



Anti-Asian American Racism: A Wake-Up Call for Population-Based Cancer Research

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ABSTRACT

Since the start of the COVID-19 pandemic, Asian Americans have been subjected to rising overt discrimination and violent hate crimes, highlighting the health implications of racism toward Asian Americans. As Asian Americans are the only group for whom cancer is the leading cause of death, these manifestations of anti-Asian racism provoke the question of the impact of racism across the cancer continuum for Asian Americans. In this Commentary, we describe how the myth of the “model minority” overlooks the diversity of Asian Americans. Ignoring such diversity in sociocultural trends, immigration patterns, socioeconomic status, health behaviors, and barriers to care masks disparities in cancer risk, access to care, and outcomes across Asian American populations.

We recommend cancer epidemiologists, population science researchers, and oncology providers direct attention toward: (i) studying the impacts of structural and personally mediated racism on cancer risk and outcomes; (ii) ensuring studies reflect the uniqueness of individual ethnic groups, including intersectionality, and uncover underlying disparities; and (iii) applying a critical race theory approach that considers the unique lived experiences of each group. A more nuanced understanding of cancer health disparities, and how drivers of these disparities are associated with race and differ across Asian American ethnicities, may elucidate means through which these disparities can be alleviated.

Racism Towards Asian Americans

Throughout the course of the COVID-19 pandemic, Asian Americans have been subjected to rising overt discrimination and violent hate crimes (1), including physical assaults disproportionately targeting women and the elderly (1). Racism’s deadly consequences were recently epitomized in the murders of eight people in Atlanta, Georgia, six of whom were Asian American women (2). These violent acts are reflective of the effects of increasing anti-Asian and xenophobic rhetoric (3, 4). As words have consequences, especially in far-reaching social media platforms, it is not surprising that this xenophobic rhetoric has led to increasing trends in anti-Asian sentiment (5).

The painful legacy of racism toward Asian Americans traces its origins to the 16th century when the first Filipinos arrived in Morro Bay, California, onboard Spanish galleon ships traveling between the Philippines (then called Spanish East Indies) and Spain’s colonies in North America (6), a history that underscores the ties between colonialism and race (7). Early groups such as the Filipinos who settled in St. Malo in Louisiana in the 1760s (8) and the Chinese sailors who settled in Hawai’i in the 1770s (9) were followed by larger numbers of migrants in the 19th century, many of whom were

contracted plantation laborers (10). Guterl describes how “[the] first Chinese people brought to the American South were Spanish-speaking “voluntary” immigrants; as “free” laborers not part of the illegal “coolie trade”, they were quickly hired off to fellow planters in southern Louisiana and along the Mississippi River” (11). These laborers were seen not as humans but as “the ideal industrial machine” (11).

A major wave of Asian immigration occurred with the California Gold Rush of the 1850s (12). In response to the growing number of Asian immigrants, anti-Asian discrimination came in the form of financial punishment such as the Foreign Miners’ Tax of 1850, which applied to Chinese and Latino but not European miners (13, 14). Discrimination also came in the form of immigration policies such as the Page Act of 1875 that banned the immigration of Chinese women, and the Chinese Exclusion Act of 1882 that banned immigration of Chinese laborers (13, 14). Concurrent with these discriminatory policies was social persecution in the form of numerous anti-Asian riots and murders (13). In 1907, the Bellingham riots that targeted South Asians, rooted in the issue of South Asian labor in lumber mills, were part of the broader Pacific Coast race riots that saw Asian American institutions damaged and South Asian communities driven out of towns (15).

In the early 20th century, ongoing perception of Asian Americans as “the yellow peril” and “perpetual foreigner” culminated in the internment of Japanese Americans after the bombing of Pearl Harbor (13). The health effects of these discriminatory policies and acts of racism were myriad. For example, studies of over 100,000 Japanese Americans interned by the US government demonstrated high rates of preventable deaths of infants and the elderly due to poor living conditions and inadequate medical care as well as long-term trauma manifested in suicide rates at least double that of the rest of the U.S. population (16).

Current events are echoes of these recurring historic prejudices.

The health implications of racism surface in the racially targeted violence and discrimination toward Asian Americans. For cancer epidemiologists, other population science researchers, and oncology providers, these manifestations of anti-Asian prejudices also provoke the question of the impact of racism across the cancer continuum for Asian Americans. A better understanding of the effects of fundamental

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causes and pathways of racism on cancer prevention and control is essential with cancer as the leading cause of death among Asian Americans (17).

Dismantling the Monolith

Racism against Asian Americans is often disguised under the veneer of the “model minority,” the belief that Asian Americans are systematically self-sufficient and collectively achieve similar levels of health and social mobility. This narrative is dangerous because the misconception overlooks the unique health needs and barriers faced by Asian American communities (18) and ignores the diversity of Asian cultures, languages, risk factors, disease epidemiology, and healthcare barriers (19).

