

SPECTRUM HEALTH



Specimen Collection

Special Collections

Fine Needle Aspiration (FNA) Cytology

Laboratory Services

April 2022

Agenda

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Before you begin- Hygiene

Be sure to:

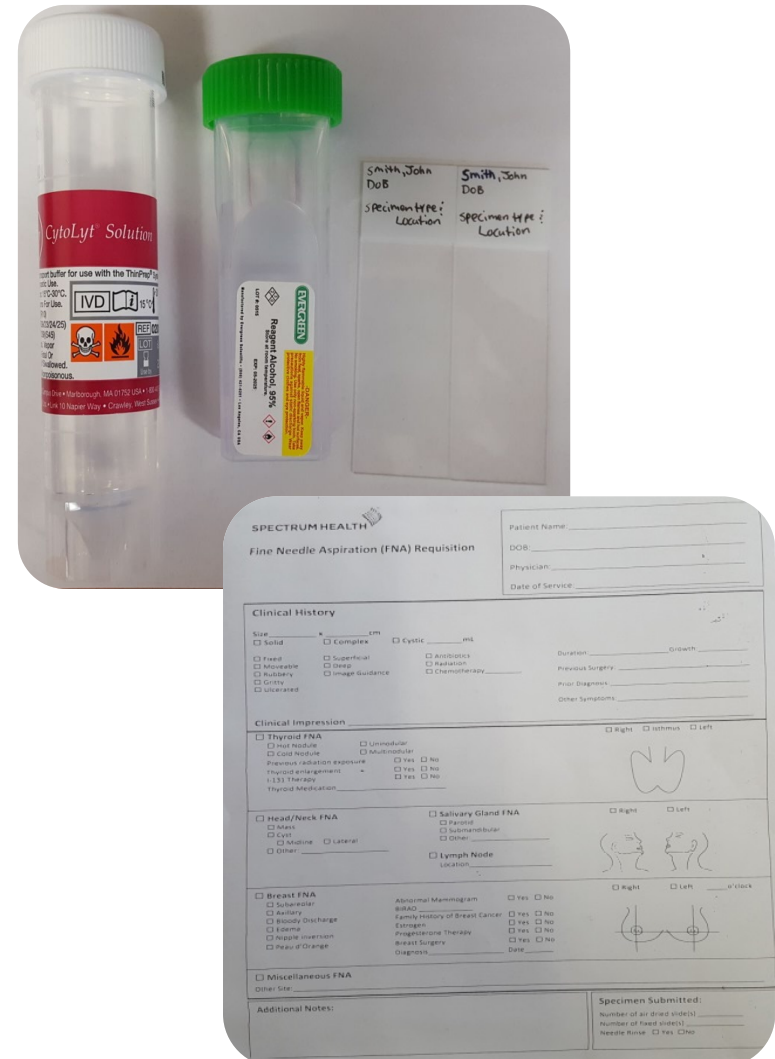
- Wash hands thoroughly and practice standard precautions while handling collection devices and specimens.
- Disinfect work surfaces prior to supply set up.



Before you begin - FNA Kit

Gather your supplies:

- ThinPrep vial with CytoLyt®
- Alcohol fixative
- Blank glass slides
- Also, a requisition is provided to obtain specimen location details and clinical history. A detailed order from your EMR is acceptable, as well.

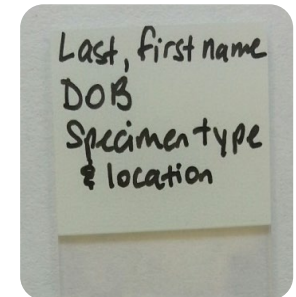
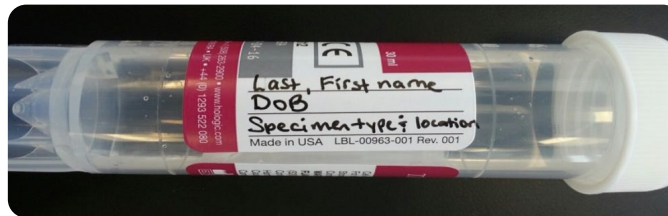


Before you begin - Labeling

There must be TWO patient identifiers on all specimens and on all 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 in marker specifically designed for glass slides.

