

Supplementary Figure and Tables for Asowata O et al

'Irreversible depletion of intestinal CD4<sup>+</sup> T-cells is associated with T-cell activation  
during chronic HIV infection'

Supplemental Table 1 Demographics and TB treatment status (%) in GI cohort  
(n=529).

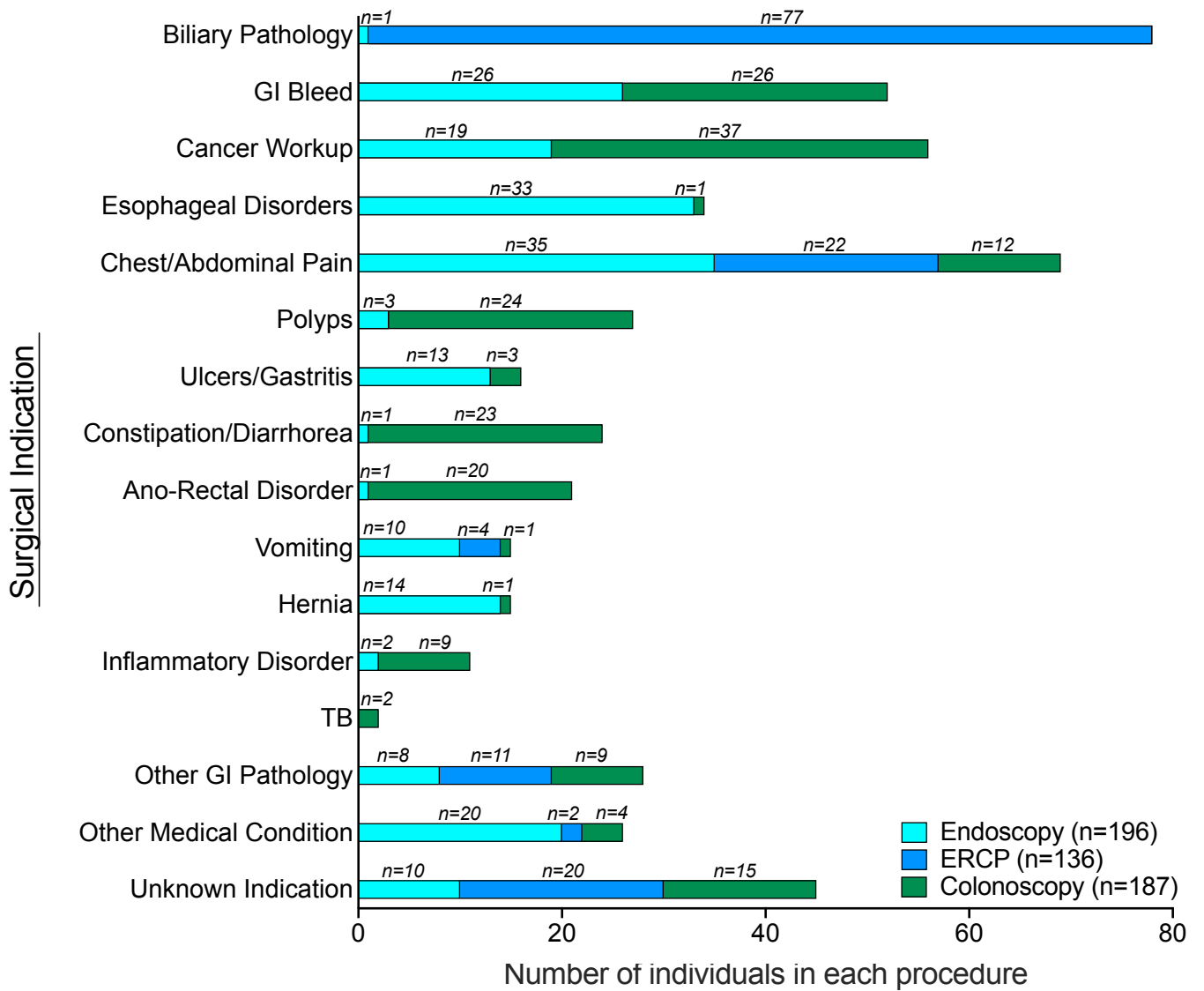
Supplementary Figures 1-5.

