

NONGYNECOLOGICAL CYTOLOGY BREAST NIPPLE SECRETION OR DISCHARGE SMEAR

I. Purpose

Nipple secretions may be due to such benign disorders as duct stasis or papilloma. However, occasionally an important endocrine disturbance or an otherwise asymptomatic cancer of the ducts of the breast may cause secretion. The chief value of cytologic examination of nipple secretions lies in the possible early diagnosis of such cancers. The procedures should be confined to those patients who have no palpable masses in the breast or other evidence of breast cancer. If there is clinical or mammographic suspicion of cancer of the breast, other methods of diagnosis, such as aspiration biopsy or excisional biopsy and frozen section, should be applied. Two subtypes of cancer of the breast may manifest themselves in spontaneous nipple secretions: The solid or papillary ductal carcinoma and the duct cell carcinoma associated with Paget's disease of the nipple. Tumors yielding cells of diagnostic value are usually located within the main ducts of the breast.

II. Specimen

- A. Indications:** Spontaneous nipple secretion or discharge for early diagnosis of cancers.
- B. Specimen Required:** A "pea" size droplet for a direct smear
- C. Materials Needed:**
1. Frosted end glass slide (Write the patient's name on the frosted end with a lead pencil).
 2. Paper clips (Place a paper clip on one end of each glass slide to hold slides apart in the fixative).
 3. Bottle of fixative (70% alcohol) or container of spray fixative.
- D. Patient Preparation:** Smears of nipple secretions may be utilized in the detection of breast cancer that involve ducts. **DO NOT MASSAGE OR SQUEEZE THE BREAST.** The following method will express secretion without trauma.

E. Collection Procedure:

1. Open the bottle of fixative and have the patient hold the bottle near the breast.
2. Gently express only the nipple and subareolar area of any secretions that may be lying in the collecting ducts. If NO SECRETION APPEARS AT THE NIPPLE WITH THIS GENTLE COMPRESSION, DO NOT MANIPULATE FURTHER.
3. Allow a "pea size" drop of fluid to collect upon the nipple tip.
4. Immobilize the breast and using the nipple, smear the material across a glass slide.
5. IMMEDIATELY drop the slide into the fixative. (Time is of the essence here. The smearing of the material across the slide and the dropping of the slide into the fixative should be accomplished in one motion).
6. Make as many smears as the amount of material allows.
7. These should be collected by applying the slide directly to the nipple, followed by immediate fixation.
8. STORAGE: Submit the specimen at room temperature along with the completed HPC requisition and copies of insurance card(s).

F. Breast pump nipple secretion smears

1. Breast secretions obtained by breast pump or cannulation of the ducts require that smears be prepared with skill and rapidity and fixed immediately.
2. **STORAGE:** Submit the specimen at room temperature along with the completed HPC requisition and copies of insurance card(s).

References

- A. Koss, Leopold G MD: *Diagnostic Cytology and its Histopathologic Basis*, Volume 2, JB Lippincott Company, 1992
- B. Lester, Susan C MD, PhD: *Manual of Surgical Pathology*, Churchill Livingstone, Philadelphia, 2001.