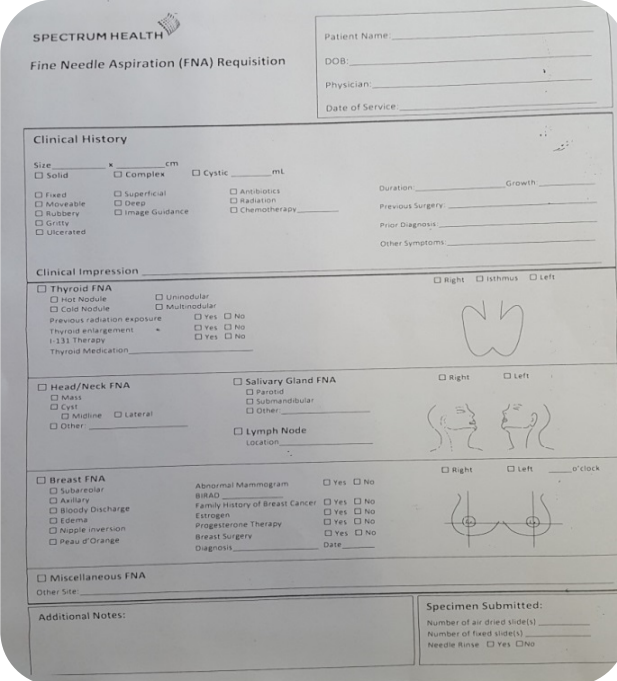


Note: If two patient identifiers are not observed upon arrival to the lab, the specimens and slides will not be processed.

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, including right vs. left
 - Salivary gland (parotid, submandibular, sublingual)
 - Thyroid (right, left, isthmus)
 - Lymph node (cervical, supraclavicular, 4R, subcarina, etc.)
 - Lung mass (Right middle lobe, left lower lobe)
- Ultrasound or CT impression
 - Cystic vs. Solid
- Size
- Pertinent patient history



The image shows a 'SPECTRUM HEALTH Fine Needle Aspiration (FNA) Requisition' form. It includes fields for Patient Name, DOB, Physician, and Date of Service. The 'Clinical History' section contains checkboxes for various characteristics like Size (Solid, Complex, Cystic), Fixation (Fixed, Movable), and Ulceration. The 'Clinical Impression' section has checkboxes for Thyroid FNA (Hot/Cold Nodule, Unimodular/Multimodular), Head/Neck FNA (Mass, Cyst, Midline/Lateral/Other), Salivary Gland FNA (Parotid, Submandibular), and Breast FNA (Subareolar, Axillary, Bloody Discharge, Edema, Nipple Inversion, Peau d'Orange). It also includes checkboxes for Abnormal Mammogram, BRCA, Family History of Breast Cancer, Estrogen, and Progestosterone Therapy. There are anatomical diagrams for the thyroid, head/neck, and breast. The bottom section includes 'Additional Notes' and 'Specimen Submitted' information (Number of air-dried slides, Number of fixed slides, Needle Rinse).

