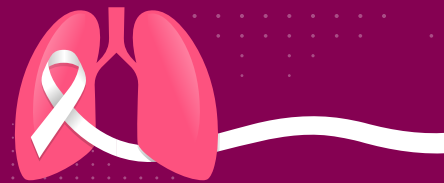


Lung Cancer Screening in COPD

Closing the Gap in High-Risk Populations



Why are routine screenings important?

COPD is an **independent risk factor** for lung cancer, associated with

2- to 7-fold

higher odds for development compared with individuals without COPD^{1,a}



Up to

77%

of patients with COPD diagnosed with lung cancer **present with advanced or metastatic disease**^{2,b}

As many as

~2 in 3



eligible patients with COPD are **not up to date** with recommended annual lung cancer screening^{3,c}

GOLD Report: Recommendation for Lung Cancer Screening

Annual low-dose computed tomography (LDCT) is recommended for lung cancer screening in **patients with smoking-related COPD who meet high-risk criteria**, in accordance with established recommendations for the general population⁴

USPSTF-Recommended Population Criteria for Annual LDCT Screening⁵

Age



50 to 80 years

Smoking Status



Active or quit in the past 15 years



≥20 pack-year history

Reassess LDCT Eligibility Annually

Discontinue screening if patient has not smoked for 15 years or if a new condition limits the patient's life expectancy or ability to undergo lung surgery.⁵

Reinforce Smoking Cessation and Prevention

Smoking cessation is the most effective intervention for reducing lung cancer risk. All patients with COPD who smoke should be encouraged to quit and offered cessation counseling as part of standard care.^{4,5}

Shared Decision-Making for LDCT Referral

Discuss the potential benefits, limitations, and harms of screening to help guide decision-making.⁴ Age and smoking history should be used to guide risk assessment for screening eligibility, though other potential risk factors may be discussed during shared decision-making. If appropriate, refer for LDCT, preferentially to a center with expertise in lung cancer screening.^{4,5}

GOLD Report

Common risk factors for lung cancer development⁴:

- Airflow limitation ($FEV_1/FVC < 0.7$)
- Emphysema identified on CT scan
- BMI < 25 kg/m²
- Family history of lung cancer

^aCross-sectional analysis of National Health Examination and Nutrition Survey data (2003–2016) from 23,523 adults. Associations between lung cancer and COPD phenotypes were evaluated using multivariable logistic regression adjusted for demographic and lifestyle factors. Emphysema was associated with 7.6-fold higher odds of lung cancer (95% CI, 3.0–19.1) and chronic bronchitis with 2.4-fold higher odds (95% CI, 1.1–5.5), compared with participants without these conditions, respectively. ^bBased on SEER-Medicare data from ~117,200 patients (US), ≥68 years with COPD who were diagnosed with primary invasive lung cancer between 2008 and 2017. ^cCross-sectional analysis of 2022 Behavioral Risk Factor Surveillance System (BRFSS) data identified patients with COPD eligible for lung cancer screening (n=5,610) under 2021 USPSTF criteria (aged 50–79 years; age 80 was excluded due to BRFSS reporting in 5-year increments, ≥20 pack-year smoking history, and currently smoke or quit within the past 15 years). Up-to-date screening was defined as receipt of a LDCT scan within the past year. ^dPotential harms of LDCT screening include false-positive results leading to unnecessary tests and invasive procedures, incidental findings, short-term increases in distress due to indeterminate results, overdiagnosis, and radiation exposure.

BMI, body mass index; COPD, chronic obstructive pulmonary disease; CT, computed tomography; FEV₁, forced expiratory volume in 1 second; FVC, forced vital capacity; GOLD, Global Initiative for Chronic Obstructive Lung Disease; SEER, Surveillance, Epidemiology, and End Results; USPSTF, US Preventive Services Task Force.

1. Rahman HH, et al. *Environ Sci Pollut Res Int*. 2023;30(8):20147–20158. 2. Metwally EM, et al. *Chronic Obstr Pulm Dis*. 2024;11(4):382–385. 3. Nielsen N, et al. *Lung*. 2024;203(1):2. 4. Global Initiative for Chronic Obstructive Lung Disease (GOLD). Global strategy for prevention, diagnosis and management of COPD: 2025 report. Accessed June 18, 2025. <https://goldcopd.org/2025-gold-report/>. 5. US Preventive Services Task Force. *JAMA*. 2021;325(10):962–970.

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