###### Purpose

To provide a procedure for the gross examination of a lung wedge resection specimen.

1. **Principle**

To take histologic sections to demonstrate any possible pathologic process present so that a diagnosis can be made microscopically by a Pathologist.

###### Equipment

1. 5-10 mL syringe
2. Fine needle (23-25 gauge)
3. Ruler
4. Forceps
5. Scalpel
6. Scissors
7. Large Knife
8. **Safety**
9. **PPE** should be worn.
10. **FORMALIN** is a known carcinogen.
11. **Supplies and Reagents**
12. **10% NEUTRAL BUFFERED FORMALIN** (pH range 6.9 – 7.2)
13. Blue Ink
14. Green Ink
15. White Distilled Vinegar
16. **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 fixed in formalin.
2. Open Lung biopsies for interstitial lung disease MUST be received fresh and insufflated with formalin immediately upon receipt
3. **Procedure**
4. The specimen will arrive fresh or in formalin.
5. Lung wedges for interstitial disease MUST be received fresh and insufflated with formalin immediately upon receipt. Insufflation should still be performed if the staple line has been partly or completely removed.

To insufflate:

* 1. Fill a small (5-10 mL) syringe with formalin
	2. Attach a fine needle (preferably 23-25 gauge)
	3. Stick the needle through the pleura and gently infuse formalin into the lung until well expanded. Fill until expanded, but take care not to overinflate, tear, or break the lung architecture.
	4. If the biopsy is large, it may be necessary to make several punctures with the needle in order to fill multiple lobules that are divided by interlobular septa.
	5. Place the entire lung wedge in formalin to fix for at least 1 hour
1. Measure the specimen in 3 dimensions (cm.).
2. Trim the staple line and ink the staple line removal site (avoid black). Use vinegar as a mordant for the ink.
3. Examine the pleura and describe.
4. Ink any suspicious areas on the pleura blue and use vinegar as a mordant for the ink.
5. Serially section the specimen perpendicular to the staple line removal site.
6. Identify the tumor or pathologic process and describe the size, shape, color, and consistency.
7. Describe and measure the tumor or pathologic process’s relationship to the staple line removal site and to the pleura.
8. Examine and describe the uninvolved parenchyma.
9. If the wedge is small or for interstitial lung disease, submit the entire specimen. Note which cassettes contain the tumor or pathologic process to the closest resection margin.
10. If the wedge is larger, submit the majority of the tumor or the pathologic process (at least 1 per cm) and also submit two representative sections of grossly uninvolved parenchyma.
11. The cassettes should be loaded on the appropriate end of day tissue processor.
12. **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

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Churg, A. (1983). An inflation procedure for open lung biopsies. *The American Journal of Surgical Pathology, 7(1),* 69-71.

1. **Authorized Reviewers**
2. Medical Director, Anatomic Pathology
3. Chief, Surgical Pathology

##### Document Control

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

S:\AP\_Grossing\_Manual

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**Location of circulating Controlled Copies:** Master Grossing Manuallocated in Surgical Pathology

##### Document History

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Signature | Date | **Revision #** |  | **Related Documents****Reviewed/****Updated** |
| Prepared by: *Anne Tranchida, PA(ASCP)* | 8/8/2007 | **r00** |  |  |
| Approved by: *Ali-Reza Armin, MD* | 10/23/2007 | **r00** |  |  |
|  |  |  |  |  |
| **Reviewed by: (Signature)** | **Date** | **Revision #** | **Modification** | **Related Documents****Reviewed/****Updated** |
| *Ali-Reza Armin, MD* | 10/10/2008 | **r00** |  |  |
| *Anne R. Tranchida,PA(ASCP)* | 10/20/2009 | **r00** |  |  |
| *Ali-Reza Armin,MD* | 10/20/2011 | **r00** |  |  |
| *Ali-Reza Armin,MD* | 10/03/2013 | **r00** |  |  |
| *Mitual B. Amin,MD* | 02/18/2015 | **r00** |  |  |
| *Zhenhong H. Qu, MD* | 04/17/2015 | **r00** |  |  |
| *Kurt Bernacki, MD* | 10/27/2017 | **r00** |  |  |
| *Kurt Bernacki, MD* | 10/21/2019 | **r00** |  |  |
| Revised by: *Heather Genson, HTL(ASCP)CMPACM* | 10/21/2021 | **r01** | Included more details on processing ILD wedges |  |
| Approved by: *Kurt Bernacki, MD* | 10/21/2021 | **r01** |  |  |
| *Kurt Bernacki, MD* | 10/23/2021 | **r01** |  |  |
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