Collection

For all Thyroid FNA's,

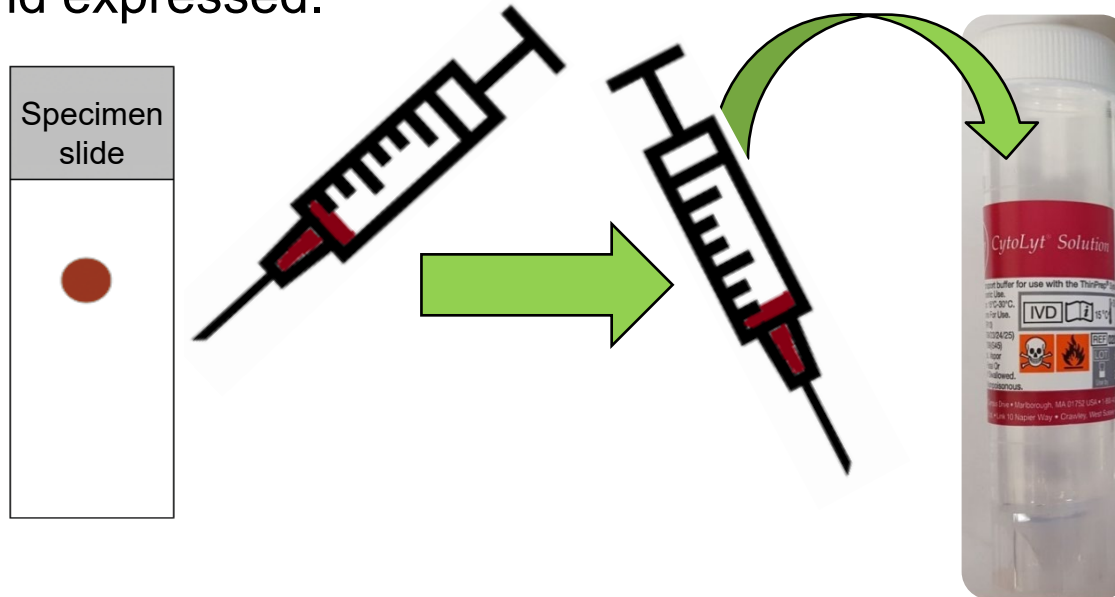
- Please **do not** make smears.
- Put three separate needle passes into the CytoLyt[®] vial.

For all other specimen types,

- Use the first needle pass for a smear.
- Put two more needle passes into the CytoLyt[®] vial.

Collection

A single drop of specimen is put on the upper two-thirds of the slide, then the needle is put into CytoLyt[®] so that fluid can be pulled into the syringe and expressed.



IMPORTANT: Once the needle and syringe come into contact with CytoLyt[®] solution, a new needle and a new syringe must be used for additional passes.

Remember to label all slides and all specimen containers with two patient identifiers.

Collection

Any remaining specimen can be expressed from the needle into CytoLyt[®] (the solution is a cellular fixative).

A minimum of three total needle passes are needed from each sampled body site. Recall:

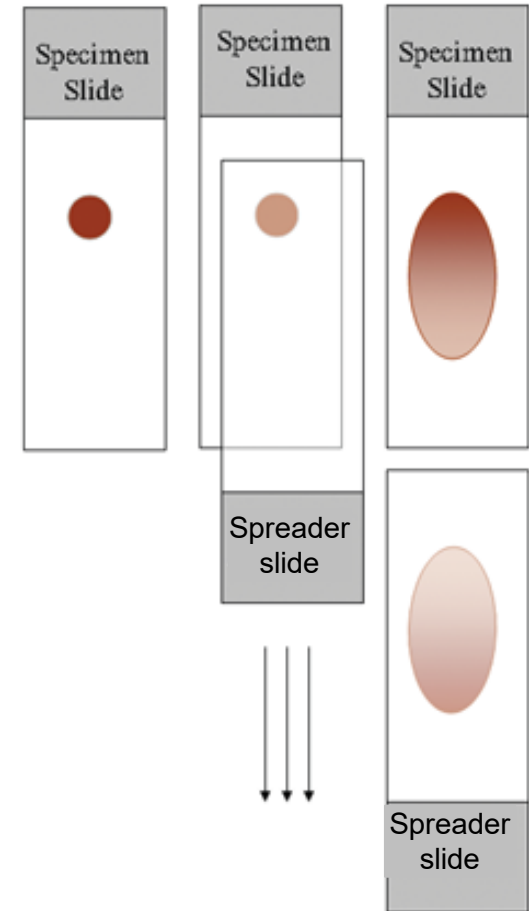
- Thyroid FNAs = no smears ; 3 separate passes into CytoLyt[®]
- All others = 1 pass for smears ; 2 separate passes into CytoLyt[®]

If there is scant specimen in the needle, or if the needle clots, it should be rinsed in CytoLyt[®].

