

Comprehensive longitudinal characterization of HIV-1 reservoir markers in patients on stable antiretroviral treatment

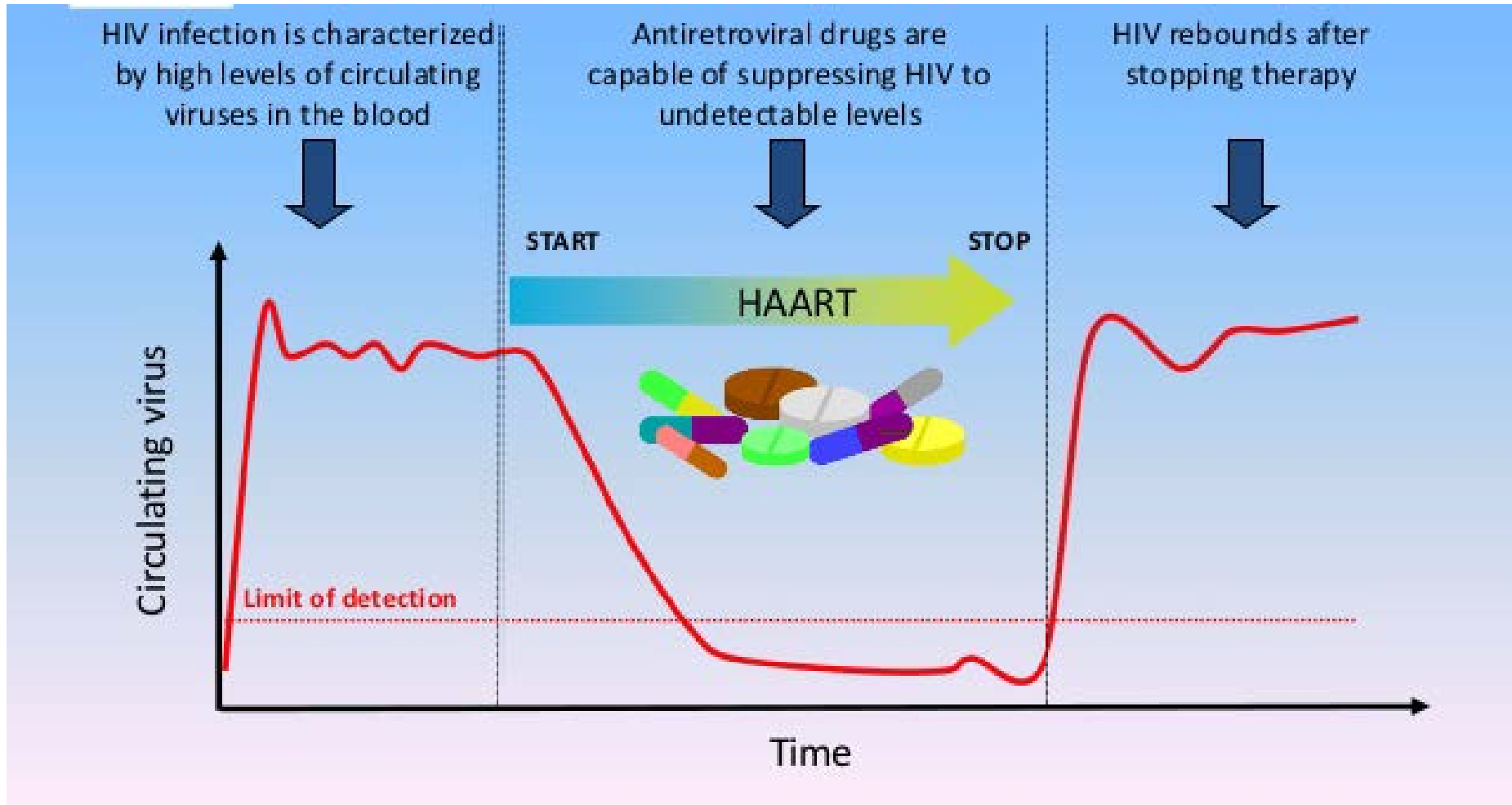
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HIV Ontrafelen



