

NEVADA LUNG CANCER SCREENING TOOLKIT



A MESSAGE FROM OUR CO-CHAIR

Are you ordering low-dose CT (LDCT) to screen your patients for lung cancer? I am writing to you because we are trying to save lives from lung cancer in Nevada and we need your help to do this!

Every year, lung cancer kills more people than breast cancer, prostate cancer, and colon cancer combined. Screening high-risk patients for lung cancer with annual LDCT can reduce lung cancer mortality by up to 20% by finding cancers at earlier stages when they are more likely to be cured.

Lung cancer is very deadly because it is often found too late: only 10% of patients have a 5-year survival rate when diagnosed at a later stage. However, when diagnosed at an early stage, lung cancer is more responsive to treatments and patients have significantly improved prognoses with 5-year survival rates of up to 90%. Lung cancer screening improves survival through earlier detection.

LDCT has had such a significant impact in reducing lung cancer deaths that in March 2021 the USPSTF expanded its recommendations so that more high-risk patients were eligible for this important screening tool.

Now, people ages 50-80 with a 20 or more pack-year smoking history (who currently smoke or have quit smoking in the past 15 years) are eligible for LDCT to be covered by their insurance company without a co-pay.

According to the 2022 Behavioral Risk Factor Surveillance System, Nevada is among the states with the lowest lung cancer screening rates with only 7.4% of high-risk people getting lung cancer screening. This is significantly below the national median of 9.9%. We need your help to fix this!

To help save lives from lung cancer, we encourage you to implement an LDCT lung cancer screening policy for your patients. In this provider packet, we have included HCPCS and ICD-10 codes that work with insurance company billing to help avoid denials and ensure coverage for your patients. Also included is a one-page billing summary to help navigate the nuances of private, Medicare, and Medicaid billing options. We also provided information to include when making a referral for LDCT to ensure that the shared decision-making requirement is met.

We encourage you to reach out to your partners at the Nevada Cancer Coalition for help in creating or growing an LDCT program in your practice. Please contact us if you encounter any issues with your program; we are here to help. Email us at info@nevadacancercoalition.org.

Thank you for your time and consideration. With your help we will save lives from lung cancer in Nevada!

Sincerely,
Chivonne Harrigal, M.D.
Co-chair, Nevada Cancer Coalition Lung Cancer Collaborative

INTRODUCTION

This toolkit is designed to assist health systems in building, maintaining, and increasing patient uptake of a lung cancer screening program using low dose computed tomography (LDCT) as recommended by the United States Preventive Services Task Force (USPSTF).

The contents of the toolkit were developed and sourced by Nevada Cancer Coalition, Chivonne Harrigal, M.D., and Diane Klassen.

Special thanks to the members of the Nevada Cancer Coalition Lung Cancer Collaborative who contributed to this toolkit's development:

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Toolkit Development

Content contained in this toolkit is the culmination of published and publicly available information on lung cancer screening programs. Additionally, experiences from real-world lung cancer screening implementation experts and researchers have been incorporated where possible. Attachments include promotional brochures, clinic resources, billing resources, and sample follow-up letters.

Audience

A LDCT lung screening program is a comprehensive effort necessitating the collaboration of the full medical team. This toolkit was designed for a variety of health care professionals including, but not limited to:

- Practice planners and administrators in primary care and community health settings.
- Practice planners and administrators at radiology and imaging centers.
- Medical billing specialists.
- Physicians, non-physician providers, and auxiliary personnel.
- Lung cancer screening champions.

THE CASE FOR SCREENING

OBJECTIVE: Understand the need, evidence, requirements, processes, risks, benefits, cost, and outcomes of lung cancer screening to consider the need for a LDCT screening program in your healthcare system or clinic.

Lung Cancer Overview

Lung cancer is the leading cause of cancer death for all genders in the United States and in Nevada, killing more people than breast, colon, and prostate cancers combined. There are two main types of lung cancer, small cell (SCLC), and non-small cell (NSCLC).

The lifetime risk of developing lung cancer is approximately 6.2% among men and 5.8% among women, or 1 in 16 men and 1 in 17 women during their lifetime. However, these probabilities are based on lung cancer occurrence in the general population; the risk is substantially higher for those who have a history of smoking. The risk of lung cancer also increases with age, partly because the disease grows for many decades before symptoms develop. More than half (53%) of lung cancer cases are diagnosed in those age 70 or older, and 83% of cases are diagnosed in those ages 65 and older. Lung Cancer incidence among Black men peaks about five years earlier than among white men for both NSCLC and SCLC. The risk of lung cancer is also greater in persons who have lower socioeconomic status (SES).¹ These differences between sex, SES, and race may be tied to onset and severity of smoking behaviors within these communities.

Before guidelines were established for routine for lung cancer screening via LDCT, lung cancer was usually diagnosed at later stages. Five-year survival of advanced lung cancer is less than 10%, with five-year survival of early-stage lung cancer exceeding 55%. However, currently only 17% of patients are diagnosed with early-stage disease. Early detection via screening is critical to reducing lung cancer specific mortality and increasing the percentage of lung cancers diagnosed in early stages. Lung cancer screening with LDCT is the only recommended test that finds lung cancer at an early stage when curative treatment options exist.

¹ American Cancer Society, Cancer Facts and Figures 2023. Special Section: Lung Cancer. [Cancer Facts & Figures 2023](#)

Evidence for Lung Cancer Screening

Lung cancer specific mortality reduction: The [Final Evidence Review](#) published by the USPSTF reported more early stage lung cancers (stage I-II) were found across LDCT screening groups than in control groups. The full report concludes screening high-risk persons with LDCT can reduce lung cancer mortality and may reduce all-cause mortality.² High rates of stage I lung cancer have also been reported outside of clinical trial settings; community healthcare systems and clinics have also reported increased stage I diagnosis rates.

Initial low uptake of lung cancer screening: As a new cancer screening modality, initial uptake of lung cancer screening has been low.³ In Nevada, the rate of those eligible individuals who did have an LDCT chest scan in the last year increased in 2022 to 7.4%.⁴ While low uptake can be linked to barriers at the patient, provider, and system level, there is a general lack of awareness about lung cancer screening in the medical and lay communities.⁵ Continued education about screening is vital so that LDCT screening for lung cancer will become as commonly known as mammography and colonoscopy for breast and colon cancer screenings.

Lung cancer screening disparities: Individuals who smoke tobacco, and are also potentially eligible for lung cancer screening, are likely to already face health disparities. Higher tobacco use is recorded among racial and ethnic minorities, sexual and gender minorities, and individuals with low-socioeconomic status or who live in rural areas. Several factors connect commercial tobacco with higher levels of disease, disability, and death within these communities, including the tobacco industry's use of tailored marketing and advertising targeting these groups and barriers to health care and treatment for tobacco use and dependence. For some individuals, the pressures of discrimination, poverty, and other social conditions may lead to commercial tobacco use as a coping mechanism.⁶ Anyone working within an LDCT program can help reduce these disparities by thinking how best to reach these populations and educate them about screening without attaching the stigma of tobacco use.

² Screening for Lung Cancer with Low-Dose Computed Tomography: An Evidence Review of the U.S. Preventive Services Task Force. 2021 March. [Screening for Lung Cancer With Low-Dose Computed Tomography: An Evidence Review for the U.S. Preventive Services Task Force - NCBI Bookshelf \(nih.gov\)](#)

³ American Cancer Society, Cancer Facts and Figures 2023. Special Section: Lung Cancer. [Cancer Facts & Figures 2023](#)

⁴ Behavioral Risk Factor Surveillance System, Respondents aged 50-80 who are current and former smokers who have had a CAT/CT scan in the last year (2022)

⁵ Carter-Harris L, Gould MK. Multilevel Barriers to the Successful Implementation of Lung Cancer Screening: Why Does It Have to Be So Hard? *Ann Am Thoracic Soc*. 2017 Aug;14(8):1261-1265. doi: 10.1513/AnnalsATS.201703-204PS.

⁶ Centers for Disease Control and Prevention. Health Disparities Related to Commercial Tobacco and Advancing Health Equity. Available at: [Tobacco-Related Disparities | CDC](#)

OVERVIEW OF A LUNG CANCER SCREENING PROGRAM

The goal of lung cancer screening is to find and diagnose early-stage disease before signs and symptoms occur. However, because the eligibility for LDCT includes criteria based on a lifestyle choice, there are elements of lung cancer screening that are different than other cancer screenings. This results in a process that requires several steps not required for other cancer screenings.

Patient Eligibility and Referral

Determine Candidate Eligibility

The USPSTF recommends annual screening for lung cancer with low-dose computed tomography (LDCT) in adults aged 50 to 80 years who are asymptomatic, have a 20 pack-year smoking history, and who currently smoke or have quit within the past 15 years. 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. Screen for lung cancer with LDCT annually as long as the individual remains eligible.

- **RESOURCE CHECK:** Need help calculating a pack-year?
 - [Pack Year Calculator \(omnicalculator.com\)](https://omnicalculator.com)
 - [Pack Years Calculator \(mdcalc.com\)](https://mdcalc.com)
- **MEDICARE PATIENTS:** CMS limits eligibility for lung cancer screening to adults aged 50-77.
 - [Medicare LDCT Coverage Guidelines](#)

How can you identify patients who may be eligible? Smoking status and history are the initial indicator for patient eligibility. Smoking status and history may be noted in the individual electronic medical record, creating opportunity to run a report of potentially eligible patients. However, patients may not disclose smoking status or history for a variety of reasons. Consequently, smoking status and history should be assessed at every visit opportunity to identify patients who may be eligible for screening.

Conduct the Shared Decision-Making Visit (SDM)

This is a counseling visit between the individual identified as eligible for screening and a provider to determine screening eligibility and to discuss the risks and benefits of screening.

- Required by Medicare for reimbursement purposes.
- Must be completed before the LDCT procedure but can be conducted during an annual visit or even on the same day as the screening.⁷
- Can be completed by a physician, a non-provider physician, or auxiliary personnel "incident to" a physician's professional service. See Chapter 15 of the Medicare Benefit Policy manual section 60.1 "Incident To Physician's Professional Services."⁷
- Must use a decision aid to address risks and benefits.
- Completion of the SDM visit must be recorded in the medical record.
- When making a referral from primary care, it must be noted on the referral if the SDM has been conducted to prevent duplication of this effort (and therefore, coverage denial).
- The SDM visit may be conducted via telehealth.
- **RESOURCE CHECK:** SDM resources, such as a decision aid, are included in Attachment A: Clinic Resources.

Tobacco Cessation Services

Cessation services must be offered to all individuals who currently smoke cigarettes. Positive reinforcement of behavior for individuals who formerly smoke cigarettes should also be considered.

- Required by Medicare for reimbursement purposes.
- Must be completed prior to the LDCT procedure.
- **RESOURCE CHECK:** Refer your patients to the Nevada Tobacco Quitline using the online for fax referral form.
 - [Nevada Tobacco Quitline Referral](#)
 - Patients can also call the Quitline at 1-800-QUIT-NOW (1-800-784-8669) or visit <https://nevada.quitlogix.org/>.
- **RESOURCE CHECK:** Promote the [American Lung Association Freedom From Smoking Program](#). The American Lung Association can offer free membership to the online support group for Nevada residents.

Referral for Screening

If an eligible patient is identified at a non-screening entity, such as a primary care setting, and is referred for screening, the following should be documented in the beneficiary's medical records:

- Determination of eligibility;
- Shared decision-making visit was conducted, including the use of one or more decision aids;

⁷ [LDCT-FAQs.pdf \(acr.org\)](#)

- Counseling provided on the importance of adherence to annual lung cancer LDCT screening, impact of comorbidities and ability or willingness to undergo diagnosis and treatment; and,
- Counseling on the importance of maintaining cigarette smoking abstinence if a former smoker; or the importance of smoking cessation if a current smoker and, if appropriate, furnishing of information about tobacco cessation interventions.

BILLING TIP: This shared decision-making visit is billed as G0296. A facility fee can also be billed: 304090.

After the shared decision-making visit is documented and coded, the initial LDCT is ordered. **In making a referral for LDCT, it must be noted to the referring entity that the shared decision-making visit has been conducted, documented, and coded.** Failure to note this has been conducted may result in claim denial on either or both claims.

