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	Continue annual screening with LDCT in 12 months	< 1%	90%
Benign Appearance or Behavior Nodules with a very low likelihood of becoming a clinically active cancer due to size or lack of growth	**2**	**Solid nodule(s):** < 6 mm new < 4 mm **Part solid nodule(s):** < 6 mm total diameter on baseline screening **Non solid nodule(s) (GGN):** <30 mm **OR** ≥ 30 mm and unchanged or slowly growing **Category 3 or 4 nodules unchanged for ≥ 3 months**			
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 at baseline **OR** new 4 mm to < 6 mm **Part solid nodule(s)** ≥ 6 mm total diameter with solid component < 6 mm **OR** new < 6 mm total diameter **Non solid nodule(s)** (GGN) ≥ 30 mm on baseline CT or new	6 month LDCT	1-2%	5%
Probably Suspicious Findings for which additional diagnostic testing is recommended	**4A**	**Solid nodule(s):** ≥ 8 to < 15 mm at baseline **OR** growing < 8 mm **OR** new 6 to < 8 mm **Part solid nodule(s:** ≥ 6 mm with solid component ≥ 6 mm to < 8 mm **OR** with a new or growing < 4 mm solid component **Endobronchial nodule**	3 month LDCT; PET/CT may be used when there is a ≥ 8 mm solid component	5-15%	2%
Suspicious Findings for which additional diagnostic testing and/or tissue sampling is recommended	**4B**	**Solid nodule(s)** ≥ 15 mm **OR** new or growing, and ≥ 8 mm **Part solid nodule(s) with:** a solid component ≥ 8 mm **OR** a new or growing ≥ 4 mm 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 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%
	4X	Category 3 or 4 nodules with additional features or imaging findings that increases the suspicion of malignancy			
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%
Volumetric measurements	1.5 mm = 1.8 mm^3 4 mm = 33.5 mm^3 6 mm = 113.1 mm^3 8 mm = 268.1 mm^3		10 mm = 523.6 mm^3 15 mm = 1767.1 mm^3 20 mm = 4188.8 mm^3 30 mm = 14137.2 mm^3		

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
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 (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/