viral reservoir

HIV-1 reservoir



Total HIV DNA

Intact and integrated HIV DNA

Replication competent reservoir

VOA

↑
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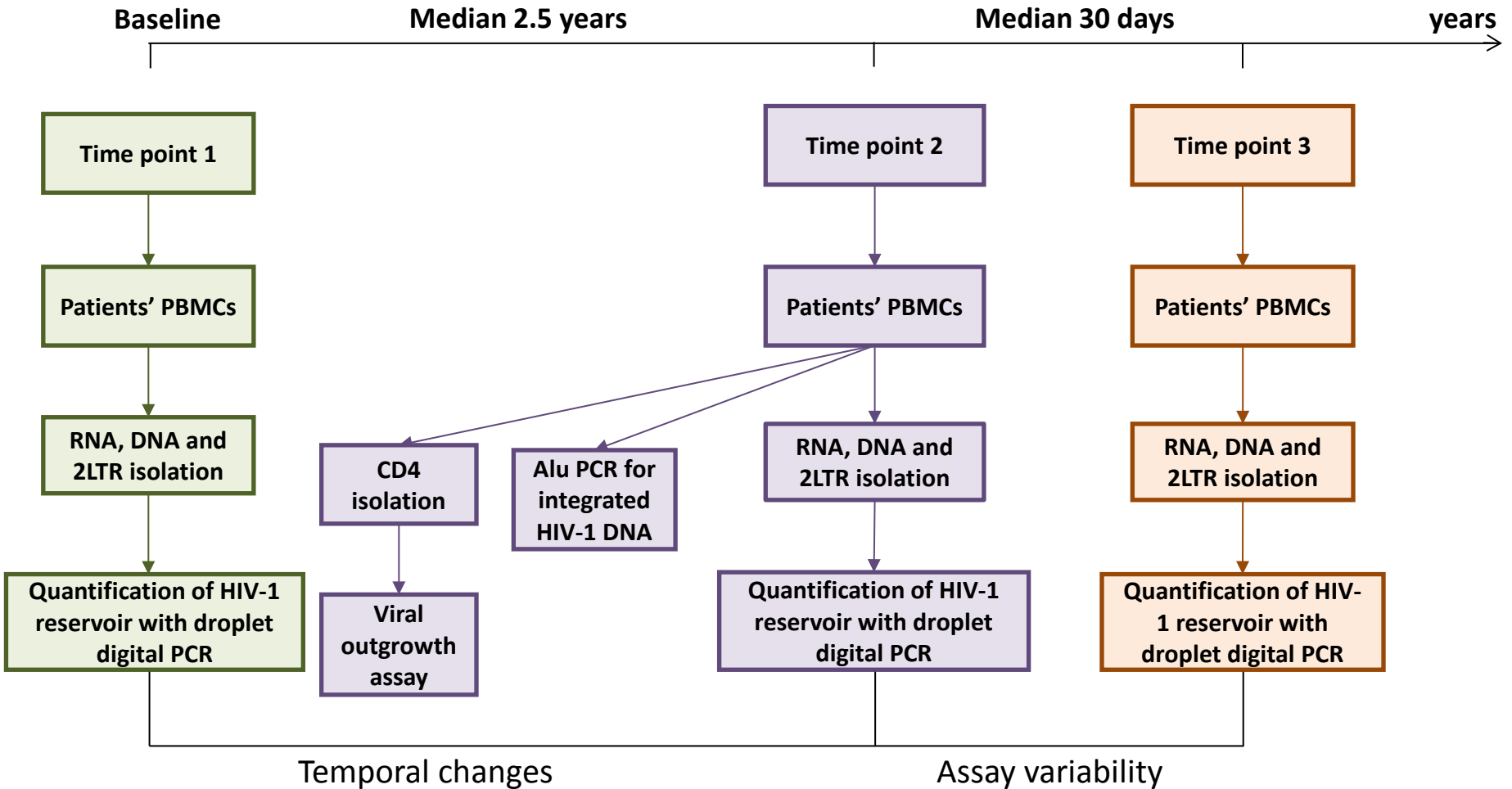
Aims of the study