Radiology Requirements

For purposes of Medicare coverage of lung cancer screening with LDCT, reading radiologists and the radiology imaging facilities must meet the following criteria:

- Reading Radiologist board certification or board eligibility with the American Board of Radiology or equivalent organization; and Radiology Imaging Facility
- Must use a standardized lung nodule identification, classification, and reporting system. CMS finalized the decision to remove the radiology imaging eligibility criteria including (radiation dose, makes available smoking cessation interventions, and CMS-approved registry data submission).

Lung Cancer Screening Registry

The ACR Lung Cancer Screening Registry (LCSR) helps clinicians monitor and demonstrate the quality of LDCT lung cancer screenings in their practice through periodic feedback reports that include peer and registry benchmarks. Because screening is performed on an asymptomatic population, there is an added responsibility for the medical community to ensure that risks and benefits are adequately measured and monitored. While reporting to the registry is not required, contributing data to the LCSR not only helps clinicians improve their own quality of care, but also helps improve and refine lung cancer screening care for everyone at the national level. For more information visit [Lung Cancer Screening Registry | American College of Radiology | American College of Radiology \(acr.org\)](#)

Billing

- G0296 — Counseling visit to discuss need for lung cancer screening (LDCT) using low-dose CT scan (service is for eligibility determination and shared decision making), and, is listed as a permanent telehealth code. The code is payable in the facility and the non-facility setting.
- 71271— Computed tomography, thorax, low dose for lung cancer screening, without contrast material(s)

Medicare will deny G0296 and 71271 for claims that do not contain these ICD-10 diagnosis codes:

- Z87.891 for former smokers (personal history of nicotine dependence).
- F17.21 - for current smokers (nicotine dependence). See [Medicare MLN Matters Article MM12124](#).
 - F17.211 Nicotine dependence, cigarettes, in remission
 - F17.213 Nicotine dependence, cigarettes, with withdrawal
 - F17.218 Nicotine dependence, cigarettes, with other nicotine-induced disorders
 - F17.219 Nicotine dependence, cigarettes, with unspecified nicotine-induced disorders

Note: Medicare coinsurance and Part B deductible are waived for this preventive service.

- **RESOURCE CHECK:** See Attachment B Billing Resources.

Patient Follow-Up

It is not required to send a follow-up letter detailing screening results, but examples of patient follow-up letters are included in Attachment D.

Promoting Screening

The Community Preventive Services Task Force has yet to release recommendations for evidence-based interventions to increase lung cancer screening. However, there have been several successful campaigns that may be adapted to your practice to promote LDCT for lung cancer screening. In any campaign effort, it is important to avoid any stigma related to smoking behaviors in your promotion as this may discourage screening, either through the perception that screening is not allowed for people who are currently smoking, or by shaming people away from screening. It is best to avoid any imagery of smoking or smoking behaviors in promoting lung cancer screening.

- **RESOURCE CHECK:** Additional brochure examples are included in Attachment C.

Outreach Resources

Community Health Worker Interventions

With targeted training regarding lung cancer and LDCT, Community Health Worker interventions have been effective in increasing awareness of lung cancer screening, though evidence is limited as to if they increase actual screening uptake^{8,9}, though CHW interventions are recommended to increase other cancer screening uptake such as breast, colorectal, and cervical so it is promising lung screening would be increased as well. Training CHWs may be useful to increase promoting your program. The American Cancer Society produced a series of webinars on Lung Cancer Screening that may be of help in training CHWs and Clinic Staff. [Webinars on Lung Cancer - ACS4CCC](#)

Screen Your Lungs Campaign

Screen your Lungs is a national campaign developed and supported by several partners including the American Cancer Society, Lungevity, Go2ForLungCancer, and the Nevada Cancer Coalition Lung Cancer Collaborative. The campaign includes a screening quiz and multiple resources translated into several languages.

ScreenYourLungs.org | [Lung Cancer Screening](#)

Pink and Pearl Campaign

The American College of Radiology developed the Pink & Pearl Campaign to leverage conversations about mammography to also discuss LDCT. This campaign is showing promise in increasing positive attitudes toward lung cancer screening.

[Print](#) and [Web](#) versions are available.

White Ribbon Project

The white ribbon project promotes awareness about lung cancer by changing public perception of the disease. This inclusive campaign focuses on awareness, education, and storytelling for patients of every stage, caregivers, researchers, health care professionals—anyone involved in the lung cancer story. [The White Ribbon Project](#)

⁸ Williams, L. B. PhD, FNP-BC, FAANP; Looney, S. W. PhD; Joshua, T. MS; McCall, A. PhD, APRN, FNP-BC; Tingen, M. S. PhD, RN, FAAN. Promoting Community Awareness of Lung Cancer Screening Among Disparate Populations: Results of the cancer-Community Awareness Access Research and Education Project. *Cancer Nursing* 44(2):p 89-97, 3/4 2021. | DOI: 10.1097/NCC.0000000000000748

⁹ Williams LB, Shelton BJ, Gomez ML, Al-Mrayat YD, Studts JL. Using Implementation Science to Disseminate a Lung Cancer Screening Education Intervention Through Community Health Workers. *J Community Health*. 2021 Feb;46(1):165-173. doi: 10.1007/s10900-020-00864-2. PMID: 32594413; PMCID: PMC8183677.

ATTACHMENT A: CLINIC RESOURCES

Contents

- Sample Templates
- CT Lung Cancer Screening sample EHR form
- Sample CT Lung Cancer Screening Worksheet
- AMA's Teachable Moment: Competing Mortality in Cancer Screening
- LDCT Protocol
- Lung-RADS Assessment Categories
- ACR Lung Cancer Screening CT Incidental Findings Quick Reference Guide



CT Lung Screening Order Form

Patient Name: _____ DOB: ___/___/___ Patient phone # : _____

Packs/day (20 cigarettes/pack): _____ x Years smoked: _____ = Pack years*: _____

*Pack year calculator: <http://smokingpackyears.com/>

Currently smoking? Y N If not currently smoking, how many years since stopped? _____

CT LUNG SCREENING EXAM (Please select one)

- INITIAL LUNG SCREENING EXAM
- SUBSEQUENT EXAM

AUTHORIZATION* # _____

*Please authorize for ONE of the following codes: G0297 CT LOW DOSE LUNG SCREENING OR 71250 CT THORAX WITHOUT CONTRAST

FAX completed order form to IMI: 208-947-3322

Comments: _____

SAMPLE

The patient must meet ALL of the following elements for eligibility into the CT Lung Screening program.

- The patient has participated in a shared decision making session during which potential risks and benefits of CT lung screening were discussed, was informed of the importance of adherence to annual screening, impact of comorbidities, and ability/willingness to undergo diagnosis and treatment should the patient be diagnosed with lung cancer, and was informed of the importance of smoking cessation and/or maintaining smoking abstinence, including the offer of Medicare-covered tobacco cessation counseling services, if applicable.
- The patient is between the ages of 55-77 years
- Has at least a 30+ pack year smoking history
- Is currently smoking or quit within the last 15 years.
- THE PATIENT IS ASYMPTOMATIC OF LUNG CANCER. I ATTEST THE PATIENT DOES NOT HAVE AND IS NOT BEING TREATED FOR ANY OF THE FOLLOWING:
 - Significant chest pain
 - Unintended weight loss
 - Hemoptysis
 - Active pneumonia

Ordering Provider Signature: _____ Date: ___/___/___

By signing this order, YOU ARE ATTESTING THAT THE PATIENT MEETS ALL OF THE ABOVE REQUIRED ELEMENTS, A SHARED DECISION MAKING VISIT HAS OCCURRED, AND REQUIRED ELEMENTS ARE DOCUMENTED IN THE OFFICE NOTES

Ordering Provider (print name): _____ Phone: _____

ORDERING PROVIDER NPI** # _____ Fax: _____

**Provider NPI number required.

Sample LCSC Order Form

Referral Reason:

Questions:

Prompt	Answer
1. Signs, Symptoms and/or Diagnosis: (e.g. cough):	Lung Cancer Screening
2. Clinical Question: (e.g. eval for pneumonia)	Lung Cancer Screening
3. By selecting YES, I am certifying that 1) The patient has participated in a shared decision making session during which potential risks and benefits of CT lung screening were discussed and this has been documented in the medical record.	Yes No
4. By selecting YES, I am certifying that 2) The patient was informed of the importance of smoking cessation and has been offered Medicare-covered tobacco cessation counseling services, if applicable, and this has been documented in the medical record.	Yes No
5. By selecting YES, I am certifying that 3) The patient has no symptoms suggestive of lung cancer and this has been documented in the medical record.	Yes No
6. Age?	<input type="text" value="45"/>
7. Current Smoker?	Yes No
8. If No, # Years since quitting:	<input type="text"/>
9. # Years Smoked Cigarettes:	<input type="text"/>
10. # Packs per day, on average:	<input type="text"/>
11. Responsible provider pager number:	<input type="text"/>

Process Inst:

The Lung Cancer Screening clinic can manage shared decision making, smoking cessation and follow up of imaging results and abnormalities discovered during screening. If you prefer this option, please cancel this order and place AMBULATORY REFERRAL TO LUNG CANCER SCREENING [REF2216].

Please consider using www.shouldiscreen.com (link below) to assist in your risk assessment, shared decision making, smoking cessation counseling and documentation requirements.

Reference Links:

1. [Should I Screen](#)

Sched Inst: [Click to add text](#)

Instructions:

Sample order LCS order form addressing CMS requirements and ACR registry data elements courtesy of Cherie Erkmen, MD, Eileen O'Malley, Leslie Boff, Frank Erdlen Temple University Health Systems)

CT Chest Low Dose/Lung Cancer Screening Accept Cancel Remove

Expires-4/30/2016, Routine, Ancillary Performed

Status: Expected: Approx. Expires: 4/30/2016

Priority:

Class:

Process Inst: Patients must meet ALL of the following eligibility criteria for lung cancer screening

1. Age between 55-77 years
2. Asymptomatic (not suspected of having symptoms of lung cancer, like hemoptysis)
3. Tobacco smoking history of at least 30 pack years (one pack year = smoking one pack per day for one year; 1 pack = 20 cigarettes)
4. Current smoker or one who has quit smoking within the last 15 years
5. No previous lung cancer ever, and no previous cancer of any type within the last 5 years. (people with non-melanomatous skin cancers are eligible)
6. Willing and able to undergo lung cancer treatment IF lung cancer were to be diagnosed

Questions:

Prompt	Answer	Comments
1. Is the patient's age between 55-77 yrs of age?	<input type="radio"/> Yes <input type="radio"/> No	
2. Is the patient asymptomatic?	<input type="radio"/> Yes <input type="radio"/> No	
3. Actual pack year smoking history:	<input type="text"/>	
4. Current smoker?	<input type="radio"/> Yes <input type="radio"/> No	
5. Does the patient have a history of lung cancer ever, or any cancer within the last 5 years? People with non-melanomatous skin cancers are eligible.	<input type="radio"/> Yes <input type="radio"/> No	
6. Is the pt willing and able to undergo lung cancer treatment if lung cancer were to be diagnosed?	<input type="radio"/> Yes <input type="radio"/> No	
7. Upper respiratory or lung infection within the last 12 weeks?	<input type="radio"/> Yes <input type="radio"/> No	
8. Is your patient aware that if insurance does not cover the cost of the screening exam, your patient may have an out-of-pocket expense?	<input type="radio"/> Yes <input type="radio"/> No	
9. Reason for exam:	<input type="text" value="Baseline screen"/> <input type="text" value="Annual screen"/>	

CT LUNG CANCER SCREENING SHARED DECISION MAKING VISIT REQUIREMENTS

<Facility> offers a CT Lung Cancer Screening program. Eligibility into the program requires each patient to meet criteria as per the Medicare National Coverage Determination (NCD) for CT Lung Cancer Screening regardless of insurance coverage type, or lack of insurance.

