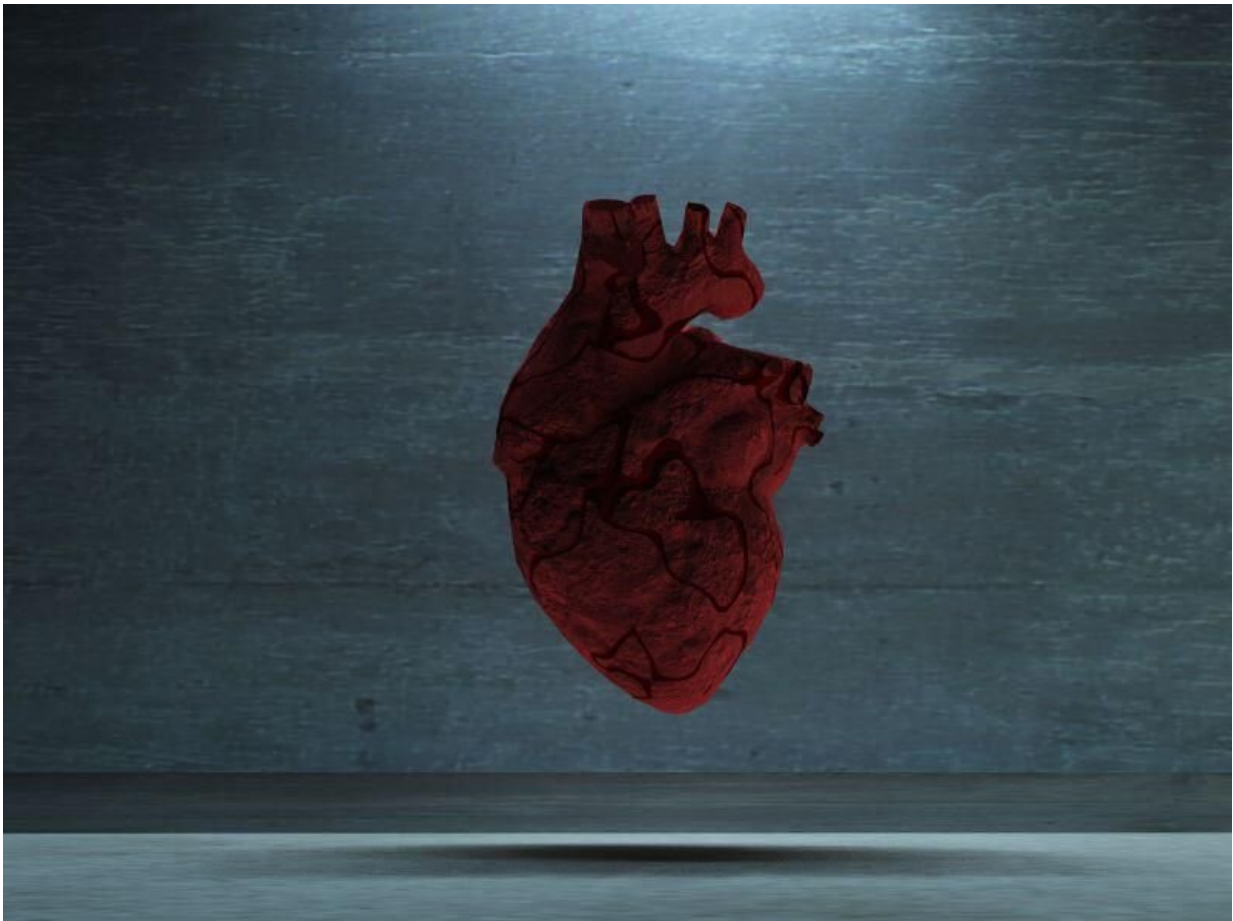


Polygenic risk score may predict sudden death in some CAD patients

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Being in the top decile for the genome-wide polygenic score for

coronary artery disease (GPS_{CAD}) is associated with an increased risk for sudden and/or arrhythmic death (SAD) among CAD patients without severe systolic dysfunction, according to a study published in the Aug. 30 issue of the *Journal of the American College of Cardiology*.

Roopinder K. Sandhu, M.D., M.P.H., from the Cedars-Sinai Medical Center in Los Angeles, and colleagues examined whether a GPS_{CAD} would have utility in SAD risk stratification in 4,698 CAD patients without severe systolic dysfunction. The [cohort](#) was dichotomized according to top GPS_{CAD} decile, as defined by the [general population](#).

The researchers found that participants in the top GPS_{CAD} decile were at elevated absolute SAD risk (8.0 versus 4.8 percent) and proportional SAD risk (29 versus 16 percent) compared with the rest of the participants during a median follow-up of 8.0 years. The top GPS_{CAD} decile was associated with SAD after controlling for left ventricular ejection fraction, clinical factors, and electrocardiogram parameters, but it was not associated with non-SAD. The addition of the top GPS_{CAD} decile to the multivariable model significantly improved continuous and categorical net reclassification indexes but did not improve the C-index.

"These findings in aggregate suggest that the GPS_{CAD} is a promising method to improve SAD risk stratification in CAD patients who do not currently qualify for an implantable cardioverter-defibrillator, which warrants further study," the authors write.

One author disclosed financial ties to the biopharmaceutical industry.

More information: Roopinder K. Sandhu et al, Polygenic Risk Score Predicts Sudden Death in Patients With Coronary Disease and Preserved Systolic Function, *Journal of the American College of Cardiology* (2022). [DOI: 10.1016/j.jacc.2022.05.049](https://doi.org/10.1016/j.jacc.2022.05.049)

Jussi A. Hernesniemi, Dawn of the Era of Individualized Genetic Profiling in the Prevention of Sudden Cardiac Death, *Journal of the American College of Cardiology* (2022). [DOI: 10.1016/j.jacc.2022.06.016](https://doi.org/10.1016/j.jacc.2022.06.016)

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