Collection – Smearing Technique

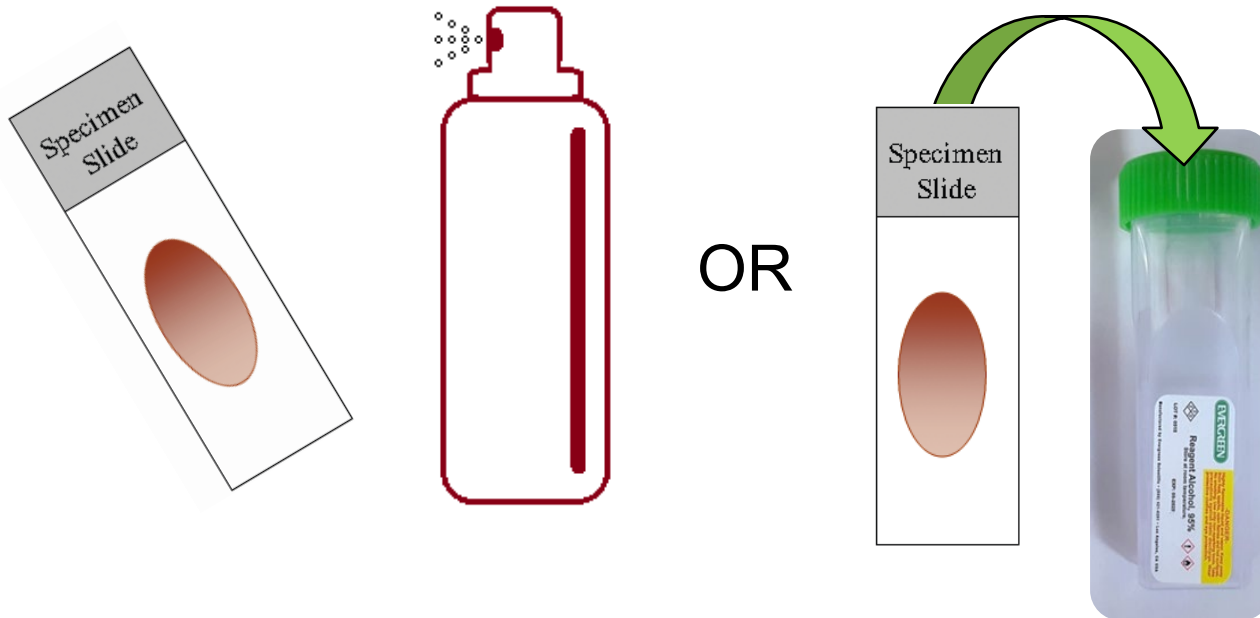
Lay the spreader slide on top of the specimen slide so that the material begins to spread between the slides.

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.



Collection – Smearing Technique

Once smeared, **IMMEDIATELY** (within one second of smearing) fix one specimen slide with spray fixative, or put in 95% alcohol.

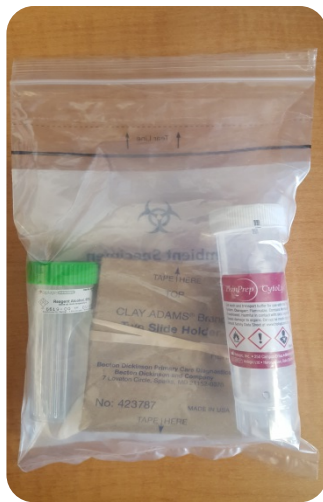


** Immediate fixation prevents air drying effects on the cells.*

The second specimen slide should be left to air dry.

