###### Purpose

To provide a procedure for the gross examination of a thyroid lobe 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. Orange Ink
14. White Distilled Vinegar
15. **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. **Procedure**
3. Weigh the specimen
4. Measure the lobe and any attached isthmus (3 dimensions – cm.).
5. Orient the specimen. Orientation may be provided by the surgeon by the placement of a suture on one of the lobes. If orientation is provided, dictate the landmark that is oriented by the surgeon. If orientation is not provided, the specimen may still be able to be oriented. The posterior aspect is concave and the isthmus is located medial and toward the inferior aspect.
6. Describe the outer surface and note the nature of the capsule. Look for any attached parathyroid glands and/or lymph nodes.
7. Include in the dictation presence or absence of any grossly identifiable attached skeletal muscle.
8. Ink the surgical margin (ragged area without capsule).
9. Ink the external surface (capsule). May ink two colors (anterior and posterior)
10. Use vinegar as a mordant for the ink.
11. Serially section the lobe from superior to inferior.
12. Examine the cut surfaces.
13. Locate the pathologic process that is present and describe the size, shape, color, consistency, location, and relationship to the external surface of the thyroid gland capsule and margin. If skeletal muscle is present, include whether or not it is involved.
14. Look up the patient’s history for a previous diagnosis of the type of lesion that is present.
15. Describe the remaining cut surfaces of the specimen that are not involved by the pathologic process.
16. If the thyroid is involved with a diffuse process (ex: Goiter or Hashimoto’s Thyroiditis), submit 7-10 representative sections.
17. If a follicular lesion is present, one section should be submitted per centimeter of the lesion and the entire capsule surrounding the lesion should be submitted. If the lesion is less than 2 cm, it should be submitted entirely with the capsule.
18. If the lesion present is papillary or another type, one section should be submitted per centimeter of the lesion. If any perithyroidal tissue is present near the lesion, it should be submitted.
19. Submit uninvolved representative sections of the lobe, including the superior, mid, and inferior portions. Include in cassette summary accordingly (e.g. 1 – left superior lobe, 2 – left mid lobe, 3 – left inferior lobe).
20. Submit the entire isthmus surgical margin.
21. All identifiable parathyroid glands and/or lymph nodes should be submitted.
22. **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. **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**

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##### Document History

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| *Ali-Reza Armin,MD* | 12/10/2008 | **r00** |  |  |
| *Anne R. Tranchida,PA(ASCP)* | 10/20/2009 | **r00** |  |  |
| *Ali-Reza Armin,MD* | 10/20/2011 | **r00** |  |  |
| *Ali-Reza Armin,MD* | 04/03/2013 | **r00** |  |  |
| *Mitual B. Amin,MD* | 02/14/2015 | **r00** |  |  |
| *Zhenhong H. Qu, MD* | 03/14/2015 | **r00** |  |  |
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