



A Single-Center Experience of Solid versus Hematologic Malignancies in People Living with HIV

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Background

- People living with HIV (PLWH) have an increased risk and propensity to develop cancer, including AIDS-defining and non-AIDS-defining malignancies. Some of the contributing factors are related to the high-risk lifestyle choices, but the introduction of highly active antiretroviral therapy (HAART) has reduced the incidence of AIDS-defining cancers.
- This study describes the clinical characteristics and differences of solid and hematologic malignancies in PLWH.

Methods

- We conducted a retrospective cohort study of PLWH who were diagnosed with cancer at our academic medical center in Northwest Louisiana between November 2019 and June 2022.
- We identified 74 patients who had HIV infection prior to the diagnosis of cancer or were diagnosed with both HIV and cancer at the same time of presentation.
- We evaluated patient's characteristics, cancer types, treatment modality, CD4 T cell count, HIV viral load, and assessed patients' adherence to HAART at the time of cancer diagnosis.

Results

- The median age was 51.5 (range, 21-76 yrs) and 59 patients (80%) were male. The majority of patients were African Americans (75.7%).

Characteristic	Solid tumors (n=51)	Hematological tumors (n= 23)	P value
Median of Age (range)	53 (21-76)	43 (21-63)	0.08
Gender			
Male	41 (80.4%)	18 (78.3%)	1
Female	10 (19.6%)	5 (21.7%)	
Ethnicity			
White	13 (25.5%)	5 (21.7%)	1
African American	38 (74.5%)	18 (78.3%)	
Smoking			
Current smoker	24 (47.1%)	7 (35%)	0.127
Former smoker	17 (33.3%)	5 (25%)	
None	10 (19.6%)	8 (40%)	
Current alcohol intake			
Yes	23 (50%)	2 (11.1%)	0.0045
No	23 (50%)	16 (88.9%)	
Sexual behavior			
Homosexual or bisexual	16 (64%)	4 (44.4%)	0.44
Heterosexual	9 (36%)	5 (55.6%)	
History of illicit drug			
Former or current use	18 (35.3%)	6 (26.1%)	1
None	25 (49%)	8 (34.8%)	
Time between HIV and cancer diagnosis median years (range)	9 (0-31)	5 (0-31)	0.34
Type of cancer			
AIDS-defined	9 (17.6%)	13 (56.5%)	0.0018
Non-AIDS-defined	42 (82.4%)	10 (43.5%)	
HAART adherence prior to cancer Diagnosis			
Yes	27 (61.4%)	7 (30.4%)	0.043
No	12 (27.3%)	10 (43.5%)	
Diagnosed at same time	5 (11.4%)	6 (26.1%)	
CD4 count before cancer			
0-199	10 (23.3%)	11 (50.0%)	0.048
>200	33 (76.7%)	11 (50.0%)	
HIV viral load before cancer			
0-199	25 (61.0%)	4 (20%)	0.003
>200	16 (39.0%)	16 (80%)	
One-year follow-up of cancer diagnosis			
Alive	32 (62.7%)	10 (43.5%)	0.22
Died	5 (9.8%)	6 (26.1%)	
Unknown	5 (9.8%)	2 (8.7%)	
Not applicable (alive, <1-year follow-up)	9 (17.6%)	5 (21.7%)	

- Overall, the median time between HIV and cancer diagnosis was eight years (range, 0-31 years) and the median time elapsed between HIV and cancer diagnoses was longer in patients with solid tumors compared to those with liquid tumors, but no statistically difference ($P=0.34$)
- Eleven patients (14.9%) were diagnosed with HIV and cancer at the same time.
- The most common reported cancers were non-Hodgkin lymphoma (17, 23%), followed by skin cancer and Kaposi sarcoma with same percentage (8, 10.8%), followed by prostate cancer (7, 9.5%).
- AIDS-defining cancers were identified in 22 patients (29.7%), which were Non-Hodgkin lymphoma (13 patients), Kaposi sarcoma (8 patients), and invasive cervical carcinoma (11 patients).
- The percentage of patients with HIV viral load >200 copies/ml and CD4 count < 200 cells/ μ L prior to cancer diagnosis was higher in hematological tumors group compared to those with solid tumors ($P < 0.05$).

Conclusion

- PLWH who have hematological malignancies are more likely to be non-adherent to HAART, have higher HIV viral load, and lower CD4 count before cancer diagnosis compared to patients with solid tumors.