# Cohere Medical Policy - Computed Tomography (CT), Chest

*Clinical Policy for Medical Necessity Review*

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# Important Notices

## Notices & Disclaimers:

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## Other Notices:



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## Policy Information:

**Specialty Area:** Diagnostic Imaging
**Policy Name:** Cohere Medical Policy - Computed Tomography (CT), Chest
**Type:** [**X**] Adult (18+ yo) | [**X**] Pediatric (0-17 yo)

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# Medical Necessity Criteria

***Service: Computed Tomography (CT), Chest***

Cohere Health takes an evidence-based approach to reviewing imaging and procedure requests, meaning that sufficient clinical information must be provided at the time of submission to determine medical necessity. Documentation must include a recent and detailed history, physical examination related to the onset or change in symptoms, relevant lab results, prior imaging, and details of previous treatments. Advanced imaging or procedures should be requested after a clinical evaluation by the treating provider, which may include a referral to a specialist.

- When a specific clinical indication is not explicitly addressed in the Cohere Health medical policy, medical necessity will be determined based on established clinical best practices, as supported by evidence-based literature, peer-reviewed sources, professional society guidelines, and state or national recommendations, unless otherwise directed by the health plan.
- Requests submitted without clinical documentation, or those that do not align with the provided clinical information—such as mismatched laterality, body part, or CPT code—may be denied for lack of medical necessity due to insufficient or inconsistent clinical information.
- Repeat diagnostic testing due to technical issues—such as patient motion, incomplete exams, or incorrect imaging sequences—may not be considered medically necessary, as it is the responsibility of the imaging center to deliver appropriate, high-quality studies as originally authorized. Similarly, repeat imaging requested at a different facility based solely on provider preference may not be approved for medical necessity.
- When there are multiple diagnostic or therapeutic procedures requested simultaneously or within the past three months, each will be reviewed independently. Clinical documentation must clearly justify all of the following:
    - The medical necessity of each individual request

    - Why prior imaging or procedures were inconclusive or why additional/follow-up studies are needed
    - How the results will impact patient management or treatment decisions
- Requests involving adjacent or contiguous body parts may be considered not medically necessary if the documentation demonstrates that the patient's primary symptoms can be adequately assessed with a single study or procedure.
- Cohere Health evaluates imaging exams based on medical necessity, regardless of contrast use. If an initial non-contrast study is completed and the radiologist later determines that contrast is needed to clarify a finding, the original authorization number may be used—provided the contrast-enhanced exam is performed at the same imaging center and within the original request's validity period, unless otherwise directed by the health plan.

## Description

Computed tomography (CT) of the chest can be performed as a screening examination in high-risk patients and to diagnose and evaluate a myriad of thoracic processes involving the lungs, mediastinum/hilum, pleura, and chest wall. Contrast usage is guided by the clinical scenario being investigated.[1]

## Medical Necessity Criteria

### Indications

**Computed tomography (CT), chest** is considered appropriate when **ANY** of the following is **TRUE**:

- Abnormality discovered or partially imaged on other imaging modalities (excluding pulmonary nodules and masses, see below)[2,3]; **OR**
- Neoplastic conditions (including masses or mass-like conditions), including **ANY** of the following[4]:
    - Chest wall mass with **ANY** of the following[3]:
        - Palpable chest wall mass with non-diagnostic chest radiograph or ultrasound; **OR**
        - Chest wall mass identified on prior imaging when further information is needed to determine the need for biopsy or surgery; **OR**
        - Preoperative planning following biopsy; **OR**
    - Pulmonary nodule or mass and **ANY** of the following is **TRUE**[1,5]:

