

# CT perfusion imaging better IDs CAD than SPECT

August 11 2014

---



(HealthDay)—Computed tomographic (CT) perfusion imaging shows higher overall diagnostic performance than single photon emission computed tomography (SPECT) perfusion imaging for the diagnosis of coronary artery disease (CAD), according to a study published in the August issue of *Radiology*.

Richard T. George, M.D., from the Johns Hopkins University School of Medicine in Baltimore, and colleagues conducted rest and adenosine stress CT perfusion imaging and either exercise or pharmacologic stress SPECT before and within 60 days of coronary angiography in 381 patients (November 2009 to July 2011).

The researchers found that CAD was diagnosed in 60 percent of the patients. The [diagnosis](#) of CAD (stenosis  $\geq 50$  percent) had a per-patient

sensitivity and specificity of 88 and 55 percent, respectively, for CT perfusion imaging and 62 and 67 percent, respectively, for SPECT. Area under the receiver operating characteristic curve ( $A_z$ ) values were 0.78 and 0.69 ( $P = 0.001$ ). For single- and multi-vessel CAD, the sensitivity of CT perfusion imaging was higher than that of SPECT. Sensitivities for left main, three-vessel, two-vessel, and one-vessel disease were 92, 92, 89, and 83 percent, respectively, for CT perfusion imaging and 75, 79, 68, and 41 percent, respectively, for SPECT.

"The overall performance of myocardial CT perfusion imaging in the diagnosis of anatomic CAD (stenosis  $\geq 50$  percent), as demonstrated with the  $A_z$ , was higher than that of SPECT and was driven in part by the higher sensitivity for left main and multi-vessel disease," the authors write.

Several authors disclosed financial ties to the medical device industry.

**More information:** [Abstract](#)  
[Full Text \(subscription or payment may be required\)](#)

Copyright © 2014 [HealthDay](#). All rights reserved.

Citation: CT perfusion imaging better IDs CAD than SPECT (2014, August 11) retrieved 3 May 2024 from <https://medicalxpress.com/news/2014-08-ct-perfusion-imaging-ids-cad.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.
---