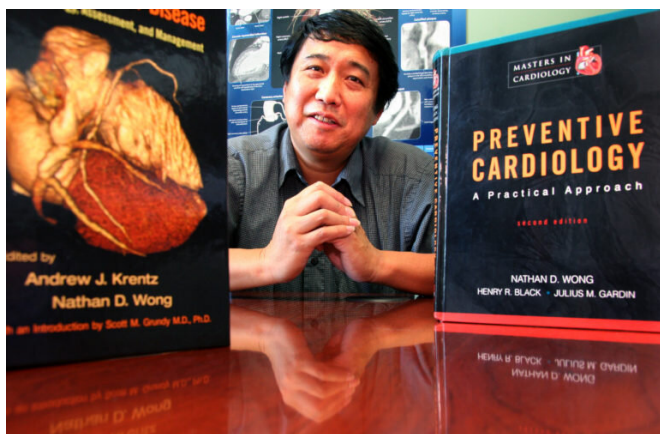


# Women with diabetes and high levels of coronary artery calcium at greater risk of death than men

27 August 2020, by Tom Vasich



"We showed that coronary calcium scores of greater than 100 in a woman with diabetes was associated with higher death rates from cardiovascular diseases and all causes than similar calcium scores in women than in man with diabetes," said Nathan D. Wong, Ph.D., professor and director for UCI's Heart Disease Prevention Program, and the lead author for the study.

Wong and colleagues studied 4,503 adults with diabetes from a national registry of patients who received coronary calcium "heart scans" from computed tomography and were followed for causes of death over more than 11 years. Death rates from cardiovascular [disease](#) in those who had coronary calcium scores of 101-400 or more, were approximately twice as high in women compared to men. Total death rates in these patients were also higher in women than in men. In analyses adjusted for age and other potential confounders, compared to those with calcium scores of 0, women who had calcium scores of 101-400 and 401 or greater had cardiovascular deaths that were 3.7 and 6.3-fold greater, respectively, compared to men whose risks were 1.6 and 3.5-fold greater, respectively.

"Our findings, showing significant levels of coronary calcium to predict mortality from cardiovascular causes more strongly in women than men with diabetes, might also help to explain the poorer prognosis for cardiovascular disease that has been observed for decades in women compared to men with diabetes," says Nathan Wong. Credit: Daniel A. Anderson / UCI

A new study finds women with diabetes and significant levels of calcium in their coronary arteries have higher rates of death from cardiovascular disease and all causes than their male counterparts.

Published in the American Diabetes Association journal, *Diabetes Care*, researchers from the University of California, Irvine School of Medicine and Cedars-Sinai Medical Center compared the sex-specific impact of [coronary artery](#) calcium (CAC) levels in adults with diabetes. CAC was used to predict cardiovascular and all-cause mortality in patients with diabetes. The results of this comparison showed greater CAC predicts cardiovascular and total mortality more strongly in women.

"Our findings, showing significant levels of coronary calcium to predict mortality from cardiovascular causes more strongly in women than men with diabetes, might also help to explain the poorer prognosis for cardiovascular disease that has been observed for decades in women compared to men with diabetes," said Wong.

"Conversely, very low death rates from coronary heart disease and cardiovascular disease seen in those with diabetes who had negative scans (calcium scores of 0), comprising 39 percent of [women](#) and 20 percent of men in our study, underscore the point that not all persons with diabetes are 'risk equivalents' for cardiovascular

disease, as has been the common belief for decades," noted Cedars-Sinai Medical Center's Daniel Berman, MD, senior author of the study.

"Our findings suggest a call-to-action for even more aggressive risk factor management in a woman with [diabetes](#) found to have significant levels of coronary [calcium](#) to prevent future [death](#) from cardiovascular causes" said Wong. Previous research conducted by Wong and colleagues, has shown rates of [cardiovascular disease](#) to be 60 percent lower in those who are well-controlled for blood sugar, cholesterol, and blood pressure.

**More information:** Nathan D. Wong et al. Sex Differences in Coronary Artery Calcium and Mortality From Coronary Heart Disease, Cardiovascular Disease, and All Causes in Adults With Diabetes: The Coronary Calcium Consortium, *Diabetes Care* (2020). [DOI: 10.2337/dc20-0166](https://doi.org/10.2337/dc20-0166)

Provided by University of California, Irvine

APA citation: Women with diabetes and high levels of coronary artery calcium at greater risk of death than men (2020, August 27) retrieved 21 September 2022 from <https://medicalxpress.com/news/2020-08-women-diabetes-high-coronary-artery.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.*