Lung Cancer Screening Using CT Scanning or Chest Radiographs

**Description:**
There has been longstanding research interest in developing screening techniques for those at high risk for lung cancer. Previous studies of sputum samples or chest x-rays (CXR) have failed to demonstrate that screening improved health outcomes. There has been interest in computed tomography (CT) scanning as a screening technique, using either spiral (also referred to as helical) or electron beam (also referred to as ultrafast) CT scanning. Compared to conventional CT scans, these scans allow for the continuous acquisition of images, thus shortening the scan time and radiation exposure. A complete CT scan can be obtained within 20 seconds, or during one breath hold, in the majority of patients. The radiation exposure for this examination is greater than for that of a CXR, but less than for a conventional CT scan.

There are also growing applications of computer-assisted detection or diagnosis (CAD) technologies that may have an impact on the use of CT scanning or chest radiographs for lung cancer screening. Computer-assisted detection points out possible findings to the radiologist who then decides if the finding is abnormal. Computer-assisted diagnosis uses a computer algorithm to analyze features of a lesion to determine the level of suspicion and is intended to enhance the reader’s diagnostic performance. Both of these technologies may be expected to offer more benefit when used by relatively inexperienced readers and may help to standardize diagnostic performance.

Several studies have established that spiral CT is more sensitive for the detection of lung cancer as compared to CXR screening. In addition, the use of CAD software may assist in lung cancer CT screening. However, there is insufficient evidence to determine whether CAD technology may improve the accuracy of CT scanning interpretation.

**Medical Criteria:**
Not applicable.

**Policy:**
CT scanning, using either spiral (helical) or electron beam (ultrafast) CT, with or without computer-assisted detection or diagnosis, is considered not medically necessary as a screening technique for lung cancer as there is insufficient peer-reviewed scientific literature to demonstrate its effectiveness.

Chest radiographs, with or without computer-assisted detection or diagnosis, is considered not medically necessary as a screening technique for lung cancer as there is insufficient peer-reviewed scientific literature to demonstrate its effectiveness.

**Coverage:**
Benefits may vary between groups/contracts. Please refer to the appropriate evidence of coverage, subscriber agreements, or BlueCHiP for Rite Care contract for applicable "Not Medically Necessary Services."

**Coding:**
There is no specific CPT code for spiral or electron beam CT scanning, therefore providers should file using the unlisted code below:

76497

The following codes are not medically necessary:

0174T
0175T

**Publications:**
- Provider Update, December 2009
- Provider Update, December 2010

**Reference:**


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