Cytology Sample Collection and Transport

Gynecologic Cytology Collection

Patient Preparation
The optimal time for collection of the Pap smear is two weeks after the first day of the last menstrual period. The patient should be instructed not to use vaginal medications, spermicides, or douches 48 hours prior to the collection of the Pap smear. The patient should also refrain from intercourse 24 hours prior to the collection of the Pap smear.

Preparation of Cervix
Warm water should be used to lubricate the speculum. Lubricant jelly should be avoided as it often obscures cellular material making cytologic evaluation difficult or impossible. The speculum must be positioned so that the outer surface of the cervix appears at the end of the instrument, since a sample from this area is necessary for adequate specimen collection. In order to not obscure the smear, remove excess blood, mucus, or inflammatory material gently with dry gauze, without forcibly removing any cellular material.

Specimen Collection: Pap Test Collection Technique

Thin Prep Pap Collection (preferred)

A. Thin Prep Cytobrush/Spatula Combination Technique
1. Using a plastic spatula, obtain an adequate sampling from the ectocervix.
2. Rinse the spatula in the PreservCyt vial by swirling the spatula vigorously.
3. Using the brush device, insert it into the cervix until only the bottom fibers are exposed.
4. Slowly rotate ¼ to ½ turn in on direction. Do not over rotate.
5. Rinse the brush in the same PreservCyt vial by rotating the device in the solution 10 times while pushing against the vial wall to release the cellular material.
6. Discard the brush.
7. Replace the vial cap securely.
8. Label vial with patient's first name, last name, and date of birth.
9. Transport to MCL at room temperature.
B. Thin Prep Broom Device Technique

1. Insert the central bristles of the broom device into the endocervical canal deep enough to allow the shorter bristles to fully contact the ectocervix.
2. Push gently and rotate the broom in a clockwise direction five times.
3. Rinse the broom quickly into the PreservCyt vial by pushing the broom against the bottom of the vial vigorously to release the cellular material.
4. Discard the broom.
5. Replace the vial cap securely.
6. Label vial with patient’s first name, last name, and date of birth.
7. Transport to MCL at room temperature.

Pap Smear, Convention Slide Collection

1. Contact laboratory for collection instructions.

Reagents:

ThinPrep PreservCyt Solutions – Flammable
Use with adequate ventilation. Inhalation of vapors may cause nonspecific discomfort (nausea, weakness), drowsiness with anesthetic effects and possible blindness. Avoid contact with skin and eyes. Wear gloves when using. Wash hands after use. Store away from excessive heat (<86°F or 30°C).

Cytology Spray Fixative - Flammable
Use with adequate ventilation and avoid breathing vapors. Prolonged exposure may cause mild irritation, drying, cracking or contact dermatitis. Persons with pre-existing skin disorders, eye problems, impaired liver; kidney or respiratory function may be more susceptible to the effects of this substance.
Non-Gynecologic Cytology Collection

Principle

Methods for collecting and handling non-gynecologic specimens will vary depending on the specimen type and the tests requested. It is the responsibility of the cytopathology laboratory to provide complete and accurate instructions (for the collection and handling of specimens) to all persons responsible for collecting these specimens.

Materials Needed:

- Specimen containers
- ThinPrep® CytoLyt Solution (available from MCL)
- Collection fluid/saline
- Glass slides or Pap Paks
- Requisition forms
- Cytology spray fixative

Collection Procedures:

If you have specific questions regarding the collection of any cytology specimens, please call MCL Customer Service at 515-247-4439 and ask to speak with the cytology laboratory.

Body Cavity Fluids (Pleura, Peritoneal, Pericardial)

1. Collect up to one liter of fluid in a clean, dry, container. If possible add approximately 1 ml heparin for each 100 ml of fluid. *Optimum volume: 200 ml.
2. Label specimen with patient’s first name, last name, date of birth, specimen type, and collection date.
3. Complete the MCL test request and package in a bag with the specimen. Keep specimen at room temperature.
4. Transport to MCL.

Breast/Nipple Secretions

1. To remove any accumulated secretory material and exfoliated squamous cells from the nipple and duct openings, the nipple is first cleansed using a gauze pad moistened with saline.
2. The nipple is then wiped with a solution of 2% glacial acetic acid (in water) to loosen plugs.
3. Subsequent gentle squeezing expresses the plugs and the nipple is wiped dry.
4. Using gentle hand pressure starting at the base of the breast and extending toward the nipple, the specimen is obtained.
5. Generally, one or more beads of fluid appear on the surface of the nipple and are touched onto a glass slide and spray fixed IMMEDIATELY.
6. The first one or two smears will usually consist of debris and will be non-diagnostic. (These smears should be preserved as well, in case no other material can be obtained). However, the most diagnostic material can usually be collected by continued gentle massage of the breast and smearing of the material on slides. Again, immediate fixation is of the utmost importance.

7. Label slides with patient’s first name, last name, date of birth, and store in slide container.

8. Complete the MCL test request and package in a bag with the specimen. Keep specimen at room temperature.

9. Transport to MCL.

Brushings (Bronchial, Gastric, Esophageal)

1. Rotate brush gently but rapidly on clean glass slide.
2. Fix slide immediately with spray fixative.
3. Rinse the remaining material from brush or clip off the wire and place the entire brush in a container of saline.
4. Label slides and specimen with patient’s first name, last name, and date of birth.
5. Complete the MCL test request and package in a bag with the specimen. Keep specimen at room temperature.
6. Transport to MCL.

