

15:40-16:00

Pathology: Specimen Preparation

울산의대 서울아산병원

공 경 업

- US-guided fine needle aspiration
- US-guided core needle biopsy /Mammotome biopsy
- US-guided localization excision

US-guided fine needle aspiration

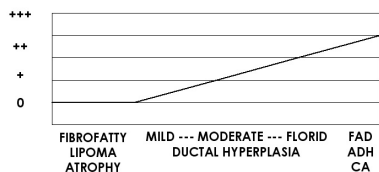
Adequacy

FNA BX BREAST ADEQUACY

- BIOPSIES: 3-4, MORE IF > 3-4 CM
 - SPECIMENT ADEQUACY
 - 4-6 GROUPS, WELL SEEN CELLS
ACINI (6 CELLS MINIMUM)
SHEETS (10 CELLS MINIMUM)
 - OTHERWISE: INSUFFICIENT
 - UNSATISFACTORY
 - OBSCURING BLOOD, MECH DIST,
DILUTION
- SNEIGE, N (MD ANDERSON) ACTA CYTO 38:971-972, 1994

ADEQUACY IN BREAST FNA CELLULARITY & HISTOLOGY

47-82% OF FCC – "SCANTY OR ABSENT"



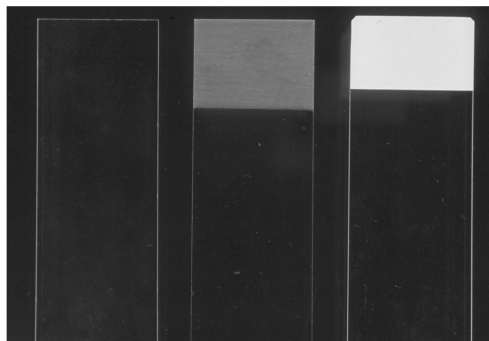
LINSK J, ACTA CYTOL 16:130-138, 1972
KLINE T, HANDBOOK, CV MOSBY, 1988
STANLEY M, DIAGN CYTOPATH 13:473-485, 1995.

Adequacy of FNA samples of solid nodules

- No specific requirement for a minimum number of ductal cells to be present for specimen adequacy
- Adequacy is determined by two judgments:
 - Opinion of the aspirator
 - Opinion of the pathologist
- Specimen description should include quantity of epithelial cells
 - Few (occasional clusters)
 - Moderate (clusters easy to find)
 - Abundant (epithelial cells in almost every field)
- Other cellular components should also be in specimen description
- Laboratories may choose to require a given number of cells be present for specimen adequacy.
- No national standard that requires a given number of cells be present for specimen adequacy

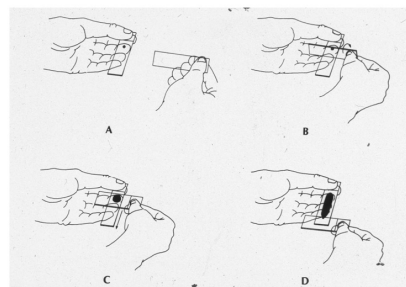
(NCI consensus)

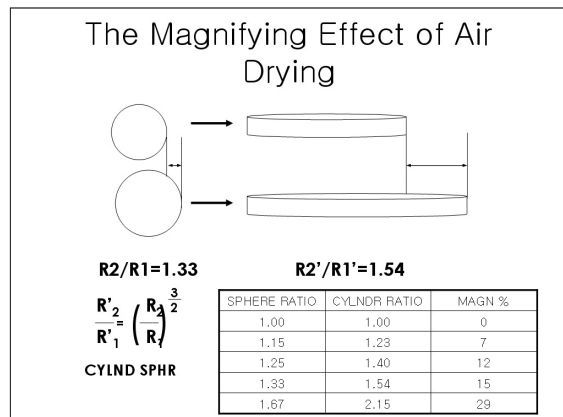
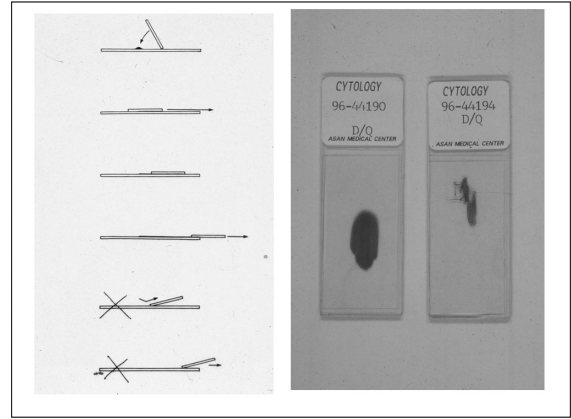
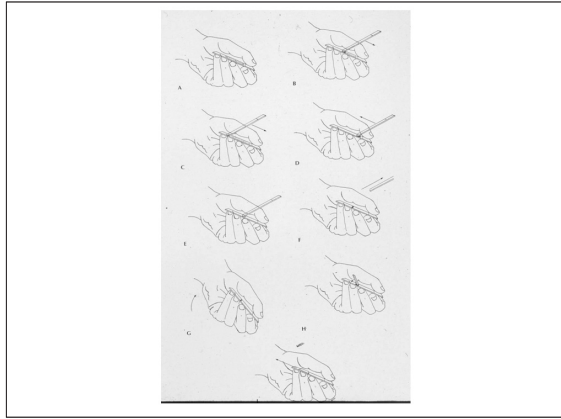
Smearing technique



