

Figure S1. *Flow cytometry gating strategy.* Illustrative gating strategy used to identify monocyte and dendritic cells from whole blood, starting from 10 million leukocytes. Dot plots showing data from a representative healthy control.

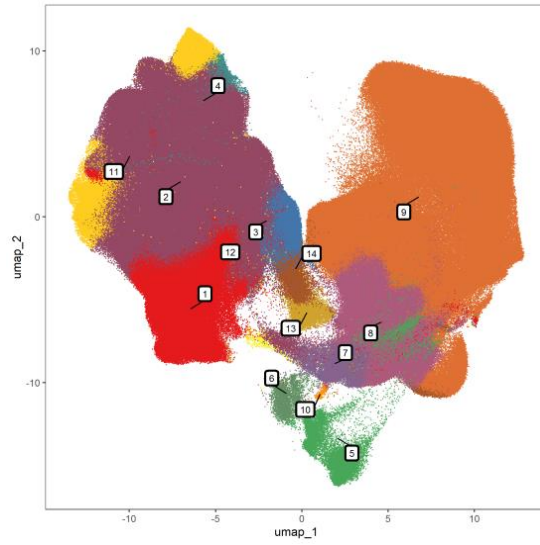
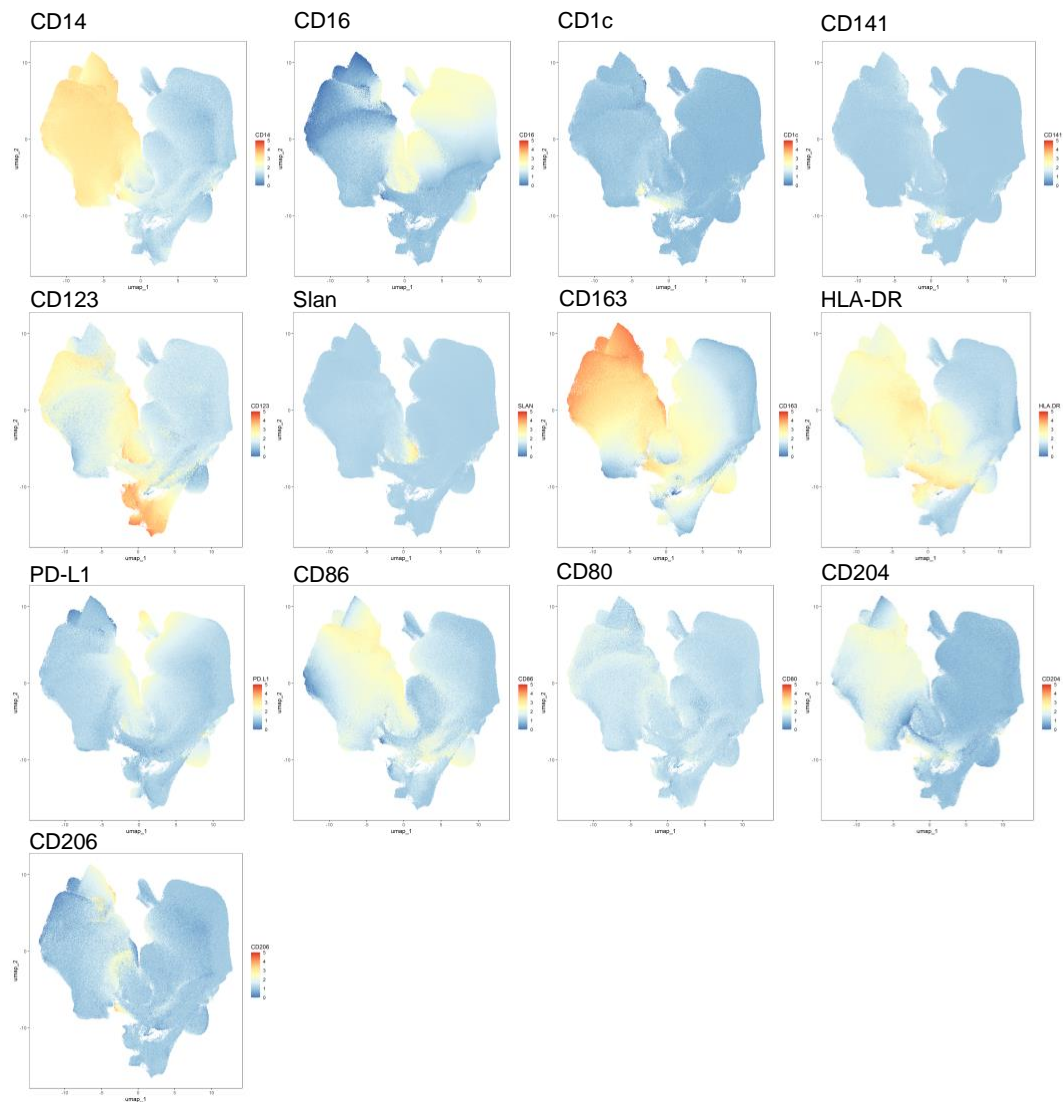
A**B**

