###### Purpose

To provide a procedure for the gross examination of a pneumonectomy specimen.

1. **Principle**

To take histologic sections to demonstrate the tumor so that a diagnosis can be made microscopically by a Pathologist. All margins and all lymph nodes should be examined microscopically.

###### Equipment

1. Ruler
2. Forceps
3. Scalpel
4. Scissors
5. Large Knife
6. **Safety**
7. **PPE** should be worn.
8. **FORMALIN** is a known carcinogen.
9. **Supplies and Reagents**
10. **10% NEUTRAL BUFFERED FORMALIN** (pH range 6.9 – 7.2)
11. Blue Ink
12. Green Ink
13. White Distilled Vinegar
14. **Quality Control**

All remaining tissue should be retained.

1. **Limitations/ Notes**

The following may influence the validity of test results:

1. The specimen should be insufflated and fixed in formalin.
2. If the specimen is for mesothelioma, it should be cut in a coronal plane.
3. **Procedure**
4. The specimen will arrive fresh or in formalin.
5. Upon receipt in the lab, the specimen should be insufflated with formalin.
6. Weigh the specimen before insufflating with formalin.
7. Note and describe the lobes that are present and measure each in three dimensions (cm).
8. Measure any other attached anatomical structures (ex: diaphragm).
9. Measure the attached portion of bronchus in 2 dimensions (cm.) and describe.
10. Describe any attached vessels.
11. Describe the pleura and ink any suspicious areas (avoid black).
12. Use vinegar as a mordant for the ink.
13. Shave the bronchial and vascular margins.
14. Serially section the specimen. If the specimen is for mesothelioma, it should be cut in a coronal plane to better assess the extent of the tumor involvement.
15. Identify the tumor or pathologic process and describe the size, shape, color, location, consistency and components that are involved.
16. Describe and measure the tumor and its relationship to the bronchial margin and to the pleura. For adenocarcinoma, if there is a solid component and softer, spongier component, include a measurement of the entire mass and a measurement of just the solid component.
17. Open the bronchi and vessels to see if there is tumor involvement and describe.
18. Examine and describe the uninvolved parenchyma.
19. Identify and submit all lymph nodes within the specimen, designation which station they are from (Stations 10 Hilar, 11 Interlobar, 12 Lobar, 13 Segmental, and 14 Subsegmental). See “Lung Lymph Node Search” procedure for a detailed description.
20. A section of lung parenchyma with bronchioles should be submitted from each station that lymph nodes are not identified.
21. Submit the bronchial and vascular margins.
22. Submit one section per centimeter of the tumor including sections of the closest pleura and adjacent parenchyma, bronchi, and/or vessels.
23. If the specimen is for mesothelioma, all pleural margins should be extensively sampled.
24. Submit a few sections of grossly uninvolved parenchyma including a section from each lobe of the specimen.
25. The cassettes should be loaded on the appropriate end of day tissue processor.
26. **Related Documents**

Lung Lymph Node Search – RA.SP.PR.GR.LU.05

1. **References**

Hruban RH, Westra, WH, Phelps, PH, & Isacson, C: Surgical Pathology Dissection An Illustrated Guide, New York, NY, Springer-Verlag Inc., 1996.

Lester, SC: Manual of Surgical Pathology, New York, NY, Churchill

Livingstone, 2001.

Leslie KO, Wick MR: Practical Pulmonary Pathology: A Diagnostic Approach, 1st ed., New York, NY, Churchill Livingstone, 2004

1. **Authorized Reviewers**
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##### Document Control

##### Location of Master: Master electronic file stored on the Beaumont Laboratory server under

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