Asian Americans are not one monolithic racial entity. Comprising almost 20 million people with origins in a multitude of countries and languages, Asian Americans are the fastest growing racial/ethnic group in the United States (20). Unsurprisingly, there is significant variation in sociocultural trends, immigration patterns, socioeconomic status, lifestyles, health behaviors, and barriers to care (19). For example, Asian Americans demonstrate the widest variation in household income: from 1970 to 2016, income inequality has risen among Asian Americans more than any other racial group (19). In 2016, Asian Americans at the 90th percentile of income earned over ten times more than Asian Americans at the bottom 10th percentile (19), compared with approximately six times more in 1970 (19). Inequality in educational attainment is similarly stark (21): in 2015, although 51% of Asian Americans ages 25 and older have a bachelor's degree or greater, upon disaggregation, rates varied from 72% among Asian Indian Americans and 60% among Malaysian Americans compared with 18% among Cambodian Americans, 17% among Hmong Americans, and 9% of Bhutanese Americans (19, 21).

The NYU Center for the Study of Asian American Health has developed a Health Atlas to compare the health outcomes of Asian Americans, Native Hawaiians, and Pacific Islanders (22). Chinese American men in New York (26%, NYC Community Health Survey 2013–17) and Korean American men in California (24%, California Health Interview Survey 2013–18) had a higher prevalence of smoking than the national average (18%, National Health Interview Survey 2012–2017); among women, 8% of Filipina Americans were smokers compared with 1% among Asian Indian American women (National Health Interview Survey 2012–17; ref. 22). Furthermore, Japanese Americans in New York were found to have a high prevalence of alcohol use (81% among Japanese Americans vs. 37% among Chinese Americans, NYC Community Health Survey 2013–17; ref. 22). These disparities in sociodemographic characteristics and health behaviors contribute to differential cancer risk, access to screening, and barriers to care across different Asian American groups.

Aggregated statistics paint a rosy picture with many studies combining Asian Americans into a single group and reporting associations between Asian race and improved cancer outcomes, usually when compared to non-Hispanic whites. Such data aggregation perpetuates the model minority myth, masking disparities in cancer risk, access to care, and outcomes (23). For instance, Korean Americans are five times and two times more likely to develop gastric cancer compared to non-Hispanic white Americans and Japanese Americans, respectively (24), with variation in complex risk factors such as *Helicobacter pylori* infection and dietary patterns (25). Although Asian women in Asia and in the United States have relatively lower incidence rates of breast cancer in aggregate, rates among Filipina Americans are higher relative

to other Asian Americans (26), with various factors such as body mass index and cumulative menstrual months posited as playing a role (27). Rates of prostate cancer incidence and mortality are also highest among Filipino American men compared with other groups, which may be linked to diet and obesity rates (25).

Data on Vietnamese American men in California have demonstrated liver cancer incidence rates over seven times higher than rates in non-Hispanic white men (25), likely associated with the prevalence of HBV infection (28). Vietnamese American women have been found to have incidence rates of cervical cancer almost twice as high as those of non-Hispanic white women (25), which cannot be explained completely by differences in human papillomavirus (HPV) infection (25, 29). Chinese American women have been found to have the second highest incidence of lung cancer and the highest rate of lung cancer mortality across Asian American groups in California (25). Among Chinese American women, up to 80% with lung adenocarcinoma occur among those who have never smoked (30), a disparity suggestive of other risk factors such as cooking oil exposure (31), oncogenic mutations in *EGFR* (32), and second-hand smoke (33).

Intertwined with cancer risk and the sociodemographic milieu is access to cancer screening and treatment. Asian Indian Americans have low rates of breast cancer screening (67% vs. 77% for non-Hispanic whites) and colorectal cancer screening (46% vs. 64% for non-Hispanic whites; ref. 34). New York Community Health Survey data in 2017 suggest that Chinese (60%), South Asian (58%), and Korean (60%) American adults have a lower prevalence of up-to-date Pap smears compared with the national average (80.2%; ref. 22). Thompson and colleagues found in models adjusting for Asian ethnicity that mammography and colorectal cancer screening were negatively associated with language discordance between patient and providers (34). Furthermore, having a female provider was associated with higher rates of screening for female cancers (34), underscoring the complex intersectionality and cultural considerations of these disparities.

Barriers to care similarly impact Asian American communities (35). For example, among patients with stage III prostate cancer, rates of definitive treatment ranged from 91% among Filipino Americans to 99% among South Asian Americans (36). Among patients with stage III lung cancer, Chinese American and Filipino American patients had lower rates of definitive treatment (Chinese American: 54%, Filipino American: 55%) compared to Japanese American patients (63%; ref. 36). Barriers are complex and heterogeneous, and can include insurance, finances, time, language, citizenship status, and culturally-associated stigma (37).

