Collection Manual - Cytology Introduction (LTR31176)

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INTRODUCTION TO CYTOLOGY SPECIMEN COLLECTION MANUAL

PRINCIPLE

This manual is intended to be used as a specimen collection guideline for cytology. Each separate area of concern is included in a different procedure. Therefore, items such as "transportation", "patient preparation", and "preservation required" may differ from procedure to procedure.

POLICY

There are several general collection reminders that should be noted. While we hope that these are already known and practiced by all hospital associates and Physician office staff, we feel that they should be reviewed.

1. Proper patient identification (i.e. patient name and date of birth) is imperative on all specimens and laboratory requisitions. Specimen source, time and date of collection, and collector's initials must also be provided. Please send current patient insurance information with all cytology specimens (applies to non-BVH owned facilities only).

2. Orders for cytology specimens collected in the Radiology Department, inpatient areas, and outpatient locations (except endoscopy) of the hospital must be entered in Cerner. Specimens must be properly labeled with all required patient identifiers (e.g. name, date of birth, and FIN number or medical record number), specimen source (i.e. right pleural fluid), date and time of collection, and collector's initials.

3. If in doubt about an order for a particular test, please contact the Cytology Department (ext. 55814). We will be glad to clarify those items that pertain to our work.

4. All cytology material should be handled carefully. Sputum, body fluids, etc., are a potential source of infectious disease and should always be treated as such.

5. Tests requested for other areas of the laboratory (i.e. Microbiology) cannot be carried out on preserved cytologic material. If a cytology collection procedure specifies prompt preservation (e.g., CSF fluid), it is best to collect separate specimens or to divide the specimen, reserving one container for cytology.

6. All BVH cytology and lab paper requisition forms must be signed by the ordering provider. Please be sure to check that the diagnosis and test order date are also indicated on the form.

Collection of Body Fluid Specimens (LTR32711)

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COLLECTION OF BODY FLUID SPECIMENS

PRINCIPLE

Cytologic examination of body fluids may yield diagnostic information that is important for the timely diagnosis and management of patients with certain inflammatory processes or neoplastic disease.

POLICY

The following procedure provides guidelines for the proper collection, preservation, and transport of body fluid specimens to the Cytology Department. It pertains to specimens that are submitted for cytologic evaluation only. If other tests are required (e.g., cultures, chemistry), please refer to the Lab Collection Manual or contact the laboratory department concerned for instructions regarding their specific needs for specimen collection.

During second, third, weekend or holiday shifts, the specimen should be taken to the main lab processing area.

SPECIMEN

Patient Preparation: Per attending Physician

Type: Body fluids (e.g. pleural, peritoneal, pericardial, joint, cul-de-sac, and cyst fluids)

Handling Conditions:

1. For specimens collected within the BVH network, use *"orders +add"* in the main menu of Power Chart to request cytology testing. Enter *Pathology Cytology Request* in the search box and complete the required fields in yellow (i.e. Procedure, Clinical History, and Specimen Description) at the bottom of the screen. For specimen description, please include specimen laterality (i.e. right or left) when applicable. If additional special studies are required (e.g. flow cytometry), these must be entered in the "Special Studies Requested" field. When finished, be sure to sign the order by using the *sign* button in the bottom right corner of the screen. Retrieve the specimen label from the designated printer and place it on the specimen container. If a specimen label is not available, please ensure that the following information appears on the specimen container: patient name, date of birth, collection date and time, collector's initials, and type of specimen (e.g. right pleural fluid).

   For specimens collected outside of the BVH network (e.g. FSC), properly complete a non-gyn cytology requisition form and indicate the type of fluid specimen that was collected. If the specimen type is not among those listed on the form under the heading EFFUSIONS, please mark the OTHER category and write in the site (including laterality

when applicable) from which it was collected. Include the following information on the form: patient name, address, date of birth, social security number, collection date, and the name of the attending Physician. Please provide as much pertinent patient information as possible on the requisition form (e.g. history, present complaint, previous radiation or chemotherapy treatment). This information is extremely important for making a proper diagnosis. Also, please include a copy of the patient's insurance information and/or insurance card whenever possible.

NOTE: If lymphoma is suspected, please indicate this in the computer or on the requisition and transport the specimen to the Cytology Department as soon as possible following collection. For suspected lymphoma cases only, do not refrigerate the specimen.

2. Identification Needed: All specimen containers must be properly labeled (i.e. patient name, date of birth, date and time of collection, collector's initials, and specimen type). Containers should also be labeled appropriately to indicate the specimen source (including laterality if applicable).

3. Collected by: Attending Physician.

4. Preservation: Please DO NOT add fixative to body fluid specimens. Heparin may be added to prevent the fluid from clotting. It also acts as a short term preservative.

5. Transportation: Specimens should be taken to the Cytology Department of the laboratory as soon as possible following collection. They should be refrigerated if they arrive in the department after hours or on weekends.

EQUIPMENT AND MATERIALS

Equipment: Per attending Physician

Materials: Per attending Physician

PROCEDURE

Per attending Physician

REPORTING RESULTS

Smears and cell blocks will be reported in the routine manner for Cytology and Surgical Pathology. Due to processing factors, reports are not routinely issued for a minimum of 24 hours after the specimen has been received by the department.

Cell blocks are always made whenever possible. They do not need to be added to the specimen orders. Only the Cytology Department can determine if a cell block can be prepared.

If there are any questions, please feel free to call the Cytology Department at ext. 55814 and speak with a Cytotechnologist or a Pathologist regarding this procedure.

REFERENCE

Keebler, Catherine M., and Somrak, Theresa M., The Manual of Cytotechnology, Seventh Edition, pp 220, The American Society of Clinical Pathologists, Chicago, 1993.

Naylor, Bernard, Pleural, Peritoneal, and Pericardial Fluids, in Comprehensive Cytopathology, Marluce Bibbo, ed., pp 541, W.B. Saunders Company, Philadelphia, 1991.

Collection of Breast Related Specimens (LTR33142)

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COLLECTION OF BREAST RELATED SPECIMENS

PRINCIPLE

Cytologic examination of cellular material or secretions from the breast may yield diagnostic information important for the timely diagnosis and management of patients with certain inflammatory processes or neoplastic disease.

POLICY

The following procedure provides guidelines for the proper collection, preservation, and transport of cellular material and secretions from the breast to the Cytology Department. It pertains to specimens that are submitted for cytologic evaluation only. If other tests are required (e.g. cultures, chemistry), please refer to the Lab Collection Manual or contact the laboratory department concerned for instructions regarding their specific needs for specimen collection.

During second, third, weekend, or holiday shifts, the specimen should be taken to the main lab processing area.

SPECIMEN

Patient preparation: Per attending Physician or authorized agent.

Type: Breast fine needle aspiration biopsy specimens and nipple secretions.

Handling Conditions:

1. For specimens collected within the BVH network, use *"orders +add"* in the main menu of Power Chart to request cytology testing. Enter *Pathology Cytology Request* in the search box and complete the required fields in yellow (i.e. Procedure, Clinical History, and Specimen Description) at the bottom of the screen. For specimen description, please include specimen laterality (i.e. right or left) when applicable. If additional special studies are required, these must be entered in the "Special Studies Requested" field. When finished, be sure to sign the order by using the *sign* button in the bottom right corner of the screen. Retrieve the specimen label from the designated printer and place it on the specimen container. If a specimen label is not available, please ensure that the following information appears on the specimen container: patient name, date of birth, collection date and time, collector's initials, and type of specimen (e.g. right breast FNA or right nipple secretion).

   For specimens collected outside of the BVH network (e.g. non-BVH owned physician office), properly complete a non-gyn cytology requisition form and indicate the appropriate specimen type (i.e. right or left) under the heading of BREAST. Include the following information on the form: patient name, address, date of birth, social security number,

collection date, and the name of the attending Physician or authorized agent. Also, please indicate if the specimen was collected under imaging guidance (i.e. ultrasound). Also, whenever possible, please include a copy of the patient's insurance information and/or a copy of their insurance card.

Please provide as much pertinent clinical information as possible. Example: Clinical history, present complaint, previous radiation or chemotherapy, current pregnancy, etc.

