Chapter 10: Pap Test Results

On completion of this section, the learner will be able to:
1. Identify how Pap test results are interpreted and the reasons for normal and abnormal results.
2. Describe the appropriate follow-up for each Pap result using the MCCSP “Screening Guidelines.”

Screening Guidelines
The following table shows the MCCSP recommendations for follow-up of all Pap test results:

<table>
<thead>
<tr>
<th>Cytology Result</th>
<th>Management</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Negative</strong></td>
<td>Routine screening.</td>
</tr>
<tr>
<td><strong>ASC-US</strong> (Atypical squamous cells of undetermined significance)</td>
<td>&lt; 21 years of age: Repeat Pap test in 12 months. Colposcopy not recommended for persistent ASC-US or LSIL. ≥ 21 years of age: Repeat Pap test in 6 months. Abnormal → Colposcopy. Negative.</td>
</tr>
<tr>
<td><strong>LSIL</strong> (Low-grade squamous intraepithelial lesion)</td>
<td>Refer for colposcopy.</td>
</tr>
<tr>
<td><strong>ASC-H</strong> (Atypical squamous cells, cannot rule out high grade)</td>
<td>Refer for colposcopy.</td>
</tr>
<tr>
<td><strong>HSIL</strong> (High-grade squamous intraepithelial lesion)</td>
<td>Refer for colposcopy, endocervical curettage and if the woman is ≥ 35 years of age or has abnormal bleeding, endometrial biopsy.</td>
</tr>
<tr>
<td><strong>AGC</strong> (Atypical glandular cells)</td>
<td>Refer for colposcopy and endocervical curettage.</td>
</tr>
<tr>
<td><strong>AIS</strong> (Adenocarcinoma in situ)</td>
<td>Refer for colposcopy and oncology.</td>
</tr>
<tr>
<td><strong>Squamous carcinoma, adenocarcinoma, other malignant neoplasms.</strong></td>
<td>Refer for colposcopy and oncology.</td>
</tr>
<tr>
<td><strong>Unsatisfactory</strong></td>
<td>Repeat Pap test in 3 months. If persistent (2 consecutive), refer for colposcopy.</td>
</tr>
<tr>
<td>Other Results</td>
<td>Management</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>------------</td>
</tr>
<tr>
<td>Absence of transformation zone cells</td>
<td>Screen according to cytology result if woman has had routine Negative Pap tests.</td>
</tr>
<tr>
<td>Rejected specimen</td>
<td>Repeat Pap test in 3 months. Inform woman repeat is not due to abnormal cytology.</td>
</tr>
<tr>
<td>Endometrial Cells</td>
<td>Refer for endometrial biopsy if the woman is: 1. Over 40, has irregular bleeding and no history of hormones or IUCD, 2. Is over 40 and her menstrual history is unknown, or 3. Post-menopausal with no history of HRT.</td>
</tr>
</tbody>
</table>

The Bethesda System

Guidelines for the management of women are based on the Bethesda System, which is the recommended standard for use in Canada, and by the MCCSP.

Specimen Adequacy

The two categories of specimen adequacy are:
- Unsatisfactory for Evaluation
- Satisfactory for Evaluation

Unsatisfactory for Evaluation

Unsatisfactory for Evaluation indicates that:
- The slide was processed and examined but was unsatisfactory for evaluation because of obscuring factors (excessive RBC’s, WBC’s or mucous) or insufficient epithelial cells or cytolysis.

The reasons the Pap test was considered Unsatisfactory for Evaluation will be given in the report (e.g. too few cells were collected or the cells on the smear were spread too thickly). Note: in longitudinal studies, women with Unsatisfactory Pap tests have a greater risk of malignancy.

Unsatisfactory Pap tests are mostly due to:
- cervical sampling errors, or
- specimen collection issues.
Other Possible Reasons for Unsatisfactory Pap Tests

Woman
- Intercourse within 24 hours of Pap test
- Douching or vaginal medication used 24 hours before Pap test
- Menses
- Body habits (obesity may make the procedure more difficult)
- Infection

HCP
- Did not sample far enough into endocervical canal to obtain endocervical/metaplastic cells
- Did not allow slide to dry before packaging
- Delay in applying fixative/use of outdated fixative
- Lack of cellular exfoliation (instrument choice)
- Lack of clinical information obtained

Satisfactory for Evaluation

The diagnostic categories are:
- Negative for Intraepithelial Lesion or Malignancy
- Epithelial Cell Abnormality
- Other

Negative for Intraepithelial Lesion or Malignancy
Pap tests interpreted as Negative for Intraepithelial Lesion or Malignancy indicate that:
- the test was satisfactory and that the client should continue with routine screening.

