Sex:
D.O.B.:
MRN #
Ref Ph

SPECIMEN INF

Collected:
Received:
Reported:

SURGICAL PATHOLOGY REPORT

*** ADDENDUM REPORT ***

LUNG CANCER MUTATION PANEL

ICD-O-3
Adenocarcinoma, NOS 8140/3
Site: lung, lower lobe C34.3
9-11-12 RD

SPECIMEN SOURCE: LUNG LOBECTOMY
SPECIMEN/BLOCK NUMBER

EGFR Mutation: NOT DETECTED
Results reviewed by

The following polymorphism was detected: 2361g>A.

Sequencing of the entire coding region and splice junction sites of exons 18-21 of the EGFR gene revealed no previously published mutations or any sequence changes that could result in amino acid changes. However, one or more polymorphic sequence changes were discovered in the EGFR gene. These polymorphisms are interpreted as non-pathogenic because they do not lead to amino acid changes. These polymorphisms are not expected to have any clinical significance. As 7% of patients who respond to EGFR inhibitors do not show mutations in exons 18-21 of EGFR gene, a negative result does not preclude the possibility of a clinical response to EGFR inhibitors.

KRAS Mutation Analysis

KRAS Mutation: DETECTED
(Abnormal) Results reviewed by

Based on sequence analysis, K-Ras codon 12 GGT>GAT (G12D) mutant was detected.

Lung Ca (NSCLC),ALK,FISH: SEE BELOW

Specimen Type: Paraffin Embedded Tumor Tissue

Clinical Indication: FISH study for oncology

Method : FISH
Total Cells : 50
Images Captured : 2

RESULT: NEGATIVE FOR ALK REARRANGEMENT [SEE COMMENT BELOW]

INTERPRETATION:

Fluorescence in situ hybridization (FISH) analysis did not reveal a rearrangement of the ALK gene. However, 1-3 additional copies of the ALK region were observed in 80% of cells. The significance of additional copies of the ALK region is not clear.

In non-small cell lung carcinoma, overexpression of the ALK kinase is seen most commonly through an inversion producing ELM4-ALK fusion protein. A small proportion of tumors (approximately 5%) with ALK rearrangement demonstrated by other methods may be missed by this study. This test is indicated as an aid in the assessment of patients for whom crizotinib (i.e. XALKORI) treatment is being considered. Correlation with clinical findings and other laboratory studies is indicated.

Please expect the result of any other concurrent test in a separate report.

FISH test was performed using a break-apart probe specific for the ALK gene . According to the manufacturer's directional insert, the cutoff value for ALK rearrangement is 15% of interphase cells in paraffin-embedded specimens. This assay has been approved by the U.S. Food and Drug Administration.

Laboratory results reviewed and Clinical Interpretation provided by

Test performed and reported under supervision c

Test performed at

Addendum Report Issued By:

DIAGNOSIS

DIAGNOSIS:

A. Level 9 lymph nodes:
Two benign lymph nodes with non-caseating granulomatous inflammation, see comment (0/2).

B. Level 7 lymph node:
Benign, hyperplasia (0/1).

C. Level 8 lymph node:
Benign, hyperplasia, non-caseating granulomatous inflammation, see comment (0/1).

D. Right lower lobe of lung lobectomy:

Tumor Characteristics:

1. Histologic type: Adenocarcinoma.
2. Histologic grade: Moderately differentiated.
3. Tumor site: Peripheral.
4. Tumor focality: Unifocal.
5. Tumor size: 3.5 x 3.0 x 1.0 cm.
6. Visceral pleural invasion: Not identified.
7. Lymphovascular space invasion: Not identified.
8. Tumor extension: Not identified.
9. Treatment effect: Not identified.

Surgical Margin Status:

1. Tumor distance from bronchial margin: 1.5 cm.
2. Tumor distance from parenchymal (stapled) margin: 1.5 cm.
3. Tumor distance from pleural surface: Less than 0.1 cm.