2. Identification needed: All slides, containers and/or slide holders must be properly labeled (i.e. patient name, date of birth, date and time of collection, and specimen type). Slides or containers should also be appropriately labeled to indicate the source of the specimen (e.g., right or left breast). Also, for nipple secretions please ensure that the frosted end of each glass slide is labeled with the name of the patient, date of birth, and the site (i.e. right or left breast) from which the specimen was collected. Please note that the patient's name and date of birth must always be written on the slide label regardless of whether or not it appears on the outside of the specimen container (e.g. cardboard slide holder or bottle of 95% ethanol).

3. Collected by: Attending Physician or authorized agent.

4. Transportation: Specimens should be sent by courier to the Cytology Department as soon as possible.

EQUIPMENT AND MATERIALS

Equipment:

Breast FNA Specimens: FNA syringe handle (if available), Coplin jar (if required – see below).

Nipple secretions: Coplin jar (if required – see below).

Materials:

Breast FNA Specimens: Available from the Cytology Department upon request. 20 ml disposable plastic syringe, 22 gauge needle, alcohol for skin preparation, clean glass microscope slides (preferably positively charged slides), spray fixative or 95% ethanol in a Coplin jar, vial of CytoLyt solution.

Nipple Secretions: Available from the Cytology Department upon request. Spray fixative or 95% ethanol in a Coplin jar, clean glass microscope slides (preferably positively charged slides).

PROCEDURE

I. FINE NEEDLE ASPIRATION BIOPSY COLLECTION:

The Physician may choose to prepare fixed smears and rinse the needle into CytoLyt or to place the entire specimen into a vial of CytoLyt solution. Ideally, whenever possible two fixed smears should be prepared first, with the remainder of the specimen being rinsed in CytoLyt solution. Needle aspirations that yield scant cellular material or consist mainly of fluid should *only* be placed into CytoLyt solution. For cases that require an immediate evaluation, smears fixed in 95% ethanol must always be prepared.

a. Label the vial of CytoLyt solution and the frosted end of the glass slides with the patient's name and date of birth. Also, please indicate the site from which the specimen is to be collected (i.e. right or left breast FNA), the date and time of collection, and the collector's initials

b. Sterilize the skin surface by using a simple alcohol swab for superficial lesions.

c. Assemble the FNA syringe, the needle, and the optional handle.

d. Introduce the needle into the target lesion.

e. Once inside the lesion, apply negative pressure move the needle back and forth with a slight change in direction during each motion. Three or four short strokes (less than 1 cm) are usually sufficient.

f. Release negative pressure and withdraw the needle.

PREPARATION OF FIXED SMEARS USING GLASS MICROSCOPE SLIDES:

a. Remove the needle from the syringe and proceed to draw air into the syringe barrel.

b. Reattach the needle to the syringe barrel. Express one or two drops of specimen in the middle of a properly labeled plain glass slide. The open edge of the needle bevel should be directed downward to avoid spraying the specimen past the slide.

c. Place a second labeled plain glass slide face to face with the first slide and allow the specimen to spread without applying pressure. If tissue fragments are present, they may be flattened with very slight pressure. Grasp the ends of the slides and pull them apart in opposite directions. The smears are to be spray fixed or placed into a container of 95% ethanol as quickly as possible.

d. If the specimen clots, is very fluid-rich, or is bloody, too much specimen may be expressed. By touching other plain slides to the specimen pool, several slide pairs may be prepared.

PREPARATION OF SPECIMENS COLLECTED IN CYTOLYT SOLUTION:

a. Remove the lid from the properly labeled vial of CytoLyt solution.

b. Deposit the sample into the CytoLyt solution vial. Be sure to rinse the needle and syringe thoroughly by drawing CytoLyt solution into the syringe barrel and releasing it back into the vial.

c. Replace the lid on the CytoLyt solution vial and tighten it completely to ensure that there will not be any leakage.

II. NIPPLE SECRETION PREPARATION:

a. Label one or two clean glass slides with the patient's name and date birth. Also, please indicate the specimen type and laterality (right or left nipple secretion), the date and time of collection, and the collector's initials.

b. Have the spray fixative uncapped or 95% ethanol fixative prepared and the bottle open.

c. Apply gentle pressure on the areola and proceed to squeeze the nipple between the thumb and index finger. If a secretion is produced, only allow a drop the size of a pea to accumulate on the apex of the nipple.

d. Support the areola and nipple with one hand.

e. With the other hand, place a properly labeled slide on the nipple and touch the drop. The drop will spread slightly laterally. Proceed to draw the slide quickly across the nipple.

f. IMMEDIATELY spray fix or place the slide into the bottle of 95% ethanol.

g. Repeat the complete procedure a second time if possible.

REPORTING RESULTS:

Smears and cell blocks will be reported in the routine manner for Cytology and Surgical Pathology. Due to processing factors, reports are not routinely issued for a minimum of 24 hours after the specimen has been received by the department.

Please note that cell blocks will be made whenever possible. They do not need to be added to the specimen orders. Only the Cytology Department can determine if a cell block may be prepared.

If there are any questions, please feel free to call the Cytology Department at ext. 55814 and speak with a Cytotechnologist or a Pathologist regarding this procedure.

NOTE: Please refer to the **Transport of FNA Specimens to the Cytology Department Memo** for the steps that must be followed when transporting fine needle aspiration specimens to the Cytology Department. Syringes with needles attached are no longer acceptable.

REFERENCES

Ramzy, Ibrahim, Clinical Cytopathology and Aspiration Biopsy, pp 331-332, Appleton & Lange, East Norwalk, 1990.

Silverman, Jan F., Breast, in Comprehensive Cytopathology, Marluce Bibbo, ed., pp 703-704, W.B. Saunders Company, Philadelphia, 1991.

Collection of Bronchoscopy Specimens (LTR32713)

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COLLECTION OF BRONCHOSCOPY SPECIMENS

PRINCIPLE

Cytologic examination of cellular material from bronchoscopy specimens may aid in the diagnosis of various disease processes of the respiratory tract. Adherence to the guidelines suggested by the following procedure will yield a properly collected and preserved specimen that will give optimal results when processed by the Cytology Department.

POLICY

The following procedure provides guidelines for the proper collection, preservation, and transport of bronchial specimens to the Cytology Department. It pertains to specimens that are submitted for cytologic evaluation only. If other tests are required (e.g., cultures, chemistry), please refer to the Lab Collection Manual or contact the laboratory department concerned for instructions regarding their specific needs for specimen collection.

During second, third, weekend or holiday shifts, the specimen(s) should be taken to the main lab processing area.

Since Microbiology studies are often performed on bronchoscopy specimens, please refer to the Microbiology section of the Lab Collection Manual for instructions regarding their specific requirements for specimen collection and handling.

SPECIMEN

Patient Preparation: Per attending Physician.

Type: Bronchoscopic material including bronchial washings, bronchial lavage specimens, bronchial brushings, bronchial aspirates (e.g. Wang FNA's), and tracheal aspirates.

Handling Conditions:

1. For specimens collected within the BVH network, use *"orders +add"* in the main menu of Power Chart to request cytology testing. Enter *Pathology Cytology Request* in the search box and complete the required fields in yellow (i.e. Procedure, Clinical History, and Specimen Description) at the bottom of the screen. For specimen description, please include specimen laterality (i.e. RUL, LLL, etc.) when applicable. If additional special studies are required (e.g. fungal stain), these must be entered in the "Special Studies Requested" field. When finished, be sure to sign the order by using the *sign* button in the bottom right corner of the screen. Retrieve the specimen label from the designated printer and place it on the specimen container. If a specimen label is not available, please ensure that the following information appears on the specimen container: patient name,

date of birth, collection date and time, collector's initials, and type of specimen (e.g. RUL bronchial lavage or LUL bronchial brushing).

For specimens collected outside of the BVH network (i.e. FSC), properly complete a non-gyn cytology requisition form and indicate the appropriate specimen type under the heading RESPIRATORY TRACT (e.g. RLL bronchial lavage). Include the following information on the form: patient name, address, date of birth, social security number, collection date, and the name of the attending Physician or authorized agent. Please provide as much pertinent patient information as possible on the requisition form (e.g. history, present complaint, previous radiation or chemotherapy treatment). This information is extremely important for making a proper diagnosis. Be sure to indicate if microbiology cultures (e.g. routine, acid fast, or fungal) or testing is required (GMS and/or AFB stain or cell counts on lavage specimens) on the BRONCHOSCOPY FORM. Also, please include a copy of the patient's insurance information and/or insurance card whenever possible.