FNA Smearing Technique

Aspirate Material	Technique
Semisolid	1 Step
Dilute	2 Step
Few Particles & Fluid	Absorption
Particles in Syringe	Pop
Particles in Needle	Snap
Hopelessly Bloody	Garbage Can



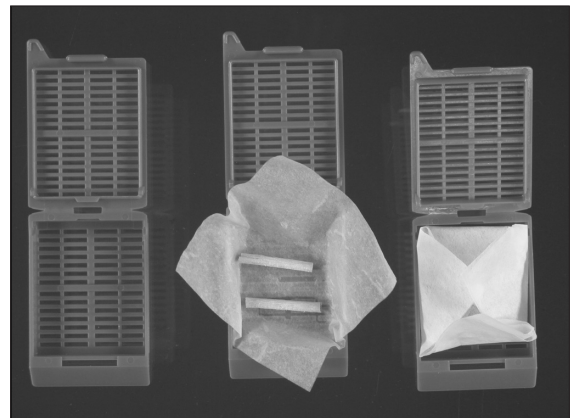


FNA Technique Utility Needle Rinse (NR) ??

- Snap & Pop Technique vs. Rinse / Centrifuge Technique
- Study : 159 FNAs from 152 Patients
- Results: 21 Carcinomas, All Smear +
 - 16 by Rinse (24% False Neg)
 - No Benign Smear + by Rinse
- Conclusion :
 - NR not Additive
 - ? Useful for Inadequate Clinician BXs
 - Physicians : Master FNA Technique

Henry-Stanley, M (Univ Ark) DIAG CYTO 8:538-540, 1992

US-guided core needle biopsy /Mammotome biopsy



Specimen Adequacy: How many CNB specimens?

- Masses: 5 specimens results in 99% diagnostic yield (14 gauge)
- Calcifications: Calcifications must be identified on specimen radiograph

Liberman. Radiology 1994;192:793

Discordant Radiology and Pathology

- 1.74 ~ 4.8% discordant findings
- 47~ 50% had carcinoma on repeat biopsy or excision

Dershaw, et al. Radiology 1996;198:323

Stolier. J Am Coll Surg 1997;185:224

Radiologic-Pathologic Correlation

- The pathologic diagnosis on a core biopsy must be concordant with the impression from imaging studies
- Discordant diagnoses must be reconciled; require repeat core biopsies or surgical excision

US-guided localization excision

Localization Biopsy for Ductal Carcinoma Simple Mapping Technique for Sampling and Size Estimation



(Rau U. The Breast Journal. 6:379-387,2000)

- Measurement of mammographic calcifications alone is insufficient to determine its extent, as the calcifications can underestimate the size by 1-2 cm

Van Nuys Prognostic Index

- Size, margin, and grade are assigned a score of 1–3
- a size estimate of 15 mm, 16–40 mm, and ≥41 mm
- Margin distance of 10 mm, 1–9 mm, and <1 mm
- Treatment options based on the VNPI
 - 3–4, excision only
 - 5–7, excision and radiation therapy
 - 8–9, mastectomy

Protocol for Bx.Evaluation and Sampling

