

Corporate Medical Policy

Lung Cancer Screening, CT Scanning or Chest Radiographs

File Name: lung_cancer_screening_ct_scanning_or_chest_radiographs
Origination: 10/2001
Last CAP Review: 6/2011
Next CAP Review: 6/2012
Last Review: 6/2011

Description of Procedure or Service

There is interest in screening and early identification of lung cancer because the disease, when identified clinically, tends to have a poor prognosis. Two proposed screening methods are chest radiographs and low-dose computed tomography (CT) scans. Either of these can be used with or without computer-assisted detection (CAD). Due to biases inherent in screening studies, randomized trials evaluating reduction in lung cancer morbidity and mortality are required to demonstrate the efficacy of screening.

Given the poor prognosis of lung cancer, there has been longstanding research interest in developing screening techniques for those at high risk. Previous studies of serial sputum samples or chest x-rays failed to demonstrate that screening improved health outcomes. More recently, there has been interest in low-dose 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 chest x-ray, 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.

In March 2001, the U.S. Food and Drug Administration (FDA) approved the RapidScreen RS-2000 system as a computer-aided detection (CAD) system intended to identify and mark regions of interest on digitized chest radiographs. In February 2004, the FDA approved the R2 Technology ImageChecker CT system as a technique to assist in the detection of lung nodules on multidetector CT scans of the chest. The R2 Technology ImageChecker also received FDA clearance for the Temporal Comparison software module in June 2004 and for the CT-LN 1000 in July 2004. The Temporal Comparison software module provides the ability to automatically track lung nodule progression or regression over time. The ImageChecker CT-LN 1000 is used for the detection of solid nodules in the lungs. Other systems that have been developed include iCAD's Second Look CT lung and Siemens' syngo LungCARE CT.

*****Note: This Medical Policy is complex and technical. For questions concerning the technical language and/or specific clinical indications for its use, please consult your physician.**

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Policy

CT Scanning is considered investigational as a screening technique for lung cancer. BCBSNC does not provide coverage for investigational services or procedures.

Chest radiographs are considered investigational as a screening technique for lung cancer. BCBSNC does not provide coverage for investigational services or procedures.

Benefits Application

This medical policy relates only to the services or supplies described herein. Please refer to the Member's Benefit Booklet for availability of benefits. Member's benefits may vary according to benefit design; therefore member benefit language should be reviewed before applying the terms of this medical policy.

When screening for lung cancer using CT scanning or chest radiographs is covered

Not applicable.

When screening for lung cancer using CT scanning or chest radiographs is not covered

CT scanning, using either spiral (helical) or electron beam (ultrafast CT, with or without computer-assisted detection or diagnosis, is considered investigational as a screening technique for lung cancer.

Chest radiographs, with or without computer-assisted detection or diagnosis, are considered investigational as a screening technique for lung cancer.

Policy Guidelines

While the data seems to suggest that CT scans are more sensitive than chest x-rays for the detection of lung cancer, the impact of CT scanning on mortality is unknown. There is insufficient evidence in the peer-reviewed medical literature to demonstrate a definitive association between early detection of lung cancer by CT scanning and improvement in life expectancy. Some researchers have expressed concern regarding the nonspecificity of CT scanning, the high number of false positive results and over diagnosis.

The use of CT scans to screen for lung cancer is not endorsed by the American Cancer Society, the American College of Chest Physicians (ACCP), the National Institutes of Health, or the American Society of Clinical Oncology. The 2003 ACCP guidelines on screening for lung cancer specifically recommend against spiral CT scan lung cancer screening. The ACCP notes that there is a lack of evidence to demonstrate improvements in mortality rates and cautions that there is potential for greater harm than benefit due to false positive results and potentially unnecessary treatments. In May 2004, the U.S. Preventive Services Task Force (USPSTF) concluded that there was insufficient evidence to recommend for or against screening asymptomatic persons for lung cancer with either low dose computerized tomography, chest x-ray, sputum cytology, or a combination of these tests due to poor evidence that screening would reduce lung cancer mortality rates. A 2009 review of American Cancer Society guidelines states that neither the ACS nor any other medical or scientific organization recommends screening for early lung cancer with CT scans or chest radiographs in asymptomatic individuals.

The 2010 National Comprehensive Cancer Network (NCCN) non-small cell lung cancer guideline specifically recommends against the routine use of CT scans to screen for lung cancer. The guideline does not mention screening with chest radiographs.

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Billing/Coding/Physician Documentation Information

This policy may apply to the following codes. Inclusion of a code in this section does not guarantee that it will be reimbursed. For further information on reimbursement guidelines, please see Administrative Policies on the Blue Cross Blue Shield of North Carolina web site at www.bcbsnc.com. They are listed in the Category Search on the Medical Policy search page.

Applicable codes: 0174T, 0175T

There is no specific CPT code for spiral or electron beam CT scanning. CPT code 71250 may be used.