2. Identification Needed: All containers must be properly labeled (i.e. patient name, date of birth, date and time of collection, collector's initials, and specimen type). Container labels should also indicate anatomic locations, including laterality when applicable (i.e. RUL).

3. Collected by: Attending Physician.

4. Transportation: Please transport the specimen(s) to the cytology department of the laboratory as soon as possible following collection. Please note that bronchial brushing specimens often contain the most diagnostic material collected. Therefore, it is extremely important that they be transported to the Cytology Department as soon as possible.

5. Preservation: None, immediate processing. In the event that a bronchoscopy specimen arrives when the department is closed, the specimen(s) should be taken to the main lab processing area.

EQUIPMENT AND MATERIALS

Equipment: Per attending Physician

Materials: Per attending Physician

PROCEDURE

Per attending Physician

REPORTING RESULTS

Smears and cell blocks will be reported in the routine manner for Cytology and Surgical Pathology. Due to processing factors, reports are not routinely issued for a minimum of 24 hours after the specimen has been received by the department. If there are any questions, please feel free to call the Cytology Department at ext. 55814 and speak with a Cytotechnologist or a Pathologist regarding this procedure.

REFERENCE

Johnston, William W., and Elson, Craig E., Respiratory Tract, in Comprehensive Cytopathology, Marluce Bibbo, ed., pp 322, W.B. Saunders Company, Philadelphia, 1990.

Collection of CSF for Cytology (LTR32715)

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COLLECTION OF CEREBROSPINAL FLUID FOR CYTOLOGY

PRINCIPLE

Cytologic examination of cerebrospinal fluids may yield diagnostic information important for the timely diagnosis and management of patients with certain inflammatory processes or neoplastic disease.

POLICY

The following procedure provides guidelines for the proper collection, preservation, and transport of spinal fluid specimens to the Cytology Department. It pertains to specimens that are submitted for cytologic evaluation only. If other tests are required (e.g., cultures, chemistry), please refer to the Lab Collection Manual or contact the laboratory department concerned for instructions regarding their specific needs for specimen collection.

During second, third, weekend or holiday shifts, the specimen should be taken to the main lab processing area.

SPECIMEN

Patient Preparation: Per attending Physician

Type: Cerebrospinal Fluid (CSF)

Handling Conditions:

1. For specimens collected within the BVH network, use *"orders +add"* in the main menu of Power Chart to request cytology testing. Enter *Pathology Cytology Request* in the search box and complete the required fields in yellow (i.e. Procedure, Clinical History, and Specimen Description) at the bottom of the screen. If additional special studies are required (e.g. fungal stain), these must be entered in the "Special Studies Requested" field. When finished, be sure to sign the order by using the *sign* button in the bottom right corner of the screen. Retrieve the specimen label from the designated printer and place it on the specimen container. If a specimen label is not available, please ensure that the following information appears on the specimen container: patient name, date of birth, collection date and time, collector's initials, and type of specimen (e.g. CSF).

   For specimens collected outside of the BVH network (e.g. a non-BVH owned physician office) properly complete a non-gyn requisition form and mark the line provided for cerebrospinal fluids. Include the following information on the form: patient name, address, date of birth, social security number, collection date, and the name of the attending

Physician. Also, please include a copy of the patient's insurance information and/or insurance card whenever possible.

Please provide as much pertinent patient information as possible on the requisition form (e.g. history, present complaint, previous radiation or chemotherapy treatment). This information is extremely important for making a proper diagnosis.

2. Identification Needed: All specimen containers must be properly labeled (i.e. patient name, date of birth, date and time of collection, collector's initials, and specimen type). All containers should be labeled in such a manner as to indicate the order in which they were collected (e.g., A. or 1 or first sample collected; B. or 2 or second, etc).

3. Collected by: Attending Physician.

4. Transportation: Specimens submitted for cytologic examination must be delivered to the cytology department IMMEDIATELY following collection. Even a 15 minute delay can result in degeneration of the cells in a CSF specimen.

5. Preservation: None, immediate processing. If the specimen arrives during the time that the department is closed, a laboratory staff member should add an equal amount of CytoLyt solution to the specimen. A container of CytoLyt solution is kept on the counter in the Cytology Processing room. The specimen container should be labeled as PRESERVATIVE ADDED and left on the counter with its corresponding order form (if applicable).

EQUIPMENT AND MATERIALS

Equipment: Per attending Physician

Materials: Per attending Physician

PROCEDURE

Per attending Physician

REPORTING RESULTS

Smears will be reported in the routine manner for Cytology and Surgical Pathology specimens. Due to processing factors, reports are not routinely issued for a minimum of 24 hours after the specimen has been received by the department. Specimens that are not received in the department within 15 minutes of collection and/or are not preserved may be considered unsatisfactory for diagnostic evaluation. If there are any questions, please feel free to call the Cytology Department at ext. 55814 and speak with a Cytotechnologist or a Pathologist regarding this procedure.

REFERENCE

Rosenthal, Dorothy L., and Mandell, Diane B., Central Nervous System, in The Manual of Cytotechnology, Seventh Edition, Keebler, Catherine M., and Somrak, Theresa M., eds., pp 208-209, The American Society of Cytopathologists, Chicago, 1993.

Collection of Fine Needle Aspiration Biopsy Specimens (LTR32725)

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COLLECTION OF FINE NEEDLE ASPIRATION BIOPSY SPECIMENS

PRINCIPLE

Fine needle aspiration biopsy plays an important role in the timely diagnosis and management of cysts, inflammatory processes, and primary as well as metastatic neoplasms of subcutaneous structures (e.g. breast, thyroid, and lymph nodes).

POLICY

The following procedure provides guidelines for the proper collection, preservation, and transport of fine needle aspiration biopsy specimens to the Cytology Department. It pertains to specimens that are submitted for cytologic evaluation only. If other tests are required (e.g. cultures, chemistry), please refer to the Lab Collection Manual or contact the laboratory department concerned for instructions regarding their specific needs for specimen collection.

During second, third, weekend, or holiday shifts, the specimen should be taken to the main lab processing area.

SPECIMEN

Patient Preparation: Per attending Physician

Type: Fine needle aspiration biopsies of superficial lesions.

Handling Conditions:

1. For specimens collected within the BVH network, use *"orders +add"* in the main menu of Power Chart to request cytology testing. Enter *Pathology Cytology Request* in the search box and complete the required fields in yellow (i.e. Procedure, Clinical History, and Specimen Description) at the bottom of the screen. For specimen description, please include specimen laterality (i.e. right or left) when applicable. If additional special studies are required, these must be entered in the "Special Studies Requested" field. When finished, be sure to sign the order by using the *sign* button in the bottom right corner of the screen. Retrieve the specimen label from the designated printer and place it on the specimen container. If a specimen label is not available, please ensure that the following information appears on the specimen container: patient name, date of birth, collection date and time, collector's initials, and type of specimen (e.g. right neck mass FNA).

   For specimens collected outside of the BVH network (e.g. non-BVH owned physician office), properly complete a non-gyn cytology requisition form and indicate the appropriate specimen type (including laterality when applicable) under the heading of NEEDLE ASPIRATION BIOPSY. If the specimen type is not among those listed under this heading,

please mark the OTHER category and indicate the site (including laterality when applicable) from which it was collected. Include the following information on the form: patient name, date of birth, address, social security number, collection date, and the name of the attending Physician. Also, please include a copy of the patient's insurance information and/or insurance card whenever possible.

Also, please provide as much pertinent clinical information as possible. Example: History, present complaint or diagnosis, previous radiation or chemotherapy, etc.

2. Identification Needed: All slides, containers and/or slide holders must be properly labeled (i.e. patient name, date of birth, date and time of collection, collector's initials, and specimen description). Slides and/or containers should also be appropriately labeled to indicate the source of the specimen (e.g. left thyroid). Please note that the patient's name and date of birth must always be written on the slide label regardless of whether or not it appears on the outside of the specimen container (e.g. cardboard slide holder or bottle of 95% ethanol).

3. Collected by: Attending Physician.

4. Transportation: Specimens should be sent by courier to the Cytology Department as soon as possible following collection.

