

# Handling of breast specimens for pathologic examination

To improve the accuracy of immunohistochemistry (IHC) testing for the expression status of estrogen receptor (ER), progesterone receptor (PgR) and HER2 in breast cancer, breast tissue samples must be handled following the instructions below:

## OVERVIEW

- Surgeon/OR staff is responsible for recording time in Excellian, on the LabLink Histopathology Breast Biopsy supplemental form or on the requisition slip, that the specimen was removed from patient.
- Surgeon must designate margins via inks (inking scheme is below); inking is the preferred method of margin evaluation due to more accurate designation of particular margins.
  - If ink is unavailable, sutures may also be used.
- If a pathologist or pathologist assistant is not immediately available to handle the specimen, the surgeon must bisect the specimen through the tumor before placing it into 10% neutral buffered formalin (NBF).
  - Breast tissue must be sectioned and placed into 10% neutral buffered formalin (NBF) **within one (1) hour of removal from patient**
- Surgeon/OR staff must record the time the sliced specimen is placed into formalin in Excellian, on the specimen label or on the requisition.
- The specimen must be placed in 10 fold greater amount of formalin than the volume of specimen.
- The tissue must be fixed in formalin for a minimum of 6 hours, not to exceed 72 hours.

## Lumpectomy specimen inking schemes

1. Dry the specimen with gauze.
2. Apply inks as follows:
  - Anterior – Orange
  - Posterior – Black
  - Medial – Green
  - Lateral – Yellow
  - Superior – Blue
  - Inferior – Red
3. Seal ink with white vinegar (apply with squirt bottle to all surfaces) and blot dry.
  - a. Make certain the ink is completely dry before continuing to the next step.
4. Section through the tumor and place in adequate formalin to fix the specimen.

## Mastectomy specimen inking schemes

1. Dry the specimen with gauze.
2. Apply inks as follows:
  - Deep - black
  - Anterior superior (above nipple) - blue
  - Anterior inferior (below nipple) - red
3. Seal the ink with white vinegar (apply with squirt bottle to all surfaces) and blot dry.
  - a. Make certain the ink is completely dry before continuing to the next step.
4. Section through the tumor (from posterior aspect), and place in adequate formalin to fix the specimen (we recommend placing gauze between sections of breast mastectomy specimens).