Cancer Epidemiology Among People with HIV in Western Kenya: A 10-Year Retrospective Analysis

#619

Dorothy I Mangale[1], Benjamin Bowe[2], Harriet F Adhiambo[2], Donella Atieno[3], Fiona Adagi[4], Betsy Abente[1], Caroline Wafula[4], Angela McLigeyo[5], **Thomas A Odeny[1,3]**.

[1] Division of Oncology, Department of Medicine, Washington University in St. Louis, St. Louis, Missouri, USA. [2]Division of Public Health Sciences, Department of Surgery, Washington University in St. Louis, St. Louis, Missouri, USA. [3] Kenya Medical Research Institute, Kisumu, Kenya. [4]Jaramogi Oginga Odinga Teaching and Referral Hospital (JOOTRH), Kisumu, Kenya. [5]Kenyatta University, Thika, Kenya.

BACKGROUND

- In western Kenya HIV prevalence (~16% versus ~5% nationally) and cancer incidence intersect
- Despite higher HIV prevalence, data on cancer patterns among people with HIV (PWH) in the region is lacking introducing barriers to planning for comprehensive, HIV-integrated cancer care

RESEARCH QUESTION: What is the epidemiology of cancer among people with HIV in western Kenya?

METHODS

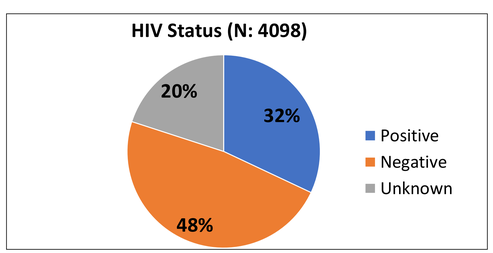
Design: Retrospective cohort study
Population: Adults with confirmed cancer diagnoses at Jaramogi Oginga Odinga Teaching and Referral Hospital
Data collection: Chart abstraction between 2014–2025
Analysis: Survival was assessed using Kaplan–Meier curves and Cox proportional hazards models

STUDY POPULATION CHARACTERISTICS

Table 1: Characteristics of cancer patients included in the study

	HIV + (n: 1309)	HIV - (n: 1953)	Unknown (n: 836)	Total (n: 4098)
Age (median, IQR)	47 (39 - 57)	57 (42 - 68)	58 (43 - 70)	53 (40 - 65)
Gender: Female	967 (74%)	1128 (58%)	517 (61%)	2612 (64%)
Median CD4 at diagnosis	336 (194 - 500)	--	--	--
ART status: Yes	1283 (98%)	--	--	--
On cancer treatment	596 (29%)	1108 (54%)	352 (17%)	2056 (50%)
Top 5 cancers				
Cervical	509 (39%)	313 (16%)	139 (16%)	961 (23%)
Esophageal	163 (12%)	265 (14%)	114 (14%)	542 (13%)
Breast	96 (7%)	263 (13%)	125 (15%)	484 (12%)
Prostate	39 (3%)	207 (11%)	75 (9%)	321 (8%)
Colorectal	19 (1%)	92 (5%)	39 (5%)	150 (4%)
Outcomes				
Deaths	227 (17%)	280 (13%)	146 (17%)	653 (16%)