EQUIPMENT AND MATERIALS

Equipment: FNA syringe handle (if available), Coplin jar (if required – see below)

Materials:

Available from the Cytology Department upon request: 20 ml disposable plastic syringe, 22 or 25 gauge needle, alcohol for skin preparation, clean glass microscope slides (preferably positively charged slides), spray fixative or 95% ethanol in a Coplin jar, vial of CytoLyt solution.

PROCEDURE

FINE NEEDLE ASPIRATION BIOPSY COLLECTION:

The Physician may choose to prepare fixed smears and rinse the needle into CytoLyt or to place the entire specimen into a vial of CytoLyt solution. Ideally, whenever possible two fixed smears should be prepared first, with the remainder of the specimen being rinsed in CytoLyt solution. Needle aspirations that yield scant cellular material or consist mainly of fluid should *only* be placed into CytoLyt solution. For cases that require an immediate evaluation, smears fixed in 95% ethanol must always be prepared.

a. Label the vial of CytoLyt solution and the frosted end of the glass slides with the patient's name and date of birth. Also, please indicate the site from which the specimen is to be collected (including laterality when applicable), the date and time of collection, and the collector's initials.

b. Sterilize the skin surface by using a simple alcohol swab for superficial lesions.

c. Assemble the FNA syringe, the needle and the optional handle.

d. Introduce the needle into the target lesion.

e. Once inside the lesion, apply negative pressure move the needle back and forth with a slight change in direction during each motion. Three or four short strokes (less than 1 cm) are usually sufficient.

f. Release negative pressure and withdraw the needle.

PREPARATION OF FIXED SMEARS USING GLASS MICROSCOPE SLIDES:

a. Remove the needle from the syringe and proceed to draw air into the syringe barrel.

b. Reattach the needle to the syringe barrel. Express one or two drops of specimen in the middle of a properly labeled plain glass slide. The open edge of the needle bevel should be directed downward to avoid spraying the specimen past the slide.

c. Place a second labeled plain glass slide face to face with the first slide and allow the specimen to spread without applying pressure. If tissue fragments are present, they may be flattened with very slight pressure. Grasp the ends of the slides and pull them apart in opposite directions. The smears are to be spray fixed or placed into a container of 95% ethanol as quickly as possible.

d. If the specimen clots, is very fluid-rich, or is bloody, too much specimen may be expressed. By touching other plain slides to the specimen pool, several slide pairs may be prepared.

PREPARATION OF SPECIMENS COLLECTED IN CYTOLYT SOLUTION:

a. Remove the lid from the properly labeled vial of CytoLyt solution.

b. Deposit the sample into the CytoLyt solution vial. Be sure to rinse the needle and syringe thoroughly by drawing CytoLyt solution into the syringe barrel and releasing it back into the vial.

c. Replace the lid on the CytoLyt solution vial and tighten it completely to ensure that there will not be any leakage.

REPORTING RESULTS

Smears and cell blocks will be reported in the routine manner for Cytology and Surgical Pathology. Due to processing factors, reports are not routinely issued for a minimum of 24 hours after the specimen has been received by the department.

Please note that cell blocks are always made whenever possible. They do not need to be added to the specimen orders. Only the Cytology Department can determine if a cell block may be prepared.

If there are any questions, please feel free to call the Cytology Department at ext. 55814 and speak with a Cytotechnologist or a Pathologist regarding this procedure.

NOTE: Please refer to the **Transport of FNA Specimens to the Cytology Department Memo** for the steps that must be followed when transporting fine needle aspiration specimens to the Cytology Department. Syringes with needles attached are no longer acceptable.

REFERENCE

Ramzy, Ibrahim, Clinical Cytopathology and Aspiration Biopsy, pp 261-263, Appleton & Lange, East Norwalk, 1990.

Collection of Gastrointestinal Tract Specimens (LTR32717)

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COLLECTION OF GASTROINTESTINAL TRACT SPECIMENS

PRINCIPLE

Examination of cellular material from gastrointestinal tract specimens may aid in the diagnosis of various inflammatory and neoplastic disease processes. Adherence to the guidelines suggested by the following procedure will yield a properly collected and preserved specimen that will give optimal results when processed by the Cytology Department.

POLICY

The following procedure provides guidelines for the proper collection, preservation, and transport of gastrointestinal tract specimens to the Cytology Department. It pertains to specimens submitted for cytologic evaluation only. If other tests are required (e.g. cultures, chemistry), please refer to the Lab Collection Manual or contact the laboratory department concerned for instructions regarding their specific needs for specimen collection.

During second, third, weekend, or holiday shifts the specimen should be taken to the main lab processing area.

SPECIMEN

Patient Preparation: Per attending physician. For cytologic studies, NPO (nothing passed orally) after midnight of the night preceding the test is recommended. Gastric material should be obtained prior to a barium swallow or at least 72 hours afterwards.

Type: Endoscopic brushings from the GI tract and Gastric Washings

Handling Conditions:

1. For specimens collected within the BVH network, use *"orders +add"* in the main menu of Power Chart to request cytology testing. Enter *Pathology Cytology Request* in the search box and complete the required fields in yellow (i.e. Procedure, Clinical History, and Specimen Description) at the bottom of the screen. For specimen description, please be as specific as possible regarding the collection site (e.g. *distal* esophageal brushing). If additional special studies are required, these must be entered in the "Special Studies Requested" field. When finished, be sure to sign the order by using the *sign* button in the bottom right corner of the screen. Retrieve the specimen label from the designated printer and place it on the specimen container. If a specimen label is not available, please ensure that the following information appears on the specimen container: patient name, date of birth, collection date and time, collector's initials, and type of specimen (e.g. distal esophageal brushing).

   For specimens collected outside of the BVH network (e.g. FSC), properly complete a non-gyn cytology requisition form and indicate the type of specimen that was collected. If

the specimen type is not among those listed on the requisition form under the heading GASTROINTESTINAL TRACT, please mark the OTHER category and write in the site (e.g. gastroesophageal junction brushing) from which it was collected. Include the following information on the form: patient name, address, date of birth, social security number, collection date, and the name of the attending Physician. Also, please include a copy of the patient's insurance information and/or insurance card whenever possible.

Please provide as much pertinent patient information as possible on the requisition form (e.g. history, present complaint, previous radiation or chemotherapy treatment, etc.). This information is extremely important for making a proper diagnosis.

2. Identification Needed: All specimen containers should be labeled with the patient name, date of birth, date and time of collection, collector's initials, and the specimen type (e.g. gastric brushing). When applicable, they should be labeled numerically to indicate the order in which they were collected.

3. Collected By: Attending Physician.

4. For endoscopic brush specimens, remove the lid from the vial of PreservCyt solution.

5. Following collection of the specimen, rinse the brush thoroughly in PreservCyt solution. Press the bristles of the brush against the wall of the container and swirl the brush vigorously to ensure that all of the collected material is released. Discard the brush in a biohazard refuse container.

6. Replace the lid on the PreservCyt solution vial and tighten it until the black torque line on the lid passes the black torque line on the vial.

7. Gastric washing specimens should be collected fresh and transported to the laboratory IMMEDIATELY following collection. Do not rinse gastric washing specimens into PreservCyt solution. Be sure to label the specimen container with the patient name, date of birth, collection date, and the specimen type.

8. Transportation: Specimens should be transported to the Cytology Department in the laboratory as soon as possible following collection.

EQUIPMENT AND MATERIALS

Equipment: Per attending Physician

Materials: PreservCyt Solution vial (available from the Cytology Department upon request)

REPORTING RESULTS

Smears and cell blocks will be reported in the routine manner for Cytology and Surgical Pathology specimens. Due to processing factors, reports are not routinely issued for a minimum of 24 hours after the specimen has been received by the department. Gastric washing specimens that are not received in the department within one (1) hour following collection may be considered to be unsatisfactory for diagnostic evaluation. If there are any questions, please feel free to call the Cytology Department at ext. 55814 and speak with a Cytotechnologist or a Pathologist regarding this procedure.

REFERENCE

Schwartz, Mary R., Gastrointestinal Tract, in Comprehensive Cytopathology & Aspiration Biopsy, Ibrahim Ramzy, ed., pp 223, 227, 232, Appleton & Lange, East Norwalk, 1990.

