

Breast, Radical Mastectomy, Post-Neoadjuvant

(1.4 Breast_Radical_Post-Neoadjuvant); Created May 5th, 2021 by Jeremy Deisch, MD

SAMPLE DICTATION

(Labeled: ____, ____, ____; ____) Received [fresh/in formalin] is a ____ gram, _ x _ x _ cm [left/right] breast. The nipple/areola complex measures _ x _ x _ cm, with an [everted/retracted] nipple. The surrounding skin measures _ x _ cm. The specimen is oriented as follows: _ [given specimen orientation]. A _ x _ x _ cm axillary tail is present.

Major pathologic finding(s): A _ x _ x _ cm [fibrous scar/ill-defined/well circumscribed, solid/cystic, firm tan mass] is present in the [quadrant], _ cm from the nipple. The [area of fibrosis/mass] lies _ cm to the anterior margin (or skin if overlying), _ cm to the posterior margin, _ cm to the medial margin, _ cm to the lateral margin, _ cm to the superior margin, and _ cm to the inferior margin. A single biopsy clip is identified [adjacent to/within] the mass.

Other findings: The background breast tissue comprises approximately 40% fibrous tissue. The skin shows a _ cm linear healed scar. _ lymph node candidates are present in the axillary tail, ranging in size from _ to _ cm.

Specimen Handling: Ink key: Blue = superior, Green = inferior, Black = posterior overlay. (RS / TE, ____ caps)

Collection Time: _ _
Time in Formalin: _ _
Time out of Formalin: _ _

SUGGESTED SAMPLING

- 1-4: Area of fibrosis, entirely submitted (refer to image for mapping)
- 5: Anterior margin closest to tumor bed/mass, perpendicular
- 6: Deep margin closest to tumor bed/mass, perpendicular
- 7: Upper outer quadrant breast tissue
- 8: Upper inner quadrant breast tissue
- 9: Lower inner quadrant breast tissue
- 10: Lower outer quadrant breast tissue
- 11: Skin and breast tissue closest to tumor bed/mass
- 12: Nipple, serially-sectioned perpendicular to skin surface [longitudinal section of nipple ducts to skin]
- 13: Areola, shave [section to demonstrate cross sections of large ducts]
- >13: Axillary lymph node candidates (section larger nodes in 2-3 mm thick slices)

STAGING CRITERIA (AJCC 8TH EDITION)

- pT staging of breast carcinoma is based upon:
 - Tumor size: (2 and 5 cm are the major cutoffs)
 - Invasion of skin or chest wall structures
 - Tumor ulceration
 - Satellite nodules in ipsilateral breast
 - “Peau-d'orange” appearance of skin overlying tumor, tumor present in dermal lymphatics

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ADDITIONAL CONSIDERATIONS

- For **every mastectomy performed for tumor** (i.e. non-prophylactic or reduction mammoplasty), the patient's chart must be reviewed prior to grossing to determine two data points:
 - **Pre-surgical (neoadjuvant) chemotherapy** - Remember that this includes traditional chemotherapy as well as Tamoxifen and aromatase inhibitors. Any use of these agents indicates that this protocol (post-neoadjuvant) must be followed. This information is usually found in oncology notes. Also, a prolonged time period between the diagnostic biopsy and the mastectomy are clues to neo-adjuvant therapy
 - **Number and location of biopsy clips** - information usually contained in radiology notes (clip placement procedure note)
- Key steps/guidelines for grossing post-neoadjuvant cases
 - Radical mastectomy specimens are prepared for fixation similar to radical mastectomies lacking presurgical treatment; carefully section the inked mastectomy specimen **from the posterior aspect** prior to fixation, leaving the anterior aspect and skin intact.
 - Following fixation, **complete the sectioning through the anterior aspect/skin** - lay each slice out flat and in order, maintaining orientation.
 - **All post-neoadjuvant radical mastectomy specimens must be radiographed**- take specimen to radiology department for x-ray to assist in clip localization, lesional identification, and specimen mapping. This same rule applies to mastectomies for DCIS and those with discrepancy with expected gross findings (i.e. tumor is not grossly apparent, all expected clips cannot be localized)
 - **Size of tumor bed must always be given in at least two dimensions**
 - **Entirely submit one entire face (two dimensional slice) of the tumor/tumor bed.** If the tumor bed surrounding the clip is not grossly apparent, submit at least five caps of tissue from the region of prior tumor/biopsy site. For very large tumors/tumor beds (i.e. those that cannot be submitted in 10 caps or less), submit (and map) contiguous sections that span the length of tumor in one dimension.
 - Submit one section of tumor/tumor bed from adjacent slices ("bookends")
 - Submit additional sections as described above in "suggested sampling"
 - **Always include a section map with all mastectomy (tumor) specimens.** Photograph the oriented breast slices flat and take a gross photograph. Print this image off, and label the slices to indicate the location of the submitted blocks. This image must also be labeled with the accession number to maintain specimen identity. As this image will accompany the requisition and slides into the pathologists office, this document must be kept clean.