

Protein-based risk score may help predict CV events among patients with heart disease

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In a study appearing in the June 21 issue of *JAMA*, Peter Ganz, M.D., of the University of California-San Francisco, and colleagues conducted a study to develop and validate a score to predict risk of cardiovascular outcomes among patients with coronary heart disease using analysis of circulating proteins.

More information: *JAMA*, [DOI: 10.1001/jama.2016.5951](https://doi.org/10.1001/jama.2016.5951)

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Coronary heart disease (CHD) remains a leading cause of death and illness. Precise stratification of cardiovascular risk in patients with CHD is needed to inform treatment decisions. This study included participants with stable CHD. For the derivation cohort (Heart and Soul study), outpatients from San Francisco were enrolled from 2000 through 2002 and followed up through November 2011. For the validation cohort (HUNT3, a Norwegian population-based study), participants were enrolled from 2006 through 2008 and followed up through April 2012. A protein risk score was derived and validated for 4-year probability of heart attack, stroke, [heart failure](#), and all-cause death; 1,130 proteins were measured in plasma samples. The risk score was compared with variables (such as total cholesterol, [systolic blood pressure](#), smoking status) from the Framingham secondary event risk model, refit to the cohorts in this study.

From the derivation cohort, 938 samples were analyzed; from the validation cohort, 971 samples were analyzed. The researchers identified 9 proteins associated with adverse [cardiovascular outcomes](#) and developed a risk score with these proteins that performed better than the refit Framingham secondary event [risk score](#) in predicting cardiovascular events, but still provided only modest discriminative accuracy.

"Further research is needed to assess whether the score is more accurate in a lower-risk population," the authors write.

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