

Poster presentation

## Differences in CD4 count increases in veterans starting antiretroviral therapy with lopinavir/ritonavir or efavirenz

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from Ninth International Congress on Drug Therapy in HIV Infection  
Glasgow, UK. 9–13 November 2008

Published: 10 November 2008

*Journal of the International AIDS Society* 2008, **11**(Suppl 1):P9 doi:10.1186/1758-2652-11-S1-P9

This abstract is available from: <http://www.jiasociety.org/content/11/S1/P9>

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### Background

Efavirenz (EFV) and lopinavir/ritonavir (LPV/r) are both recommended as preferred backbone agents for combination antiretroviral therapy (cART) in treatment-naïve patients. Meta-analyses have suggested there is a difference in the magnitude of CD4 cell count response.

### Methods

Within the virtual cohort of the VA clinical case registry (CCR), we used generalized linear models, accounting for multiple measurements within patients, to compare CD4 cell counts over a 48-month period following treatment initiation of either EFV- or LPV/r-containing cART (regardless of virologic response).

### Summary of results

Between Sept. 1, 2000 and Dec. 31, 2006, 4,298 and 11,618 veterans started LPV/r- and EFV-containing cART, respectively. Only patients on continuous EFV or LPV/r therapy with no interruptions >60 days per pharmacy refill database were analyzed. There was no statistically significant difference in adherence or time on therapy between regimens. Baseline mean CD4 counts were 271 and 319, respectively ( $p < 0.001$ ). Mean CD4 counts changes are presented in Table 1.

Differences in CD4 changes were most pronounced for patients with low baseline CD4 count (<50 cells/ $\mu$ L):  $\Delta$ CD4 was 303 vs. 206 cells at month 36;  $p = 0.0344$ .

### Conclusion

Despite significantly lower baseline CD4 count, LPV/r-based regimens were associated with significantly greater CD4 gains at 6, 24, and 36 months compared with EFV-based regimens.

**Table 1:**

Mean values/ $\mu$ L	Months on cART	6	12	24	36	48
LPV/r	n =	1098	802	472	283	121
	$\Delta$ CD4	61	81	125	138	171
EFV	n =	3089	2409	1644	1136	781
	$\Delta$ CD4	50	71	94	104	136
Difference in $\Delta$ CD4: LPV/r – EFV		11	10	31	34	35
p value for $\Delta$ CD4 $\dagger$		0.0294	0.1554	0.0028	0.0229	0.5188

$\dagger$ Scheffé Test for multiple comparisons.

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