

Supplemental Figure 1: Confirmation of active COVID-19 infection for severe and moderate infection

groups. A) Quantification of viral burden from nasal swab of severe and moderate infection groups. B)

Quantification of blood spike protein in severely infected participants based on survival vs fatality from infection.

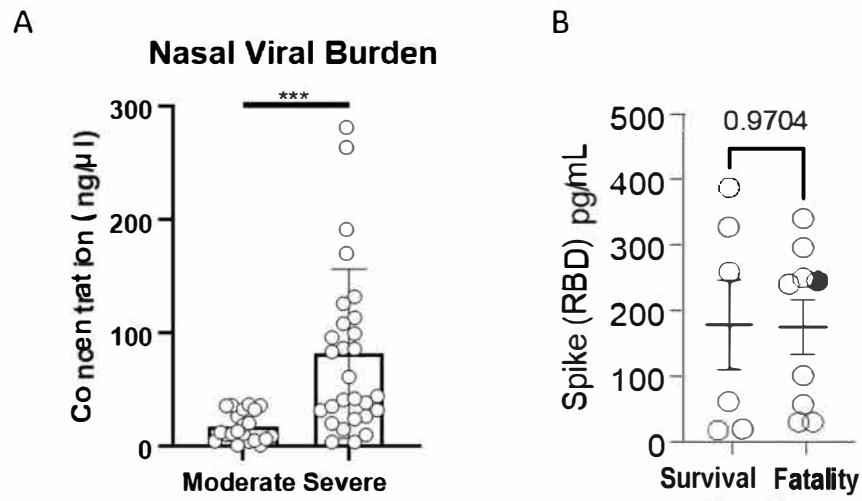
Supplemental Figure 2: Full gating strategy for whole blood flow cytometry. Concatenated healthy control sample used as in Figure 2.

Supplemental Figure 3. Flow plots of significantly altered immune cell types by study group. A-C) Flow plots of major immune cell populations analyzed for control(A), moderate infection (B), and severe infection (C) groups (all individual samples concatenated by group for shown plots).

Supplemental Figure 4: Correlation matrices of demographic, immune, and endothelial parameters in severe COVID-19 infection with fatal and non-fatal outcomes. A) Fatal outcome correlation matrix. B) Survival outcome correlation matrix.

Supplemental Figure 5. Significantly altered immune cell types and long COVID symptoms in Recovered group. A) Flow plots of major immune cell populations analyzed for moderate recovered group (all individual samples concatenated by group for shown plots). B) Correlation of self-reported COVID-19 symptoms associated with long COVID identified as significantly altered prior to multiple comparison corrections as assessed by YRS questionnaire (n=23); points are slightly jittered for visibility.

