Specimen Collection

Special Collections
Fine Needle Aspiration (FNA) Cytology

Laboratory Services
April 2017
Agenda

Before You Begin

Collection – Smearing Technique

Packaging & Transport

Proper vs. Improper Slide Examples

Resources

Click on the links above to be taken directly to that section.
Before you begin- Hygiene

Wash hands thoroughly and practice standard precautions while handling collection devices and specimens.

Disinfect work surfaces prior to supply set up.
Before you begin - FNA Kit

Gather your supplies:

- ThinPrep vial with CytoLyt®
- Alcohol fixative
- Blank glass slides
- A requisition is provided to obtain specimen location details and clinical history. A detailed order from your EMR is also acceptable.
There must be TWO patient identifiers on all specimens and prepared slides.

- Patient’s first and last name (no nicknames or initials)
- Patient’s date of birth and/or Spectrum Health MRN

Label slides in pencil or glass slide specific marker.

Specimens and slides will not be processed if two patient identifiers are not observed upon arrival to the lab.
Before you begin - Orders

Provide as many clinical details as possible when ordering

- Source/Body Site
  - Salivary gland, thyroid, lymph node, lung mass, breast mass, etc.
- Precise specimen location
  - Salivary gland (parotid, submandibular, sublingual)
  - Thyroid (right, left, isthmus)
  - Lymph node (cervical, supraclavicular, 4R, subcarina, etc.)
  - Lung mass (Right middle lobe, left lower lobe)
- Location (Right vs Left)
- Size
- Ultrasound or CT impression: Cystic vs. Solid
- Pertinent patient history
Label all slides and specimen containers with **two** patient identifiers.

A single drop of specimen is put on the upper 2/3 of the slide. The needle is then put in CytoLyt®; fluid is pulled into the syringe and expressed.

**NOTE:** Once the needle and syringe come in contact with CytoLyt® solution, a new needle and syringe must be used for additional passes.
Lay the spreader slide on top of the specimen slide, so that the material begins to spread between the slides.

Gently pull the two slides apart using a sliding motion along the length of the slide, resulting in a thin layer of material on each slide.
Once smeared **IMMEDIATELY** (within one second of smearing) fix one specimen slide with spray fixative or put in 95% alcohol. The second specimen slide is left to air dry.

* Immediate fixation prevents air drying effect of the cells.
Any remaining specimen can be expressed from the needle into CytoLyt®. The CytoLyt® solution is a cellular fixative.

If there is scant specimen in the needle or the needle clots, rinse the needle in CytoLyt®.

NOTE: Once the needle and syringe come in contact with CytoLyt® solution, a new needle and syringe must be used for additional passes.
Collection

If more than one body site is being sampled a new FNA kit is required for each specimen site collection.

Right Thyroid

Left Thyroid
Once the specimen is received in the laboratory, the fixed smear is stained with a Pap stain and the air-dried slide is stained with Diff-Quik®. A ThinPrep® slide is prepared from specimen that is expressed into the CytoLyt® vial. If enough specimen remains, a cell block is prepared.
Transport specimen to laboratory immediately for processing. If there is a delay, refrigerate solution until it is delivered to the laboratory.

Cells in CytoLyt® solution are preserved for 8 days at room temperature.

When packing up specimen vials for transport to the laboratory, please check all specimen tops are tightly sealed.
Proper slide preparation example

Correct FNA Cytology Smear Technique

Monolayer smear
Poor slide preparations

Poorly prepared slides are not ideal and can be difficult to make a good and accurate diagnosis.

The “lift” or “pull apart” slide technique creates ridges of thick specimen.

Too much specimen on slides makes individual cells hard to see. If you have too much specimen on a smear, take another slide and smear specimen again.

A demonstration of smear techniques may be found here: https://www.youtube.com/watch?v=RoYfwyTyxJY
Poor slide preparations

What we see under a microscope with poor specimen preparation.

Too much specimen

What we can see under a microscope with good specimen preparation.

Monolayer of evenly distributed specimen.

Individual cell groups
If a Cytotechnologist is needed to assist physician in preparation of slides and determination of adequate cellularity, the procedure should be scheduled in advance by calling the Spectrum Health Cytology Department at 616.267.2610, Monday - Friday, 8:00 a.m. - 4:30 p.m.
Spectrum Health Regional Laboratory

Phone: 616.774.7721
Fax: 616.774.5159
Email: LaboratoryServices@spectrumhealth.org

Test Directory and Collection Instructions: spectrumhealth.testcatalog.org/show/9677

Laboratory News & Updates: lab.spectrumhealth.org

More training modules: lab.spectrumhealth.org/training