        - Incidentally detected pulmonary nodule on prior CT chest, and the patient meets criteria specified in Fleischner Society Guidelines[1] (see Table 1); **OR**
        - Pulmonary nodules detected on lung cancer screening CT, and the patient meets Lung-RADS® (2022) criteria[5] (see Table 2); **OR**
        - Incidentally detected pulmonary nodule or mass seen on imaging other than dedicated Chest CT (e.g., CT abdomen/pelvis, CT neck, MRI, etc.) and lesion measures greater than 8 mm[6]; **OR**
        - Incidentally detected pulmonary nodule seen on imaging other than dedicated Chest CT and measures less than or equal to 8 mm on non-CT chest imaging, and the patient meets criteria specified in Fleischner Society Guidelines[6]; **OR**
    - Other thoracic mass lesions when detected on prior imaging, including **ANY** of the following[1]:
        - Mediastinal mass; **OR**
        - Pancoast tumor; **OR**
        - Pleural mass; **OR**
        - Thymoma; **OR**
        - Tracheal or endobronchial lesion; **OR**
    - Concern for thymoma in a patient with myasthenia gravis[7]; **OR**
    - Staging, management, or surveillance of known primary malignancy (except for invasive breast cancer without pulmonary symptoms; or for asymptomatic very-low-, low-, and intermediate-risk prostate cancer with a life expectancy of 5 years or less)[8,9]; **OR**
    - Staging, management, or surveillance of lung cancer or other primary thoracic malignancy[10-13]; **OR**
- Cardiothoracic manifestation of known extrathoracic diseases with **ALL** of the following[1,14-16]:
    - Chest radiograph has been performed and is **ANY** of the following:
        - Nondiagnostic; **OR**
        - Further evaluation is indicated; **AND**
    - **ANY** of the following[14]:
        - Systemic lupus erythematosus (SLE); **OR**
        - Rheumatoid arthritis (RA); **OR**
        - Progressive systemic sclerosis; **OR**
        - Polymyositis and dermatomyositis; **OR**
        - Sjögren's syndrome; **OR**
        - Ankylosing spondylitis (AS); **OR**

        - Granulomatosis with polyangiitis; **OR**
        - Eosinophilic Granulomatosis with Polyangiitis (EGPA); **OR**
        - Anti-glomerular basement membrane antibody disease; **OR**
- Infection or an infectious disorder for **ANY** of the following:
    - Pneumonia when **ANY** of the following is **TRUE**:
        - Repeat chest radiograph shows no improvement following at least 4-6 weeks of medical treatment[5]; **OR**
        - Recurrence of pneumonia on chest radiograph in the same location within 6 months[17]; **OR**
        - Evaluation of known or suspected complications of pneumonia following nondiagnostic chest radiograph; **OR**
        - Immunosuppressed patients with signs or symptoms of pneumonia following chest radiograph[18,19]; **OR**
    - For the diagnosis and management of miscellaneous infectious or inflammatory conditions, including **ANY** of the following[3]:
        - Lung abscess; **OR**
        - Sternal wound infection/dehiscence; **OR**
        - Mediastinitis; **OR**
        - Other infectious or inflammatory condition that is symptomatic; **OR**
- For the diagnosis and management of blunt or penetrating trauma to the thorax and further evaluation is needed following chest radiograph; **OR**
- For the management (including treatment response), suspected or known, of a parenchymal lung disease, including **ALL** of the following[20-22]:
    - Chest radiograph is non-diagnostic; **AND**
    - **ANY** of the following are suspected:
        - Bronchiectasis; **OR**
        - Bronchiolitis obliterans; **OR**
        - Sarcoidosis; **OR**
        - Interstitial lung disease (including idiopathic pulmonary fibrosis [IPF]); **OR**
        - Occupational lung disease (e.g., silicosis, asbestosis, coal workers' pneumoconiosis); **OR**
- Vascular conditions, known or suspected, including **ANY** of the following (CTA preferred)[2-4,7]:
    - Pulmonary hypertension; **OR**
    - Pulmonary vascular malformations; **OR**
    - Pulmonary venous abnormalities; **OR**
- For evaluation of **ANY** of the following uncategorized/miscellaneous

symptoms when applicable:

