**Purpose**

A mastectomy is the complete removal of a breast, usually after a cancer diagnosis. A mastectomy is usually the option for: multifocal disease, locally advanced cancers with possible chest wall or skin invasion, inflammatory cancer, metastatic cancer to the lymph nodes or women at high risk for breast cancer - BRCA1 or BRCA2 mutations and a family history of breast cancer. This option is also available to women who would rather have a mastectomy instead of a lumpectomy. There are four main types of mastectomies. Mastectomies can be radical with attached pectoralis muscle and attached axillary tail - rarely done. They can be modified radical mastectomies where there is attached axillary tail and possibly a small amount of muscle present on the deep margin. A simple mastectomy is the breast without the axillary tail. Another option is a prophylactic mastectomy where there isn't any disease documented in the breast. **Prophylactic mastectomies are processed the same as simple mastectomies. The only difference is the sections that are taken for review. For radical and modified radical mastectomies you need to amputate the axillary tail before sectioning the breast.**

**Procedure**

* Orient the specimen. If axillary tissue is present, it is a marker for the lateral side. Usually the surgeons will use sutures to orient the specimen in the following way: short suture - superior, long suture - lateral and double sutures - deep/posterior. **If there are sutures present but they are not labeled, you still need to contact the surgeon to clarify the orientation.**
* Locate the quadrants on the breast - upper outer, lower outer, lower inner, upper inner. A grid of these quadrants is determined by the placement of the nipple.
* Measure the specimen. Measure the skin and possible axillary tissue separately.
* Describe the skin and nipple/areola complex. Are there any scars present? Any lesions? Which quadrants? How far from the margin?
* Amputate the nipple and submit a cross section of the base to demonstrate the ducts and serially section the remaining tip.
* Palpate specimen to check for any noticeable masses.
* Examine the deep margin. Describe the fascia and if any pectoralis muscle is present.
* Ink the specimen as follows: superior - blue, inferior - green and posterior/deep - black.
* Remove the axillary tissue if present and set aside.
* Have the deep surface facing you with the superior portion of the breast at the top of the cutting board and serially section the breast at 0.5 cm. **DO NOT CUT THROUGH THE SKIN!!! KEEP THE BREAST INTACT AND SECTION UP TO 2 MM AWAY FROM THE SKIN SURFACE.**
* Examine each section. Describe any tumors and/or biopsy cavities: give measurements of the lesion, is it well circumscribed, stellate, indurated, surround by fat necrosis, smooth walled? Is residual tumor present if a biopsy cavity is within the specimen? How far is it from the deep margin and which quadrant the lesion is located?
* Describe the remaining tissue and look for any satellite lesions. Also give a percentage of fibrous tissue present.
* If an axillary tail was present, shred the tissue and dissect out all of the lymph nodes.

**Sections for Histology**

* 1 cassette for the nipple and areola (cross section)
* 3-4 cassettes of tumor including tumor to deep and/or closest margin and tumor to normal
* 5 cassettes of biopsy cavity if no tumor is present - including to the deep margin and tumor to normal
* 1 cassette of each quadrant with several small pieces of fibrous tissue. Always look for a second tumor or satellite lesion that may be present in multifocal disease processes
* If an axillary tail is present, as many as needed to submit all the lymph nodes found
* **For prophylactic mastectomies, take 1 cassette for the nipple and two cassettes for each quadrant.**

**Sample Dictation**

"Labeled right breast - short suture superior and long suture lateral" received in formalin in a large container is an oriented simple mastectomy specimen, 18 (Medial to Lateral) x 15 (Superior to Inferior) x 4.5 (Anterior to Posterior). The specimen is partially covered by a 15 (Medial to Lateral) x 5 (Superior to Inferior) cm ellipse of skin. See above for orientations.

Arising in the upper outer quadrant is a 1.8 x 1.5 x 1.2 cm solid tumor with infiltrating and stellate borders. The tumor is located 1.5 cm from the deep margin, 1.9 cm from the superior margin and 3.9 cm from the inferior margin. No other lesions are noted.

The remaining cut surfaces consist of yellow adipose interspersed with grey-white fibrous tissue - 10% fibrous. Both the skin ellipse and nipple areola complex are unremarkable.

Inking code: Superior margin= blue, Inferior margin=green and posterior margin=black.

**Cassette Summary:**

A1. Nipple areola complex. (1ss)

A2-A3. Upper outer quadrant including tumor to superior margin in each cassette (1ss)

A4-A5. Upper outer quadrant including tumor to posterior margin in each cassette (1ss)

A6. Lower outer quadrant including inferior and posterior margins (2ss)

A7. Upper inner quadrant including superior and posterior margins (2ss)

A8. Lower inner quadrant including inferior and posterior margins (2ss)