CPT codes 0174T and 0175T refer to chest radiographs.

BCBSNC may request medical records for determination of medical necessity. When medical records are requested, letters of support and/or explanation are often useful, but are not sufficient documentation unless all specific information needed to make a medical necessity determination is included.

Scientific Background and Reference Sources

BCBSA Medical Policy Reference Manual, 5/31/01; 6.01.30

Specialty Matched Consultant Advisory Panel - 8/2002

ECRI Target Report #477. (May 2002). Helical computed tomography (CT) systems for lung cancer screening. Retrieved on May 7, 2004 from http://www.target.ecri.org/summary/detail.aspx?doc_id=466&q=lung+cancer+screening+ct&anm.

ECRI Health Technology Assessment Information Service. (April 2002). Helical CT for detection of lung cancer. Retrieved on May 7, 2004 from http://www.ta.ecri.org/Med_Tech/Prod/summary/detail.aspx?doc_id=6896&q=lung+cancer+screening+ct&anm.

BCBS Medical Policy Reference Manual [Electronic Version]. 6.01.30, 12/18/02.

Banerjee, S. (June 2003). Multi-slice/helical computed tomography for lung cancer screening. *Issues Emerg Health Technol*, (48) 1-4. Retrieved on May 7, 2004 from http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=12812212.

Truong MT, Munden RF. (July 2003). Lung cancer screening. *Curr Oncol Rep*, 5(4), 309-12. Retrieved on May 7, 2004 from http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=12781073.

Specialty Matched Consultant Advisory Panel - 7/2004

ECRI Target Report #477 (2004, July) Helical computed tomography (CT) for lung cancer screening. Retrieved January 12, 2006 from http://www.target.ecri.org/summary/detail.aspx?doc_id=466

For Policy renamed: Lung Cancer Screening, CT Scanning or Chest Radiographs

BCBSA Medical Policy Reference Manual [Electronic Version]. 6.01.30, 12/14/05.

BCBSA Medical Policy Reference Manual [Electronic Version]. 6.01.30, 12/12/06

California Technology Assessment Forum (February 2007). Low dose spiral computerized tomography (LDCT) screening for lung cancer. Retrieved 2/22/08 from <http://www.ctaf.org/content/general/detail/687>

BCBSA Medical Policy Reference Manual [Electronic Version]. 6.01.30, 3/13/08

Smith FA, Cokkinides V, Brawley OW. Cancer screening in the United States, 2009: A review of current American Cancer Society guidelines and issues in cancer screening. *CA Cancer J Clin* 2009;59:27-41

BCBSA Medical Policy Reference Manual [Electronic Version]. 6.01.30, 10/06/09

Lung Cancer Screening, CT Scanning or Chest Radiographs

National Comprehensive Cancer Network. Non-small cell lung cancer. Clinical practice guidelines in oncology, v2.2010. Available online at: http://www.nccn.org/professionals/physician_gls/PDF/nscl.pdf.

BCBSA Medical Policy Reference Manual [Electronic Version]. 6.01.30, 10/08/10

Policy Implementation/Update Information

10/01	Original policy issued.
9/02	Specialty Matched Consultant Advisory Panel meeting 8/2002. No changes.
4/04	Benefits Application and Billing/Coding sections updated for consistency.
8/12/04	Specialty Matched Consultant Advisory Panel review 7/23/2004 with no changes to policy criteria. References added.
6/5/06	Policy renamed "Lung Cancer Screening, CT Scanning or Chest Radiographs." Added rationale to Policy Guidelines section. Added policy number to Key Words. References and CPT code updated. Specialty Matched Consultant Advisory Panel review 5/3/2006 with no changes to policy coverage criteria.
1/28/07	CPT Codes updated. Deleted code 0152T from the Billing/Coding section and added codes 0174T and 0175T. (adn)
6/16/08	Specialty Matched Consultant Advisory Panel review 5/15/08. No change to policy statement. (adn)
6/22/10	Policy Number(s) removed (amw)
9/28/10	Description section revised. Investigational statements reworded, but intent is unchanged. Policy Guidelines updated. Specialty Matched Consultant Advisory Panel review 8/25/10. Draft policy accepted as written. (adn)
7/19/11	Routine scheduled review. Updated Policy Guidelines and References. Specialty Matched Consultant Advisory Panel review 6/29/11. Policy accepted as written. (adn)

Medical policy is not an authorization, certification, explanation of benefits or a contract. Benefits and eligibility are determined before medical guidelines and payment guidelines are applied. Benefits are determined by the group contract and subscriber certificate that is in effect at the time services are rendered. This document is solely provided for informational purposes only and is based on research of current medical literature and review of common medical practices in the treatment and diagnosis of disease. Medical practices and knowledge are constantly changing and BCBSNC reserves the right to review and revise its medical policies periodically.