



September 2023

ELDER CARE

A Resource for Interprofessional Providers

An Update on Lung Cancer Screening in Older Adults

Mary Croake, DO; Lori Pearce, PA; Samjot Dhillon, MD; Mary Reid, MSPH, PhD; Roswell Park Cancer Institute, Buffalo, NY; The Permanente Medical Group, CA.

Introduction

Lung cancer is the greatest cause of cancer death in the US. The 20% reduction in 5-year mortality benefit seen with lung cancer screening means that over 30,000 lives could be saved each year with appropriate lung cancer screening with low-dose CT (LDCT). When implemented effectively, screening can shift the stage of lung cancers detected so that the majority are early-stage cancers (70%) as opposed to the current status quo with the majority of lung cancer diagnosed at late stages (stages 3 and 4). The higher cure rates and improved survival benefits from lung cancer screening are the result of earlier stage at diagnosis.

The National Lung Cancer Screening Trial and the Nelson Trial

Since the results of the National Lung Screening Trial (NLST) were published in 2011, lung cancer screening has received widespread support. The NLST enrolled more than 50,000 asymptomatic adults between the ages of 55-74 years who had at least 30 pack-years of smoking exposure, including former smokers who had quit within the past 15 years. Enrollees were randomized to receive 3 annual screening examinations using low-dose spiral

computed tomography (LDCT) or to control group screened with annual chest x-rays. During a median follow-up interval of 5.5 years, there was a 20% reduction in the mortality rate from lung cancer with LDCT screening when compared to screening with annual chest x-rays. The Nelson Trial, published in 2020, included 13,195 participants, comparing LDCT screening to no screening. The lung cancer mortality rate was lower in the screening group compared with the not screened group (2.50/1000 vs 3.30/1000 person years, respectively).

These studies collectively provide definitive evidence that lung cancer screening can shift the detection of lung cancer to earlier stages and that treatment of earlier-stage lung cancer can significantly improve overall survival and decrease lung cancer mortality. This concept is a welcome finding for the millions of tobacco-exposed adults who have seen modest improvement in lung cancer survival rates in decades.

US Preventive Services Task Force (USPTF) Recommendations

Since the NLST results were released, several professional organizations have issued recommendations regarding lung cancer screening with LDCT. Most important among

Table 1. Current Guidelines for Lung Cancer Screening

Organization	Primary Screening Eligibility Criteria			Additional Criteria
	Smoking Exposure	Age Range		Smoking Exposure
US Preventive Services Task Force (revised 2021)	≥ 20 pack-years*	50	80	Active smoking within 15 years
National Comprehensive Cancer Network (NCCN) (revised 2023)	≥ 20 pack-years *	50	See below*#	No quit time requirement Consider risk factors

* If patient currently smokes or quit smoking within the past 15 years

** There is no requirement for smoking within the last 15 years and considers risk factors: strong family history of lung cancer, COPD with FEV1 <70%, prior lung cancer, and/or occupational or environmental exposures

*# See also the NCCN Guidelines for Non-Small Cell Lung Cancer. Although randomized trial evidence supports screening up to age 77 years, there is uncertainty about the upper age limit to initiate or continue screening. One can consider screening beyond age 77 years as long as patient functional status and comorbidity allow consideration for curative intent therapy.

TIPS for Lung Cancer Screening in Older Adults

- Consider ordering low-dose spiral computed tomography (LDCT) to screen for early lung cancer in patients 50-80 years old if they have a smoking history > 20 pack-years and either currently smoke or quit within the past 15 years.
- Before ordering LDCT screening, assess whether the patient has health problems that might limit life expectancy, in which case screening may not be appropriate. Assess whether the patient has the ability and willingness to undergo definitive treatment for lung cancer.
- Discuss the potential benefits and harms of screening. Document this conversation in the medical record as shared decision making.
- Consider the patients ability to access a screening center and other barriers, such as transportation, social supports, and financial costs.

ELDER CARE

Continued from front page

these, because of their influence of health insurance coverage, including Medicare and Medicaid, are recommendations from the USPSTF. The USPSTF issued a Grade B recommendation in support of LDCT screening for lung cancer. A Grade B recommendation means “there is moderate certainty that the net benefit is moderate to substantial.” These guidelines were updated in 2021 to include more women and minorities at risk for lung cancer by lowering the age and smoking exposure required for eligibility.

