Major Global Study of HIV's Ties to Heart Disease Is a Data Goldmine

The REPRIEVE study, which is primarily looking at a statin's effect on cardiovascular disease, is shedding light on many other mysteries.

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The global REPRIEVE trial, which has enrolled 7,700 people taking HIV treatment and seeks to determine a cholesterol-lowering statin's effects on cardiovascular disease (CVD) outcomes, is shedding light on many other pressing questions about the health of people living, and aging, with the virus.

The trial began enrolling people with HIV around the world in 2015; by 2019, it reached full enrollment, with participants from 12 countries across five continents.

The participants are all at low to moderate risk for CVD according to traditional risk calculators for the general population, which means they would not normally be recommended a statin medication. They were randomized to receive either Livalo (pitavastatin) or a placebo in a double-blind manner, meaning neither the participants nor the researchers know who has received which type of pill.

The primary question the study seeks to answer is whether the statin lowers the risk of major adverse health events related to CVD as the participants are followed over a number of years. But the study authors are also looking to take advantage of such a large and long-term study to address many other important questions about the health and well-being of HIV-positive people as they age.

The median age of the participants at enrollment was 50 years old. So overall, they provide a good reflection of where the global HIV population is headed as it steadily ages thanks to antiretroviral (ARV) treatment providing the opportunity for a much longer life.

While the central results of REPRIEVE are not expected until 2023, the study authors have just published in the Journal of Infectious Diseases a collection of papers with preliminary findings from the study on a wide range of topics.

One paper outlines the impressive diversity of the cohort of participants. Because their demographics are a good representation of the global HIV population, the study cohort is poised to

provide especially useful data. This includes diversity in nationality, race, ethnicity and designated sex at birth. More than 60% of the participants are nonwhite, and more than 31% are women. Two percent, or 129 people, are transgender.

Upon entering the study, the participants had been living with HIV for a median of 13 years since their diagnosis and had been taking ARVs for a median of 10 of those years.

The REPRIEVE investigators found that at the study's baseline point, a substantial number of the participants had signs indicating they had reduced kidney function. A substudy of REPRIEVE is in fact analyzing whether Livalo can slow or prevent declining kidney function.

Concerningly, data indicated that many of the participants have excess fat around the heart. This condition is associated with a higher risk for heart trouble.

The study population also has a high rate of impaired muscle strength and function.

The REPRIEVE authors are also looking at reproductive aging among the women in the study—in other words, the pace of the natural process that leads to menopause. Women of more advanced reproductive age, the study authors have already found, were more likely to have a high waist circumference and high blood levels of hemoglobin. Accelerated reproductive aging was more common among women living in sub-Saharan Africa, Latin America or the Caribbean than in the wealthier nations, such as the United States.

The study is poised to provide especially important data about CVD among HIV-positive transgender people, as currently there is a great need for more research on this topic. Previous studies have found that the use of gender-affirming hormones may increase the risk of CVD. The REPRIEVE investigators have found that a high waist circumference was more common among trans women, in particular those receiving such hormone treatment.

To read a POZ feature article about REPRIEVE, click here.

To read a press release about REPRIEVE and to find links to all the papers recently published on the ongoing trial, click here.

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