

[Prevenção's](#) HART tests, offered by Atlas Genomics, were developed through a strategic partnership with Massachusetts General Hospital and cardiac biomarker expert, Dr. James Januzzi.

The HART tests were developed using Machine Learning (a subset of Artificial Intelligence) to create multiple protein, algorithmically scored blood tests. HART cardiovascular diagnostic and prognostic tests have almost 90% accuracy and are significantly more accurate than standard-of-care stress tests, individual biomarkers, genetic tests, coronary artery calcium scores and clinical risk scores.

HART test results have been presented/published at 31 leading cardiovascular meetings and top-tier cardiology journals. Atlas Genomics provides two lead blood tests for patient use:

1. **HART CVE™** – blood test for **1-year risk of heart attack, stroke or cardiovascular (CV) death**; useful for monitoring patients with known cardiac disease, and symptomatic patients with high cardiovascular risk, including patients with diabetes, obesity, smokers, peripheral artery disease, chronic kidney disease, and family history.

Publications/presentations include:

- a. *American Journal of Cardiology (AJC)*, 2017; (accuracy 79%; HR=4.03; 97% NPV)
- b. *Biomarkers in Medicine (BMM) 2020*; (accuracy 86%/AUC=0.86; HR=9.9; 99% NPV);
- c. American College of Cardiology (ACC) Scientific Sessions, 2021; 1,500-patient study
- d. *European Journal of Preventive Cardiology. 2022*; Mohebi R, McCarthy C, Magaret C, et al. Performance of a Protein Biomarker Panel for Prediction of Cardiovascular Events in Patients with Diabetes Mellitus. 2022. *European Journal of Preventive Cardiology. Vol. 29 Cardiology. 10.1093/eurjpc/zwac050.*
- e. American Heart Association (AHA) Scientific Sessions, 2022; Risk stratifying **Chronic Kidney Disease** patients for MI, stroke, or cardiovascular death
- f. *International Journal of Cardiology, 2022*; Performance of a Multi-biomarker Panel for Prediction of Cardiovascular Event in Patients with **Chronic Kidney Disease**

2. **HART CADhs™** – blood test for obstructive **coronary artery disease diagnosis**; useful for baselining and monitoring patients with known cardiac disease and symptomatic patients with high cardiovascular risk, including patients with diabetes, obesity, smokers, peripheral artery disease, chronic kidney disease, and family history.

Publications/presentations include:

- a. *Journal of American Heart Association (JAHA) August 2020 (AUCs=0.85-0.88)*;
- b. European Society of Cardiology (ESC) Congress, 2021; 924-patient study
- c. *Journal of the American College of Cardiology. 2020.* Ekanem E, Shah, P, Latta, F, DeFilippi, C. et al. Performance of Novel Biomarker-Clinical Score to Predict Presence of Obstructive Coronary Disease **Versus Stress Test** in Validation Cohort. *JACC 2020. SP 98. Vol. 75. DO - 10.1016/S0735-1097(20)30725-7*
- d. *Circulation.* November 2021; R Gattani, E Ekanem, A Ofofu-Somuah et al, A Pooled Multi-National Validation Study of a Machine Learning, High-Sensitivity Troponin-Based Multi-Proteomic Model to Predict the Presence of Obstructive Coronary Artery Disease as Compared to High Sensitivity Troponin Alone in a **Subset of Patients with Diabetes.** *Circulation.* November 2021. 144(Suppl_1) DOI:[10.1161/circ.144.suppl_1.10637](https://doi.org/10.1161/circ.144.suppl_1.10637)

Please visit the website www.prevencomed.com for additional information.