Trends in Common Cancer Diagnoses Among People with HIV in North America from 2006-2020

0798

Contact:
Sally B. Coburn
sbcoburn@jhu.edu

Sally B. Coburn[1], Elizabeth Humes[1], Michael A. Horberg[2] , Michael J. Silverberg[3], Jeff Martin[4], Raynell Lang[5], Chad Achenbach[6], Lesley S. Park[7], Minh Nguyen[8], Mari Kitahata[9], Maile Karris[10], Heidi Crane[9], Joseph Eron[11], Keri N. Althoff[1], Richard D. Moore[1] for the NA-ACCORD of the International Epidemiology Databases to Evaluate AIDS (IeDEA)

[1]Department of Epidemiology, Johns Hopkins University, Baltimore, Maryland, USA; [2]Kaiser Permanente Mid-Atlantic Permanente Medical Group and Research Institute, Washington, DC, USA; [3]Division of Research, Kaiser Permanente Northern California, Oakland, CA, USA; [4]University of California at San Francisco, San Francisco, CA, USA; [5]Department of Medicine, University of Calgary, Calgary, Alberta, CA; [6]Division of Infectious Diseases, Department of Medicine, Northwestern University, Chicago, IL, USA; [7]Department of Epidemiology & Population Health, Stanford University School of Medicine, Stanford, CA, USA; [8]Emory University School of Medicine, Atlanta, GA, USA; [9]Department of Medicine, University of Washington, Seattle, WA, USA; [10]Department of Medicine, University of California San Diego, San Diego, CA, USA; [11]University of North Carolina School of Medicine, Chapel Hill, NC, USA

BACKGROUND

Cancer burden in people with HIV (PWH) shifted from cancers associated with immunodeficiency to cancers common in the general population

Trends in common cancer diagnoses by sex have not been characterized following Treat-All policies and modern ART

We examined incidence trends by sex for common cancers in a consortium of PWH in care from 2006-2020 in the US and Canada

METHODS

Study population

- PWH ≥ 18 years old participating in the North American AIDS Cohort Collaboration on Research & Design
- Under observation from 2006 or later in a cohort contributing validated cancer diagnoses

Cancer site validation and selection for analysis

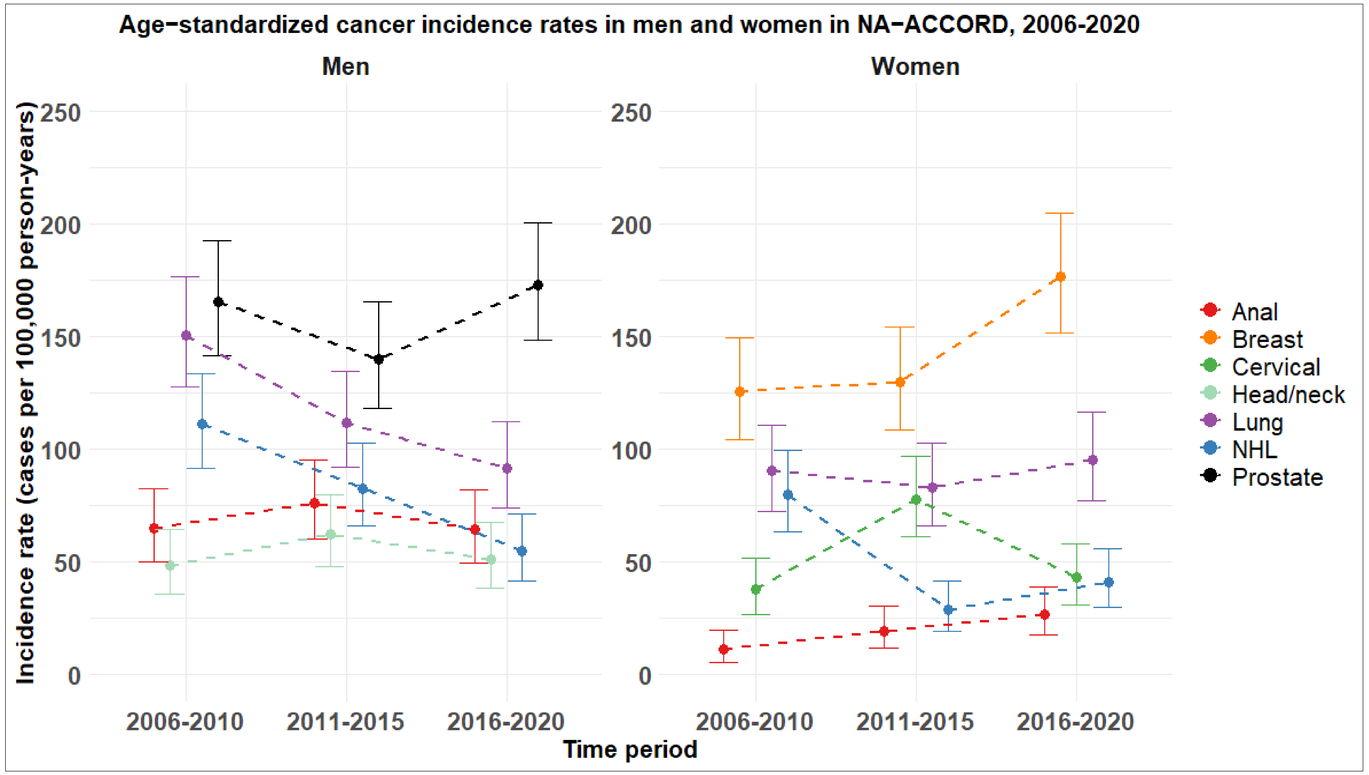
- Cancer diagnoses are validated periodically though review of medical records, pathology reports and linkages with cancer registries
- The five most common diagnoses (absolute counts) within 2006-2020 by sex were selected

