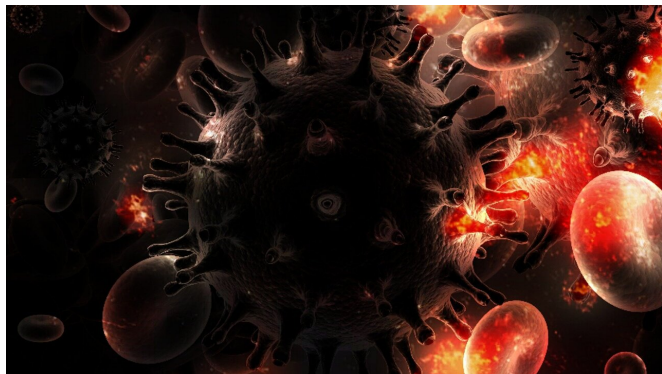


Study provides insights into cardiovascular disease risk among people living with HIV

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The AIDS Clinical Trials Group (ACTG), the largest global HIV research network, today announced that findings from a sub-study of REPRIEVE (A5332/A5332s, an international clinical trial studying heart disease prevention in people living with HIV) have been published in the *Journal of the American Medical Association Network Open (JAMA Network Open)*. The study found that approximately half of study participants, who were considered by traditional measures to be at low-to-moderate risk of future heart disease, had atherosclerotic plaque in their coronary arteries.

While it is well-known that people living with HIV are at increased risk of cardiovascular events, including heart attacks and strokes, little is understood about the prevalence and extent of atherosclerosis in heart blood vessels and associated biological factors. The Mechanistic sub-study of REPRIEVE was designed to specifically identify factors that contribute to cardiovascular disease among people living with HIV.

"This sub-study of REPRIEVE is seeking to better understand why people living with HIV develop heart disease, even when their HIV is well

controlled and they don't have many traditional risk factors," said ACTG Chair Judith Currier, M.D., M.Sc., University of California, Los Angeles. "REPRIEVE is the largest study of cardiovascular disease among people living with HIV and this is an important early report that sets the stage for future important findings."

Today's publication describes baseline data on 755 participants between the ages of 40 and 75 years old, who were enrolled at 31 sites across the United States. The sub-study used coronary CT angiography to assess the amount of [plaque](#) in participants' coronary arteries and then correlated those findings with blood samples that measured inflammation and immune activation.

Nearly half the participants (49 percent) had plaque in their coronary arteries, though the plaques were mostly seen in just a few areas of the coronary arteries. The presence of plaque was associated with a higher burden of risk factors, but also with higher levels of inflammation independent of traditional risk scores. In almost all individuals (97 percent), the plaque was mild and did not cause a narrowing of more than 50 percent of the [coronary artery](#). While significant narrowing was rare, about one-quarter of participants (23 percent) had plaque with features that could potentially cause problems in the future (also known as vulnerable plaque).

In the general population, epidemiologic studies have shown that future cardiovascular disease increases with higher ASCVD PCE (atherosclerotic cardiovascular disease pooled cohort equation) risk scores, an index of traditional risk. REPRIEVE recruited participants with low to moderate ASCVD risk and a low average 10-year risk score of 4.5 percent. The clinical significance of mild or even significant plaque in asymptomatic people with low cardiovascular risk is unknown, as is the effectiveness of statin therapy to prevent [cardiovascular disease](#) in this population. REPRIEVE will address these important questions

by following these participants to determine if the plaque reported in the Mechanistic sub-study of REPRIEVE is clinically significant (whether it is related to future cardiovascular events), whether statin therapy can reduce plaque and markers of inflammation, and if statin therapy can reduce the incidence of [heart](#) attacks and strokes.

"Heart disease is a major cause of illness and death among people living with HIV, including those with well-controlled HIV disease receiving antiretroviral treatment," said Steven Grinspoon, M.D., Massachusetts General Hospital. "Until now, our understanding of coronary artery [disease](#) among people living with HIV has been very limited. These findings significantly expand our knowledge and provide important insights that will lay the foundation to ultimately help us better support the health and well-being of people living with HIV."

More information: Udo Hoffmann et al, Assessment of Coronary Artery Disease With Computed Tomography Angiography and Inflammatory and Immune Activation Biomarkers Among Adults With HIV Eligible for Primary Cardiovascular Prevention, *JAMA Network Open* (2021). [DOI: 10.1001/jamanetworkopen.2021.14923](#)

Provided by AIDS Clinical Trials Group

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