Lung cancer screening saves lives. So why so do many at high risk not get one?

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Lung cancer screening has been proven to save lives.

But according to a new study, only 5.8% of people eligible for a free,

low-dose CT scan actually get screened for lung cancer—far below levels seen for colorectal, breast and cervical cancer screens.

Debra Ritzwoller knows the challenges firsthand..

Ritzwoller is a senior investigator in economics and cancer research with the Kaiser Permanente Colorado Institute for Health Research. Part of her job via a grant from the National Cancer Institute is to study and promote the use of lung cancer screening among Kaiser's patients and other health systems. But in five years of trying, she hasn't managed to get a high-risk close relative screened for the disease.

The relative's doctor insisted he wasn't at elevated risk, because he'd quit smoking a decade earlier. Ritzwoller ended up talking to her family member while at the doctor's and explaining that his age, heavy smoking history, plus having a family member with the disease did put him at high risk. The doctor agreed and ordered the screening exam.

When she last spoke with the family member, he still hadn't been screened, because he didn't know how to schedule the screen.

"There's a lot of folks out there who we're not reaching," Ritzwoller said.

Lung cancer remains the deadliest cancer in the United States, claiming an estimated 130,000 lives this year. About 60% are caught after the tumor has spread beyond the lung and is past the point of being cured, said Zach Jump, National Senior Research Director for Epidemiology and Statistics with the American Lung Association, who helped lead the new study.

Still, Jump said he's seen the five-year survival rate from lung cancer climb from about 15% when he started working for the lung association, to more than 25% today. Catching tumors early offers the possibility of

even more lives saved, he said. Studies show screening leads to at least a 20% reduction in death from lung cancer.

Screening, which involves a quick CT scan, fully clothed with no advance preparation, has only been recommended by the federal government since 2014. In March 2021, criteria were modified to nearly double the number of people eligible for the free scan.

Now, anyone can get the free screen if they are between ages 50 to 80, currently smoke or quit within the past 15 years, and have a 20 pack-year smoking history, meaning they smoked at least 20 cigarettes a day for 20 years or 10 cigarettes daily for 40 years. (The American Lung Association offers a pack-year calculator here.)

That's a more complicated list of criteria than for other cancer screens, which might be one reason people have been slow to adopt lung cancer screening,

Ritzwoller's family members' medical chart didn't indicate how much he had smoked, which is likely why his doctor initially dismissed the idea of screening. Many doctors know only whether their patients are current smokers, not their smoking history.

"There's a knowledge gap for both the patients and for the providers," Ritzwoller said.

Then, as with her family member, many people don't know what to do if they do qualify. The screens are required to be provided at no cost to patients under the Affordable Care Act. People who are part of a program, as at Kaiser, where they're helped through the process and reminded annually, are more likely to get screened, her data shows.

Lung cancer screening can vary substantially by doctor and treatment

facility, suggesting that some are better than others at prioritizing the screens.

In a recent study of the Veterans Health Administration from 2013 to 2021, researchers found that the facility where a patient received care accounted for 36% of the variation in screening rates and the doctor accounted for 19% of the difference—more than personal characteristics of the veteran.

Shame may also deter lung cancer screening

Andrea Borondy Kitts remembers her husband, a heavy smoker, saying, "I did this to myself" when he was diagnosed with lung cancer a decade ago.

Kitts, who has been a lung cancer advocate since her husband's death, initially thought high risk people like her husband would "run to their doctors" to get screened. But often, she has to convince people to get screened. "I've had people tell me 'lung cancer is a death sentence, why would I want to know?'" Kitts said.

New treatments have made significant advances against the disease, and early detection is the best predictor of long-term survival. Eighty percent of cancers detected with screening are at an early stage when it's potentially curable, she said, while 75% of cancers found without screening are at later stages with fewer treatment options.

Lack of lung cancer screening is more about systems failing patients than patients failing to show up for tests, said Dr. Jacob Sands, a lung cancer specialist at the Dana-Farber Cancer Institute in Boston.

"Amongst the medical community, I think there's a history of blaming patients for bad stuff, as opposed to recognizing the flaws within our

own system," he said.

Lack of awareness also limits lung cancer screening, said Chi-Fu Jeffrey Yang, a thoracic surgeon at Massachusetts General Hospital.

"When we go out in the community and we teach people about lung cancer screening, nobody's heard of it," he said.

While mammogram appointments don't require prior approval from a primary care doctor, lung cancer screens usually do, Yang said, which is another barrier.

As with any screen, the low-dose CT scan can yield false positives, requiring further testing to prove the person doesn't have lung cancer. Nearly 13% of initial tests are false positives, with the person recommended for follow-up or more invasive testing. For repeat scans, the figure is closer to 5%.

Making progress

Massachusetts leads the country in screening, but only 16% of eligible people have been screened.

"It's an absolute failing grade and it's the best grade in the whole country," Sands said.

Others at the top of the list include New Hampshire and Vermont, which also have low smoking rates, meaning less of their population is likely at risk.

The one exception is Kentucky, which the new study shows has been relatively successful at getting eligible people screened. The state also has the highest incidence of lung cancer and mortality rates in the

country and the second-highest smoking rate, said Shannon Baker, the advocacy director for the American Lung Association in Kentucky and Tennessee.

"Generation after generation, they have seen lung cancer rear its ugly head and they have seen their family members pass because of it," Baker said. "Sometimes, I wonder how much of the reluctance to get screened or the reluctance even to get proper care ... those things might not be happening as they should be because there is potentially that resignation."

Yet, over the past three years, even during the pandemic, Kentucky has screened 5,000 extra people each year, bringing their statewide screening rate up to 13%, above the national average.

Baker credits a broad collaboration that incudes her group, area universities and other cancer organizations. They focus on educating providers and patients about the importance of screening. The state legislature also has required an annual report on screening rates, to ensure that quality screening is available statewide.

"Kentucky deserves a huge pat on the back for all that we've accomplished, but the need persists and we have to step up our game," Baker said.

Black men are more likely to die of lung cancer with a lower smoking history than their white counterparts, Sands said. The updated guidelines help reduce some inherent disparity in screening by including younger people with less smoking history.

Right now, he said, screening numbers are low for everybody, but it's important that screening programs are accessible to all populations as they get developed. In the future, Sands said, risk modeling may be able

to better define who would benefit the most from lung cancer screening.

There is no screen currently available to detect lung cancer in the 15% of people who develop it without a smoking history, though that is being explored, Jump said.

People are more likely to get lung cancer even without smoking if they have certain environmental exposures, including second-hand smoke or occupational exposures. There are no individual genes known to confer added risk, unlike with the BRCA1 and BRCA2 genes, which increase breast cancer risk, he said.

"There's a lot of interest in trying to better identify who can most benefit from screening," Jump said. "The initial guidelines were focused on a very high-risk group."

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