**Supplemental Table 1.** Demographics and TB treatment status (%) in GI cohort (n=529).

	All, n=529/529 (100%)	HIV <sup>-</sup> , n=359/529 (68%)	HIV <sup>+</sup> all, n=170/529 (32%)	*HIV <sup>+</sup> ART <sup>+</sup> , n=102/120 (85%)	HIV <sup>+</sup> ART <sup>-</sup> , n=24/160 (15%)
<b>Gender</b>					
Female	62	57	74	77	65
Male	38	43	26	23	35
<b>Ethnicity</b>					
Black	64	53	86	85	78
Indian	24	30	12	14	17
Coloured	5	7	1	0	4
Caucasian	7	9	1	1	0
Other	0	0	0	0	0
<b>Procedure</b>					
Colonoscopy	37	42	31	31	22
Endoscopy	36	38	30	34	22
ERCP	28	22	39	36	57
<b>TB infection</b>					
Active TB	2	2	2	3	0
<b>Previous TB</b>					
Previous TB	11	4	24	27	9
<b>TB Treatment</b>					
<sup>^</sup> Current on treatment	10	8	13	14	0
<b>Starting ART at diagnosis</b>					
Starting ART at diagnosis	NA	NA	NA	38	NA

<sup>^</sup>Rifampin/Isoniazid/Pyrazinamide/Ethambutol. \*Undetectable viral load (VL<20).

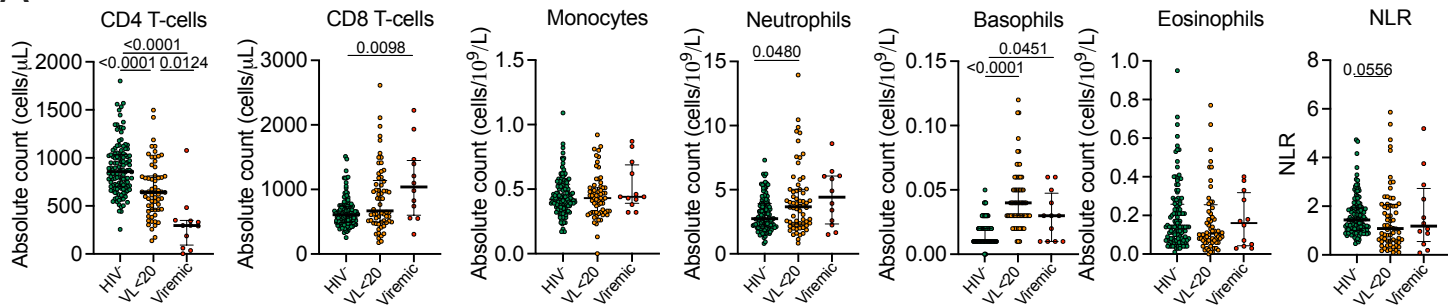
Suppl Figure 1 (Related to Figure 1).



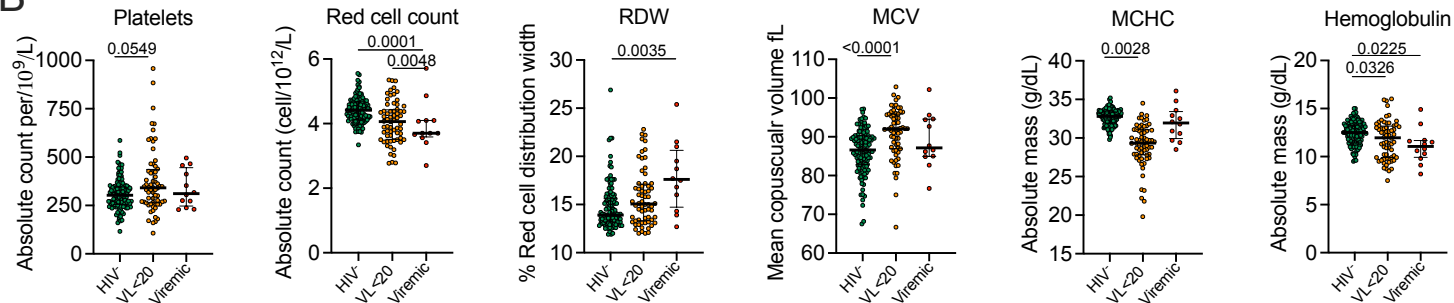
**Supplementary Figure 1 (related to Figure 1).** Surgical indication of participants presenting to the GI clinic stratified by procedures (Endoscopy, Colonoscopy, ERCP) (n=519). The number of patients for each indication/procedure combination is listed above each bar. 'Unknown' are patients who presented to the GI clinic with no surgical indication.

Supl Figure 2 (Related to Figure 2).

