# Response of HIV positive patients to the long-term salvage therapy by LPV/r

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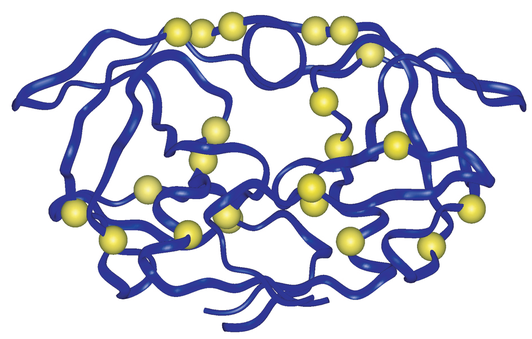
## INTRODUCTION

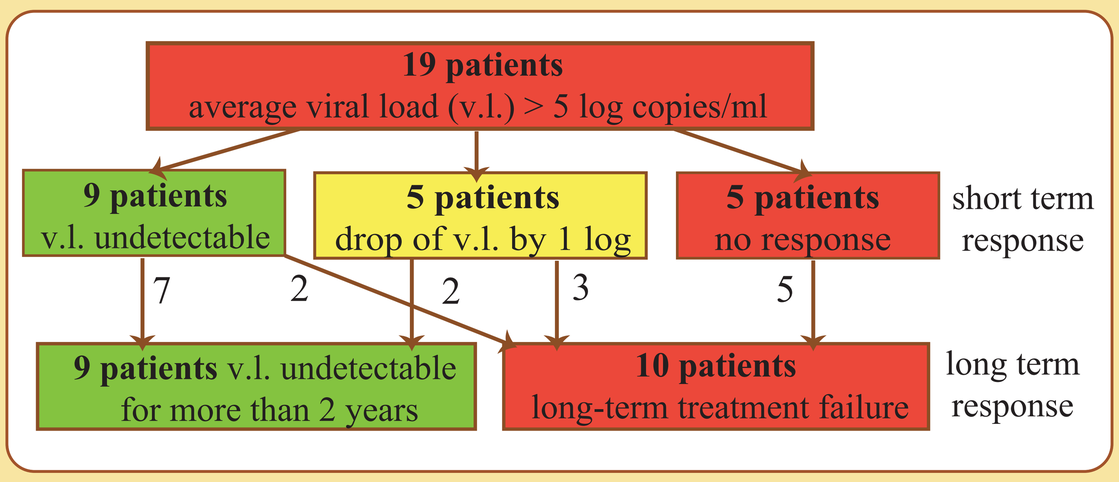
The cohort of 19 protease inhibitor (PI) experienced patients undergoing LPV/r salvage regimen was followed for the period of up to 37,5 months, during the years 2000-2003. Changes of HIV-1 RNA plasma level and CD4+ count were monitored and evaluated with regard to the baseline characteristics (median of CD4 count: 271 cells/µl (7 - 839); median of viral load: 5 log copies/ml (2.6 - 6.4); the baseline genotype was influenced by prior use of PIs (high occurence of resistance associated mutations, such as L90M, I84V and many others).
Furthermore, the virologic outcome of the therapy was correlated with prevalence of several factors, which were previously identified as predictors of lopinavir susceptibility: LPV mutation score (cumulative number of particular mutations present at positions:10, 20, 24, 46, 53, 54, 63, 71, 82, 84 and 90), the occurence of mutations at positions 54 and 77, prior use of PIs and coprescription with efavirenz.



Amino-acid positions associated with LPV mutation score are depicted in yellow colour on the model of HIV PR.

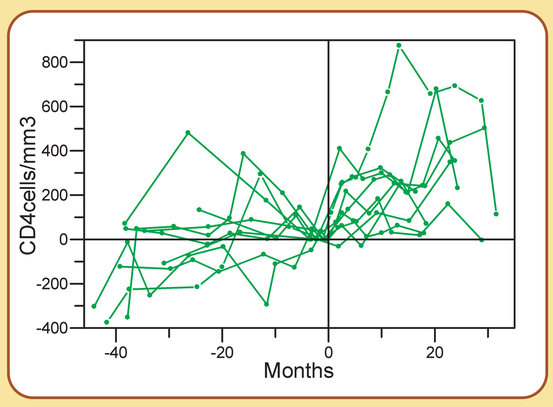
## RESULTS

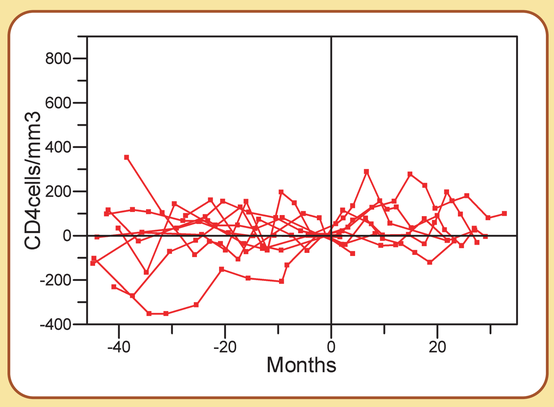
**Virologic response** after 3 months of therapy and at the end of therapy (up to 37,5 months).



