

Poster presentation

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## Absolute lymphocyte count as a marker for CD4 lymphocyte count: criterion for initiating antiretroviral therapy in HIV-infected Nigerians

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### Background

Few laboratories in resource-constrained countries can afford to perform laboratory-monitoring tests required for the implementation of HIV therapy. In this case control study, we have investigated the relevance of absolute lymphocyte count as a surrogate marker for CD4 lymphocyte count as a criterion for initiating HAART in HIV-infected Nigerians.

### Methods

A total of 100 consecutive recruited HIV-infected, previously antiretroviral naive persons and 30 HIV-negative individuals blood samples were run for absolute lymphocyte and CD4 lymphocyte counts and results were compared by a model of linear regression analysis.

### Results

An overall modest correlation was observed between absolute lymphocyte count and CD4 lymphocyte ( $r = 0.51$ ) and at CD4 lymphocyte threshold relevant for clinical management of HIV-infected;  $<200$ ,  $200-350$  and  $>350$  cells/ $\mu\text{L}$  ( $r = 0.41$ ,  $0.30$  and  $0.21$ ) respectively. Mean absolute lymphocyte count of  $1.60 \pm 0.77 \times 10^9/\mu\text{L}$ ,  $1.88 \pm 1.11 \times 10^9/\mu\text{L}$  and  $2.04 \pm 0.54 \times 10^9/\mu\text{L}$  was equivalent respectively to CD4 of  $<200$ ,  $200-350$  and  $>350$  cells/ $\mu\text{L}$ .

### Conclusion

This study indicates a modest correlation between absolute and CD4 lymphocyte counts of HIV-infected Nigerians and at CD4 lymphocyte count threshold significant for clinical management of HIV-infected. Absolute lymphocyte count can become a minimal inexpensive alternative to CD4 lymphocyte count in conjunction with WHO staging and clinical status of patient in determining the optimal time to initiate therapy particularly in resource limited settings where other expensive methods of CD4 enumeration are unavailable.