

Chapter 9: The Papanicolaou Test

On completion of this section, the learner will be able to:

1. Identify ideal conditions for performing cervical cancer screening.
2. Describe how to perform a person-centered Pap test.
3. Understand how to accurately label and prepare a Pap test specimen and complete a cervical cytology requisition form.
4. Identify abnormal findings and conditions that require follow-up.

Learning Objectives

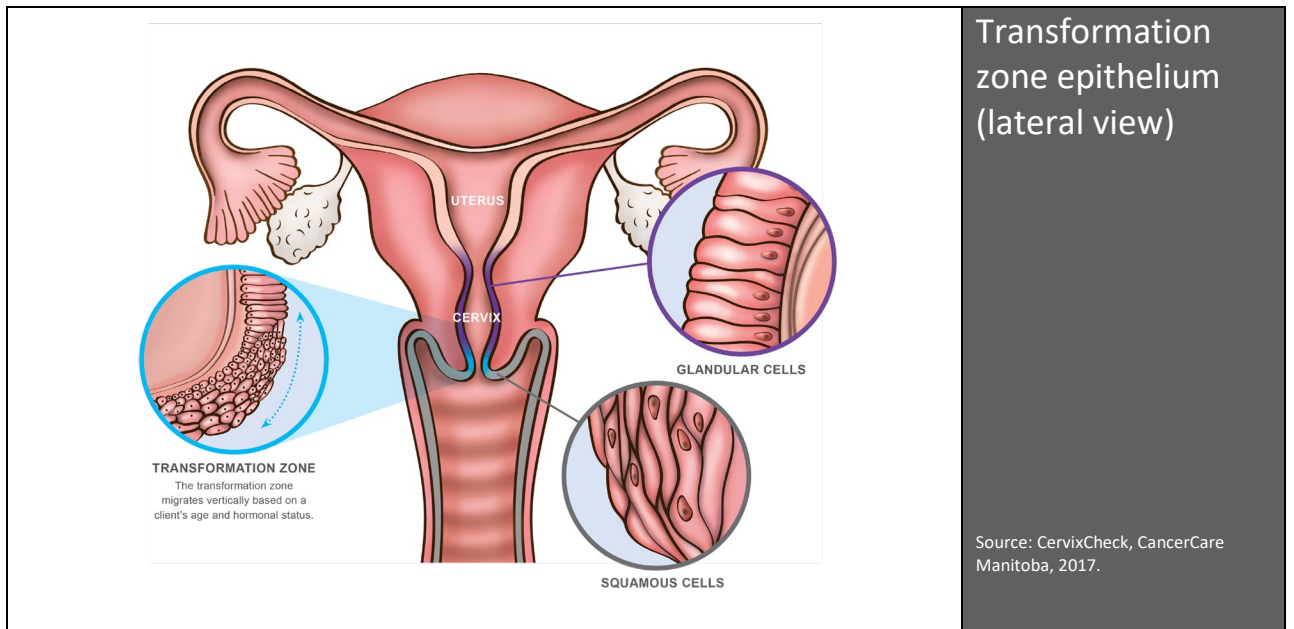
Ideal Conditions for Performing Cervical Cancer Screening

While these are listed as “ideal conditions for performing cervical cancer screening” they should not be seen as barriers to cervical cancer screening participation.

- Avoid vaginal douching for 24 hours before the test
- Avoid use of contraceptive creams or jellies for 24 hours before the test
- Avoid intercourse for 24 hours before the test

Sampling Areas

The area of the cervix at risk for pre-cancer and cancer is the transformation zone (TZ). The TZ is the area between the columnar epithelium of the endocervix and the mature squamous epithelium of the ectocervix. The TZ is not clinically apparent. Sampling both the endocervix and ectocervix improves the probability of sampling the TZ. With liquid based cytology, the broom OR plastic spatula and cytobrush are effective to capture cells from the TZ.



Liquid Based Cytology¹

With Liquid Based Cytology (LBC), a sample of cells is taken from the cervix using a broom-like device. The cervical sample is deposited in a liquid medium and sent to the laboratory for examination.

