Disparities in lung cancer screening rates among the Hispanic/LatinX population

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“Ultimately, the newly proposed lung cancer screening guidelines serve as hope for high-risk subjects of Hispanic/LatinX ethnicity whom, until now, have often missed out on opportunities to undergo lung cancer screening. With these new broader lung cancer screening guidelines, eligibility for high-risk Hispanic/LatinX individuals should increase, therefore improving their rates of earlier detection and overall lung cancer mortality.”

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The Hispanic/LatinX community is one of the fastest growing in the USA [1]. In 2019, the Hispanic/LatinX population reached a total of 60.6 million and accounted for 52% of the total population growth [1]. The Hispanic population comprise the country’s second largest racial/ethnic group, behind non-Hispanic whites, and are the largest minority group in the US, accounting for 18.5% of the total population [2]. By 2045, the Hispanics/LatinX population is projected to extend up to 24.6%, whereas the white population is expected to contract, no longer forming the majority of the US population [3]. Despite their large representation in the US, the Hispanic/Latinx population remains one of the most underserved and continue to face enormous disadvantages in access to healthcare and screening. Throughout the years, multiple studies have demonstrated the barriers and limitations the Hispanic/LatinX community have experienced in the healthcare system, including but not limited to: low income leading to lack of health insurance, perceived discrimination, language barriers and limited health proficiency, lack of access to cancer prevention, early detection and treatments. Studies have shown how the Hispanic population has the highest uninsured rate of any racial or ethnic group within the US [4]. Uninsured patients are less likely to undergo age-appropriate cancer screening, putting them at higher risk to later stages of cancer diagnosis [5]. Additionally, patients without health insurance often tend to postpone, forgo or deny recommended care [6,7]. Studies have shown how racial and ethnic minorities, particularly Hispanics, have lower screening rates than white individuals for cervical, breast and colorectal cancers. For these reasons, Hispanics are less likely than non-Hispanic whites to be diagnosed with cancer at the localized stage [8]. This could explain why, unlike the white population, cancer is the most common cause of death among the Hispanic/LatinX population.

Lung cancer is the most common non-cutaneous cancer overall and the leading cause of cancer-related death worldwide. Lung cancer is most commonly diagnosed at advanced stages of the disease, carrying an overall 5-year survival rate of less than 20% [9]. The survival rates are even lower for Hispanic patients compared with non-Hispanic whites, as the proportions of locally diagnosed lung cancer are 13% in Hispanics versus 17% in non-Hispanic whites. Similarly, 59% of Hispanic patients are diagnosed at a later stage compared with 52% of non-Hispanic whites [10]. In an effort to improve lung cancer screening as well as subsequent early diagnosis and curative resections for lung cancer, organizations such as the National Comprehensive Cancer Network (NCCN) and the United States Preventive Services Task Force (USPSTF) created lung cancer screening guidelines in 2011 and 2013, respectively. The USPSTF13 recommended annual screening for lung cancer in adults 55–80 years of age who have at least a 30-pack-year smoking history and are current smokers or have quit within the last 15 years [11]. Alternatively, the NCCN classified high-risk patients as those who are 55–74 years of age with >30-pack-year history of smoking with <15 years since quitting; or >20-pack-year history of smoking and additional risk factors.
factors for lung cancer, including: family history of lung cancer, personal history of another malignancy, history of chronic obstructive pulmonary disease or pulmonary fibrosis, radon exposure, occupational exposure and/or second-hand smoking exposure [12].

Recommendations for low-dose computed tomography (LDCT) for lung cancer screening were established after the National Lung Screening Trial, one of the largest randomized controlled trials in the USA, showed a clear reduction in lung cancer deaths among high-risk patients who underwent LDCT for screening. However, more than 90% of the participants in the trial were white, compared with only 1.8% being Hispanic, which as aforementioned, is not an accurate representation of the US population [13]. Since the screening implementation, there has been no change in the odds of stage I lung cancer diagnosis in the Hispanic population. Hispanic/LatinX individuals are less likely to be diagnosed with stage I disease compared with white individuals. This could be due to decreased tendencies for screening referrals and lower rates for meeting eligibility criteria. One study assessed the perceptions about lung cancer and the awareness and barriers for lung cancer screening among the LatinX and non-LatinX populations [14]. The study found that more of the LatinX population believed that lung cancer could be prevented, at 74.6% compared with 48.1% of the non-LatinX population, but simultaneously, LatinX individuals were less aware of lung cancer screening at 44.1 versus 34.1% [14]. When informed, more LatinX wanted to be screened (90.7%) compared with non-LatinX (67%) [14]. One study created a cross-sectional analysis using the 2015 National Health Interview Survey to evaluate the disparities in lung cancer screening eligibility for ethnic and racial minorities. The study found that non-Hispanic whites had the highest lung cancer screening eligibility rates compared with other racial and ethnic groups. Among current smokers, 24.7% of Hispanics met USPSTF screening eligibility compared with 44% of non-Hispanic blacks and 71.3% of non-Hispanic whites [15]. Similarly, the Hispanic population had the lowest rate of screening eligibility among former smokers. Similar to the previous study, we conducted an observational study in patients diagnosed with lung cancer between 2016 and 2019. We thus aimed to assess the tendencies for screening eligibilities between race and ethnicity with each screening criteria. In our as-yet unpublished study, Hispanic/LatinX individuals had significantly lower tendencies of meeting the USPSTF lung cancer screening eligibility criteria compared with non-Hispanic/LatinX individuals. We found a statistical association between ethnicity and eligibility of screening criteria, where a proportionally higher number of Hispanic/LatinX persons were ineligible under USPSTF criteria met NCCN criteria (this study is still unpublished).

In 2021, the USPSTF made changes to their existing lung cancer screening guidelines with hopes of increasing the eligibility rates for high-risk individuals. The new guidelines suggest lowering the minimum age to 50 years and reducing the smoking history to at least 20-pack years [16]. Ultimately, the newly proposed lung cancer screening guidelines serve as hope for high-risk subjects of Hispanic/LatinX ethnicity whom, until now, have often missed out on opportunities to undergo lung cancer screening. With these new broader lung cancer screening guidelines, eligibility for high-risk Hispanic/LatinX individuals should increase, therefore improving their rates of earlier detection and overall lung cancer mortality.

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