

# AI-Assisted Lung CT Analysis

Clinician Decision Support Report

LIDC-IDRI-0001

Scan Date: N/A

Patient: N/A (N/A, N/A yrs)

## ⚠ DATA QUALITY WARNINGS

- [Schema:root] 'study\_uid' is a required property
- [XAI:Nodule 0] High-risk nodule ( $p=0.72$ ) missing explainability visualization
- [XAI:Nodule 2] High-risk nodule ( $p=0.89$ ) missing explainability visualization
- [XAI:Nodule 4] High-risk nodule ( $p=0.73$ ) missing explainability visualization
- [XAI:Nodule 7] High-risk nodule ( $p=0.82$ ) missing explainability visualization
- [XAI:Nodule 13] High-risk nodule ( $p=0.86$ ) missing explainability visualization
- [XAI:Nodule 17] High-risk nodule ( $p=0.73$ ) missing explainability visualization
- [XAI:Nodule 19] High-risk nodule ( $p=0.74$ ) missing explainability visualization
- [XAI:Nodule 23] High-risk nodule ( $p=0.73$ ) missing explainability visualization
- [XAI:Nodule 24] High-risk nodule ( $p=0.72$ ) missing explainability visualization
- ... and 15 more warnings

## LUNG CONDITION SUMMARY

|                 |                                                  |                      |          |
|-----------------|--------------------------------------------------|----------------------|----------|
| Overall Status: | Lungs appear within expected attenuation ranges. | Emphysema Score:     | 0.0011   |
| Fibrosis Score: | 1.0000                                           | Consolidation Score: | 0.9142   |
| Airway Wall:    | N/A                                              | Processing Time:     | 7.90 sec |

## DETECTED PULMONARY NODULES (93)

| ID | SIZE (MM) | VOLUME (MM <sup>3</sup> ) | TYPE         | LOCATION          | MALIGNANCY | REVIEW | XAI |
|----|-----------|---------------------------|--------------|-------------------|------------|--------|-----|
| 0  | 45.52     | 28579                     | solid        | right middle lobe | 72.0%      | Yes    | —   |
| 1  | 42.3      | 27742                     | subsolid     | right upper lobe  | 47.7%      | Yes    | —   |
| 2  | 40.11     | 32983                     | solid        | left lingula      | 88.7%      | No     | —   |
| 3  | 47.73     | 33863                     | subsolid     | left lingula      | 45.9%      | Yes    | —   |
| 4  | 39.05     | 32177                     | ground-glass | left lingula      | 72.7%      | No     | —   |
| 5  | 51.36     | 31885                     | ground-glass | right middle lobe | 25.7%      | Yes    | —   |
| 6  | 42.66     | 31275                     | subsolid     | left lingula      | 55.3%      | Yes    | —   |
| 7  | 50.4      | 37220                     | ground-glass | right middle lobe | 82.5%      | No     | —   |
| 8  | 32.9      | 39804                     | ground-glass | left lingula      | 35.9%      | Yes    | —   |
| 9  | 34.17     | 28744                     | subsolid     | left lingula      | 49.2%      | Yes    | —   |
| 10 | 44.53     | 27867                     | ground-glass | left lingula      | 36.8%      | Yes    | —   |
| 11 | 52.37     | 38468                     | subsolid     | right middle lobe | 43.1%      | Yes    | —   |
| 12 | 45.16     | 39471                     | subsolid     | right middle lobe | 57.0%      | Yes    | —   |
| 13 | 55.2      | 26776                     | ground-glass | left lingula      | 86.4%      | No     | —   |
| 14 | 44.89     | 37114                     | ground-glass | left lingula      | 50.3%      | Yes    | —   |
| 15 | 49.12     | 36994                     | ground-glass | left lingula      | 57.9%      | Yes    | —   |
| 16 | 55.41     | 24835                     | subsolid     | right middle lobe | 61.1%      | Yes    | —   |
| 17 | 54.06     | 37984                     | ground-glass | right middle lobe | 73.0%      | No     | —   |
| 18 | 29.75     | 26795                     | subsolid     | left lingula      | 58.7%      | Yes    | —   |
| 19 | 48.71     | 27728                     | subsolid     | right middle lobe | 74.2%      | No     | —   |
| 20 | 53.25     | 32570                     | ground-glass | right middle lobe | 36.4%      | Yes    | —   |
| 21 | 47.19     | 39343                     | subsolid     | left lingula      | 39.4%      | Yes    | —   |
| 22 | 39.71     | 31783                     | subsolid     | left lingula      | 64.5%      | Yes    | —   |
| 23 | 48.55     | 33035                     | ground-glass | left lingula      | 73.5%      | No     | —   |
| 24 | 39.8      | 33021                     | ground-glass | right middle lobe | 71.8%      | No     | —   |