It is accepted there are marginal increases in sensitivity and decreases in specificity offers no clinical performance advantage for detection of high-grade precancerous lesions.^{2 3 4} The decision by laboratories to incorporate LBC is based on a cost-effectiveness analysis, practicality to laboratories and cytotechnologists and the ability to also serve as a platform for molecular testing for HPV Testing, Gonorrhea, Chlamydia and trichomonas.

Publications from the **Netherlands National Cervical Cancer Screening** what LBC platform is used has clinical significance.⁵

Because LBC removes most artifacts and other obscuring elements; the frequency of unsatisfactory results is reduced. LBC also allows for automated cytology reading and provides the foundation to perform HPV testing.

The Pap Test Procedure: Liquid Based Cytology

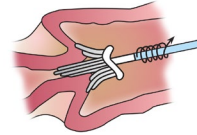
You will need the following equipment for a liquid based cytology (LBC) specimen:

- Vaginal speculum of appropriate size
- Portable light or a light source with a disposable speculum
- Liquid vial
- Broom-like sampling device (or plastic brush and plastic spatula sampling devices)
- Non-latex gloves
- Cotton tipped swab (optional)
- Vaginal lubricant

For a summary of the Pap test procedure sampling techniques, see Appendix 1.

1. Prepare the client as explained in the Chapter 8: External & Speculum Exam. In a professional and sensitive manner, explain the purpose of the Pap test, the instruments to be used, the procedure, possible test results and follow-up and the recommended frequency of Pap tests.
2. As per the Manitoba Quality Assurance Program (MANQAP), the vial (as supplied by the laboratory) must be labelled with the client's first name, last name and PHIN (or military, or other provincial/territorial #). The PHIN and name on the label must match the PHIN and name on the requisition.
3. After placing vaginal lubricant on the outer inferior blade of the speculum, insert the appropriately sized speculum and inspect the cervix.
4. Take STI specimens if required. Gently wipe away excessive discharge/mucous on the cervix with an oversized cotton swab. This should be done as gently as possible to avoid removing the cervical cells to be sampled.

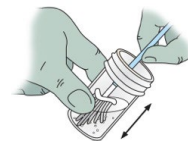
5. Insert the broom deeply enough into the endocervical canal so that the shorter bristles fully contact the ectocervix. Rotate the brush 5 times in a clockwise direction. To collect a **vaginal vault specimen**, insert the broom or spatula to the top of the vagina and rotate five times in a clockwise direction.



6. **For SurePath:** Insert the broom into the larger opening of the vial. Rotate the broom 90° to use the inner edge of the insert to pull off the broom into the vial.



6. **For ThinPrep:** Rinse the broom by pushing it into the bottom of the vial 10 times, forcing the bristles apart. Then, swirl the broom vigorously to release more material.



7. Place the cap on the vial and tighten firmly.
8. Slowly withdraw the speculum as explained in Chapter 8: External & Speculum Exam. Place metal speculum in appropriate container for sterilizing or dispose of plastic speculum. Discard gloves and wash hands.
9. Inform the client:
- that the procedure is over and they can move into a seated position,
 - that they may have blood spotting following the procedure and offer them a protective pad or liner,
 - that if the Pap test is abnormal they will be contacted and follow-up will be arranged with their HCP,
 - whether they will receive their result if their Pap test is normal,
 - that they may request their results from their HCP and from CervixCheck,
 - of any future appointments,
 - about the importance of follow-up for abnormal Pap test results, and
 - that CervixCheck resources are available to them for free.
10. Complete requisition and prepare specimen for transport to your regional laboratory services. Store specimen at room temperature away from



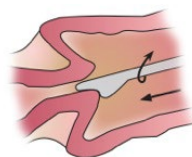
obvious heat sources. Send the sample to the laboratory within 5 days of collecting the specimen.

Alternative Collection Method for LBC

A plastic spatula and cytobrush may also be used to collect liquid based samples.

