Lung Cancer Screening

Disclaimer: This algorithm has been developed for MD Anderson using a multidisciplinary approach considering circumstances particular to MD Anderson’s specific patient population, services and structure, and clinical information. This is not intended to replace the independent medical or professional judgment of physicians or other health care providers in the context of individual clinical circumstances to determine a patient's care. This algorithm should not be used to treat pregnant women.

Note: Screening is only intended for asymptomatic individuals and should take place in the context of appropriate shared decision making. Individuals undergoing lung cancer screening should have a 10-year life expectancy and no co-morbidities that would limit the diagnostic evaluation or treatment of any identified problem. The screening technique should be performed with a consistent technique and process.

PRESENTATION

Presence of lung cancer symptoms?*

Yes

Proceed to diagnostic evaluation

No

RISK

Low Risk:
- Age less than 50 years old
- Age greater than 80 years old and/or
- Less than 20 pack-year tobacco smoking history

High Risk:
- Age 50-80 years old and
- Greater than or equal to 20 pack-year tobacco smoking history and
- Current tobacco smoker or former tobacco smoker who has quit within the last 15 years and
- Patient is willing to undergo curative treatment for lung cancer

SCREENING

- Screening not recommended
- If patient is a current tobacco smoker or a recent tobacco smoker who has quit within the past year, provide tobacco smoking cessation counseling and refer to the Tobacco Cessation Treatment - Adult algorithm
- Annual low-dose CT lung screening
- If patient is a current tobacco smoker or a recent tobacco smoker who has quit within the past year, provide tobacco smoking cessation counseling and refer to the Tobacco Cessation Treatment - Adult algorithm

1 Refer to Small Cell Lung Cancer (SCLC) algorithm or Non-Small Cell Lung Cancer algorithm
2 Lung cancer screening should be avoided in patients that are currently undergoing cancer treatment (lung cancer or other malignancies) or that are under post-treatment surveillance for recurrent or metastatic disease. These cases should be evaluated on a case-by-case basis.
3 Refer to Appendix A for the Benefits and Risks of Lung Cancer Screening
4 Lung cancer symptoms include:
   - Cough
   - Hoarseness
   - Unexplained weight loss
   - Hemoptysis
5 Multi-detector thin-slice low dose CT chest without IV contrast
6 High risk patients aged 78-80 years old are eligible by United States Preventive Services Taskforce (USPSTF) screening criteria, but are currently not covered by Centers for Medicare and Medicaid Services (CMS). Private insurance plans vary according to plan.
APPENDIX A: Benefits and Risks of Lung Cancer Screening

**Benefits**
- Increase survival from lung cancer
- Identification of previously unknown major health risks
- Improvement of quality of life
- Reduction in disease-related morbidity, treatment-related morbidity, and mental, emotional, social, and spiritual health implications

**Risks**
- Detection of non-aggressive tumors or indolent disease
- Detection of incidental lesions
- Potential side effects and/or complications from diagnostic workup
- Inaccurate results from testing (e.g., false-positive results or false-negative results)
- Unnecessary testing and procedures
- Exposure to radiation
- Anxiety and stress from test results
- Financial burden
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SUGGESTED READINGS


This screening algorithm is based on majority expert opinion of the Lung Cancer Screening workgroup at the University of Texas MD Anderson Cancer Center. It was developed using a multidisciplinary approach that included input from the following:

**Core Development Team Leads**
- Therese Bevers, MD (Cancer Prevention)
- Myrna Godoy, MD (Thoracic Imaging)
- Ana Nelson, DNP, APRN, FNP (Cancer Prevention)

**Workgroup Members**
- Heather Alexander Dahl, PgDip, BA (Community Alliances)
- Powel Brown, MD, PhD (Cancer Prevention)
- Joyce Dains, DrPH, JD, DNur, FNP-BCNAP (Nursing)
- George Eapen, MD (Pulmonary Medicine)
- Jeremy Erasmus, MD (Thoracic Imaging)
- Wendy Garcia, BS*
- Ernest Hawk, MD, MPH (Cancer Prevention)
- Maisa Sanchez, LVN (Diagnostic Imaging)
- Stephen Swisher, MD (Surgery)
- Priya Thomas, MD (Cancer Prevention)
- Hannah Warr, MSN, CPHON*

*Clinical Effectiveness Development Team

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