

## **Imaging of the vulnerable plaque: new modalities.**

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Atherosclerosis is currently considered to be an inflammatory and thus a systemic disease affecting multiple arterial beds. Recent advances in intravascular imaging have shown multiple sites of atherosclerotic changes in coronary arterial wall. Traditionally, angiography has been used to detect and characterize atherosclerotic plaque in coronary arteries, but recently it has been found that plaques that are not significantly stenotic on angiography cause acute myocardial infarction. As a result, newer imaging and diagnostic modalities are required to predict which of the atherosclerotic plaque are prone to rupture and hence distinguish "stable" and "vulnerable" plaques. Intravascular ultrasound can identify multiple plaques that are not seen on coronary angiography. **Thermography has shown much promise and is based on the concept that the inflammatory plaques are associated with increased temperature and can also identify "vulnerable patients."** Of all these newer modalities, magnetic resonance imaging has shown the most promise in identification and characterization of vulnerable plaques. In this article, we review the newer coronary artery imaging modalities and discuss the limitations of traditional coronary angiography.