Collection of Sputum Specimens for Cytology (LTR33143)

Revision: 2.08
Last Approved By: Williams, Diane (Electronic Signature Timestamp: 10/17/2017 4:27:24 PM)
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COLLECTION OF SPUTUM SPECIMENS FOR CYTOLOGY

PRINCIPLE

Microscopic examination of sputum specimens may assist in the early detection of respiratory tract neoplasms and infection. Correct collection methods are essential to ensure proper sampling of the lower respiratory tract.

POLICY

This procedure provides guidelines for the proper collection, preservation, and transport of sputum specimens to the Cytology Department. It pertains to specimens that are submitted for cytologic evaluation only. If other tests are required (e.g., cultures, chemistry), please refer to the Lab Collection Manual or contact the laboratory department concerned for instructions regarding their specific needs for specimen collection.

During second, third, weekend, or holiday shifts, the specimen should be taken to the main lab processing area.

SPECIMEN

Patient preparation: Early morning specimens are preferred and should be collected whenever possible. Prior to collection of the sputum specimen, the patient should brush their teeth and rinse their mouth out with water. This rids the oral cavity of any unnecessary debris that may be seen microscopically.

Type: Sputum

Handling Conditions:

1. For specimens collected within the BVH network, use *"orders +add"* in the main menu of Power Chart to request cytology testing. Enter *Pathology Cytology Request* in the search box and complete the required fields in yellow (i.e. Procedure, Clinical History, and Specimen Description) at the bottom of the screen. If additional special studies are required, these must be entered in the "Special Studies Requested" field. When finished, be sure to sign the order by using the *sign* button in the bottom right corner of the screen. Retrieve the specimen label from the designated printer and place it on the specimen container. If a specimen label is not available, please ensure that the following information appears on the specimen container: patient name, date of birth, collection date and time, and type of specimen (e.g. sputum).

   For specimens collected outside of the BVH network (i.e. non-BVH owned physician offices), properly complete a non-gyn cytology requisition and mark the line provided for sputum specimens. Please include the following information: patient name, date of birth, address, social security number, date of collection, pertinent clinical history, and the

name of the attending Physician or authorized agent. Also, please include a copy of the patient's insurance information and/or insurance card whenever possible.

Please provide as much pertinent patient information as possible on the requisition form (e.g. history, present complaint, previous radiation or chemotherapy treatment, etc.). This information is extremely important for making a proper diagnosis.

2. Identification Needed: All specimen containers must be properly labeled (i.e. patient name, date of birth, date and time of collection, and specimen type).

3. Collected By: Attending Physician or authorized agent.

4. Transportation: Specimens submitted for cytologic examination must be delivered to the Cytology Department as soon as possible following collection. If immediate transport is not possible, please refrigerate the specimen in the interim.

5. Preservation: None, immediate processing. If the specimen arrives when the department is closed, a laboratory staff member should add 30 ml of CytoLyt solution to the specimen. A container of CytoLyt solution is kept on the counter in the Cytology Processing room. The specimen container should be labeled as PRESERVATIVE ADDED and left on the counter with the corresponding order form (if applicable). Specimens that arrive in the department more than two hours following collection and those that have not been preserved may be considered to be less than optimal for diagnostic evaluation.

EQUIPMENT AND MATERIALS

Equipment: None.

Materials: An empty sputum collection cup.

PROCEDURE

1. The patient should be instructed to sit in an upright position if physically possible. Deep breathing (diaphragmatic) and vigorous coughing will help to bring up secretions from the outer bronchial tree.

2. All secretions should be deposited into an open cytology collection container.

3. Secretions may range in color from whitish-tan to red (signifies the presence of blood). Clear material indicates contamination of the specimen with saliva. The patient should continue to attempt to produce an adequate specimen.

REPORTING RESULTS

Smears and cell blocks will be reported in the routine manner for Cytology and Surgical Pathology. Due to processing factors, reports are not routinely issued for a minimum of 24 hours after the specimen has been received by the department. If there are any questions, please feel free to call the Cytology Department at ext. 5814 and speak with a Cytotechnologist or a Pathologist regarding this procedure.

REFERENCES

Greenberg, S. Donald, Respiratory Infections and Other Benign Lesions, in Comprehensive Cytopathology & Aspiration Biopsy, Ibrahim Ramzy, ed., pp 133, Appleton & Lange, East Norwalk, 1990.

Johnson, William W., and Elson, Craig E., Respiratory Tract, in Comprehensive Cytopathology, Marluce Bibbo, ed., pp 321, W.B. Saunders, Philadelphia, 1991.

Collection of Superficial Lesion Samples (LTR32719)

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Last Approved By: Williams, Diane (Electronic Signature Timestamp: 8/20/2017 4:24:01 PM)
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COLLECTION OF SUPERFICIAL LESION SAMPLES FOR CYTOLOGY

PRINCIPLE

Cytologic examination of samples collected from superficial lesions (often in the vulvar or head and neck areas) may yield diagnostic information important for the timely diagnosis and management of patients with certain inflammatory processes or neoplastic disease.

POLICY

The following procedure provides guidelines for the proper collection, preservation, and transport of samples from superficial lesions to the Cytology Department. It pertains to specimens that are submitted for cytologic evaluation only. If other tests are required (e.g., cultures, chemistry), please refer to the Lab Collection Manual or contact the laboratory department concerned for instructions regarding their specific needs for specimen collection.

During second, third, weekend or holiday shifts, the specimen should be taken to the main lab processing area.

SPECIMEN

Patient Preparation: Per attending Physician

Type: Cytologic material collected from superficial lesions

Handling Conditions:

1. For specimens collected within the BVH network, use *"orders +add"* in the main menu of Power Chart to request cytology testing. Enter *Pathology Cytology Request* in the search box and complete the required fields in yellow (i.e. Procedure, Clinical History, and Specimen Description) at the bottom of the screen. For specimen description, please specify laterality (e.g. right or left) when applicable. If additional special studies are required, these must be entered in the "Special Studies Requested" field. When finished, be sure to sign the order by using the *sign* button in the bottom right corner of the screen. Retrieve the specimen label from the designated printer and place it on the specimen container (if applicable). If a specimen label is not available, please ensure that the following information appears on the specimen slide or container: patient name, date of birth, collection date and time, collector's initials, and type of specimen (e.g. vulvar scraping).

   For specimens collected outside of the BVH network (e.g. a non-BVH owned physician office) properly complete a non-gyn requisition form and mark the line provided for "*Lesion scraping of*" under the MISCELLANEOUS category and indicate the specimen type (i.e. lesion scraping of right ear). Please specify laterality (e.g. right or left) when applicable.

Include the following information on the form: patient name, address, date of birth, social security number, collection date, and the name of the attending Physician or authorized agent. Also, please include a copy of the patient's insurance information and/or insurance card whenever possible.

Also, please provide as much pertinent patient information as possible on the requisition form (e.g. history, diagnosis or present complaint, previous radiation or chemotherapy treatment). This information is extremely important for making a proper diagnosis.

2. Identification Needed: All slides, containers and/or slide holders must be properly labeled (i.e. patient name, date of birth, date and time of collection, collector's initials, and specimen source [e.g. vulvar lesion scraping]). Please note that the patient's name and date of birth must always be written on the slide label regardless of whether or not it appears on the outside of the specimen container (e.g. cardboard slide holder).

3. Collected by: Attending Physician or authorized agent.

4. Transportation: Specimens should be sent by courier to the Cytology Department as soon as possible following collection.

EQUIPMENT AND MATERIALS

Equipment: Per attending Physician

Materials: Available from the Cytology Department upon request: clean glass microscope slides (preferably positively charged slides), spray fixative, and plastic spatula *or* vial of PreservCyt solution and cytobrush.

PROCEDURE

Physicians or authorized providers may choose to prepare a fixed smear or to place the entire specimen into a vial of PreservCyt solution.

PREPARATION OF A FIXED SMEAR USING A GLASS MICROSCOPE SLIDE:

a) Label the frosted end of the glass slide with the patient's name and date of birth. Also, be sure to indicate the specimen source (including laterality when applicable), the date and time of collection, and the collector's initials.

b) For open vesicle lesions, gently wipe off surface debris prior to specimen collection. Use a spatula to carefully scrape the lesion and spread the collected material thinly and evenly onto the glass slide. Fix the slide immediately by using the spray fixative.

c) For closed vesicle lesions, carefully break them open and gently remove any fluid and debris before collecting the sample. If the lesion is very dry, it may be moistened gently with a saline soaked gauze prior to sample collection.

