



## The *Characterizing and Understanding the HIV Reservoir for Eradication (CURE)* cohort: a new resource for understanding HIV persistence

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## BACKGROUND

- The development of effective HIV remission or cure strategies will require a deeper understanding of inter-individual variation in HIV reservoir size and composition.
- To this end, we have established the *Characterizing and Understanding the HIV Reservoir for Eradication* (CURE) cohort comprising individuals living with HIV on long-term cART.

**In this poster, we describe CURE and explore associations between clinical history and latent HIV reservoir size.**

# METHODS

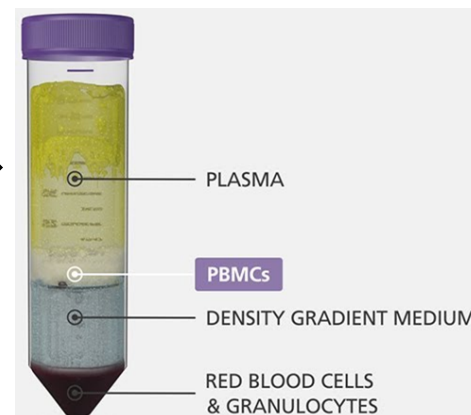
Participant recruitment and  
informed consent



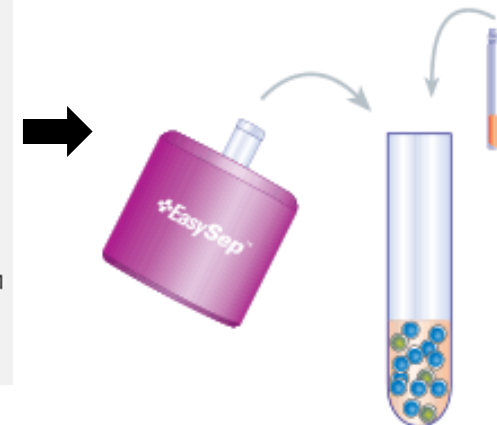
Blood draw (450mL)



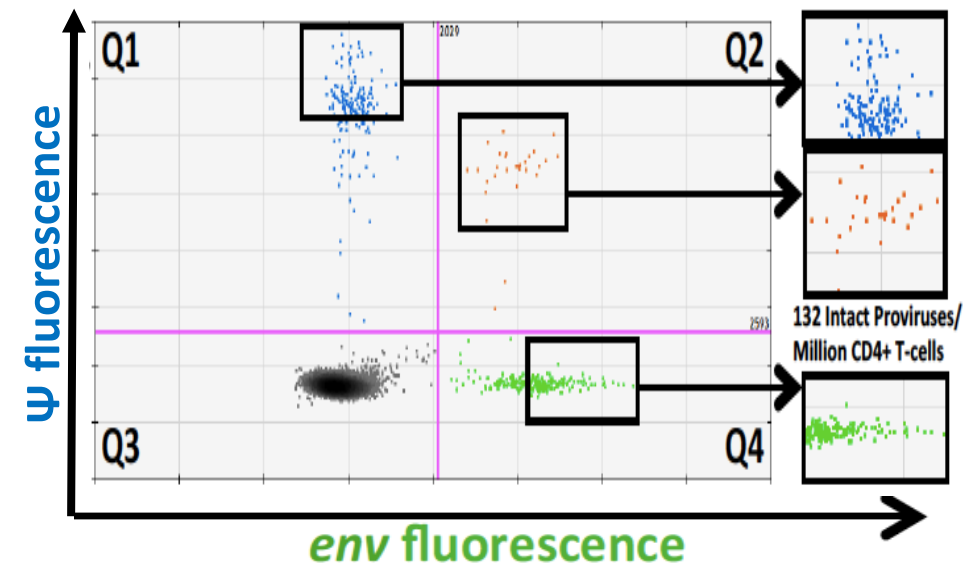
PBMC isolation



CD4 isolation from PBMCs



Quantification of total and intact latent reservoir using Intact Proviral DNA assay  
via droplet digital PCR (ddPCR) for **N=14** CURE participants