| ID | SIZE (MM) | VOLUME (MM³) | TYPE         | LOCATION          | MALIGNANCY         | REVIEW           | XAI |
|----|-----------|--------------|--------------|-------------------|--------------------|------------------|-----|
| 25 | 44.08     | 32249        | subsolid     | right middle lobe | <span>39.5%</span> | <span>Yes</span> | —   |
| 26 | 31.05     | 25837        | ground-glass | left lingula      | <span>81.9%</span> | No               | —   |
| 27 | 51.15     | 29966        | ground-glass | right middle lobe | <span>47.5%</span> | <span>Yes</span> | —   |
| 28 | 38.78     | 25316        | subsolid     | right middle lobe | <span>24.2%</span> | No               | —   |
| 29 | 39.13     | 30304        | ground-glass | right middle lobe | <span>41.5%</span> | <span>Yes</span> | —   |
| 30 | 50.39     | 35547        | ground-glass | right middle lobe | <span>25.7%</span> | No               | —   |
| 31 | 50.39     | 26818        | ground-glass | left lingula      | <span>87.3%</span> | No               | —   |
| 32 | 47.4      | 28518        | ground-glass | right middle lobe | <span>28.2%</span> | No               | —   |
| 33 | 47.4      | 39362        | ground-glass | right middle lobe | <span>59.6%</span> | <span>Yes</span> | —   |
| 34 | 40.38     | 39821        | subsolid     | right middle lobe | <span>31.5%</span> | No               | —   |
| 35 | 47.32     | 36200        | subsolid     | right middle lobe | <span>54.4%</span> | <span>Yes</span> | —   |
| 36 | 45.61     | 34839        | ground-glass | left lingula      | <span>45.7%</span> | <span>Yes</span> | —   |
| 37 | 43.6      | 39351        | ground-glass | right middle lobe | <span>46.2%</span> | <span>Yes</span> | —   |
| 38 | 43.43     | 39472        | ground-glass | left lingula      | <span>31.6%</span> | <span>Yes</span> | —   |
| 39 | 41.38     | 39635        | ground-glass | left lingula      | <span>74.4%</span> | No               | —   |
| 40 | 52.58     | 26770        | ground-glass | right middle lobe | <span>82.1%</span> | No               | —   |
| 41 | 52.41     | 26168        | subsolid     | left lingula      | <span>89.2%</span> | No               | —   |
| 42 | 46.38     | 34603        | ground-glass | left lingula      | <span>95.0%</span> | No               | —   |
| 43 | 52.37     | 37611        | ground-glass | right middle lobe | <span>27.4%</span> | No               | —   |
| 44 | 40.06     | 27013        | subsolid     | right middle lobe | <span>34.3%</span> | <span>Yes</span> | —   |
| 45 | 54.4      | 33382        | ground-glass | left lingula      | <span>43.4%</span> | <span>Yes</span> | —   |
| 46 | 37.01     | 35457        | ground-glass | right middle lobe | <span>47.9%</span> | <span>Yes</span> | —   |
| 47 | 41.19     | 36940        | ground-glass | left lingula      | <span>60.3%</span> | <span>Yes</span> | —   |
| 48 | 53.47     | 35501        | subsolid     | left lingula      | <span>70.2%</span> | No               | —   |
| 49 | 43.55     | 36048        | ground-glass | left lingula      | <span>42.4%</span> | <span>Yes</span> | —   |
| 50 | 51.79     | 39574        | ground-glass | left lingula      | <span>43.8%</span> | <span>Yes</span> | —   |