The Centers for Medicare and Medicaid Services (CMS) has determined that the evidence is sufficient to add a lung cancer screening counseling and shared decision making visit, and for appropriate beneficiaries, annual screening for lung cancer with low dose computed tomography (LDCT), as an additional preventative service benefit under the Medicare program. To begin this process, a determination of eligibility must be demonstrated. **This requires an initial face to face visit between the prospective CT Lung Screening patient and the primary care provider where specific information is acquired relating to the current and past cigarette use, the benefits and harms of CT Lung Screening, and counseling of tobacco cessation. This is termed a shared decision making visit. Information gathered and documented in the office visit notes (medical record) will determine patient eligibility into the CT Lung screening program.**

There is good news! The provider may bill for this CT Lung Cancer Screening shared decision making visit given a new screening code, G0296, *defined as a Counseling visit to discuss need for lung cancer screening (LDCT) using low dose CT scanning (the service is for eligibility determination and shared decision making).*

REQUIRED ELEMENTS OF THE SHARED DECISION MAKING VISIT THAT MUST BE DOCUMENTED:

- ✓ Patient must be between the age of 55-77
- ✓ Asymptomatic; No signs or symptoms of lung cancer
- ✓ Tobacco smoking status*; current smoker or former smoker.
 - ✚ If current smoker, patient must have tobacco smoking history of at least 30-pack years.
 - ✚ Patient specific smoking pack-years must be documented in the medical record. (One pack year=smoking one pack per day for one year. 1 pack=20 cigarettes)
 - ✚ If former smoker, number of years since quit smoking
 - ✚ CT Lung screening is only applicable to patients who smoke cigarettes.
- ✓ Use of one or more decision aids, to include benefits and harms of screening, follow up diagnostic testing, over diagnosis, false positive rate, and total radiation exposure.
- ✓ Counseling on the importance of adherence to annual lung cancer LDCT screening, impact of comorbidities and ability or willingness to undergo diagnosis and treatment.
- ✓ Counseling on the importance of maintaining cigarette smoking abstinence if former smoker; or the importance of smoking cessation if current smoker and, if appropriate, furnishing of information about tobacco cessation interventions, and,
- ✓ If appropriate, the furnishing of a written order for lung cancer screening with LDCT. *The written order is required to contain specific criteria.*

For more information please use the following links:

<https://www.cms.gov/medicare-coverage-database/details/nca-decision-memo.aspx?NCAId=274>

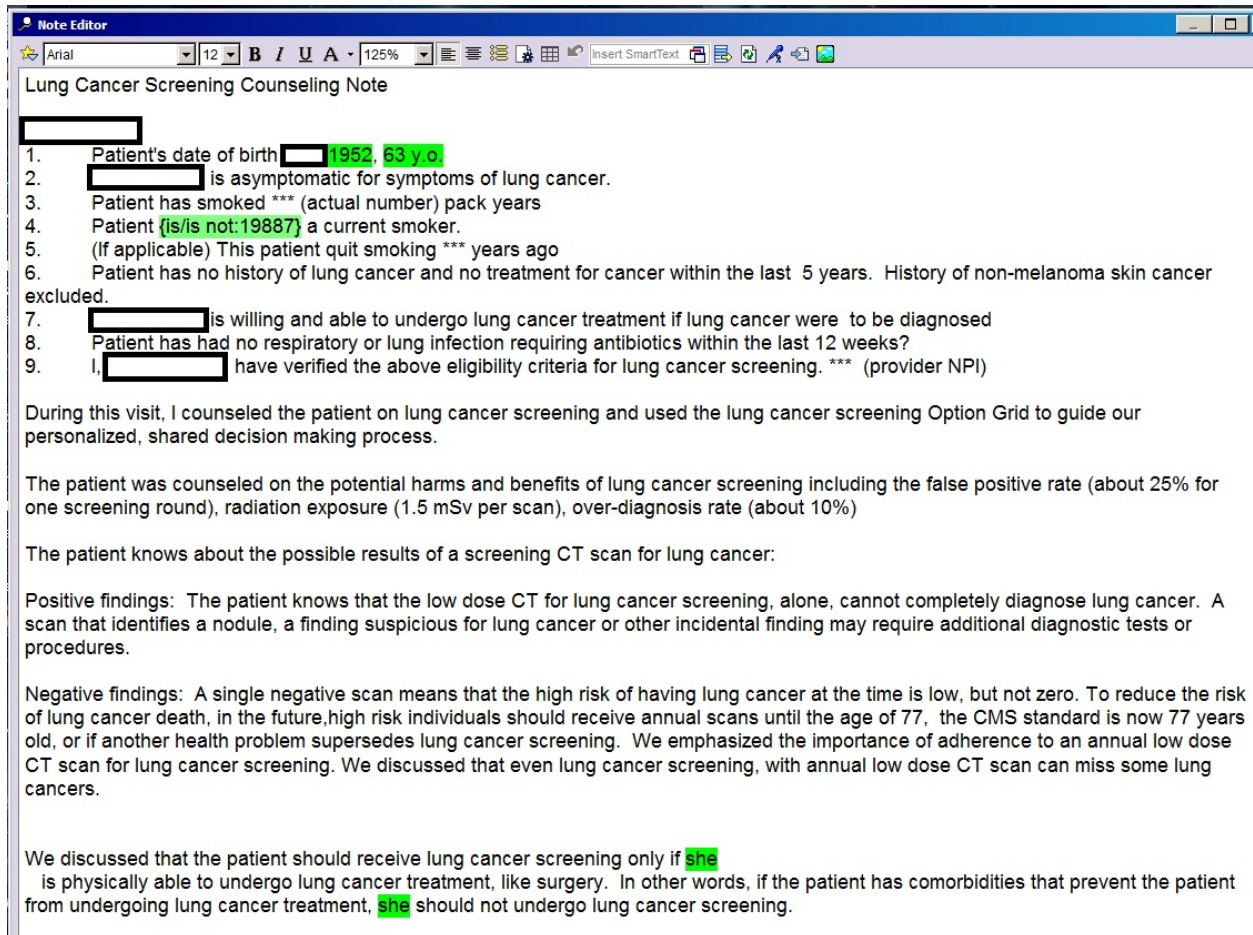
<http://www.acr.org/~media/ACR/Documents/PDF/QualitySafety/Resources/Lung%20Imaging%20Resources/Example%20of%20shared%20decision%20making.pdf>

<http://www.shouldiscreen.com/>

<http://www.radiologyinfo.org/en/info.cfm?pg=screening-lung>

<http://www.cancer.gov/types/lung/research/NLSTstudyGuidePatientsPhysicians.pdf>

Sample shared decision making note addressing CMS requirements and ACR registry data elements courtesy of (Cherie Erkmen, MD, Eileen O'Malley, Leslie Boff, Frank Erdlen from Temple University Health Systems)



The screenshot shows a 'Note Editor' window with a toolbar at the top containing various editing tools like bold, italic, underline, and font color. The main text area contains a 'Lung Cancer Screening Counseling Note' for a patient whose name is redacted. The note includes a numbered list of clinical criteria, a paragraph describing the counseling process, and sections for positive and negative findings. Some text in the original image is highlighted in green, such as '1952, 63 y o', '19887', and 'she'.

Lung Cancer Screening Counseling Note

[Redacted]

1. Patient's date of birth [Redacted] 1952, 63 y o
2. [Redacted] is asymptomatic for symptoms of lung cancer.
3. Patient has smoked *** (actual number) pack years
4. Patient {is/is not: 19887} a current smoker.
5. (If applicable) This patient quit smoking *** years ago
6. Patient has no history of lung cancer and no treatment for cancer within the last 5 years. History of non-melanoma skin cancer excluded.
7. [Redacted] is willing and able to undergo lung cancer treatment if lung cancer were to be diagnosed
8. Patient has had no respiratory or lung infection requiring antibiotics within the last 12 weeks?
9. I, [Redacted] have verified the above eligibility criteria for lung cancer screening. *** (provider NPI)

During this visit, I counseled the patient on lung cancer screening and used the lung cancer screening Option Grid to guide our personalized, shared decision making process.

The patient was counseled on the potential harms and benefits of lung cancer screening including the false positive rate (about 25% for one screening round), radiation exposure (1.5 mSv per scan), over-diagnosis rate (about 10%)

The patient knows about the possible results of a screening CT scan for lung cancer:

Positive findings: The patient knows that the low dose CT for lung cancer screening, alone, cannot completely diagnose lung cancer. A scan that identifies a nodule, a finding suspicious for lung cancer or other incidental finding may require additional diagnostic tests or procedures.

Negative findings: A single negative scan means that the high risk of having lung cancer at the time is low, but not zero. To reduce the risk of lung cancer death, in the future, high risk individuals should receive annual scans until the age of 77, the CMS standard is now 77 years old, or if another health problem supersedes lung cancer screening. We emphasized the importance of adherence to an annual low dose CT scan for lung cancer screening. We discussed that even lung cancer screening, with annual low dose CT scan can miss some lung cancers.

We discussed that the patient should receive lung cancer screening only if she is physically able to undergo lung cancer treatment, like surgery. In other words, if the patient has comorbidities that prevent the patient from undergoing lung cancer treatment, she should not undergo lung cancer screening.

Sample screenshots of data entry system courtesy of Cherie Erkmen, MD and David Fleece, MD Temple University Health Systems

Imaging data

Lung CA Screening - Lung Cancer Screen Imaging and Dx

Was LDCT performed? Yes No

Facility TUH Episc... FCCC Jeanes NEH

CT Manufacturer

CT Model

CTDvol (mGy) DLP (mGy*cm)

Tube current-time (mAs) Tube voltage (kV)

Scanning time (s) Scanning volume (cm)

Pitch Reconstructed image width (z-axis, mm)

CT exam result by Lung-RADS category

0=recalls (incomplete screen)	1=normal, continue annual screening
2=benign appearance or behavior: continue annual screening	3=6 month CT recommended
4A=3 month CT recommended, may consider PET/CT	4B=additional diagnostics and/or tissue sampling recommended
4X=additional diagnostics and/or tissue sampling recommended.	

Lung Nodule? Yes No

Number 1

Location RUL RML RLL LUL... LLL

Size 3

Appearance solid part solid non-solid calcified other

Characteristics

Other clinically or potentially significant abnormalities - CT exam result modifier S Yes No

Prior Hx lung cancer - CT modifier C Yes No Unknown

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Workup and diagnosis

Workup

Diagnostic f/u study date

Diagnostic f/u study type low dose chest CT routine chest CT PET/CT other

Description

Follow-up Consult date

Consult Specialty Pulmonology Thoracic Surgery Other

Follow-up Procedure date

Follow-up Procedure bronchoscopy navigational biop... EBUS CT guided biopsy US guided biopsy surgery

Procedure location L hilum Lingula LLL LUL R hilum RLL RML RML/R... RUL/R... RUL other

Diagnosis

Tissue Dx date

Tissue Dx method 1=percutaneous 2=bronchoscopic 3=surgical

Tissue source RUL RML RLL LUL/ling... LLL R lung L lung lymph n... effusion unknown

Tissue Diagnosis 1=Benign 2=Malignant - invasive lung cancer 3=Malignant - NON-lung cancer 4=Malignant - minimally invasive lung cancer 5=Malignant - adenocarcinoma in situ 6=Premalignancy - atypical adenomatous hype... 7=Non-diagnostic

Histology 1=Non-small cell lung cancer 2=Small cell lung cancer (high grade neuroendocrine tumor) 3=Carcinoid (low grade neuroendocrine tumor) 4=Atypical carcinoid (intermediate grade neuroendocrine tumor)

Histology (NSCLC) 1=Invasive adenocarcinoma 2=Squamous cell carcinoma 3=Adenosquamous cell carcinoma 4=Large cell carcinoma 5=Undifferentiated/poorly differentia... 8=Other, specify

Cell differentiation well differentiated moderately differentiated poorly differentiated undifferentiated

Clinical Stage IA IB IIA IIB IIIA IIIB IV N3

Pathologic Stage IA IB IIA IIB IIIA IIIB IV N3

Treatment? Yes No

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Sample data entry screenshots of data entry system courtesy of Cherie Erkmen, MD and David Fleece, MD Temple University Health Systems

