

## Annual Repeat Screening Protocol, results and workup recommendations

**Negative:** No new nodules

**IELCAP = 1**

**Semi-positive: RETURN FOR NEXT ANNUAL REPEAT**

**IELCAP = 2**

- a. Growth of previously seen nodules but still < 3.0 mm;
- b. *New* noncalcified nodules < 3.0 mm;
- c. Nonsolid nodules, regardless of size.

**d. Indeterminate:**

**IELCAP = 3**

- a. Largest solid, part-solid (solid component) 3.0-5.9 mm, return for *follow-up CT scan in 6 months after baseline* and if this follow-up CT shows a) *decrease*, b) *no change*, or c) *growth at a nonmalignant rate*, then

**IELCAP = 2**

**RETURN IN 6 MONTHS FOR NEXT ANNUAL REPEAT SCREENING.**

- b. Largest solid, part-solid (solid component) 6.0-14.9 mm, return for 1 month-*follow-up CT*, and if this follow-up CT shows *decrease*, then

**RETURN IN 11 MONTHS FOR NEXT ANNUAL REPEAT. IELCAP = 2**

*If the 1-month-follow-up CT shows no growth or growth at a nonmalignant rate,*

**RETURN FOR ANOTHER LDCT FOLLOW-UP IN 5 MONTHS.** If this

*LDCT shows decrease, no growth, or growth at a nonmalignant rate,* **RETURN 6 IN 6 MONTHS FOR NEXT ANNUAL REPEAT SCREENING. IELCAP = 2**

**Positive:**

**IELCAP = 4**

- a. Largest *new* or *growing* solid or solid component of part-solid nodule is 3.0-14.9 mm and *follow-up CT scan shows growth at a malignant rate*;
- b. Largest new or growing solid or solid component of part-solid nodule  $\geq 15.0$  mm;
- c. *New* solid endobronchial nodule.

### WORKUP OPTIONS FOR POSITIVE RESULTS:

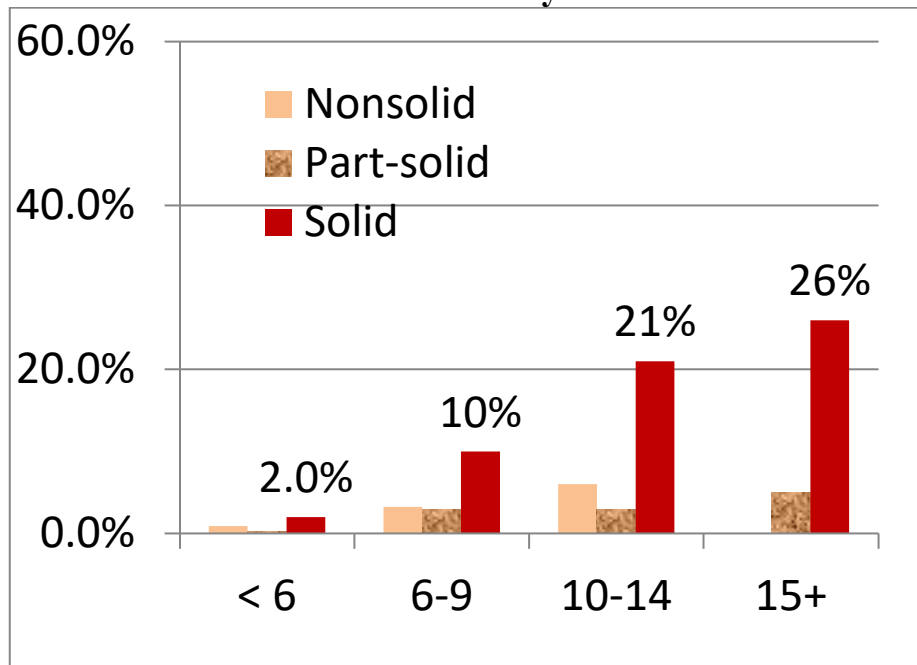
For a) and b), options are as follows:

1. Immediate biopsy.
2. An alternative for nodules > 10mm is to perform PET scan. If positive, biopsy is recommended; if it is indeterminate or negative, low-dose CT 3 months after the initial CT is performed. If the nodule shows growth, biopsy is recommended, otherwise workup stops.
3. Infections may present as solitary or as multiple nodules (75). Provide an immediate course of a broad-spectrum antibiotic with anaerobic coverage, and 1-month follow-up LDCT. If the LDCT shows:
  - a) continued growth, biopsy is recommended;
  - but if there is b) decrease, return in 11 months for next annual repeat screening. **IELCAP = 2**
  - c) *no growth or growth at a nonmalignant rate*, return in 5 months and if LDCT shows decrease, no growth, or growth at a nonmalignant rate, return in 5 months for next annual screening. **IELCAP = 2**

C) If an endobronchial nodule is identified, ideally the participant is asked to cough vigorously several times and the region of interest is reimaged at the same setting. If the endobronchial nodule is not recognized at the time of the screening CT scan, another low-dose CT scan without contrast is performed within 1 month, unless classic features of retained secretions are identified. At the time of the follow-up CT scan, the participant is asked to cough vigorously several times. If the nodule is still present, the participant is referred for pulmonary consultation, and if necessary, bronchoscopy.

**NOTE: Whom diagnostic work-up is stopped, REPEAT CT 12 months is to be performed.**

**Annual Repeat Round. Probability of malignancy based on nodule size and consistency**



**Annual Repeat Rounds: Change needed in nodule diameter to identify growth at a malignant rate for volume doubling times of 180 days or faster.**

ANNUAL REPEAT ROUNDS		
Original diameter (mm)	Diameter (mm) in 6 months without measurement error VDT: 180 days	Diameter (mm) in 6 months with measurement error VDT: 180 days
3.0	3.8	4.2
4.0	5.0	5.4
5.0	6.3	6.7
Original diameter (mm)	Diameter (mm) in 1 month without measurement error VDT: 180 days	Diameter (mm) in 1 month with measurement error VDT: 180 days
6.0	6.2	7.0
7.0	7.3	8.1
8.0	8.3	9.1
9.0	9.4	10.2
10.0	10.4	11.2
11.0	11.4	12.2
12.0	12.5	13.3
13.0	13.5	14.3
14.0	14.5	15.3