HIV Cure Strategies May Need to Be Tailored According to Sex

Research indicates that there are numerous differences in how HIV behaves in women versus men.

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Research indicates that there are numerous differences in how HIV behaves in women compared with men. Thus, researchers may need to take participants' sex into account when designing cure studies, aidsmap reports.

Eileen Scully, MD, PhD, of the Johns Hopkins University School of Medicine, gave a presentation on sex differences in HIV's dynamics within the body at the 2020 Conference on Retroviruses and Opportunistic Infections in Boston last month.

She noted the existence of sex-based differences in the dynamics of the viral reservoir and various facets of how the immune system functions and how estrogen encourages nonreplicating HIV-infected cells to remain in their latent state,.

These differences are apparently driven by anatomical differences, the body's microbiome, genetics and specifics to do with immune cells and how genes are expressed, among other factors. HIV replicates more slowly and, in the face of fully suppressive antiretroviral (ARV) treatment, maintains residual replication at lower levels in women compared with men. Women also have lower levels of HIV DNA capable of producing viable new copies of virus encoded into their cells. Also, when ARV treatment is interrupted in cure studies, women's viral loads take longer to rebound than men's, on average.

An analysis presented at the preconference Community Cure Workshop of the study populations of 31 HIV cure research groups found that just 17% of participants were women.

At the main conference, results from the first-ever all-women cure study, called Moxie, showed that the selective estrogen receptor modulator tamoxifen did not enhance the activity of vorinostat, a drug used in cure studies to try to drive latently infected cells to produce virus again as a part of a cure strategy called "kick and kill."

However, the study quickly recruited 31 women in the United States for the study, suggesting that recruitment of women for such research is feasible. Another cure study is in the works in South

Africa that will include only young women.

To read the aidsmap article, click here.

To view Scully's slides, click here.

To read the conference abstract on the Moxie study, click here.

To view a webcast of the presentation that includes mention of the upcoming South Africa study, click here.

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