Correspondence:
Racheal Ayanga Aida, MBChB, MPH
ayangaracheal@gmail.com

Kaposi Sarcoma in Relation to HIV Diagnosis: Which Comes First in East Africa?

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Racheal A. Ayanga[1], Aggrey Semeere[1], Megan Wenger[2], Linda Chemtai[3], Pendo Ibrahim[4], Philippa K Makanga[1], Michael Kanyesigye[5], Matthew Semakadde[6], Bronia Mwine[5], Stella Nabunya[6], Celestine Lagat[3], Martha Nansereko[1], Elyne Rotich[3], Hilda Muwando[1], Zainab Illonga[4], Emmanuel Ochola[7], Charles Kasozi[6], Winnie Muyindike[5], Esther Freeman[8], Elia John[4], Samson Kiprono[3], Miriam Laker-Oketta[1], Jeffrey Martin[2] and **Helen Byakwaga[1]**

[1]Infectious Diseases Institute, Kampala, Uganda; [2]University of California, San Francisco; [3]Academic Model Providing Access to Healthcare, Eldoret, Kenya; [4]Muhimbili University of Health and Allied Sciences, Dar es Salaam, Tanzania; [5]Mbarara Regional Referral Hospital, Uganda; [6]Masaka Regional Referral Hospital, Uganda; [7] St. Mary's Hospital, Lacor, Uganda; and [8]Harvard Medical School

Background

- In 2015, the WHO recommended initiation of ART in all persons living with HIV, regardless of CD4 count or clinical stage, the dawning of the "Treat All" era.
- The intention of "Treat All" is to detect and treat HIV infection in its earliest stages.
- At the most macroscopic level, "Treat All" has been successful in most resource-limited settings, diminishing all-cause death related to HIV.
- What is less understood is whether all individual severe HIV-related complications have benefitted equally.
- We investigated how one oncologic complication — Kaposi sarcoma (KS) — has fared by examining when it develops in relationship to diagnosis of HIV infection.

Objectives

To describe the development of KS in relation to HIV diagnosis among adults in East Africa in the 'Treat All' era.

Study Design and Study Participants

- Cross-sectional study of persons living with HIV who received a new diagnosis of KS between October 2021 and June 2024.
- Identified at 6 primary care networks in East Africa using rapid case ascertainment:
  - AMPATH Network, Western Kenya
  - Masaka Regional Referral Hospital, Uganda
  - Mbarara Regional Referral Hospital, Uganda
  - Infectious Diseases Institute (IDI), Uganda
  - St Mary's Hospital, Lacor, Gulu, Uganda
  - Muhimbili University of Health and Allied Sciences (MUHAS), Tanzania

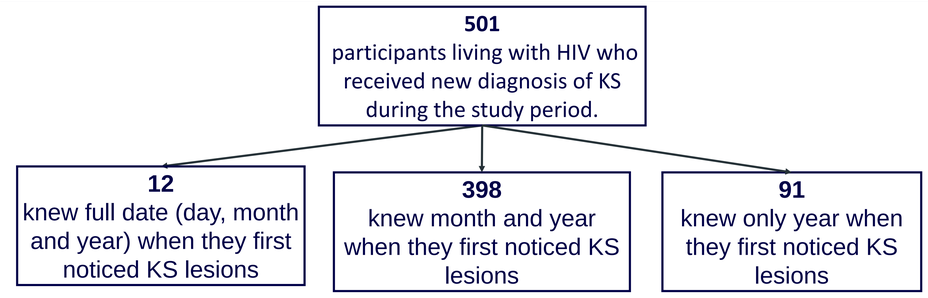


Study Sites in East Africa

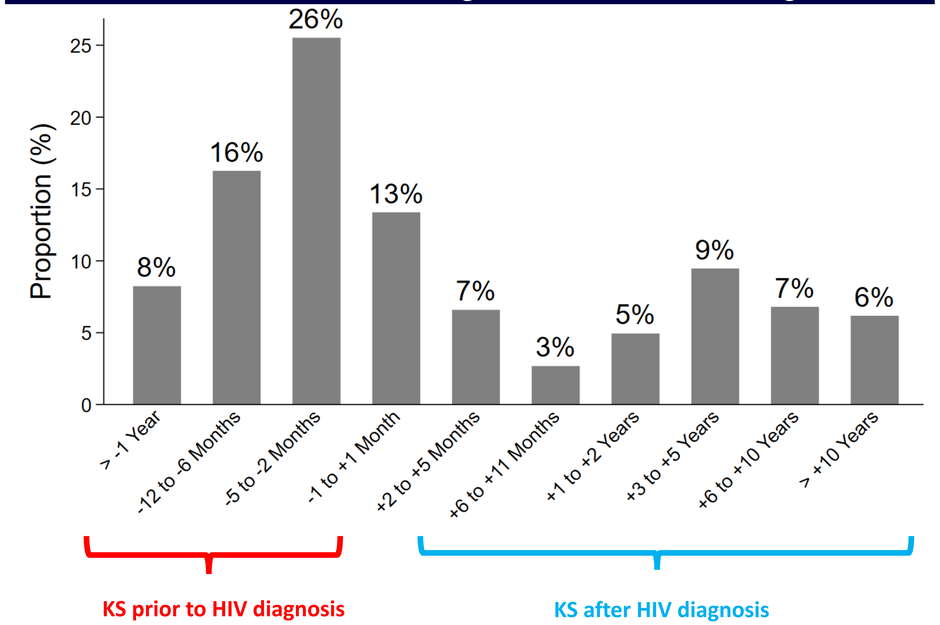
Measurements

- KS diagnosed by histopathology by local pathologists with the exception of a few cases in which it was located in anatomic sites deemed too dangerous to biopsy and for which clinical diagnosis alone was performed.
- Questionnaire-based data ascertained by interviewer administration
  - Participants reported on the time they first noticed KS lesions and when HIV diagnosis was first made.
- All participants underwent HIV antibody testing, either to confirm self-report (among those claiming prior infection) or to test for new infection (among those claiming no prior infection).

Precision of Knowledge Regarding Timing of Lesion Onset



Duration Between First Noticing KS Lesions and HIV Diagnosis



Participant Characteristics at KS Diagnosis

Characteristic	N = 501
Age, years	36 (30-42)[a]
Male, sex	67%
Round trip cost to HIV care facility (USD)	40 (20-60)[a]
Receiving ART before noticing KS lesions	62%
Highest level of education completed	
Primary education not completed	41%
Primary education completed	15%
Secondary, vocational and diploma education	42%
Tertiary education	2%
Monthly income (USD)	
≤ 100	71%
101-1,000	28%
>1,000	1%

[a]Median (Interquartile range)

Conclusion

Amongst adults living with HIV with newly diagnosed KS in East Africa in the 'Treat all' era:

- Nearly half develop KS prior to health care system's diagnosis of HIV infection.
- A large proportion develop KS after HIV diagnosis.

Implication

- There is a need to improve HIV screening strategies to have HIV diagnosis made earlier (i.e., optimize the effectiveness of "Treat All"), thus preventing progression to KS among those with HIV.
- The large proportion of patients developing KS after HIV diagnosis represents another research priority — why is this occurring and how can it be prevented?

Acknowledgements