RACIAL DIFFERENCES IN CANCER AMONG OLDER ADULTS WITH AND WITHOUT HIV

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Background:

➔ Human immunodeficiency virus (HIV) attacks the body's immune system, making the person more likely to get infection-related cancers.[1]

➔ Racial/ethnic minorities have higher rates of HIV infection[2] and cancer[3] compared to non-Hispanic Whites.

➔ The introduction of highly active antiretroviral therapy (HAART) has led to increased life expectancies for HIV+ people, approaching that of the general population, across racial groups.[2]

➔ Previous research has shown that aging is associated with an increased chance of developing specific cancers including lung, prostate, colorectal, and breast.[4]

➔ However, racial disparities persist as related to HIV status and cancer.[3]

Objective:

➔ The purpose of this study is to examine racial differences in likelihood of cancer among older adults with and without HIV.

➔ A secondary aim of this study is to understand gender differences in likelihood of cancer among older adults with and without HIV.

Methods:

➔ Rush Center of Excellence on Disparities and HIV and Aging (CEDHA) Cohort: Total population of 371 were sampled: 177 HIV+-, 194 HIV-, 255 Blacks and 116 Whites.

➔ Ethics: The CEDHA Research Core was approved by the Rush Institutional Review Board.

➔ Variables: All variables were self-reported except HIV status, which was determined by blood test.

◆ Race: "With which group do you most closely identify yourself?" Response Options: 1= White and 2= Black

◆ Cancer*: "Have you ever been told by a doctor, nurse or therapist that you had cancer, malignancy or tumor of any type?" Response Options: 1= Yes, 2= Suspect or Possible, and 3= No.

◆ Other covariates: age (at baseline) , gender (1= Male and 0=Female), and education (years of education).

*1 and 2 combined for analysis

Statistics:

➔ Statistical analysis compared demographic and clinical characteristics of HIV+ and HIV- individuals using t-tests for continuous variables (age) and chi-square for categorical variables (HIV status, race, gender and cancer). Proportion and odds ratio of reporting cancer were ascertained, along with confidence intervals. Potential cofounders were identified.

➔ Statistical tests were two-sided and statistical significance level of α=0.05.

References:
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3. Guest, J., Rentsch, C., & Rimland, D. (2014). Comparison of colorectal cancer screening and diagnosis in HIV-positive and HIV-negative veterans. AIDS Care, 26(12), 1490-1493.
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Results:

Table 1
Characteristics of 371 participants from the CEDHA cohort study by stratified HIV status

Characteristic n (%) or mean (SD)	n	HIV+ (n=177)	HIV- (n=194)
White	116	53 (29.9%)	63 (32.5%)
Black	255	124 (70.1%)	131 (67.5%)
Male	272	134 (75.7%)	138 (71.1%)
Female	97	42 (23.7%)	55 (28.4%)
Age	371	58.7 (4.46)	58.9 (6.80)
Education	371	13.2 (2.82)	13.6 (2.96)
Reported cancer	53	26 (49.1%)	27 (50.9%)

There were no significant differences in any of these variables by HIV status.

Table 2
Proportion and odds ratio of reporting cancer among participants with HIV+ and HIV-

Variable	n	Proportion (%)	OR $_{cancer}$ (95% CI)
Total (N=371)			
HIV+	177	14.7%	1.07 (0.60, 1.91)
HIV-	194	13.9%	
Black	255	11.8%	0.54 (0.30, 0.98)
White	116	19.8%	
Female	97	16.5%	1.26 (0.66, 2.38)
Male	272	11.8%	
HIV+ (n=177)			
Black	124	11.3%	0.44 (0.19, 1.02)
White	53	22.6%	
Female	42	14.3%	0.95 (0.35, 2.55)
Male	134	14.9%	
HIV- (n=194)			
Black	131	12.2%	0.66 (0.29, 1.52)
White	63	17.5%	
Female	55	18.2%	1.33 (0.71, 2.49)
Male	138	12.3%	

● In the total cohort, Blacks had lower odds of cancer compared to Whites (Table 2).

● When stratified by HIV status: in both HIV+ and HIV- groups, black participants had lower odds of cancer than White participants but the difference was not statistically significant (Table 2).

● There were no gender differences in the odds of having cancer in any group (Table 2).

● There was no evidence of confounding by gender, age or education (not significantly associated with cancer or HIV status).

Conclusion:

● In previous research, Blacks were more likely to have cancer than Whites.

● In the current study, Blacks had lower likelihood of cancer than Whites (in total and by HIV status).

● Potential reasons for our finding are survival bias (i.e. Blacks with cancer more likely to die before study), or that this high risk cohort is not representative of the US population.

● Other study limitations include self-report of cancer and cross-sectional analysis.

● Future studies could use medical records (i.e. date of cancer diagnosis, cancer type), and younger people (middle age) of varying lifestyles (i.e. income, location, etc.).