- To perform a comprehensive evaluation of viral reservoir markers quantified by digital PCR and VOA.
- To assess the long- and short-term dynamics and variations of HIV cellular markers by digital PCR.
- We used 25 patient samples with varying levels of HIV-1 burden
- Median 9 years (IQR: 6-12) ART

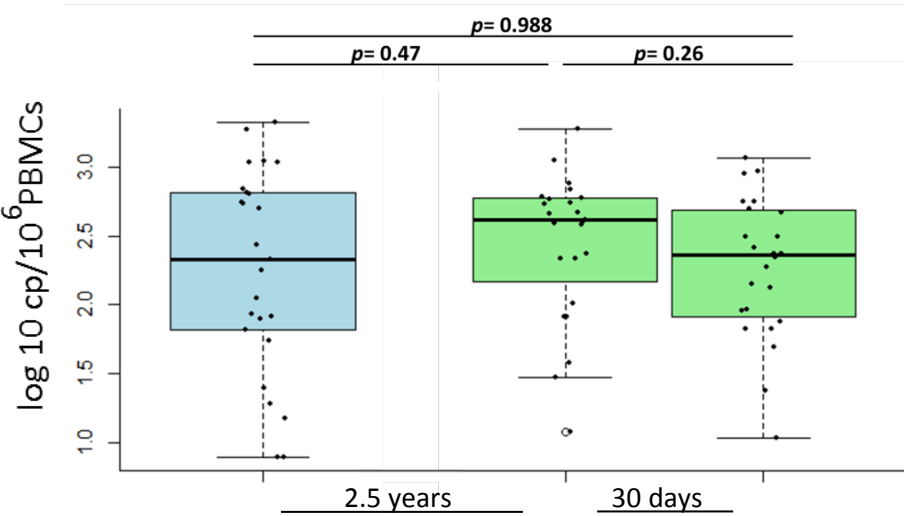


Cross-sectional evaluation

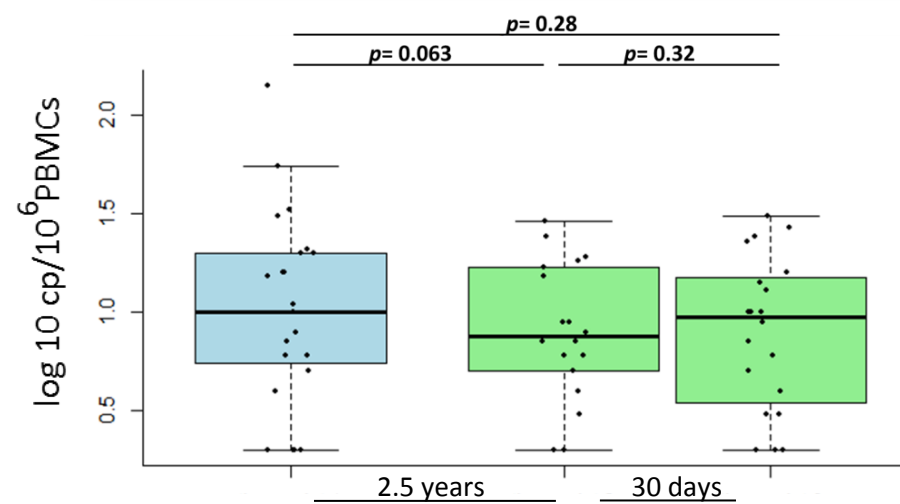




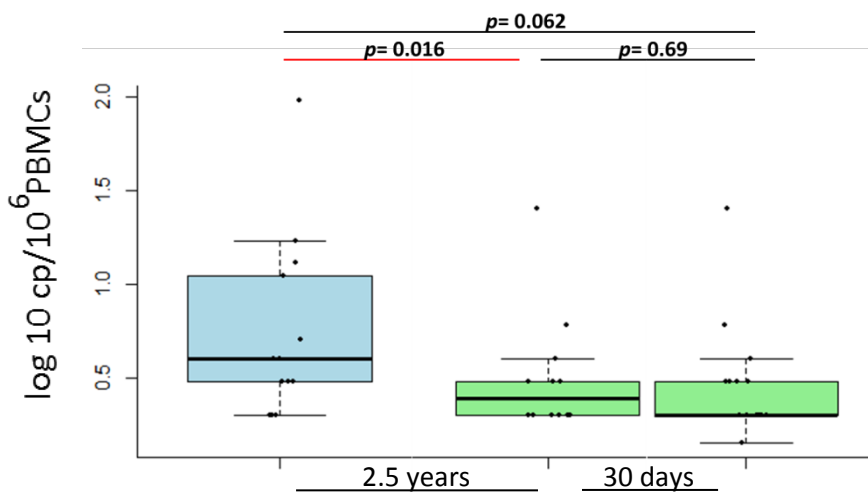
Total HIV-1 DNA



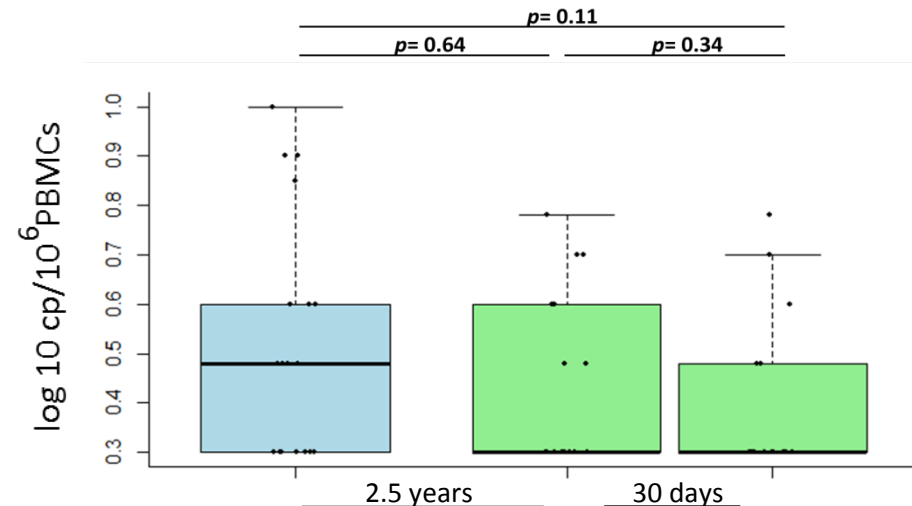