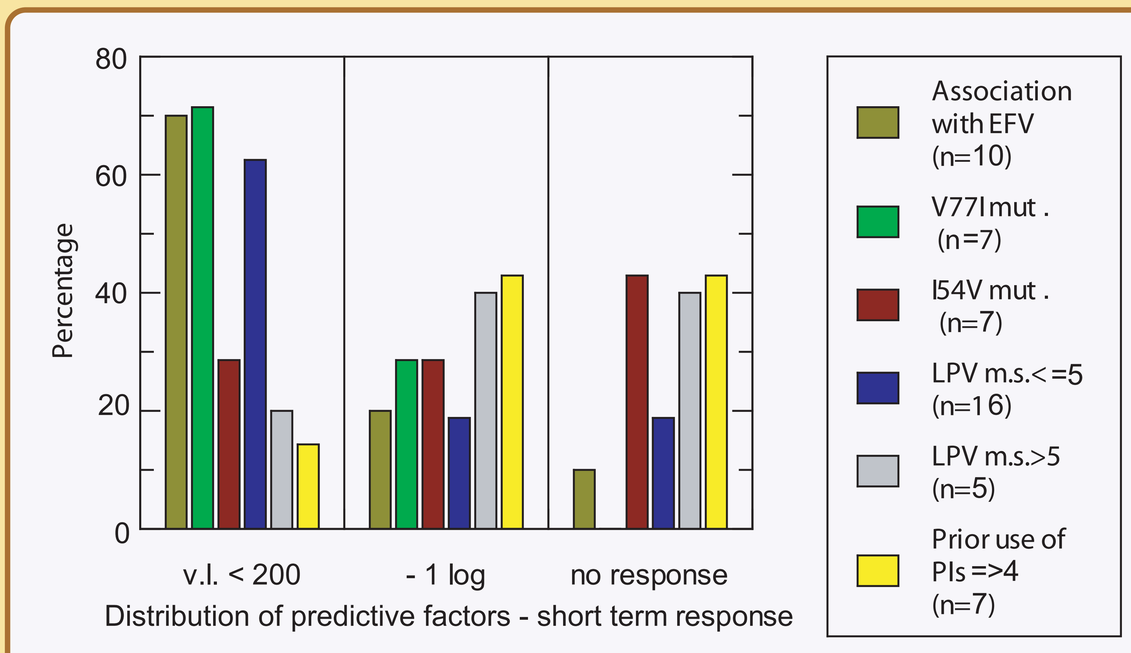

**Short term immunologic response:**
Increase of CD4 count closely corresponded to decrease of viral load. Median increase by 100 cells/µl was detected for patients with undetectable viral loads, 40 cells/µl for patients with partial supression and median decrease by 40 cells/µl in cases of virologic failure.

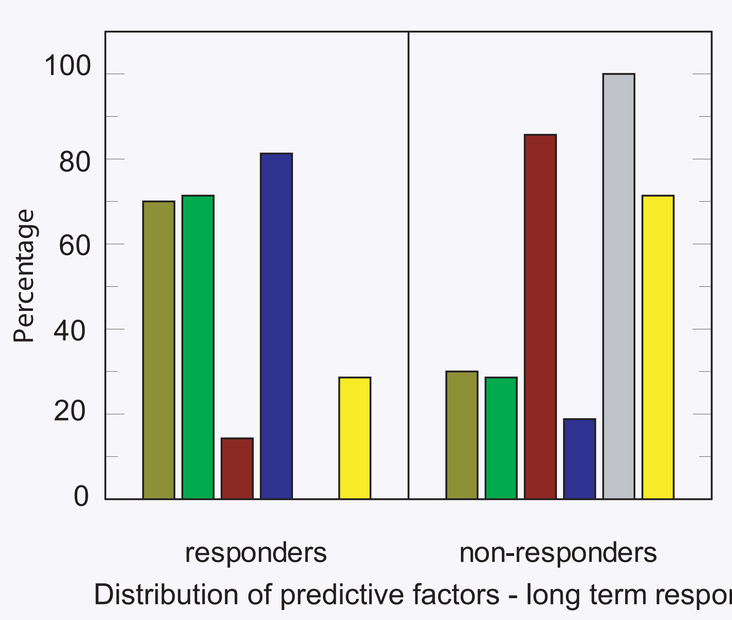
**Long term immunologic response:**
patients with undetectable viral load (in green)
patients with virologic failure (in red)




**Predictive factors** - several factors were identified as predictors of susceptibility to lopinavir. The cohort of 19 patients was retrospectively analyzed and the prevalence of the most significant factors was mapped with regard to the patients' response.




## CONCLUSIONS

In the short term analysis incidence of positive predictive factors (particularly mutation I77V and coprescription with efavirenz score) highly correlated with positive virologic response, whereas distribution of negative predictive factors within the response group was more random. On the contrary, the negative predictive factors (LPV mutation score, prior use of more than 5 PIs and mutation I54V) correlated with patients virologic failure from the long term point of view.
Generally, the results of LPV/r salvage therapy proved to be encouraging. 47% of patients from our study achieved stable suppression of viral replication accompanied by significant improvement of CD4+ count for 31 months on average. Furthermore, the LPV/r proved to be potent inhibitor despite unfavourable prognosis, even though the effect lasted only few months.