Figure 1: Distribution of HIV status among cancer



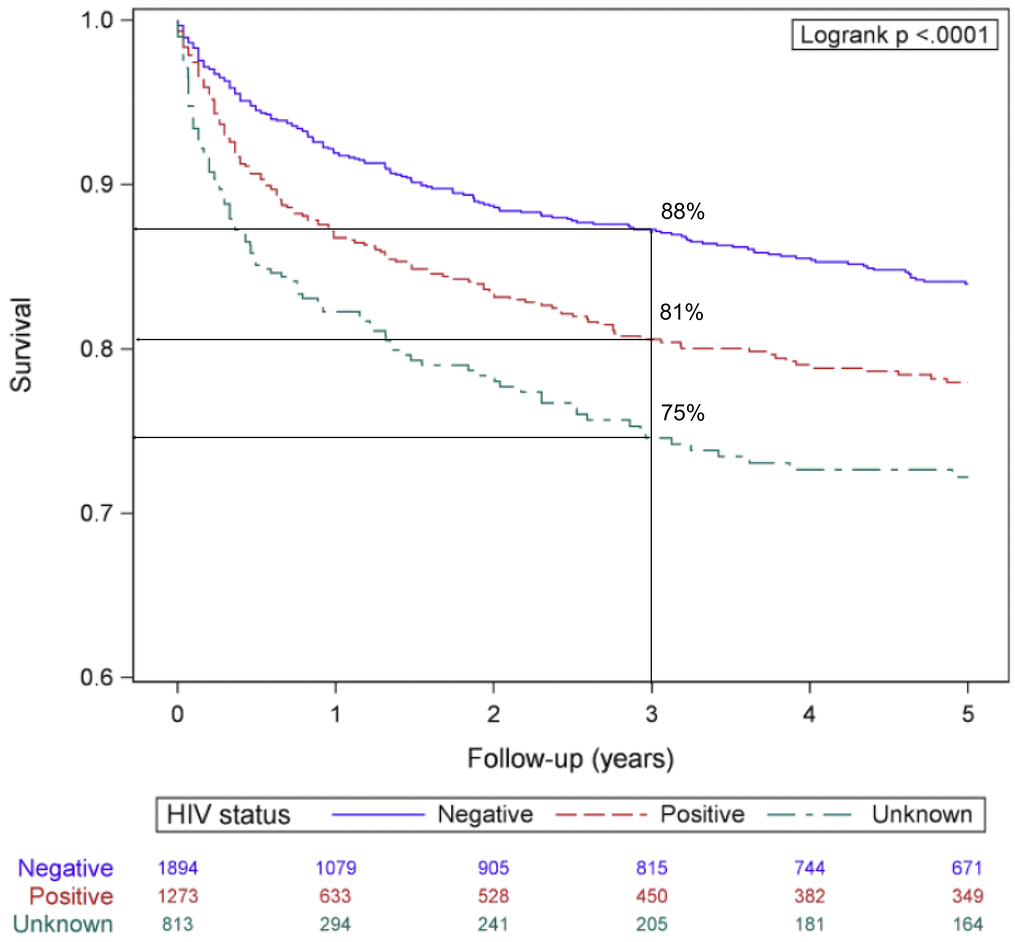
High burden of HIV (1 in 3) and unknown HIV status (1 in 5)

Unknown HIV status conferred the worst survival

Non-Hodgkin lymphoma, esophageal, and colorectal cancer independently increased mortality risk

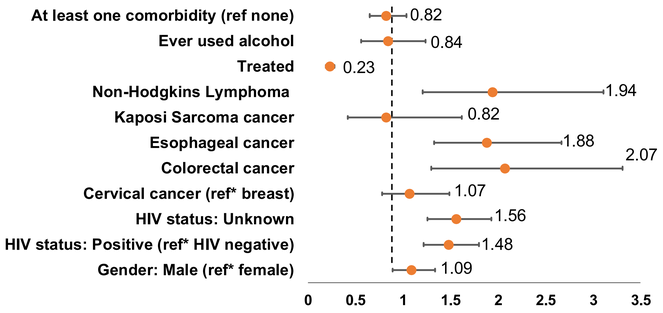
RESULTS

Figure 2: Kaplan-Meier curves showing survival over time by HIV status



RESULTS

Figure 3: Forest plot of hazard ratios estimating mortality risk



- HIV infection (HR 1.48; 95% CI 1.22–1.80) and unknown HIV status (HR 1.56; 95% CI 1.23–1.93) increased risk of death while treatment reduced mortality risk by 77% (HR 0.23; 95% CI 0.19–0.28)
- The highest mortality risk was among those with NHL (HR 1.94; 95% CI 1.21–3.11) colorectal (HR 2.07; 95% CI 1.30–3.30) and esophageal cancer diagnoses (HR 2.07; 95% CI 1.30–3.30)

CONCLUSIONS

- PWH were on average younger than all groups and reported poor survival when compared to HIV- clients. The poorest survival was among clients with unknown HIV status. Risk of mortality increased with HIV+ or unknown HIV status, NHL, esophageal and colorectal cancer diagnoses
- There is an urgent need for routine HIV testing in oncology settings, timely cancer screening among PWH, and integrated HIV–cancer care models to improve survival

Acknowledgements

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PLAIN LANGUAGE SUMMARY

- 1 in 3 cancer clients were living with HIV.
- Clients with HIV were younger and had lower survival than those without HIV.
- The highest risk of death was observed among clients with HIV, those with unknown HIV status, and those diagnosed with lymphoma, esophageal, or colorectal cancer.

Author Contact: d.mangale@wustl.edu