- The patient has **ALL** of the following:
  - Non-diagnostic chest radiograph; **AND**
  - **ANY** of the following:
    - Shortness of breath; **OR**
    - Chest pain that persists despite treatment; **OR**
    - Hemoptysis (CTA preferred)[23]; **OR**
    - Other symptoms that are unlikely to be cardiac in origin; **OR**
- Cough (chronic or persistent lasting more than 8 weeks) and **ALL** of the following:
  - Cough does not respond to appropriate treatment; **AND**
  - Cough is unexplained by clinical evaluation (including, but not limited to, reflux disease, post-nasal drip, medications causing cough); **AND**
  - Chest radiograph, and/or pulmonary function testing or spirometry does not explain symptoms[24,25]; **OR**
- Cough (chronic or persistent) in immunosuppressed individuals unexplained by chest radiograph[19,26]; **OR**
- Fever of unknown origin with **ANY** of the following:
  - Unexplained fever in an immunocompromised patient; **OR**
  - **ALL** of the following:
    - Duration greater than 3 weeks; **AND**
    - Fever remains unexplained following a standard diagnostic evaluation (including chest radiograph) to identify the source; **OR**
- Vocal cord paralysis with **ALL** of the following:
  - Confirmed on direct laryngoscopy by ENT; **AND**
  - CT neck is also being ordered or has been performed[27]; **OR**
- Pleural disease including **ANY** of the following[3,28]:
  - Pleural effusion when further evaluation is required for etiology and/or is not resolving on chest radiograph; **OR**
  - Hemothorax; **OR**
  - Empyema; **OR**
  - Chylothorax; **OR**
  - Bronchopulmonary fistula suspected based on radiographs and clinical parameters; **OR**
  - Recurrent or unexplained pneumothorax; **OR**
- Unintentional weight loss exceeding 5% of the patient's body weight within a 12-month interval and **ANY** of the following is **TRUE**[29,30]:

        - Persistent weight loss after a period of observation with a negative comprehensive clinical evaluation and **ALL** of the following:
            - Documentation of complete history and physical examination; **AND**
            - Patient is up-to-date on age-appropriate cancer screening[31-33]; **AND**
            - Chest radiograph has been performed; **AND**
            - Initial laboratory evaluation has been performed; **OR**
        - Positive findings of malignancy on history, physical exam, imaging, or laboratory evaluation; **OR**
- Preoperative imaging for surgical (interventional or bronchoscopic included) planning when surgery is already planned or a bronchoscopy procedure is already approved[28,34]; **OR**
- Postoperative evaluation for **ANY** of the following[3]:
    - Postoperative complications; **OR**
    - Post-transplant if complications or infection are suspected and chest radiograph is non-diagnostic; **OR**
    - Response to therapies including chemotherapy, immunotherapy, and lung-directed ablative therapies[3]; **OR**
- Evaluation of thoracic aortic disease with **ALL** of the following (CTA preferred)[35]:
    - **ANY** of the following:
        - The patient has renal insufficiency; **OR**
        - The request explicitly states that dye is not wanted; **OR**
        - Cardiothoracic surgeon preference; **AND**
    - **ANY** of the following:
        - Initial diagnosis of a suspected thoracic aortic aneurysm based on an abnormality on **ANY** of the following:
            - Chest radiograph; **OR**
            - Echocardiogram; **OR**
        - Evaluation of known or suspected thoracic aortic disease progression/complication based on signs, symptoms, or other imaging studies (e.g., chest pain, suspicion for rupture)[3]; **OR**
        - Surveillance of known thoracic aortic aneurysm in a patient with non-syndromic/non-hereditary cause for **ANY** of the following:
            - At baseline if the ascending aorta is not adequately imaged on transthoracic echocardiogram (TTE); **OR**
            - Six months after the initial diagnosis; **OR**

- Annual surveillance for thoracic aortic aneurysms less than 5 cm; **OR**
- Surveillance every six months for thoracic aortic aneurysm greater than or equal to 5 cm; **OR**
- Surveillance every six months for aneurysms that are growing by more than 0.5 cm/year; **OR**