The specific recommendations from the USPSTF are for annual lung cancer screening with LDCT “**in adults ages 50 to 80 years who have a 20 pack-year smoking history and currently smoke or have quit within the past 15 years.**” The National Comprehensive Cancer Network (NCCN) has also released detailed guidelines, aligning with USPTF except the NCCN does not require active smoking in the last 15 years. NCCN institutions are comprehensive cancer centers and use NCCN guidelines for cancer screening, treatment, and follow-up.

Lung cancer screening is covered by most insurance plans, although there is some inconsistency across the US with preauthorization requirements, co-pays, and follow-up coverage state-by-state, insurer-by-insurer.

Providing Lung Cancer Screening using LDCT

There are several steps in lung cancer screening that should be followed to assure compliance with the guidelines and appropriate reimbursement. This section will briefly outline the steps:

- True lung cancer screening should occur in patients who are 50, with a 20 pack-year exposure to cigarette smoking, and who have actively smoked in the last 15 years and have no symptoms of lung cancer. This definition aligns with the USPTF criteria, CMS, and the CPT code. Lung cancer survivors are not included in this group and should undergo routine surveillance with chest imaging based on the NCCN Guidelines.
- Identified patients should have a shared decision-making discussion (SDM) within the practice of the provider ordering the test or by the radiology center where the LDCT is performed. SDM can be performed

by any member of the clinical team and is not required to be done by a licensed person. However, SDM should be recorded in the EHR for billing purposes. SDM can be billed under a specific CPT code.

- If the patient is an active smoker, they should be directed to smoking cessation services by any member of the care team. If smoking cessation counseling occurs, this too can be billed for and should be recorded in the EHR.
- The LDCT is performed, and the results should be communicated to the patient and to their PCP.
- For lung cancer survivors who are eligible for a LDCT chest for surveillance should have this done under the diagnostic CT chest without contrast CPT code.
- The follow-up schedule will be determined by the findings on the LDCT (presence and number of lung nodules along with their characteristics: solidity, size, shape, etc.) and will be detailed in the radiology report utilizing a Lung-RADS score. The Lung-RADS score does not consider any additional risk factors or patient history for the follow-up schedule.
- If the patient was not eligible for lung cancer screening, but an incidental nodule was found on a CT done for other reasons, then the Fleischner Criteria follow-up schedule should be followed. Most outside providers will order a CT chest without contrast and not a LDCT.

Radiology Report Recommendations for Follow-up

There are three primary protocols for the follow-up of patients who have undergone lung cancer screening: **Lung-RADS, NCCN and Fleischner guidelines**. These guidelines describe when the next LDCT should be scheduled based on whether nodules are detected and the characteristics of the nodule(s).

The NCCN guidelines complement the follow-up schedule for nodules and ground glass lesions described by the Lung-RADS 2022 system. Simply put, Lung-RADS is a score that incorporates the size, shape and solidity of a nodule that is associated with a prescribed follow-up schedule.

References and Resources

- Lancet. 2023 Feb 4;401(10374):390-408. doi: 10.1016/S0140-6736(22)01694-4. Epub 2022 Dec 20.PMID: 36563698
N Engl J Med. 2011 Aug 4;365(5):395-409. doi: 10.1056/NEJMoa1102873. Epub 2011 Jun 29.
N Engl J Med. 2013 Jul 18;369(3):245-254. doi: 10.1056/NEJMoa1301851. PMID: 23863051
N Engl J Med. 2020 Feb 6;382(6):503-513. doi: 10.1056/NEJMoa1911793. Epub 2020 Jan 29.PMID: 31995683

Interprofessional care improves the outcomes of older adults with complex health problems.

Editors: Mindy Fain, MD; Jane Mohler, NP-c, MPH, PhD; and Barry D. Weiss, MD
Interprofessional Associate Editors: Tracy Carroll, PT, CHT, MPH; David Coon, PhD; Marilyn Gilbert, MS, CHES;
Jeannie Lee, PharmD, BCPS; Marisa Menchola, PhD; Francisco Moreno, MD; Lisa O'Neill, DBH, MPH; Floribella Redondo; Laura Vitkus, BA
The University of Arizona, PO Box 245069, Tucson, AZ 85724-5069 | (520) 626-5800 | <http://aqina.arizona.edu>

Supported by: Donald W. Reynolds Foundation, Arizona Geriatrics Workforce Enhancement Program and the University of Arizona Center on Aging

This project was supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) under grant number U1QHP28721, Arizona Geriatrics Workforce Enhancement Program. This information or content and conclusions are those of the author and should not be construed as the official position or policy of, nor should any endorsements be inferred by HRSA, HHS or the U.S. Government.