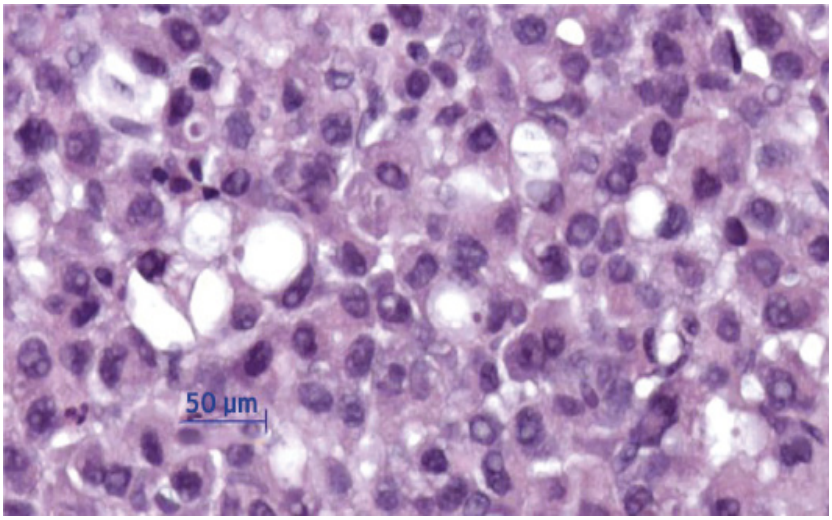
Breast, Axilla, & Lung Lesions in a Young Women



Work Up:

CK7	Positive
ER	Negative/Focal weak
PR	Negative
Mammaglobin	Negative
TTF-1	Positive
Napsin A	Positive
E-cadherin	Positive, membranous
Ki-67	20% of cells
Serum CEA	570 U/mL

Patient Case 2:

A 34 year old non-smoking woman presents in the emergency room with chest pain; X-ray shows a whiteout in her left lung. She requires a chest tube. Fluid cytology shows no malignancy or infection. No discrete masses are found and she is discharged without the chest tube. On a follow up appointment several weeks later, she reports a large, hard mass in her left breast. PET CT shows abnormal areas of increased uptake in the left breast, left axilla, left pleura, and left lower lobe. Core biopsies are done on several left axillary nodes.

Pathologist Diagnosis:

A discussion at the Cardiothoracic Tumor Board led to a consensus that this was most likely a metastatic breast cancer and not metastatic lung; at that point a Napsin A IHC was performed and was positive. The pathologist stated that TTF-1 and Napsin A positivity was strong evidence for metastatic lung cancer. Pathology called it a poorly differentiated adenocarcinoma most consistent with a lung primary.

Initial Treatment:

Because this young mother of two presented with a poorly differentiated adenocarcinoma in the breast and axilla, breast cancer had to be ruled out. Could this be metastatic breast cancer rather than lung adenocarcinoma?

Tissue of Origin® Test Ordered.

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Tissue of Origin Analysis		
TISSUE TYPE	SS	≥5 100
Non-Small Cell Lung	**44.7**	
Ovarian	26.2	
Breast	9.2	
Colorectal	6.9	
Pancreas	2.3	
Thyroid	2.1	
Gastric	2.0	
Kidney	1.9	
Sarcoma	1.3	
Non-Hodgkin's Lymphoma	0.8	
Hepatocellular	0.8	
Bladder	0.5	
Testicular Germ Cell	0.5	
Prostate	0.4	
Melanoma	0.5	

Pathologist's Interpretation
Most Likely Tissue of Origin:
Non-Small Cell Lung
Degree of Confidence:
High
Tissues Ruled Out:
Pancreas, Kidney, Hepatocellular, Prostate, Thyroid, Sarcoma, Bladder, Melanoma, Gastric, Non-Hodgkin's Lymphoma, and Testicular Germ Cell
Pathologist's Comments:
A total of 11 tissue types have been excluded.

Post Tissue of Origin®:

- ALK test: negative
- EGFR test: wild type
- Initial treatment started with carboplatin, Taxol, and Avastin, but the patient experienced an increase in CEA and tumor growth. Treatment was switched to Gemzar and Navelbine; patient had a favorable response with the breast tumors but felt fatigued.
- Most recent PET CT shows progression to the abdomen and pelvis. Plan is to discontinue Gemzar and Navelbine and attempt treatment with Alimta and cisplatin.

"Although there were clues that pointed to lung cancer, the patient's age, history and presentation confounded the issue -- I wanted to rule out a possible breast primary before starting therapy. The Tissue of Origin® Test result put my concerns to rest."

- Dr. Lisa Ahrendt, Englewood, CO

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