



Subject: Lung Cancer Screening by Low dose Computerized Tomography(LDCT)

Effective Date: October 28, 2003

Department: Utilization Management

Policy: Screening Chest CT, also known as low-dose CT scanning, as a screening test for lung cancer, is reimbursable under Plans administered by QualCare, Inc.

Objective: To assure proper and consistent reimbursement and to limit application of LDCT lung cancer screening to the population in which efficacy is supported by peer-reviewed literature.

Procedure: Annual LDCT for lung cancer screening [**CPT 71250; HCPCS G0297**] is reimbursable for members who meet the following criteria:

A. Age 55 to 80 years.
and

B. Current or former smoker (must have quit within the last 15 years) with a ≥ 30 pack -year history of smoking.[**ICD-9 codes V15.82, V76.0. ICD-10 codes Z12.2, Z72.0**] and

Are asymptomatic (no cough, weight loss).

OR

C. Age ≥ 50 yrs with ≥ 20 pack-year history of smoking and one additional risk factor:

- Documented sustained and substantially elevated residential radon exposure
- Occupational lung-targeting carcinogens- asbestos, arsenic, beryllium, cadmium, chromium, coal smoke, diesel fumes, nickel, silica and soot.
- Personal history of lung cancer, lymphoma, head and neck cancer or other smoking related cancer.
- Family history of lung cancer in a first-degree relative
- Personal history of lung disease- COPD or pulmonary fibrosis.

And is asymptomatic (no cough, weight loss).

NOTE: second –hand smoke exposure is not independently considered a risk factor for lung cancer screening.

D. LDCT for lung cancer screening for individuals not meeting the above criteria is considered investigational due lack of documented efficacy in the peer reviewed medical literature

Note: If there is a symptom or physical finding referable to the respiratory system, such as cough or shortness-of-breath, an environmental exposure (including but not limited to asbestos) or if there is an abnormality on a plain chest x-ray, a requested chest CT scan will not be considered a screening study and this policy will not apply.

References

National Comprehensive Cancer Network(NCCN) Guidelines Version 3.2018 Lung Cancer Screening, accessed at NCCN.org

PDQ Screening and Prevention Editorial Board. Lung Cancer Screening (PDQ®): Health Professional Version. 2018 Feb 2. In: PDQ Cancer Information Summaries [Internet]. Bethesda (MD): National Cancer Institute (US); 2002-. Published online February 2, 2108 Available from:<https://www.ncbi.nlm.nih.gov/books/NBK65827/>

Chu GCW, Lazare K, Sullivan F. Serum and blood based biomarkers for lung cancer screening: a systematic review. *BMC Cancer*. 2018;18(1):181-186(Feb)

Gierada DS, Pinsky PF, Duan F, Garg , et al. Interval lung cancer after a negative CT screening examination: CT findings and outcomes in National Lung Screening Trial participants. *Eur Radiol*. 2017;27(8):3249-3256(Aug)

National Comprehensive Cancer Network(NCCN) Guidelines Version 2.2016 Lung Cancer Screening, accessed at NCCN.org

Field JK, Duffy SW, Baldwin DR, Whynes DK, et al. UK Lung Cancer RCT Pilot Screening Trial: baseline findings from the screening arm provide evidence for the potential implementation of lung cancer screening. *Thorax*. 2015 Dec 8. pii: thoraxjnl-2015-207140

Wille MM, Dirksen A, Ashraf H, Saghir Z, et al. Results of the Randomized Danish Lung Cancer Screening Trial with Focus on High-risk Profiling. *Am J Respir Crit Care Med*. 2015 Oct 20. [Epub ahead of print]

McKee BJ, Hashim JA, French RJ, McKee AB, et al. Experience with a CT screening program for individuals at high risk for developing lung cancer. *J Am Coll Radiol*. 2015;12(2):192-7(Feb)

