

Chemoprophylaxis and Host Virus Interactions

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Project Description: This is an observational cohort study of individuals who have completed a randomized clinical trial of the safety and effectiveness of daily oral tenofovir vs placebo for the prevention of HIV-1 infection. Participants will be enrolled from various chemoprophylaxis trial sites nationally and internationally.

This study will assess immunological and virological factors associated with HIV infection among participants in PrEP trials. We will determine if chemoprophylaxis failure is associated with durably lower viremia, higher CD4+ T cell counts, and higher risk of drug resistance compared with placebo failure. Among seroconverters, we will determine if HIV-specific cell-mediated immune responses are stronger and more broadly cross-reactive, during chemoprophylaxis compared with placebo. In association with this, we will assess whether HIV nucleic acids are detectable for longer periods of time prior to seroconversion in those receiving chemoprophylaxis compared with placebo. Finally, we will determine if *prior tenofovir chemoprophylaxis* is associated with lower anti-HIV seroincidence or an attenuated course of infection after seroconversion.

Project End date: August 2010