



## National Panel of Multidisciplinary Experts Addresses the Unmet Needs in Assessing Coronary Artery Disease in Women

*Proceedings of a Roundtable Discussion Sponsored by the Jefferson School of Population Health and Society for Women's Health Research Published in Population Health Management and the Journal of Women's Health*

*New Sex-Specific Diagnostic Options Should be Considered for Inclusion in Clinical Practice Guidelines*

**REDWOOD CITY, C.A.** – March 11, 2015 – CardioDx, Inc., a molecular diagnostics company specializing in cardiovascular genomics, today announced the publication of “The Diagnosis of CAD in Women: Addressing the Unmet Need,” a summary report synthesizing discussion from a roundtable meeting of experts organized by the Jefferson School of Population Health (JSPH) in partnership with the Society for Women's Health Research (SWHR). The peer-reviewed journal *Population Health Management* currently features the report on its Open Access website with full printed articles to appear in the April issues of *Population Health Management* as well as the *Journal of Women's Health*.

Coronary artery disease (CAD) has become a major public health challenge, affecting 6.4% of all adults—and 5.1% of women—in the United States annually.<sup>1,2</sup> Medical costs for CAD are projected to triple—from \$272.5 billion to \$818.1 billion between 2010 and 2030.<sup>1</sup> Results from multiple studies show a steady increase in the number of diagnostic tests ordered for women with non-acute symptoms suggestive of obstructive\* CAD and, in particular, a rise in tests that increase the patient's exposure to radiation risks without demonstrable benefit to the individual patient.<sup>3,4</sup>

A multi-stakeholder panel comprising experts in the fields of clinical cardiology, medical technology innovation, women's health research and policy analysis, personalized medicine, employer group and other health insurance, patient advocacy, and health economics was convened in 2014 at the Heart House in Washington, D.C., by the JSPH and SWHR, with sponsorship by CardioDx. The goals of the roundtable were to:

1. Review the evidence pertaining to sex differences in anatomy/physiology and symptoms of obstructive CAD.
2. Discuss the appropriate use, risks and benefits of non-invasive and invasive testing for obstructive CAD.
3. Explore the incorporation of a new age, sex and gene expression score (ASGES) assay in evaluating patients, particularly women, with typical and atypical symptoms of obstructive CAD.

The expert roundtable was organized around a series of high-level presentations with discussions moderated by David B. Nash, M.D., M.B.A., Dean, Jefferson School of Population Health.

“The diagnostic challenge associated with the evaluation of women with symptoms suggestive of obstructive CAD is an important but often overlooked issue that affects millions of patients in the United





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States and across the globe,” said Dr. Nash. “The diverse backgrounds of the experts who participated in this roundtable reflect the multidisciplinary approach that will be needed to generate broader awareness of the unique challenges facing women and ultimately help create a new care pathway for safe, convenient and accurate evaluation of symptomatic CAD.”

As patients proceed through each level of diagnostic testing for obstructive CAD, they are exposed to additional associated risks (eg, procedural complications, radiation exposure, contrast agent reactions, nephrotoxicity). The panel concluded that better methods are needed to help exclude patients with a low likelihood of obstructive CAD from further cardiac testing, thereby avoiding prolonged and costly workups and allowing for more rapid attention to the noncardiac sources of their symptoms.

Phyllis Greenberger, M.S.W., President and Chief Executive Officer of SWHR, added: “Many of the current testing options for obstructive CAD are not as specific or sensitive in women, yielding high rates of false positive and false negative results that may lead to unnecessary cardiac procedures and unnecessary radiation exposure. We hope this report creates a sense of urgency among healthcare professionals, patients and other stakeholder groups to think differently about the diagnosis – or assessment – of obstructive CAD in women and pursue new testing strategies that apply the latest advances in precision medicine.”

The expert panel arrived at six consensus findings and recommendations addressing opportunities for improved awareness and education, as well as the benefits and risks of testing options for women with symptoms suggestive of obstructive CAD.

To read a summary of the expert panel discussion and six consensus findings, please visit the *Population Health Management* [website](#) for the full report.<sup>5</sup>

### **About Obstructive Coronary Artery Disease**

Coronary artery disease (CAD) is a very common heart condition in the United States. One in six deaths among Americans is caused by CAD.<sup>1</sup> CAD is caused by the buildup of fatty deposits (also known as plaque) in the arteries supplying the heart with blood and oxygen. Over time, this plaque buildup causes a narrowing or blockage in the heart arteries and decreases the amount of blood reaching the heart muscle. If the blockage occupies more than 50% of the artery, then it is called obstructive\* CAD. Patients with CAD may experience chest discomfort, shortness of breath, and abdominal pain or weakness. Ultimately, decreased blood flow and oxygen to the heart can lead to a severe cardiac condition such as a heart attack, heart failure, arrhythmia (abnormal heart rhythm), or even death.

### **About the Jefferson School of Population Health**

The Jefferson School of Population Health (JSPH), established in 2008, is one of six schools and colleges that constitute Thomas Jefferson University, a leading academic health center founded in Philadelphia in 1824 as Jefferson Medical College. As the first designated School of Population Health in the country, JSPH is dedicated to the exploration of policies and forces that determine the health and quality of life of populations, locally, nationally, and globally. Its mission is to prepare leaders with global vision to



develop, implement, and evaluate health policies and systems that improve the health of populations and thereby enhance the quality of life. To learn more, visit: [http://www.jefferson.edu/university/population\\_health.html](http://www.jefferson.edu/university/population_health.html).

### **About the Society for Women's Health Research**

A national non-profit organization, the Society for Women's Health Research (SWHR) is the thought leader in research on biological differences in disease and is dedicated to transforming women's health through science, advocacy, and education. To learn more, visit: [www.swhr.org](http://www.swhr.org).

### **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, CardioDx is committed to expanding patient access and improving healthcare quality and efficiency through the commercialization of genomic technologies. Please visit [www.cardiodx.com](http://www.cardiodx.com) for additional information.

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\* Obstructive coronary artery disease (CAD) is defined as at least one atherosclerotic plaque causing  $\geq 50\%$  luminal diameter stenosis in a major coronary artery ( $\geq 1.5$  mm lumen diameter) as determined by invasive quantitative coronary angiography (QCA) or core-lab computerized tomography angiography (CTA) ( $\geq 2.0$  mm lumen diameter).

### References

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