TAKING A DEEPER LOOK AT LUNG CANCER SCREENING

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Lung cancer is the most lethal form of cancer, killing 150,000 Americans and 1.8 million people worldwide in 2022. The cancer is often diagnosed late when survival is less likely. Yet these mortality figures could be significantly lowered by using a simple preventative tool—lung cancer screening (LCS)—that could detect the disease in its early phase.

Two related facts recently caught the attention of Yale researchers. First, the pool of people eligible for LCS was expanded in March 2021 and now includes between 14 million to 15 million Americans, but only 10 percent of them are being screened. Second, lung cancer hits Black males harder than any other group, striking them at a younger age, with a shorter history of smoking, and with greater lethality compared to white patients. The Yale researchers did a meta-analysis to investigate the relationship between race and participation in lung cancer screening. It is the first systematic review of this understudied subject.

They found that Blacks are less likely to get LCS than whites, despite being at greater risk. "The main result wasn't surprising," said Yukiko Kunitomo, MD, the paper's first author, who conducted the research while at Yale and is now a fellow at Johns Hopkins University. "But the fact that there are still very limited studies looking at this issue and very little data was surprising."

The lack of data stems from the low rates of inclusion of racial minorities in clinical trials focused on this issue. For instance, the National Lung Screening Trial, one of the largest ever done, had more than 53,000 participants, only 4.5 percent of whom were Black.

"Another important finding," said co-author Lynn Tanoue, MD, MBA, Professor of Medicine (Pulmonary) and Director of the Lung Cancer Screening Program at Yale, "is that even when there were abnormal findings on the CT scans, the follow-up for African Americans was not as good." Black patients were 33 percent less likely to follow-up than whites. "The disparity persisted," added Dr. Kunitomo.

The researchers attribute the low follow-up to several things related to racial disparities, including the usual suspects: social and demographic factors such as access to care, transportation, ability to take time off from a job, and fears about the cost of treatment. Dr. Kunitomo also points out that getting a potential diagnosis of cancer is scary and stressful, especially if the patient does not have a strong relationship with a primary healthcare provider. Some providers are not diligent about following up. Patients also may believe, incorrectly, a lung cancer diagnosis is a death sentence, which they don't want to hear.

"So, we have a lot of educating to do," said Dr. Tanoue, "from patients to physicians to the larger community." For instance, patients and physicians need a better understanding of the test itself, which takes five minutes, is safe and painless, without anesthesia or bloodwork, and saves lives by detecting lung cancer early.

The screening has been recommended for eligible patients since 2013, yet participation rates remain stubbornly low. Some of the reasons have already been mentioned, but others can be traced to the healthcare side. For instance, the criteria for eligibility are strict and lengthy. The provider elicits a detailed smoking history—how much the patient smoked, for how long, whether they started and stopped, and when they quit. "Getting all of this information takes a lot of time," explained Dr. Kunitomo, "and even if it's put into an electronic record, it can't be as easily extracted or automated as with other types of screening."

Dr. Tanoue agrees. She describes the electronic record system at Yale New Haven Health, called EPIC, as "cumbersome and time-consuming," and notes that it doesn't flag a patient who is eligible for screening or send an alert to the primary provider, which is common for patients needing mammograms or colonoscopies, the standard screenings that have saved countless lives. The hospital's IT team is working on the problem and so is EPIC. "We need to make it easier for providers to think about screening, to order it, and for patients to get it done," said Dr. Tanoue.

The researchers also reported that only 47 to 58 percent of providers are knowledgeable about the guidelines for eligibility. It is difficult for primary providers to stay on top of every kind of screening, which is why an automated alert would be so helpful. The researchers also want to urge providers to make an annual LCS part of routine care for some patients.

These improvements are crucial, they add, because their study also revealed that when patients get referred for a scan, the disparities between races almost disappear. "When providers refer people," said Dr. Kunitomo, "you see an equal proportion getting scans."

"We're now trying to educate the primary care providers who are going to be ordering these screens to cast the net wider and be more inclusive of African-Americans and women," said Dr. Tanoue. "Cancer screening is an important topic on everybody's radar now, because the benefit can be so enormous."