Statistical Analyses

- Estimated sex- and period-specific cancer incidence rates (2006-10; 2011-15; 2016-20) per 100,000 person-years (PY)
- Rates were age-standardized to the US 2000 population

RESULTS

- Among 112,757 PWH (86% men, 14% women) in 20 NA-ACCORD cohorts, we included 4,634 incident cancer diagnoses
- Median age at first cancer diagnosis was 60 years (IQR 54, 66) for men and 51 (IQR 44, 58) for women



- Most common sites in men: prostate (n=1516), lung (n=1031), anal (n=612), non-Hodgkin Lymphoma (NHL) (n=597), head/neck (n=479); in women: breast (n=134), lung (n=115), non-Hodgkin Lymphoma (n=66), cervical (n=55), anal (n= 29)
- NHL declined in men (111-55 cases per 100,000 PY, p<0.05) and women (80-41 cases per 100,000 PY p<0.05)
- Head/neck and cervical cancers were stable in men/women, respectively
- Lung cancer declined in men (151-92 cases per 100,000 PY, p<0.05); stable in women (90-95 cases per 100,000 PY, p>0.05)
- Anal cancer was stable in men (65-76 cases per 100,000 PY, p>0.05); increased in women (11-27 cases per 100,000 PY, p<0.05)
- Breast/prostate cancers were stable/declined from 2006-10 to 2011-15 and increased from 2011-15 to 2016-20 (p>0.05)

Declines in NHL are consistent with improved ART treatment and earlier HIV diagnosis. Trends in breast and prostate may indicate increasing burden of these cancers. Cancer trends in women underscore need to clarify cancer etiology and improve screening for women with HIV.

CONCLUSIONS

- Declines in NHL likely due to improved immunity at diagnosis, earlier ART initiation/effectiveness
- Declining lung cancer consistent with other HIV studies
- Increasing breast/prostate cancer merits continued monitoring
- Trends in women underscores need to clarify cancer etiology and improve screening for women with HIV

ACKNOWLEDGEMENTS

The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health or the Centers for Disease Control and Prevention. This work was supported by National Institutes of Health grants U01AI069918, F31AI124794, F31DA037788, G12MD007583, K01AI093197, K01AI131895, K23EY013707, K24AI065298, K24AI118591, K24DA000432, KL2TR000421, N01CP01004, N02CP055504, N02CP91027, P30AI027757, P30AI027763, P30AI027167, P30AI036219, P30AI050409, P30AI050410, P30AI094189, P30AI110527, P30MH62246, R01AA016893, R01DA011602, R01DA012568, R01 AG053100, R24AI067039, U01AA013566, U01AA020790, U01AI038855, U01AI038858, U01AI068634, U01AI068636, U01AI069432, U01AI069434, U01DA03629, U01DA036935, U10EY008057, U10EY008052, U10EY008067, U01HL146192, U01HL146193, U01HL146194, U01HL146201, U01HL146202, U01HL146203, U01HL146204, U01HL146205, U01HL146208, U01HL146240, U01HL146241, U01HL146242, U01HL146245, U01HL146333, U24AA020794,U54MD007587, UL1RR024131, UL1TR000004, UL1TR000083, Z01CP010214 and Z01CP010176; contracts CDC-200-2006-18797 and CDC-200-2015-63931 from the Centers for Disease Control and Prevention, USA; contract 90047713 from the Agency for Healthcare Research and Quality, USA; contract 90051652 from the Health Resources and Services Administration, USA; grants CBR-86906, CBR-94036, HCP-97105 and TGF-96118 from the Canadian Institutes of Health Research, Canada; Ontario Ministry of Health and Long Term Care; and the Government of Alberta, Canada. Additional support was provided by the National Institute Of Allergy And Infectious Diseases (NIAID), National Cancer Institute (NCI), National Heart, Lung, and Blood Institute (NHLBI), Eunice Kennedy Shriver National Institute Of Child Health & Human Development (NICHD), National Human Genome Research Institute (NHGRI), National Institute for Mental Health (NIMH) and National Institute on Drug Abuse (NIDA), National Institute On Aging (NIA), National Institute Of Dental & Craniofacial Research (NIDCR), National Institute Of Neurological Disorders And Stroke (NINDS), National Institute Of Nursing Research (NINR), National Institute on Alcohol Abuse and Alcoholism (NIAAA), National Institute on Deafness and Other Communication Disorders (NIDCD), and National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK). These data were collected by cancer registries participating in the National Program of Cancer Registries (NPCR) of the Centers for Disease Control and Prevention (CDC).