

Supplementary file

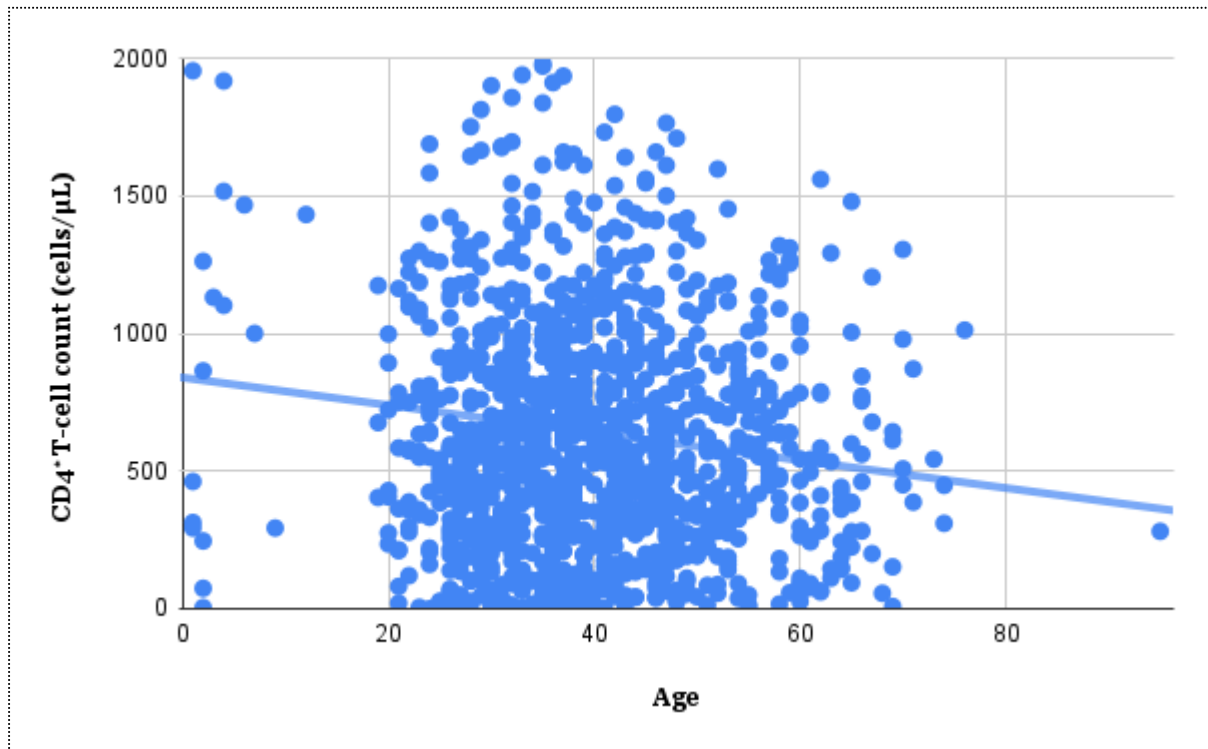


Figure 1: Pearson correlation between age and CD4⁺ T-cell count in PLWH.

*CD4⁺ T: CD4⁺ T lymphocytes, PLWH: people living with HIV, r : Pearson correlation coefficient, p : p value.

This figure shows the Pearson correlation between age and CD4⁺ T-cell count in PLWH at diagnosis. Each point represents an individual participant. A linear regression line illustrates the inverse relationship, indicating lower CD4⁺ T-cell counts with increasing age. Pearson correlation analysis demonstrated a negative correlation ($r = -0.32$, $p = 0.001$).

