

What doctors want patients to know about lung cancer screening

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Lung cancer causes about 160,000 U.S. deaths a year, which is greater than the toll of the next three most common cancers—colon, breast and prostate—combined. Yet only about 30% of lung cancer cases are diagnosed early. Most patients are diagnosed at a far less treatable, later stage of the disease. And with about [20% of lung cancer deaths preventable](#), evidence-based screening recommendations for high-risk patients offers the best hope to catch the disease early and provide the best chance for effective treatment.

AMA policy recommends [lung cancer screening to be considered standard care](#) and that coverage of screening low-dose computerized tomography (CT) scans for patients at high risk for lung cancer by Medicare, Medicaid and private insurance be a required covered benefit. The policy also aims to raise awareness of lung cancer screening with low-dose CT scans in high-risk patients to improve screening rates and decrease the leading cause of cancer death in the U.S.

The AMA's What Doctors Want Patients to Know™ series gives physicians a platform to share what they want patients to understand about today's health care headlines.

In this installment, two physicians took time to discuss what patients need to know about [lung cancer screening](#) and prevention. These AMA members are:

- [Omar Atiq, MD](#), a medical oncologist in Little Rock, Arkansas, and immediate past president of the American College of Physicians.
- [Christopher Seder, MD](#), a thoracic surgeon and chief of the division of thoracic surgery at Rush University System for Health in Chicago.

[Rush University System for Health](#) is a member of the [AMA Health System Program](#), which provides enterprise solutions to equip leadership, physicians and care teams with resources to help drive the future of medicine.

Understand what lung cancer is

“Lung cancer is a malignancy of the airways or the lung tissue that is the No. 1 leading cause of cancer deaths in the United States,” Dr. Seder said, noting that lung cancer is also one of “the top two most frequent cancers in the United States.”

“The two main broad categories are small cell lung cancer and non-small cell lung cancer,” he said. “The most common type by far is non-small cell lung cancers. Those are primarily made up of two different types, adenocarcinomas as well as squamous cell carcinomas.”

Smoking is the leading risk factor

“We do know that there are certain environmental exposures that are associated with lung cancer. The No. 1 environmental exposure that will surprise no one is smoking,” said Dr. Seder. “We do know that 80% of people who have lung cancer were regular smokers at one point in their life, so this is an extraordinarily strong association.

“Nobody refutes the association between smoking and lung cancer anymore, not even the tobacco companies,” he added. “But you can never smoke and get lung cancer, or you can smoke your entire life two packs a day and never get lung cancer. So, there are other components that go into it other than just the environmental exposure.”

“Are there other risk factors? Yes,” [Dr. Atiq](#) said. “There is heavy metal exposure—like arsenic, lead, uranium—and environmental factors like air pollution, but those are not as clearly defined as risk factors as smoking or tobacco, therefore the screening guidelines are based on tobacco smoking.”

“We don’t know yet whether vaping, e-cigarettes or even cannabis are related to an increased risk of lung cancer,” he said. “We believe it may be, especially for cannabis, but

the data is not as robust as it is for tobacco.”

A genetic mutation may be present

“There are other environmental exposures such as radon and various toxic chemicals and fumes that have combustion products that have been associated with lung cancer,” said Dr. Seder. “But we are increasingly seeing young, healthy patients who have never been smokers presenting with lung cancer.

“And when that happens, that’s probably not an environmental exposure over time issue, but instead a genetic issue that that person has a mutated gene in their lung making it grow,” he added. “It’s not a genetic component in the sense that it’s passed from generation to generation, but a genetic component meaning there are specific gene mutations that we see within lung cancers that predispose people to early cancers without the typical exposure to carcinogens.”

Most lung cancers are asymptomatic

“Unfortunately, most lung cancers are asymptomatic until the lung cancer has spread somewhere else,” said Dr. Seder. “Once the lung cancer spreads somewhere else, it oftentimes becomes incurable or more difficult to treat.”

