

Supplemental Table 1: Relative quantification of HIV DNA in PBMC and CSF

PBMC from 3 different participants who had detectable HIV DNA in CSF cells were serially diluted, extracted, and assayed for HIV DNA and human CCR5 copies with the same assay method used for CSF cell pellets (20). Shown below are average copies of HIV DNA from triplicate wells and the total copies of HIV DNA detection in serially diluted PBMC compared to those in undiluted CSF cells. The total copies of HIV DNA detected in CSF cells are the same or higher than those in PBMC after normalization for cell equivalents assayed.

Table 1A: PID #1			
PBMC			
Total cell equivalents assayed (CCR5 copies)	Average copies/well of HIV DNA detected	Total copies HIV DNA detected	HIV DNA copies/10,000 cells
263,550	38.5	115.5	4.4
105,195	21.8	65.4	6.2
60,255	10.6	31.9	5.3
27,000	8.9	26.6	9.9
9,876	1.7	5.1	5.2
4,286	1.4	4.1	9.6
2,180	0	0	0
818	0	0	0
CSF Cells			
622	0.9	2.6	41.8

Table 1B: PID #2			
PBMC			
Total cell equivalents assayed (CCR5 copies)	Average copies/well of HIV DNA detected	Total copies HIV DNA detected	HIV DNA copies/10,000 cells
224,700	66.3	198.8	8.8
51,690	17.9	53.6	10.4
33,390	13.8	41.4	12.4
16,530	6.2	18.7	11.3
5,366	1.4	4.3	8.0

2,529	0.9	2.6	10.3
1,292	0.9	2.8	21.7
439	0	0	0
CSF Cells			
680	0.7	2.0	29.4

Table 1C: PID#3			
PBMC			
Total cell equivalents assayed (CCR5 copies)	Average copies/well HIV DNA detected	Total copies HIV Int DNA detected	HIV DNA copies/10,000 cells
279,750	36.9	110.7	4.0
70,875	11.7	35.0	4.9
37,995	5.9	17.6	4.6
16,725	5.0	15.1	9.0
7,295	0.9	2.7	3.7
3,596	0.5	1.4	3.9
2,073	0	0	0
637	0	0	0
CSF Cells			
2,727	2.4	7.3	26.8

Supplemental Table 2: Measures of HIV inflammatory biomarkers in CSF in HIV positive vs HIV negative participants; median values (Q1, Q3) are shown.

CSF Inflammatory Markers	HIV + (n=69)	HIV- (n=19)	P-Value
IL-6 (pg/mL)	2.3 (1.4-3.4)	2.2 (1.3-2.9)	0.59
CXCL-10 (pg/mL)	221 (149-295)	138 (89-191)	<0.001
Neopterin (nMol/L)	6.0 (4.4 -7.3)	5.6 (4.4-6.0)	0.13
CCL-2 (pg/mL)	366 (327-438)	431 (356 -545)	0.11
sCD14 (ng/mL)	99.7 (75.3-120)	97.3 (71.4-125)	0.92
sCD163 (ng/mL)	38.3 (29.7-46.0)	28.2 (24.4 -34.9)	<0.001

Supplemental Table 3: Associations between HIV participant characteristics and CSF inflammatory biomarkers. Spearman correlations are shown.

Clinical Features (n=69)	CSF Biomarker											
	IL-6		CXCL-10		Neopterin		CCL-2		sCD14		sCD163	
	r	P-value	r	P-value	r	P-value	r	P-value	r	P-value	r	P-value
Age at LP	0.0	0.97	0.33	0.006	0.32	0.007	0.29	0.016	0.42	<0.001	0.40	<0.001
Years on ART at LP	-0.12	0.34	-0.09	0.47	0.08	0.51	0.06	0.64	0.10	0.41	0.09	0.45
Pre-ART CD4+ T-Cell Count (cells/mm ³)	-0.07	0.54	0.15	0.23	-0.18	0.13	0.15	0.23	-0.02	0.89	-0.01	0.95
Recent CD4+ T-Cell Count (cells/mm ³)	-0.11	0.37	0.08	0.51	-0.12	0.35	0.03	0.81	-0.11	0.35	-0.06	0.62
Pre-ART CD4:CD8 ratio	0.08	0.51	0.03	0.80	-0.29	0.017	0.12	0.32	-0.03	0.79	-0.03	0.79
Recent CD4:CD8 ratio	0.06	0.61	0.0	0.98	-0.18	0.14	-0.04	0.75	0.03	0.84	0.11	0.39
Pre-ART plasma HIV-1 RNA (log ₁₀ copies/mL)	0.13	0.27	-0.03	0.83	0.03	0.83	-0.10	0.40	0.05	0.70	0.17	0.16

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