AI-Assisted Lung CT Analysis

Clinician Decision Support Report

54d80b3c-05c4-4e09-bafa-77531a9bb955
Scan Date: 2026-02-12
Patient: N/A (N/A, N/A yrs)

⚠ DATA QUALITY WARNINGS

- [Schema:nodules → 0 → type] 'benign' is not one of ['solid', 'subsolid', 'ground-glass', 'ground_glass', 'ggo', 'unknown']
- [Nodule 1] Unknown type 'benign' - expected solid/subsolid/ground-glass

LUNG CONDITION SUMMARY

Overall Status:	AI-Analyzed	**Emphysema Score:**	0.0000
Fibrosis Score:	0.0000	**Consolidation Score:**	0.0000
Airway Wall:	Normal	**Processing Time:**	2.75 sec

DETECTED PULMONARY NODULES (1)

ID	SIZE (MM)	VOLUME (MM^3)	TYPE	LOCATION	MALIGNANCY	REVIEW	XAI
1	19.0	1303.0	benign	LLL	9.6%	No	No XAI

CLINICAL IMPRESSION

AI detected 1 nodule(s), all classified as low risk. Routine follow-up suggested.

EXPLAINABILITY SUMMARY

No AI explainability visualizations were generated for this scan.

Visualizations available for 0/1 nodules.

⚕ **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.

AI-Assisted Clinical Discussion

Clinical Discussion The AI-assisted CT analysis identified a solitary solid pulmonary nodule measuring 19 mm in maximal axial dimension (volume ≈ 1 300 mm^3) located in the left lower lobe. Although the algorithm classifies the lesion as “benign” with a malignancy probability of 9.6 % (confidence ≈ 90 %), size-based Lung-RADS criteria assign this nodule to **Category 4B** (solid nodule > 15 mm), which warrants further diagnostic work-up irrespective of the AI probability estimate. No additional nodules, emphysema, fibrosis, or consolidation were detected, and the “needs_review” flag is false. The differential diagnosis for a 19-mm solid nodule in the LLL includes a benign granuloma or hamartoma, an infectious focus (e.g., resolved pneumonia with residual scar), and primary lung carcinoma (adenocarcinoma or squamous cell carcinoma). Given the nodule’s size and the Lung-RADS 4B designation, the 2017 Fleischner Society guidelines recommend **PET/CT for metabolic assessment or tissue sampling** (e.g., CT-guided core biopsy) to exclude malignancy; if PET/CT is nondiagnostic, a short-interval CT at 3 months is appropriate to assess interval stability. No uncertainty flags were raised by the AI; however, the modest malignancy probability underscores the need for clinical correlation and multidisciplinary review. AI-assisted analysis — clinical correlation required.

Generated by HealthATM AI (Groq/openai-gpt-oss-120b) — Clinical correlation required.