- Surveillance of known syndromic/hereditary/genetic aortic disease for **ANY** of the following[35]:
  - Marfan syndrome with **ANY** of the following[35]:
    - At baseline if the ascending aorta is not adequately imaged on TTE; **OR**
    - Six months after baseline imaging; **OR**
    - Surveillance every two years if the patient does not have a thoracic aortic aneurysm; **OR**
    - Annual surveillance if aneurysm is growing by less than 0.3 cm/year; **OR**
    - Annual surveillance if aneurysm is less than 4.5 cm in size; **OR**
    - Surveillance every six months if aneurysm is growing by more than 0.3 cm/year; **OR**
    - Surveillance every six months if aneurysm is greater than 4.5 cm; **OR**
  - Bicuspid aortic valve (BAV) with **ANY** of the following[35]:
    - At baseline if the ascending aorta is not adequately imaged on TTE; **OR**
    - Six months after baseline imaging; **OR**
    - Surveillance every two years if the patient does not have a thoracic aortic aneurysm; **OR**
    - Annual surveillance if the aneurysm is growing by less than 0.3 cm/year; **OR**
    - Annual surveillance if the aneurysm is less than 4.5 cm in size; **OR**
    - Surveillance every six months if the aneurysm is growing by more than 0.3 cm/year; **OR**
    - Surveillance every six months if the aneurysm is greater than 4.5 cm; **OR**
  - Turner Syndrome with **ANY** of the following[35]:
    - At baseline if the ascending aorta is not adequately imaged on TTE; **OR**

        - Six months after baseline imaging; **OR**
        - Surveillance every two years if the patient does not have a thoracic aortic aneurysm; **OR**
        - Annual surveillance if the thoracic aortic aneurysm has an indexed diameter (aortic size index - ASI) greater than 2 $cm/m^2$; **OR**
    - Loeys-Dietz syndrome with **ANY** of the following; **OR**[35]:
        - At baseline if the ascending aorta is not adequately imaged on TTE; **OR**
        - Six months after baseline imaging; **OR**
        - Annual surveillance if the aneurysm is less than 4.0 cm
        - Annual surveillance if the aneurysm is growing less than 0.3 cm growth/year; **OR**
        - Surveillance every 6 months if the aneurysm is greater than 4 cm; **OR**
        - Surveillance every 6 months if the aneurysm is growing by more than 0.3 cm/year; **OR**
    - Vascular Ehlers-Danlos syndrome (VEDS) with **ANY** of the following[35]:
        - At baseline if the ascending aorta is not adequately imaged on TTE; **OR**
        - At six months after baseline imaging; **OR**
        - Annual surveillance if the aneurysm is less than 5.0 cm; **OR**
        - Annual surveillance if the aneurysm is growing less than 0.5 cm growth/year; **OR**
        - Surveillance every 6 months if the aneurysm is greater than 5 cm; **OR**
        - Surveillance every 6 months if the aneurysm is growing by more than 0.5 cm/year; **OR**
    - Initial screening CT for a first-degree relative (parent, sibling, or child) of a patient with confirmed aortic disease attributable to a heritable or genetic cause; **OR**
    - Surveillance of known thoracic aortic dissection; **OR**
- Congenital thoracic anomalies, including **ANY** of the following:
    - Congenital pulmonary airway malformation (pediatric); **OR**
    - Chest wall deformities including but not limited to pectus excavatum (pediatric only); **OR**
    - Evaluation and management of diaphragmatic hernia; **OR**

    - Pulmonary sequestration; **OR**
- Repeat imaging (defined as a repeat request following recent imaging of the same anatomic region with the same or similar modality) will be considered reasonable and necessary if **ALL** of the following are **TRUE**:
    - There are no established guidelines; **AND**
    - **ANY** of the following:
        - There are new or worsening symptoms not addressed in the guidelines, such that repeat imaging would influence treatment; **OR**
        - There is need for a one-time clarifying follow-up of a prior indeterminate finding; **OR**
        - In the absence of change in symptoms, there is an established need for monitoring which would influence management.