Demographics and eligibility

Lung CA Prescreening and Eligibility - Prescreening and Eligibility

Show: All Choices

Demographics and Clinical Hx

Education Level: 1=8th grade or less, 2=9th-11th grade, 3=High school grad level, 4=Post high school training, 5=Assoc degree/some college, 6=Bachelor's degree, 7=Graduate or Prof School, 8=Other, 99=Unknown/decline to answer

Environmental Exposures: none, radon, asbestos, silica, cadmium, arsenic, beryllium, chromium, diesel fu..., nickel

Secondhand smoke exposure: Yes, No

Lung cancer in 1st deg relative: Yes, No

Previous evaluation for lung nodule?: Yes, No

Comorbidities: COPD, Emphysema, Pulmonary fibrosis, CAD, CHF, PVD, Cancer other than lu..., Other (add comment)

Eligibility

Smoking Status: 1=current smoker, 2=former smoker, 3=never smoker, 4=smoker, current status u..., 9=unknown if ever smoked

Pack-Years: 34, Year Quit

years since quit

Previous lung cancer screening: Yes, No, Unknown

Previous Chest CT (any reason): Yes, No, Unknown

Where: NY

When: 2005

Previous scan available?: Images + Result (Epic), Images (CD/DVD), Images (hard copies), Result (scanned), Result (paper copy), No

Respiratory infection in the past 12 weeks?: Yes, No, Unknown

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Shared decision making

Shared Decision Making

Did PCP/referring provider perform SDM?: Yes, No, Unknown

Pretest CollaboRATE 3 score, SDM visit date

SDM visit location: PCP encounter, Specialty encounter, Screening Program encounter, Other

SDM Note Completed?: Yes, No, Unknown

SDM Note available?: Yes, No

SDM Tool used: OptionGrid, Other

All SDM criteria met?: Yes, No, Unknown

Aware of potential cost of CT?: Yes, No, Unknown

Aware of potential cost of other interventions?: Yes, No, Unknown

Does PCP have Epic access?: Yes, No

Does ordering provider have Epic access?: Yes, No

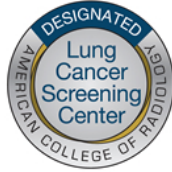
Ordered in Epic?: Yes, No

Consent on file?: Yes, No

Willing to be contacted regarding future research?: Yes, No

Restore, Close, Cancel, Previous, Next

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March 14, 2016

Patient ID:
Date of LDCT:

Dear :

We wish to inform you that the results of your recent Low Dose Lung Screening CT show a probably benign finding with a low likelihood of becoming a clinically active cancer. It is recommended that you undergo a follow-up Low Dose CT in 6 months to assure that the finding is stable.

A report of your results was sent to your health care provider.

Your images will become part of your medical record at **my facility**. They will be on file for your ongoing care. If, in the future, you change health care providers or go to a different location for a Low Dose Lung Screening CT, you should tell them where and when this CT was done.

Thank you for allowing us to help meet your health care needs.

Sincerely,

April Smith, MD
Interpreting Radiologist

CT Lung Cancer Screening Eligibility

All answers must be Yes for patient to qualify for CT Lung Cancer Screening

If the patient does NOT meet criteria to qualify for the screening and the order is submitted anyway, then the patient may be responsible for the entire cost of the screening.

U.S. Preventative Services Task Force (USPSTF) recommends annual screening for lung cancer with LDCT in adults aged 50 to 80 years who have a 20 pack-year smoking history and currently smoke or have quit smoking within the past 15 years.

Packs/Day (20 Cigarettes/Pack)

Years Smoked

Pack Years

*Patient Has At Least 20 Pack Years Smoking History

- Yes
 No

*Patient Is A Current Smoker Or Quit Smoking Within Past 15 Years

- Yes
 No

*Patient Is Between The Ages Of 50-80 Years

- Yes
 No

*Patient Has NO Signs/Symptoms Of Lung Cancer

- Yes
 No

*Patient has participated in a clear discussion and explanation of the high risk factors associated with smoking tobacco. Time was included for answering questions to the satisfaction of the patient.

- Yes
 No

*Patient Is Able To Tolerate Treatment

- Yes
 No

If the patient does not qualify or declines, please finish signing the form and remove the order.

*Does Patient Qualify For Lung Cancer Screening?

- Does qualify for lung cancer screening using low-dose chest CT
 Does not qualify for lung cancer screening using low-dose chest CT

*Lung Cancer Screening Proceed Or Decline

- At this time, the patient would like to proceed with lung cancer screening using low-dose chest CT
 At this time, the patient would like to decline lung cancer screening using low-dose chest CT

Counseling Visit - G0296

- Charge for counseling visit to discuss need for lung cancer screening using low-dose chest CT scan

Discussed Risk Of Smoking With Patient

- Discussed smoking risk with patient

-Tobacco smoke is harmful to smokers and nonsmokers (contains harmful chemicals); it can cause chronic lung disease such as emphysema, bronchitis, and asthma

-Cigarette smoking causes many types of cancer (lung, throat, mouth, nasal cavity, esophagus, stomach, pancreas, kidney, bladder, cervix, and acute myeloid leukemia)

-Quitting smoking reduces health risks caused by exposure to tobacco smoke

-Health problems caused by smoking are heart disease, stroke, aneurysm, chronic obstructive pulmonary disease, hip fractures, and cataracts

-Strong commitment is needed to gain benefits from lung cancer screening (adherence to program)

-Values placed on benefits, harms, and scientific uncertainties



Radiology

CT Lung Cancer Screening Worksheet

1. Name _____ Date _____

2. Race (Circle)

White American Indian Black Native Hawaiian or Pacific Other

Hispanic or Latino

3. COVID diagnosis Yes No Approximate Date if yes _____

4. Smoking Status (Circle)

Current Smoker Former Smoker When did you quit? _____

Years Smoked _____ Packs per Day _____

5. Height _____ Weight _____

6. Have you ever had any of the following health problems (circle all that apply):

COPD

Congestive heart failure

Emphysema

Peripheral Vascular Disease

Pulmonary fibrosis

Lung Cancer

Coronary Artery Disease

Cancer other than lung cancer

7. Have you ever had a CT Lung Cancer Screening in the past? Yes No

TEACHABLE
MOMENT

LESS IS MORE

Competing Mortality in Cancer Screening
A Teachable Moment**Daniel Schneider, MD,
PhD**

Division of Pulmonary and Critical Care Medicine, Department of Internal Medicine, University of Michigan Medical School, Ann Arbor.

**Douglas Arenberg,
MD**

Division of Pulmonary and Critical Care Medicine, Department of Internal Medicine, University of Michigan Medical School, Ann Arbor.



Editorial

Story From the Front Lines

A 70-year-old man saw his primary care clinician and expressed concern about his lung cancer risk after learning a friend had recently died of it. The patient had had an 80-pack-year history, and had quit 7 years previously. His physician ordered a screening chest computed tomographic (CT) scan, which demonstrated a spiculated 12-mm lung nodule that was new when compared with scans done previously for other reasons. This prompted a positron emission tomographic scan, which showed metabolic activity, raising the suspicion for lung cancer. He was referred to a pulmonary-nodule clinic.

The man presented to the pulmonary clinic in a wheelchair while receiving continuous oxygen. His medical history revealed severe diastolic heart failure; chronic obstructive pulmonary disease; obesity (his body mass index, calculated as weight in kilograms divided by height in meters squared, was 54); diabetes mellitus with microvascular complications, including stage III chronic kidney disease; and peripheral neuropathy. Additional medical history included several recent falls attributed to progressive neuropathy and deconditioning. These considerations were discussed with the patient and ultimately, invasive diagnostic testing was discouraged. A conservative plan that included a repeated CT scan in 4 months was mutually agreed on. Two months after this visit, the patient was admitted and treated for pneumonia. While recovering in the hospital, his primary team noted that this nodule had not undergone workup and he had another CT scan, which demonstrated interval growth. He was scheduled for an outpatient CT-guided biopsy.

Prior to the biopsy, the patient was rehospitalized for pneumonia, this time requiring intensive care unit admission. His medical history was addressed at a multidisciplinary thoracic tumor conference. He was not a surgical candidate, and attempts to biopsy the nodule were also considered to be high risk. Therefore, he was referred to radiation oncology to discuss the risks and benefits of empirical radiation therapy without a tissue diagnosis. Prior to meeting with radiation oncology, in follow-up at an outpatient clinic 2 weeks after discharge, he had increasing dyspnea, was delirious, and was thought to yet again have pneumonia. He was ultimately referred to palliative care for consideration of hospice.

Teachable Moment

Common cautions in the context of screening for lung cancer include high false-positive rates, complications of invasive procedures, radiation exposure, and psychological stress. Other considerations, which this pa-

tient's case illustrates, are the importance of considering competing mortality when assessing the potential benefits of screening and overdiagnosis. The US Preventive Services Task Force clearly emphasizes this in their recently released guideline statement: "Screening may not be appropriate for patients with ... comorbid conditions, particularly those who are in the upper end of the screening age range."^{1,2} In other words, screening should be restricted to those whose health permits them to benefit from and tolerate the additional testing and treatment required.

This is also reflected in the "shared decision making" requirement of the Centers for Medicare and Medicaid Services decision³ to cover lung cancer screening for high-risk Medicare beneficiaries. This emphasizes the idea of targeting screening based on patient comorbidities and individualized preferences. Physicians should resist the temptation and not feel obliged to offer screening to patients only because they meet age and smoking requirements. Rather, as this case illustrates, physicians will be doing a disservice to patients and the health care system if they offer screening to patients that will not benefit.

As screening for lung cancer is implemented in a wider population, we can expect screening subjects who are sicker than the National Lung Cancer Screening Trial participants and arguably sicker than the populations offered other cancer screening interventions owing to targeting patients with considerable smoking history. We can also expect a reduction in overall benefit as follow-up compliance inevitably regresses away from the 95% adherence attained in a clinical trial. This stresses the importance of careful selection of patients who are likely to benefit from intervention.

Overdiagnosis is related to competing mortality, in that it represents the detection of clinically insignificant cancers. This determination varies from patient to patient because those with lower life expectancy have a greater chance of experiencing "overdiagnosis" during cancer screening. Both retrospective studies^{4,5} of actual practice patterns and survey data confirm that screening for cancer is offered to patients with limited life expectancy and therefore limited potential to benefit from screening. Recognizing the impact of comorbid illness on the effectiveness of cancer screening is arguably more important in the patient population eligible for lung cancer screening owing to a high prevalence of smoking-related comorbidities.

As lung cancer screening is more widely adopted, considerations of comorbid disease must be incorporated into shared decision-making, and decision aids that

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facilitate this might prove very useful. In our patient, it was hard to predict his accelerated decline but comparatively very easy to predict that, if a screen-detected cancer was present, he would die with it, not as a result of it.

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doi:10.1001/jamainternmed.2015.1232.

Conflict of Interest Disclosures: None reported.

