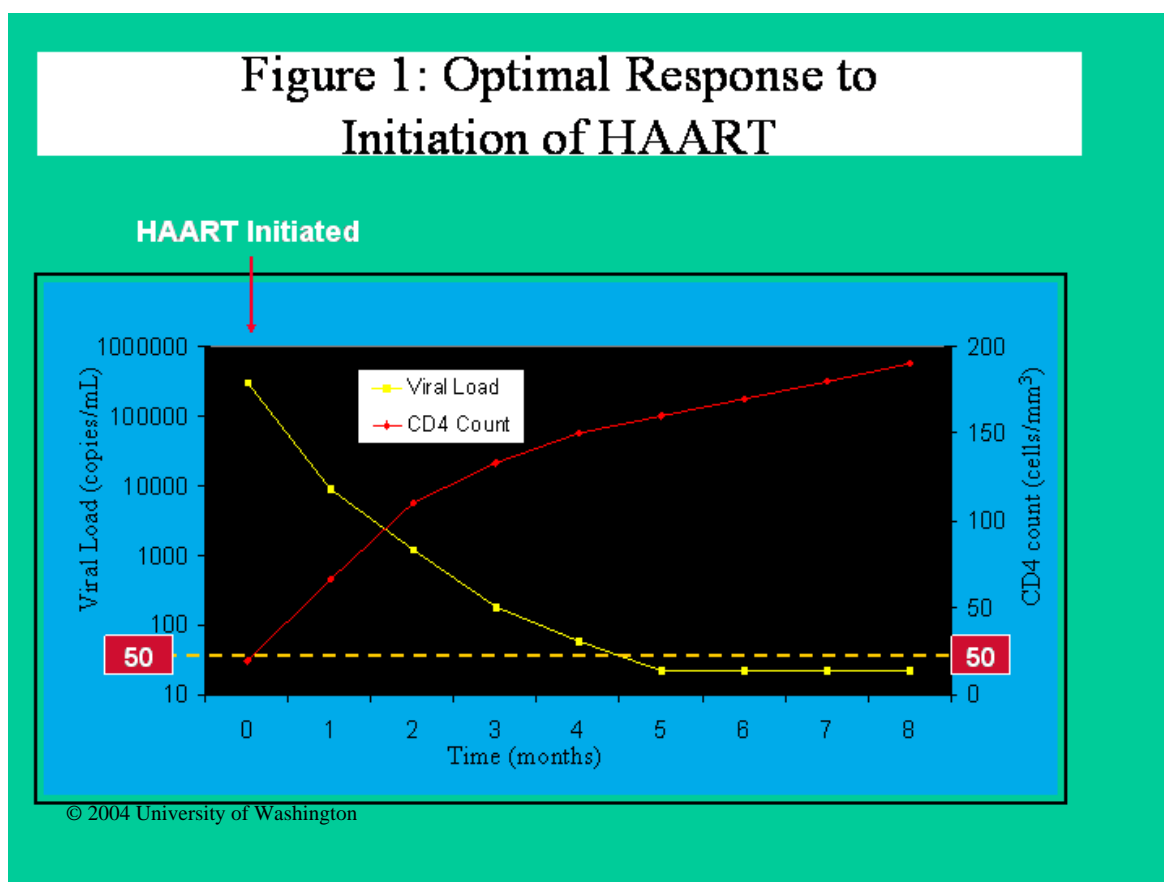


OVERVIEW OF ANTIRETROVIRAL THERAPY (ART)

HIGHLY ACTIVE ANTIRETROVIRAL THERAPY (HAART)

HAART, defined as the combination of three or more antiretroviral (ARV) agents taken concurrently to suppress HIV replication,¹ represents the current standard of care of antiretroviral therapy for individuals infected with HIV. This strategy evolved from the recognition that treatment of chronic HIV infection with only one or two ARV agents typically results in rapid treatment failure and the development of ARV resistance, compromising future therapeutic options.

Ultimately, the goal of HAART is the prevention of HIV-associated morbidity and mortality. This is most effectively achieved by suppressing HIV replication to a level below the limit of detection by viral load assays (generally less than 50 copies/mL). Suppression of HIV replication with HAART is typically associated with a significant rise in the CD4+ T cell count, reflecting partial reconstitution of the immune system that results in reduced HIV-related morbidity and mortality and in improved quality of life. Hence, for HIV-infected individuals initiating ARV therapy, full suppression of virologic replication should be the goal. (See *Figure 1* for a graphic depiction of the optimal response to HAART.)



For highly treatment-experienced patients who have developed significant resistance to various ARV agents, suppression of viral replication to an undetectable level may no longer be a realistic goal. However, an appropriately designed HAART regimen for such patients will often result in stabilisation of HIV disease progression, even in the absence of full virologic suppression.

¹HAART can be more strictly defined as: (a) two or more NRTIs in combination with at least one PI or one NNRTI; (b) one NRTI in combination with at least one PI *and* at least one NNRTI; (c) a regimen containing RTV and SQV in combination with one NRTI and no NNRTIs; or (d) an ABC- or TDF-containing regimen of three or more NRTIs in the absence of both PIs and NNRTIs. (Source: US DHHS. Guidelines for the use of antiretroviral agents in HIV-1-infected adults and adolescents. 2004. Available at: <http://AIDSinfo.nih.gov/guidelines>. Accessed January 2005.)