# Early detection may help Kentucky tamp down its lung cancer crisis

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For the past decade, Kentucky researchers have promoted lung cancer screening, first recommended by the U.S. Preventive Services Task Force in 2013. These days the Bluegrass State screens more residents

who are at high risk of developing lung cancer than any state except Massachusetts—10.6% of eligible residents in 2022, more than double the national rate of 4.5%—according to the most recent American Lung Association analysis.

The effort has been driven by a research initiative called the Kentucky LEADS (Lung Cancer Education, Awareness, Detection, and Survivorship) Collaborative, which in 2014 launched to improve screening and prevention, to identify more tumors earlier, when survival odds are far better.

The group has worked with clinicians and hospital administrators statewide to boost screening rates both in urban areas and regions far removed from academic medical centers, such as rural Appalachia. But, a decade into the program, the researchers face an ongoing challenge as they encourage more people to get tested, namely the fear and stigma that swirl around smoking and lung cancer.

Lung cancer kills more Americans than any other malignancy, and the death rates are worst in a swath of states including Kentucky and its neighbors Tennessee and West Virginia, and stretching south to Mississippi and Louisiana, according to data from the Centers for Disease Control and Prevention.

It's a bit early to see the impact on lung cancer deaths because people may still live for years with a malignancy, LEADS researchers said. Plus, treatment improvements and other factors may also help reduce death rates along with increased screening. Still, data already shows that more cancers in Kentucky are being detected before they become advanced, and thus more difficult to treat, they said.

Of total lung cancer cases statewide, the percentage of advanced cases—defined as cancers that had spread to the lymph nodes or

beyond—hovered near 81% between 2000 and 2014, according to Kentucky Cancer Registry data. By 2020, that number had declined to 72%, according to the most recent data available.

"We are changing the story of families. And there is hope where there has not been hope before," said Jennifer Knight, a LEADS principal investigator.

Older adults in their 60s and 70s can hold a particularly bleak view of their mortality odds, given what their loved ones experienced before screening became available, said Ashley Shemwell, a nurse navigator for the lung cancer screening program at Owensboro Health, a nonprofit health system that serves Kentucky and Indiana.

"A lot of them will say, 'It doesn't matter if I get lung cancer or not because it's going to kill me. So I don't want to know,'" said Shemwell. "With that generation, they saw a lot of lung cancers and a lot of deaths. And it was terrible deaths because they were stage 4 lung cancers." But she reminds them that lung cancer is much more treatable if caught before it spreads.

Leaders have provided training and other support to 10 hospital-based screening programs, including a stipend to pay for resources such as educational materials or a nurse navigator, Knight said. In 2022, state lawmakers established a statewide lung cancer screening program based in part on the group's work.

Jacob Sands, a lung cancer physician at Boston's Dana-Farber Cancer Institute, credits the LEADS collaborative with encouraging patients to return for annual screening and follow-up testing for any suspicious nodules. "What the Kentucky LEADS program is doing is fantastic, and that is how you really move the needle in implementing lung screening on a larger scale," said Sands, who isn't affiliated with the Kentucky

program and serves as a volunteer spokesperson for the American Lung Association.

In 2014, Kentucky expanded Medicaid, increasing the number of lower-income people who qualified for lung cancer screening and any related treatment. Adults 50 to 80 years old are advised to get a CT scan every year if they have accumulated at least 20 pack years and still smoke or have quit within the past 15 years, according to the latest task force recommendation, which widened the pool of eligible adults. (To calculate pack years, multiply the packs of cigarettes smoked daily by years of smoking.) The lung association offers an online quiz, called "Saved By The Scan," to figure out likely eligibility for insurance coverage.

Half of U.S. patients aren't diagnosed until their cancer has spread beyond the lungs and lymph nodes to elsewhere in the body. By then, the five-year survival rate is 8.2%.

But regular screening boosts those odds. When a CT scan detects lung cancer early, patients have an 81% chance of living at least 20 years, according to data published in November in the journal Radiology.

Some adults, like Lisa Ayers, didn't realize lung cancer screening was an option. Her family doctor recommended a CT scan last year after she reported breathing difficulties. Ayers, who lives in Ohio near the Kentucky border, got screened at UK King's Daughters, a hospital in far eastern Kentucky. The scan didn't take much time, and she didn't have to undress, the 57-year-old said. "It took me longer to park," she quipped.

She was diagnosed with a lung carcinoid tumor, a type of neuroendocrine cancer that can grow in various parts of the body. Her cancer was considered too risky for surgery, Ayers said. A biopsy showed the cancer was slow-growing, and her doctors said they would

monitor it closely.

Ayers, a lifelong smoker, recalled her doctor said that her type of cancer isn't typically linked to smoking. But she quit anyway, feeling like she'd been given a second chance to avoid developing a smoking-related cancer. "It was a big wake-up call for me."

Adults with a smoking history often report being treated poorly by medical professionals, said Jamie Studts, a health psychologist and a LEADS principal investigator, who has been involved with the research from the start. The goal is to avoid stigmatizing people and instead to build rapport, meeting them where they are that day, he said.

"If someone tells us that they're not ready to quit smoking but they want to have lung cancer screening, awesome; we'd love to help," Studts said. "You know what? You actually develop a relationship with an individual by accepting, 'No.'"

Nationally, screening rates vary widely. Massachusetts reaches 11.9% of eligible residents, while California ranks last, screening just 0.7%, according to the lung association analysis.

That data likely doesn't capture all California screenings, as it may not include CT scans done through large managed care organizations, said Raquel Arias, a Los Angeles-based associate director of state partnerships at the American Cancer Society. She cited other 2022 data for California, looking at lung cancer screening for eligible Medicare fee-for-service patients, which found a screening rate of 1%-2% in that population.

But, Arias said, the state's effort is "nowhere near what it needs to be."

The low smoking rate in California, along with its image as a healthy

state, "seems to have come with the unintended consequence of further stigmatizing people who smoke," said Arias, citing one of the findings from a 2022 report looking at lung cancer screening barriers. For instance, eligible patients may be reluctant to share prior smoking habits with their health provider, she said.

Meanwhile, Kentucky screening efforts progress, scan by scan. At Appalachian Regional Healthcare, 3,071 patients were screened in 2023, compared with 372 in 2017.