Collection – Multiple Sites

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



Right Thyroid



Left Thyroid

Collection- Processing

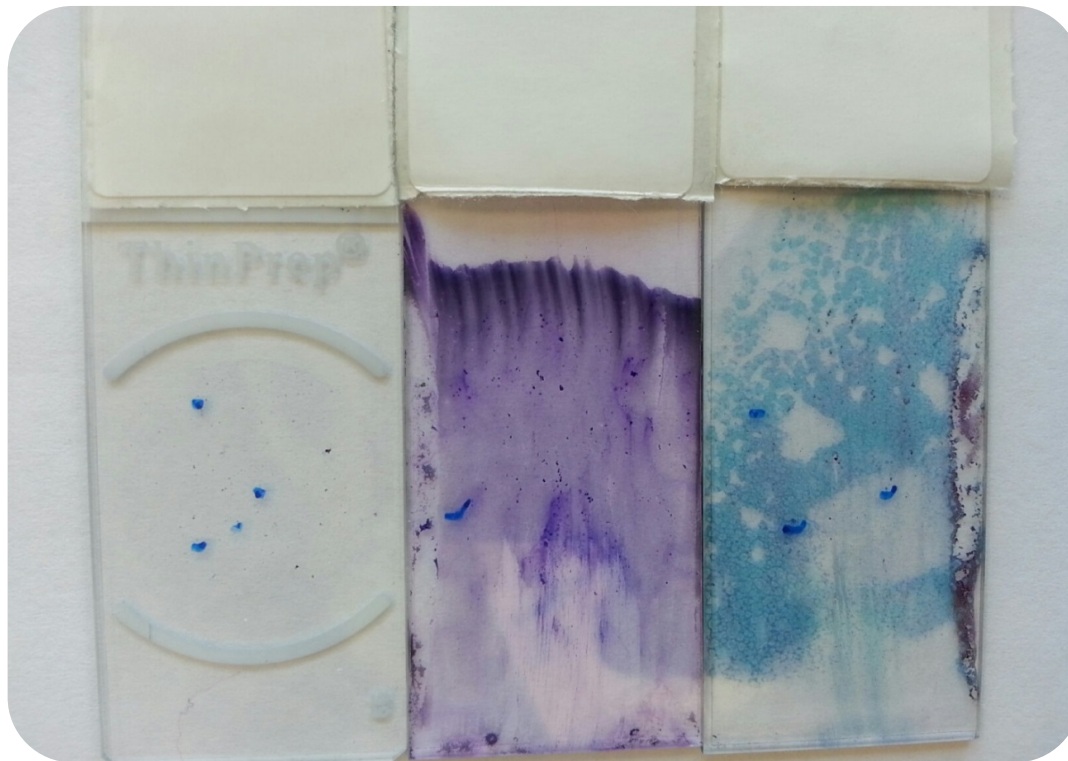
Once the specimen is received in the laboratory, the fixed smear is stained with a Pap stain and the air-dried slide is stained with Diff-Quik[®]. A ThinPrep[®] slide is prepared from specimen that is expressed into the CytoLyt[®] vial. If enough specimen remains, a cell block is prepared.



Proper Slide Preparation

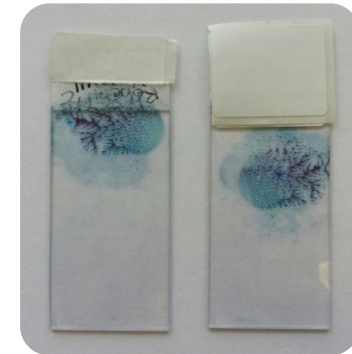
Correct FNA Cytology Smear Technique

Monolayer smear



Poor Slide Preparation

Poorly prepared slides (i.e. improperly placed specimen, etc.) are not ideal and can be difficult to make a good and accurate diagnosis.



