Increase in CD4 counts at Presentation to ART Care among Urban HIV Clinics in Uganda

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BACKGROUND

In resource-limited settings, the increased availability of HIV testing services, scale-up of antiretroviral therapy (ART), and revised ART initiation guidelines has led to increased accessibility to HIV care. We hypothesized that HIV-infected persons are seeking care earlier compared to the era of initial ART roll-out in sub-Saharan Africa. We investigated the median CD4 count at presentation to care and the proportion presenting with CD4 counts ≤100 cells/μL from 2005 to 2013.This was done in the context of rolling out a pre-ART cryptococcal antigen (CRAG) screening program among patients with CD4<100 .

HYPOTHESIS:

HIV-infected persons are seeking care earlier compared with the era of initial ART roll-out in sub-Saharan Africa.

METHODOLOGY

Data on CD4 counts at enrollment in care were obtained from 8 urban municipal clinics in Kampala District (KCCA clinics) where HIV care services are supported by PEPFAR and the Infectious Disease Institute (IDI) in Uganda. Multiple linear regression examined associations with CD4 count by year. Results were adjusted for clinic site with robust standard errors to account for clustering.

RESULTS

A total of 21,895 (36.9% of 59327) had documented CD4 results at entry into care. The large number of missing CD4 counts could have been attributed to incomplete electronic medical records. 73% were women; median age was 32 years (IQR: 26, 39). The median CD4 count increased steadily through the study period from 168 cells/μL in 2005 to 263 cells/μL in 2013 (increase in CD4 count was +6.0 cells/μL per year (95%CI: 1.0 to 12.0 cells/μL per year), (Figure 2).

There was a 20% relative reduction in the proportion presenting with CD4 <100 cells/μL from 24.7% in 2005 to 20.2% in 2013 (P<0.001).
This implies a reduction at risk of OIs and HIV-related mortality. However, a substantial proportion continue to present late (CD4 <350). (Figure 1)

With this modest decreasing proportions of patients presenting with CD4 <100, we anticipate pre-ART CRAG screening will continue to be needed for the foreseeable future in settings where late presentation is prevalent.

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REFERENCES: Immunodeficiency at start of combination ART in low,mid and high income countries, The IeDEA and Art cohort collaboration. *J Acquir Immune Defic Syndr* 2014;65:e8-16

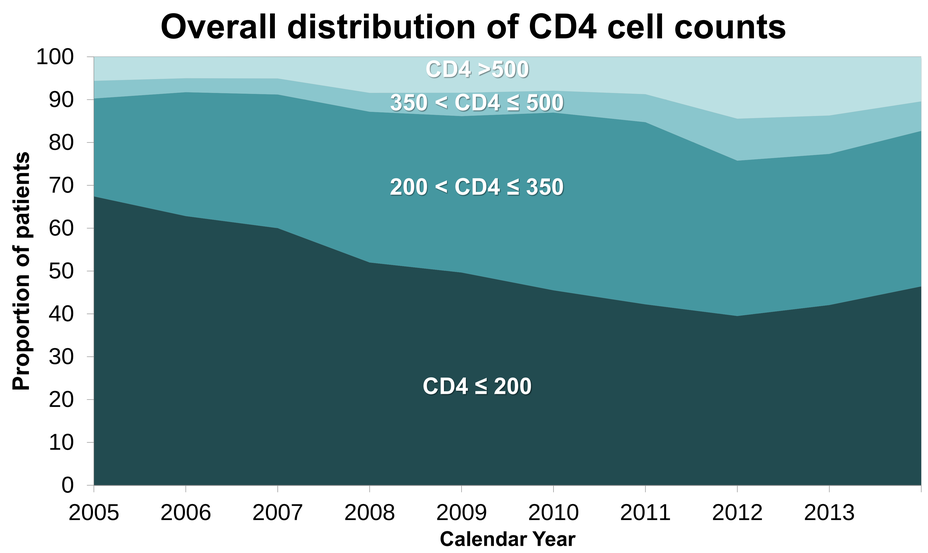


Figure 1. Proportion of patients at CD4 thresholds when presenting for HIV care.

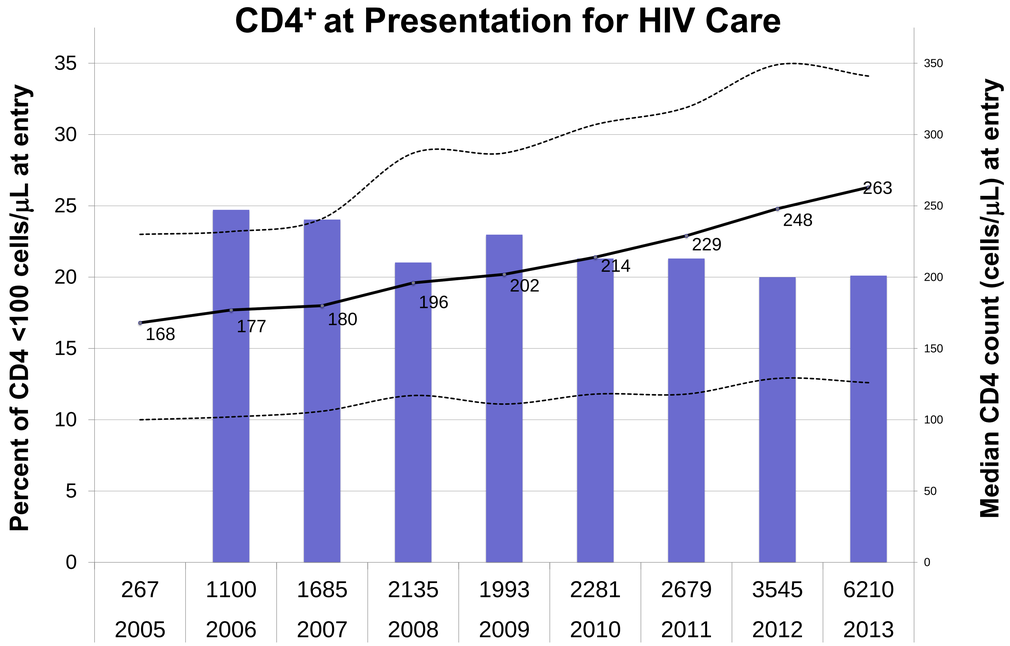


Figure 2 displays the median (IQR) of CD4 counts at entry into HIV care (line graph) and the proportion of presenting CD4<100 cells/μL (bar graph) with the number of CD4 counts performed by year listed in the x-axis at 8 urban municipal HIV clinics in Kampala, Uganda

CONCLUSION

- There has been a gradual, sustained increase in median CD4 counts at presentation to HIV care from 2005 to 2013 in Kampala.
- A substantial proportion (20%) still present with CD4<100 cells/μL, thus need to expand CRAG screening implementation.
- In light of the current ART start guidelines, more effort is required to ensure eligible patients enroll into care.