Screening Recommendations

Screening Initiation - Age 20
All sexually active women should start screening at age 20 years. For women under 20 years of age, a sexual health visit with the health care provider is recommended. Women who have received the HPV vaccine should follow the same routine screening.

Routine Screening - Age 20 – 69 years
Screen annually until there are 3 consecutive negative Pap tests. Then extend interval to every three years.

These recommendations do not apply to women with previous abnormal Pap Tests.

Screening Cessation - Age 70 years
Screening may discontinue for women age 70 years or more, if there are 3 negative Pap tests within the last 10 years and no history of abnormal Pap tests. For women with little or no screening history, they should have three consecutive normal tests before stopping screening.

Annual Screening
Women with previous history of abnormal Pap tests > ASCUS. Women who are immune compromised, HIV positive, or have DES exposure in utero.

Clinical Management Recommendations

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative</td>
<td>Routine screening – repeat Pap annually until 3 consecutive negative results, then extend interval to every 3 years</td>
</tr>
<tr>
<td>Unsatisfactory</td>
<td>Repeat Pap within 3 months</td>
</tr>
<tr>
<td>ASCUS &lt; 30 yr or ≥ 30yrs with no HPV Status</td>
<td>Repeat Pap in 6 months</td>
</tr>
<tr>
<td>ASCUS ≥ 30 yrs HPV -ve</td>
<td>Treat as a negative result</td>
</tr>
<tr>
<td>ASCUS ≥ 30 yrs HPV +ve</td>
<td>Colposcopy within 6 months</td>
</tr>
<tr>
<td>ASC–H, LSIL-H, HSIL, CIS, AGC, AIS or Carcinoma</td>
<td>Colposcopy within 3 months</td>
</tr>
<tr>
<td>LSIL</td>
<td>If 1st LSIL following negative routine screening, repeat Pap in 6 months, all others go to colposcopy.</td>
</tr>
<tr>
<td>Endometrial Cells in a woman over 40 yrs</td>
<td>May be associated with benign endometrium, normal alterations, or endometrial / uterine abnormalities – manage as clinically indicated.</td>
</tr>
</tbody>
</table>

Subsequent Management

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASCUS ≥ 30 yrs HPV +ve, followed by a negative</td>
<td>Annual screening</td>
</tr>
<tr>
<td>ASCUS with no HPV result, followed by a negative</td>
<td>Routine screening</td>
</tr>
</tbody>
</table>

Any woman with a prior cytology diagnosis greater than ASCUS should be managed with annual screening.

Special Circumstances

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>Post Hysterectomy Screening</td>
<td>Cervix Intact/no abnormal history – routine screening</td>
</tr>
<tr>
<td></td>
<td>Cervix Intact/abnormal history – annual screening</td>
</tr>
<tr>
<td></td>
<td>No Cervix/no abnormal history – a vault sample may be recommended every 5 years as part of comprehensive reproductive health assessment.</td>
</tr>
<tr>
<td>Pregnant Women</td>
<td>The brush should not be used on women after first 10 weeks of pregnancy. Breakable spatulas are available when ordering supplies.</td>
</tr>
</tbody>
</table>

KEY

- ASCUS - Atypical Squamous Cells of Undetermined Significance
- ASC–H - Atypical Squamous Cells cannot exclude HSIL
- LSIL - Low Grade Squamous Intraepithelial Lesion
- LSIL–H - LSIL cannot exclude HSIL
- HSIL - High Grade Squamous Intraepithelial Lesion
- AGC - Atypical Glandular Cells
- AIS - Adenocarcinoma in situ
- CIS - Carcinoma in situ

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or online
www.publichealthlab.com

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709 752 6708
or email
shelley.williams@easternhealth.ca

This guideline is not intended to define or serve as a standard of medical care. Standards of medical care are specific to all the facts or circumstances involved in an individual case and can be subject to change as scientific knowledge and technology advance and as practice patterns evolve.

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30 Questions about Pap test Screening

Dr Cathy Popadiuk, Medical Director, Cervical Screening Initiatives Program
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1. What is “organized” cervical cancer (CC) screening?