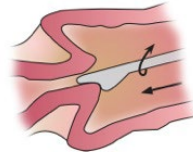
SurePath

1. Insert the spatula into the cervical os and rotate 360 degrees with firm pressure.
2. Snap off the head of the spatula (avoid touching the head of the device), and drop into the liquid vial (avoid splashing).
3. Insert the cytobrush into the cervical os no further than the end of the bristles and rotate 90 degrees.
4. Snap off the head of the cytobrush (avoid touching the head of the device), and drop into the liquid vial (avoid splashing).



ThinPrep

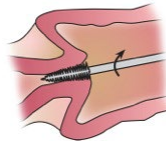
1. Insert the spatula into the cervical os and rotate 360 degrees with firm pressure.



2. Rinse the spatula by swirling it vigorously in the vial 10 times. Discard the spatula.



3. Insert the cytobrush into the cervical os no further than the end of the bristles and rotate 90 degrees.



4. Rinse the cytobrush by swirling it vigorously in the vial 10 times. Discard the cytobrush.



The Vaginal Vault Procedure: Liquid Based Cytology

To collect a vaginal vault specimen, insert the broom or spatula to the top of the vagina and rotate five times in a clockwise direction.

Pregnant Clients

Screening pregnant clients is unnecessary if the client has had routine negative Pap tests, is not due to be screened, has no symptoms of cervical cancer and/or no visual abnormalities of the cervix. If a Pap test is warranted, aim to screen during the first 10 weeks of pregnancy. If the client is over 10 weeks pregnant, the benefits of screening should outweigh the potential harms. Only the plastic spatula should be used.

Important Information

How to Document a Pap Test

Below are two examples of how to document a Pap test:

O= Objective

A= Assessment

P= Plan

Example #1

O: External genitalia: no noted lesions or rash.

Cervix: midline; small ectropion, small amount of thick white mucousy discharge from multip os.

A: Rule out cervical pathology.

P: Pap test performed; well tolerated. Will advise of abnormal results.

Example #2

O: External genitalia: 2mm flesh coloured discrete circular papule to left labia majora; no tenderness on palpation; no discharge.

Cervix: posterior position, but os easily maintained in midline position within opened speculum; small amount fresh bleeding upon rotation of cervix broom.

Adnexa: negative cervical motion tenderness; negative palpable lesion to either fornix

A: Rule out cervical pathology

P: Pap test performed; well tolerated. Client aware she may experience slight spotting post procedure. Will advise of abnormal results.

Advised patient to monitor papule for any change in size or discomfort and report same to HCP.

Cervical Cytology Request and Colposcopy Report Forms⁶

In Manitoba, cytology requisition forms and cytology reporting terminology are standardized. Locate the Manitoba cervical cytology request form and become familiar with the laboratory's process for transporting specimens to the lab, access to specimen collection instruments and mechanisms for receiving reports. Any questions should be directed to the laboratory.

Completing the Cervical Cytology Request Form

At present, all cytology laboratories in Manitoba use one format for requisitioning and reporting cervical cytology. Colposcopists also use a common colposcopy reporting form. Please review these forms in Appendix 2 of the module. As per MANQAP, in order for a specimen to be accepted at the laboratory, the PHIN and first and last name on the specimen must match the PHIN and name on the cytology requisition.

The specimen taker must be clearly identified on the cervical cytology request form in the "CervixCheck/Provider#" and/or "Bill to (#)" field. Where nurses, clinical assistants (CA) and physician assistants (PA) perform Pap tests under a physician or nurse practitioner, the CervixCheck provider number (issued by CervixCheck) should be recorded in the "CervixCheck/Provider#" field. The billing number of the physician or nurse practitioner overseeing these Pap tests should be captured in the "Bill to(#)" field.