**A**

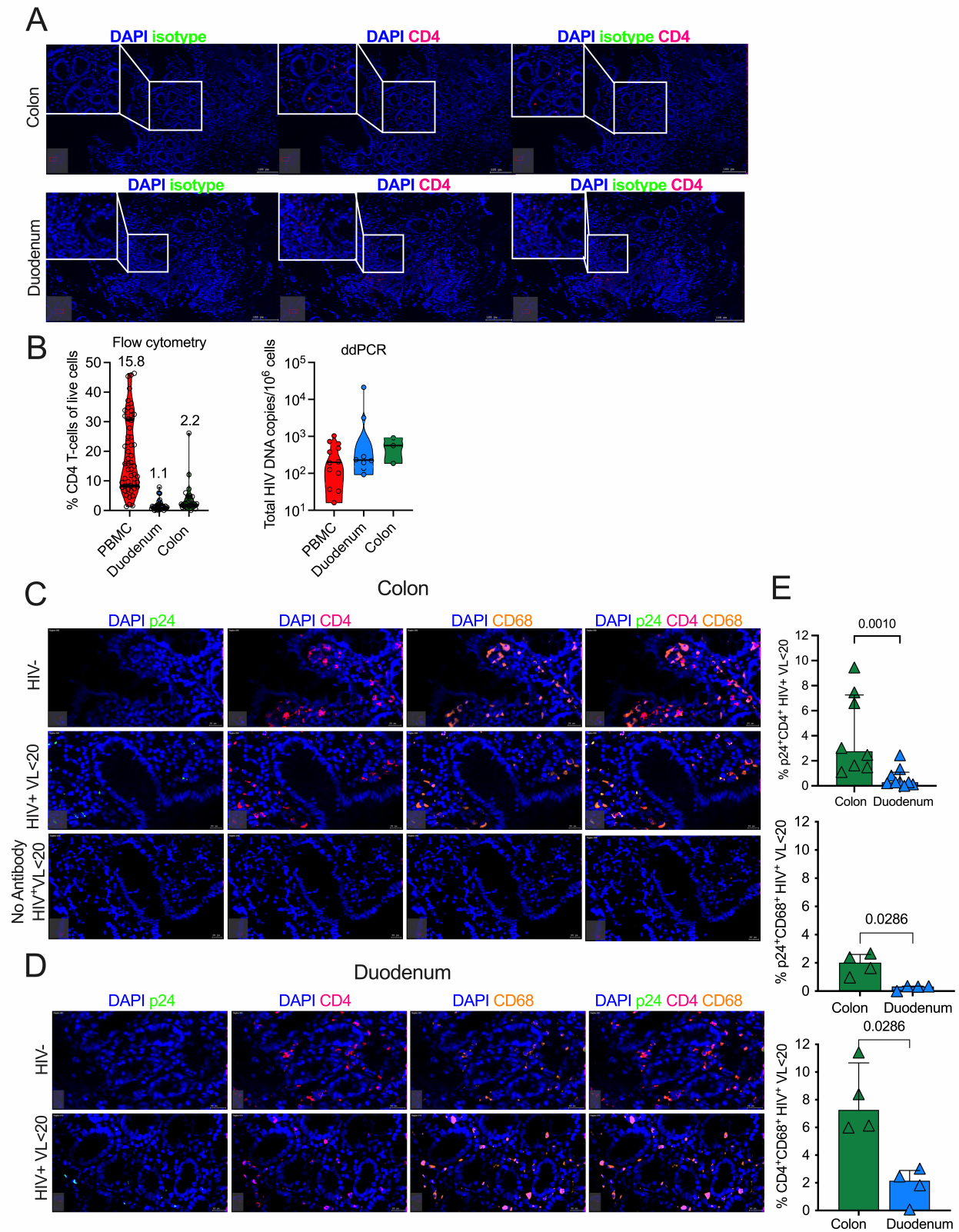


**B**



**Supplementary Figure 2 (related to Figure 2).** Full blood counts of study participants stratified by HIV status and viral load. P-values by Mann-Whitney U test.