Figure S2. *Unsupervised analysis of monocytes and dendritic cells (A) UMAP of the CD45+Lin- dataset of all samples showing the 14 clusters obtained with FlowSOM. (B) Marker expression within the UMAP.*

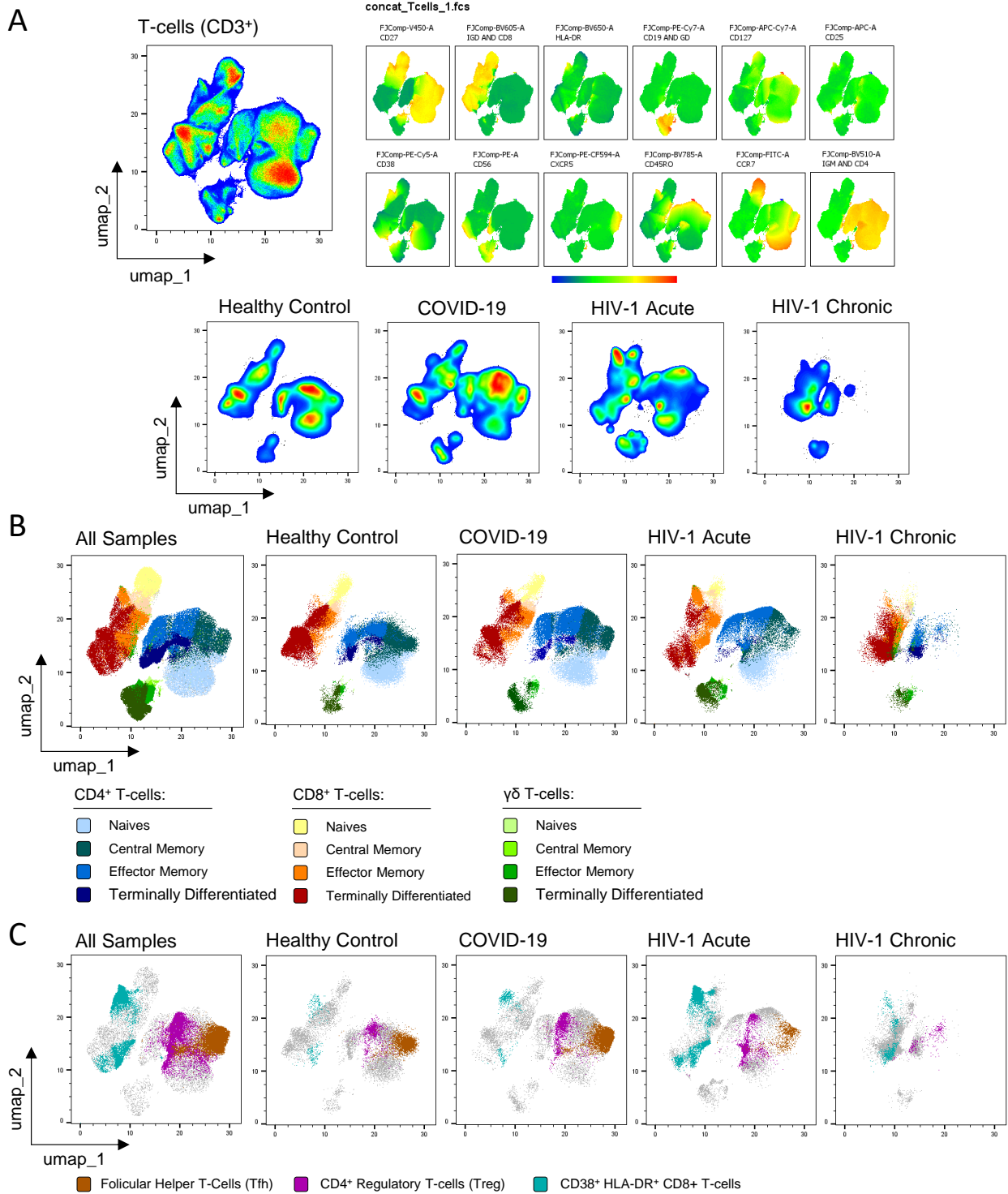


Figure S3. Unsupervised analysis of T-cells. (A) Marker expression within the UMAP of the CD3⁺ cells and relative event distribution in a representative individual from the healthy control and COVID-19 groups, as well as in the untreated HIV-1 acute and HIV-1 chronic patients. (B-C) Manually annotated T-cell subsets: (B) Naïve (CCR7⁺CD45RO⁻), Central Memory (CCR7⁺CD45RO⁺), Effector Memory (CCR7⁻CD45RO⁺), Terminally Differentiated (CCR7⁻CD45RO⁻); (C) Tfh (CCR7⁺CD45RO⁺CXCR5⁺), Treg (CCR7⁻CD45RO⁺CD25⁺CD127^{low}) and activated CD8⁺ T-cells.