Genomic DNA extraction



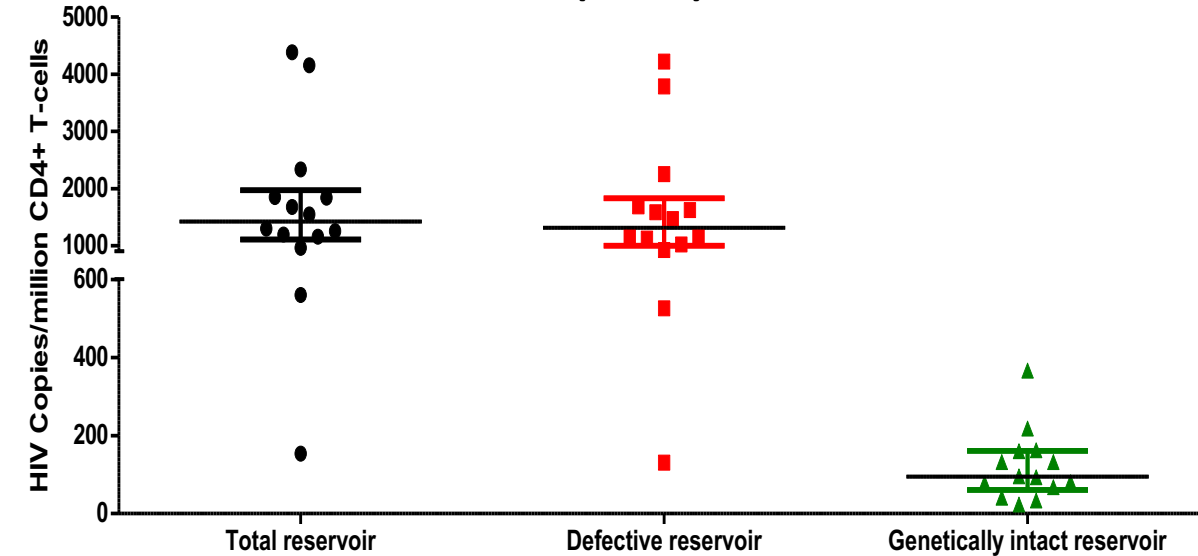


# RESULTS

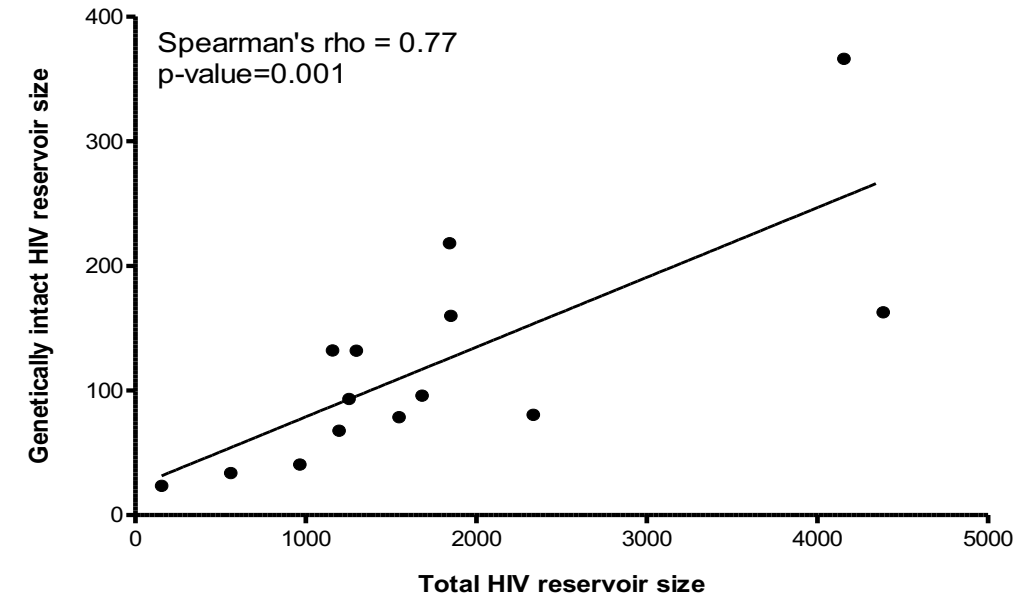
**Table 1: Characteristics of the CURE cohort**

Participants recruited so far	31
Biological sex	
<i>Male</i>	29
<i>Female</i>	2
Median age (IQR)	57 (48-63) years
HIV subtype	B
Median (IQR) estimated duration of uncontrolled HIV infection	7 (2-15) years
Subsequent median (IQR) cART duration	13 (9-20) years
Median (IQR) nadir CD4 <sup>+</sup> T-cell count	280 (120-630) cells/mm <sup>3</sup>
Median (IQR) archived pre-cART plasma available	5 (2-16) samples/participant

**Figure 1: Latent HIV reservoir size of the CURE participants (N=14)**



**Figure 2: Positive correlation between total and intact reservoir**



*No significant correlations observed between uncontrolled infection duration, cART duration, nadir CD4 count, and reservoir size.*

## CONCLUSION

- CURE is a new Canadian HIV cohort, comprising individuals with diverse clinical histories, including those treated in early infection and long-term HIV survivors, will advance our understanding of HIV persistence.
- The availability of archived plasma specimens will allow us to investigate the reservoir diversity in the context of HIV's within-host evolutionary history.