

# MPI SPECT Screening in Diabetes Unjustified

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BOSTON — Screening asymptomatic diabetes patients for myocardial ischemia using advanced imaging does not improve their 5-year prognosis for coronary events, compared with standard care, study results have shown.

In addition to this “unexpected” finding from the Detection of Ischemia in Asymptomatic Diabetics (DIAD) study, a surprisingly low rate of ischemia was uncovered by the screening protocol in this population of patients who are considered to be at high risk for coronary disease, Dr. Frans J. Wackers reported at the annual meeting of the American Society of Nuclear Cardiology.

Of 561 type 2 diabetes patients without symptomatic or previously diagnosed coronary artery disease who underwent

ally, the use of aspirin, statin drugs, and angiotensin-converting enzyme inhibitors increased significantly over the 5-year period, which probably explains why patients in both groups did so well, Dr. Wackers said.

With respect to the imaging findings in the screened population, patients with normal MPI results or with small MPI defects had 5-year cumulative cardiac event rates of 2.1% and 2.0%, respectively.

However, the cumulative cardiac event

rates among patients who had moderate to large MPI defects, as well as those found to have nonperfusion abnormalities such as ischemic changes on electrocardiogram, were significantly higher, at 12.3% and 6.8%, respectively, Dr. Wackers reported.

In addition to moderate/large MPI defects and nonperfusion abnormalities, the investigators found that predictors of cardiac events by Cox regression included male sex, peripheral vascular disease, cre-

atinine level, and abnormal heart rate response to standing.

The findings indicate that clinical events and significant inducible ischemia both identify higher-risk patients with type 2 diabetes, “but overall rates of cardiac events are equivalent whether or not patients undergo initial screening,” Dr. Wackers stated.

Dr. Wackers reported no financial conflicts of interest related to this presentation. ■



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DR. WACKERS

screening with stress adenosine myocardial perfusion imaging (MPI) as part of the study, “only 22% had inducible ischemia, which was far less than we expected,” said Dr. Wackers of Yale University, New Haven, Conn.

During a mean follow-up of 4.8 years, there was no difference in the rates of cardiac events between patients in the screening group and the 562 patients in the standard care control group, he said, noting that the cumulative rate of cardiac events for both groups was approximately 3%.

The goal of the DIAD study was to determine the prevalence of silent myocardial ischemia in adults with type 2 diabetes without evidence of coronary artery disease, as well as the cost-effectiveness of screening all diabetes patients for ischemia using MPI single-photon emission computed tomography (SPECT).

The multicenter study randomized 1,123 patients, aged 55-75 years, with a mean diabetes duration of 8.7 years to MPI SPECT screening or to standard care without screening. Subsequent diagnostic testing in both groups was performed at the discretion of patients’ primary caregivers, even among those patients identified as having silent myocardial ischemia.

“When we gave the results to the physicians, we did not recommend treatment or referral to cardiologists because we didn’t know if the results were [clinically relevant],” said Dr. Wackers.

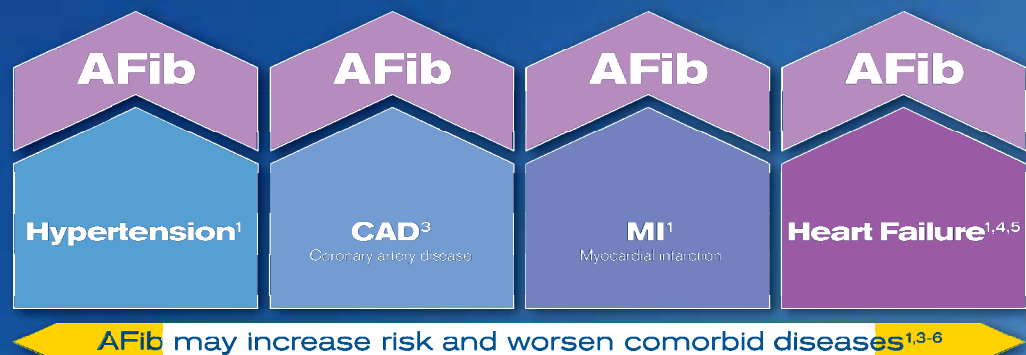
All of the patients in the study were called at 6-month intervals to assess their cardiovascular health and treatment status.

In both the screening and standard care groups, 7% of the patients underwent coronary artery bypass grafting surgery during the course of the study. Addition-

## A complex combination

# Atrial fibrillation may add complexity and risk across a range of cardiovascular diseases

AFib adds significant complexity and risk to a range of cardiovascular diseases<sup>1-6</sup>



There is a negative interaction between atrial fibrillation and cardiac conditions such as ischemic heart disease and structural heart disease. Mechanisms of hemodynamic instability contribute to burden on the heart as well as burden on the patient.

Atrial fibrillation is associated with increased morbidity and mortality:

- Heart failure<sup>1</sup>
- Left ventricular systolic dysfunction<sup>6</sup>
- Post-MI<sup>1</sup>

Atrial fibrillation can also have a powerful impact on quality of life (QoL). In the short-term, symptoms such as palpitations, impaired exercise tolerance, and fatigue can impact QoL and activities of daily living.<sup>7,8</sup> In the longer-term, patients with symptomatic atrial fibrillation show impairment similar to that following heart failure, angioplasty, and MI.<sup>9</sup> For many patients with atrial fibrillation, maintaining sinus rhythm is the primary goal of therapy.<sup>7</sup>