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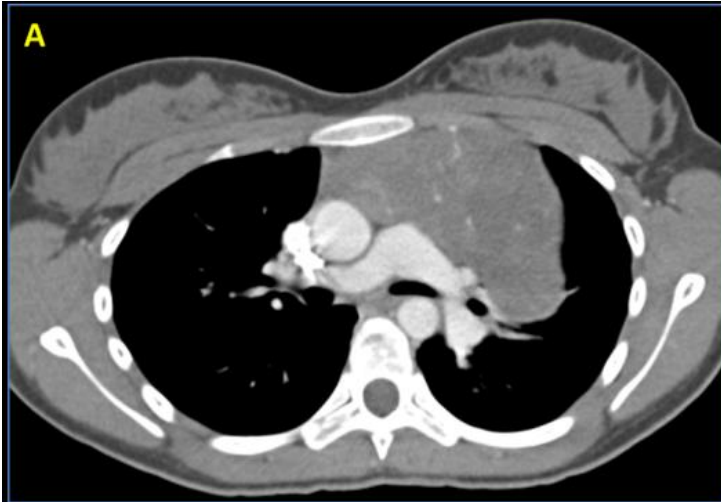
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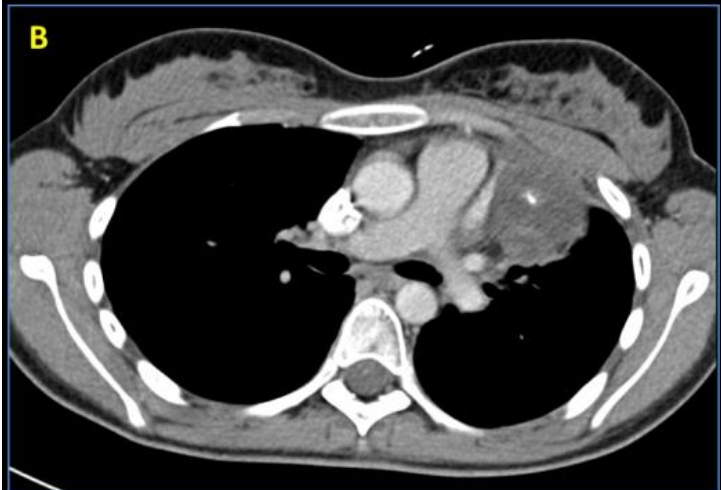
LDCT Protocol

1. Lung apices to costophrenic sulci
2. FOV not to extend more than 1cm beyond rib cage, do not include the soft tissues of the chest wall.
3. Patient centered to the Gantry
4. Supine, arms above head
5. Inspiration
6. Slice thickness of <2.5mm, preferred is less than or equal to 1.0mm
7. interval <2.5mm
8. Max tube rotation is less than or equal to 0.5 seconds
9. Pitch between 0.7 and 1.5
10. Maximum dose index volume of 3 mGy (resulting in effective dose below 1 mSv).
11. kVp/mAs based on patient size
- 12.
13. Multiplanar reconstruction(MPR) both Coronal and Sagittal

ADULT LUNG CANCER SCREENING TECHNICAL SPECIFICATIONS		
Adult Chest for Lung Cancer Screening		
Technique Parameters (Items in bold are designation requirements. Failure to meet these requirements will result in deferral of Designation)		
Scan Parameter	Parameter Specification	Comments
Scanner type	multidetector helical (spiral) detector rows ≥ 4	non helical and single detector scanners are not appropriate for lung cancer screening CT
Required Series		No IV or oral contrast should be used
kV	100 to 140 acceptable for standard sized patient	Should be set in combination with mAs to meet CTDIvol specifications
mAs	Should be set in combination with kVp to meet CTDIvol specifications.	The mAs selected should result in diagnostic-quality images of the lungs Should take into account the patient's body habitus and age, slice width, kVp, and unique attributes of the scanner and acquisition mode
Max. Tube Rotation Time	≤ 0.5 seconds	0.75 second is acceptable if a single breath hold ≤ 15 seconds can be achieved for scanners that cannot perform 0.5 second rotation time
Pitch (IEC Definition)	Between 0.7 and 1.5	Should be set with other technical parameters to achieve single breath hold scan and CTDIvol specifications
Respiration	single breath hold full inspiration	
Scan duration/ Acquisition time	≤ 15 seconds	Time to acquire the scan though entire lungs within a single breath
Reconstructed image width (nominal width of reconstructed image along z-axis)	≤ 2.5 mm	≤ 1 mm preferred
Reconstructed image spacing (Distance between two reconstructed images)	\leq slice width	Overlapping reconstructions are not necessary but are acceptable



Patient with mediastinal mass. The initial CT scan of the chest (A) was obtained by using standard technique. The kVp was set at 120, which resulted in a CTDI vol of 11.6.



On follow-up CT scan of the chest (B), the kVp was reduced to 100. This resulted in a 37% decrease in the dose of radiation (CTDIvol of 5.84).

There is slightly increased image noise on the follow-up CT scan of the chest, but the image quality is diagnostic and comparable to that of the initial scan.

LUNG CANCER SCREENING CT (Selected GE scanners) with AEC (smartmA) on ([Back to INDEX](#))

SCOUT: AP S60-I400; from top of shoulder through mid-liver, if automatic exposure control is used. PA scout if manual mA is used.

	LightSpeed 16	BrighSpeed 16	LightSpeed VCT	Optima 660
Scan Type	Helical	Helical	Helical	Helical
Rotation Time (s)	0.5	0.5	0.5	0.5
Beam Collimation (mm)	43758	20	40	40
Detector Configuration	16x0.625 / 16x1.25	16x1.25	64x0.625	64x0.625
Pitch	1.375	1.375	0.984	0.984
Speed (mm/rot)	13.75 / 27.50	27.5	39.36	39.36
kV	120	120	120	120
min mA	40	40	30	30
max mA	130	130	110	110
Noise Index (smart mA) ¹	32	32	32	32
SFOV	Large Body	Large Body	Large Body	Large Body
CTDIvol	2.6 / 2.4 mGy	2.4 mGy	2.2 mGy	2.2 mGy

RECON 1

	Axial	Axial	Axial	Axial
Plane	Axial	Axial	Axial	Axial
Algorithm	Lung or Bone	Lung or Bone	Lung or Bone	Lung or Bone
Recon Mode	Full or Plus	Full or Plus	Full or Plus	Full or Plus
Thickness (mm)	2.5	2.5	2.5	2.5
Interval (mm)	1.25	1.25	1.25	1.25
ASiR/ASiR-V (if used)			70	70

RECON 2

	Axial	Axial	Axial	Axial
Plane	Axial	Axial	Axial	Axial
Algorithm	Lung or Bone	Lung or Bone	Lung or Bone	Lung or Bone
Thickness (mm)	0.625 / 1.25	1.25	0.625	0.625
Interval (mm)	0.4 / 0.625	0.625	0.4	0.4
ASiR/ASiR-V (if used)			70	70
Recon Option				

RECON 3

	MIP	MIP	MIP	MIP
Algorithm	MIP	MIP	MIP	MIP
Thickness (mm)	6	6	6	6
Interval (mm)	3	3	3	3
ASiR/ASiR-V (if used)				
Recon Option				

¹ Noise Index value of 32 ONLY applies if the 2.5 mm reconstructed image thickness is selected as the first reconstruction; if other slice thicknesses (e.g. 0.625mm or 1.25 mm) are selected for the first reconstruction, then a different Noise Index value must be chosen in order to achieve the CTDIvol values described here; This is because the Noise Index value is related to the image thickness of the first reconstruction.

	Approx. Weight (kg)	Approx. Weight (lbs)	mA	Approx. CTDIvol (mGy)
Small Patient	50-70	110-155	25-50	0.9-2.3
Avg. Patient	70-90	155-200	50-75	1.8-3.6
Large Patient	90-120	200-265	75-100	2.7-4.6



Lung-RADS® Version 1.1

Assessment Categories Release date: 2019

Category Descriptor	Lung-RADS Score	Findings	Management	Risk of Malignancy	Est. Population Prevalence
Incomplete	0	Prior chest CT examination(s) being located for comparison Part or all of lungs cannot be evaluated	Additional lung cancer screening CT images and/or comparison to prior chest CT examinations is needed	n/a	1%
Negative No nodules and definitely benign nodules	1	No lung nodules Nodule(s) with specific calcifications: complete, central, popcorn, concentric rings and fat containing nodules	Continue annual screening with LDCT in 12 months	< 1%	90%
Benign Appearance or Behavior Nodules with a very low likelihood of becoming a clinically active cancer due to size or lack of growth	2	Perifissural nodule(s) (See Footnote 11) < 10 mm (524 mm ³)			
		Solid nodule(s): < 6 mm (< 113 mm ³) new < 4 mm (< 34 mm ³)			
		Part solid nodule(s): < 6 mm total diameter (< 113 mm ³) on baseline screening			
		Non solid nodule(s) (GGN): <30 mm (<14137 mm ³) OR ≥ 30 mm (≥ 14137 mm ³) and unchanged or slowly growing			
Probably Benign Probably benign finding(s) - short term follow up suggested; includes nodules with a low likelihood of becoming a clinically active cancer	3	Solid nodule(s): ≥ 6 to < 8 mm (≥ 113 to < 268 mm ³) at baseline OR new 4 mm to < 6 mm (34 to < 113 mm ³)	6 month LDCT	1-2%	5%
		Part solid nodule(s) ≥ 6 mm total diameter (≥ 113 mm ³) with solid component < 6 mm (< 113 mm ³) OR new < 6 mm total diameter (< 113 mm ³)			
		Non solid nodule(s) (GGN) ≥ 30 mm (≥ 14137 mm ³) on baseline CT or new			
Suspicious Findings for which additional diagnostic testing is recommended	4A	Solid nodule(s): ≥ 8 to < 15 mm (≥ 268 to < 1767 mm ³) at baseline OR growing < 8 mm (< 268 mm ³) OR new 6 to < 8 mm (113 to < 268 mm ³)	3 month LDCT; PET/CT may be used when there is a ≥ 8 mm (≥ 268 mm ³) solid component	5-15%	2%
		Part solid nodule(s): ≥ 6 mm (≥ 113 mm ³) with solid component ≥ 6 mm to < 8 mm (≥ 113 to < 268 mm ³) OR with a new or growing < 4 mm (< 34 mm ³) solid component			
		Endobronchial nodule			
Very Suspicious Findings for which additional diagnostic testing and/or tissue sampling is recommended	4B	Solid nodule(s) ≥ 15 mm (≥ 1767 mm ³) OR new or growing, and ≥ 8 mm (≥ 268 mm ³)	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 ³) solid component. <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>	> 15%	2%
		Part solid nodule(s) with: a solid component ≥ 8 mm (≥ 268 mm ³) OR a new or growing ≥ 4 mm (≥ 34 mm ³) solid component			
	4X	Category 3 or 4 nodules with additional features or imaging findings that increases the suspicion of malignancy			
Other Clinically Significant or Potentially Clinically Significant Findings (non lung cancer)	S	Modifier - may add on to category 0-4 coding	As appropriate to the specific finding	n/a	10%

IMPORTANT NOTES FOR USE:

- Negative screen: does not mean that an individual does not have lung cancer
- Size: To calculate nodule mean diameter, measure both the long and short axis to one decimal point, and report mean nodule diameter to one decimal point
- Size Thresholds: apply to nodules at first detection, and that grow and reach a higher size category
- Growth: an increase in size of > 1.5 mm (> 2 mm³)
- Exam Category: each exam should be coded 0-4 based on the nodule(s) with the highest degree of suspicion
- Exam Modifiers: S modifier may be added to the 0-4 category
- Lung Cancer Diagnosis: Once a patient is diagnosed with lung cancer, further management (including additional imaging such as PET/CT) may be performed for purposes of lung cancer staging; this is no longer screening
- Practice audit definitions: a negative screen is defined as categories 1 and 2; a positive screen is defined as categories 3 and 4
- Category 4B Management: this is predicated on the probability of malignancy based on patient evaluation, patient preference and risk of malignancy; radiologists are encouraged to use the McWilliams et al assessment tool when making recommendations
- Category 4X: nodules with additional imaging findings that increase the suspicion of lung cancer, such as spiculation, GGN that doubles in size in 1 year, enlarged lymph nodes etc
- Solid nodules with smooth margins, an oval, lentiform or triangular shape, and maximum diameter less than 10 mm or 524 mm³ (perifissural nodules) should be classified as category 2
- Category 3 and 4A nodules that are unchanged on interval CT should be coded as category 2, and individuals returned to screening in 12 months
- LDCT: low dose chest CT

*Additional resources available at - <https://www.acr.org/Clinical-Resources/Reporting-and-Data-Systems/Lung-Rads>

*Link to Lung-RADS calculator - <https://brocku.ca/lung-cancer-screening-and-risk-prediction/risk-calculators/>

ACR® Lung Cancer Screening CT Incidental Findings Quick Reference Guide

This Quick Guide is intended for use by Lung Cancer Screening (LCS) program coordinators and nurse navigators as they assist in the care coordination of LCS patients in collaboration with the referring providers.

- The Quick Guide lists common incidental findings on LCS CT and the typical management and/or appropriate follow-up recommendations.
- Comparison to prior exams is important to assess for stability or change.
- The guidance provided is intended to serve as a simple reference tool and does not replace the more comprehensive White Paper, ACR Appropriateness Criteria® and reference documents listed on the third page.
- The interpreting radiologist should include significant incidental findings that need attention, with recommended follow-up, in the "Impression" section of the report.
- Questions about the findings in a radiology report are best answered by the radiologist who interpreted the exam.

