

Supplementary table I. CD4+ and CD8+ T cell phenotype.

	HIV+	Healthy controls	P-value ¹	P-value adjusted ²
CD4+/38+DR+ %	6.05 (4.59-10.1)	1.91 (1.03-2.825)	1.06E-08	2.96E-07
CD4+/28-57+ %	2.38 (0.46-5.87)	0.36 (0.0335-1.885)	3.28E-03	9.18E-02
CD4+/CD27+%	84.1 (78.8-90)	88.8 (83.8-92.3)	4.22E-02	1
CD4+/CD28+%	95.2 (91.1-98.4)	97.3 (94.9-98.5)	8.55E-02	1
CD4+/CD38+%	52.2 (40.7-60.9)	52.6 (42.1-62.75)	6.52E-01	1
CD4+/CD38+ MFI	270 (246-298)	225 (209.5-238)	1.43E-04	4.00E-03
CD4+/CD45RO+ %	55.2 (41.5-65.2)	50.2 (33.7-55.65)	1.25E-01	1
CD4+/CD57+%	3.96 (1.71-7.6)	1.24 (0.25-2.365)	3.21E-04	9.00E-03
CD4+/CD57+ MFI	1887 (706-4425)	576 (377-1922.5)	3.21E-03	8.99E-02
CD4+/HLA-DR+%	17.5 (12.6-27)	6.12 (4.1-9.525)	2.04E-08	5.71E-07
CD4+/HLA-DR+ MFI	224 (205-256)	178 (173.5-183.5)	5.42E-08	1.52E-06
CD4+/PD-1+%	28.4 (22.7-34.4)	20.4 (14.6-27.45)	1.62E-03	4.53E-02
CD4+/PD-1+ MFI	340 (302-385)	241 (229-269.5)	1.97E-09	5.51E-08
CD4+/Tim-3%	1.86 (1.4-2.35)	1.21 (0.875-1.525)	6.82E-05	1.91E-03
CD8+/38+DR+ %	23.9 (19.3-41.8)	4.76 (2.8-6.955)	2.88E-10	8.05E-09
CD8+/28-57+ %	33.6 (24.4-42.4)	14.1 (7.65-20.75)	5.45E-06	1.53E-04
CD8+/CD27+ %	50.2 (38.3-63)	77.1 (61.15-82.4)	3.45E-05	9.66E-04
CD8+/CD28+ %	43 (28.8-58.4)	74 (64.25-82.65)	4.10E-07	1.15E-05
CD8+/CD38+ %	54 (37.7-67.6)	35.2 (28.8-43.05)	7.47E-04	2.09E-02
CD8+/CD38+ MFI	173 (151-220)	130 (122-138.5)	3.33E-08	9.32E-07
CD8+/CD45RO+ %	39.2 (32.4-50.6)	28 (20.35-38.35)	2.82E-03	7.89E-02
CD8+/CD57+ %	35.8 (26.8-45)	15.7 (9.015-22.3)	1.10E-06	3.09E-05
CD8+/CD57+ MFI	2093 (1482-2891)	1602 (1104.5-2182)	1.43E-02	4.01E-01
CD8+/HLA-DR+ %	52.7 (36.4-65)	16.8 (13.65-25.2)	2.42E-09	6.77E-08
CD8+/HLA-DR+ MFI	220 (195-257)	157 (143-165.5)	8.79E-08	2.46E-06
CD8+/PD-1+ %	37.9 (29.4-47.1)	20.4 (12.9-23.55)	1.58E-07	4.41E-06
CD8+/PD-1+ MFI	315 (278-372)	265 (257-317.5)	5.87E-03	1.64E-01
CD8+/Tim-3 %	2.42 (1.5-3.6)	0.69 (0.53-0.8)	2.66E-08	7.45E-07

