###### Purpose

To provide a procedure for the dissection of a simple mastectomy 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. 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. Black Ink
12. Blue Ink
13. Green Ink
14. Orange 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 for a minimum of 6 ½ hours.
2. **Procedure**
3. Weigh and measure the specimen.
4. Look at the patient’s previous specimen history and read any corresponding radiology reports to see if any clips have been placed.
5. The specimen should be oriented by the surgeon. Discuss how the specimen is oriented.
6. If the specimen is not oriented, contact the surgeon. Look for a scar or lesion on the skin surface which may aid the surgeon in providing orientation.
7. Ink the external surfaces three colors (should be inked and bisected at triage) as follows:
8. Anterior/Superficial in superior half – blue
9. Anterior/Superficial in inferior half – green
10. Posterior/Deep – black
11. If the specimen is a nipple sparing subcutaneous simple mastectomy, ink the subareolar area orange.
12. Apply vinegar to act as a mordant for the ink.
13. Describe and measure any skin that is attached to the anterior/superficial aspect.
14. Examine the skin for scars and lesions and if present, describe and measure.
15. Describe the nipple/areola complex.
16. Serially section the specimen from lateral to medial.
17. Inspect the cut surfaces for any masses, lesions, previous biopsy sites, other areas of abnormality, or clips.
18. If grossly present, describe any pathology that is identified (size, shape, color, & consistency). Mention which quadrant contains the pathology. And mention if a clip is present.
19. If more than one mass, lesion, previous biopsy site, or other area of abnormality is present, describe and measure the relationship.
20. Document the relationship between the pathologic area(s) and the closest margin(s). Give the relationship to the posterior/deep margin.
21. Submit sections according to the Breast Grossing Standardization and as follows:
22. **Mastectomy for cancer**
23. Minimum of 12 cassettes including 1 section of nipple or subareolar area, closest 3 margins, and 2 sections per each quadrant (1 block per quadrant with 2 sections in each)
24. If tumor is 2 cm or less, submit entire tumor
25. If tumor is >2cm, submit 1 section per cm of largest dimension of tumor/area of interest
26. **Prophylactic Mastectomy**
27. Focus on non-fatty (fibrous) tissue
28. Two sections per cassette
29. If high risk patient (BRCA or strong family history)
30. 4 blocks from each quadrant (2 sections per block)
31. 1 section of nipple or subareolar area
32. If not high risk
33. 2 blocks from each quadrant (2 sections per block)
34. 1 section of nipple or subareolar area
35. If Paget’s disease is suspected, the entire nipple/areola complex should be submitted.
36. Sections should be submitted of skin that include any scars or lesions that have been described.
37. Sections should be submitted from each quadrant per Breast Grossing Standardization (upper outer, upper inner, lower inner, and lower outer). If pathology (the lesion of interest) is present in one of the four quadrants, take additional sections of that quadrant that are away from the pathology. More sections may be submitted from the quadrants if the patient has a history of DCIS.
38. Any identifiable lymph nodes should be submitted.
39. Include a diagram with the location of the sections taken.
40. Include in the dictation the cold ischemic time and approximate hours of fixation. This is calculated from the time bisected at triage.
41. Load the cassettes on the appropriate (for fatty breast tissue) processor. Note: the specimen must fix for a minimum of 6 ½ hours.
42. **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.

1. **Related Documents**

Breast Grossing Standardization RA.SP.PR.GR.BT.09

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

**Number of Controlled Copies posted for educational purposes: 0**

**Number of circulating Controlled Copies: 1**

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

##### Document History

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| *Anne R. Tranchida,PA(ASCP)* | 10/20/2009 | **r00** |  |  |
| *Ali-Reza Armin,MD* | 10/20/2011 | **r00** |  |  |
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| *Mitual B. Amin,MD* | 02/14/2015 | **r00** |  |  |
| *Zhenhong H. Qu, MD* | 03/12/2015 | **r00** |  |  |
| *Kurt Bernacki, MD* | 10/27/2017 | **r00** |  |  |
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