Title: Correlation Between Total Lymphocyte Count, Hemoglobin, Hematocrit and CD4 Count in HIV Patients in Nigeria.

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Abstract: The expensive and technology limited setting of CD4 count testing is a major setback to the initiation of HAART in a resource limited country like Nigeria. Simple and inexpensive tools such as Hemoglobin (Hb) measurement and Total Lymphocyte Count (TLC) are recommended as substitute marker. In order to assess the correlations of these parameters with CD4 count, 100 “apparently healthy” male volunteers tested HIV positive aged ≥20 years but ≤40 years were recruited and from whom Hb, Hct, TLC and CD4 count were obtained. The correlation coefficients, R, the Nash-Sutcliffe Coefficient of Efficiency (CoE) and the p-values of the ANOVA model of Hb, Hct and TLC with CD4 count were assessed. The assessments show that there is no significant relationship of any of these parameters with CD4 count and the correlation coefficients are very weak. This study shows that Hb, Hct and TLC cannot be substitute for CD4 count as this might lead to certain individuals’ deprivation of required treatment.

Key words: HIV, total lymphocytes Count, hemoglobin, hematocrit, CD4+ T cells count