Cerebrospinal Fluid

1. Collect specimen into a sterile tube.
2. Optimum volume: 2 ml. - Minimum volume: 0.5 ml.
3. Label specimen with patient’s first name, last name, date of birth, specimen tube #, and collection date.
4. Complete the MCL test request and package in a bag with the specimen.
5. Keep specimen refrigerated.
6. Have transported on ice to MCL via courier. Call MCL Customer Service for Stat pick-up if possible.
Fine Needle Aspiration Biopsy (FNA) - Lung, Breast, Prostate, Other
(submitting specimen in tube) *See separate procedure for Thyroid FNA

*An optimal specimen would include both submitting a specimen in tube and on slide.

1. Aspirate specimen and place directly into a vial, tube or other container that contains ThinPrep® CytoLyt Solution or Saline. (This fluid is available by calling the Mercy Clinical Laboratory to arrange for delivery by courier).
2. Label specimen with patient’s first name, last name, date of birth, specimen type, and collection date.
3. Complete the MCL test request and package in a bag with the specimen. Keep specimen at room temperature.
4. Transport to MCL.

Fine Needle Aspiration Biopsy (FNA) - Lung, Breast, Prostate, Other
(submitting specimen on slides) *See separate procedure for Thyroid FNA

*An optimal specimen would include both submitting a specimen in tube and on slide.

1. Aspirate specimen. Place bevel of needle against center of glass slide and express a small drop of aspirated material. Place a second slide on top of the first, allow weight of slide to spread the drop, then quickly pull slides apart.
2. Fix one slide immediately with spray fixative or immerse into a container filled with 95% alcohol for the Papanicolaou stain.
3. Air-dry the second slide for the Diff-Quik stain.
4. Label specimens with patient’s first name, last name, and date of birth.
5. Allow the slides to dry for 15 minutes and place in slide container.
6. Complete the MCL test request and package in a bag with the specimen. Keep specimen at room temperature.
7. Transport to MCL.

Fine Needle Aspiration Biopsy (FNA) – Thyroid Aspirate

1. Aspirate specimen. Place bevel of needle against glass slide and express a small drop of aspirated material.
2. Place a second slide perpendicular to the first and touch along the upper edge. In a smooth motion, the second slide is brought flush with the first and a single, rapid, gentle smearing stroke is made.
3. For each Aspirated Pass
   a. Prepare one (1) fixed slide (immediately fix with spray fixative or immerse into a container filled with 95% alcohol) for the Papanicolaou stain.
   b. Prepare one (1) air-dried slide for Diff-Quik stain.
4. After the slides are prepared, rinse the remaining material into a ThinPrep® CytoLyt solution vial. The fluid can be rinsed through the needle a few times to ensure proper retrieval of all the aspirated material.
5. Label all specimens with the patient’s first name, last name and date of birth.
6. Allow slides to dry for 15 minutes and place in slide container.
7. Complete the MCL test request and package in a bag with the specimen. Keep specimen at room temperature.
8. Transport to MCL.

Sputum

1. Collection should not be done within 30 minutes of eating to avoid food contamination.
2. Instruct patient to rinse mouth with water prior to each collection.
4. Label specimen with patient’s first name, last name, date of birth, specimen type, and collection date.
5. Complete the MCL test request and package in a bag with the specimen. Keep specimen at room temperature.
6. Transport to MCL.

Touch Preps (Tzanck prep, Conjunctival Smear)

1. Vesicular or bullous lesions MUST be present for preparation of a Tzanck smear. When ulcers or crusted lesions are present, only culture should be obtained.
2. Vesicular fluid can be collected by aspiration with a needle or rupturing the vesicle with a scalpel blade and collecting the fluid that oozes out with a moistened swab.
3. Place the swab or scraper into ThinPrep® CytoLyt solution (available from MCL). Rinse well into the fixative and leave the swab in the solution. Break or cut the handle end off of the swab and replace the cap securely.
4. Label specimen with patient’s first name, last name, date of birth, specimen type, location of lesion and collection date.
5. Complete the MCL test request and package in a bag with the specimen. Keep specimen at room temperature.
6. Transport to MCL.

Urine

1. Hydrate the patient before collection.
2. “Clean catch” specimens are preferred when tests are to rule out malignancy.
4. Label specimen with patient’s first name, last name, date of birth, specimen type and collection date.
5. Complete the MCL test request and package in a bag with the specimen. The requisition form should be marked to indicate whether the specimen is voided or catheterized.
6. Refrigerate the specimen to stabilize if transport will be longer than 1 hour. It is recommended for cell preservation that the sample be transported to the lab the same day as collected.
7. Transport to MCL. Keep specimen refrigerated.

Washings (Bronchial, Tracheal, Esophageal) Aspirates

1. These specimens are often collected during endoscopic procedure.
2. Specimen should be collected into a sterile container.
4. Label specimen with patient’s first name, last name, date of birth, specimen type and collection date.
5. Complete the MCL test request and package in a bag with the specimen. Keep specimen at room temperature.
6. Transport to MCL.