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

Clinical Guidelines for Medical Necessity Review

Version: 1
Effective Date: November 21, 2024

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

Date of last literature review: 11/14/2024
Document last updated: 11/20/2024
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

Recommended Clinical Approach

Lung cancer has historically had a low survival rate due to the frequency of diagnosis at later stages.[1] Screening for lung cancer using low-dose computed tomography (LDCT) has been found to be more sensitive than traditional chest x-ray in the diagnosis of early-stage lung cancers.[2] LDCT provides appropriate visualization with a lower dose of ionizing radiation compared to standard computed tomography. The benefit of such early detection outweighs the incidence of false positive results found with this radiological testing modality.

Medical Necessity Criteria

Indications

➔ **Low-dose computed tomography, chest, for lung cancer screening** is considered appropriate when **ALL** of the following are **TRUE**[1-8]:

- ◆ Asymptomatic adults between the ages of 50 to 80 years; **AND**
- ◆ Screening may occur no more than annually; **AND**
- ◆ **ANY** of the following is **TRUE**:
  - The patient is a current or former smoker with a 20 pack-year* cigarette smoking history; **OR**
  - The patient has quit smoking cigarettes 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)

Non-Indications

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

- ◆ The patient has not smoked for more than 15 years; **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 Cancer Institute (2024) updated its PDQ guideline for lung cancer screening (Health Professionals Version), in which evidence of the benefit of LDCT is discussed. They state that low-dose computed tomography (LDCT) was shown to be more sensitive than chest radiography, and based upon the Early Lung Cancer Action Project, nearly six times more stage I lung cancers were detected compared to chest radiography, with most of the tumors less than 1 cm in size. Several large-scale studies have been conducted in recent years, including the National Lung Screening Trial in 2011, with 53,454 enrolled individuals, resulting in 3.6% of individuals found to have lung cancer. The NELSON trial in Europe (2020) resulted in 2.1% of the 13,105 men and 2594 women being diagnosed by LDCT. The reviewers state that smaller, randomized trials are currently being conducted or completed in several countries.[2]

The US Preventive Services Task Force (USPSTF) published a recommendation in 2021 to update their 2013 recommendation. A systematic review was conducted on the accuracy of using LDCT to screen for lung cancer as well as determining the benefits and harms of such screening. The resulting recommendation is for an annual LDCT screening for lung cancer in adults 50 to 80 years of age who have a 20-pack-year history of smoking currently or have quit in the past 15 years. After 15 years of non-smoking, screening is no longer necessary. The former recommendation from 2013 required a 30-pack year smoking history in adults aged 55-80.[3]

The National Comprehensive Cancer Network (NCCN)(2025 update) lung cancer screening guideline discusses the risks and benefits of lung cancer screening. Risks include false-positive or false-negative results, radiation exposure, cost, and finding of incidental lesions. Benefits were stated as decreased mortality from lung cancer, improvement in anxiety and healthy lifestyles, and the potential of 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]

References

1. American Lung Association. State of lung cancer 2023 report. https://www.lung.org. Published 2023.
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3. US Preventive Services Task Force (USPSTF). Recommendation Statement. Screening for lung cancer. https://www.uspreventiveservicestaskforce.org. Published March 9, 2021.
4. Agency for Healthcare Research and Quality (AHRQ). Screening for lung cancer with low-dose computed tomography: an evidence review for the US Preventive Services Task Force. https://www.ahrq.gov. Published March 2021.
5. National Comprehensive Cancer Network (NCCN). NCCN Clinical Practice Guidelines in Oncology. Lung cancer screening. https://www.nccn.org. Updated October 14, 2024.
6. American College of Chest Physicians (ACCP). Guideline and Expert Panel Report. Screening for lung cancer. https://www.chestnet.org. Published July 13, 2021.
7. American College of Radiology (ACR). ACR Appropriateness Criteria. Lung cancer screening. https://www.acr.org. Published 2018. Updated 2022.
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Clinical Guideline Revision History/Information

Original Date: November 21, 2024		
Review History		