Organized screening refers to a system in place to prevent the disease in question, in this case, cervical cancer (CC). The elements of an organized screening programme include:

i. Methods for identification and invitation of women at risk,
ii. Information systems including a registry of the pap smears done, their results, and the population to be screened,
iii. A method of assuring women receive the appropriate follow up and recall of normal and abnormal smears in an appropriate time interval,
iv. Quality assurance systems to review the pap smears taken at the smear taker to the cyto-pathology interpretation levels.
v. Quality assurance that all pap smears have received appropriate follow-up including treatment.

In countries with national organized CC screening programmes, CC rates are the lowest in the world at 0.5 cases per 100,000 eligible women. In these programs, women are not screened annually. There is little benefit to screening annually over every three years to reducing CC in the population.

Percentage Reduction in the Cumulative Rate of Invasive Cervical Cancer over the age range 35 – 64 years, with different frequencies of screening.

<table>
<thead>
<tr>
<th>Screening Frequency</th>
<th>% reduction in the Cumulative Rate</th>
<th>No of Tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 year</td>
<td>93.5%</td>
<td>30</td>
</tr>
<tr>
<td>2 years</td>
<td>92.5%</td>
<td>15</td>
</tr>
<tr>
<td>3 years</td>
<td>90.8%</td>
<td>10</td>
</tr>
<tr>
<td>5 years</td>
<td>83.6%</td>
<td>6</td>
</tr>
<tr>
<td>10 years</td>
<td>64.1%</td>
<td>3</td>
</tr>
</tbody>
</table>

Assuming a Screen occurs at age 35 years, and that a previous negative screen had been performed. From IARC 1986.

2. What is “opportunistic” screening?

Opportunistic screening refers to screening that is NOT done through an organized programme, but through ad hoc opportunities. For CC screening, such opportunities include reproductive health care assessments for birth control, ante- and post partum evaluations, gynecologic STI assessments and so on. Associating a pap test for reasons other than a well women health evaluation is considered opportunistic.
Since 1976, the Canadian Government has advocated for organized CC screening in the provinces. This has been reiterated through numerous national task forces and meetings over the years but no province has been able to implement a fully integrated organized screening programme with all the required elements. Thus, in Canada, CC screening has been offered opportunistically for the most part. The onus for follow up and recruitment has been with the physician and the patient.

3. Why has NL changed its screening guidelines from annual to less frequent screening? Is this safe?

Background to CSI Programme:

NL has had among the lowest CC screening rates in the country prior to 1998. That year, the federal government awarded a grant to the Western Region to do a pilot study to increase screening rates in that region. Numerous methods to attract unscreened women and help health care providers offer screening were successful such that a provincial screening programme, the Cervical Screening Initiatives Program, was announced on January 31, 2003 by the NL government. The NL government has been funding this important initiative since then and the CSI programme has been expanding eastward across the province. Over the last eight years, screening rates have increased significantly with now 76% of eligible women having received a pap test within the last three years, up from 64% in 2005. The pap test(cytology) registry has been updated and resourced such that identification of women needing follow up (fail safe recall) is now being done (since Sept 2011). All colposcopy reports are now included in the provincial cytology registry. In the future it is hoped that there can be a linkage with the provincial MCP database to allow invitations to women identified as never screened in the province. This will have to receive approval through appropriate privacy legislation amendments.

In 2003, when the CSI programme began, many women were known to have been unscreened in the province, thus a message of annual pap tests was encouraged as an easy reminder for patients and health care providers to understand the importance of this screening test. Furthermore, the inherent limitations to the pap test with respect to sensitivity requires that women have three normal annual pap tests before going on to increased intervals. Some women having never been screened, or those who have not had a pap test for many years required annual pap screening to assure accuracy to their test result. A message of annual screening addressed these concerns.

Less Frequent Screening:

After three normal annual pap tests, it is safe to go to less frequent intervals for screening. In many countries with organized Cervical Cancer screening programmes, a three or even five year interval is used between screens in women with a prior history of normal tests. Following three normal tests, it is very unlikely that a woman will develop an invasive cancer within the next three years. In countries with organized screening programmes, women would have less than twenty pap smears over their life time and the ability to prevent cancer is as effective as annual screening. Annual screening is not the most cost effective and efficient manner to offer screening from a public health perspective but without an organized system with
invitation, recall and follow up of abnormal screens, annual screening offers the safeguard of reminder at opportunistic visits.

