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Division of Cancer Epidemiology & Genetics

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Prevalence of Cancer Screening In People with HIV Utilizing a Symphony Health Data Linkage in Texas

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BACKGROUND

- Screening for cancer can identify cancer at earlier stages where curative therapy can be most efficacious, or, in the case of cervical cancers, identify precancerous lesions that can be treated, preventing progression to malignant cancer.
- Cancer risk is elevated in people with HIV (PWH) compared to those without HIV.
- For people with HIV (PWH), cancer screening is important given higher incidence of late-stage disease at diagnosis, disparities in receipt of cancer treatment, and elevated risk of cancer related mortality.
- We sought to describe the prevalence of screening for anus, breast, cervix, and prostate cancers.

METHODS

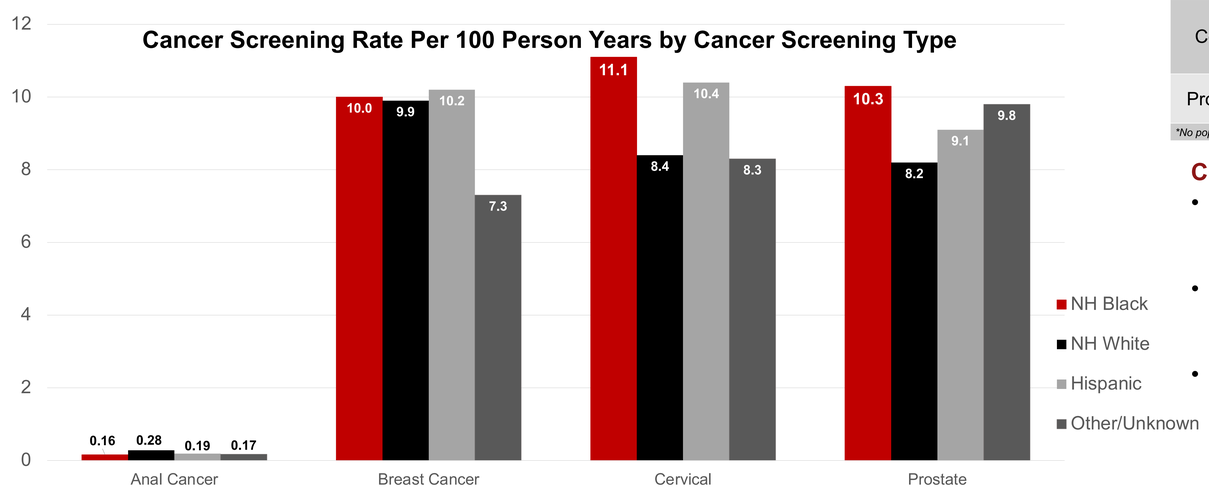
- Data from the HIV/AIDS Cancer Match (HACM) Study, a population-based HIV and cancer registry linkage was linked to Symphony Health, an aggregator of health data including claims from medical, laboratory, hospital, and physician records, in Texas during 2008-2015.
- For each screening type we limited the cohort to those who were screening eligible based on age criteria as of 2008.
- Individuals had to have two claim codes within our data with at least 6 months of follow up time. Screening claims within 9 months of each other were dropped, as these were unlikely to be screening procedures.
- We determined the proportion of individuals with any screen during our study window and estimated the prevalence rate of screening over follow-up.
- Poisson regression was used to identify predictors of screening by age, race/ethnicity and HIV transmission group.

Cancer Type	Associated Codes
Anal	CPT/HCPCS Codes: 46000, 46601, 46604, 46606, 46607, 46608, 46610, 46611, 46612, 46614, 46615, 0288T
Breast	ICD-10: Z12.31, Z12.39 CPT/HCPCS Codes: 76092, 77057, 77063, 77067, G0202, G9899
Cervix	ICD-10: Z12. 4; CPT & HCPCS Codes: G0123, G0124, G0141, G0143, G0144, G0145, G0147, G0148, P3000, P3001, Q0091, 88141, 88142, 88143, 88147, 88148, 88150, 88152, 88153, 88154, 88155, 88164, 88165, 88166, 88167, 88174, and 88175
Prostate	ICD-9 codes: G0103 ICD-10 code: Z12.5; CPT/HCPCS codes: 84153, 84154

Anus, breast, cervix, and prostate cancer screening is *underutilized* among people with HIV in Texas.