Tammemägi MC, Church TR, Hocking WG, Silvestri GA, et al. Evaluation of the lung cancer risks at which to screen ever- and never-smokers: screening rules applied to the PLCO and NLST cohorts. *PLoS Med*. 2014;11(12):e1001764(Dec)

National Comprehensive Cancer Network(NCCN) Guidelines Version 1.2014 Lung Cancer Screening, accessed online 01/14/14 at NCCN.org

U.S. Preventive Services Task Force Recommendation Statement-Screening for Lung Cancer, accessed online 01/14/14 at uspreventiveservicestaskforce.org[initially published in *Annals of Internal Medicine* on 12/31/13]

Hayes Inc. Hayes Medical Technology Assessment-Low Dose helical (Spiral) Computed Tomography for Lung Cancer Screening. Updated 04/04/2013. Accessed at www.hayesinc.com

Bach PB, Mirkin JN, Oliver TK, Azzoli CG, Berry DA, Brawley OW, et al. Benefits and harms of CT screening for lung cancer: a systematic review. *JAMA*. 2012;307(22):2418-29

Pastorino U, Rossi M, Rosato V, Marchianò A, Sverzellati N, Morosi C, et al. Annual or biennial CT screening versus observation in heavy smokers: 5-year results of the MILD trial. *Eur J Cancer Prev*. 2012;21(3):308-15.

Saghir Z, Dirksen A, Ashraf H, Bach KS, Brodersen J, Clementsen PF, et al. CT screening for lung cancer brings forward early disease. The randomised Danish Lung Cancer Screening Trial: status after five annual screening rounds with low-dose CT. *Thorax*. 2012;67(4):296-301.

National Lung Screening Trial Research Team, Aberle DR, Adams AM, Berg CD, Black WC, et al. Reduced lung-cancer mortality with low dose computed tomographic screening. *N Eng J Med*. 2011; 365(5):395-409(Aug)

Sox HC. Better evidence about screening for lung cancer. *N Eng J Med*. 2011;365(5): 455-457(Aug)

Pastorino U. Lung cancer screening. *Br J Cancer*. 2010;102(12):1681-1686(Jun)

Stanbrook MB, Flegel K. A pause for thought on lung cancer screening. *CMAJ* 2009;180(8):793 (Apr 14)

Hayes, Inc. Hayes News Service. *Risk and Benefits of CT Scanning to Screen for Early Lung Cancer*. Lansdale, PA: Hayes, Inc.; November 20, 2008

Reich JM. A critical appraisal of overdiagnosis: Estimates of its magnitude and implications for lung cancer screening. *Thorax* 2008;63(4):377-383 (Apr)

Infantre M, Lutman FR, Cavuto S, et al. Lung cancer screening with spiral CT : Baseline results of the randomized DANTE trial. *Lung Cancer* 2008;59(3):355-363 (Mar)

Aberle DR, Brown K. Lung Cancer Screening with CT. *Clin Chest Med* 2008;29(1):1-14 (Mar)

Johnson DH, Blot WJ, Carbone DP. Cancer of the Lung: Non-Small Cell Lung Cancer and Small Cell Lung Cancer. Ch 76 in Abeloff MD, Armitage JO, Niederhuber JE, et al, eds. *Abeloff's Clinical Oncology* 4th ed. Philadelphia. Churchill Livingstone Elsevier. 2008

Bach PB, Silvestri GA, Hanger M, et al. Screening for lung cancer: ACCP evidence-based clinical practice guidelines (2nd edition). *Chest* 2007;132(3 Suppl):69S-77S) (Sep)

CONFIDENTIAL – NOT FOR DISTRIBUTION OUTSIDE OF QUALCARE

American Lung Association. Statement of Dr. Norman H. Edelman, Chief Medical Officer, American Lung Association on Lung Cancer CT Scan. March 7, 2007. Available at: www.lungusa.org/press-room/press-releases/lung-cancer-ct-scan-statement.html. Accessed 11/01/09

