Nasopharyngeal cancer incidence varies widely among different ethnic subgroups of Asian Americans

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Chinese Americans and Laotian Americans were over 10 and 14 times more likely to be diagnosed with nasopharyngeal cancer, respectively, than non-Hispanic white Americans, with incidence rates surpassing other Asian American subgroups, according to results presented at the virtual 14th AACR Conference on the Science of Cancer Health Disparities in Racial/Ethnic Minorities and the Medically Underserved, held October 6-8, 2021.

"It's become increasingly evident that studying the Asian American population as a single racial group may overlook critical ethnic-specific risk patterns," said Alice Lee, Ph.D., MPH, an assistant professor at California State University, Fullerton and lead author of the study. "Our findings identify those at highest risk of nasopharyngeal cancer, who would largely benefit from targeted interventions."

Nasopharyngeal cancer is a relatively rare head and neck cancer known to more frequently affect people of Asian descent. Previous research based on data from the Surveillance, Epidemiology, and End Results (SEER) database estimates that the incidence of nasopharyngeal cancer is over seven times higher among Asian Americans than non-Hispanic white Americans.

However, Asian Americans represent a highly heterogeneous population with a variety of cultures and lifestyle practices that can differentially impact cancer risk. By disaggregating this population into ethnic subgroups, researchers can better identify the genetic, environmental, and behavioral factors that increase risk for nasopharyngeal cancer, Lee said.

In this study, the researchers identified approximately 9,700 cases of nasopharyngeal cancer in the SEER database, diagnosed in Asian Americans between 1990 and 2014. They divided the population into nine ethnic subgroups—Chinese, Japanese, Filipino, Korean, Asian Indian/Pakistani, Vietnamese, Laotian, Cambodian, and Native Hawaiian/Pacific Islander—and, after adjusting for age, calculated the incidence rates for each group.

Lee and colleagues found that compared with non-Hispanic white Americans, the incidence of nasopharyngeal cancer was 14.71 times higher in Laotian Americans and 10.73 times higher in Chinese Americans. Most other ethnic subgroups also had a significantly increased risk of nasopharyngeal cancer when compared with non-Hispanic whites, with the exception of Japanese and Asian Indian/Pakistani individuals. Lee said this distinction might help researchers better understand the mechanisms underlying the etiology of nasopharyngeal cancer.

"Japanese and Asian Indian/Pakistani individuals will serve as a contrast to the higher risk groups in
future research aimed at identifying risk factors and developing more targeted prevention programs."

Lee explained.

The researchers also investigated whether these disparities persisted across different nasopharyngeal tumor histologies. While Chinese and Laotians had a higher risk for all histologies examined in the study, the risk was especially high for differentiated and undifferentiated non-keratinizing tumors, the latter of which had a 25-fold higher incidence in both Chinese and Laotian Americans when compared to non-Hispanic white Americans.

Lee hopes these data will promote a shift in the way cancer risk is studied in people of Asian descent and will spur research into the reasons behind these disparities.

"Our findings highlight the need to move away from examining cancer among Asian Americans as a single racial group, since there are clear ethnic-specific disparities that are missed with an aggregated approach," she said. "By identifying those disproportionately burdened by the disease, we can start thinking about the behavioral, biological, and social factors that may contribute to their higher risk."

Limitations of this study include a small sample size for some ethnic subgroups, as well as limited information about patient and lifestyle factors—such as immigration history, smoking, alcohol use, and body mass index—which could confound the differences observed.

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