### Non-Indications

**Computed tomography (CT), chest with contrast** is not considered appropriate if **ANY** of the following is **TRUE**[36]:

- The patient has undergone advanced imaging of the same body part and for the same indication within 3 months without undergoing treatment or developing new or worsening symptoms.[37]

*NOTE: The referring professional and radiologist should discuss the risks and benefits of contrast media administration, including possible prophylaxis, in patients with chronic or worsening kidney disease or severe renal failure.
**NOTE: CT in pregnant patients should be requested at the discretion of the ordering provider and obstetric care provider.
***NOTE: CT in patients with claustrophobia should be requested at the discretion of the ordering provider.

## Disclaimer on Radiation Exposure in Pediatric Populations

Due to the heightened sensitivity of pediatric patients to ionizing radiation, minimizing exposure is paramount. At Cohere, we are dedicated to ensuring that every patient, including the pediatric population, has access to appropriate imaging following accepted guidelines. Radiation risk is dependent mainly on the patient's age at exposure, the organs exposed, and the patient's sex, though there are other variables. The following technical guidelines are provided to ensure safe and effective imaging practices:

**Radiation Dose Optimization:** Adhere to the lowest effective dose principle for pediatric imaging. Ensure that imaging protocols are specifically tailored for pediatric patients to limit radiation exposure.[38,39]

**Alternative Modalities:** Prioritize non-ionizing imaging options such as ultrasound or MRI when clinically feasible, as they are less likely to expose the patient to ionizing radiation. For instance, MRI or ultrasound should be considered if they are more likely to provide an accurate diagnosis than CT, fluoroscopy, or radiography.[38,39]

**Cumulative Dose Monitoring:** Implement systems to track cumulative radiation exposure in pediatric patients, particularly for those requiring multiple imaging studies. Regularly reassess the necessity of repeat imaging based on clinical evaluation.[38,39]

**CT Imaging Considerations:** When CT is deemed the best method for achieving a correct diagnosis, use the lowest possible radiation dose that still yields reliable diagnostic images.[38,39]

**Cohere Imaging Gently Guideline**
The purpose of this guideline is to act as a potential override when clinically indicated to adhere to Imaging Gently and Imaging Wisely guidelines and As Low As Reasonably Possible (ALARA) principles.[38,39]

## Definitions

**Age-appropriate cancer screening** includes the below imaging. If the screenings are completed and there are concerning findings, a CT chest would be appropriate to order[31-33]:

- Breast Cancer: Ages 40-74, a screening mammography is performed biennially
- Colorectal Cancer: Ages 50-75, a screening colonoscopy is performed every 10 years
- Cervical Cancer:
  - Ages 21-29: screening with cervical cytology every 3 years
  - Ages 30-65: screening with cervical cytology every 3 years, screening with high-risk papillomavirus (hrHPV) testing alone every 5 years, or screening every 5 years with hrHPV testing in combination with cytology (cotesting).

## Tables

Table 1.

| **Fleischner Society 2017 Guidelines for Management of Incidentally Detected Pulmonary Nodules in Adults[1]** | | | | |
|---|---|---|---|---|
| **Solid Nodules*** | | | | |
| | **Size** | | | |
| **Nodule Type** | **<6mm (<100 $mm^3$)** | **6–8 mm (100–250 $mm^3$)** | **>8 mm (>250 $mm^3$)** | **Comments** |
| *Single* | | | | |
| Low Risk** | No routine follow-up | CT at 6–12 months, then consider CT at 18–24 months | Consider CT at 3 months, PET/CT, or tissue sampling | Nodules <6 mm do not require routine follow-up in low-risk patients (recommendation 1A). |
| High Risk** | Optional CT at 12 months | CT at 6–12 months, then CT at 18–24 months | Consider CT at 3 months, PET/CT, or tissue sampling | Certain patients at high-risk with suspicious nodule morphology, upper lobe location, or both may warrant a 12-month follow-up (recommendation 1A). |

