



Lung-RADS® Version 1.1

Assessment Categories Release date: 2019

Category Descriptor	Lung-RADS Score	Findings	Management	Risk of Malignancy	Est. Population Prevalence
Incomplete	0	Prior chest CT examination(s) being located for comparison Part or all of lungs cannot be evaluated	Additional lung cancer screening CT images and/or comparison to prior chest CT examinations is needed	n/a	1%
Negative No nodules and definitely benign nodules	1	No lung nodules Nodule(s) with specific calcifications: complete, central, popcorn, concentric rings and fat containing nodules			
Benign Appearance or Behavior Nodules with a very low likelihood of becoming a clinically active cancer due to size or lack of growth	2	Perifissural nodule(s) (See Footnote 11) < 10 mm (524 mm^3) Solid nodule(s): < 6 mm (113 mm^3) new < 4 mm (34 mm^3) Part solid nodule(s): < 6 mm total diameter (113 mm^3) on baseline screening Non solid nodule(s) (GGN): < 30 mm (14137 mm^3) OR ≥ 30 mm (14137 mm^3) and unchanged or slowly growing Category 3 or 4 nodules unchanged for ≥ 3 months	Continue annual screening with LDCT in 12 months	< 1%	90%
Probably Benign Probably benign finding(s) - short term follow up suggested; includes nodules with a low likelihood of becoming a clinically active cancer	3	Solid nodule(s): ≥ 6 to < 8 mm (113 to $< 268 \text{ mm}^3$) at baseline OR new 4 mm to < 6 mm (34 to $< 113 \text{ mm}^3$) Part solid nodule(s): ≥ 6 mm total diameter (113 mm^3) with solid component < 6 mm ($< 113 \text{ mm}^3$) OR new < 6 mm total diameter ($< 113 \text{ mm}^3$) Non solid nodule(s) (GGN) ≥ 30 mm (14137 mm^3) on baseline CT or new	6 month LDCT	1-2%	5%
Suspicious Findings for which additional diagnostic testing is recommended	4A	Solid nodule(s): ≥ 8 to < 15 mm (268 to $< 1767 \text{ mm}^3$) at baseline OR growing < 8 mm ($< 268 \text{ mm}^3$) OR new 6 to < 8 mm (113 to $< 268 \text{ mm}^3$) Part solid nodule(s): ≥ 6 mm (113 mm^3) with solid component ≥ 6 mm to < 8 mm (113 to $< 268 \text{ mm}^3$) OR with a new or growing < 4 mm ($< 34 \text{ mm}^3$) solid component Endobronchial nodule	3 month LDCT; PET/CT may be used when there is a ≥ 8 mm (268 mm^3) solid component	5-15%	2%
Very Suspicious Findings for which additional diagnostic testing and/or tissue sampling is recommended	4B	Solid nodule(s) ≥ 15 mm (1767 mm^3) OR new or growing, and ≥ 8 mm (268 mm^3) Part solid nodule(s) with: a solid component ≥ 8 mm (268 mm^3) OR a new or growing ≥ 4 mm (34 mm^3) solid component	Chest CT with or without contrast, PET/CT and/or tissue sampling depending on the *probability of malignancy and comorbidities. PET/CT may be used when there is a ≥ 8 mm (268 mm^3) solid component. For new large nodules that develop on an annual repeat screening CT, a 1 month LDCT may be recommended to address potentially infectious or inflammatory conditions	> 15%	2%
Other Clinically Significant or Potentially Clinically Significant Findings (non lung cancer)	S	Modifier - may add on to category 0-4 coding	As appropriate to the specific finding	n/a	10%

IMPORTANT NOTES FOR USE:

- 1) Negative screen: does not mean that an individual does not have lung cancer
- 2) Size: To calculate nodule mean diameter, measure both the long and short axis to one decimal point, and report mean nodule diameter to one decimal point
- 3) Size Thresholds: apply to nodules at first detection, and that grow and reach a higher size category
- 4) Growth: an increase in size of > 1.5 mm (> 2 mm^3)
- 5) Exam Category: each exam should be coded 0-4 based on the nodule(s) with the highest degree of suspicion
- 6) Exam Modifiers: S modifier may be added to the 0-4 category
- 7) Lung Cancer Diagnosis: Once a patient is diagnosed with lung cancer, further management (including additional imaging such as PET/CT) may be performed for purposes of lung cancer staging; this is no longer screening
- 8) Practice audit definitions: a negative screen is defined as categories 1 and 2; a positive screen is defined as categories 3 and 4
- 9) Category 4B Management: this is predicated on the probability of malignancy based on patient evaluation, patient preference and risk of malignancy; radiologists are encouraged to use the McWilliams et al assessment tool when making recommendations
- 10) Category 4X: nodules with additional imaging findings that increase the suspicion of lung cancer, such as spiculation, GGN that doubles in size in 1 year, enlarged lymph nodes etc
- 11) Solid nodules with smooth margins, an oval, lentiform or triangular shape, and maximum diameter less than 10 mm or 524 mm^3 (perifissural nodules) should be classified as category 2
- 12) Category 3 and 4A nodules that are unchanged on interval CT should be coded as category 2, and individuals returned to screening in 12 months
- 13) LDCT: low dose chest CT

*Additional resources available at - <https://www.acr.org/Clinical-Resources/Reporting-and-Data-Systems/Lung-Rads>

*Link to Lung-RADS calculator - <https://brocku.ca/lung-cancer-screening-and-risk-prediction/risk-calculators/>