

Advanced Pathology Laboratory

Gynecological Pathology Specimen Procurement

1. General Considerations:

- 1.1. The detection of cervical cancer and its precursors as well as other gynecologic abnormalities is the primary purpose of obtaining a cervical cell sample. It is important to obtain a specimen that is not obscured by blood, mucus, inflammatory exudate or lubricant. The patient should be tested two weeks after the first day of her last menstrual period, and definitely not when she is menstruating. The patient should not use vaginal medication, vaginal contraceptives, or douches during the 48 hours before the exam.
- 1.2. The Pap test is a screening test for cancer with an overall false negative rate up to 25%. Therefore, appropriate follow-up studies are recommended, as clinically indicated.

2. Collecting Conventional smear: The aim of collecting a cervical smear is to obtain a representative specimen from the squamocolumnar junction also known as the transformation zone or transitional zone of the uterine cervix, using an Ayre's spatula or a similar device. A smear cannot be considered adequate unless this area has been sampled. Lubricant jelly should not be used on the vaginal specimen, although a small quantity of normal saline on the speculum will not affect cell detail.

- 2.1. Mark a clean, dry glass slide with the patient's full name and date of service.
- 2.2. Remove the excessive mucus or purulent exudate from the surface of the cervix with a moistened cotton-wool swab prior to obtaining the sample.
- 2.3. Obtain a circumferential sample by turning the Ayre's spatula through 360 degrees, thus obtaining cells from the entire squamocolumnar junction. At times, difficulty may be experienced if the cervix is irregular in shape as may occur after childbirth, so that the collection technique may have to be modified to ensure that the entire area is sampled.
- 2.4. Place the sample on the glass slide and spread smoothly over the length of the slide using the wooden spatula. Interpretation is greatly helped if the cells are spread over the surface of the slide in a uniform monolayer.
- 2.5. Fix the specimen immediately since air drying starts within a few seconds.
 - 2.5.1. Liquid fixation: Drop the slide immediately in a jar containing 95% ethyl alcohol for a minimum of 15 minutes.
 - 2.5.2. Aerosol fixation: Place the slide on a flat surface, direct the fixative to slide at a distance of approximately 25 cm. Spray the surface of the slide while trying to avoid ridging.
 - 2.5.3. After fixation, the slide is allowed to air dry and is then sent to the laboratory with a completed cytopathology requisition.

3. ThinPrep collection techniques:

3.1. Patient Preparation:

- 3.1.1. Lubricate jellies should not be used to lubricate the speculum. Even though lubricant jellies are water soluble, excessive amounts of jelly may compromise the test and possibly lead to an unsatisfactory result.
- 3.1.2. Remove excess mucous or other discharge present before taking the sample. This should be gently removed with ring forceps holding a folded gauze pad. The excess cervical mucus is essentially devoid of meaningful cellular material and when present in the sample vial may yield a slide with little or no diagnostic material.
- 3.1.3. Remove inflammatory exudate from the cervical canal before taking the sample. This is done by placing a dry 2 x 2 inch piece of gauze over the cervix and peeling it away after it absorbs the exudate, or by using a dry proctoswab or scopette. The excess inflammatory exudate is essentially devoid of diagnostic cellular material and when present in the sample vial may yield a slide with little or no diagnostic material.

Advanced Pathology Laboratory

- 3.1.4. The cervix should not be cleaned by washing with saline or it may result in a relatively acellular specimen.
- 3.1.5. The specimen should be obtained before the application of acetic acid.
- 3.2. **Collection of gynecologic sample using the broom-like device:**
 - 3.2.1. Obtain an adequate sampling from the cervix using a broom-like device. Insert the central bristles of the broom into the endocervical canal deep enough to allow the shorter bristles to fully contact the ectocervix. Push gently, and rotate the broom in a clockwise direction five times.
 - 3.2.2. Rinse the broom as quickly as possible into the PreservCyt solution vial by pushing the broom into the bottom of the vial 10 times, forcing the bristle apart. As a final step, swirls the broom vigorously to further release material. Discard the connection device.
 - 3.2.3. Tighten the cap so that torque line on the cap passes the torque line on the vial.
 - 3.2.4. Record the patient's name and ID number on the vial. Record the patient information and medical history on the cytology request form.
 - 3.2.5. Place that vial and acquisition in specimen bag for transport to the laboratory.
- 3.3. **Collection of gynecologic sample, using the endocervical brush/spatula device:**
 - 3.3.1. Obtain an adequate sampling from the ectocervix using a plastic spatula.
 - 3.3.2. Rinse the spatula as quickly as possible into the PreservCyt solution vial by swirling the spatula vigorously in the vial 10 times. Discard the spatula.
 - 3.3.3. Obtain an adequate sampling from the endocervix using an endocervical brush device. Insert brush into the cervix until only the bottom-most fibers are exposed. Slowly rotate 1/4 or 1/2 turns in one direction. Do not over rotate.
 - 3.3.4. Rinse the brush as quickly as possible in the PreservCyt solution by rotating the device in the solution 10 times while pushing against the PreservCyt vial wall. Swirl vigorously to further release material. Discard the brush.
 - 3.3.5. Tighten the cap so that torque line on the cap passes the torque line on the vial.
 - 3.3.6. Record the patient's name and ID number on the vial. Record the patient information and medical history on the cytology request form.
 - 3.3.7. Place that vial and acquisition in specimen bag for transport to the laboratory.

References: Bibbo, M. Comprehensive Cytopathology. Philadelphia, W.B. Sanders. 1991.
ThinPrep 2000 Operator's Manual, Cytoc Corporation.