| | | | | |
|---|---|---|---|---|
| *Multiple* | | | | |
| Low Risk** | No routine follow-up | CT at 3–6 months, then consider CT at 18–24 months | CT at 3–6 months, then consider CT at 18–24 months | Use most suspicious nodule as guide to management. Follow-up intervals may vary according to size and risk (recommendation 2A). |
| High Risk** | Optional CT at 12 months | CT at 3–6 months, then at 18–24 months | CT at 3–6 months, then at 18–24 months | Use most suspicious nodule as guide to management. Follow-up intervals may vary according to size and risk (recommendation 2A). |
| **Subsolid Nodules*** | | | | |
| | **Size** | | | |
| **Nodule Type** | **<6mm (<100 $mm^3$)** | **≥ 6 mm (>100 mm3)** | **Comments** | |
| *Single* | | | | |
| Ground Glass | No routine follow-up | CT at 6–12 months to confirm persistence, then CT every 2 years until 5 years | In certain suspicious nodules <6 mm, consider follow-up at 2 and 4 years. If solid component(s)or growth develops, consider resection. (Recommendations 3A and 4A). | |
| Part Solid | No routine follow-up | CT at 3–6 months to confirm persistence. If unchanged and solid component remain <6 mm, annual CT should be performed for 5 years. | In practice, part-solid nodules cannot be defined as such until ≥6 mm, and nodules <6 mm do not usually require follow-up. Persistent part-solid nodules with solid components 6mm should be considered highly suspicious (recommendations 4A-4C). | |
| *Multiple* | CT at 3–6 months. If stable, consider CT at 2 and 4 years | CT at 3–6 months. Subsequent management based on the most suspicious nodule(s) | Multiple <6 mm pure ground-glass nodules are usually benign, but consider follow-up in selected patients at high risk at 2 and 4 years(recommendation 5A). | |

Table 2.

| Lung-RADS® (2022)[3] | | | |
|---|---|---|---|
| **Lung-RADS** | **Category Descriptor** | **Findings** | **Management** |
| **0** | **Incomplete** Estimated Population Prevalence: ~1% | Prior chest CT examination being located for comparison (see note 9) | Comparison to prior chest CT |
| | | Part of all of the lungs cannot be evaluated | Additional lung cancer screening CT imaging needed |
| | | Findings suggestive of an inflammatory or infectious process (see note 10) | 1-3 month LDCT |
| **1** | **Negative** Estimated Population Prevalence: 39% | **No lung nodules;** OR | 12-month screening LDCT |
| | | **Nodule with benign features:**<br>• Complete, central, popcorn, or concentric ring calcifications; OR<br>• Fat-containing | |
| **2** | **Benign**<br><br>Based on imaging features or indolent behavior<br><br>Estimated Population Prevalence: 45% | **Juxtapleural Nodule**<br>• < 10 mm (524 $mm^3$) mean diameter at baseline or new; AND<br>• Solid; smooth margins; and oval, lentiform, or triangular shape | |
| | | **Solid Nodule**<br>• < 6 mm (< 113 $mm^3$) at baseline; OR<br>• New <4 mm (< 34 $mm^3$) | |
| | | **Part Solid Nodule**<br>• < 6 mm (< 113 $mm^3$) total mean diameter at baseline | |
| | | **Non-Solid Nodule (GGN)**<br>• <30 mm (< 14,137 $mm^3$) at baseline, new or growing; OR<br>• ≥30 mm (≥ 14,137 $mm^3$) stable or slowly growing (see note 7) | |
| | | **Airway nodule,** subsegmental - at baseline, new, or stable (see note 11) | |
| | | • Category 3 lesion that is stable or decreased in size at 6-month follow-up CT; OR<br>• Category 4B lesion proven to be benign in etiology following appropriate diagnostic workup | |
| **3** | **Probably** | **Solid Nodule** | 6-month LDCT |