| ID | SIZE (MM) | VOLUME (MM³) | TYPE         | LOCATION          | MALIGNANCY | REVIEW | XAI |
|----|-----------|--------------|--------------|-------------------|------------|--------|-----|
| 51 | 35.19     | 30758        | ground-glass | right middle lobe | 81.8%      | No     | —   |
| 52 | 54.07     | 30379        | ground-glass | right middle lobe | 30.2%      | Yes    | —   |
| 53 | 45.29     | 28720        | ground-glass | left lingula      | 45.1%      | Yes    | —   |
| 54 | 48.92     | 32471        | ground-glass | left lingula      | 55.9%      | Yes    | —   |
| 55 | 30.33     | 32573        | ground-glass | left lingula      | 44.4%      | Yes    | —   |
| 56 | 54.68     | 39030        | subsolid     | right middle lobe | 48.1%      | Yes    | —   |
| 57 | 50.4      | 26406        | ground-glass | left lingula      | 35.9%      | Yes    | —   |
| 58 | 45.76     | 25871        | ground-glass | right middle lobe | 47.4%      | Yes    | —   |
| 59 | 39.46     | 26529        | ground-glass | right middle lobe | 49.9%      | Yes    | —   |
| 60 | 47.3      | 32850        | ground-glass | left lingula      | 38.6%      | Yes    | —   |
| 61 | 46.56     | 40041        | ground-glass | left lingula      | 57.4%      | Yes    | —   |
| 62 | 45.5      | 28914        | ground-glass | right middle lobe | 56.7%      | Yes    | —   |
| 63 | 45.31     | 24819        | ground-glass | right middle lobe | 33.6%      | Yes    | —   |
| 64 | 51.87     | 34879        | ground-glass | right middle lobe | 20.0%      | No     | —   |
| 65 | 47.2      | 33289        | subsolid     | left lingula      | 55.6%      | Yes    | —   |
| 66 | 47.0      | 29762        | ground-glass | left lower lobe   | 20.0%      | No     | —   |
| 67 | 37.07     | 35728        | ground-glass | right middle lobe | 80.2%      | No     | —   |
| 68 | 41.1      | 36445        | ground-glass | right middle lobe | 36.2%      | Yes    | —   |
| 69 | 53.71     | 32567        | subsolid     | left lingula      | 55.3%      | Yes    | —   |
| 70 | 50.48     | 25654        | ground-glass | right middle lobe | 70.5%      | Yes    | —   |
| 71 | 39.57     | 35693        | ground-glass | right middle lobe | 95.0%      | No     | —   |
| 72 | 53.76     | 34867        | subsolid     | left lower lobe   | 37.0%      | Yes    | —   |
| 73 | 45.14     | 39939        | ground-glass | left lower lobe   | 30.8%      | Yes    | —   |
| 74 | 58.02     | 29176        | ground-glass | right lower lobe  | 48.1%      | Yes    | —   |
| 75 | 45.46     | 25383        | ground-glass | right lower lobe  | 45.4%      | Yes    | —   |
| 76 | 40.93     | 37363        | ground-glass | right lower lobe  | 76.5%      | No     | —   |

| ID | SIZE (MM) | VOLUME (MM <sup>3</sup> ) | TYPE         | LOCATION         | MALIGNANCY | REVIEW | XAI |
|----|-----------|---------------------------|--------------|------------------|------------|--------|-----|
| 77 | 39.85     | 32009                     | ground-glass | left lower lobe  | 57.2%      | Yes    | —   |
| 78 | 51.43     | 31680                     | subsolid     | right lower lobe | 91.5%      | No     | —   |
| 79 | 44.27     | 30138                     | ground-glass | right lower lobe | 40.5%      | Yes    | —   |
| 80 | 43.18     | 34703                     | ground-glass | right lower lobe | 27.1%      | Yes    | —   |
| 81 | 51.07     | 24916                     | ground-glass | left lower lobe  | 64.5%      | Yes    | —   |
| 82 | 46.96     | 26256                     | ground-glass | left lower lobe  | 71.3%      | No     | —   |
| 83 | 51.79     | 38939                     | ground-glass | right lower lobe | 40.8%      | Yes    | —   |
| 84 | 57.51     | 31055                     | subsolid     | left lower lobe  | 69.1%      | No     | —   |
| 85 | 46.56     | 39754                     | subsolid     | right lower lobe | 56.5%      | Yes    | —   |
| 86 | 48.59     | 37669                     | ground-glass | right lower lobe | 29.2%      | Yes    | —   |
| 87 | 56.15     | 34944                     | ground-glass | left lower lobe  | 52.5%      | Yes    | —   |
| 88 | 42.3      | 28227                     | ground-glass | left lower lobe  | 35.4%      | Yes    | —   |
| 89 | 56.62     | 34987                     | ground-glass | left lower lobe  | 41.4%      | Yes    | —   |
| 90 | 48.66     | 29600                     | subsolid     | left lower lobe  | 38.1%      | Yes    | —   |
| 91 | 50.64     | 34051                     | ground-glass | left lower lobe  | 66.5%      | Yes    | —   |
| 92 | 50.88     | 37569                     | ground-glass | left lower lobe  | 79.4%      | No     | —   |

⚠️ **24 high-risk nodule(s) detected** — Clinical correlation and follow-up recommended.

## CLINICAL IMPRESSION

93 nodules detected. Largest measures 53.5 mm. 93 nodules show moderate-to-high malignancy probability. Recommend clinical correlation.

## EXPLAINABILITY SUMMARY

No AI explainability visualizations were generated for this scan.

Visualizations available for 0/93 nodules. **24 high-risk nodule(s) lack XAI.**

**⚠ AI-Assisted Screening Notice:** This report was generated by automated AI analysis and is intended for decision support only. All findings must be validated by a qualified radiologist or physician. AI predictions are probabilistic and should not be used as the sole basis for clinical decisions.

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