

# COMPARATIVE PERFORMANCE OF AMPLICOR HIV-1 MONITOR ASSAY VERSUS NucliSens EasyQ IN SUBTYPE C INFECTED PATIENTS

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## INTRODUCTION

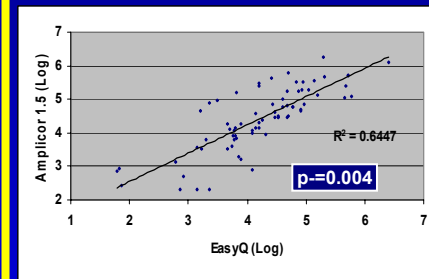
- Non-B subtype HIV infections are becoming more common worldwide.
- New versions of different assays have been developed for measurements of non-subtype B infected patients.
- In Israel, a large percentage of the patient population are immigrants from Ethiopia, and are infected with subtype C HIV.
- In our previous study, we reported viral load underestimation as measured by NASBA assay, compared to the Amplicor 1.5 assay in subtype C infected patients.
- The present study was designed to evaluate the performance of a newer version of the NASBA assay in subtype C infected patients

## METHODS

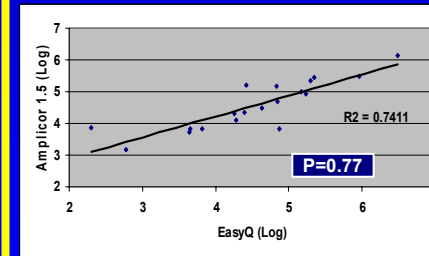
- 87 samples from 76 subtype C infected patients and 20 samples from 20 subtype B infected patients were collected prospectively.
- All samples were tested both by Amplicor 1.5 and by NucliSens EasyQ assays.
- Results of the Amplicor assay were multiplied by a factor of 0.51 in order to convert copies/ml to international units (IU/ml).
- The log converted results were compared using a paired, two-tailed student's t-test
- A discordant result between the two assays was considered as > 0.5 log difference.
- Discordance between CD4 counts and viral load measurements were defined as CD4 <200 cells/ml and VL < 5000 IU/ml.

## RESULTS

### Subtype C



### Subtype B

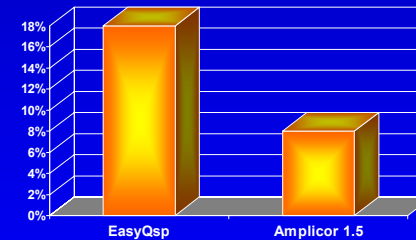


Viral Load results from the Amplicor and EasyQ assays of each sample were compared. The disparity between the two assays was highly significant for subtype C but not significant for subtype B.

	Subtype C	Subtype B
Number	87	20
>0.5 Log Difference	25 (29%)	3 (15%)
>1 Log Difference	12 (14%)	2 (10%)

Magnitude of differences between the two assays according to viral subtype

### CD4 to VL Discrepancy- Subtype C



CD4 to VL discrepancy (CD4 <200, VL <5000 iu) was found in 18% of subtype C patients by EasyQ compared to 8% by the Amplicor Assay

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### Mean viral load:

Subtype C: Amplicor 116,434 (204-1,421,000)  
EasyQsp 84,696 (25- 2,500,000)

Subtype B: Amplicor 126,561 (204- 1,229,100)  
EasyQsp 255,011 (25-3,100,000)

Eleven patients of subtype C were tested on two different occasions. No difference was found in the ratio of EasyQ to Amplicor 1.5 in both occasions ( $p=0.34$ )

## CONCLUSION

- Although the newer versions of commercial assays for viral load measurement were adapted to measure non-subtype B virus, the results of two assays differed significantly.
- Considering the importance of viral load determination in clinical practice, It is important to find a gold standard for non-subtype B viral load determination.