| | | | |
|---|---|---|---|
| | **Benign**<br><br>Based on imaging features or behavior<br><br>Estimated Population Prevalence: 9% | • ≥ 6 mm to < 8 mm (≥ 113 to < 268 $mm^3$) at baseline; OR<br>• New 4 mm to <6 mm (34 to < 113 $mm^3$) | |
| | | **Part Solid Nodule**<br>• ≥ 6 mm (≥ 113 $mm^3$) total mean diameter with solid component < 6 mm (< 113 $mm^3$) at baseline<br>• New < 6 mm (< 113 $mm^3$) total mean diameter | |
| | | **Non-Solid Nodule (GGN)**<br>• ≥ 30 mm (≥ 14,137 $mm^3$) at baseline or new | |
| | | **Atypical Pulmonary Cyst** (see note 12)<br>• Growing cystic component (mean diameter) of a thick-walled cyst | |
| | | Category 4A lesion that is stable or decreased in size at 3-month follow-up CT (excluding airway nodules) | |
| **4A** | **Suspicious**<br>Estimated Population Prevalence: 4% | **Solid Nodule**<br>• ≥ 8 mm to < 15 mm (≥ 268 to < 1767 $mm^3$) at baseline; OR<br>• Growing < 8 mm (< 268 $mm^3$)<br>• New 6 to < 8 mm (113 to < 268 $mm^3$) | 3-month LDCT;<br><br>PET/CT may be considered if there is a ≥ 8 mm (≥ 268 $mm^3$) solid nodule or solid component |
| | | **Part Solid Nodule**<br>• ≥ 6 mm (≥ 113 $mm^3$) total mean diameter with solid component ≥ 6 mm to < 8 mm (≥ 113 to < 268 $mm^3$) at baseline; OR<br>• New or growing <4 mm (< 34 $mm^3$) solid component | |
| | | **Airway Nodule,** segmental or more proximal - at baseline (see note 11) | |
| | | **Atypical Pulmonary Cyst** (see note 12)<br>• Thick-walled cyst; OR<br>• Multilocular cyst at baseline; OR<br>• Thin- or thick-walled cyst that becomes multilocular | |
| **4B** | **Very Suspicious**<br>Estimated Population | **Airway Nodule,** segmental or more proximal - stable or growing (see note 11) | Referral for further clinical evaluation |
| | | **Solid Nodule**<br>• ≥ 15 mm (≥ 1767 $mm^3$) at baseline; OR<br>• New or growing ≥ 8 mm (≥ 268 $mm^3$) | Diagnostic chest CT with or without contrast;<br><br>PET/CT may be considered if there is a ≥ 8 mm (≥ 268 $mm^3$) solid nodules or solid component; |
| | | **Part Solid Nodule**<br>• Solid component ≥ 8 mm (≥ 268 $mm^3$) at baseline; OR<br>• New or growing ≥ 4 mm (≥ 34 $mm^3$) solid component | |
| | | **Atypical Pulmonary Cyst** (see note 12)<br>• Thick-walled cyst with growing wall | |

| | | | |
|---|---|---|---|
| | Prevalence: 2% | thickness/nodularity; OR<br>• Growing multilocular cyst (mean diameter); OR<br>• Multilocular cyst with increased loculation or new/increased opacity (nodular, ground glass, or consolidation) | Tissue sampling;<br><br>and/or referral for further clinical evaluation;<br><br>Management depends on clinical evaluation, patient preference, and the probability of malignancy (see note 13) |
| | | **Slow-growing solid or part-solid nodule** that demonstrates growth over multiple screening exams (see note 8) | |
| **4X** | Estimated Population Prevalence: <1% | Category 3 or 4 nodules with additional features or imaging findings that increase suspicion for lung cancer (see note 14) | |
| **S** | **Significant or Potentially Significant**<br><br>Estimated Population Prevalence: 10% | Modifier: May add to category 0-4 for clinically significant or potentially clinically significant findings unrelated to lung cancer (see note 15) | As appropriate to the specific finding |

