1. **TITLE:** PROCEDURE FOR FINE NEEDLE ASPIRATION

2. **PURPOSE:**
   Fine needle aspiration biopsy is contributory to timely diagnosis of both neoplastic and non-neoplastic disease and reducing the need for open surgical biopsy for many patients. Proper sample collection is necessary to have proper diagnosis and reporting.

3. **DEFINITION:** FNA means Fine Needle Aspiration

4. **POLICY:**
   4.1. All management procedures must be explained to the patient before Fine Needle Aspiration is carried out.
   4.2. Fine needle aspiration is performed by clinicians, surgeon or radiologist.
   4.3. FNA sample should be adequate and properly preserved to have optimal results.
   4.4. On request, a preliminary on site/intra-operative assessment of adequacy is made, and this assessment is documented in the cytopathology form to be later included in final report.

5. **Procedure:**
   5.1. **FNA scheduling:**
      5.1.1. The schedule for the FNA is the responsibility of the clinician/nurse.
      5.1.2. If the clinic or ward needs the assistance of Cytology unit (specimen adequacy assessment), it should be notified a day in advance. Cytology laboratory is located in Building 500, Basement, Room G-32, Tel. 3147.
   5.2. **Slide, container labeling for FNA:**
      5.2.1. FNA assisting Nurse or Cytotech. will prepare glass slides for spreading smears by writing two patient identifiers (**Name and MRN number**). Each prepared slide must be labeled separately and any specimen container with collected material (fluid from aspiration) must also be labeled. The label should be placed on the container itself rather than the lid to ensure unequivocal identification even when the lid is removed or it become dislodged in transit. Specimen from separate sites should be placed in separate container properly indicating whether bilateral organs are involved and the specific site indicated “left or right”, upper quadrant”, middle lobe”, etc. For each procedure, sufficient number of slides is prepared before starting the procedure.
      5.2.2. Once the slides are ready and patient identifiers (Name and Medical Record Number (MRN) are placed on the prepared slides and specimen container for cell block and other ancillary studies if required, the clinician will perform the procedure.
5.2.3. The filled-up requisition form (KFHU.LAB 14008) should be submitted to laboratory together with the specimen. All pertinent personal/clinical data should be included according to the policy implemented on this matter. Details of the procedure including the site of the specimen, the number of passes (optional) and the number of slides are to be documented. For aspirated fluid specimen, the volume and gross description should be included in the request form. The request must also be entered in the computer.

5.3. Materials:
- Glass slides with frosted ends.
- Tray for spreading out slides.
- Pencil for labeling slides.
- Spraycyte/Jars or plastic containers filled with 80% isopropanol, 95% ethanol for slide fixation.
- Empty containers for cyst fluids.
- Tubes of 10% buffered formalin for tissue fragments.
- Tube of medium if microbiological culture required.
- Paper tissues.
- Gauze swabs.
- Disposable plastic forceps.
- Diff Quick stain.

5.4. Smear preparation:
Prepare fixed and unfixed slides for each pass. Number slides I, II, III, etc. for each pass. Air dried smears are prepared from the aspirated material for assessment of adequacy while the patients is still waiting in the clinic (on demand). Please note that the purpose of attending procedures is not to give diagnosis but only to assess the adequacy of the specimen and if necessary smear preparation.

5.4.1. Detach the needle from the syringe and fill the syringe with air immediately following completion of aspiration.

5.4.2. Re-attach the needle and point needle at the center on the surface of the pre-labeled slides with the bevel pointing downwards.

5.4.3. Advance the plunger of the syringe to express a small amount of aspirate onto the pre-labeled slides. Air should not be blown out onto the slide because this causes air drying and also aerosols are formed which can be potentially infectious.

5.4.4. Carry out the procedure over a series of labeled slides as quickly as possible.

5.4.5. A second spreader pre-labeled slide is gently lowered crosswise over the droplet, which will then spread out slightly by...
capillary action. The spreader slide is then gently pulled straight back in one smooth motion, down the length of the diagnostic slide. Fix the spread specimen immediately with spraycyte fixative/80% isopropanol/95% ethyl alcohol. Do not prepare all the slides before fixation. It should be one at a time. Air dried slides should be prepared if needed for on-site specimen adequacy.

5.4.6. If fluid is obtained, drain the cyst as completely as possible and re-aspirate any residual mass. The fluid should not be spread onto the slides; it should be submitted in Cytology laboratory for processing. The processing is the same as in fluid specimen.

5.4.7. The needle is rinsed in RPMI/ (tissue culture medium) (optional) to make additional Cytospin preparations or a cell block if necessary.

5.5. Staining:

5.5.1. The air dried slides are stained with Diff Quick for assessment of adequacy.

5.5.2. Fixed slides are stained with Pap’s staining procedure.

5.6. Limitation of Fine Needle Aspiration (FNA).

5.6.1. Identification of malignant cells is a definitive diagnosis but a “negative” report does not exclude malignancy as adequate sampling cannot be guaranteed.

5.6.2. It is not possible to assess the presence or absence of invasion or distinguish in situ from infiltrative carcinoma.

5.6.3. It is not possible to make a diagnosis for which the criteria are based on histological pattern or to distinguish reliably between some pairs of conditions which have a similar presentation when viewed at a cellular level.

6. Responsibility:

Appplies to clinician/pathologist responsible for Performing Fine Needle Aspiration procedures, nurses for proper specimen collections, smear preparation and preservation and the laboratory staff responsible for reception, processing and smear preparation as the case may be.

7. Forms/Attachment:

Please refer to forms (Section 13)

8. Distribution:

- LMD Administration
- All Clinical Department
9. **References:**

- Guidelines of the Papanicolaou Society of Cytopathology for Fine-Needle Aspiration Procedure and Reporting
- The Papanicolaou Society of Cytopathology Task Force on Standards of Practice
  
  9.4 Cytopathology Laboratory, KFHU