Median (IQR) shown for all parameters

¹ P-value from Mann-Whitney test

² P-value adjusted by Bonferroni correction

Supplementary table II. Significant correlations

Marker(s)	Adjusted P-value ¹	Rho ²	Laboratory parameter
CD4+/38+DR+ %	1.52E-03	-0.588	CD4 count
CD4+/HLA-DR+%	1.89E-02	-0.522	CD4 count
CD4+/HLA-DR+ MFI	3.33E-04	-0.622	CD4 count
CD4+/PD-1+%	1.60E-02	-0.526	CD4 count
CD4+/PD-1+ MFI	2.33E-04	-0.63	CD4 count
CD8+/38+DR+ %	5.10E-03	-0.558	CD4 count
CD4+/38+DR+ %	1.75E-04	-0.636	CD4 %
CD4+/HLA-DR+%	4.34E-03	-0.562	CD4 %
CD4+/HLA-DR+ MFI	3.34E-04	-0.622	CD4 %
CD4+/PD-1+%	4.56E-03	-0.561	CD4 %
CD4+/PD-1+ MFI	8.69E-09	-0.783	CD4 %
CD8+/38+DR+ %	3.76E-03	-0.566	CD4 %
CD8+/CD38+ %	2.14E-02	-0.518	CD4 %
CD8+/CD38+ MFI	1.18E-02	-0.535	CD4 %
CD8+/CD27+ %	4.53E-02	-0.495	CD8 count
CD4+/38+DR+ %	2.88E-04	0.625	CD8 %
CD4+/HLA-DR+%	1.03E-03	0.597	CD8 %
CD4+/HLA-DR+ MFI	3.70E-04	0.62	CD8 %
CD4+/PD-1+ MFI	2.49E-03	0.576	CD8 %
CD8+/38+DR+ %	2.46E-02	0.514	CD8 %
CD4+/38+DR+ %	2.99E-02	0.523	VL
CD4+/HLA-DR+ MFI	4.77E-02	0.508	VL
CD8+/38+DR+ %	1.49E-02	0.544	VL
CD8+/CD38+ %	1.10E-02	0.553	VL
CD8+/CD38+ MFI	1.44E-03	0.606	VL
CD4+/38+DR+ %	5.96E-06	-0.697	CD4/CD8 ratio
CD4+/HLA-DR+%	2.04E-04	-0.633	CD4/CD8 ratio
CD4+/HLA-DR+ MFI	1.75E-05	-0.679	CD4/CD8 ratio
CD4+/PD-1+%	1.81E-02	-0.523	CD4/CD8 ratio
CD4+/PD-1+ MFI	5.85E-08	-0.761	CD4/CD8 ratio
CD8+/38+DR+ %	9.42E-04	-0.599	CD4/CD8 ratio
CD8+/CD38+ %	3.07E-02	-0.507	CD4/CD8 ratio
CD8+/CD38+ MFI	7.36E-03	-0.548	CD4/CD8 ratio

¹ P-value adjusted by Bonferroni correction

² Non-parametric Spearman correlation coefficient

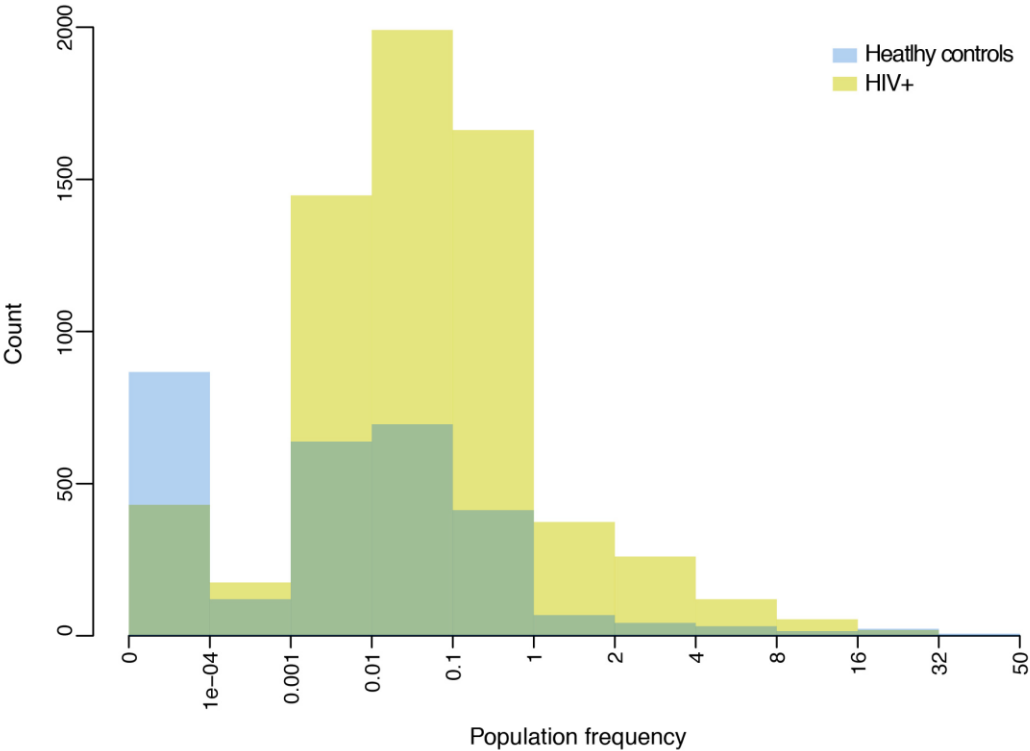
Supplementary table III. Significant correlations between the CD4/CD8 ratio and CD4% with pathological T cell populations

