Prevention: Vaccine Failure

An experimental vaccine combination did not protect people from acquiring HIV in a large clinical trial.

August 16, 2021 By Liz Highleyman

An experimental vaccine combination did not protect people from acquiring HIV in a large clinical trial, adding to a long string of disappointments in vaccine research. So far, only one study—the RV144 trial in Thailand—has shown any effectiveness in preventing HIV, reducing new infections by 31%. Following up on those findings, the Phase II/III Uhambo trial (HVTN 702) tested a modified version of the same vaccine regimen. The study enrolled 5,404 people at risk for HIV in South Africa. They were randomly assigned to receive two doses of a canarypox vector vaccine called ALVAC-HIV plus four boosters of a gp120 protein subunit vaccine, both adapted to target HIV subtype C, which is predominant in southern Africa. In February 2020, the trial was halted after an interim review found that the vaccine regimen was not effective. Over two years, 138 participants in the vaccine arm and 133 people in the placebo arm were diagnosed with HIV. Among the people who did become infected, viral load was not reduced in the vaccine group.
