

Abstract

Elite controllers suppress HIV viremia to below the limit of detection in the absence of antiretroviral therapy (ART). However, precise frequencies of CD4+ T cells carrying replication-competent HIV and/or the dynamics of the infectious viral reservoirs in response to initiation and discontinuation of ART in elite controllers are unknown. We show that the size of the pool of CD4+ T cells harboring infectious HIV diminished significantly following initiation of ART and rebounded to baseline upon cessation of therapy. Our data provide compelling evidence that persistent viral replication occurs in untreated elite controllers even in the absence of detectable plasma viremia.