4. What are the limitations of the pap smear (PS)?

The Pap Test takes a sample of cells from the surface of the cervix and endocervical canal. It is then sent for interpretation by a cytopathologist. The Pap test can be done conventionally with the specimen directly placed on a slide with fixative, or through a liquid based medium which is spun down, cleaned of debris, and specially prepared for ease of interpretation of the cells. Both types of slides are stained before review. In NL, the Liquid Based Cytology (LBC) Surepath system is now used and our UNSATISFACTORY rate of tests has decreased to less than 0.5% from 3%. This means fewer tests need to be repeated and less inconvenience to the women and health care providers.

Interpretation of the resulting slide, through conventional or liquid base formats, depends on the quality of the sample taken and the interpretation of the specimen by the reviewer. There is known intra and inter-observer variation in this process. As such, the sensitivity of a pap test to detect an abnormality is estimated at 50% and specificity over 98%. (The highest sensitivity rates for pap smear screening approach 70% to detect high grade dysplasia, but a conservative estimate of 50% is used by epidemiologists). With a sensitivity of 50%, a single pap test may miss an abnormality up to 50% of the time, but if it is repeated annually, a second and third time, the probability of detecting an abnormality approaches 90%. Thus it is important to have three negative annual tests before suggesting that a woman goes to less frequent testing. If after three negative annual tests she has a negative result, she very likely does not have an abnormality. When the CSI programme began in 2001, annual screening was the message given to women and health care providers. A woman never screened, or unscreened for several years, requires annual screening to assure she does not harbor an abnormality, which may not be picked up on a first pap test in years.

Considering only studies free of verification bias: sensitivity 51%, specificity 98%.

Cytology screening programmes have to compensate for the low sensitivity by requiring 2 to 3 annual pap tests before screening can be done less frequently.

Approximate programme sensitivity for:

2 consecutive annual pap tests: 51% + 51% of 49% = 76%
3 consecutive annual pap tests: 76% + 51% of 24% = 88%

5. **What is HPV testing? What does it mean to Pap screening?**

HPV is known to be the causative agent for cervical cancer. Of over 200 known HPV types, some 40 affect the lower genital tract and are considered high risk types as they can eventually lead to cervical or lower genital tract cancer in susceptible individuals. Up to 90% of men and women will be exposed to, and infected with, high risk HPV over their lifetime, but most infections will be transient and cleared on their own. In five to ten per cent of individuals, the HPV will integrate into mucosal cells and into the host DNA to cause deleterious cellular changes that can go on to dysplasia (pre-cancer) and cancer. There is no way at present to identify which individuals who are HPV positive will go on to get deleterious effects from the infection. Persistent HPV positivity, meaning an inability to clear the virus in two years, is a risk factor for dysplasia.

HPV testing in NL is done using the Qiagen (previously called Digene) Hybrid Capture 2 DNA test on the residual fluid from select pap test specimens, namely those showing ASCUS in women 30 years old and over. HPV testing is not done on all HPV specimens due to the high rate of positivity at any one time. In women under 30, up to 25% could be HPV positive with a normal pap test result. They would most likely spontaneously clear their HPV without every developing an abnormal pap test or problem. Similarly, in women over thirty, although fewer will be HPV positive than those women under 30, the HPV test is not specific enough to differentiate who will develop a problem if they are HPV positive and pap test negative. Algorithms and other “biomarkers” are being researched to better define how to differentiate which women will actually go on to get high grade dysplasia and ultimately cancer, from those who will not thus decreasing the number of women referred to colposcopy and requiring treatment for dysplasia.

6. **Why is HPV testing only done in women 30 years old and over for ASCUS, and not for other abnormalities?**

As previously mentioned in Question 5, the HPV test is at present still not specific enough to offer for primary screening as many women who are HPV positive and pap test negative may have a transient infection and a normal pap test. The corollary is that where there is an abnormality identified on a pap test greater than ASCUS, a significant proportion of those women are high risk HPV positive and adding this test gives no further information to help manage the patient. They all should be referred to colposcopy.

Prevalence of high risk HPV DNA and CIN2 and CIN3 in women with ASCUS and ASC-H in the ASCUS-LSIL “ALTS” Triage Study.