Black C, deVerteuil R, Walker S, *et al.* Population screening for lung cancer using computed tomography, is there evidence of clinical effectiveness? A systematic review of the literature. *Thorax* 2007;62(2):131-138 (Feb)

Ginsberg MS, Grewal RK, Heelan RT. Lung Cancer. *Radiol Clin N Amer* 2007;45(1):21-43 (Jan)

Gates TJ, Beelen MJ, Hershey CL. Cancer Screening in Men. *Prim Care Clin Office Pract* 2006;33(1):115-138 (Mar)

Bellomi M, Rampinelli C, Funicelli L, *et al.* Screening for lung cancer. *Cancer Imaging* 2006;6: S9-S12 (Jan)

Wahl RL, Pannu H. Imaging. Ch 18 in Abeloff MD, Armitage JO, Niederhuber JE, *et al.* eds. *Clinical Oncology*. Philadelphia. Elsevier Churchill Livingstone. 2004.

Hayes, Inc. Hayes Medical Technology Directory. *Helical Computed Tomography for Lung Cancer Screening*. Lansdale, PA: Hayes, Inc. May 7, 2003

Henschke CI, Yankelevitz DF, McCauley DI *et al.* Guidelines for the use of spiral computed tomography for lung cancer. *Eur Respir J Suppl*2003;39:45S-51S (Jan)

Bach PB, Kelley MJ, Tate RC *et al.* Screening for Lung Cancer. A Review of the Current Literature. *Chest* 2003;123(1):72S-82S (Jan)

Bach PB, Niewoehner DE, Black WC. Screening for Lung Cancer. The Guidelines. *Chest* 2003;123(1):83S-88S (Jan)

Pelletier AL, Potter AP. Case Report: Self-Referred Screening CT Scans in an Unselected Population. (Letter) *AFP* 2002;66(7):1156, 1286 (Oct 1)

Reich JM. Improved Survival and Higher Mortality. The Conundrum of Lung Cancer Screening. *Chest* 2002;122(1):329-337 (Jul)

Marcus P. Lung Cancer Screening, Once Again. *Chest* 2002;122(1):3-4 (Jul)

Chirikos TN, Hazelton T, Tockman M, *et al.* Screening for Lung Cancer with CT. A preliminary Cost-effectiveness Analysis. *Chest* 2002;121(5):1507-1514 (May)

Henschke CI, Yankelevitz DF, Libby D *et al.* Computed Tomography Screening for Lung Cancer. *Clin Chest Med* 2002;23(1):49-57 (Mar)

Kramer BS. Spiral computed tomography screening. Study begins to determine its efficacy in lung cancer screening. *West J Med* 2001;174(4):230-231 (April)

Reich JM. Hazards of Lung Cancer Screening. Three Vignettes and a Critique. *Chest* 2001;119(2):659-660 (Feb)

Sone S, Takashima S, Li F *et al.* Mass screening for lung cancer with mobile spiral computed tomography scanner. *Lancet* 1998;351:1242-1245 (Apr 25)

Drafted By/Date: BFisher, MD 07/14/03
Approved By/Date: QM Committee 10/28/03
Revised By/Date: BFisher, MD 11/20/07
Approved By/Date: QM Committee 12/11/07
Revised By/Date: BFisher, MD 11/01/09
Approved By/Date: QM Committee 12/08/09
Reviewed w/o Revision By/Date: MMcNeil, MD 11/28/11
Approved By/Date: QC Committee 12/13/11
Revised By/Date: MMcNeil, MD, 05/01/14
Approved By/Date: QM Committee 5/13/14
Revised By/Date: M. McNeil, MD 08/09/16
Approved By/Date: QM Committee 08/23/16
Reviewed w/o Revision By/Date: M McNeil, MD 05/08/18
Approved By/Date: QM Committee 06/19/18

*Consistent with Summary Plan Description (SPD). When there is discordance between this policy and the SPD, the provisions of the SPD prevail.