The diagram illustrates the Cervical Cytology Request Form, with a magnified view of the **PROVIDER INFORMATION** section. The form includes fields for Patient Information, Patient History, and Provider Information. The magnified view highlights the following fields:

- PROVIDER INFORMATION**
- Last name**
- First name**
- CervixCheck/Provider #** (circled in blue)
- Bill to (#)** (circled in blue)
- Send report to (street address)**
- City/Town**
- Prov**
- Fax**

Specimen takers should identify themselves on the cervical cytology request form as follows:

DESIGNATION	CervixCheck/PROVIDER #:	BILL TO (#):
Clinical Assistant	22### (CervixCheck #)	Physician or NP billing #
Midwife	Not applicable	Midwifery billing #
Nurse Practitioner	Not applicable	Billing #
Nurse (RN, LPN)	N### (CervixCheck #)	Physician or NP billing #
Physician	Not applicable	Billing #
Physician Assistant	72### (CervixCheck #)	Physician or NP billing #

As per MANQAP and CervixCheck, the laboratory requires:

- client's surname and first name
- client's PHIN (or military number, other provincial/territorial number)
- complete date of birth (year/month/day)
- HCP name
- HCP's street address (or Box # where street address does not exist)
- HCP identifiers
 - CervixCheck/Provider #:
 - collects CervixCheck provider numbers for nurses, clinical assistants and physician assistants (issued by CervixCheck) in cases where nurses, clinical assistants and physician assistants perform Pap tests under a physician or nurse practitioner,
 - collects individual midwifery provider #'s, and/or
 - Bill to (#): billing number of the physician, nurse practitioner and midwife.

To ensure optimum evaluation of specimens, laboratories require:

- date of the client's last menstrual period (LMP). This date is important in the evaluation of benign endometrial cells. If these cells are found past the 12th day of a client's cycle or in a client who is post-menopausal, it is considered an abnormal finding.
- date(s) and result(s) of previous tests
- any relevant clinical or histological history
- history of existing hysterectomy, abnormal Pap tests and/or treatment. This is important information for follow-up.

Specimen Rejection Policy

1. The laboratory will reject a specimen under the following circumstances:
 - The specimen is improperly labelled
 - When the client is a non-Manitoba resident or, for any other reason, has not been issued a PHIN, the failure to identify the specimen with the client's name or alternate number
 - Discrepancy of information between the specimen and the requisition form
 - The specimen is received without accompanying requisition
2. The specimen and requisition will be returned to the HCP if the requisition lacks any or all of the following pertinent information:
 - Client's first and last name
 - Client's PHIN
 - Date of birth
 - Name/address of referring HCP
3. The requisition will be returned to the HCP if it is received without a specimen.

Transporting the Specimen

Liquid Vial (liquid based cytology)

Store at room temperature away from obvious heat sources and deliver to the laboratory within 5 days of specimen collection. Place the vial in a plastic bag with the patient's requisition form.

CervixCheck Provider Number

Nurses, clinical assistants and physician assistants should obtain a CervixCheck provider number from CervixCheck at such point cervical screening becomes part of their professional practice. This number identifies the nurse (N###), clinical assistant (22####) or physician assistant (72####) on the cervical cytology request form, thereby linking the nurse, clinical assistant or physician assistant with a cervical cancer screening test (i.e. Pap test) and any subsequent follow-up. See Appendix 2 for the request form.

Physicians, midwives, nurse practitioners should record their billing number (as assigned by Manitoba Health) in the "Bill to (#)" field on the cytology requisition form.

1. How do you sample the cervix with a broom?

Chapter 9
Self-Test

References

- ¹ Canadian Agency for Drugs and Technologies in Health. (2008). Liquid-based techniques for cervical cancer screening: Systematic review and cost-effectiveness analysis. Retrieved March 4th, 2009 from: [Microsoft Word - 333_Liquid-Based Techniques for Cervical Cancer Screening_tr e.doc \(cda-amc.ca\)](#)
- ² Arbyn M, et al. Obstetrics and gynecology. 2008; 111:167-77.
- ³ RCT: Ronco G, et al. BMJ, Clinical research ed. 2007; 335:28.
- ⁴ Siebers AG, et al. JAMA. 2009; 302:1757-64
- ⁵ Rozemeijer et al. Cancer Causes Control. 2016; Rozemeijer et al. BJM. 2017.
- ⁶ Manitoba Laboratory Standards. January, 2013. The College of Physicians and Surgeons of Manitoba.