<table>
<thead>
<tr>
<th>Cytology</th>
<th>No.</th>
<th>% High Risk HPV DNA +ve</th>
<th>% CIN 2+</th>
<th>% CIN3+</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASCUS</td>
<td>764</td>
<td>63.2%</td>
<td>11.6%</td>
<td>4.7%</td>
</tr>
<tr>
<td>ASC-H</td>
<td>116</td>
<td>85.6%</td>
<td>40.5%</td>
<td>24.1%</td>
</tr>
<tr>
<td>HSIL</td>
<td>213</td>
<td>98.7% 5</td>
<td>9.2%</td>
<td>37.6%</td>
</tr>
</tbody>
</table>
Study provides the results for liquid-based cytology specimens that were tested for high-risk types of HPV using Hybrid Capture 2
From Sherman et al. (2001)  ALTS Trial

7. Is the Pap test the right test for cervical cancer screening?

As previously outlined in Question 4, although the pap test has a sensitivity of only 50%, this rises to 90% after three screens at regular intervals. It is thus likely a true abnormality will be detected within three tests such that a woman would be referred for further evaluation and management of a possible histologic pre-cancer (dysplasia). With a latency period of several years before a cancer develops (usually at least five to fifteen or more years), there is ample time to intervene. The specificity of the Pap test is very high, over 98%, thus if it is abnormal, showing a cytologic squamous intra-epithelial lesion (SIL), it is very likely that there is such an abnormality present. The abnormality does not mean cancer, but an SIL from mild to severe. The Pap test is also relatively cost effective from one third to one fifth the cost of an HPV test depending on regional variability.

Studies with HPV testing show that its sensitivity is over 98% for a high grade SIL (HSIL) but its specificity only 93% versus 98% for the pap test. This means that many more women would be referred for further evaluation and colposcopy that do not have a lesion. The HPV test is too non-specific at present to be used for primary screening (ie instead of the pap test). In women under 30, almost 25% will be HPV positive at any one time and most of these infections regress spontaneously within two years. Persistent HPV infection predisposes to high grade dysplasia but there is no way of identifying which women have persistent infections from transient infections and of those infections, which HPV type is responsible. There could be many HPV types present on a specimen at any one time, but the HPV test presently approved in Canada and used in NL (Qiagen), does not stratify among the thirteen high risk types in the test. In the future genotyping stratification may be available but will likely be more expensive.

8. When should Pap test screening begin?

The new CSI guidelines suggest Pap test screening should start at 20 years of age. In the past, screening was to begin within three years of sexual activity or by age 18 years, whichever came first. Most countries and provinces have adopted a later age for initiation of Pap test screening to 20 years or more. This is due to the fact that adolescents only rarely get cervical cancer and many of the abnormalities detected through screening are transient and would regress spontaneously. A lesion before 20 years of age would not likely progress to cancer before a first pap test at 20. The rare cases of cancer in adolescents under 20 tend to present with symptoms and would not likely have been prevented through Pap test screening. In NL, there have only been three cases of CC in women under twenty since 1969. There has been no change in this rare event with screening over the last decades.

9. When should Pap screening stop?
If a woman has had a history of normal pap tests during her lifetime, which included at least three normal pap tests during the decade before reaching 70 years of age, she may discontinue screening. If she has had a history of treatment for abnormal cervical cytology at any time in the past with cryotherapy, laser, or leep (cone) biopsy then screening should continue annually. If, for any reason, there is a concern that she may develop a new HPV infection through lifestyle changes or exposure to new partners, then Pap screening may continue at the discretion of the woman and her health care provider. Women who have had a history of three normal pap tests in the decade prior to discontinuing screening, seldom go on to acquire invasive cancer.

A significant proportion of invasive CC is still diagnosed in women over 70 years of age. In almost all such cases, the women did not have three normal pap tests in the previous decade. Most often, they have not had a pap test in several years if ever. This age group is at most risk of developing CC due to lack of screening.

10. **How often should women get their Pap tests?**

At the initiation of screening, pap tests should be done annually until three negative sequential results. At this point it is safe to extend the screening interval to every three years.