Improper specimen placement

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



“Pull apart” with ridges

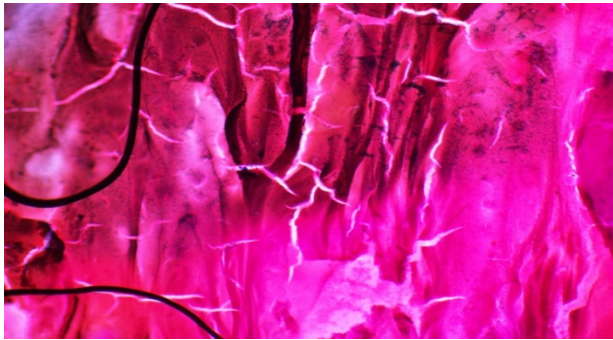
Too much specimen on slides makes individual cells hard to see. If there is too much specimen on a smear, take another slide and smear specimen again.



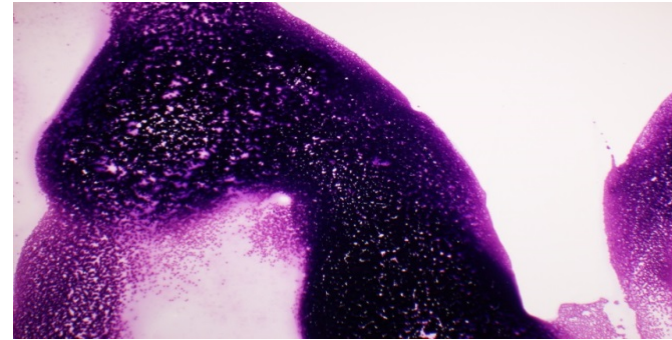
Too much specimen

Poor slide preparations

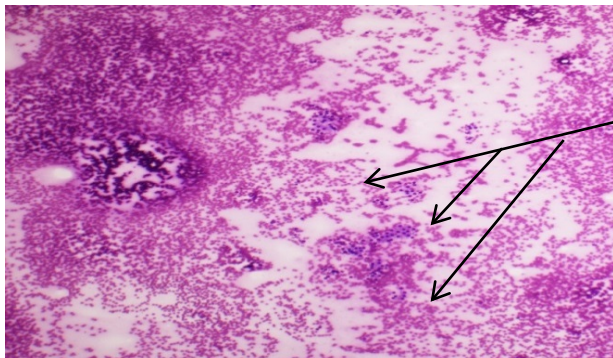
What is seen under a microscope with poor specimen preparation.



Too much specimen

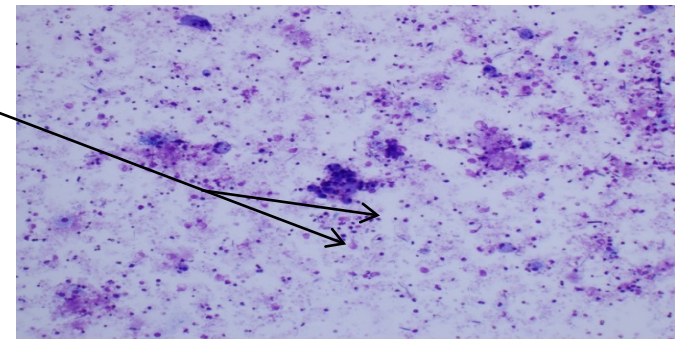


What can be seen with good specimen preparation.



Individual cell groups

Monolayer of evenly distributed specimen.



Packaging & Transporting

Transport the specimen to the laboratory immediately for processing. If there is a delay, refrigerate the solution until it is delivered to the laboratory.

Cells in CytoLyt[®] solution are preserved for eight days at room temperature.

Reminder: When packing up specimen vials for transport to the laboratory, please check that all specimen tops are tightly sealed.



Resources

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.

Resources

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**

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