## Level of Care Criteria

Inpatient or Outpatient

## Procedure Codes (CPT/HCPCS)

| CPT/HCPCS Code | Code Description |
|---|---|
| 71250 | Computed tomography (CT), thorax; without contrast material |
| 71260 | Computed tomography (CT), thorax; with contrast material(s) |
| 71270 | Computed tomography (CT), thorax; without contrast material, followed by contrast material(s) and further sections |
| 76380 | Computed tomography, limited or localized follow-up study |

# Medical Evidence

Hassankhani et al. (2023) conducted a systematic review and meta-analysis of the diagnostic utility of multidetector computed tomography (MDCT) scans in penetrating diaphragmatic injuries. The study investigates the diagnostic efficacy of MDCT in detecting diaphragmatic injuries caused by penetrating trauma, with a focus on the potential risks of missed injuries and complications in cases managed nonoperatively despite the recognized value of CT scans for stable patients. The progression of CT technology, notably with the emergence of MDCT, has significantly improved the capacity to identify and assess diaphragmatic injuries caused by penetrating trauma. Although CT has solidified its role in evaluating blunt abdominal trauma patients who are hemodynamically stable, becoming the preferred imaging method in this regard, utilization in cases of penetrating thoracoabdominal trauma remains an ongoing subject of investigation. The study underscores the efficacy of MDCT in identifying diaphragmatic injury resulting from penetrating trauma with moderate to high diagnostic accuracy.[40]

Cramer et al. (2021) provide a secondary analysis of a randomized controlled trial (RCT) on the incidence of second primary lung cancer after low-dose CT versus chest X-ray screening in head and neck cancer survivors. A total of 53,452 participants were enrolled in the study; 171 survivors of head and neck cancer were identified (82 had screening via low-dose CT of the chest and 89 via chest X-ray. The average age of participants was 61 years, with 132 being male (77%). The incidence of lung cancer was notably higher among head and neck cancer survivors compared to those without. In head and neck cancer survivors, the incidence of second primary lung cancer was 2610 cases per 100,000 person-years in the low-dose CT group versus 1594 cases per 100,000 person-years in the chest X-ray group. Overall survival in head and neck cancer survivors was 7.07 years with low-dose CT compared to 6.66 years with chest X-ray. The secondary analysis of the RCT indicates that head and neck cancer survivors face a heightened risk of developing second primary lung cancer. Low-dose CT screening is essential for such survivors, particularly individuals with a significant history of cigarette smoking who are deemed suitable for curative treatment.[41]

Oldroyd et al. (2021) performed a systematic review and meta-analysis to determine the clinical factors linked with cancer susceptibility in idiopathic

inflammatory myopathies (IIMs) and conducted a comprehensive review of the available evidence concerning cancer screening within this context. The meta-analysis assessed the cancer risk linked with numerous clinical risk factors and myositis-specific autoantibodies (MSAs), providing insights for cancer screening strategies among IIM patients. The authors note that findings can collectively contribute to refining cancer screening guidelines, potentially facilitating earlier cancer detection and enhancing patient outcomes.[42]

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# Policy Revision History/Information

| Original Date: April 15, 2022 | | |
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| **Review History** | | |
| Version 2 | 08/20/2024 | Annual review and policy restructure. |
| Version 3 | 10/30/2024 | Edited repeat imaging criteria language. |
| Version 4 | 08/21/2025 | Annual Review.<br><br>Age-appropriate cancer screenings have been defined in the Definitions section.<br><br>The Tables section has been moved to after the Definitions.<br><br>Certain indications were updated for clarity, such as for pulmonary nodules and thoracic mass lesions.<br><br>Staging, management, or surveillance of known primary malignancy indication has been rewritten to exclude “invasive breast cancer without pulmonary symptoms; or for asymptomatic very-low-, low-, and intermediate-risk prostate cancer with a life expectancy of 5 years or less.”<br><br>The occupational lung disease indication has been updated to include silicosis, asbestosis and coal workers’ pneumoconiosis. |