Legend/Abbreviations:

ASCVD = atherosclerotic cardiovascular disease
 CAC = coronary artery calcification
 CE = contrast enhanced
 CT = computed tomography
 → = action recommended, text in **Bold** type

MR = magnetic resonance imaging
 OK = typically, but not always, insignificant or benign
 US = ultrasound
 w/u: = work up with follow-up imaging
 PCP = primary care provider

Anatomic Region	Findings/Recommendations
Abdominal	
Adrenal ¹	<ul style="list-style-type: none"> • Adrenal calcification – OK. • Nodule < 10 HU (fat density), likely adenoma – OK. • Soft tissue density nodule < 1 cm – OK. • Adrenal nodule stable ≥ 1 year – OK. <p>→ Any other nodule or mass → w/u: CE Adrenal CT or MRI.</p>
Kidney ²	<ul style="list-style-type: none"> • Non-obstructing renal calculi – OK. • Simple or hyperdense/hemorrhagic cyst ("Bosniak 1 or 2") < 4 cm – OK. <p>→ Soft tissue density (or mixed density) renal mass → w/u: CT or MRI of the Kidneys without and with IV contrast.</p>
Liver ³	<ul style="list-style-type: none"> • Simple cyst – OK. • Nodule < 1 cm – OK, likely benign. <p>→ Soft tissue nodule/mass ≥ 1cm → w/u: CE Abdomen CT or MRI. → Fatty liver/hepatic steatosis or cirrhosis → PCP evaluation.</p>
Pancreas ⁴	<ul style="list-style-type: none"> • Coarse calcifications – OK. <p>→ Cyst/mass → w/u: CE Abdomen CT or MRI.</p>
Musculoskeletal	
Bone Density ^{13,14,15}	<ul style="list-style-type: none"> • > 130 HU at L1 – OK. <p>→ 100 – 130 HU at L1 (Osteopenia) → consider PCP evaluation. → < 100 HU at L1 (Osteoporosis) → PCP evaluation and consider DEXA.</p>
Other	<ul style="list-style-type: none"> • Degenerative disc disease – OK.

Cardiovascular	
Aorta ⁶	<ul style="list-style-type: none"> • "Ectasia of the thoracic aorta" – OK. • Mural calcification – OK. • Ascending Aorta < 42mm – OK. <p>→ Ascending Aorta ≥ 42 mm → PCP surveillance or cardiology consult for aneurysm surveillance.</p>
Cardiac/pericardium	<ul style="list-style-type: none"> • Trace/small pericardial effusion – OK. <p>→ Moderate or large pericardial effusion → discuss with PCP.</p> <p>→ Other Abnormalities (such as moderate or greater aortic valve calcification) → PCP evaluation.</p>
Coronary arteries ^{7,8}	<ul style="list-style-type: none"> • Coronary artery calcifications (CAC) typically reported as none, mild, moderate, or severe. <p>→ CAC present → PCP evaluation for ASCVD risk assessment.</p>
Main PA measurement ^{9,10}	<ul style="list-style-type: none"> • < 31 mm – OK. <p>→ 31 mm → PCP evaluation, consider Cardiology or Pulmonary consult.</p>
Breast	
	<ul style="list-style-type: none"> • Coarse calcifications – OK. • Cyst with no associated solid component – OK. <p>→ Any other nodule/mass or asymmetric density → w/u: diagnostic mammogram +/- US.</p>
Esophagus	
	<p>→ Large hiatal hernia or dilated esophagus → PCP evaluation.</p> <p>→ Focal wall thickening or mass → PCP evaluation, consider GI consult.</p>
Lung/Pleura	
Lung ¹¹	<ul style="list-style-type: none"> • Atelectasis – mild/subsegmental – OK. • Emphysema/bronchial wall thickening (Expected findings) – consider PCP evaluation; may benefit from Pulmonary consult. <p>→ Fibrotic interstitial lung disease (ILD) → recommend pulmonary consultation.</p> <p>→ Bronchiectasis/ground glass opacity/cystic lung disease/diffuse nodular disease → PCP evaluation, consider pulmonary consultation.</p>
Pleura	<p>→ New disease – effusion, thickening, mass → PCP evaluation, consider pulmonary consultation.</p>
Mediastinum	
Lymph nodes (Short axis measurement) ¹²	<ul style="list-style-type: none"> • < 15 mm – OK. <p>→ ≥ 15 mm & no explainable cause → PCP evaluation; consider pulmonary consultation. Consider follow-up CE Chest CT in 3–6 months.</p>
Other ¹²	<ul style="list-style-type: none"> • Cyst – OK. <p>→ Mass (soft tissue or mixed density) → CE Chest MRI or CT.</p>
Thyroid¹⁶	
Features	<ul style="list-style-type: none"> • Large and heterogeneous, likely goiter – probably OK; consider thyroid function testing. • Nodule < 15 mm – OK. <p>→ Nodule ≥ 15 mm or with suspicious features → w/u: thyroid US and clinical evaluation.</p>

References:

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- 13) Lee SJ, Pickhardt PJ. Opportunistic Screening for Osteoporosis Using Body CT Scans Obtained for Other Indications: the UW Experience. *Clinic Rev Bone Miner Metab*. 2017; 15(3):128–137.
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ATTACHMENT B: BILLING RESOURCES

Contents

- o ACR Lung Cancer Screening Economics & Billing Quick Reference Guide

ACR Lung Cancer Screening Economics & Billing Quick Reference Guide



This guide is intended to answer commonly asked questions about lung cancer screening logistics, program requirements, economics and billing issues.

Definitions	
Chest CT	Generic term encompassing low-dose and non–low-dose CT, with or without IV contrast.
LDCT	Chest CT using low-dose technique — an imaging technique used to evaluate the chest primarily for lung nodule detection, follow-up and lung disease. The LDCT (low-dose chest CT) technique is required for lung cancer screening.
Interval CT	Short interval chest CT or CTA performed “off-cycle” between annual screening exams for diagnostic purposes. In most cases, performed with LDCT technique.
Surveillance CT	Diagnostic chest CT performed for surveillance in patients with known lung cancer, generally evaluating for recurrent cancer.
Program specifics	
Site accreditation requirements	<p>For CT: CT accreditation is required for non–hospital-based outpatient facilities that bill for CT under part B of the Medicare physician fee schedule.</p> <p>For ACR® Lung Cancer Screening Center Designation: Facility must have ACR CT Accreditation and participate in the ACR Lung Cancer Screening (LCS) Registry.</p> <p>For ACR LCS Registry participation: ACR CT Accreditation is not required.</p>
Ordering provider	An order for LCS LDCT must be provided by a licensed independent practitioner. Order may be electronic or paper-based.
Shared decision making	<p>Face-to-face discussion by a licensed independent practitioner (physician, NP and PA) (required by Medicare for first-time screen only) or auxillary personel incident to physician’s professional services. This discussion can be performed and reimbursed multiple times per year. This can be performed via telehealth.</p> <p>Can be performed as part of the Evaluation and Management (E&M) visit and billed with a 25 modifier. Optional but reimbursable (by Medicare) for subsequent annual LCS CT.</p>
Smoking cessation intervention	Smoking cessation interventions and services must be offered to current smokers. If smoking cessation counseling is provided, it must be documented separately. Smoking cessation counseling can be reported in addition to an E&M visit, performed on the same day by the same licensed independent provider, by appending 25 modifier to the appropriate level of E&M service. This can be performed via telehealth.
Lung-RADS®	<p>Used for interpreting low-dose LCS CT exams and interval follow-up CTs for screen-detected abnormalities that may be lung cancer.</p> <p>If an interval CT is performed for another reason, Lung-RADS use is recommended when possible for the lung nodule-specific findings.</p> <p>Use is required for participation in the ACR Lung Cancer Screening Registry™.</p>
ACR Lung Cancer Screening Registry	Submission of data to the registry is optional but participation is encouraged to support quality improvement in LCS. The ACR submits a subset of data to CMS.

LCS coverage and eligibility criteria	
Medicare	LCS is covered as a preventive service in patients ages 50–77 years; ≥20 pack-year smoking history; current smokers or quit within last 15 years; no signs or symptoms of lung cancer.
Medicaid	Varies, state-dependent. In Medicaid Expansion states, the United States Preventive Services Task Force (USPSTF) criteria apply. In other states, typically Medicare-like criteria apply. Verify specifics for your state.
Commercial	The USPSTF has recommended that LCS CT be covered as a preventive service for patients who meet the following eligibility criteria — ages 50–80; ≥20 pack-year smoking history; patient who currently smokes or quit within last 15 years; no signs or symptoms of lung cancer (criteria were updated in March 2021).
Self-pay	Permitted for patients who do not meet standard criteria but fulfill National Comprehensive Cancer Network group 2 or other high-risk criteria. Coded as LCS LDCT (71271); submission to the ACR LCS Registry is required.
IDTF setting	LCS LDCT is covered in an Independent Diagnostic Testing Facility (IDTF) setting for patients with commercial insurance, Medicare, Medicaid or on a self pay basis.
Billing	
Pre-authorization requirement	Typically required for Medicare Advantage and commercial insurance. Not required for traditional Medicare. May be required for Medicaid (varies by state).
Shared decision-making visit	Code: G0296; no co-pay (ICD 10 code — recommend Z87.891 or F17.210).
LCS LDCT billing code	Code: 71271; no co-pay (ICD-10 code — recommend Z87.891 or F17.210).
Tobacco cessation counseling	3–10 minutes: CPT Code 99406 (ICD 10 code — recommend F17.210). Over 10 minutes: CPT Code 99407 (ICD 10 code — recommend F17.210).
Interval CT (diagnostic CT)	Diagnostic CT Code: 71250; co-pay typically required. Diagnostic CTA Code: 71275; co-pay typically required.
Follow up	
Lung-RADS 3	6-month follow-up CT; if unchanged or smaller ➡ LCS LDCT 1 year after the follow-up CT.
Lung-RADS 4A	3-month follow-up CT; if unchanged or smaller ➡ 6-month follow-up LDCT; Then, if unchanged or smaller ➡ LCS LDCT 1 year after last follow-up CT.
Lung cancer diagnosis confirmed	Discharge from LCS; patient may return to screening after appropriate post-treatment surveillance.

Commonly Used Acronyms:

ACR:	American College of Radiology
CMS:	Centers for Medicare & Medicaid Services
E&M:	Evaluation and management
IDTF:	Independent Diagnostic Testing Facility
LCS:	Lung cancer screening
LDCT:	Low-dose chest CT
NCCN:	National Comprehensive Cancer Network (NCCN group 2 criteria = ages ≥50, at least 20 pack-year and another risk factor)
NLCRT:	National Lung Cancer Roundtable

ATTACHMENT C: BROCHURES

Contents

- Nevada Cancer Coalition Lung Screening Brochure, English and Spanish
- Eon Health Lung Screening Infographic
- Eon Health Lung Screening Booklet

Ready to quit smoking?

Quitting is hard. Lung screening is easy.

Quitting smoking is hard, but there's help available.

The Nevada Tobacco Quitline has counselors ready to help at any time of day or night, and quit medication may be available.

Get help online or by phone:

Call 1-800-QUIT-NOW
or visit
<https://nevada.quitlogix.org/>
to get started.

You may also talk to your doctor about prescription medication or other tools to help you quit tobacco for good and improve your health.

If you smoke, or have quit smoking, you may be eligible for lung cancer screening.

When found early, lung cancer is easier to treat and cure
– thanks to recent treatment advances.



What causes lung cancer?

Most lung cancers are caused by smoking tobacco, but exposure to these may also put you at risk:

- Other people's tobacco smoke, called secondhand smoke.
- Radon, an odorless, colorless gas that occurs naturally in the environment. You can test your home for radon with a kit from the Nevada Radon Education Program.
- Asbestos, which may be found in older homes.
- Diesel exhaust, such as from large trucks.
- Chemical exposure.



**NEVADA CANCER
COALITION**

NevadaCancerCoalition.org



Let's find out if you qualify for lung screening.

