



An Inside Look at Disparities in Lung Cancer Care for At-Risk Populations

August 1, 2021

Matthew Gavidia

On World Lung Cancer Day, we explore current guidelines for lung cancer screening in the United States, implications of the COVID-19 pandemic, and disparities in mortality and access to care by race and socioeconomic status.

As health care utilization experienced marked [declines](#) in 2020 due to the COVID-19 pandemic, the impact of deferred cancer screening and treatment is expected to contribute to [increased](#) cancer morbidity and mortality in the future.

In examining these delays, the impact on underserved communities and at-risk populations across the United States cannot be understated, as [disparities](#) in cancer diagnoses and surgery were apparent long before the pandemic began, according to experts interviewed by *The American Journal of Managed Care*® (AJMC®).

Although early cancer screening and diagnosis provides patients with the best chance of positive outcomes, eligibility for screening, particularly [lung cancer](#), has historically overlooked the increased risk associated with minority populations.

Serving as the [leading cause](#) of cancer-related deaths, data has demonstrated that Black men and women are at increased risk for lung cancer at a younger age, despite having smoked less than White men.

In fact, these concerns were the focus of recently [updated](#) US Preventive Services Task Force (USPSTF) recommendations for lung cancer screening, in which 2 notable changes were made to expand eligibility for more high-risk patients:

- Yearly low-dose computed tomography (LDCT) scans for people aged 50 to 80 years old, rather than starting at 55
- Individuals with 20 pack-years of smoking history now eligible, expanding from 30 pack-years

Reviewing the potential impact of these updated guidelines, M. Patricia Rivera, MD, professor of medicine, Division of Pulmonary Diseases and Critical Care Medicine, director, Multidisciplinary Lung Cancer Screening Program, and codirector, North Carolina Lung Screening Registry, at University of North Carolina at Chapel Hill, discussed in an email exchange with *AJMC*[®] what will be achieved and what unmet needs persist in managing lung cancer care disparities.

Are the Updated Guidelines Enough?

“The new recommendations of lowering the age and pack year requirement actually results in a higher relative increase in eligibility for women versus men, and for Blacks, Hispanics, and Native Americans versus whites,” said Rivera, who also served as a coauthor of an editorial published in [JAMA](#) on the updated recommendations. “An important observation is that while these new recommendations will result in a higher relative increase in eligibility, it does not mean that the disparities will be eliminated.”

Citing another study published in [JAMA Network Open](#) examining the updated guidelines, Rivera said that although screening eligibility will be improved for women and minorities, odds ratio findings suggest that eligibility will still favor White

men.

“It is expected that now 14.5 million US adults will be eligible for screening, with the 2013 recommendations it was 8 million. So, I think it's like an 81% increase of individuals—many more patients are now eligible,” said Rivera. “But the barriers still remain—just because you've lowered the age and the smoking history doesn't mean that the rate is going to increase. It means you've improved eligibility or access to lung cancer screening by eligibility, but not necessarily access to care.”

Ultimately, there are several underlying factors contributing to the inequities present in lung cancer care. In assessing one of the major [types](#) of lung cancer, non-small cell lung cancer (NSCLC), a recent study published in the [Annals of Thoracic Surgery](#) examined differences in outcomes by race and residential segregation, measured by a proxy of historic housing discrimination and related structural racism, in 100 of the most populous US counties.

Deriving data from the Surveillance, Epidemiology and End Results program on Black and White patients diagnosed with NSCLC from 2004 to 2016, results indicated that Black patients with NSCLC who lived in the most segregated US counties were 49% more likely to be diagnosed at an advanced stage, compared with those living in the least segregated counties—a trend that was not found in White patients.

In addition to being more likely than White patients of being diagnosed at an advanced stage, despite having lower incidence overall, Black patients from highly segregated counties who were diagnosed with NSCLC at an early stage were found to be 47% less likely to receive surgery.

Multiple Reasons Underpinning Disparities

Addressing these disparities in surgery, corresponding study author Kei Suzuki, MD, assistant professor of Surgery, Boston University School of Medicine, told *AJMC*[®] that while the study was not designed to identify the details and causes of the association, he and fellow authors consider reasons for the link to be multifactorial.

“This could be due to system issues such as access to care—could be an issue on the providers’ side as they may be less likely to recommend surgery for Black patients,” Suzuki said via email. “This could be due to factors on the patients’ side, whether that be mistrust or that patients’ physiologic condition may not allow for surgery....using our local data with patients being seen at Boston Medical Center, we have further shown association with residential segregation in the form of [redlining](#) and disparity in lung cancer screening.”

Perceiving updates to the USPSTF lung cancer screening guidelines as an important step in improving screening of at-risk populations, Suzuki noted that further research on risk factors is warranted, with another significant issue residing in screening uptake.

