

# LABORATORY



*New Vision Medical Laboratories provides full service laboratory services including clinical and anatomic pathology to St. Rita's Medical Center and Van Wert County Hospital and limited services to the St. Rita's Putnam County Ambulatory Care Center, St. Rita's Delphos Ambulatory Care Center, and the Institute for Orthopedic Surgery.*

## CYTOLOGY

### GENERAL INSTRUCTIONS

- Specimens for Cytology must be delivered to the Laboratory as soon as they have been collected except for cervicovaginal smears which are fixed as soon as they are prepared.  
If a specimen cannot be delivered to the Lab immediately, it must be refrigerated. It must not be allowed to freeze.
- Fixative, preservative or anticoagulant should be added to Cytology specimens other than Cervicovaginal smears, unless otherwise instructed by Cytology personnel.
- All Cytology specimens must be accompanied by the appropriate requisition containing patient identification information. It is essential that the requisition contain clinical information such as diagnosis, hormonal or radiation therapy, history of dysplasia or carcinoma, visible lesion, pregnancy, etc.
- **All cytology specimens should be labeled with the date and time of collection, type of specimen, total amount of specimen (total volume), color and consistency of specimen, prior to adding fixative. Upon receipt of specimen to lab the above information will be checked and voucher will be date/time stamped and initialed by receiving staff.**

### CERVICAL AND/OR VAGINAL SMEARS

1. The specimen should include endocervical cells. The use of a spatula with a long tip such as an Ayers spatula or a cytology brush is recommended. Endocervical material may also be obtained with pipette or a saline moistened cotton swab, but the cotton swab should not be used for making the remainder of the cervical smear. Pap smears obtained while the patient is menstruating are acceptable, but are not ideal and may have to be repeated.
2. Slides must be fixed immediately (within 1-2 seconds) to avoid air-drying artifact which may result in erroneous interpretations. Cytology fixative is recommended. Thoroughly spray the slides for about 2 seconds at a distance of 8 - 12 inches and allow the fixative to dry before closing the lid on the slide container in order to avoid adherence of the slide to the cardboard lid. Immediate insertion of the slides into a jar filled with 95% ethyl or isopropyl alcohol is also satisfactory.

3. Label the frosted end of the slide in pencil with the patient's name, date of birth, and source of specimen.
4. Send the slide in appropriate container, accompanied by a completed Cytology form. Print or type all pertinent information for patient identification and proper billing. It is essential that the pertinent clinical information be included.

#### **ENDOCERVICAL THINPREP® SPECIMEN**

1. Insert the central bristles of the broom-like device into the endocervical canal deep enough to allow the shorter bristles to fully contact the endocervix. Push gently and rotate the broom in a clockwise direction five times.
2. Rinse the broom into the PreservCyt® Solution vial by pushing the broom into the bottom of the vial 10 times, forcing the bristles apart. As a final step, swirl the broom vigorously to further release material. Discard the collection device.
3. Tighten the cap so that the torque line on the cap passes the torque line on the vial.
4. Label the vial with the patient's name and date of birth.
5. Place the vial in a specimen transport bag and send to the laboratory accompanied by a completed Cytology form. It is essential that all pertinent clinical information be included.

#### **DEEP COUGH OR AEROSOL INDUCED SPUTUM**

1. Obtain sterile containers from the laboratory. Collect 1 specimen on each of 3 consecutive days.
2. Specimens must be collected in AM before any food is ingested. Instruct patient to cough deeply and expectorate into fixative container. Respiratory (inhalation) Therapy may call for aerosol induction. Shake gently to mix.
3. Deliver to Lab ASAP, accompanied by a completed Cytology form. Print or type all pertinent information for patient information and proper billing. It is essential that the pertinent clinical information be included.

#### **BRONCHIAL, ESOPHAGEAL AND ENDOMETRIAL WASHINGS; PLEURAL, PERITONEAL, AND PERICARDIAL FLUID; SPINAL FLUID, URINE**

All specimens must be submitted in as fresh a state as possible and without the addition of any fixative or preservative. Refrigerate immediately and deliver to the laboratory ASAP. Submit the specimen with a properly completed Cytology requisition. Print or type all pertinent information for patient identification and proper billing. It is essential that the pertinent clinical information be included.

#### **URINE**

It is especially important to refrigerate urine; it is preferable to deliver it immediately to the laboratory, as it deteriorates very rapidly. The method of collection needs to be documented on the collection container and on the requisition (clean catch, Foley cath, random, etc.) Clean catch specimens are preferable.

## PLEURAL AND PERITONEAL SEROUS FLUID

Malignant cells are often large and heavy and, therefore, quickly settle to the bottom of an effusion. It is important to mix the fluid in the patient prior to aspiration by ballottement to the abdomen, having the patient cough or turn, etc.

## BRONCHIAL BRUSHINGS

When the bronchial brushing technique is used, the surgeon should prepare two slides in the operating room and fix immediately in 95% ethanol, or spray fixative can be used. The brush may then be sent to the Cytology Lab in saline solution so that additional slides can be prepared.

## BREAST SMEARS

1. Have patient hold an opened bottle of fixative below the breast.
2. Gently strip the sub-areola area and nipple, using the thumb and forefinger. If secretion occurs, allow only a drop the size of a pea to accumulate on the apex of the nipple.
3. Support the areola and nipple with one hand. With the other hand place a slide upon the nipple, touching the drop. The drop will spread a bit laterally; draw the slide quickly across the nipple.
4. Immediately drop the slide into the bottle of fixative. **Note: Specimen may be sprayed with fixative.**
5. When there is nipple erosion or ulceration, and no nipple secretion can be obtained, the remaining specimen consists of clear fluid. Physiologic saline solution or albumin can be added to the erosion fluid. Gently mix with the lesion to exfoliate cells and make a smear as described above. A cotton swab soaked in albumin serves as an excellent abrader of the lesion and can then be used to transfer and spread the material on the slides. Fix slides immediately.
6. Submit the specimen with a properly completed Cytology requisition/voucher. Print or type all pertinent information for patient identification and proper billing. Pertinent clinical information is essential, especially information about radiation therapy, previous history of dysplasia or carcinoma, a visible lesion, etc.
7. Deliver to laboratory immediately.

## PATHOLOGIST CONSULTATION IS SUGGESTED PRIOR TO THE FOLLOWING PROCEDURES:

- Fine Needle Aspiration
- Kidney Biopsy
- Muscle Biopsy
- Open Lung Biopsy
- Lymph Node Biopsy
- Brain Biopsy for Herpes simplex encephalitis
- Skin biopsies for possible lymphoma or bullous disease

- Requests for analysis of trace elements or other unusual analytes in tissue.

*Surgeons and other physicians are always welcome in the Laboratory and are invited to review gross and/or microscopic specimens on their cases.*

*Updated: March, 2012. Reviewed by: Chris Wannemacher.*