



**IMPACT-CARD Trial Data Presented at the 2013 European Society of Cardiology Congress
Demonstrate the Value of Corus[®] CAD as a Decision-Making Tool for Cardiologists**

Corus CAD Gene Expression Test Helped Cardiologists Determine Which Patients with Symptoms Suggestive of Obstructive Coronary Artery Disease (CAD) Did Not Require Further Cardiac Testing

PALO ALTO, Calif. – [September 3, 2013] – CardioDx, Inc., a molecular diagnostics company specializing in cardiovascular genomics, today announced the presentation of results from the Investigation of a Molecular Personalized Coronary Gene Expression Test on Cardiology Practice Pattern (IMPACT-CARD) trial demonstrating the clinical utility of [Corus[®] CAD](#) in helping cardiologists decide which patients with symptoms suggestive of obstructive CAD did not require further cardiac testing. The trial found that patients with a low Corus CAD score (≤ 15), indicating a low probability of obstructive CAD, were approximately 88 percent less likely to be referred for further cardiac testing. The IMPACT-CARD results were presented during an oral session at the 2013 European Society of Cardiology Congress in Amsterdam.

“These data reinforce the value of Corus CAD as a test to determine which symptomatic patients have a low probability of obstructive CAD and thus do not require further cardiac testing,” said John McPherson, M.D., Vice Chair for Education, Department of Medicine at Vanderbilt University Medical Center, in Nashville, Tenn. “Quickly, safely, and efficiently determining that obstructive CAD is not the cause of patients’ symptoms yields two key benefits: first, it allows clinicians to avoid unnecessary and costly cardiac tests, and second, it allows clinicians to turn their attention to other potential causes of their patients’ symptoms.”

The IMPACT-CARD Trial included 83 consecutively eligible, stable patients with no history of CAD who were referred to five cardiologists for evaluation of chest pain and related symptoms. The primary outcome was the proportion of patients referred for further cardiac testing after receiving a Corus CAD test. Additional cardiac testing was noted in 8 percent (4/52) of patients with a low Corus CAD gene expression score vs. 71 percent (22/31) of patients with an elevated (>15) Corus CAD gene expression score ($p = 0.04$ after controlling for age, gender, and other cardiovascular risk factors). No major adverse cardiovascular events were observed for any patient over a 6-month follow-up period in either the low or elevated Corus CAD patient-scoring groups.

“CardioDx developed Corus CAD to address a major clinical challenge that cardiologists and primary care clinicians have struggled with for years,” said Mark Monane, M.D., Chief Medical Officer, CardioDx. “The symptoms of obstructive CAD are often ambiguous, particularly in women, and current modalities for identifying which patients should undergo further cardiac testing and elective invasive coronary angiography have limitations, including the lower sensitivity of these tests in women due to biological differences. Corus CAD offers an alternative that is safe and convenient and can help accurately exclude the diagnosis of obstructive CAD, so clinicians can pursue other causes underlying their patients’ symptoms. It also helps patients avoid the risks associated with imaging radiation, imaging agents, and contrast solutions.”

A second Corus CAD study presented at the Congress, “A composite peripheral blood gene expression score has high sensitivity for obstructive coronary artery disease in a non-invasive imaging population and correlates with plaque burden and morphology by CT-angiography,” examined the relationship between Corus CAD and CT-angiography parameters. The study found that the Corus CAD gene expression score was most significantly correlated with non-calcified plaque, an important predictor of mortality¹ in at-risk patients.

About Obstructive Coronary Artery Disease

Coronary artery disease is a very common heart condition in the United States. One in six deaths among Americans is caused by CAD.² CAD can cause a narrowing or blockage of the coronary arteries (vessels to the heart that supply the heart with blood, oxygen, and nutrients), reducing blood flow to the heart muscle. This narrowing or blockage in the coronary arteries is often referred to as obstructive CAD, characterized by the presence of atherosclerosis, or plaque.

About Corus CAD

Corus CAD is a blood test that can safely, accurately and conveniently help primary care clinicians and cardiologists assess whether or not a stable nondiabetic patient’s symptoms are due to obstructive CAD, enabling many patients to avoid unnecessary noninvasive and invasive cardiac procedures and exposure to imaging-related radiation risks, imaging agent intolerance or complications with cardiac catheterization. The test involves a routine blood draw that is conveniently administered in the clinician’s office. The test is simple, convenient, and most importantly, is the only sex-specific test for the assessment of obstructive coronary artery disease and accounts for critical biological differences between men and women.

The test has been clinically validated in independent patient cohorts, including two prospective, multicenter U.S. studies, PREDICT and COMPASS.^{3,4} In the COMPASS study, Corus CAD outperformed MPI in diagnostic accuracy, demonstrating a significantly higher sensitivity (89 percent vs. 27 percent, $p < 0.001$) and a significantly higher negative predictive value (96 percent vs. 88 percent, $p < 0.001$) than MPI for assessing the presence of obstructive CAD. Over 40,000 Corus CAD test results have been commercially delivered to clinicians. Corus CAD is a covered benefit for the nearly 50 million Medicare beneficiaries in the U.S. CardioDx processes all Corus CAD test samples at its CLIA-certified and CAP-accredited clinical laboratory in Palo Alto, CA.

About CardioDx

CardioDx, Inc., a molecular diagnostics company specializing in cardiovascular genomics, is committed to developing clinically validated tests that empower clinicians to better tailor care to each individual patient. Strategically focused on coronary artery disease, cardiac arrhythmia and heart failure, CardioDx is committed to expanding patient access and improving healthcare quality and efficiency through the commercialization of genomic technologies. For more information, please visit www.cardiodx.com.

Forward-Looking Statements

This press release may contain forward-looking statements, including statements regarding the safety and efficacy of Corus CAD and beliefs regarding the need for and value of gene expression diagnostics. These statements relate to future events and involve known and unknown risks, uncertainties and other factors that could cause actual levels of activity, performance or achievement to differ materially from

those expressed or implied by these forward-looking statements. These statements reflect the views of CardioDx as of the date of this press release with respect to future events and, except as required by law, it undertakes no obligation to update or revise publicly any forward-looking statements, whether as a result of new information, future events or otherwise after the date of this press release.

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¹ Ahmadi N, Nabavi V, Hajsadeghi F, et al. Mortality Incidence of Patients with Non-obstructive Coronary Artery Disease Diagnosed by Computed Tomography Angiography. *Am J Cardiol*. 2011;107:10-16.

² Go AS, Mozaffarian D, Roger VL, et al. Heart Disease and Stroke Statistics--2013 Update: A Report From the American Heart Association. *Circulation*. 2013;127:e6-e245.

³ Rosenberg S, Elashoff MR, Beineke P, et al. Multicenter Validation of the Diagnostic Accuracy of a Blood-Based Gene Expression Test for Assessing Obstructive Coronary Artery Disease in Nondiabetic Patients. *Ann Intern Med*. 2010;153:425-434.

⁴ Thomas GS, Voros S, McPherson JA, et al. A Blood-Based Gene Expression Test for Obstructive Coronary Artery Disease Tested in Symptomatic Nondiabetic Patients Referred for Myocardial Perfusion Imaging: The COMPASS Study. *Circ Cardiovasc Genet*. 2013;6:154-162.