11. **Who should never stop Pap test screening?**

Any woman who has ever been treated for a high grade cervical abnormality should continue to have annual pap tests as her risk for future abnormalities continues to be higher than the general female population. Even if she has been treated with a total hysterectomy for high grade dysplasia, she should continue to have annual pap tests as she could develop dysplasia of the vaginal vault or vaginal side walls. Women with a history of cervical dysplasia are at risk of dysplasia along the entire lower genital tract including the vulva.

If a woman does not know what she was treated for ie low grade versus high grade dysplasia, it is prudent to continue screening annually.

12. **Who is at risk for cervical cancer? Who is at high risk?**

Any female who has ever been sexually active, be it digitally or through penetrative intercourse, is at risk of potentially getting cervical cancer. High risk types of Human papilloma virus are known to be the cause of cervical cancer and are acquired through the cervical mucosal surface contact. The likelihood of acquiring a high risk HPV type increases with early onset of sexual activity, exposure to multiple sexual partners, or exposure to a “high risk” male. With changes in social behavior in many countries over the last few decades, the baseline female population has initiated intercourse in their teens and participates in serial monogamy spreading HPV widely in social circles.
Women considered at high risk for Cervical cancer have an even greater risk than this population background risk and include women born to mothers exposed to DES in utero, immuno-compromised patients such as those on immunosuppressive therapies for organ transplants, or HIV positive patients.

13. **Why are the guidelines for post hysterectomy screening?**

There are various types of hysterectomies and often women may not know exactly what they had done for their “hysterectomy”. Often they think a “total” hysterectomy means their fallopian tubes and ovaries were removed which is not actually part of the terminology for hysterectomy. A total hysterectomy means the uterine fundus and cervix were completely removed and only a vaginal vault is left. A sub-total hysterectomy refers to the cervix being left in place and only the uterine fundus being removed. With a sub-total hysterectomy patient, screening should continue as if no hysterectomy was done ie treat the cervical pap smear diagnosis as for any other woman. If a total hysterectomy was done in a patient where it is known she has never had an abnormal pap smear and her surgery was for benign causes such as for fibroids, then pap screening does not need to be done. A vault smear can be offered as part of a routine well woman assessment but is not necessary. If a total hysterectomy was performed for dysplasia, or the patient has a history of treated dysplasia, then she should continue with annual screening due to the increased risk of vaginal dysplasia. If a woman was not screened regularly or she is unsure of her status, then screening of the vault should continue until three negative annual smears and then every three years until 69 years of age at which point screening can be discontinued.

14. **What does an “unsatisfactory” Pap test mean?**

Since the implementation of LBC and the discontinuation of conventional cytology, unsatisfactory pap tests have been very infrequent, less than 0.5%. Of these unsatisfactory tests a small proportion do not have enough cells on the slide for interpretation and some, despite the processing and removal of blood and debris, still have blood obscuring the specimen. Most unsatisfactory pap tests now are due to incorrect or incomplete labeling of the specimen. As the laboratories do not consider pap tests precious material, because of their relative ease of procurement, the sample is not processed to prevent error and is unsatisfactory.

15. **What is a satisfactory pap test? If I don’t get endocervical cells on the pap test, how can that be satisfactory?**

Previously it was thought that for a pap test to be “satisfactory”, it had to have endo-cervical cells present in addition to cells from the exo-cervix. The cytobrush was used in addition to the spatula to help access the endocervical component thus making for more “satisfactory” smears. Now the LBC all in one brush is meant to sample both ecto and endo cervix. Over the past decade studies have shown that although the cytobrush has allowed for the presence of more endocervical cells in the specimen, there has not been an increase in detection of pre-cancer or a decrease in invasive cervical cancer incidence. It is now believed that whether endo-cervical cells are present or not, does not alter the diagnosis of a pap test. A high grade squamous intra-epithelial lesion (SIL) is present whether there are endocervical cells identified or not, and a
negative pap test is negative again whether endocervical cells are identified or not. Unfortunately, adenocarcinomas within the endocervix are difficult to identify with pap tests and have occurred even with normal endocervical cells present.