RESULTS

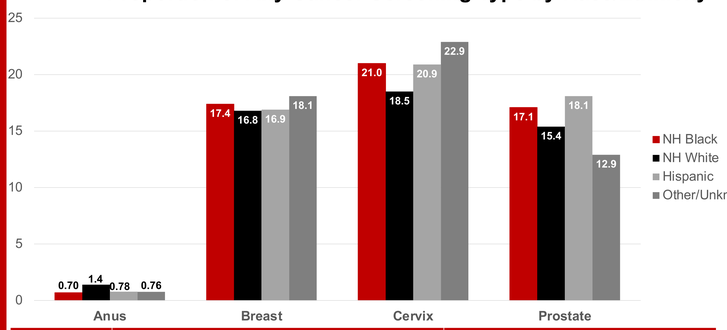
- Among PWH, 1.26% were **ever screened** for anal cancer, 34.4% for breast cancer among women, 39.3% for cervical cancer among women, and 29.4% for prostate cancer among men, during our study.



	Anal Cancer Screening		Breast Cancer Screening		Cervical Cancer Screening		Prostate Cancer Screening	
	Rate Ratio (CI)	P value	Rate Ratio (CI)	P value	Rate Ratio (CI)	P value	Rate Ratio	P value
Birth Year	1.03 (1.02, 1.04)	**<0.0001**	0.96 (0.95,0.96)	**<0.0001**	1.01 (1.00,1.01)	**<0.0001**	0.99 (0.99-1.00)	0.33
HIV Transmission Group								
MSM (Non-PWID)	Ref	Ref	----	--	--	--	Ref	Ref
Other/Unknown	0.31 (0.23, 0.42)	**<0.0001**	0.90 (0.85-0.95)	0.0001	0.94 (0.89,0.98)	**0.01**	1.09 (1.02-1.18)	**0.02**
PWID	0.66 (0.53, 0.81)	**<0.0001**	1.03 (0.98-1.09)	0.20	1.11 (1.06,1.18)	**<0.0001**	0.96 (0.89-1.03)	0.23
Heterosexual	0.18 (0.12, 0.26)	**<0.0001**	Ref	Ref	Ref	Ref	1.00 (0.91-1.11)	0.98
Race/ethnicity								
NH Black	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref
Hispanic	0.84 (0.68, 1.03)	0.1054	0.95 (0.89-1.00)	0.07	0.94 (0.89-0.99)	**0.04**	0.87 (0.81-0.94)	**0.0004**
Other/Unknown	0.80 (0.43, 1.46)	0.464	0.75 (0.62-0.91)	**0.004**	0.74 (0.62-0.89)	**0.001**	0.94 (0.76-1.17)	0.59
NH White	1.25 (1.06, 1.48)	**0.0093**	0.88 (0.83-0.93)	**<0.0001**	0.75 (0.71-0.79)	**<0.0001**	0.80 (0.75-0.85)	**<0.0001**

Note. HIV = Human Immunodeficiency Virus; CI= Confidence Interval; PWID= person who injects drugs; MSM = Men who have sex with men; NH= Non Hispanic;

Proportion of Any Cancer Screening Type by Race/Ethnicity



Cancer Type	Screening Guidance	Age and Frequency of Screening
Anus*	New York State Department of Health AIDS Institute, Screening for Anal Dysplasia and Cancer in Adults With HIV	Men and women aged ≥ 35 with HIV
Breast	U.S. Preventive Services Task Force	Women aged 50-74 years, biennial mammography screening for average risk women
Cervix	Guidelines for the prevention and treatment of opportunistic infections in adults and adolescents with HIV	Women aged ≥ 30 annual screening throughout lifetime
Prostate	U.S. Preventive Services Task Force	Men aged 50-69, biennial screening for average risk men

**No population level screening guidance exists for anal cancer screening at this point.*

CONCLUSIONS

- Findings suggest screening modalities for anal, breast, cervical, and prostate cancer are underutilized among PWH in Texas.
- Cancer is a leading cause of death among PWH, future work is needed to determine barriers to suboptimal screening rates.
- Cancer screening among PWH represents an important opportunity to reduce morbidity and mortality especially since prior work has demonstrated disparities in receipt of cancer screening among PWH.

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