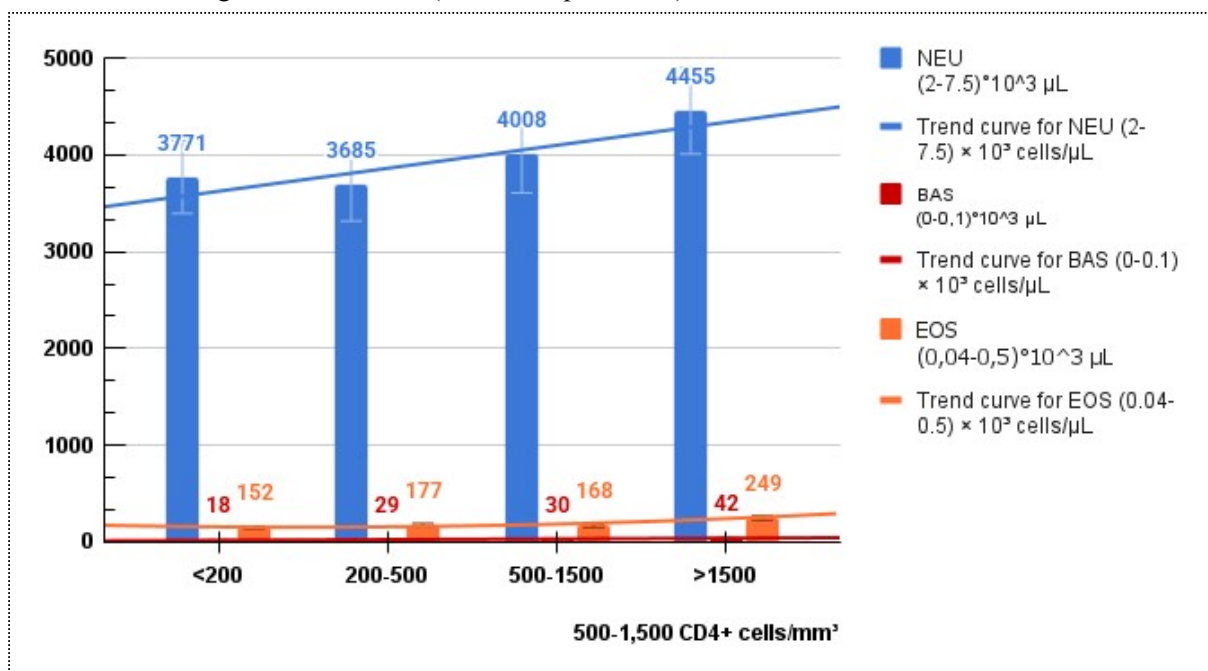


Figure 2: Distribution of mean polymorphonuclear cell populations (Neutrophils, Basophils, Eosinophils) and Monocytes based on CD4 T-Cell cluster levels

*CD4: cluster of differentiation 4, PLWH: people living with HIV, NEU: neutrophils, BAS: basophils, EOS: eosinophils.

This figure shows a progressive change in mean absolute counts of polymorphonuclear cells including neutrophils, eosinophils, basophils and monocytes across decreasing CD4⁺ T-cell clusters (<200, 200–500, 500–1500, and >1500 cells/μL) in PLWH at diagnosis. Lower CD4⁺ T-cell levels are associated with reduced counts of these innate immune cell populations, illustrating a downward trend with increasing immune suppression.