16. **Is LBC better than Conventional Cytology in preventing Cervical Cancer and detecting pre-cancer?**

LBC has not been shown to be better at preventing invasive cervical cancer or detecting more high grade lesions. When first implemented, it is not uncommon to detect more lower grade lesions as cyto-pathologists gain experience with the new, cleaner specimens and do not want to miss abnormalities. This has been the case in NL and as the cyto-pathologists gained expertise and comfort with the new specimens, fewer pap tests have been identified as Atypical Squamous Cells or Low Grade Squamous Intraepithelial Lesions.

LBC has significantly decreased the proportion of slides that are unsatisfactory for interpretation. Very few women now have to undergo repeat testing for unsatisfactory pap tests.

17. **What does ASCUS mean?**

ASCUS refers to Atypical Squamous Cells of Undetermined Significance. It means that the pap test shows some slightly atypical cells which do not meet the criteria for a Squamous Intraepithelial Lesion. In a pap screening programme, up to 3 to 5% of women may have an ASCUS pap test. Of women with ASCUS, up to 15% may have an underlying histologic high grade lesion, CIN 2 or 3. 85% otherwise do not have a high grade lesion, thus it is important to distinguish who is at higher risk of a problem and should be referred to colposcopy and who is not at risk.

18. **What are the different management alternatives for ASCUS?**

A woman **under 30 with her first ASCUS pap test** is very unlikely to have an underlying high grade lesion thus the pap test should be repeated in 6 months. If it continues to be abnormal then she is more likely to be in the category of having a persistent lesion and should be referred to colposcopy.

A woman **over 30 with a first ASCUS pap test would have a reflex HPV test** done on her sample and if it is **high risk HPV positive**, then she should go to immediate **colposcopy**. Her risk of developing a CIN2/3 lesion is **27%** over two years. If her colposcopy and pap test is normal and no lesion identified, then she should continue with **annual screening**.

A woman **over 30 with a first ASCUS who is HPV negative** can go back to routine screening. The ASCUS HPV −ve result in a woman 30 and over can be treated as a **negative result**. It is extremely unlikely that she will develop a high grade lesion in the next three years, less than 2%.
A woman **over 30 with no HPV status on her ASCUS** should have the pap test repeated **in 6 months**. If it is positive for ASCUS or more, she should go to colposcopy, if it is negative, she should return to annual screening until she again has three negative pap tests. If she has another ASCUS pap test following a normal pap, she should have a repeat pap in 6 months and follow the guidelines accordingly again.

19. **What do I do with an ASC-H Pap test?**

**ASC-H** means Atypical Squamous Cells cannot exclude HSIL. Of all Atypical Squamous Cell (ASC) tests (which were 3 to 5% of all pap test results), only 5 to 10% of this proportion should be ASC-H. The rate of histologically confirmed CIN2/3 associated with ASC-H is between 15% seen with ASCUS and 70 to 75% seen with HSIL. There is great variability among studies but a reasonable estimate of CIN2/3 associated with ASC-H would be 25% or more.

As a consequence, with the high risk of an underlying high grade dysplastic lesion, ASC-H should be referred to colposcopy. A woman should have annual screening after her colposcopic evaluation and follow up of this lesion.

20. **What does LSIL mean?**

**LSIL** means Low Grade Squamous Intra-epithelial Lesion. This abnormality could be due to an acute HPV viral infection on the cervix or the mild dysplastic changes of CIN1 in the cells of the cervical surface epithelium. In both cases, the lesions should regress spontaneously within two years. Up to 85% of women with an LSIL pap test are high risk HPV positive thus this HPV testing is not an accurate triage strategy for colposcopy as it is with ASCUS pap results. Much like ASCUS HPV positive women over 30 having a 27% risk of developing a high grade dysplasia, CIN2/3 over two years, women with LSIL have the same ultimate risk.

21. **What do I do with an LSIL Pap test result?**

In the previous CSI NL screening guidelines, a woman with Low Grade Squamous Intraepithelial Lesion (LSIL) was to go directly to colposcopy. This was the suggestion because of the poor screening rates in NL and the possibility that the woman was never screened or underscreened, thus having a higher likelihood of having a significant abnormality than a woman with LSIL who was screened regularly. Due to ease of messaging and the large proportion of women in the population who did not have regular screening, the CSI recommendations were to send all women with LSIL directly to colposcopy.

