

Lung Cancer Profiler 2021 Update

Client Review Document

Overview

The Lung Cancer Profiler makes lung cancer screening recommendations based on age and smoking history. This online assessment is intended only for people who have NOT already been diagnosed with lung cancer. The results are based on widely accepted research but are only accurate for the intended audience.

Main Scientific Basis

The recommendations included in this assessment are from the U.S. Preventive Services Task Force (USPSTF)¹ released in 2021. The USPSTF recommends annual screening for adults who meet all of the following criteria:

- Age 50 to 80
- 20+ pack-year smoking history
- Current smoker or quit fewer than 15 years ago

Other societies recommend slightly different age minimum (55 years), age maximum (74, 77 or 79 years) and smoking pack-year cut-off (30 years).^{2,3,4,5}

Product Description

The Lung Cancer Profiler provides lung cancer screening recommendations based on age and smoking history. Other risk factors for developing lung cancer are assessed, including:

- COPD
- Pulmonary fibrosis
- Radiation therapy to the chest
- Family or personal history of smoking-related cancers
- Exposures to cancer-causing substances in the environment or workplace, such as radon or dusts

Primary Results

The primary result from the Lung Cancer Profiler is the screening recommendation. The results are organized into the following categories:

- Screening May Be Recommended
- Discuss Screening Options with a Doctor
- Not Currently Recommended
- Discuss Screening Options at Age 50
- Not Recommended Due to Age
- Former Smoker – Not Recommended
- Never Smoker – Not Recommended

Follow-up messaging, emails, and programs can be developed to align with these categories.

Screening Recommendations Categories

Screening May Be Recommended

This category includes individuals who meet all of these criteria:

- Age 55 to 77
- 30+ pack-year smoking history
- Current smoker or quit fewer than 15 years ago

Discuss Screening Options with a Doctor

This category includes individuals:

- Age 50-80 with a 20+ pack-year smoking history who either currently smoke or who quit smoking less than 15 years ago and don't meet the criteria for Screening Recommended.
- This category was created to handle individuals who may be recommended for screening based on USPSTF guidelines but may not have screening costs covered by Medicare or private insurance.

Not Currently Recommended

This category includes current smokers with 1 of these 2 profiles:

- Age 18 to 35 with 20+ pack years smoking
- Age 18 to 80 with fewer than 20 pack-years smoking

Discuss Screening Options at Age 50

This category includes people with 1 of these 2 profiles:

- Current smokers, age 36 to 49, with ≥ 20 pack-years
- Former smokers, age 36 to 49 with ≥ 20 pack-years, quit after age 35

Not Recommended Due to Age

This category includes current or former smokers over age 80.

Former Smoker – Not Recommended

This category includes former smokers who meet 1 of these 3 criteria:

- Quit more than 15 years ago
- Have fewer than 20 pack-years of smoking

Never Smoker – Not Recommended

This category includes individuals of any age who have never smoked.

References

1. Screening for Lung Cancer: U.S. Preventive Services Task Force Recommendation Statement. *JAMA*. 2021;325(10):962-970. doi:10.1001/jama.2021.1117.
2. Jaklitsch MT, Jacobson FL, Austin JH, et al. The American Association for Thoracic Surgery guidelines for lung cancer screening using low-dose computed tomography scans for lung cancer survivors and other high-risk groups. *J Thorac Cardiovasc Surg*. 2012;144(1):33-38. doi:10.1016/j.jtcvs.2012.05.060 44.
3. Lung cancer screening guidelines. American Cancer Society. Accessed March 18, 2021. <https://acsjournals.onlinelibrary.wiley.com/doi/epdf/10.3322/caac.21172>.
4. Mazzone PJ, Silvestri GA, Patel S, et al. Screening for lung cancer: CHEST guideline and expert panel report. *Chest*. 2018;153(4):954-985. doi:10.1016/j.chest.2018.01.016
5. NCCN Guidelines for Patients: lung cancer screening. National Comprehensive Cancer Network. Published 2020. Accessed March 18, 2021. https://www.nccn.org/patients/guidelines/content/PDF/lung_screening-patient.pdf.