Supplemental Figure 1

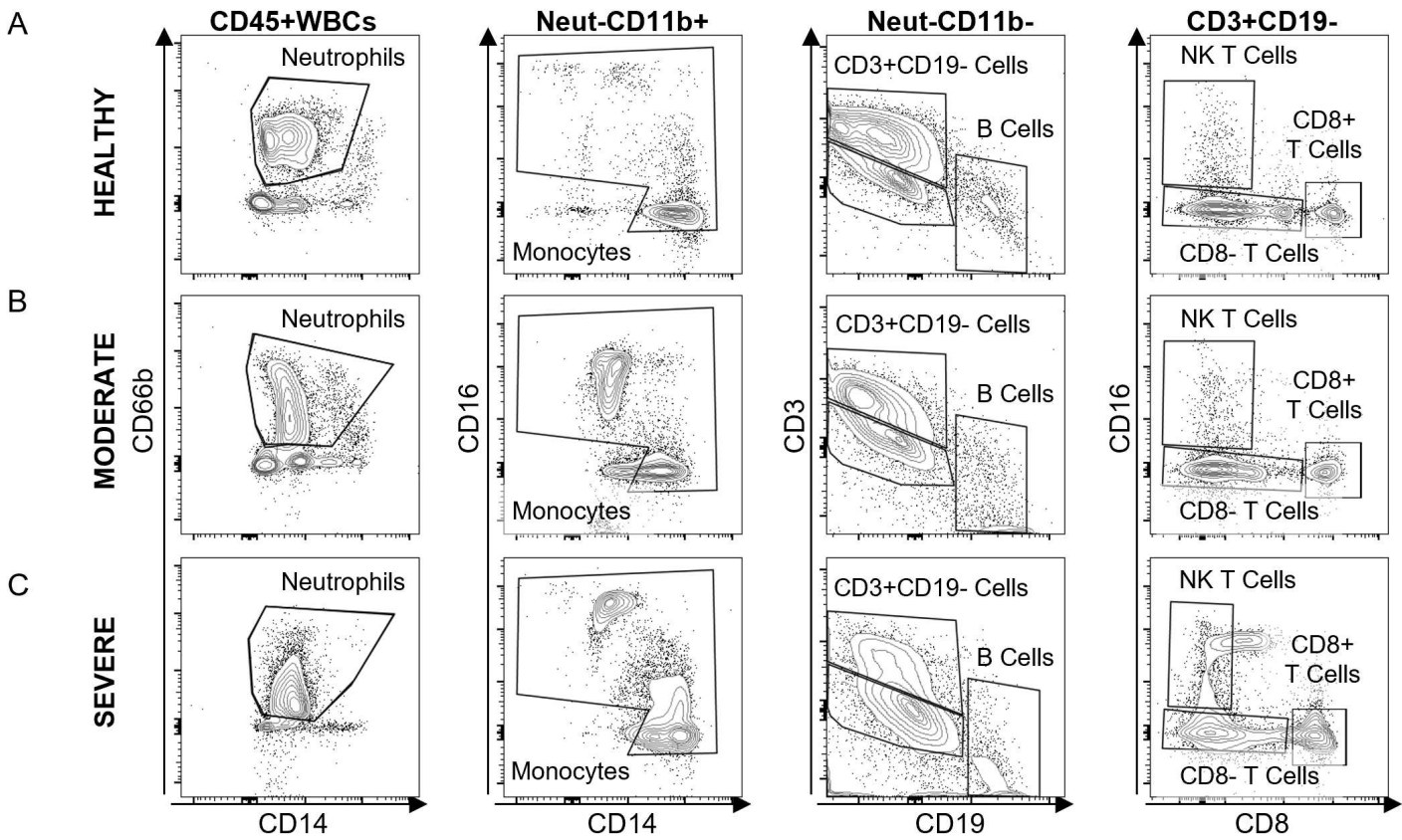


The figure displays a series of flow cytometry plots illustrating the isolation strategy for CD8⁺MHCII⁺ T cells from whole blood. The process begins with an **Ungated** population, followed by selection for **Singlets**, **Single Cells**, and **Live Cells**. The next step involves selecting **CD45⁺ Cells**, which are further divided into **WBCs** (White Blood Cells) and **Neutrophil Neg.** (Neutrophil Negative). The **CD11b⁺ Cells** are then isolated, leading to the selection of **All Monocytes**. The final step shows the isolation of **CD8⁺MHCII⁺ CD3⁺ T cells**, which are further characterized as **T Cell Purity Check** and **B Cell Purity Check**.

The plots show various parameters measured at each stage:

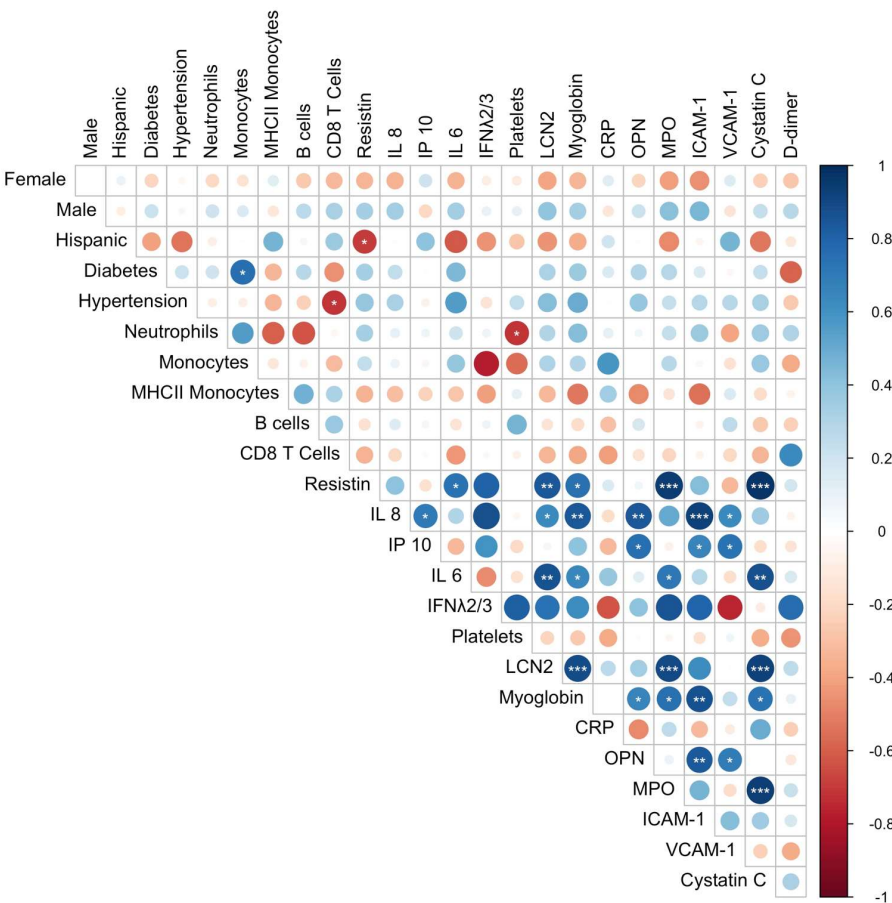
- Ungated:** SSC-A vs. SSC-H.
- Singlets:** FSC-A vs. FSC-H.
- Single Cells:** SSC-H vs. FSC-A.
- Live Cells:** SSC-H vs. CD45.
- CD45⁺ Cells:** SSC-H vs. FSC-A.
- WBCs:** CD66b vs. CD14.
- Neutrophil Neg.:** SSC-H vs. CD11b.
- CD11b⁺ Cells:** CD16 vs. CD14.
- All Monocytes:** CD16 vs. CD14.
- CD8⁺MHCII⁺ CD3⁺ T cells:** CD8 vs. MHC II.
- T Cell Purity Check:** CD8 vs. MHC II.
- B Cell Purity Check:** CD19 vs. MHC II.
- CD3⁺CD19⁻ Cells:** CD3 vs. CD19.
- CD3⁺CD19⁻ Cells:** CD16 vs. CD8.
- Non-B Cells/CD3hi Cells:** CD16 vs. CD56.
- Live Cells:** SSC-H vs. FSC-A.
- No Cells:** P-selectin vs. CD45.

Supplemental Figure 3



Supplemental Figure 4

A



B

