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Letter to the Editor regarding: *Primary coronary microvascular dysfunction: clinical presentation, pathophysiology, and management* Circulation 2010;121:2317–2325

William F. Fearon, MD

Division of Cardiovascular Medicine, Stanford University Medical Center, Stanford, CA

To the editor

I read with interest the excellent Contemporary Review in Cardiovascular Medicine on primary coronary microvascular dysfunction by Lanza and Crea.[1] In their review, the authors discuss the diagnosis of coronary microvascular dysfunction and state that invasive assessment of the microvasculature at the time of coronary angiography is complex, time-consuming, and adds unjustified risk. Emerging data suggest that the measurement of fractional flow reserve (FFR), coronary flow reserve (CFR) and the index of microcirculatory resistance (IMR) with a pressure or flow sensor tipped coronary wire can be performed easily, safely and quickly and can provide important diagnostic and prognostic information, which may not be obtained noninvasively.[2,3] By interrogating the epicardial coronary vessels with FFR, it is possible to identify and to treat appropriately an important subset of patients with diffuse epicardial atherosclerosis who have angiographically normal appearing vessels but are often mistakenly given the diagnosis of coronary microvascular dysfunction.[4] Simultaneous determination of a newer index, IMR, assesses the status of the microvasculature independent of both epicardial coronary artery stenosis and of changes in hemodynamics, something that is not be possible with measurement of coronary flow reserve, whether performed invasively or noninvasively.[5] Thus, using a coronary wire-based method, patients with chest pain and angiographically normal appearing coronary arteries can receive a safe, efficient and accurate diagnosis.

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Correspondence: William F. Fearon, MD, 300 Pasteur Drive, H2103, Stanford University Medical Center, Stanford, CA 94305, Phone: 650 725-2621, Fax: 650 725-6766, wfearon@stanford.edu.

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