Epithelial Cell Abnormality
Pap tests interpreted as Epithelial Cell Abnormality include both those that:
- represent cervical carcinoma, and
- have changes considered to indicate increased risk of cervical carcinoma.

Changes indicative of increased risk for cervical carcinoma are reported as:
- Atypical Squamous Cells (ASC)
  - ASC-US Atypical Squamous Cells – Unknown Significance
  - ASC-H Atypical Squamous Cells – Cannot exclude High Grade Squamous Intraepithelial Lesion (HSIL)
- Low Grade Squamous Intraepithelial Lesion (LSIL)
- High Grade Squamous Intraepithelial Lesion (HSIL)
- Includes Carcinoma in-Situ
  - Atypical Glandular Cells (AGC)
  - Adenocarcinoma in Situ (AIS)
  - Squamous Carcinoma Adenocarcinoma (Other malignancy)

**Other Results**

**The Transformation Zone**

The presence of squamous metaplastic cells and/or dysplastic cells and/or endocervical cells is generally regarded as evidence of adequate sampling of the transformation zone. If the components of the transformation zone are absent in a satisfactory Pap test, you may not need to repeat the Pap test if the individual has had routine Negative Pap tests. The decision to repeat the Pap test is based on the cytology diagnosis and not the presence or absence of transformation zone cells.¹

**Rejected Specimen**

A specimen may be rejected for one of the following reasons:
- The specimen slide is improperly labeled
- Failure to identify the slide with the woman’s name when she is a non-Manitoba resident or, if for any other reason has not been issued a PHIN
- Discrepancy of information between the specimen and the requisition
- The slide is broken beyond repair
- The slide is received without accompanying requisition

**Endometrial Cells**³

Cervical cytology is not a good diagnostic assessment for endometrial cancer. The presence of apparently benign endometrial cells in women over 40 years indicates an increased risk for endometrial cancer and therefore endometrial assessment. Endometrial cells reported in women less than age 40, rarely have associated significant endometrial pathology.

Because menopausal status, hormonal therapy, menstrual data and clinical risk factors are often unknown, endometrial cells should be reported in all women from the age of 40 onward.

Endometrial biopsy should be performed if the woman is:
- over 40, has irregular bleeding and no history of hormones or IUCD
- over 40, and her menstrual history is unknown, or
- Post-menopausal with no history of HRT
Limitations of Pap Test Results

False Negative Results

A false negative result occurs when the Pap test fails to detect an abnormality that is present on the cervix. False negatives occur because either:

- abnormal cells are not present on the slide due to limitations of cervical sampling and Pap test preparation, or
- the laboratory did not identify abnormal cells in the Pap test.

Cervical cancer screening is not completely sensitive. The Pap test has a false negative rate that varies widely (13-70%) in published studies and may be higher for a single client visit.

Repeat screening at regular intervals is necessary to provide adequate lifetime protection from cervical cancer. All sexually active women should be screened at least every two years.

Colposcopy

Women with high grade and persistent low grade/unsatisfactory Pap tests results are referred to colposcopy. Colposcopy is a technology that has been used for several decades to identify sub-clinical abnormalities of the cervix. The cervix is magnified through a binocular scope with a high intensity light. This allows for the identification of abnormalities based upon:

- Epithelial density (white epithelium)
- Vascular patterns (punctuation, etc.)

Using these parameters, an area of abnormality can be identified in order to direct a tissue biopsy by one of the following methods:

- Laser surgery (uses an intense, narrow beam of light to remove abnormal cells)
- LEEP (loop electro surgical excision procedure; an electrical wire loop is inserted into the vagina where abnormal tissue is removed)
- Cone biopsy (the removal of a cone-shaped piece of tissue)

To see colposcopy images, as well as carcinoma and other abnormalities of the cervix, please see the Pap Test Learning Module DVD presentation on “Carcinoma of the Cervix.”
Manitoba Cervical Cancer Screening Program Resources

Screening Guidelines
Abnormal Results/Colposcopy (pamphlet)


References

1 Manitoba Cervical Cancer Screening Program. (2009). MCCSP screening guidelines. Manitoba: CancerCare Manitoba

2 Manitoba Cervical Cancer Screening Program. (2002). Pap smears: A resources guide for Manitoba health professionals. Manitoba: CancerCare Manitoba


Chapter 10
Self-Test

1. How are Pap test results interpreted?
2. What are reasons for Unsatisfactory Pap tests?
3. What is the MCCSP management steps for all cytology results?
4. Why does a false negative result occur?