Immunopathological population	Adjusted P-value ¹	Rho ²	Laboratory parameter
CD4+CD8-27+R0+28+38+57+DR+PD+Tim-	2.80E-02	-0.566	CD4 count
CD4+CD8-27+R0+28+38+57-DR+PD+Tim-	5.90E-06	-0.727	CD4 count
CD4+CD8-27-R0+28+38+57-DR+PD+Tim-	2.95E-05	-0.703	CD4 count
CD4+CD8-27-R0+28+38+57-DR+PD-Tim-	3.61E-03	-0.614	CD4 count
CD4+CD8-27+R0+28+38+57-DR+PD+Tim-	1.81E-07	-0.772	CD4 %
CD4+CD8-27+R0+28-38+57-DR+PD+Tim-	3.55E-03	-0.615	CD4 %
CD4+CD8-27-R0+28+38+57-DR+PD+Tim-	3.94E-06	-0.733	CD4 %
CD4+CD8-27-R0+28+38+57-DR+PD-Tim-	1.16E-02	-0.588	CD4 %
CD4-CD8+27+R0+28-38+57-DR+PD+Tim-	3.86E-02	-0.558	CD4 %
CD4-CD8+27+R0-28+38-57-DR-PD-Tim-	4.49E-02	0.554	CD4 %
CD4-CD8+27-R0+28-38+57-DR+PD+Tim+	3.18E-02	-0.563	CD4 %
CD4-CD8+27-R0+28-38+57-DR+PD+Tim-	1.79E-02	-0.577	CD4 %
CD4+CD8-27-R0-28+38+57-DR+PD+Tim-	2.86E-02	0.566	CD8 count
CD4+CD8-27+R0+28+38+57-DR+PD+Tim-	1.52E-03	0.633	CD8 %
CD4+CD8-27-R0+28+38+57-DR+PD+Tim-	1.45E-03	0.634	CD8 %
CD4-CD8+27-R0+28-38+57-DR+PD+Tim+	1.13E-03	0.656	VL
CD4-CD8+27-R0+28-38+57-DR+PD+Tim-	6.62E-04	0.666	VL
CD4-CD8+27-R0-28-38+57-DR+PD+Tim+	2.58E-02	0.584	VL
CD4+CD8-27+R0+28+38+57-DR+PD+Tim-	0.00E+00	-0.784	CD4/CD8 ratio
CD4+CD8-27+R0+28-38+57-DR+PD+Tim-	1.56E-03	-0.645	CD4/CD8 ratio
CD4+CD8-27+R0+28-38-57-DR+PD+Tim-	3.23E-02	-0.571	CD4/CD8 ratio
CD4+CD8-27-R0+28+38+57-DR+PD+Tim-	5.10E-07	-0.759	CD4/CD8 ratio
CD4+CD8-27-R0+28+38+57-DR+PD-Tim-	2.35E-03	-0.636	CD4/CD8 ratio
CD4+CD8-27-R0+28-38+57-DR+PD+Tim-	9.75E-03	-0.602	CD4/CD8 ratio
CD4-CD8+27+R0-28+38-57-DR-PD-Tim-	4.14E-02	0.564	CD4/CD8 ratio
CD4-CD8+27-R0+28-38+57-DR+PD+Tim+	3.97E-02	-0.557	CD4/CD8 ratio
CD4-CD8+27-R0-28-38+57-DR+PD-Tim-	4.71E-02	-0.56	CD4/CD8 ratio

¹ P-value adjusted by Bonferroni correction

² Non-parametric Spearman correlation coefficient

Supplementary figure 1



SUPPLEMENTAL FIGURE 1. The distribution of Boolean population frequencies for the HIV infected (green) and healthy control (blue) subjects are shown as overlaid histograms. The x-axis shows the intervals of population frequencies and the y-axis shows the number of events found in the corresponding interval.