

POSTER 61**RALTEGRAVIR INTENSIFICATION DOES NOT REDUCE PERSISTENT HIV-1 VIREMIA IN TREATMENT EXPERIENCED PATIENTS**

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Background: Antiretroviral treatment-experienced patients with drug resistance can have HIV-1 RNA suppressed to <50 copies using newer combinations of antiretrovirals, but low-level viremia often persists. Determining whether this persistent viremia is due to ongoing cycles of HIV-1 replication is important because partially suppressive regimens facilitate the emergence of drug resistance. To investigate the contribution of ongoing replication to persistent viremia in treatment-experienced patients, we conducted a study of short term drug intensification with the integrase inhibitor, raltegravir.

Methods: We enrolled participants with a prior history of virologic failure and genotypic resistance who were subsequently suppressed to <75 copies/ml on a new regimen that did not contain raltegravir. Participants had baseline viral RNA levels determined during a 21 day period prior to drug intensification, then weekly during a 30 day intensification period with raltegravir 400 mg twice daily. Additional sampling was performed during the 6 weeks following intensification.

Results: Participants (N=8) had undergone an average of 4 suboptimal regimens prior to successful therapy, and were suppressed on combinations with an average GSS score of 2.1 (range 1.5-3) for a mean of 6.1 y prior to enrollment. Six patients have completed intensification thus far. Median viremia prior to raltegravir was 0.31 log₁₀ HIV-1 copies/ml. No significant change in viral RNA levels was detected during intensification (median viral RNA 0.12 log₁₀ copies/ml, p=0.88) or following intensification (median 0.08 log₁₀ copies/ml, p=0.41). Mean CD4 cell numbers were not significantly different after 30 days of intensification. Raltegravir was well tolerated with no adverse effects.

Conclusions: Raltegravir intensification of treatment-experienced patients on a suppressive regimen did not lower the level of persistent viremia. Low level viremia in treatment-experienced patients is not the product of ongoing cycles of HIV-1 replication in short-lived cells, even in patients with a prior history of drug resistance.