“Patients who present with symptoms from their lung cancer can have a variety of symptoms. If it’s all localized still, they can have a cough, chest pain and they can cough up blood,” he said. “If it has spread somewhere else, such as their bones, they may present with a broken bone because the cancer has eaten away that part of the bone and it fractures.

“If it spreads to their brain, they may present with double vision or other neurologic symptoms,” Dr. Seder added. “Once the cancer is spread distantly, it becomes significantly more difficult to cure.”

If eligible, get yearly screenings

“Because of the effects of cigarette smoking, the current [recommendations from the U.S. Preventive Services Task Force](#) are that any person between the ages of 50 and 80 who has a 20-pack year history of cigarette smoking should be screened with low dose CT scans on a yearly basis,” Dr. Atiq explained.

This “means a pack a day for 20 years or a half a pack a day for 40 years or two packs a day for 10 years and quit within the last 15 years qualifies for lung cancer screening,” Dr. Seder said, emphasizing that “those patients should all be screened.”

“If you qualify, you get your first screening and then based on that, if there’s nothing found, you would come back in a year for a repeat screening as long as you still meet those criteria of between 50 and 80 years old and quit within the last 15 years,” he said. “If there’s something abnormal that’s identified, those patients will then be asked to come back at a shorter interval.

“It may be six months or three months or if there’s a really concerning finding and it looks like the patient might have a cancer, there may be a biopsy or additional imaging suggested for the patient,” Dr. Seder added.

Guidelines [issued last year by the American Cancer Society](#) say that how long ago you quit smoking should not be a factor in whether you get screened for lung cancer. Instead, the updated guideline recommends annual lung cancer screening for current and past smokers, 50 to 80 years old with at least a 20-pack year smoking history.

Get screened with low-dose CT scans

“For patients who are between the ages of 50 and 80 with a 20-pack year history of cigarette smoking who are either smoking now or quit within the past 15 years, yearly low-dose CT scans are recommended,” said Dr. Atiq. “Low-dose CT scans are sophisticated CT scanners where you do not get the full dose of radiation that you get on a diagnostic CT scan.

“But you do get a good enough picture for the radiologist to be able to find a small lung cancer if there is one,” he added. “Some older CT scans are not considered good enough for lung cancer screening in high-risk patients.”

Follow up will be needed

“Low dose CT scans for [screening for lung cancer](#) should be done with the right equipment at the right place with the right radiologists and with the right follow up,” said Dr. Atiq. “In other words, you need to have the right medical team in place who have the right equipment, who know what they’re doing and who know the patient has an appropriate follow up in case you find lung cancer or, for that matter, any other malignancy or some other disease.”

“The follow up includes making sure if there is an abnormality that it is looked at first by the radiologist who can sometimes tell us what their suspicion is in terms of this abnormality in the lung being lung cancer or some other illness,” he explained. “Then the primary care physician or the pulmonologist may have to do further testing to confirm that it is indeed lung cancer.”

“If we find something on a scan, what we’ll do is order the next appropriate test, which sometimes will be a PET scan—a scan that looks through your whole body—and anything that’s cancer should light up,” Dr. Seder said. “Or sometimes we’ll order a biopsy where we put a camera down your mouth, go down to the lung and take a little bite of that tumor to tell if it’s a cancer or not. If you’re lucky enough to find a lung cancer at a very early stage ... then you have the opportunity to undergo a surgery that has a high risk of curing that lung cancer.

“The good news about surgery today is, as a thoracic surgeon, the good thing about undergoing lung surgery today is that it’s all done in a minimally-invasive fashion, meaning with cameras and a robot and we’re taking out big lung cancers through an inch and a half incision,” he said. “So, there’s less pain, quicker recovery, less complications, less pneumonia.”

“We want to promote lung cancer screening because if you can find an early stage, you can get it cured with a minimally invasive operation and go on with your life,” Dr. Seder emphasized.