Age 50-80 AND:

- A current smoker or quit in the last 15 years.
- Smoke or smoked what equals 20 "pack years."
- Do not have any signs or symptoms of lung cancer.

What's a pack year?

There are about 20 cigarettes in a normal pack. If you smoked a pack a day for 20 years, you have smoked 20 pack years.

Visit ShouldScreen.com for a pack year calculator.

of packs you smoked a day

X

of years you smoked

=

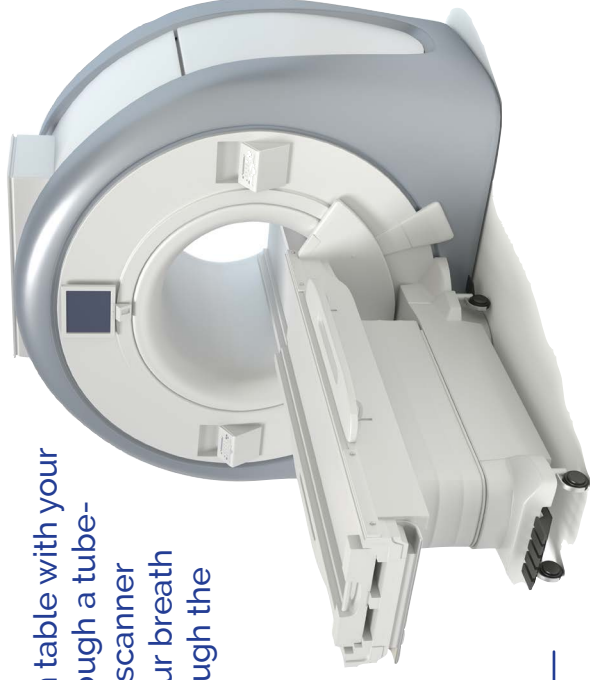
of pack years



What to Know About Lung Cancer Screening

During the screening you'll lie flat on an exam table with your arms over your head. The table will move through a tube-like low-dose computed tomography (LDCT) scanner to the starting position. Then, you will hold your breath for 5-10 seconds and the table will move through the machine again for the actual scan.

The scan will create an image of your lungs that doctors can use to look for signs of cancer, such as growths or lumps. The whole process takes about 30 minutes.



Lung screening is about your health. Take control and leave the "scanxiety" behind.

How to Get Screened

Talk to your doctor about your smoking history and ask for a referral for lung screening.

Your doctor and insurance provider can help you find the nearest screening location and schedule an appointment.

Medicare, VA and most commercial insurance providers cover lung screening. If you need help paying for screening, contact a ThriveNV navigator at ThriveNV.org.



¿Listo para dejar de fumar?

Dejar de fumar es difícil. El examen de pulmón es fácil.

Dejar de fumar es difícil, pero hay ayuda disponible.

La línea para dejar de fumar de Nevada tiene consejeros listos para ayudar en cualquier momento del día o de la noche, y los medicamentos para dejar de fumar pueden estar disponibles.

Obtenga ayuda en línea o por teléfono:

Llame al **1-800-QUIT-NOW** o visite <https://nevada.quitlogix.org/> para comenzar.

También puede hablar con su médico sobre medicamentos recetados u otros recursos para ayudarlo a dejar el tabaco para siempre y mejorar su salud.



¿Qué causa el cáncer de pulmón?

La mayoría de los cánceres de pulmón son causados por fumar tabaco, pero la exposición a estos también puede ponerlo en riesgo:

- El humo de tabaco de otras personas, llamado humo de segunda mano.
- Radón, un gas inodoro e incoloro que se produce naturalmente en el medio ambiente. Puede probar su casa para detectar radón con un kit del Programa de Educación sobre el Radón de Nevada.
- Asbestos, que se puede encontrar en casas antiguas.
- Escape de Diesel, como el de camiones grandes.
- Exposición a químicas.

Si usted fuma o ha dejado de fumar, puede ser elegible para la detección del cáncer de pulmón.

Cuando se detecta temprano, el cáncer de pulmón es más fácil de tratar y curar, gracias a los recientes avances en el tratamiento.



NevadaCancerCoalition.org

Averigüemos si califica para la detección del cáncer de pulmón.

La Edad 50-80 Y:

- Un fumador actual o dejado de fumar en los últimos 15 años.
- Fumar o fumar lo que equivale a 20 "paquetes de años".
- No tienen ningún signo o síntoma de cáncer de pulmón.

¿Qué es un paquete por año?

Hay alrededor de 20 cigarrillos en un paquete normal. Si fumó un paquete al día durante 20 años, ha fumado 20 paquetes.

Visite ShouldScreen.com para obtener una calculadora de paquete anual.

de paquetes que fumó al día

X

de años que fumó

=

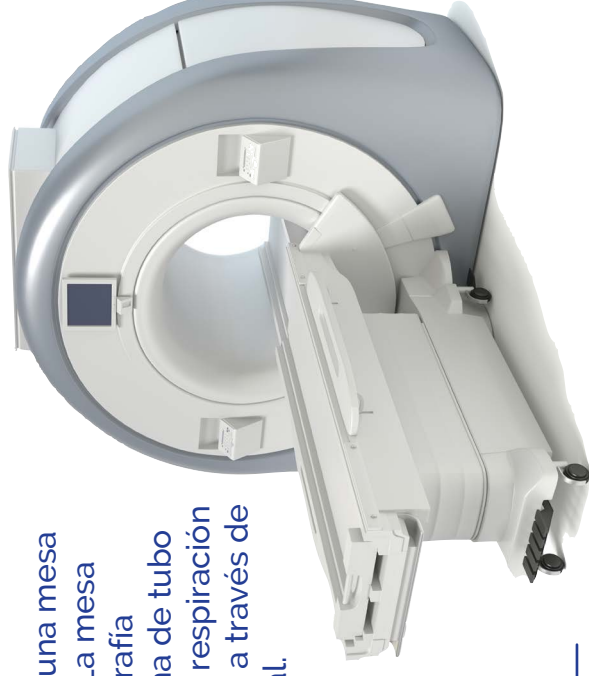
de paquetes de años



Lo que debe saber sobre la detección del cáncer de pulmón

Durante la evaluación, usted se acostará en una mesa de examen con los brazos sobre la cabeza. La mesa se moverá a través de un escáner de tomografía computarizada de baja dosis (LDCT) en forma de tubo hasta la posición inicial. Luego, contendrá la respiración durante 5-10 segundos y la mesa se moverá a través de la máquina nuevamente para el escaneo real.

La exploración creará una imagen de sus pulmones que los médicos pueden usar para buscar signos de cáncer, como crecimientos o bultos. Todo el proceso dura unos 30 minutos.



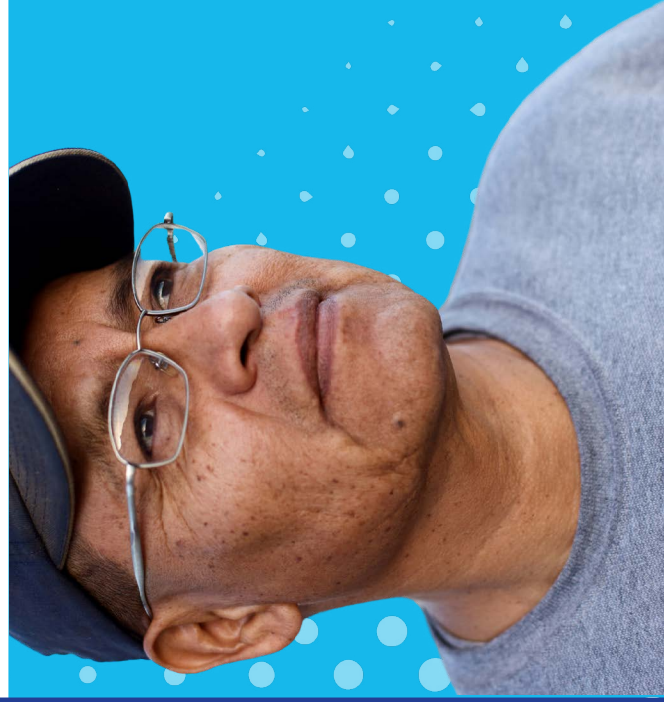
La prueba de detección pulmonar tiene que ver con su salud. Toma el control y deja atrás la "ansiedad de escanear".

Cómo hacerse la prueba de detección

Hable con su médico a cerca de su historial de tabaquismo y solicite una derivación para un examen de pulmón.

Su médico y proveedor de seguros pueden ayudarlo a encontrar el lugar de detección más cercano y programar una cita.

Medicare, VA y la mayoría de los proveedores de seguros comerciales cubren los exámenes pulmonares. Si necesita ayuda para pagar la detección, comuníquese con un navegador de ThriveNV en ThriveNV.org



Lung Cancer Screening

Learn more about the importance of screening, who's at risk of developing lung cancer, and the benefits of early detection.



22.4%
LUNG

Lung cancer is the second most common cancer in both men and women in the United States. **Each year, more people die of lung cancer** than of colorectal, breast, and prostate cancers combined.

8.8%
COLORECTAL

7%
BREAST

5.5%
PROSTATE

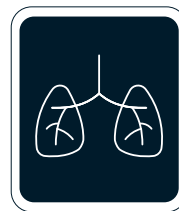
<https://seer.cancer.gov/statfacts/>

Providers Are Missing An Opportunity



8 million

Americans are currently **at risk** for lung cancer in the United States



Screening with annual LDCT can prevent **one death for every 250** at-risk adults who are screened.

<https://www.lung.org/lung-health-diseases/lung-disease-lookup/lung-cancer/resource-library/lung-cancer-fact-sheet>
<https://www.cancer.gov/types/lung/patient/lung-screening-pdq>

Lung Cancer Screening



Who Is At Risk?

Knowing which patients are eligible for screening is the first step. Providers who recognize eligible at-risk patients can proactively screen to detect cancer early when it is more easily treated. Patients at-risk include those who meet all of the following criteria:

- ✓ Are 50 to 77 years old
- ✓ Have a smoking history of ≥ 20 pack-years*
- ✓ Are currently smoking or who have quit within the last 15 years

$$\text{Pack Years} = \text{Average \# of Packs Per Day} \times \text{\# of Years Smoked}$$

*Number of cigarette packs smoked per day multiplied by the number of years a person has smoked.



The Shared Decision Making Visit

To determine a patient's eligibility for lung cancer screening, a shared decision making visit is required to discuss current and past cigarette use, the benefits and risks of LDCT, and counseling of tobacco cessation. The provider can bill for this CT Lung Cancer Screening shared decision making visit using **screening code G0296**.



Insurance Coverage

Lung cancer screening with LDCT is covered by Medicare for patients 50–77 and by most commercial insurances plans for patients 50–80 at risk for lung cancer.

Early Detection Saves Lives

As providers, patients trust you to determine what's best for their health and well-being. Improving efforts to screen eligible patients gives you the best chance to provide the life-saving early detection that can find cancer and catch it before it spreads. The bottom line:

✓ **Know your at-risk patients**

✓ **Perform annual LDCT screenings**

✓ **Improve Patient Outcomes**

Is Lung Cancer Screening Right For You?

Here's what you should know about this life-saving screening.

1 in 5

of all cancer deaths are lung cancer related.

1 in 16

Americans in their lifetime will be diagnosed with lung cancer.



Learn More About
Lung Cancer Screening



What is lung cancer screening?

Much like a mammogram or a colonoscopy, lung cancer screening is a regular preventive health check. If screening detects lung cancer at an early stage when it is small and before it has spread, it is more likely to be treated successfully, significantly increasing the patient 5-year survival rate.

A low-dose CT (LDCT) scan is the only screening method recommended for at-risk patients. The LDCT machine takes a 3D picture of your lungs and shows more detail than a standard chest X-ray. LDCT scan uses 75% less radiation than a regular CT scan and does not require any needles.



Screening with annual LDCT can prevent one death for every 250 at-risk adults who are screened.

Who should be screened for lung cancer?

LDCT screening is only recommended for individuals who are at-risk for lung cancer. You're considered at-risk and eligible for screening if you:

- Are 50 to 77 years old*
- Are currently smoking or have quit within the last 15 years
- Have a smoking history of ≥ 20 pack-years**

PACK YEARS = average # of packs per day **X** # of years smoked

If you meet the eligibility criteria, you should have a conversation with your doctor or healthcare provider about lung cancer screening.