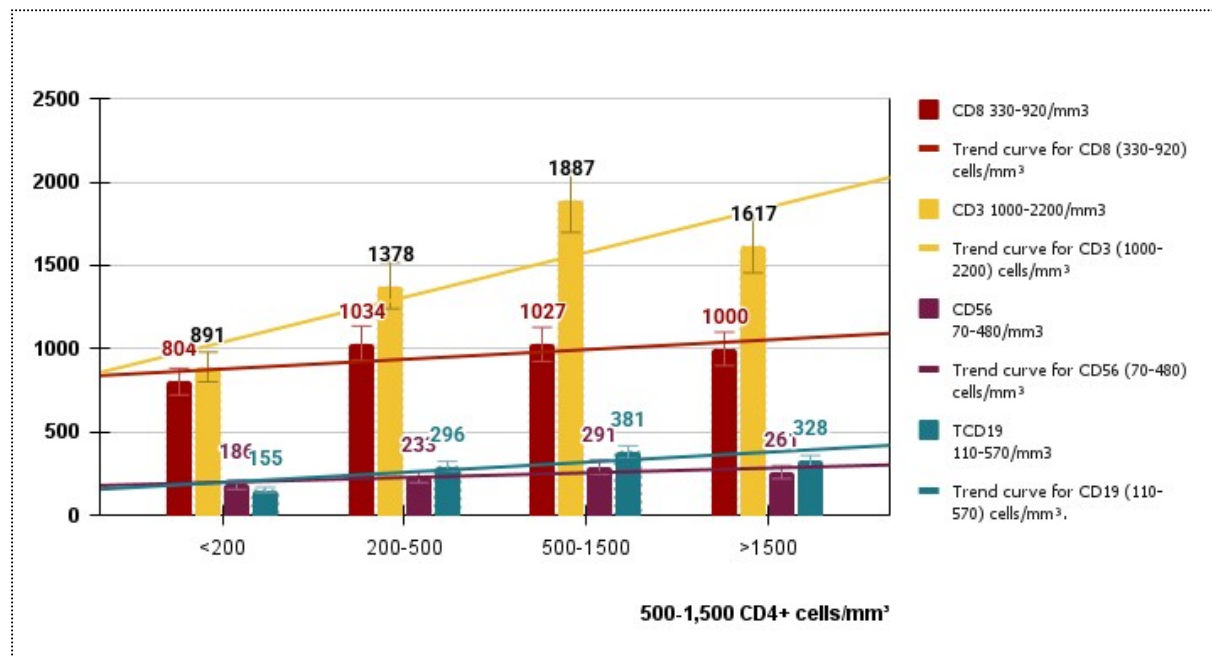


Figure 3: Distribution of mean immunological markers (TCD8, TCD3, B CD19, NK CD16/56) based on CD4 T-Cell cluster levels

*CD: cluster of differentiation, CD4: cluster of differentiation 4, TCD8: CD8⁺ T lymphocytes, CD3: total T lymphocytes, CD19: B lymphocytes, NK: natural killer cells (CD16⁺CD56⁺), PLWH: people living with HIV.

This figure illustrates trends in lymphocyte subsets in PLWH across CD4⁺ T-cell clusters (<200, 200–500, 500–1500, and >1500 cells/μL). Mean TCD8 and total CD3⁺ T-cell counts increase as CD4⁺ T-cell levels decrease, whereas B lymphocyte counts show a declining trend with greater CD4⁺ T-cell depletion. NK cell counts remain relatively stable across clusters.

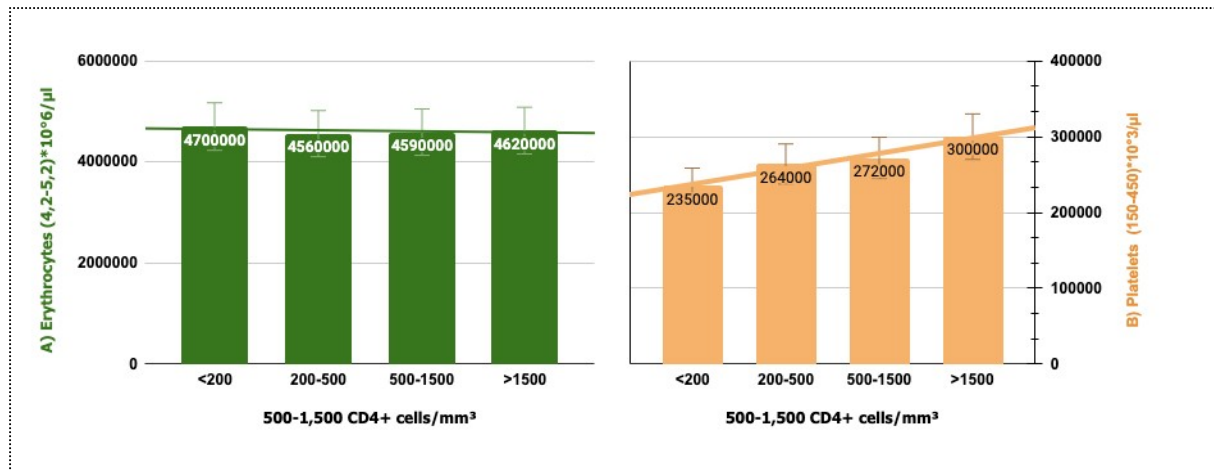


Figure 4: Distribution of hematological cell means (Erythrocytes and Platelets) based on CD4 T-Cell cluster levels

**CD4: cluster of differentiation 4, PLWH: people living with HIV, CBC: complete blood count.*

This figure depicts a decreasing trend in mean erythrocyte (red blood cell) and platelet counts measured by CBC with lower CD4⁺ T-cell levels across four clusters (<200, 200–500, 500–1500, and >1500 cells/μL). The figure demonstrates the association between advanced CD4⁺ T-cell depletion and altered hematological parameters in people living with HIV at diagnosis.