Unspliced HIV-1 RNA



2LTR circles

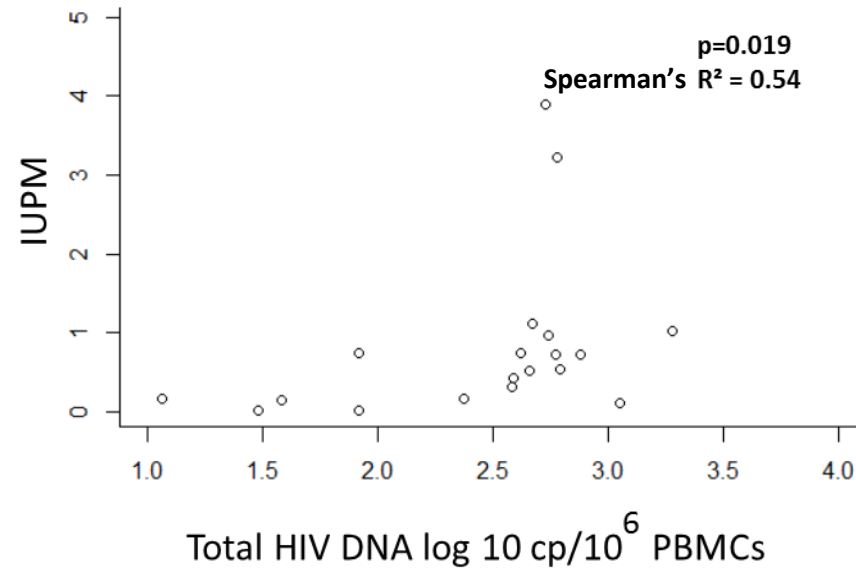


Multiply spliced HIV-1 RNA

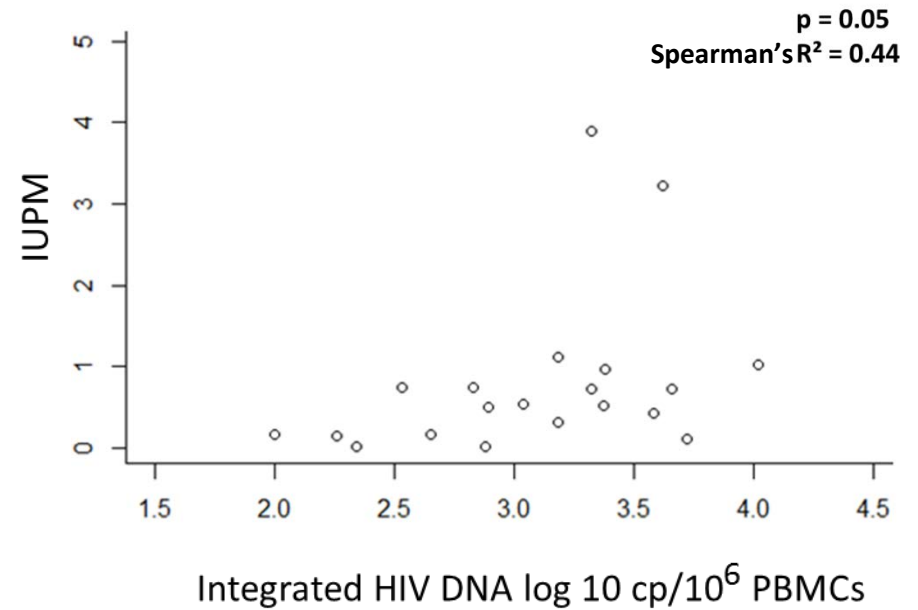




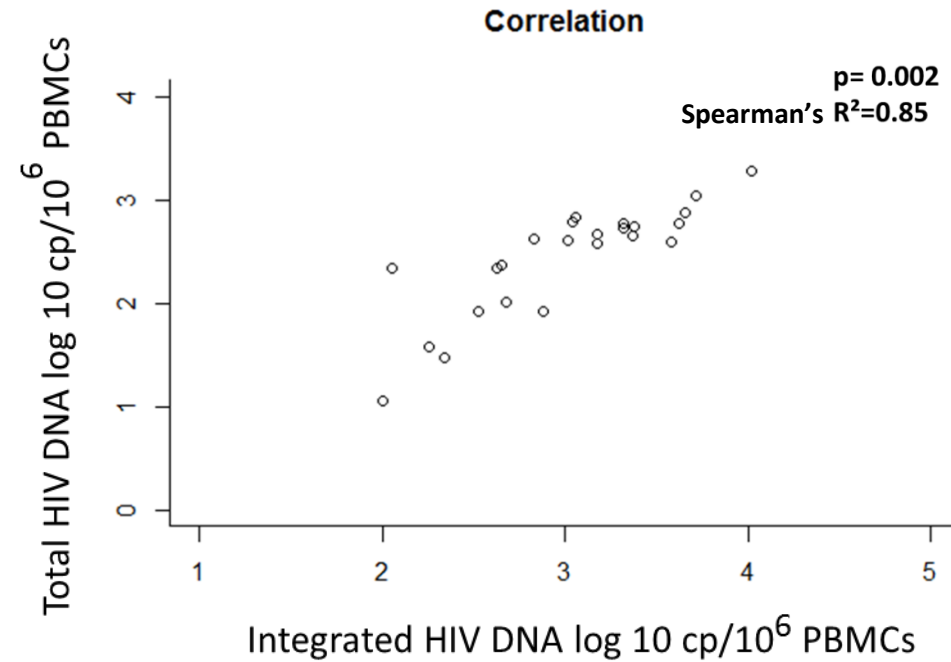
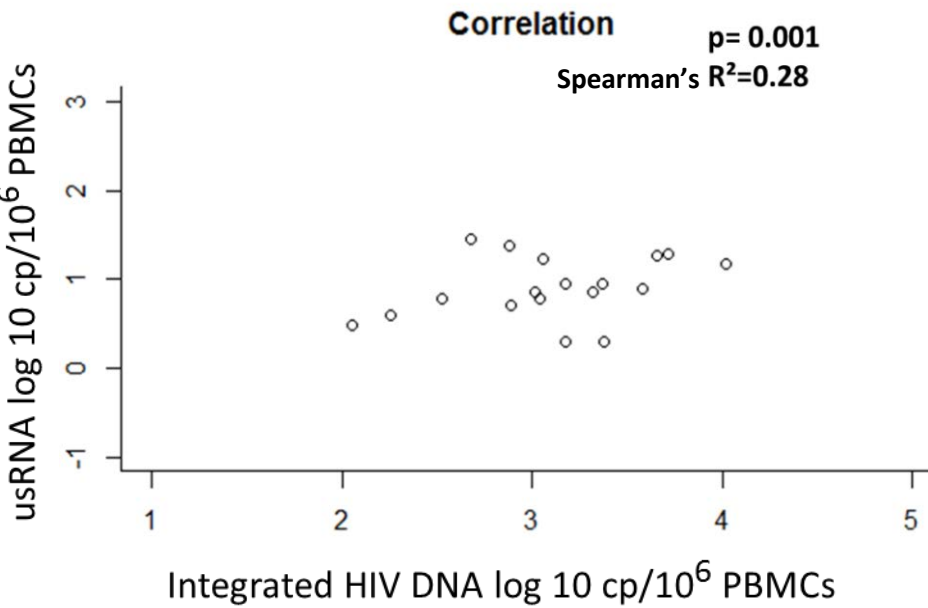
Correlation