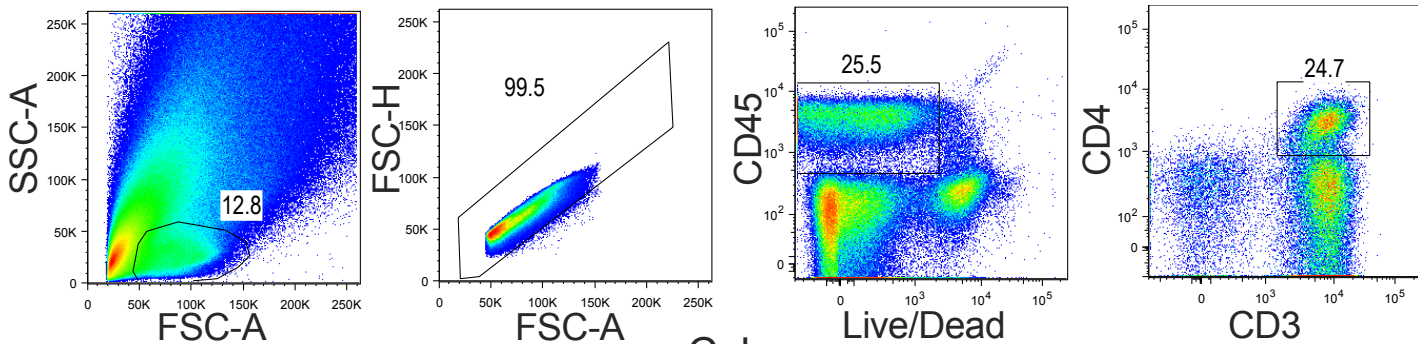
Suppl Figure 3 (related to Figure 5)



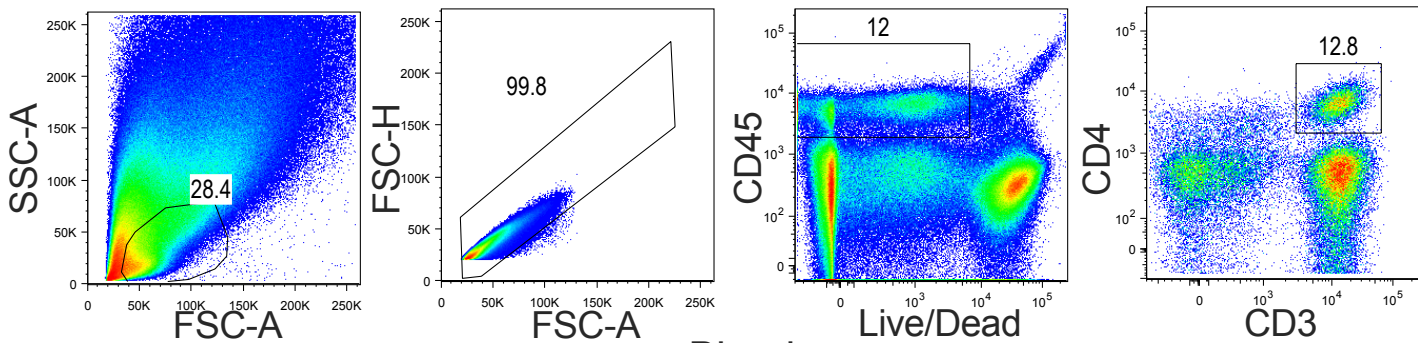
**Supplementary Figure 3 (related to Figure 5). HIV-1-p24 detection in the gut mucosa in ART treated individuals.** **A.** Representative fluorescent immunohistochemistry image of colon and duodenum tissue sections from study participant for HIV-1-p24 isotype controls (green) and CD4 T-cells (red) proportion of total cells stained with DAPI (blue) from HIV infected participants. Bars, 100  $\mu$ m and 20  $\mu$ m for large and inserted images respectively. **B.** % CD4 T-cells of live cells from PBMC, duodenum and colon of selected study participants; comparison of HIV-1 DNA in the blood to the duodenum and colon using digital droplet PCR (ddPCR). **C.** Representative fluorescent immunohistochemistry image of colon tissue sections from study participant for HIV-p24 (green), CD4 T-cells (red) and CD68 (orange) proportion of total cells stained with DAPI (blue) from HIV uninfected and HIV infected plasma virally suppressed participants, with no antibody controls included. Bars, 20  $\mu$ m for all images. **D.** Representative fluorescent immunohistochemistry image of duodenum tissue sections from study participant for HIV-p24 (green), CD4 T-cells (red) and CD68 (orange) proportion of total cells stained with DAPI (blue) from HIV uninfected and HIV infected plasma virally suppressed participants. Bars, 20  $\mu$ m for all images. **E.** Quantification of HIV-p24, CD4 T-cells and CD68 cells proportion of total cells in colon (green) and duodenum (blue) stained with DAPI from HIV infected virally suppressed participants. P-values by Mann-Whitney U test.



