Cohere Medical Policy - Low-Dose Computed Tomography (LDCT), Chest, for Lung Cancer Screening

Clinical Policy for Medical Necessity Review

Version: 2
Cohere Health UMC Approval Date: December 11, 2025
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Important Notices

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Guideline Information:

Specialty Area: Diagnostic Imaging
Guideline Name: Cohere Medical Policy - Low-Dose Computed Tomography (LDCT), Chest, for Lung Cancer Screening
Type: [**X**] Adult (18+ yo) | [_] Pediatric (0-17 yo)

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Medical Necessity Criteria

Service: Low-Dose Computed Tomography (LDCT), Chest, for Lung Cancer Screening

Description

Low-dose CT of the chest (LDCT) is offered to certain patients considered to be at high-risk of acquiring lung cancer, who, at the same time, would be inclined to pursue oncologic treatment if a lung cancer diagnosis were rendered after a full diagnostic evaluation. A well-developed lung cancer screening program is essential to realizing the population-level promise of the same, the components of which are not limited to the following:

- Shared decision-making between the requesting provider and the patient
- Tobacco cessation counseling, support, and pharmacologic therapy as needed
- LDCT

LDCT screening for lung cancer increases the odds of detecting lung cancer at an early stage, when there is a better chance of effectively treating/curing the newly diagnosed cancer.[1] It is properly performed in serial fashion on an annual basis for patients who are participating in a guideline-directed screening program.

Multiple chest images are taken while the patient lies flat on the X-ray table. The images are combined to reconstruct detailed internal organ images, highlighting the lungs. This advanced imaging technology allows detection of very small lung nodules that can signal early-stage lung cancer.[2] According to medical literature, LDCT can lower the mortality rate from lung cancer by as much as 20%.

Medical Necessity Criteria

Indications

Low-dose computed tomography, chest, for lung cancer screening is considered appropriate when **ALL** of the following are **TRUE**[1-9]:

- Adults 50 to 80 years of age; **AND**
- Asymptomatic (no signs of lung cancer); **AND**
- Tobacco smoking history of at least 20 pack-years*; **AND**
- Screening may occur no more often than annually; **AND**
- **ANY** of the following:
  - The patient is a current smoker; **OR**
  - The patient has quit smoking within the past 15 years.

*NOTE: One pack-year equals smoking one pack of cigarettes per day for one year (20 cigarettes in one pack).[3]

Non-Indications

Low-dose computed tomography, chest, for lung cancer screening is not considered appropriate if **ANY** of the following is **TRUE**[3]:

- Screening for a patient who has quit smoking more than 15 years ago; **OR**
- There is limited life expectancy due to another health problem; **OR**
- The patient is unable or unwilling to have curative lung surgery.

Level of Care Criteria

Outpatient

Procedure Codes (CPT/HCPCS)

CPT/HCPCS Code	Code Description
71271	Computed tomography, thorax, low dose for lung cancer screening, without contrast material(s)

Medical Evidence

The National Comprehensive Cancer Network (NCCN) (2025) lung cancer screening guideline discussed risks and benefits. Risks included false-positive or false-negative results, radiation exposure, cost, and finding of incidental lesions. Benefits included decreased mortality from lung cancer, improvement in anxiety and healthy lifestyles, and the potential for the discovery of other undiagnosed health risks, including thyroid nodules and breast cancer. The screening recommendation by NCCN is in agreement with other societies (high-risk greater than or equal to 50 years of age with a greater than or equal to 20 pack-year cigarette smoking history).[5]

Jonas et al. (2021) analyzed the recommendations by the United States Preventive Services Task Force (USPSTF) for low-dose computed tomography (LDCT) for lung cancer. Seven randomized controlled trials (RCTs) were reviewed, including the National Lung Screening Trial (NLST) with 53,454 participants and the Nederlands-Leuvens Longkanker Screenings Onderzoek (NELSON) trial with 15,792 participants. Overall, the authors found that while screening can reduce lung cancer mortality, LDCT can cause false positives.[6]

Aberle et al. (2011) reported on the National Lung Screening Trial (NLST) (NCT00047385), which had 53,454 individuals with a high-risk of lung cancer. Participants were randomly assigned to either the low-dose CT group (26,722) or the single-view posteroanterior chest radiography group (26,732). Positive results were found in 24.2% of the participants, and were higher among the LDCT group by a factor of more than three. Adherence rates were high overall. The authors noted that a main limitation of the study was the advances in technology that have occurred since the study was conducted, which have further reduced the rate of lung cancer deaths. Lower death rates were also attributed to other ongoing LCDT screening not originally in the NLST data, and thus, death rates may be higher.[10]

The National Cancer Institute (2024) stated that LDCT was shown to be more sensitive than chest radiography; based on the Early Lung Cancer Action Project, LDCT detected nearly six times more Stage I lung cancers compared to chest radiography, with most of the tumors less than 1 cm in size.[2]

References

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Policy Revision History/Information

Original Date: November 21, 2024		
Review History		
Version 2	12/11/2025	Annual review. Clarified description, indications, and non-indications to align with guideline-directed cigarette smoking history requirement, as well as screening frequency and patient willingness for treatment and smoking cessation. Expanded the Medical Evidence section; added one citation.