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First 5 Minutes®: Empowering Shared Decisions in Lung Cancer Screening

Announcer:
You're listening to CME on ReachMD, and this is *Deep Breaths: Updates from CHEST*. This activity, titled "First 5 Minutes®: Empowering Shared Decisions in Lung Cancer Screening" is provided by The American College of Chest Physicians and is supported in whole through an unrestricted educational grant from Lilly.

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And now, here's your host, Dr. Brett Bade.

Dr. Bade:
Hello everyone. Welcome to CME on ReachMD. This is *Deep Breaths: Updates from CHEST*. I'm Dr. Brett Bade, and I'm a pulmonologist at Mayo Clinic and a member of the American College of Chest Physicians. Joining me today is Dr. Michael Gieske. Dr. Gieske is a family medicine physician and the Director of lung cancer screening at St. Elizabeth Cancer Center in Edgewood, Kentucky. He's also a member of the American Academy of Family Physicians, as well as a member of the American College of Chest Physicians. Dr. Gieske, thanks for being here today.

Dr. Gieske:
Thank you, Dr. Bade, I appreciate that kind introduction. It's a pleasure to be here.

Dr. Bade:
The pleasure is all mine. This episode is a part of the CHEST First 5 Minutes series and addresses an area of documented measurable underperformance in cancer prevention. We're going to focus on lung cancer screening.

I want to begin with a few epidemiological datapoints to frame our discussion for today. Lung cancer screening with low-dose CT, or LDCT, reduces lung cancer mortality by at least 20% in the landmark US-based trial, the NLST, the National Lung Screening Trial. Lung cancer mortality was decreased by about 24% in the comparable trial in Europe, that is the NELSON trial.

In the real world, mortality reduction with annual low-dose CT may be even greater. For perspective, for lung cancer, 5-year survival for early-stage disease is about 64%. In patients with more advanced or late-stage disease, 5-year survival is much lower, at 9%. And despite these stark differences in survival for timing of stage recognition, only 20 to 30% of lung cancers are diagnosed at an early stage today.

Dr. Gieske, from your perspective in practice, what's getting in the way?

Dr. Gieske:
Well, there's lots of barriers to lung cancer screening, unfortunately, and it's different from many of the other cancer screenings that we do. The gap is largely attributable to implementation barriers at the primary care level, with who have competing priorities.

First 5 Minutes framework addresses a related problem. Even when eligibility is established, a shared decision-making conversation

required by CMS before low-dose CT can be ordered requires communication skills that are often not taught routinely in medical school and in clinical training.

Dr. Gieske:
But before we go further, Dr. Bade, can you clarify the current guideline landscape, specifically referencing the USPSTF 2021 criteria, the CHEST 2021 guidelines, and the American Cancer Society 2023 guidelines?

Dr. Bade:
Yeah, Dr. Gieske, great point. Confusing topic. For those who may not be familiar with the acronyms, the USPSTF refers to the United States Preventive Services Task Force, which is the National Guideline by which most of us provide screening recommendations. In terms of lung cancer screening, the most recent recommendation from USPSTF was in 2021, and the associated CHEST guidelines from the CHEST Society, ACCP, have similar recommendations.

Most recently, the guidelines have been expanded to include patients by age and tobacco smoking history, with the age specifically between ages of 50 to 80 years, and then a tobacco smoking history of 20 or more pack years.

The additional criteria for both USPSTF and CHEST are the quit date, and that is patients are eligible if they currently smoke or quit within the last 15 years.

Importantly, the American Cancer Society in 2023 published guidelines extending eligibility even further, specifically eliminating the quit year requirement entirely.

The National Comprehensive Cancer Network, or NCCN, provides yet another guideline for lung cancer screening recommendation. In its version of January 2026 guidelines, it actually offers the most inclusive eligibility framework.

USPSTF 2021 governs most insurance coverage and the CMS reimbursement. A note is that CMS excludes patients between the ages of 78 and 80, despite the USPSTF's upper limit of 80. So this gap warrants explicit attention in our shared decision-making for patients in that age range.

NCCN applies primarily in oncology and cancer center settings, so individualized shared decision-making is essential for patients who fall between guideline frameworks.

One final nuance from the CHEST guidelines in 2021 is that beyond the categorical criteria of age and tobacco smoking history, CHEST includes a recommendation that screening programs consider screening in patients who have a high net benefit from lung cancer screening. This includes use of validated clinical risk prediction calculators and life expectancy estimates.

Guideline adoptions overall remain poor. Three years following the 2021 USPSTF revision, only about 1/3 of primary care clinicians remain unaware of the updated criteria. Among those who report awareness, only around 31% correctly identify all eligibility components.

There's a persistent belief among primary care and family medicine physicians that low-dose CT screening is not covered by insurance and that it will create an out-of-pocket cost for the patient. In your experience, how significant is an actual barrier? And what does evidence say about coverage?