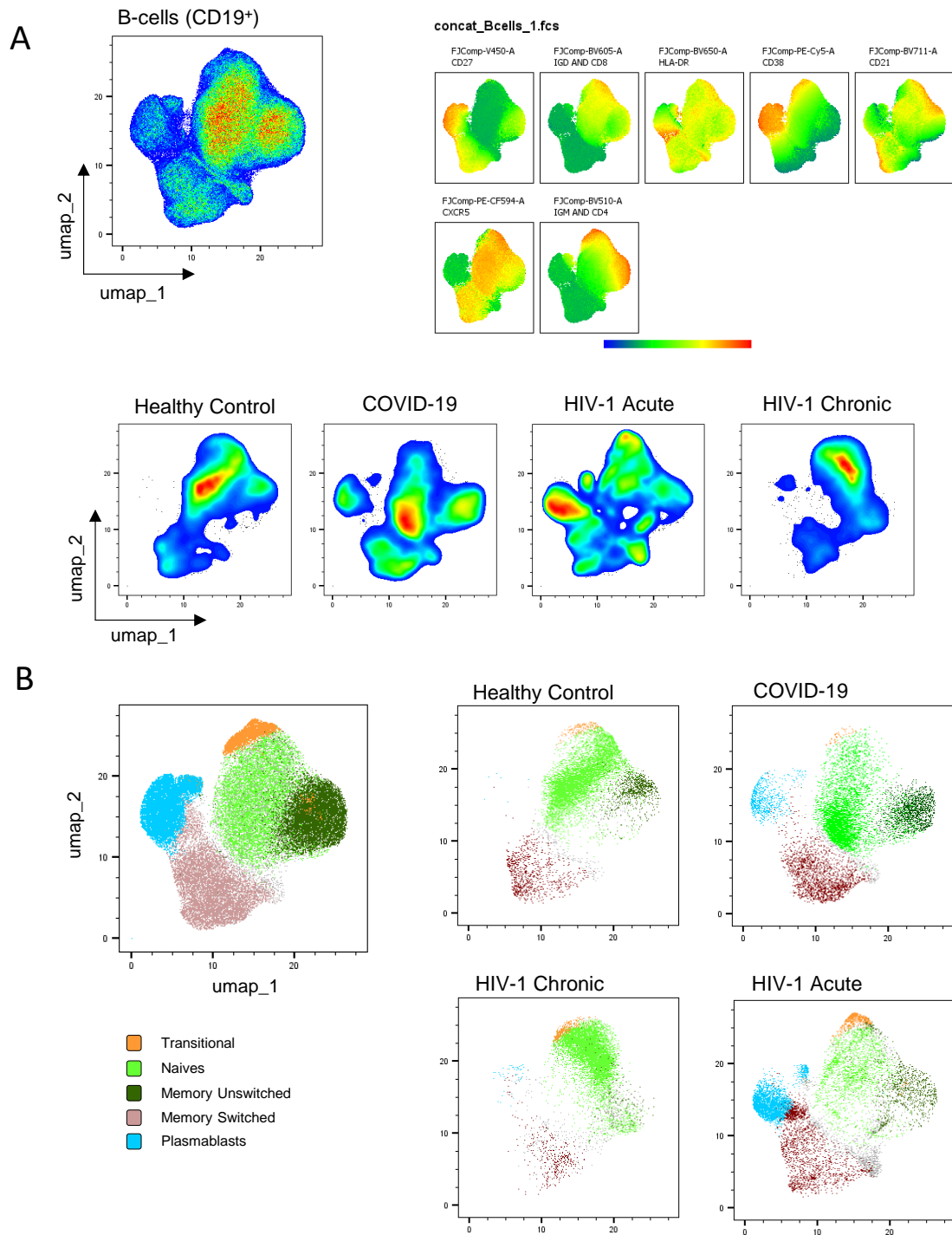


Figure S4. Unsupervised analysis of B-cells. (A) Marker expression within the UMAP of the CD19⁺ cells and relative event distribution representative individual from the healthy control and COVID-19 groups, as well as in the untreated HIV-1 acute and HIV-1 chronic patients. **(B)** Manually annotated B-cell subsets : Transitional (CD38^{high}IgM^{high}), Naïve (IgD⁺IgM⁺CD27⁻), Memory Unswitched (IgD⁺IgM⁺CD27⁺), Memory Switched (IgD⁻IgM⁻CD27⁺), Plasmablasts (CD38^{high}CD27^{high}IgM^{-dim}).

Table S1. Flow-cytometry antibodies

Antibody	Fluorochrome	Clone	Source
CD27	BV421	M-T271	BD Horizon
Vio Blue	Vio Blue	DD-1	Milteny Biotec
CD141	BV510	1A4	BD Biosciences/BD Horizon
IgM	BV510	MHM-88	Biolegend
CD4	V500	RPA-T4	BD Horizon
CD45	BV605	HI30	BD Biosciences