Lymph Node Status (utilizing all specimens):

1. Total number of lymph nodes received: 8.
2. Total number of lymph nodes containing metastatic carcinoma: None (0/8).

Other:

1. Other significant findings: Block 9 has been submitted for lung carcinoma mutation evaluation panel. A further report will follow.
   Non-caseating granulomatous inflammation is identified in several of the lymph nodes, see comment.
   Mild to moderate chronic bronchitis and patchy areas of fibrosis are noted.
2. pTNM stage: pT2, N0.

Electronic Signature:

COMMENTS:
The non-caseating granulomatous inflammation identified in some of the lymph nodes is of uncertain etiology however the possibility of sarcoidosis would be, given the pattern of granulomas identified, at the top of the list followed by infection. Clinical correlation is suggested.

CLINICAL INFORMATION

CLINICAL INFORMATION

CLINICAL HISTORY:
Preoperative Diagnosis: y/c /ith right lung mass
Postoperative Diagnosis:
Symptoms/Radiologic Findings:

SPECIMENS:
A. Level 9 lymph node
B. Level 7 lymph node
C. Level 8 lymph node
D. Right lower lobe

SPECIMEN DATA

GROSS DESCRIPTION:
The specimen is received in four formalin filled containers labeled with the patient's name

A. Container A is additionally labeled 'level 9 lymph node' and contains two gray-black rubbery nodules consistent with anthracotic lymph nodes. They are 0.5 and 1.7 cm in greatest dimension. The largest nodule is inked and bisected and all tissue is submitted in cassette A1 labeled

B. Container B is additionally labeled 'level 7 lymph node' and contains a 1.5 cm purple-gray nodule consistent with lymph node. The specimen is sectioned and entirely submitted in cassette B1 labelec

C. Container C is additionally labeled 'level 8 lymph node' and contains a 3.5 x 2.3 x 1.0 cm gray-black rubbery nodule consistent with anthracotic lymph node. The specimen is serially sectioned and entirely submitted in cassettes C1 through 4 labelec

D. Container D is additionally labeled 'right lower lobe' and contains 11.5 x 11.0 x 7.0 cm lung lobe. The pleura is purple-gray anthracotic. A 10.5 cm in length serpiginous staple line is present. The pleura is remarkable for a 3.0 x 2.5 cm yellow-tan plaque like lesion and area of umbilication consistent with tumor. This area is inked blue. The staple line is removed and the underlying parenchyma is beefy red and glistening with no discrete lesions. Exposed vascular margins are present, as well as a 0.6 cm in length x 0.9 cm in diameter bronchial margin. Additional small bronchiole margins are present within the exposed parenchyma. The largest bronchus is opened to reveal a clear mucoid intraluminal substance. The endothelium is yellow-tan and striated with no discrete lesions. The specimen is serially sectioned to reveal a 3.5 x 3.0 x 1.0 cm ill-defined gray-white mass abutting the pleura at the site of umbilication and approaching to within 1.5 cm of both the bronchial and parenchymal margins. The remainder of the parenchyma is pink-tan spongy and congested with no additional lesions. Four black anthracotic parabronchial nodules are identified consistent with lymph nodes. These range from 0.4 up to 0.9 cm in greatest dimension. Representative sections are submitted in cassettes D1 through 11 labeled lesignated as follows: D1 and 2, bronchiole and vascular margins to include largest bronchial margin in cassette D2; cassette D3, inked, parenchymal margin, perpendicular; D4 through 8, mass to inked pleura; 9 and 10, additional mass; 11, four whole possible parabronchial lymph nodes. Additionally, a yellow, green and blue cassette are submitted for genomics research each labeled

MICROSCOPIC EXAMINATION:
Special stains for acid-fast bacilli and fungi done selectively on the Level 9 lymph node demonstrates no microorganisms.

Criteria	Yes	No
Diagnosis Discrepancy		X
Primary Tumor Site Discrepancy		X
HIPAA Discrepancy		X
Prior Malignancy History		X
Dual/Synchronous Primary Noted		X

Case is (circle): QUALIFIED / DISQUALIFIED
Reviewer Initials: Date Reviewed: 8/30/12

8/30/12