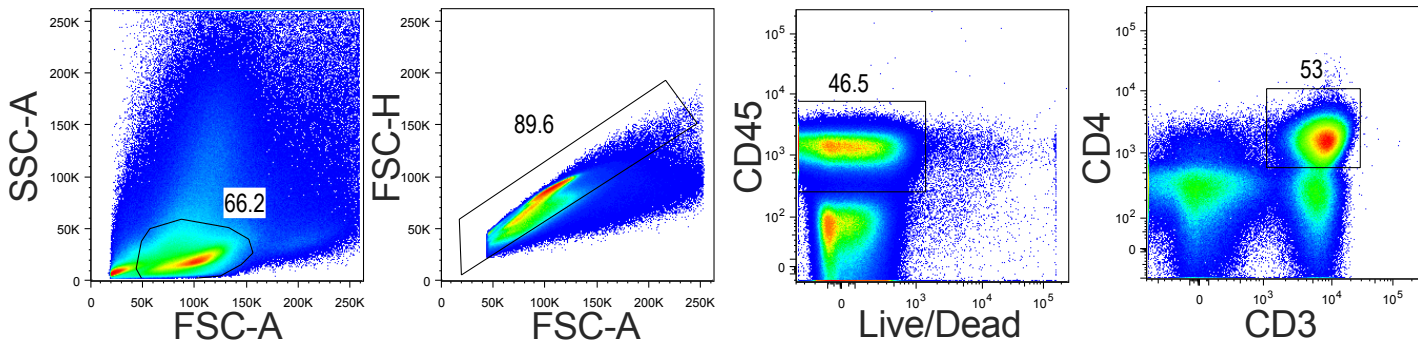
### Duodenum



### Colon

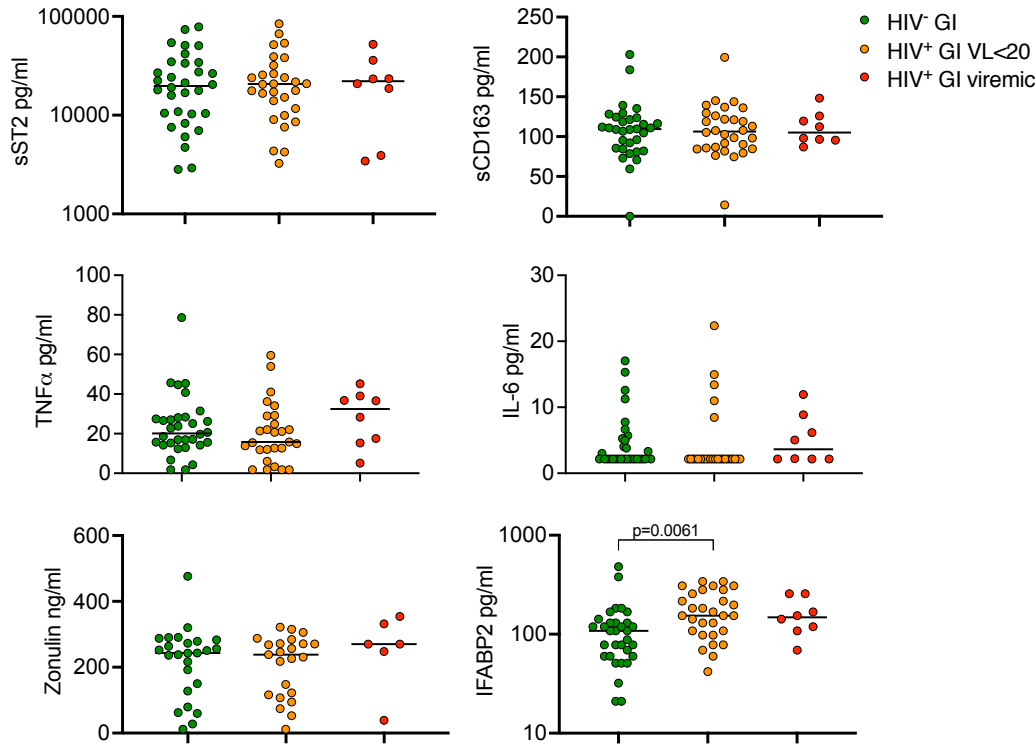


### Blood



**Supplementary Figure 4 (related to Figure 7). Flow cytometry gating strategy for duodenum, colon and blood T-cells.**

# Suppl Figure 5 (related to Figure 8)



**Supplementary Figure 5 (related to Figure 8).** Innate markers of inflammation and immune activation stratified by HIV and viral load status. P-values by Mann-Whitney U test.