



Testing and Early Diagnosis

Who Should Receive Lung Cancer Screening?

Dr. Devika Das - Medical Oncologist, Hematologist, UAB Medicine, Clinical Assistant Professor, University of Alabama Birmingham

Lung Cancer Screening

This is specifically something that I wanted to discuss because compared to breast cancer, colorectal cancer, and cervical cancer screening, as a nation in the U.S., we are not doing a good job at lung cancer screening. It's one of the last screening recommendations that came from the U.S. Preventive Task Force service, and unfortunately, it hasn't made it into a lot of the providers' checklists of screening that they talk to their patients about. So there is a lot of awareness and education that is ongoing and will be needed to make sure that our patients who are eligible for lung cancer screening, get the appropriate screening at the appropriate time.

The Screening Uptake

So this is a report from the State of Lung Cancer Reports that are released every year by the American Lung Association. This was released in 2021. What this shows that, only 5.7% of patients nationally, who were eligible and were high-risk, were screened. Massachusetts had the best screening rates at 17.8%, while California and Wyoming had it as low as 1%. So, we have a long way to go before all of our patients who are eligible for lung cancer screening, gets screened.

So this is a picture that shows the US Preventive Services Task Force Recommendation for lung cancer screening. We've had some recent changes in the eligibility. I have highlighted the changes that have come. Previously, patients that were at the age of 55 to 80 who had a thirty pack-year smoking history were eligible for screening for lung cancer. That has changed in the recent recommendation and now we have a wider range. Any adult between the age of 50 to 80 who has had a twenty pack-year smoking history, and they are currently smoking or have quit within the past fifteen years, might be potentially eligible for lung cancer screening. What does it mean to be eligible for screening and does everybody who has smoked need screening? Well, that's a discussion which needs to happen between the patient and their primary-care provider, and what we recommend — what happens — is shared-decision making.

How is the screening happening? The screening happens every year with a low-dose CT scan. And, you can stop screening if the patient has not smoked for fifteen years, or has a health problem that would limit life expectancy or their ability to have a cured lung cancer surgery.

So how do we interpret this recommendation and how do we implement this recommendation? So what is a pack year history? A pack year is a way of calculating how much a person has smoked in their lifetime. One pack year is equivalent of smoking an average of twenty cigarettes, so one pack per day, for a year. Again, the shared decision making; so when a person is eligible for lung cancer screening, what is the conversation that the patient has with their primary-care provider? In most, a very extensive discussion of the benefits, limitations, and the harm. The benefits is, obviously, diagnosing of patient with early-stage lung cancer improves their chance at cured treatments and long-term survival; as opposed to those patients who then are not screened and are diagnosed with



advanced malignancies, which we know unfortunately in lung cancer we don't have a lot of cured therapies in that space.

What could be some of the limitations and harms? As with any screening test, there is always a chance of finding things that may not be cancerous but are concerning, and the patient undergoes a biopsy or undergoes further testing which can cause some physical harm, can cause psychological harm, and the stress associated with being worried about the fact that you may or may not have cancer. And some certain harms that we see with screening without discussion with the patient is, if the patient has some life-limiting disease, if somebody has very advanced COPD and they are unable to go through biopsies or treatment, or have another medical condition that limits their life to a few weeks to months, putting them through a lung cancer screening test would not be a good way to treat them as it's potentially causing them harm. So, again, whether or not the screening test is a good option for you is always a discussion that you need to have with your primary-care provider, and the decision should be a shared decision that you make with them.

How often does this happen? The baseline screening happens with a low-dose CT scan. So the first screening test that would happen is a low-dose CT scan and then based on the results from that CT scan you would either be asked to get another screen next year or, if they find some lesion that needs to be followed, there are different recommendations based on the radiology results that are seen.