###### Purpose

To provide a procedure for the gross examination of a lung lobectomy 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. **Procedure**
3. The specimen will arrive fresh or in formalin.
4. Upon receipt in the lab, the specimen should be insufflated with formalin.
5. Weigh the specimen before insufflating with formalin.
6. Measure the specimen in 3 dimensions (cm.).
7. Measure the attached portion of bronchus in 2 dimensions (cm.) and describe.
8. Describe any attached vessels.
9. Mention any attached staple lines and note their relationship to the bronchial margin.
10. Describe the pleura and ink any suspicious areas (avoid black).
11. Shave the staple line margins (parenchymal, bronchial, and vascular) and ink the staple line removal sites (avoid black).
12. Use vinegar as a mordant for the ink.
13. Serially section the specimen, identify the tumor or pathologic process and describe the size, shape, color, and consistency.
14. Describe and measure the tumor and its relationship to the bronchial margin, any staple line removal sites, 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.
15. Open the bronchi and vessels to see if there is tumor involvement and describe.
16. Examine and describe the uninvolved parenchyma.
17. Identify and submit all lymph nodes within the specimen, designating which station they are from (Stations 12 Lobar, 13 Segmental, and 14 Subsegmental for a single lobe). See “Lung Lymph Node Search” procedure for a detailed description.
18. A section of lung parenchyma with bronchioles should be submitted from each station that lymph nodes are not identified.
19. If a portion of a second lobe is present, provide a detailed similar description of the other lobe. Pay attention to additional stapled margins.
20. Submit the bronchial and vascular margins.
21. Submit sections of staple line parenchymal margin(s) closest to the tumor.
22. Submit one section per centimeter of the tumor including sections of the closest pleura and adjacent parenchyma, bronchi, and/or vessels.
23. Submit a few sections of grossly uninvolved parenchyma.
24. If a second lobe is present, submit representative sections.
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

S:\AP\_Grossing\_Manual

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