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| <b>*National Imaging Associates, Inc.</b>                                  |  |
| <b>Clinical guidelines</b><br><b>LOW-DOSE CT FOR LUNG CANCER SCREENING</b> | <b>Original Date: January 2015</b>       |
| <b>CPT Codes: 71271</b>  | <b>Last Revised Date: April 2023</b>     |
| <b>Guideline Number: NIA_CG_020-1</b>                                      | <b>Implementation Date: January 2024</b> |

### GENERAL INFORMATION

- *It is an expectation that all patients receive care/services from a licensed clinician. All appropriate supporting documentation, including recent pertinent office visit notes, laboratory data, and results of any special testing must be provided. If applicable: All prior relevant imaging results and the reason that alternative imaging cannot be performed must be included in the documentation submitted.*
- *Where a specific clinical indication is not directly addressed in this guideline, medical necessity determination will be made based on widely accepted standard of care criteria. These criteria are supported by evidence-based or peer-reviewed sources such as medical literature, societal guidelines and state/national recommendations.*

### INDICATIONS FOR LOW-DOSE CT (LDCT) FOR LUNG CANCER SCREENING

#### For Annual Lung Cancer Screening:

The use of low-dose, non-contrast spiral (helical) multi-detector CT imaging as a screening technique for lung cancer is considered **medically necessary ONLY** when used to screen for lung cancer for certain high-risk, **asymptomatic** individuals, i.e., no acute lung-related symptoms, when **ALL** of the following criteria are met<sup>1</sup>:

#### Group 1:

- Individual is between 50-80 years of age\*; **AND**
- There is at least a 20 pack-year history of cigarette\*\* smoking; **AND**
- If the individual is a former smoker, that individual had quit smoking within the previous 15 years.

\*May approve for individuals over the age limit if the individual is a candidate for and willing to undergo curative treatment

\*\* Annual screening refers to the use of cigarettes only; does not take other forms of smoking into the calculation (i.e., vaping, pipe, cigar, marijuana; see [Background](#))

## Group 2:

Yearly Low-Dose CT surveillance after completion of definitive treatment of non-small cell lung cancer as per these parameters<sup>2</sup>:

- Stage I-II (treated with surgery +/- chemotherapy)
  - Starts at year 2-3 of surveillance
- Stage I-II (treated primarily with radiation) or stage III-IV with all sites treated with definitive intent
  - Starts at year 5 of surveillance

## Nodule on initial LDCT (Follow-up low dose CT is approvable)<sup>3</sup>:

- [Table 1](#) shows the follow-up interval at which LDCT can be approved to reduce radiation dose<sup>2</sup>
- If multiple nodules, the largest and type is used for decision

## Other Indications

Further evaluation of indeterminate findings on prior imaging (unless follow up is otherwise specified within the guideline):

- For initial evaluation of an inconclusive finding on a prior imaging report that requires further clarification
- One follow-up exam of a prior indeterminate MR/CT finding to ensure no suspicious interval change has occurred. (No further surveillance unless specified as highly suspicious or change was found on last follow-up exam.)