PREPARATION OF SPECIMENS COLLECTED IN PRESERVCYT SOLUTION:

a) Label a PreservCyt vial with the patient's name and date of birth. Also, be sure to indicate the specimen source (including laterality when applicable), the date and time of collection, and the collector's initials.

b) Remove the lid from the vial of PreservCyt solution.

c) Gently wipe off surface debris from open vesicle lesions prior to specimen collection. For closed lesions, carefully break them open and gently wipe away any fluid and debris before collecting the specimen.

d) Carefully brush the lesion with the cytobrush and rinse it into the vial of PreservCyt solution. Press the bristles of the brush against the wall of the vial while stirring the solution ten times.

e) Swirl the brush vigorously to further release cellular material. Discard the brush in the appropriate refuse container. DO NOT leave any portion of the brush in the PreservCyt vial.

f) Replace the lid on the PreservCyt solution vial. Tighten the lid until the black torque line on the lid passes the black torque line on the vial.

REPORTING RESULTS

Smears will be reported in the routine manner for Cytology and Surgical Pathology specimens. Due to processing factors, reports are not routinely issued for a minimum of 24 hours after the specimen has been received by the department. If there are any questions, please feel free to call the Cytology Department at ext. 55814 and speak with a Cytotechnologist or a Pathologist regarding this procedure.

REFERENCE

Carter, D and J. Shafer. “Direct Scraping/Tzanck Smears” in Cytology Specimen Collection Procedures. Berkshire Health System Laboratories, Fairview Hospital, 27 Jan. 2010. http://www.berkshirehealthsystems.org/documents/BHS%20Lab/Outpatient/b.Cyto%20Section.pdf, Accessed 22 Jan 2017.

Collection of Thin Prep PAP Smears (LTR32720)

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COLLECTION OF THINPREP PAP SMEARS

PRINCIPLE

Pap smears offer an easy and accurate way of detecting pre-cancerous lesions of the cervix and to a lesser extent of the endometrium and ovary. Vaginal smears may be used to gain helpful information regarding hormonal status. Pap smears also aid in the detection of certain infections such as Trichomonas vaginalis, fungal agents, Chlamydia, and some viruses such as Condyloma acuminatum or Herpes simplex.

The ThinPrep processor was introduced by Cytyc (Hologic) Corporation in 1991. The ThinPrep process filters out a portion of non-diagnostic debris (primarily blood and mucus which can obscure cellular detail) while retaining important diagnostic cells and infectious agents. Studies have shown that cervical samples prepared by the ThinPrep process result in a slide that is more easily read and interpreted than a conventional Pap smear.

POLICY

The following procedure provides guidelines for the proper collection, preservation, and transport of ThinPrep Pap smear specimens to the Cytology Department. It pertains to specimens that are submitted for cytologic evaluation only. If other tests are required (e.g., gram stain, cultures), please refer to the Lab Collection Manual or contact the laboratory department concerned for instructions regarding their specific needs for specimen collection.

SPECIMEN

Patient preparation: Per attending Physician or authorized agent

Type: Thin Prep Pap smears (cervical, endocervical, and/or vaginal smear)

Handling Conditions: If possible, smears should be taken at mid-cycle (menstrual smears are not preferred). The patient should be instructed not to douche for 24 hour before the smear is to be taken.

1. For specimens collected within the BVH network, use *"orders +add"* in the main menu of Power Chart to request cytology testing. Enter *Pathology Pap Smear Request* in the search box and complete the required fields in yellow (i.e. gyn specimen source, clinical information, LMP, routine screening or follow-up exam, hormones, pregnant, post-partum, hysterectomy, post-menopausal, and additional comments if applicable) at the bottom of the screen. The gyn specimen description drop-down menu allows the user to select from the following options: Liquid Prep (Pap smear only), Liquid Prep with HPV, Liquid Prep reflex ASCUS, Liquid Prep with GC/Chlamydia, Liquid Prep with HPV and with GC/Chlamydia, and Liquid Prep reflex ASCUS and with GC/Chlamydia. Since GC/Chlamydia testing is included in the preceding list of options, there is no need to place

a separate GC/Chlamydia order for testing from the ThinPrep Pap vial. When finished, be sure to sign the order by using the ***sign*** button in the bottom right corner of the screen. Retrieve the specimen label (if available) from the designated printer and place it on the ThinPrep Pap vial. If no specimen label is available, please write the following information on the ThinPrep vial: patient name, date of birth, date and time of collection, and the collector's initials.

For Pap specimens collected outside of the BVH network (i.e. non-BVH owned physician offices), properly complete a gyn requisition form**.** Be sure to indicate the source of the specimen (e.g. cervical scraping, endocervical brushing, or vaginal scraping) and whether the Pap is a routine screening or a follow-up due to a previous abnormal. The patient's date of birth, LMP (last menstrual period) date, and pertinent clinical information are also very important for an accurate diagnosis. Also, please include a copy of the patient's insurance information and/or insurance card whenever possible. If HPV and/or GC/Chlamydia testing is required, please mark the appropriate line(s) in the lower left corner of the requisition form.

2. Identification Needed: All requisitions must be properly completed with the following information: patient name, address, birth date, social security number, specimen collection date, and name of attending Physician or authorized agent. Label the vial of PreservCyt solution with the patient's name, date of birth, the specimen collection date and time, and the collector's initials.

3. Collected by: Attending Physician or authorized agent.

4. Transportation: ThinPrep Pap vials and cytology requisition forms should be delivered to the Cytology Department at the earliest convenience.

EQUIPMENT AND MATERIALS

Equipment: Per Attending Physician or authorized agent

Materials: Available from the Cytology Department upon request. Vials of PreservCyt Solution for the ThinPrep Pap Test, plastic spatulas and endocervical brushes ***or*** plastic broom-like devices.

Please do not use a wooden cervical scraper or a cotton tip applicator to collect the specimen.

PROCEDURE

The ThinPrep processor is approved for use with cervical specimens collected with either a broom-like device or an endocervical brush/plastic spatula combination. Please note that lubricating jelly *should not* be used during Pap smear collection if at all possible. When necessary, it should be used very sparingly. K-Y lubricating jelly is the only brand recommended for use during Pap smear collection by Hologic Corporation.

I. SPECIMEN COLLECTION WITH A PLASTIC BROOM-LIKE DEVICE:

The plastic broom-like device is designed to collect both ectocervical and endocervical cells from the cervix as follows:

1. Remove the lid from the vial of PreservCyt solution.

2. To obtain an adequate sample, insert the central bristles of the broom into the endocervical canal deep enough to allow the shorter bristles to fully contact the ectocervix.

3. Push gently and rotate the broom five times in one direction.

4. Rinse the sample off of the broom in PreservCyt solution. Push the broom against the bottom of the vial ten times, forcing the bristles to bend apart.

5. As a final step, hold the broom between the thumb and forefinger and swirl it vigorously to further release cervical material. DO NOT leave the head of the broom in the PreservCyt vial.

6. Discard the broom and replace the lid on the PreservCyt solution vial. Tighten the lid until the black torque on the lid passes the black torque line on the vial.

II. SPECIMEN COLLECTION WITH A PLASTIC SPATULA AND ENDOCERVICAL BRUSH COMBINATION:

The plastic spatula is used to sample the ectocervix while the endocervical brush samples the endocervix.

1. Remove the lid from the vial of PreservCyt solution.

2. Obtain a sample from the ectocervix by using the plastic spatula.

3. Rinse the spatula in PreservCyt solution by swirling it in the vial several times. Discard the spatula in the appropriate refuse container.

4. Obtain a sample from the endocervix by inserting the brush into the endocervical canal until only the bottom bristles are exposed.

5. Rotate the brush 1/4 to 1/2 turn in one direction to minimize bleeding. Be careful not to over-rotate the brush.

6. Rinse the brush in the same vial of PreservCyt solution as the spatula. Press the bristles of the brush against the wall of the vial while stirring the solution ten times.

7. Swirl the brush vigorously to further release cellular material. Discard the brush in the appropriate refuse container. DO NOT leave any portion of the brush in the PreservCyt vial.

