

Abstract

Myocardial Infarctions (MI) occur due to blocked blood flow to the heart, causing damage or death of heart muscle tissue. Men experience MI's more frequently than women and often show classic symptoms such as chest pain, while women may have less typical signs, such as neck or jaw discomfort, which can lead to delayed medical attention. The Coronary Artery Calcium Score (CACs) is a non-invasive computed tomography exam that measures calcium deposits in the coronary arteries, helping assess the risk of heart disease in individuals with moderate cardiovascular risk. The most common scoring methods include the Agatston Score, Volume Score, and the Mass Score. The Agatston Score is used most frequently because it evaluates both the density and area of calcified plaques. The Volume Score offers reduced sensitivity to noise but with the chance of this overestimating the calcification. The final method, Mass Scoring, considers the amount of calcification along with water and x-ray absorption to try and calculate the score based off mineral mass. Early detection of coronary calcium can support heart disease prevention and improve patients' outcomes by promoting timely diagnosis and treatment.

Keywords: myocardial infarction, prevention, computed tomography, coronary artery calcium score