Correlation

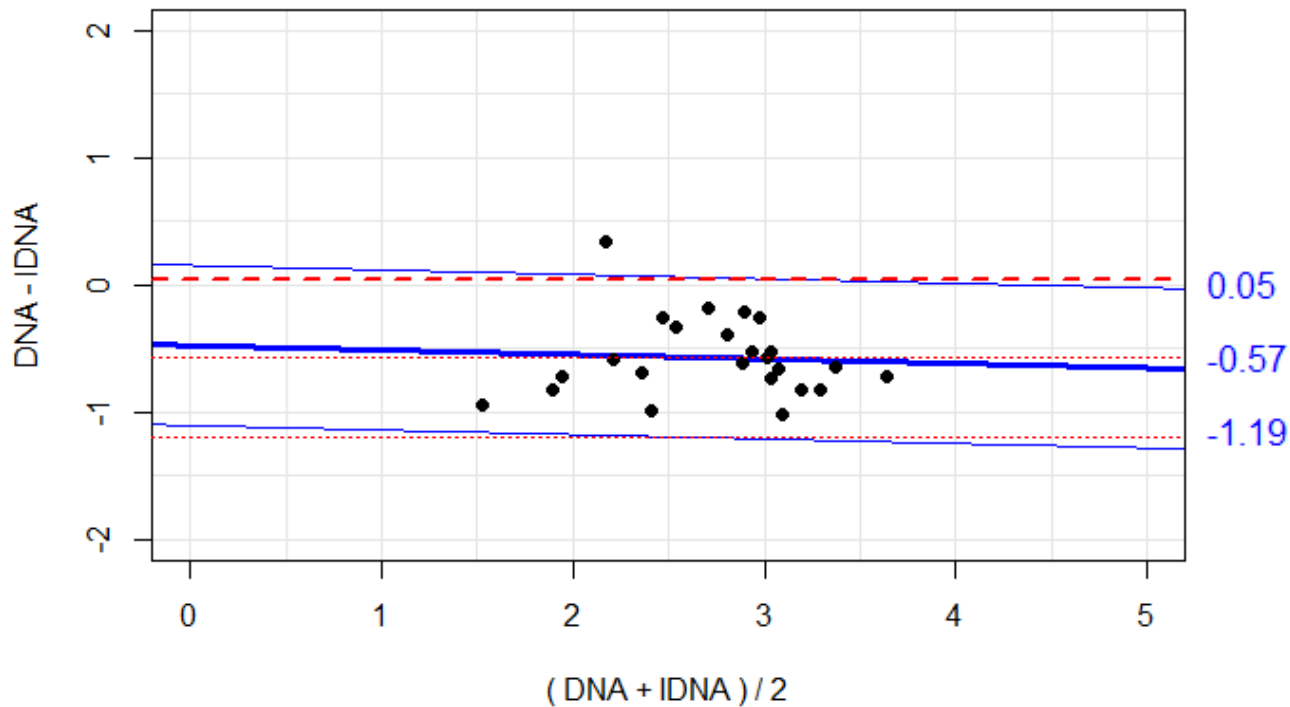


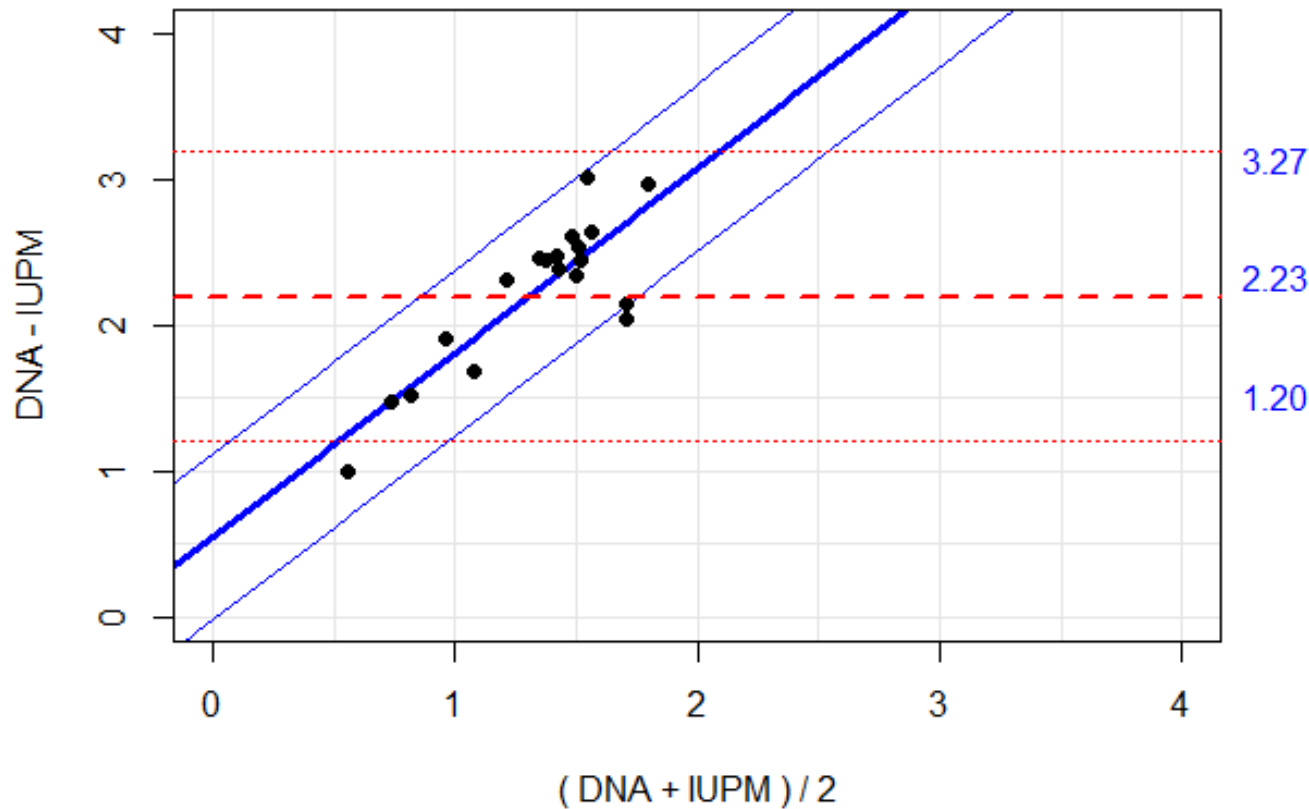
Integrated HIV-1 DNA

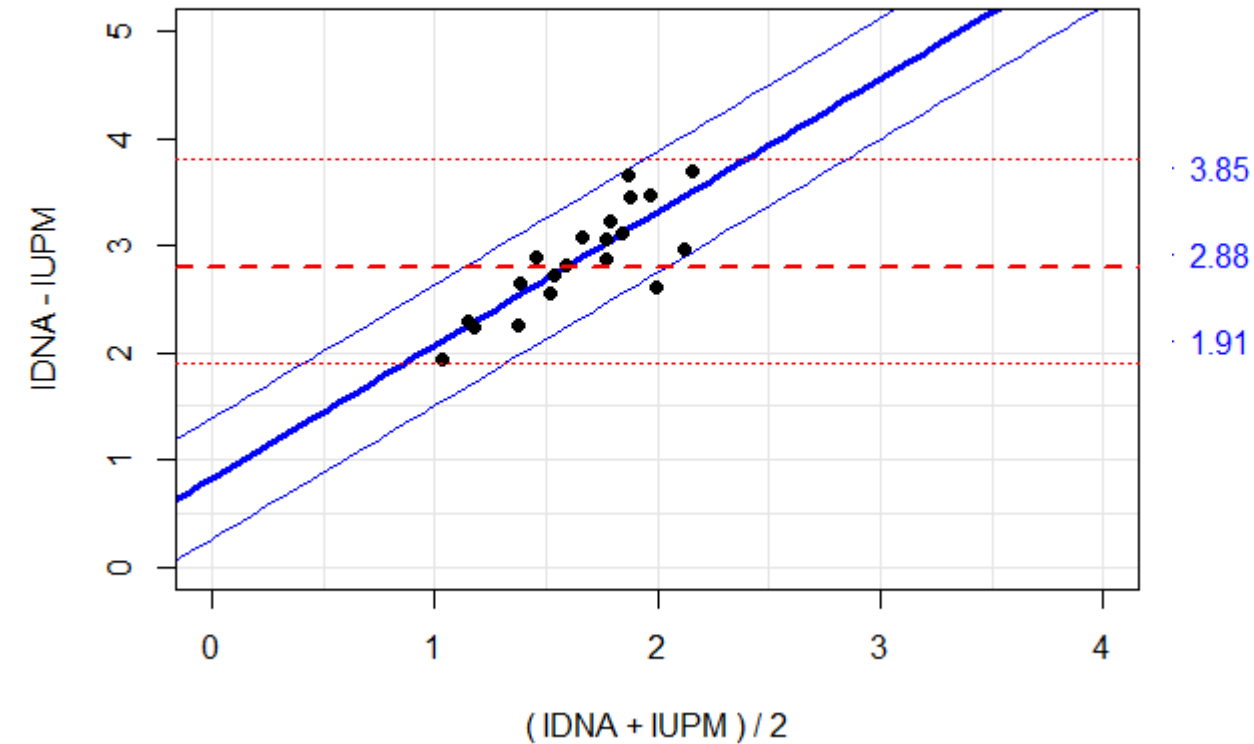




Assessment of agreement in HIV-1 quantification between the PCR based methods and the viral outgrowth assay









- Our data confirms long-term stability of the size and dynamics of HIV-1 DNA levels
- The total pool of HIV-1 DNA correlated with VOA
→ stable fraction of integrated HIV-1 is replication competent
- total HIV-1 DNA and VOA might predict each other
→ further validation in treated patients
 - » The agreement between PCR based and VOA is a function of the total HIV-1 reservoir size.
- A correlation was observed between the residual proviral mRNA transcription levels and integrated HIV-1 DNA



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HIV Ontrafelen

The Ragon Institute of MGH, MIT and Harvard

Mathias Lichterfeld

Xu Yu

Maria Jose Buzon



To all patients participating in this study