“Published screening rate/uptake in the country is in the range of 5% to 10%, meaning of those who meet the criteria, only a handful are actually receiving the screening LDCT scans. It’s one thing to expand the criteria, but an unanswered question remains: how do we better screen those who meet the criteria?”

Closing the Medicaid Screening Coverage Gap, Potential of Targeted Screening

As Rivera noted, there are several issues contributing to the lack of adherence nationwide to the USPSTF lung cancer screening guidelines, namely endorsement from prominent health care organizations and socioeconomic barriers such as insurance status.

Medicare is currently reviewing the updated USPSTF guidelines, and had endorsed screening in 2015, but for Medicaid, where recipients are [twice as likely](#) to be current smokers than those with private insurance, the program is not required to cover screening. Even if it does cover it, programs may use different criteria than what guidelines recommend.

“There are [9] states that did not expand the Medicaid coverage for lung cancer screening. So, we have a large number of individuals in this country at risk for lung cancer because of

smoking, who are either uninsured or underinsured with Medicaid and may be in an area where Medicaid doesn't cover—that remains a significant barrier within our health care system,” said Rivera.

With disparities in screening access potentially exacerbated by the updated guidelines due to the lack of applicability for a significant proportion of US residents covered by Medicaid, a recent [review](#) developed for the Lung Ambition Alliance by The Health Policy Partnership suggests that targeted screening with LDCT scans in high-risk populations can significantly reduce mortality and the economic burden tied to it.

Endorsed by the International Association for the Study of Lung Cancer (IASLC), the review was based on findings of the [NELSON study](#), which showed that among a cohort of over 13,000 European people indicated as high-risk for lung cancer, mortality rates were significantly reduced in the intervention group who underwent LDCT scans (18.4%) compared with those of the control group who were not scanned (24.4%) after a 10-year follow-up.

Speaking with *AJMC*[®], Giorgio Scagliotti, past president and interim chief science officer, IASLC, and professor of Medical Oncology, University of Turin School of Medicine, highlighted that while screening recommendations focus primarily on current or former heavy smokers and age, there is growing evidence suggesting that risk factors such as family history of cancer or pneumonia, occupational exposures, and ethnicity are paramount in determining risk of lung cancer.

“Early-stage lung cancer can be managed with less complex, less costly clinical pathways than when it is diagnosed at later stages,” said Scagliotti via email. “As lung cancer progresses, health care costs rise from increased frequency of hospital admissions, additional rounds of treatment, additional care requirements and greater likelihood of palliative care.”

As underserved populations and people of lower socioeconomic status have been shown in data to be less likely to participate in cancer screening programs, the report assessed barriers that patients may face and opportunities for

reform in 3 key areas:

- Increasing information and awareness
- Reducing physical and financial barriers to access
- Dismantling psychological and social barriers that prevent attendance at screening

“Screening with LDCT technology is the next big opportunity to increase survival from cancer, and wide scale implementation will bring us closer to our goal of eliminating lung cancer as a cause of death,” added Scagliotti.

Catching Cancer Earlier May Warrant Federal Intervention

Although a scaled LDCT screening approach would be optimal in expanding reach to high-risk populations, Rivera noted that simply revising guidelines to include requirements such as shared decision-making would potentially exacerbate [workflow concerns](#) for already time-constrained physicians, and may limit uptake as a result.

“In thinking of strategies that might expedite workflow, doing televisits of shared decision-making prior to patients coming in to see their doctors can be very helpful,” suggested Rivera. “But probably one of the most important interventions is that health care systems really need to provide the resources like the nurse navigators that can help facilitate the screening process. And in addition to navigators, community navigators deploying nurse navigators into communities to reach [underserved groups](#) of individuals in low socioeconomic areas would be very helpful.”

Ultimately, Scagliotti, Rivera, and Suzuki all agree that to make a significant impact on lung cancer care disparities, federal intervention from policymakers is needed.

In fact, Rivera said that similar action was taken decades ago for breast and cervical cancer, in which federal mandates, such as the [Breast and Cervical Cancer Mortality Prevention Act of 1990](#), were instituted to ensure availability and quality of screening for these cancers were provided by each state to all

women, regardless of financial status.

“We need state involvement and individual state mandates like expansion of Medicaid across all states, so that all individuals have a chance to access this important preventive service,” added Rivera.

In looking at recent data on rates of screening across the United States per state, Kentucky has the [highest incidence of lung cancer](#) nationwide, with the smoking rate shown to be significantly higher than the national rate.

In response, the state has implemented a very aggressive lung cancer screening initiative that Rivera noted was spearheaded years ago primarily through family practice physicians. Through this initiative, Kentucky’s lung cancer screening rate rose to 15% in 2018, vastly greater than North Carolina, where the screening rate was 4% in the same year, underscoring potentially undiagnosed and advancing lung cancers.

“By having these initiatives that get screening into the communities where it’s needed most and learning/trying to mimic or expand those kinds of initiatives across other states can be very helpful,” she concluded.