Common risk factors for lung cancer include:

- Smoking
- Exposure to secondhand smoke
- Exposure to radon gas
- Exposure to asbestos, arsenic, and other carcinogens
- Having a personal or family history of lung cancer

If you have any of these risk factors, have a conversation with your doctor or healthcare provider about your concerns for lung cancer.

*Lung cancer screening with LDCT is covered by Medicare for patients 50–77 and by most commercial insurance plans for patients 50–80 at high risk for lung cancer.

**Number of cigarette packs smoked per day multiplied by the number of years a person has smoked.



Common misconceptions about lung cancer screening:

MYTH: The scans used in lung cancer screening expose you to dangerous radiation

FACT: LDCT scans for lung cancer screening have about 75% less radiation than conventional CT scans. A regular CT scan is associated with a very small risk of developing cancer—about 0.05%, or about 1 in 2,000.



If you have additional questions about lung cancer screening, be sure to talk to your provider.

MYTH: Lung cancer screening is time consuming

FACT: The actual screening process takes around 15 minutes, and the results are usually available within 24 hours. Screening may require two appointments: the first appointment is a shared decision making visit to ensure you are eligible and to answer your questions, and the second appointment is for the screening itself. However, some locations only require one visit.

MYTH: Lung cancer screening is still considered experimental and is not the standard of care

FACT: Screening experts agree that LDCT is beneficial for the at-risk population of current and former smokers. Screening is recommended for these patients and is covered by Medicare, Medicaid, and most insurance companies.

MYTH: If I quit smoking, I am no longer at risk and don't need to be screened

FACT: Current recommendations suggest lung cancer screening for not only current smokers, but also for former smokers who have quit less than 15 years ago.

MYTH: Lung cancer screening has a high rate of false positives, which can lead to unnecessary procedures

FACT: All cancer screenings carry a risk of false positives, but having a false positive doesn't mean you'll necessarily need to have other, more invasive procedures.

What happens before, during, and after a lung cancer screening?

1 BEFORE YOUR SCREENING

You will meet with your provider to discuss the benefits and risks of screening. If you decide on screening, your provider will order the screening and refer you to a location that offers LDCT. Your provider's office may make an appointment for you, or you may need to contact the screening location to set up your appointment.

2 DURING YOUR SCREENING

You lie on your back on a table while pictures are taken of your lungs. You shouldn't need to change your clothes as long as they don't contain metal, and there are no medicines or needles required for the procedure.

3 AFTER YOUR SCREENING

A specialist will read your scan and someone from the screening location or your healthcare team will call you to discuss the result. If you have a negative result, you will continue with yearly screening. If you have a positive result, you may need additional scans or tests. Your healthcare provider will talk to you about the findings and what needs to happen next.

LDCT is quick, painless, and can save your life.



What should I ask my healthcare provider about lung cancer screening?

Here are a few questions you can ask your provider when you discuss yearly lung cancer screening:

- Is lung cancer screening recommended for me?
- How do I know if my insurance covers LDCT screening?
- What are the benefits and risks of LDCT screening?
- How will I get the results of my LDCT scan?
- What tools are available to help me quit smoking?

ATTACHMENT D: SAMPLE RESULT LETTERS

Contents

- Result Letter – Significant Finding
- Result Letter – General
- Result Letter – Suspicious Finding
- Result Letter – Suspicious/Very Suspicious Finding
- Result Letter – Probable/Nodule Finding
- Result Letter – Benign Nodules Finding
- Result Letter – No Evidence of Cancer

RESULT LETTER (SIGNIFICANT FINDING)

Dear _____,

RE: Your screening low-dose chest CT done on:

Interpreted by:

Report electronically available to:

Date:

We are writing to inform you that your recent lung screening CT shows _____ nodules requiring follow-up at this time. However, there is an “incidental or additional” finding, which may require further evaluation. This does not necessarily mean there is a serious problem, but it should not be ignored. Your ordering provider will receive a copy of this CT report and you are encouraged to follow up with your practitioner.

It is recommended that you continue annual lung cancer screening every 12 months as long as you meet the criteria. Your next follow-up will be due on or after _____

Once we receive an order from your provider, you will be contacted by one of our lung screening staff members to schedule this exam.

Here are some other important points you should know:

- Your full low-dose chest CT report, including any minor observations, has been sent to your healthcare provider. Your exam report and images will be kept on file at _____ as part of your permanent record and are available for your continuing care.
- Although low-dose chest CT is very effective at finding lung cancer early, it cannot find all lung cancers. If you develop any new symptoms such as shortness of breath, chest pain, or coughing up blood, please call your doctor.
- Please keep in mind that good health involves quitting smoking. For help in quitting, please contact our health coaches at _____ or call _____ to register for smoking cessation classes.
- Screening does not obligate you to return to _____ but we are happy to provide the service to you.

If you have any questions about this letter, please contact your healthcare provider. You may also contact the _____ at _____ between _____ and _____, Monday through Friday.

Sincerely,

RESULT LETTER

Dear _____,

RE: Your screening low-dose chest CT done on:

Interpreted by:

Report electronically available to:

Date:

We are writing to let you know that your recent lung screening CT shows _____ nodules requiring follow-up at this time. It is recommended that you continue annual screening every 12 months as long as you meet the criteria. Your next follow will be due on or after _____.

Once we receive an order from your provider, you will be contacted by one of our lung screening staff members to schedule this exam.

Here are some other important points you should know:

- Your full low-dose chest CT report, including any minor observations, has been sent to your healthcare provider. Your exam report and images will be kept on file at _____ as part of your permanent record and are available for your continuing care.
- Although low-dose chest CT is very effective at finding lung cancer early, it cannot find all lung cancers. If you develop any new symptoms such as shortness of breath, chest pain, or coughing up blood, please call your doctor.
- Please keep in mind that good health involves quitting smoking. For help in quitting, please contact our health coaches at _____ or call _____ to register for smoking cessation classes.

If you have any questions about this letter, please contact your healthcare provider. You may also contact the _____ at _____ between _____ and _____, Monday through Friday.

Sincerely,



Name: _____
Address: _____
City: _____
State: _____ Zip: _____

Lung Cancer Screening Result Letter

Dear: _____

We are writing to inform you that your recent lung screening CT performed on _____ revealed a suspicious finding for which additional diagnostic testing is required which could include PET/CT and/or 3 mo. follow-up due on or after _____.

A report of your results with the above recommendation(s) has been sent to your ordering health care provider. Please contact them as soon as possible to discuss these results and help facilitate next steps in your medical care.

Here are some other important points you should know.

1. Your full low-dose chest CT report, including any minor observations, has been sent to your ordering healthcare provider. Your exam report and images will be kept on file at Humboldt General Hospital as part of your permanent record and are available for your continuing care.
2. Although low-dose chest CT is very effective at finding lung cancer early, it cannot find all lung cancers. If you develop any new symptoms such as shortness of breath, chest pain, or coughing up blood, please call your doctor.
3. Please keep in mind that good health involves quitting smoking. For help quitting, please contact the Nevada Tobacco Quitline at 1-800-QUIT-NOW
4. Screening does not obligate you to return to Humboldt General Hospital, but we are happy to provide the service to you.

Sincerely,

Diagnostic Imaging Department

Humboldt General Hospital



Name: _____
Address: _____
City: _____
State: _____ Zip: _____

Lung Cancer Screening Result Letter

Dear: _____

We are writing to inform you that your recent lung screening CT performed on _____ revealed a suspicious or very suspicious finding for which additional diagnostic testing and/ or tissue sampling is recommended. This finding could represent lung cancer and immediate action is required.

A report of your results with the above recommendation(s) has been sent to your ordering health care provider. Please contact them as soon as possible to discuss these results and help facilitate next steps in your medical care.

Here are some other important points you should know.

1. Your full low-dose chest CT report, including any minor observations, has been sent to your ordering healthcare provider. Your exam report and images will be kept on file at Humboldt General Hospital as part of your permanent record and are available for your continuing care.
2. Although low-dose chest CT is very effective at finding lung cancer early, it cannot find all lung cancers. If you develop any new symptoms such as shortness of breath, chest pain, or coughing up blood, please call your doctor.
3. Please keep in mind that good health involves quitting smoking. For help quitting, please contact the Nevada Tobacco Quitline at 1-800-QUIT-NOW
4. Screening does not obligate you to return to Humboldt General Hospital, but we are happy to provide the service to you.

Sincerely,

Diagnostic Imaging Department

Humboldt General Hospital



Name: _____
Address: _____
City: _____
State: _____ Zip: _____

Lung Cancer Screening Result Letter
(FOLLOW-UP)

Dear: _____

We are writing to you about your recent lung screening performed on _____ revealed a probable benign finding(s) or nodule(s) with a low likelihood of becoming clinically active cancer. It is recommended that you return for a follow-up LDCT in 6 months. Your next low dose CT will be due on or after _____.

A report of your results with the above recommendations has been sent to your ordering health care provider so they may help facilitate this important follow-up exam.

If you so choose to utilize our facility for your follow-up care, once we receive an order from your provider, you will be contacted by one of our scheduling staff to schedule.

Here are some other important points you should know.

1. Your full low-dose chest CT report, including any minor observations, has been sent to your ordering healthcare provider. Your exam report and images will be kept on file at Humboldt General Hospital as part of your permanent record and are available for your continuing care.
2. Although low-dose chest CT is very effective at finding lung cancer early, it cannot find all lung cancers. If you develop any new symptoms such as shortness of breath, chest pain, or coughing up blood, please call your doctor.
3. Please keep in mind that good health involves quitting smoking. For help quitting, please contact the Nevada Tobacco Quitline at 1-800-QUIT-NOW

Sincerely,

Diagnostic Imaging Department

Humboldt General Hospital



Name: _____
Address: _____
City: _____
State: _____ Zip: _____

Lung Cancer Screening Result Letter

Dear: _____

We are writing to you about your recent lung screening CT performed on _____ showed nodule(s) that are benign (non-cancerous) in appearance or behavior. While this finding on your exam is not suspicious for cancer it should not be ignored and should be discussed further with your ordering provider for the next steps.

It is recommended that you return for an annual low dose CT in 12 months. Your ordering healthcare provider can help facilitate this important yearly screening exam. Your next low dose CT is recommended on or after _____.

Once we receive an order from your provider, you will be contacted by one of our scheduling staff to schedule.

Here are some other important points you should know.

1. Your full low-dose chest CT report, including any minor observations, has been sent to your ordering healthcare provider. Your exam report and images will be kept on file at Humboldt General Hospital as part of your permanent record and are available for your continuing care.
2. Although low-dose chest CT is very effective at finding lung cancer early, it cannot find all lung cancers. If you develop any new symptoms such as shortness of breath, chest pain, or coughing up blood, please call your doctor.
3. Please keep in mind that good health involves quitting smoking. For help quitting, please contact the Nevada Tobacco Quitline at 1-800-QUIT-NOW
4. Screening does not obligate you to return to Humboldt General Hospital, but we are happy to provide the service to you.

Sincerely,

Diagnostic Imaging Department

Humboldt General Hospital



Name: _____
Address: _____
City: _____
State: _____ Zip: _____

Lung Cancer Screening Result Letter

Dear: _____

We are writing to you about your recent lung screening performed on _____ shows no evidence of cancer. It is recommended that you continue annual screening every 12 months as long as you meet the criteria. Your next screening CT will be due on or after _____.

Once we receive an order from your provider, you will be contacted by one of our scheduling staff to schedule.

Here are some other important points you should know.

1. Your full low-dose chest CT report, including any minor observations, has been sent to your ordering healthcare provider. Your exam report and images will be kept on file at Humboldt General Hospital as part of your permanent record and are available for your continuing care.
2. Although low-dose chest CT is very effective at finding lung cancer early, it cannot find all lung cancers. If you develop any new symptoms such as shortness of breath, chest pain, or coughing up blood, please call your doctor.
3. Please keep in mind that good health involves quitting smoking. For help quitting, please contact the Nevada Tobacco Quitline at 1-800-QUIT-NOW

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