With screening rates now much improved across the province, the suggestion is for a woman with a first LSIL pap test result after previous normal pap tests to have a repeat pap test in 6 months. If her pap test at that point is **not** normal, she should go to colposcopy. Again, if there is no regular pap history in the patient with an LSIL pap test, she should go on directly to colposcopy.

22. **What do I do with an LSIL-H Pap test result?**
Similar to the ASC-H designation, the LSIL-H category denotes a concern by the cyto-pathologist of a possible high grade lesion in the context of viral or lower grade changes. This should be an uncommon diagnosis but nonetheless should be sent directly to colposcopy.

23. **What does HSIL mean?**

HSIL refers to High Grade Squamous Intra-epithelial lesion. Women with HSIL have a 70 to 75% chance of having a biopsy confirmed CIN2/3 lesion and a 1 to 2% risk of having underlying invasive cervical cancer. Patients with HSIL should be referred directly to colposcopy.

24. **What does AGC mean?**

AGC refers to Atypical Glandular Cells. All AGC pap tests should be referred to colposcopy due to the significant risk of an underlying abnormality in the ecto-cervix, endo-cervix, or endometrium. In the past, AGC was specified into AGC not otherwise specified or of undetermined significance, versus AGC favoring neoplasia. In the former, a high grade dysplastic abnormality or worse was found in 9 to 41% of cases and in the latter in 27 to 96% of patients. There is a great deal of variability in these rates that reflects the subjectivity in evaluating and making a diagnosis in cytology. It is important to realize that where there are atypical glandular cells, one must refer to colposcopy urgently for further diagnostic evaluation and work up to include colposcopy, endocervical curettage, and endometrial biopsy.

25. **What does AIS mean?**

AIS denotes Adenocarcinoma in Situ. This diagnosis requires immediate colposcopy referral and most colposcopists will see such a patient within a few weeks. AIS is associated with a histologic diagnosis of adenocarcinoma in situ in 48 to 69% of women, or invasive cervical adenocarcinoma in up to 38% of women. An associated high grade squamous cell lesion is often associated with the adenomatous abnormality.

26. **What do normal endometrial cells on Pap test in a woman over 40 mean? What am I supposed to do with this report?**

A number of studies have reviewed the association of pathology with the presence of normal benign endometrial cells identified on pap tests in women over 40. In general, if the woman is pre-menopausal with the cells identified in the first half of the cycle during, or shortly after menstruation, this is considered a normal phenomenon and no further intervention needs to be done. If the cells are identified in the second half of the cycle and/or associated with symptoms such as abnormal or inter-menstrual bleeding, further investigation with Transvaginal Ultrasound and/or endometrial biopsy is warranted. Thus recording of
accurate LMP is particularly important for women 40 years of age and over to help interpret the pap result and determine whether further investigation is needed.

The risk of endometrial pathology associated with benign endometrial cells on pap test in women over 40 increases the closer the woman is to menopause. Approximately 60% of women with this finding have no endometrial pathology, 27% have benign endometrial pathology such as fibroids and polyps, 9% have endometrial hyperplasia with and without atypia, and 3.5% have endometrial carcinoma. Of women with endometrial carcinoma, most are older than the early 40’s and peri/ or menopausal.

Should a pap test result show atypical endometrial cells, a woman must be referred to colposcopy.

27. **Are there other results that can be reported on a Pap test?**

Very rarely, other descriptors such as psammoma bodies, blue bodies, or other terms can be used by the cytopathologist in reporting pap tests. Anything unusual should be referred to colposcopy. In most cases, there will be no significant malignant pathology, but rarely there may be a case. For example, psammoma bodies can suggest benign fallopian tube endosalpingiosis, but there are reported cases of ovarian cancer presenting this way. When in doubt, refer for colposcopy.

28. **When should I refer the patient for specialist opinion and/or colposcopy?**

In addition to the suggested referral to colposcopy on the Clinical Management Guidelines, one should refer to colposcopy any time there is concern that there is a problem. If the woman has inter-menstrual, post-coital or any worrisome irregular vaginal bleeding, there may be a local cause on the cervix even if the pap smear is normal. If there is an obvious lesion on the cervix causing bleeding, the patient should be referred for further investigation to rule out a malignant process. Polyps and cervical ectropions are common, but an underlying malignant process must be ruled out. Pap tests are meant to detect pre-cancer and not cancer. Malignant lesions often have necrotic cells and obscuring debris that make interpretation of a pap test difficult. The pap test result may be negative due to inability to sample underlying malignant tissue.

