Preventive Services Task Force recommend the use of CT scanning for evaluation of coronary artery disease. Of significant concern is that a non-calcified plaque may go unidentified, and therefore place the individual at increased risk for a cardiac event. Studies have shown that EBCT provides no additional value in determining cardiac risk over standard risk assessment tools, such as the Framingham risk model. Other studies have shown that there is significant variability in the measures of coronary artery calcium, and therefore using CT scans to monitor the progression of disease is difficult.

References: Detrano RC, Wong ND, Doherty TM, Shavelle RM, Tang W, Ginzton LE, Budoff MJ, Narahara KA. Coronary calcium does not accurately predict near-term future coronary events in high-risk adults. *Circulation*. 1999; 99(20):2633-2638.

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*Approved by the Medical Director*