

Questions:

1.

A 65-year-old male who has been undergoing lung cancer screening for the past 2 years presents for follow-up after a yearly-low-dose chest CT was completed. He has a 50 pack-year tobacco history and quit smoking two years ago. The patient has no concerning symptoms as required for the screening CT. His chest CT demonstrates a new 5mm solid nodule in the right upper lobe.

Based on the provided data, how will this nodule be categorized under Lung RADS?

- A. Lung-RADS 1
- B. Lung-RADS 2
- C. Lung-RADS 3
- D. Lung-RADS 4A
- E. Lung-RADS 4B

2.

A 50-year-old male with a 12 pack-year tobacco history was seen urgently in the emergency room after a motor vehicle accident. As part of a trauma work up, a CT of the chest is obtained which demonstrates an incidental 5mm solitary, solid, spiculated lung nodule in the left upper lobe. The patient does not have any prior history of malignancy.

What is the appropriate next step in the evaluation of this nodule based on Fleischner Society Guidelines?

- A. No follow up necessary
- B. LDCT in 3 months
- C. LDCT in 6 months or PET CT
- D. LDCT in 12 months
- E. Tissue sampling

3.

A 75-year-old male current smoker with a 40 pack-year tobacco history presents to the emergency room after a fall. A CT chest with contrast ordered as part of the trauma evaluation shows a left upper lobe solid peripheral nodule measuring 9mm without associated mediastinal or hilar adenopathy. There were no other significant findings on the remainder of the CT body imaging. The patient was referred to the interventional pulmonary clinic for further evaluation of the pulmonary nodule.

What is/are the recommended management option(s) in the Fleischner Society Guidelines for this incidentally diagnosed pulmonary nodule?

- A. Repeat chest CT in 6-12 months , then consider CT at 18-24 months
- B. Optional CT at 12 months
- C. Surgical resection
- D. Repeat chest CT at 3 mo, PET/CT, or tissue sampling

4.

A 45 year-old man who is a current smoker presents with shoulder pain after a baseball injury. A shoulder series identifies a soft tissue injury and an incidental lung nodule prompting further imaging. A chest CT confirms an 18mm solid subpleural right lower lobe lung nodule. The patient subsequently undergoes a PET CT which demonstrates isolated FDG uptake (SUV 10) in the right upper lobe nodule without evidence of mediastinal or hilar lymphadenopathy or FDG uptake. The patient wishes to have confirmation of a diagnosis prior to possible surgical resection.

Which technique has been reported to have the highest diagnostic yield?

- A. Ultrathin bronchoscopy-guided bronchoscopy with biopsy
- B. CT-guided transthoracic biopsy
- C. Electromagnetic navigational bronchoscopy with biopsy
- D. Radial EBUS-guided bronchoscopy with biopsy
- E. Virtual bronchoscopy with biopsy

5.

A 59-year-old female former smoker with a 40 pack-year tobacco history who quit smoking 5 years ago has been part of a lung cancer screening program for the past 2 years. There have been no significant findings on prior LDCT. This year's LDCT identified a new pulmonary nodule in the LUL measuring 7mm.

What is the best next step in management?

- A. Repeat LDCT chest in 3 months
- B. Repeat LDCT scan in 6 months
- C. Repeat LDCT scan in 12 months
- D. Navigation bronchoscopy with linear EBUS

6.

A 37-year-old female never smoker with a history of asthma presented to the emergency room with very sudden onset dyspnea. CT angiogram of the chest was obtained and showed no evidence of a pulmonary embolus, however there was a right upper lobe 4mm pulmonary nodule. The patient was treated for an asthma exacerbation

and was referred to interventional pulmonary for follow up and recommendations for management of the incidentally identified pulmonary nodule.

What is the best next step for follow up?

- A. CT chest or PET CT in 3 months
- B. CT chest in 6-12 months
- C. Optional CT chest at 12 months
- D. No routine radiologic follow up

7.

A 65-year-old male former smoker with a 45 pack-year tobacco history underwent LDCT chest as part of lung cancer screening and was found to have a 20mm nodule in the apical segment of the right upper lobe. A bronchus sign appears to be present. The patient subsequently underwent a PET/CT which showed significant FDG uptake (SUV 9) in the right upper lobe nodule and mild FDG uptake in the right hilum. The patient is scheduled to undergo a diagnostic procedure.

Which diagnostic procedure has been shown to provide the highest diagnostic yield with the lowest risk of pneumothorax?

- A. Transbronchial biopsies and transbronchial needle aspiration (TBNA) of the lung nodule under fluoroscopic guidance
- B. Radial EBUS without guide sheath and biopsy of the lung nodule
- C. CT-guided transthoracic needle aspiration of the lung nodule
- D. Radial EBUS with guide sheath and biopsy of the lung nodule

8.

A 45-year-old male never-smoker with a history of obesity, GERD and a family history of colon cancer in two 1st degree relatives presented to the emergency room with chest pain. CT angiogram of the chest was obtained and showed no evidence of a pulmonary embolus, however a 14mm right upper lobe pulmonary nodule was noted. Which of the following increases the likelihood that this lung nodule is malignant?

- A.) Patient's age
- B.) Male sex
- C.) Nodule location
- D.) Obesity
- E.) Strong family history of colon cancer

9.

A 50-year old woman with a history of GERD and hyperlipidemia saw an advertisement about lung cancer screening and presents to discuss if she is a candidate. She smoked

1 pack of cigarettes per day for 21 years and quit 16 years ago. She has a family history of lung cancer in her mother who was a never smoker. Based on the 2021 USPSTF Guidelines, she would not qualify for lung cancer screening due to:

- A. Age
- B. Family history of lung cancer
- C. Pack-year history of smoking
- D. Period of time since she quit smoking
- E. A health problem that limits life expectancy

10. A 73-year-old male with a 55 pack-year tobacco history underwent a LDCT chest as part of lung cancer screening and was found to have a new 7 mm solid nodule in the left upper lobe (LUL). Subsequently, the patient underwent 3 month follow up chest CT which demonstrated stability of the LUL pulmonary nodule.

What is the best next step in management?

- A. Repeat LDCT scan in 3 months
- B. Repeat LDCT scan in 6 months
- C. Repeat LDCT scan in 12 months
- D. No further follow up

11. A 63-year-old female with a 46 pack-year tobacco history who quit smoking 10 years ago has been part of a lung cancer screening program for the past one year. On initial LDCT scan one year ago she was found to have an 11 mm cyst in the right lower lung lobe (RLL) with a 3mm wall thickness.

What is the best next step for follow up recommendation based on new Lung-RADs 2022?

- A. No further follow up
- B. PET CT
- C. Repeat LDCT scan in 3 months
- D. Repeat LDCT scan in 6 months
- E. Navigation bronchoscopy with radial EBUS