Dr. Gieske:
It's a compounding barrier, and this persistent misconception regarding insurance coverage is about 53% of primary care physicians incorrectly identify a lack of coverage as a barrier to screening.

And practice low-dose CT screening is a covered benefit under Medicare and Medicaid.

The CMS shared decision-making visit, while procedurally obligatory, also presents a clinical intervention in its own right. The CHEST 2021 guidelines specify seven components. And they include eligibility determination, discussion of benefits and harms, the use of decision aids, a description of potential CT findings that require follow-up.

Critically, a November 2025 study published in CHEST demonstrated that shared decision-making is associated with long-term screening adherence, not just initial uptake, although it does improve that as well.

So the guidelines have expanded significantly, but as you noted, only about 1/2 of lung cancer diagnoses occur in patients who meet the current USPSTF eligibility criteria. We're leaving a lot of lung cancers undiscovered through the present screening criteria. Who are the populations that current screening criteria systematically miss? And how should primary care physicians be thinking about risk assessment beyond pack year history?

Dr. Bade:
For those just tuning in, you're listening to CME on ReachMD. And this is Deep Breaths: Updates from CHEST. I'm Dr. Brett Bade, and I'm speaking with Dr. Michael Gieske about the importance of lung cancer screening.

So CHEST published a 10-year update on high-quality lung cancer screening this year— or last year, and it names equitable screening across population groups as one of two fundamental program objectives, not just a secondary goal.

A core limitation of current guideline criteria is that studies suggest 35 to 15% of individuals diagnosed with lung cancer don't meet USPSTF eligibility, with some variability by dataset and population.

Individuals without a smoking history account for about 10 to 20% of all lung cancer cases. And in our current guideline schema, we're not going to capture those for screening.

Other etiologic factors that impact risk would include radon exposure, secondhand smoke, environmental carcinogens, occupational exposures, and heritable genetic susceptibility.

Another group worth mentioning is US veterans. Nearly 8,000 veterans receive a new lung cancer diagnosis per year within the VA healthcare system.

Another group worth mentioning outside the VA are other occupationally exposed groups, for example firefighters with substantial cumulative exposure carry elevated lung cancer risk independent of their tobacco smoking history.

Other notable occupations would be coal miners, industrial workers, and those with prolonged environmental carcinogen exposure, similarly are at increased risk of lung cancer, but not captured by our screening criteria.

Some other notes are the important nature of disparities. Black men, for example, experience higher lung cancer incidence and earlier age of diagnosis than white men at similar smoking exposures. But interestingly, only 32% of black patients who smoke met USPSTF criteria at the time of lung cancer diagnosis, reflecting systematic underrepresentation within current screening frameworks.

American Indian and Alaska Native populations actually have the highest tobacco use prevalence of any demographic group. And Asian American Native Hawaiian and Pacific Island women who have never smoked face a disproportionately high risk of lung cancer, 1/2 of diagnoses fall outside of our current criteria for lung cancer, and the populations most affected have the highest burden and the lowest lung cancer screening rates.

So the practical question I think we have for pulmonology and primary care is how do you surface these factors with a 15-minute conversation that has three other items on the agenda?

Dr. Gieske:
Yeah, that's certainly a challenge. And so you could maybe at the beginning of the visit just open it up with a broad question: what else affects your lung health, your occupation, your family history of cancer, where you have lived, your home or workplace environment, maybe ask about radon. You know, those are factors that eventually likely be part of lung cancer screening and certainly could add to the risk. So that question really opens up the conversation helps to improve the shared decision-making conversation.

Dr. Bade:
Let's move on to a case. This case is a patient named Marcus T. Marcus is a 54-year-old black male with 25 years of service as a professional firefighter. Marcus has a 20-pack year tobacco smoking history, having smoked a pack a day from ages 20 to 40, so quite about 14 years ago. His father received a lung cancer diagnosis at age 63 and actually died of the disease. He presents to our clinic today for a routine blood pressure follow-up. He does not raise the question of lung cancer screening and has not previously been offered lung cancer screening.

So if we look at the criteria and apply USPSTF 2021, Marcus meets all the eligibility criteria.

So in terms of eligibility, Marcus is a straightforward case, but I think we both see patients every week who might be just outside those eligibility thresholds that we discussed in terms of age and tobacco smoking history. For example, a patient with a 22-pack year smoking history but who quit 18 years ago, such a patient doesn't meet USPSTF categorical criteria but might meet criteria for others, for example the American Cancer Society.

I think this kind of scenario is exactly where our risk calculators become essential.

So looking back at Marcus, he comes in for a blood pressure visit today. How do you get from that screening conversation without feeling like you're adding to his agenda?

Dr. Gieske:
Well, certainly those additional risk factors raise our antennas, and you could ask, for example, you've been a firefighter for 25 years, what kinds of things have you been exposed to on the job? When Marcus describes the smoke and chemical exposure, I had the information I need.