Weigh screening benefits and risks

“[Lung-cancer screening](#) has a few risks. One is that an abnormality may be found for which further testing may be required, which may eventually turn out not to be cancer,” said Dr. Atiq. “But there could be complications of further testing. A biopsy could sometimes find small enough cancers that if we hadn’t found them, that wouldn’t have affected the length or the quality of a patient’s life.”

In turn, “you are treating something that may not have to be treated. Repeated low-dose CT scans could theoretically cause cancer in some people. Although, the risk is very low,” he said. “Therefore, you have to weigh the risks and benefits in each individual patient.

“But it is generally accepted by the U.S. Preventive Services Task Force, Centers for Disease Control and Prevention, American Cancer Society and other experts in the lung cancer field that in the right population, lung cancer screening has been shown to reduce deaths,” Dr. Atiq said. “Because you can find many of them at an earlier stage when they’re potentially curable as opposed to finding them in advanced stages when they are symptomatic and incurable.”

Make the decision to quit smoking

“The most common and the most salient preventable factor in cancer deaths is smoking, so people should not smoke,” Dr. Atiq urged. “If they are smoking, they should quit smoking. That is beneficial.”

“Talk to your physician about [help with quitting smoking](#),” he said. “That should be at any time if you are smoking, even if you have just started smoking or you’ve been smoking for five years or 10 or more years; even if you are still not at high enough to be screened.”

“Outside of the cardiovascular issues that smoking predisposes people to, we do know that if you stop smoking today your risk of lung cancer will begin to drop,” said Dr. Seder. “It will never get down to the point of a person who's never smoked, but it will certainly be less than if you continued to smoke.”

Take other preventive measures

While “asbestos exposure is now rare, based on what we know about the relationship of asbestos to cancer, we know it can lead to lung cancer,” Dr. Atiq said. “Then the environment. We have to take care of our environment. We have to reduce pollution.

“We have to make sure that people who are exposed to heavy metals and other pollutants have appropriate clothing, masks, goggles and protective equipment and gear so that their exposure to those elements is minimized,” he added. “And then, although data is not definitive yet, logic would tell us that we should also avoid marijuana, [e-cigarettes](#) and vaping because there are good reasons to believe that they may also have deleterious effects on our health, especially as it pertains to cancer.”

“The data we have are still too preliminary to link vaping to lung cancer,” Dr. Seder said. “We do know that vaping is for sure not healthy for you, but does that lead to an increased risk of cancer? Time will tell.”

Be honest with your physician

“If you are in your 50s or higher up to age 80 and you have been a smoker or are currently a smoker, then you should talk to your physician,” said Dr. Atiq. “But, in general, primary care physicians, internists, family medicine physicians and others would generally bring this up themselves as long as the patient has a relationship and is following up with that physician.

“That’s the only way to do it,” he said, noting that “the highest honor and the highest privilege that one can get is that of being a physician when a stranger puts his or her life into your hands,” he said. “So, if there is not complete honesty and transparency, then that relationship can suffer and there’s no reason for that.”

“The physician can’t help the patient if the patient’s not telling them everything,” Dr. Atiq emphasized. “So, if they don’t know you smoke, they can’t provide the right services for quitting smoking and for lung cancer screening.”

It's an individualized process

“Prevention of cancer with minimizing exposure to known carcinogens along with appropriate screening helps reduce our risk of death from lung cancer,” said Dr. Atiq. “It is a very individualized decision, and screening should be recommended unless there are reasons that a physician and a patient decide the benefits of screening don’t outweigh the risks.

“Lung cancer is preventable, and an ounce of prevention is better than a pound of cure, so please do not smoke. If you are smoking, quit,” he said. “Try to also keep your environment clean of pollutants, and that of course is a societal imperative, but we all as individuals make the society and have an important role to play.

“And if you have any questions, please talk to your physician about it,” he emphasized. “At the American Medical Association—as the largest umbrella organization of physicians in our country—what we are trying to do is to help not only our members, but the public and our patients to live longer, better lives.”

“Just because you have lung cancer does not necessarily mean it’s a death sentence. Things are rapidly evolving. Keep fighting the good fight,” Dr. Seder said.