8. Replace the lid on the PreservCyt solution vial. Tighten the lid until the black torque line on the lid passes the black torque line on the vial.

REPORTING RESULTS

Reports are generally issued within three working days of specimen receipt in the department. If there are any questions, please feel free to call the cytology department at ext. 55814 and speak with a Cytotechnologist or a Pathologist regarding this procedure.

REFERENCE

"The ThinPrep Pap test: Clear and Simple" Physician Training Video, Cytyc Corporation, 1997.

Collection of ThinPrep HPV and GC Chlamydia Specimens (LTR32721)

Revision: 3.08
Last Approved By: Williams, Diane (Electronic Signature Timestamp: 8/20/2017 5:04:44 PM)
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COLLECTION OF THINPREP HPV AND GC/CHLAMYDIA SPECIMENS

PRINCIPLE

Chlamydia is one of the most common sexually transmitted diseases in the United States. It is caused by the bacterium *Chlamydia trachomatis* and can result in irreversible damage to a woman's reproductive organs before any symptoms are recognized. *Neisseria gonorrhoeae* is the bacterium responsible for causing gonorrhea. In women, gonorrhea is a common cause of pelvic inflammatory disease (PID), which can damage the fallopian tubes and tissues in and near the uterus and ovaries.

In general, HPV testing is performed on ThinPrep sample vials from patients over 30 years of age and those with an abnormal Pap result (e.g. ASCUS). The test helps to identify those patients who are most likely to develop high grade dysplasia and cancer of the cervix. Women with high risk HPV types (i.e. 16, 18, 31, 33, 35, 39, 45, 51, 52, 56, and 58) are at least ten times more likely to develop cervical disease. It is believed that just four HPV types (16, 18, 31, and 45) may be responsible for 70% of cervical cancers worldwide. Persistent HPV infection is the major risk factor for the development of high grade lesions and cervical carcinoma.

One advantage of the ThinPrep Pap Test is that HPV and/or GC/Chlamydia testing may be performed on the same sample vial from which the Pap smear is prepared. This eliminates the need for a follow up office visit to collect an additional sample from the patient.

POLICY

The purpose of HPV and GC/Chlamydia testing is to identify patients with high risk HPV types and/or with infection by *Chlamydia trachomatis* and/or *Neisseria gonorrhoeae.* The following procedure provides guidelines for the proper collection, preservation, and transport of specimens to the Cytology Department for HPV and/or GC/Chlamydia testing.

SPECIMEN

Patient Preparation: Per attending Physician or authorized agent.

Type: ThinPrep Pap sample for HPV and/or GC/Chlamydia testing. If possible, samples should be collected at mid-cycle (menstrual smears are not preferred). The patient should be instructed not to douche for 24 hours before the sample is to be collected.

Handling Conditions:

1. For **HPV TESTING <u>ONLY</u>** from ThinPrep Pap specimens collected *within the BVH network*, use *<u>"orders +add"</u>* in the main menu of Power Chart. Enter *<u>HPV DNA</u>* in the search box and complete the required fields in yellow (i.e. collection priority and collection

date and time). When finished, be sure to sign the order by using the *sign* button in the bottom right corner of the screen. Retrieve the specimen label (if available) from the designated printer and place it on the ThinPrep Pap vial. If no specimen label is available, please write the following information on the ThinPrep vial: patient name, date of birth, date and time of collection, and the collector's initials. Also, please indicate the desired test (i.e. HPV DNA only) on the label to ensure that the specimen is not processed as a Pap smear. Please note that the preceding steps should also be used for *add-on* HPV orders for Pap smears (i.e. if HPV testing was desired but was accidentally missed in the original order).

For **GC/CHLAMYDIA TESTING ONLY** from ThinPrep Pap specimens collected *within the BVH network*, use *"orders +add"* in the main menu of Power Chart. Enter *GC/Chlamydia DNA* in the search box and complete the required specimen type field in yellow. For Thin Prep Pap specimens, select "***Liquid Prep***" from the drop-down menu. When finished, be sure to sign the order by using the *sign* button in the bottom right corner of the screen. Retrieve the specimen label (if available) from the designated printer and place it on the ThinPrep Pap vial. If no specimen label is available, please write the following information on the ThinPrep vial: patient name, date of birth, date and time of collection, and the collector's initials. Also, please indicate the desired test (i.e. GC/Chlamydia DNA only) on the label to ensure that the specimen is not processed as a Pap smear. Please note that the preceding steps should also be used for *add-on* GC/Chlamydia orders for Pap smears (i.e. if GC/Chlamydia testing was desired but was accidentally missed in the original order). However, it is very important to notify the laboratory *immediately* if a GC/Chlamydia request has been added to a Pap order to ensure proper specimen handling.

For **HPV AND/OR GC/CHLAMYDIA *AND* PAP CYTOLOGY TESTING** from ThinPrep Pap specimens collected *within the BVH network*, use *"orders +add"* in the main menu of Power Chart. Enter *Pathology Pap Smear Request* in the search box and complete the required fields in yellow (i.e. gyn specimen source, clinical information, LMP, hormones, routine screening or follow-up exam, pregnant, post-partum, hysterectomy, post-menopausal, and additional comments if applicable) at the bottom of the screen. The gyn specimen description drop-down menu allows the user to select from the following options for HPV and/or GC/Chlamydia + Pap testing: Liquid Prep with HPV, Liquid Prep with GC/Chlamydia, Liquid Prep with HPV and with GC/Chlamydia, and Liquid Prep reflex ASCUS and with GC/Chlamydia. Since GC/Chlamydia testing is included in the preceding list of options, there is no need to place a separate GC/Chlamydia order for testing from the ThinPrep Pap vial. When finished, be sure to sign the order by using the *sign* button in the bottom right corner of the screen. Retrieve the specimen label (if available) from the designated printer and place it on the ThinPrep Pap vial. If no specimen label is available, please write the following information on the ThinPrep vial: patient name, date of birth, date and time of collection, and the collector's initials.

2. For **HPV AND/OR GC/CHLAMYDIA DNA ONLY** Thin Prep specimens collected *outside of the BVH network* (e.g. non-BVH owned physician offices), a properly completed BVH lab requisition form must be sent to the Cytology Department before the Aptima HPV assay and/or the GC/Chlamydia DNA probe (Aptima combo 2 assay) can be performed. These tests may also be ordered *in addition* to a Pap by marking the appropriate line in the bottom left hand corner of the BVH Pap smear requisition form. Be sure to check that the specimen vial is labeled with the patient's name, date of birth, date and time of collection, and collector's initials. BVH lab requisition forms must include the signature of the ordering Physician and a diagnosis. Also, please include a copy of the patient's insurance information and/or insurance card whenever possible. If desired, orders may be faxed to the laboratory. The fax number is (419) 423-5125.

EQUIPMENT AND MATERIALS

Equipment: Per attending Physician or authorized agent

Materials: Available from the Cytology Department upon request. Vials of PreservCyt Solution for the ThinPrep Pap Test, plastic spatulas and endocervical brushes *or* plastic broom-like devices. *Please do not use a wooden cervical scraper or a cotton tip applicator to collect the specimen.*

PROCEDURE

Please refer to the collection procedure for ThinPrep Pap smears to view the steps that should be followed to obtain an optimal cervical sample. Please note that the Aptima HPV assay should be carried out within 30 days of specimen collection. Therefore, it is very important that the test be ordered as soon as possible. Also, please note that GC/Chlamydia testing should not be ordered *after* the Pap slide has been prepared due to the likelihood of cross-contamination of DNA between specimens.

REPORTING RESULTS

Results of the Aptima HPV assay and GC/Chlamydia DNA probe are usually available within three to five days from the test order date. The results will help to identify patients who are at risk for the development of pelvic infection and disease as well as cervical dysplasia and cancer. This information will help Physicians to determine the most appropriate course of treatment for their patients. If there are any questions, please feel free to call the Cytology Department at ext. 55814 and speak with a Cytotechnologist or a Pathologist regarding this procedure.

REFERENCES

Allen, Karen (Ed). Expert Interview: A Brave New World, *ASCT Journal of Cytotechnology* pp. 47-49, Volume 1, Number 2, 1997.