The generally favorable mortality following cancer diagnosis seen among most Asian American ethnic groups when compared to non-Hispanic whites masks important disparities among Asian Americans and within ethnic groups, such as up to four-times higher mortality among foreign-born relative to U.S.-born Asian American women with breast cancer (38). Differences in cancer-specific mortality among Asian Americans have been demonstrated (36). Asian Americans were found to have lower cancer-specific mortality than non-Hispanic whites overall, yet this did not apply to Korean Americans (36). Breast cancer was found to be the leading cause of cancer death among Filipina American women and Asian Indian American women, whereas lung cancer was found to be the leading cause of cancer-related death among Chinese American, Japanese American, Korean American, and Vietnamese American women (39). Among Asian Americans with gastric cancer, Koreans had the highest survival and Vietnamese had the lowest survival (45.4% vs. 35.7% at five years; ref. 40). Immigration histories likely contribute to these disparities.

Korean and Vietnamese Americans with more recent immigration histories have high rates of cancers less commonly seen in the West – stomach cancer (25, 39, 40) and liver cancer (25, 40), respectively. Groups with older immigration histories, such as Japanese and Filipino Americans, experience a higher burden of cancers more commonly found in the United States [e.g., colorectal (41) and breast cancers (42)]. These differences are clearly multifaceted in origin, with heterogeneity in risk factors, lifestyle, genetic ancestry, access to screening and care all playing a role.

Steps Forward

Recognizing the heterogeneity of Asian Americans, cancer population sciences researchers and oncology providers must direct attention towards the following: (i) studying the impacts of structural and personally-mediated racism on cancer health outcomes; (ii) ensuring studies and reported results and statistics reflect uniqueness of individual ethnic groups, including intersectionality, and unmask underlying disparities; and (iii) applying a critical race theory approach to consider the unique lived experiences of each group.

Racism harms health and is a public health crisis. The disproportionate burden of COVID-19 and police brutality on Black and Brown people parallels the COVID-19-related deaths and hate crimes experienced by Asian Americans. More insidious manifestations may impact cancer disparities and as such, ways in which structural racism and discrimination impact cancer health merit focused study. Linguistic barriers to screening and care may affect stage at presentation and outcomes. Barriers to care that affect Asian American patients of lower socioeconomic status, those without health insurance, and those without legal immigration status, require immediate attention and amelioration. Efforts are needed to understand how implicit racial bias of providers and institutions may affect oncology care and outcomes for Asian American patients as has been shown for other groups (43).

Second, it is important that studies reflect the uniqueness of Asian American groups by incorporating disaggregated analyses so as not to mask disparities. Sound science necessitates efforts to understand and account for heterogeneity across study populations. Efforts are also needed to study cancer disparities across Asian Americans that take into account the intersectionality of social categorizations that also contribute to individual identities. Cancer disparities associated with biologic sex (34), gender identity (44), socioeconomic status (19), educational attainment (19), cultural preferences (35, 37), immigration histories (41, 42, 45), religion (46), and other social factors underscore the need for studies that recognize heterogeneity amongst

people that go beyond – but are often closely linked with – categories of race and ethnicity; such studies may lead to a greater understanding of how these different facets of individuals' identities affect cancer disparities.

Importantly, the intersection of Asian American identities with other race and ethnicity categorizations – people who share African American or Latinx American heritage, for example – impacts individuals' experience of anti-Asian racism and racism towards their other racial identities (47). How multiple racial identities impact disparities across the continuum of cancer care is poorly understood; studies should evaluate differences in associations for single and multiple racial identities as well as assess the association between genetic ancestry and cancer risk, accounting for genetic admixture which may prove insightful with the consideration of the intersection of genetic ancestry with other sociodemographic factors (48). In addition, individuals' preferences for ethnic identity, particularly as it may relate to health behaviors and experiences with discrimination, is important to assess.

Finally, approaching cancer disparities through the lens of critical race theory will serve to better dissect the causes of these disparities, and consequently, ways in which these disparities may be alleviated. It is important to not pathologize race or ethnicity – being Asian American does not inherently portend worse or better cancer outcomes. Instead, genetic ancestries, lived experiences, and the long history of structurally-mediated trauma in both the sending and receiving countries, which are complex and interrelated – should be leveraged in efforts to work towards equity.

The rise of anti-Asian American hate crimes is a call to action for us to examine ways in which racism affects health beyond the pandemic. It is important that those in the cancer epidemiology, population sciences, and clinical oncology communities take stock of the disparities that affect Asian American communities. A greater and more nuanced understanding of these disparities – and how drivers of these disparities are associated with race and differ across Asian American ethnic populations – may elucidate means through which these disparities may be alleviated. Given the documented low rates of NCI (49) and NIH (50) funding support for Asian American health studies, increased directed funding support is critically needed for the cancer research community to effectively address these issues.

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