

# AI-Assisted Lung CT Analysis

Clinician Decision Support Report

XAI-TEST-001

Scan Date: N/A

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

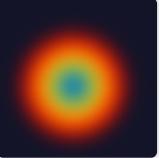
## ⚠ DATA QUALITY WARNINGS

- [XAI:Nodule 1] gradcam\_path file missing: outputs/nodule\_1\_gradcam.png
- [XAI:Nodule 1] overlay\_path file missing: outputs/nodule\_1\_overlay.png
- [XAI:Nodule 1] mask\_path file missing: outputs/nodule\_1\_mask.npy
- [XAI:Nodule 2] gradcam\_path file missing: outputs/nodule\_2\_gradcam.png
- [XAI:Nodule 2] overlay\_path file missing: outputs/nodule\_2\_overlay.png
- [XAI:Nodule 2] mask\_path file missing: outputs/nodule\_2\_mask.npy
- [XAI:Nodule 3] gradcam\_path file missing: outputs/nodule\_3\_gradcam.png
- [XAI:Nodule 3] overlay\_path file missing: outputs/nodule\_3\_overlay.png
- [XAI:Nodule 3] mask\_path file missing: outputs/nodule\_3\_mask.npy
- [XAI:Nodule 4] gradcam\_path file missing: outputs/nodule\_4\_gradcam.png
- ... and 11 more warnings

## LUNG CONDITION SUMMARY

Overall Status:	Lungs appear within expected attenuation ranges.	Emphysema Score:	0.0020
Fibrosis Score:	0.1500	Consolidation Score:	0.0800
Airway Wall:	N/A	Processing Time:	5.25 sec

## DETECTED PULMONARY NODULES (7)

ID	SIZE (MM)	VOLUME (MM <sup>3</sup> )	TYPE	LOCATION	MALIGNANCY	REVIEW	XAI
1	18.5	2450	solid	right upper lobe	85.0%	Yes	
2	12.3	890	subsolid	left upper lobe	78.0%	Yes	
3	8.7	320	ground-glass	right lower lobe	72.0%	Yes	
4	6.2	150	solid	left lower lobe	45.0%	No	
5	4.5	45	solid	right middle lobe	25.0%	No	
6	3.8	28	solid	left upper lobe	12.0%	No	
7	5.2	70	subsolid	right lower lobe	35.0%	No	

⚠️ **3 high-risk nodule(s) detected** — Clinical correlation and follow-up recommended.

## CLINICAL IMPRESSION

7 nodules detected. 3 high-risk nodules require clinical attention. XAI visualizations available for all high-risk findings.

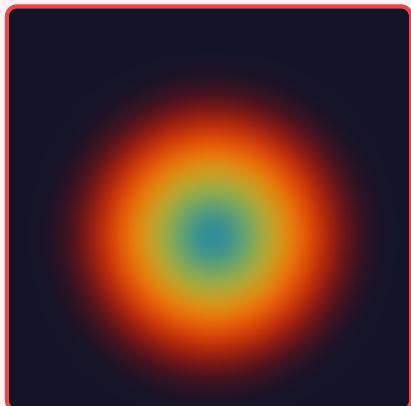
## EXPLAINABILITY SUMMARY

AI explainability visualizations are available for 7 of 7 detected nodules.

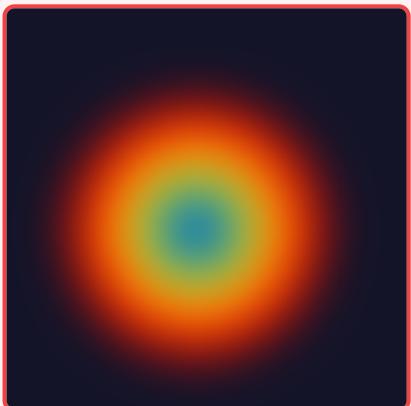
Visualizations available for 7/7 nodules.

### 🔍 AI Explainability Visualizations

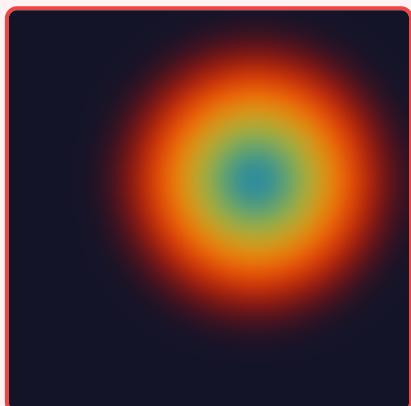
The following heatmaps show regions that influenced the AI's risk assessment for high-risk nodules.



**Nodule #1** (85% risk)  
GRADCAM



**Nodule #2** (78% risk)  
GRADCAM



**Nodule #3** (72% risk)  
GRADCAM

⚠️ **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.