This First 5 Minutes framework is built on a single principle, developing the relationship before making a recommendation. You're not delivering a clinical plan at the patient. You're inviting him into the conversation.

You know, if the patient signals hesitation, costs, worry about what you might find, not wanting to open a door he can't close, I name it before I move past it. And I close with support, a commitment, not just a referral. Whatever comes back, we'll handle it together.

From the specialist side, what does a well-prepared referral look like for a patient like Marcus?

Dr. Bade:
From my perspective, a good referral, just focus on Marcus tells me why he's there, what he understands about his risk, what concerns came up in your discussions with him, and a better understanding of what he might expect. I think that's continuity. Means I can build on that conversation that you started rather than starting over.

Dr. Gieske:
So Marcus gets a scan and comes back with a 7-mm nodule on the right upper lobe. This is exactly where the pathway most commonly breaks down. The radiology report oftentimes says probably benign. That's by the Lung-RADS categorization, and many clinicians read that as nothing to worry about, but it is not.

Statistically, Lung-RADS category 3s, for example, have a very low risk of developing into cancer, but they do require follow-up. And data indicates that only about 30 to 43% of indeterminate pulmonary nodules identified on lung cancer screenings are managed in accordance with Lung-RADS guidelines.

One distinction worth noting is that Lung-RADS applies only to screening-detected nodules. If a nodule turns up on an incidental CT or a symptomatic CT that’s ordered, we use Fleischner Society criteria instead.

So could you walk through the Lung-RADS category and how this framework applies?

Dr. Bade:
To focus on Lung-RADS specifically, this tool is from the American College of Radiology, and it's a standardized reporting tool, kind of analogous to the reporting tools that we have for breast cancer, for example BI-RADS. It's a structure for screening and it's formally recommended by the CHEST 2021 guidelines as a structured reporting system screening programs could adopt.

For primary care purposes, I think there are three categories that drive clinical action. As you mentioned, category 1 or 2 labels for these categories are benign or probably benign appearance. The recommendation for our follow-up is to continue annual low-dose CT.

Moving to category 3, this category is labeled probably benign for a baseline solid nodule between 6 and less than 8 mm. The radiologic probability of malignancy is really pretty low at less than 1 to 2% but it’s critical that these scans and these nodules have an appropriate follow-up. In this case, for a category 3 lung nodule it’s 6 months with a low-dose CT to evaluate for any change.

In the final category, that is 4A or 4B. The malignancy probability ranges from 1 to 2% to much higher. Management for these lung nodules includes a spectrum of care that might be repeat CT in 3 months, or PET/CT for lung nodules that have an 8 mm solid component or higher, tissue sampling, or referral to a specialist.

So returning to Marcus, a 7-mm solid nodule in a patient who has high-risk features, the classification by Lung-RADS would be category 3, and the management instruction is a follow up low-dose CT in 6 months. And as you mentioned, this is mandatory, not discretionary.

Also to add to your conversation, loss of follow-up in category 3 in some studies has been a common failure point.

So in primary care, what might be some of the structural reasons for loss of follow-up? And what workflow interventions do you think have proven some benefit in improving adherence to follow-up?

Dr. Gieske:
See, certainly the challenge is ensuring that the follow-up scan occurs. And there's three structural interventions that could help this. One is problem list entry. Put it on the problem list so it continues to get attention and the follow-up is assured. There are tools that you can use in the EHR, for example a best practice advisory, a best practice alert at 5 months, have the patient get a patient prompt on their patient portal at 5 months that you have a repeat follow-up scan coming up, and most EHR platforms support this functionality. Give the patient a written plan at the time of the visit. How Lung-RADS category 1s, 2s, 3s, or 4s will be handled, and this is going to definitely

improve their compliance and follow-up.

Dr. Bade:
So we've covered the full pathway in our conversation, from eligibility to nodule management. Perhaps can I ask you to provide an actionable recommendation, Dr. Gieske? What should a primary care clinician listening to this do differently starting tomorrow?

Dr. Gieske:
Well, lung cancer is the number one cancer killer and adding that conversation to your health maintenance protocol for every patient 50 to 80, is certainly a good start. Use the what else question to surface other risk factors standard criteria miss. When eligibility is established, conduct the shared decision-making visit, document it, and place the order.

And for a clinician that who has now ordered the scan is looking at a radiology report in the Lung-RADS result, what's the single most important thing to understand about what is required next?

Dr. Bade:
I think one of the most important issues is including Lung-RADS 3 for every patient participating in lung cancer screening.

Looking at the numbers, about 62,000 lung cancer deaths today could be prevented over the next 5 years if all eligible individuals were screened, and those patients are again in our practice panels today.

And I'd like to thank Dr. Gieske for joining me today to discuss lung cancer screening and shared decision-making.

Dr. Gieske:
Brett, it’s been a pleasure having this conversation with you on this very important subject.

Dr. Bade:
I'm Dr. Brett Bade and thank you to everyone who joined us on this the First 5 Minutes.

Announcer:
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