

Diagnostic tests for heart disease function differently for women, men

April 6 2016, by Sarah Avery

Tests used to diagnose and assess the severity of coronary artery disease appear to function differently for women and men who have stable symptoms, according to researchers from Duke Clinical Research Institute.

The finding, presented April 4 at the American College of Cardiology Scientific Sessions meeting in Chicago, adds new insights into the differences between men and women who are newly diagnosed with heart disease.

Analyzing data from the PROMISE study (Prospective Multicenter Imaging Study for Evaluation of Chest Pain), researchers previously found that for both women and men, heart attacks and other events occurred at the same rate regardless of whether patients were assessed using a computed tomographic angiography or a functional [stress test](#).

However, since the frequency of a positive test differed between the two test types, the ability to predict an event based on test findings was not the same for CTA vs. stress testing.

More women had a positive stress test than a CTA, but given the same event rate, this meant that a smaller proportion who had a positive stress test went on to have a coronary event—death, heart attack or other [heart](#) problem leading to hospitalization. As a result, CTA proved to be more predictive than a stress test of a future coronary event among women.

For men, a stress test showed a positive finding for [heart disease](#) less often than CTA, but the predictive value of CTA and the stress testing for an event was roughly similar.

"In the main PROMISE study analysis, the rates of coronary events were similar whether patients were tested with CTA or a stress test," said lead author Neha Pagidipati, M.D. of DCRI. "Our analysis delved a little deeper to determine if there were subtle differences between the sexes associated with using these diagnostic tests."

Pagidipati said the differences in women are statistically significant and could help guide test selection and the interpretation of test results, but do not yet provide a basis to recommend that all [women](#) undergo CTA instead of functional stress tests. Instead, she said, the findings point strongly to the need for a study specifically designed to answer that question.

Provided by Duke University

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