**Table 1: Lung-RADS® Assessment Categories<sup>2</sup>**

| Category Descriptor  | Lung-RADS Score | Findings   | Management  |
|--|-----------------|--|---|
| <b>Incomplete</b>  | <b>0</b>        | Prior chest CT examination(s) being located for comparison<br>Part or all of lungs cannot be evaluated   | Additional lung cancer screening CT images and/or comparison to prior chest CT examinations is needed   |
| <b>Negative</b><br>No nodules and definitely benign nodules  | <b>1</b>        | No lung nodules<br>Nodule(s) with specific calcifications: complete, central, popcorn, concentric rings and fat containing nodules   | Continue annual screening with LDCT in 12 months  |
| <b>Benign Appearance or Behavior</b><br>Nodules with a very low likelihood of becoming a clinically active cancer due to size or lack of growth                      | <b>2</b>        | <b>Perifissural nodule(s)</b> (See Footnote 11) < 10 mm (524 mm <sup>3</sup> )   |   |
|  |                 | <b>Solid nodule(s):</b><br>< 6 mm (< 113 mm <sup>3</sup> )<br>new < 4 mm (< 34 mm <sup>3</sup> )   |   |
|  |                 | <b>Part solid nodule(s):</b><br>< 6 mm total diameter (< 113 mm <sup>3</sup> ) on baseline screening<br><b>Non solid nodule(s) (GGN):</b><br><30 mm (<14137 mm <sup>3</sup> ) <b>OR</b><br>≥ 30 mm (≥ 14137 mm <sup>3</sup> ) and unchanged or slowly growing<br><b>Category 3 or 4 nodules unchanged for ≥ 3 months</b>   |   |
| <b>Probably Benign</b><br>Probably benign finding(s) - short term follow up suggested; includes nodules with a low likelihood of becoming a clinically active cancer | <b>3</b>        | <b>Solid nodule(s):</b><br>≥ 6 to < 8 mm (≥ 113 to < 268 mm <sup>3</sup> ) at baseline <b>OR</b><br>new 4 mm to < 6 mm (34 to < 113 mm <sup>3</sup> )<br><b>Part solid nodule(s)</b><br>≥ 6 mm total diameter (≥ 113 mm <sup>3</sup> ) with solid component < 6 mm (< 113 mm <sup>3</sup> ) <b>OR</b><br>new < 6 mm total diameter (< 113 mm <sup>3</sup> )<br><b>Non solid nodule(s)</b><br>(GGN) ≥ 30 mm (≥ 14137 mm <sup>3</sup> ) on baseline CT or new            | 6 month LDCT  |
| <b>Suspicious</b><br>Findings for which additional diagnostic testing is recommended   | <b>4A</b>       | <b>Solid nodule(s):</b><br>≥ 8 to < 15 mm (≥ 268 to < 1767 mm <sup>3</sup> ) at baseline <b>OR</b><br>growing < 8 mm (< 268 mm <sup>3</sup> ) <b>OR</b><br>new 6 to < 8 mm (113 to < 268 mm <sup>3</sup> )<br><b>Part solid nodule(s):</b><br>≥ 6 mm (≥ 113 mm <sup>3</sup> ) with solid component ≥ 6 mm to < 8 mm (≥ 113 to < 268 mm <sup>3</sup> ) <b>OR</b><br>with a new or growing < 4 mm (< 34 mm <sup>3</sup> ) solid component<br><b>Endobronchial nodule</b> | 3 month LDCT; PET/CT may be used when there is a ≥ 8 mm (≥ 268 mm <sup>3</sup> ) solid component  |
| <b>Very Suspicious</b><br>Findings for which additional diagnostic testing and/or tissue sampling is recommended   | <b>4B</b>       | <b>Solid nodule(s)</b><br>≥ 15 mm (≥ 1767 mm <sup>3</sup> ) <b>OR</b><br>new or growing, and ≥ 8 mm (≥ 268 mm <sup>3</sup> )<br><b>Part solid nodule(s) with:</b><br>a solid component ≥ 8 mm (≥ 268 mm <sup>3</sup> ) <b>OR</b><br>a new or growing ≥ 4 mm (≥ 34 mm <sup>3</sup> ) solid component  | Chest CT with or without contrast, PET/CT and/or tissue sampling depending on the *probability of malignancy and comorbidities. PET/CT may be used when there is a ≥ 8 mm (≥ 268 mm <sup>3</sup> ) solid component.<br><i>For new large nodules that develop on an annual repeat screening CT, a 1 month LDCT may be recommended to address potentially infectious or inflammatory conditions</i> |
|  | <b>4X</b>       | Category 3 or 4 nodules with additional features or imaging findings that increases the suspicion of malignancy  |   |
| <b>Other</b><br>Clinically Significant or Potentially Clinically Significant Findings (non lung cancer)  | <b>S</b>        | <b>Modifier - may add on to category 0-4 coding</b>  | As appropriate to the specific finding  |



## **BACKGROUND**

Smoking-related lung cancer is the leading cause of cancer deaths in both men and women in the United States. Treatment for most lung cancer is focused on surgery which is usually curative only when the tumors are very small. Screening for early lung cancer with sputum cytology and chest x-rays has not been successful in reducing deaths from lung cancer. However, in 2011, a large, prospective, multicenter trial was published that showed CT Chest screening identified early cancers better than other approaches and reduced the death rate from lung cancer. In 2014, the United States Preventive Service Task Force (USPSTF) recommended annual low-dose CT Chest screening (CPT® code 71271) for people with current or recent past smoking histories.

The health effects of smoking (tobacco) products other than cigarettes is limited. More research is needed to explore the cancer risk from these products to guide cancer prevention efforts; therefore, cancer screening guidelines have not been developed for them. Currently, the screening guidelines apply only to cigarettes smoking.

All screening and follow-up chest CT scans to be performed at low dose (100-120 kVp and 40-60 mAs), unless evaluating mediastinal findings or lymph nodes, where standard dose CT with IV contrast may be more appropriate.<sup>4</sup>

## **OVERVIEW**

Screening should be discontinued once a person has not smoked for 15 years or develops a health problem that substantially limits life expectancy or the ability or willingness to have curative lung surgery.

## REFERENCES

1. Final Recommendation Statement Lung Cancer: Screening U.S. Preventive Services Task Force (USPSTF). Updated March 9, 2021. Accessed November 20, 2022. <https://uspreventiveservicestaskforce.org/uspstf/recommendation/lung-cancer-screening>
2. Lung-RADS® Version 1.1. American College of Radiology (ACR). Updated 2019. Accessed November 20, 2022. <https://www.acr.org/-/media/ACR/Files/RADS/Lung-RADS/LungRADSAssessmentCategoriesv1-1.pdf>
3. Wood DE, Kazerooni EA, Baum SL, et al. Lung Cancer Screening, Version 3.2018, NCCN Clinical Practice Guidelines in Oncology. *J Natl Compr Canc Netw*. Apr 2018;16(4):412-441. doi:10.6004/jnccn.2018.0020
4. NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines): Non-Small Cell Lung Cancer Version 1.2023. National Comprehensive Cancer Network (NCCN). Updated December 22, 2022. Accessed January 23, 2023. [https://www.nccn.org/professionals/physician\\_gls/pdf/nscl.pdf](https://www.nccn.org/professionals/physician_gls/pdf/nscl.pdf)

## POLICY HISTORY

| Date       | Summary   |
|------------|---|
| April 2023 | <ul style="list-style-type: none"><li>• Added that applies only to cigarette smoking</li><li>• General Information moved to beginning of guideline with added statement on clinical indications not addressed in this guideline</li><li>• Added statement regarding further evaluation of indeterminate findings on prior imaging</li></ul> |
| March 2022 | <ul style="list-style-type: none"><li>• Reviewed data. No significant updates since prior revision.</li></ul>   |

## Reviewed / Approved by NIA Clinical Guideline Committee

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