Chlamydia (2007). Retrieved Nov. 5, 2009 from http://www.cdc.gov/std/Chlamydia/STDFact-Chlamydia.htm.

Gonorrhea (2009). Retrieved Nov. 5, 2009 from http://www.cdc.gov/std/Gonorrhea/STDFact-gonorrhea.htm.

Highlights from CAP HPV Meeting, *ASCT Journal of Cytotechnology* pp. 17-19, Volume 5, Number 1, 2002.

Pelvic Inflammatory Disease (2008). Retrieved Nov. 5, 2009 from http://www.cdc.gov/std/PID/STDFact-PID.htm.

Collection of Urine Specimens for Cytology (LTR32722)

Revision: 2.06
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COLLECTION OF URINE SPECIMENS FOR CYTOLOGY

PRINCIPLE

The cytologic examination of urine specimens can be a diagnostic aid in the evaluation of neoplastic and/or inflammatory processes of the urinary tract. Samples must be collected and processed appropriately to ensure optimal preservation of the cellular material.

POLICY

The following procedure provides guidelines for the proper collection, preservation, and transport of urine specimens to the Cytology Department. It pertains to specimens that are submitted for cytologic evaluation only. If other tests are required (e.g. cultures, chemistry), please refer to the Lab Collection Manual or contact the laboratory department concerned for instructions regarding their specific needs for specimen collection.

During second, third, weekend, or holiday shifts, the specimen should be taken to the main lab processing area.

SPECIMEN

Patient Preparation:

1. *Clean catch urine* - proper cleansing of the urethral meatus and surrounding area.

2. *Catheterization* - per Physician's instructions.

Type: Urine (voided or collected via catheter from the bladder, ureter, or kidneys)

Handling Conditions:

For specimens collected within the BVH network, use *"orders +add"* in the main menu of Power Chart to request cytology testing. Enter *Pathology Cytology Request* in the search box and complete the required fields in yellow (i.e. Procedure, Clinical History, and Specimen Description) at the bottom of the screen. For specimen description, please include laterality if applicable (e.g. left kidney urine) and indicate whether the urine was voided or collected via a catheter. If additional special studies are required, these must be entered in the "Special Studies Requested" field. When finished, be sure to sign the order by using the *sign* button in the bottom right corner of the screen. Retrieve the specimen label from the designated printer and place it on the specimen container. If a specimen label is not available, please ensure that the following information appears on the specimen container: patient name, date of birth, collection date and time, collector's initials, and type of specimen (e.g. voided or catheterized urine).

For specimens collected outside of the BVH network (e.g. FSC), properly complete a non-gyn cytology requisition form and indicate the type of specimen that was collected under URINARY TRACT. Please indicate the specimen type as well as the site of collection if applicable (e.g. catheterized bladder urine, right or left kidney urine or free voided bladder urine, etc.). Include the following information on the form: patient name, address, date of birth, social security number, date of collection, and name of the attending Physician or authorized agent. Also, please include a copy of the patient's insurance information and/or insurance card whenever possible.

Please note that patient history as well as specimen type is extremely important in making a proper diagnosis. Please be sure to provide all pertinent patient information (e.g., history of radiation therapy and/or chemotherapy) and indicate whether the specimen is a voided urine, a catheterized urine, an ileal bladder urine, a post cystoscopy urine, or a post IVP urine.

Identification Needed: All specimen containers must be properly labeled (i.e. patient name, date of birth, date and time of collection, collector's initials, and specimen type [i.e. voided or catheterized urine]). The site from which the specimen was collected must be clearly indicated on the specimen container. If more than one specimen is to be collected, separate containers must be used and each one must be correctly labeled.

Collected by: Attending Physician or authorized agent.

Transportation: Specimens should be transported to the Cytology Department in the laboratory as soon as possible following collection by hospital personnel or by courier. Specimens should be refrigerated in the event of a delay in transport to the lab.

Preservation: If the specimen is collected Monday through Friday during normal department hours, no preservative or fixative is required. If the specimen arrives after 4:30 p.m. or on Saturday, Sunday, or on a holiday, approximately 30 ml of CytoLyt solution should be added to the specimen. The preservative is kept on the counter in the Cytology Processing room. Be sure to note the initial urine volume prior to the addition of the CytoLyt. After adding CytoLyt solution to the specimen, record the initial urine volume on the container and also write PRESERVATIVE ADDED. Specimen are to be left on the counter with the corresponding order form (if applicable). The CytoLyt solution should be added by laboratory personnel.

EQUIPMENT AND MATERIALS

Equipment: None

Materials:

For voided specimens, use a Unicatch or "Clean" catch urine collection kit.

Catheterized urine specimens are collected per Physician orders by a Physician or authorized agent.

PROCEDURE

1. *Voided or "'Clean" Catch Urine* - Read and follow the instructions provided in the Unicatch kit or refer to the sample instruction sheet in the procedure notes section (see below).

2. *Catheterized Urine* - Urine from a catheter is collected per Physician's instructions by a Physician or authorized agent.

REPORTING RESULTS

Smears will be reported in the routine manner for Cytology and Surgical Pathology specimens. Due to processing factors, reports are not routinely issued for a minimum of 24 hours after the specimen is received in the department. Unrefrigerated specimens that are not received in the department within one (1) hour following collection or those specimens that have not been preserved may be considered as less than optimal for proper diagnostic evaluation. If there are any questions, please feel free to call the Cytology Department at ext. 55814 and speak with a Cytotechnologist or a Pathologist regarding this procedure.

PROCEDURE NOTES

SAMPLE INSTRUCTION SHEET FOR UNICATCH COLLECTION SYSTEM

HOW TO COLLECT A "CLEAN CATCH" (MIDSTREAM) SAMPLE OF URINE:

1. Wash your hands.

2. Remove the cap and set it aside. Do not remove the protective paper from the inside of the cap. Do not touch the inside of the container.

3. Tear open all three towelette packets.

   Females:

   Hold the labia with one hand and wash one side of the vulva front to back. Wash the second side with second towelette and then the center with third towelette.

   Males:

   If uncircumcised, hold the foreskin back. Wash the head of the penis from the center outward with each towelette.

4. While holding the labia apart or the foreskin back, begin to void into the toilet.

5. Bring the properly labeled specimen container into the urine stream and partially fill it. Make sure that the top edge of the container does not touch anything.

6. Continue to empty bladder into the toilet.

7. Unless instructed otherwise, return the specimen container and cap to the hospital associate who will close it.

REFERENCES

Kern, William H., in Comprehensive Cytopathology, Marluce Bibbo, ed., pp 434-435, W.B. Saunders Company, Philadelphia, 1991.

Rone, V. Rene, in Clinical Cytopathology and Aspiration Biopsy, Ibrahim Ramzy, ed., pp 197-198, Appleton & Lange, East Norwalk, Connecticut, 1990.

Transport of FNA Specimens to Cytology Memo (LTR31175)

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TRANSPORT OF FNA SPECIMENS TO CYTOLOGY MEMO

Date (Original Memo): May 21, 1992
To: All Physicians
From: BVH Cytology Department
Subject: Transport of Fine Needle Aspiration Specimens to the Cytology Department

To comply with OSHA regulations, the following should be used as a guideline for the proper transport of fine needle aspiration specimens to the BVH Cytology Department. If Microbiology tests have been ordered, these steps do not apply. Syringes with needles attached are no longer acceptable.

If the specimen is fluid in nature, it may be transported in one of three ways:

1. The syringe (without the needle attached) should be transported with a cap that covers its end. Since the syringe caps are not sterile, microbiology specimens cannot be handled in this manner.

OR

2. The specimen may be placed into a red top blood tube for transport.

OR

3. As the least desirable method, the syringe may be submitted with the needle embedded into a device supplied by the laboratory.

If, following aspiration, the specimen material is only present within the shaft of the needle, direct smears should be prepared and fixed immediately with cytology spray fixative. The needle may then be rinsed into a properly labeled vial of CytoLyt solution to ensure that any remaining specimen is collected for cytologic evaluation.

Please be sure to properly label (i.e. patient name, date of birth, specimen source, and time and date of collection, and collector's initials) all syringes, tubes, or slides and either include a properly completed non-gyn cytology requisition form or order a Pathology Cytology Request in Cerner Power Chart.

If there are any questions, please feel free to call the Cytology Department at extension 55814.