Case Study Paula: Complex low-metabolic nodule detected at Stage 1A in low-risk patient

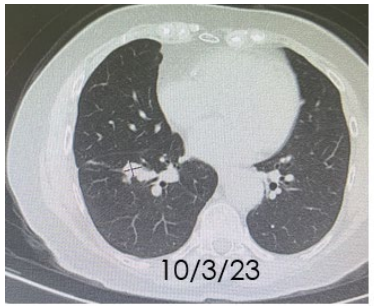
Patient Information and Initial Workup

- **Age:** 80 years old
- **Sex:** Female
- **Smoking status:** Quit in 1999
- **Medical history:** Hypertension, stroke, COVID-19 infection in 2021
- **Status:** Low risk
- **Presentation:** Asthma symptoms post-COVID, including cough, dyspnea, wheezing. Patient placed on Augmentin, asthma inhalers
- **Chest x-ray** showed lobulated opacity in RLL
- **Surveillance:** 6-month follow-up LDCT recommended

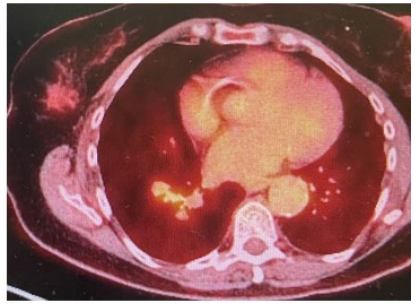
NOTE: Actual patient case, but name has been changed to ensure privacy.

Imaging Results

LDCT on 10/3/23 revealed 13mm lobulated nodule in RLL. 10/5/23 PET scan SUV was 2.5, lung cancer probability 15.9%

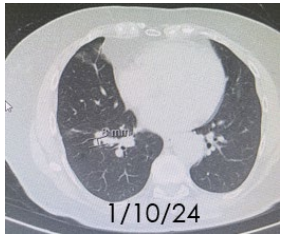


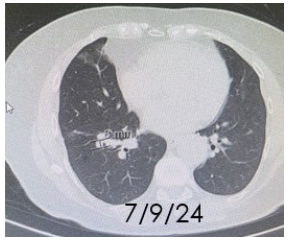
13mm LOBULATED NODULE

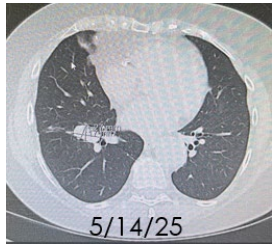


PET SUV 2.5, 10/5/23

LDCT scans on 1/10/2024 and 7/9/2024 no significant changes in the RLL nodule. LDCT on 5/14/2025 revealed a change in the distal component of the lobulated RLL process, with growth and a more nodular appearance.







Additional Findings/Next Steps

- **Brock model risk:** 15.9%/16.5% (Herder model with PET)
- **Nodify** blood serum marker test returned "reduced risk" result
- **Bronchoscopy** on 10/9/23 negative for suspicious cells but found S. Viridans consistent with active infection
- **Second bronchoscopy** on 3/17/25 again revealed inflammation markers but no suspicious cells

Outcome with CyPath® Lung

- **CyPath® Lung:** 3/4/25 test result: 0.72, likely malignancy
- **Shared decision-making:** CyPath® Lung result convinced patient to undergo surgery despite conflicting information from other indicators
- **Robotic wedge resection:** Patient referred for surgery in June 2025
- **Diagnosis:** Stage 1A neuroendocrine tumor
- **CyPath® Lung:** Detected lung cancer in low-risk patient when PET, bronchoscopy and serum marker test suggested it was benign inflammation

LDCT=low-dose computed tomography; PET=positron emission tomography; RLL=right lower lobe.