IgD	BV605	IA6-2	Biolegend
CD8 α	BV605	RPA-T8	Biolegend
HLA-DR	BV650	L243	Biolegend
CD86	BV711	IT2.2	Biolegend
CD21	BV711	B-ly4	BD Horizon
PD-L1	BV785	29E2A3	Biolegend
CD45RO	BV785	UCHL1	Biolegend
CD3	Fitc	α T3	eBioscience/Invitrogen
CD19	Fitc	HB19	eBioscience/Invitrogen
CD66b	Fitc	G10FS	Biolegend
CCR7	FITC	150503	R&D Systems
CD14	Percp Cy5.5	61D3	eBioscience/Invitrogen
CD3	PerCP Cy5.5	OKT3	eBioscience
CD80	Pe	2D10	Biolegend
CD56	PE	C5.9	Cytognos
CD163	Pe Dazzle-594	GH1/61	Biolegend
CXCR5	PE Dazzle594	J252D4	Biolegend
CD206	Pe-Cy5	15-2	Biolegend
CD38	PE-Cy5	HIT2	Biolegend
CD123	Pe-Cy7	6H6	eBioscience
TCR- $\gamma\delta$	PE-Cy7	11F2	BD Biosciences
CD19	PE-Cy7	J3-119	Beckman Coulter
CD25	APC	2A3	BD Biosciences
CD204	Apc	7C9C20	Biolegend
CD16	Af700	368	Biolegend
CD1c	Apc-Cy7	L161	Biolegend
CD127	APC-ef780	eBioRDR5	Invitrogen