29. **What is the HPV vaccine?**

There are presently two vaccines available against high risk HPV types known to cause cervical cancer. A quadrivalent vaccine by Merck protects against high risk types HPV 16 and 18 which cause 70% of cervical cancer and against low risk types HPV 6 and 11 which cause genital warts. A bivalent vaccine by GSK protects against high risk types HPV 16 and 18 that cause cervical cancer. Both are highly efficacious at preventing HPV infection and pre-cancer in vaccinated individuals. The province funds a school based vaccination programme for girls in grade six and a recent catch up programme for
grade nine girls. The quadrivalent vaccine has been offered to this population since 2006. Both vaccines are otherwise available privately according to Health Canada approvals. One is directed to the respective product monographs for Gardasil (Merck) and Cervarix (GSK) for details. New NACI guidelines are expected in the next few months to describe approved uses for both vaccines in Canada.

30. **What does HPV vaccination mean for Pap screening?**

It is believed that with the vaccination of girls before sexual activity, they will receive the greatest benefit for cervical cancer prevention against the most common high risk HPV types, 16 and 18, responsible for 70% of cervical cancer worldwide. Other less frequent high risk HPV types however, can still contribute to a further 30% of cervical cancer not formally* addressed in these vaccines. It is thus imperative that all women continue with cervical cancer pap test screening as outlined in the NL Clinical Management Guidelines. It is expected that as the vaccinated cohort begins screening, there will be a commensurate decrease in abnormal pap tests. The program is working to establish appropriate monitoring with genotyping and a possible linkage of pap tests with vaccine history. The process is being explored within the constraints of privacy protections and linkage of vaccine and cervical screening registries.

*The quadrivalent vaccine has cross protection against HPV 31, and the bivalent vaccine against HPV 31, 33 and 45. Cross protection refers to some protection against HPV types that are similar to HPV 16 (HPV 31 and 33) and HPV 18 (HPV 45) and that are not formally in the quadrivalent and bivalent vaccines, respectively.
References and Suggested Reading:

Endometrial Cells on Pap Smear:


General Overview:


A question often asked by women who have had a hysterectomy is “Do I still need a Pap Test?” The following guidelines show the current national recommendations and practices.

For women who have had a subtotal hysterectomy. (Cervix still intact)

**Routine Screening**

Specimen collection on a woman with a hysterectomy is performed using the brush contained in the LBC collection kits.

For women who have had a total hysterectomy and have a history of abnormal cervical cells or cervical cancer. (Cervix removed)

**Annual Screening**

For women who have had a total hysterectomy and no abnormal history. (Cervix removed)

**No Pap Test Required**

For women who have had a total hysterectomy and no history known.

**Have 3 Negative Pap Tests then refer to routine recommendations**

* There have been some arguments made that it is still of preventive health benefit to re-screen women with a total hysterectomy and no abnormal history at least once every five years, as part of an overall reproductive health assessment.

Routine screening recommendations for women with an intact cervix, and no previous abnormal Pap Test, is to have 3 consecutive normal Pap Tests and extend screenings to every 3 years.

For more information please contact your health care provider, community nurse, pharmacist or call 1-866-643-8719

Don’t just sit there. Have a Pap test every 3 years. How far will you go... to fight cervical cancer? Go the distance!

If you have ever been sexually active, start Pap testing at age 20.
If you’re due for a Pap test, stop putting it off. Make an appointment with your doctor today!

Cervical Screening Initiatives
1-866-643-8719
lorihumett@westernhealth.nl.ca
A routine Pap test could save your life. TAKE CARE OF YOURSELF your friends and family will be glad you did.

A routine Pap test can prevent almost all cancer of the cervix!

Don’t just sit there. Have a Routine Pap test.

Where does your health information go?

You should know that when you have a Pap test your health information is secured in the laboratory and Provincial Cytology Registry. To provide you with the highest quality health services, the Cervical Screening Initiatives Program uses unidentified information to assist with health services planning and evaluation.

For more information contact your health care provider, public health nurse or:

THE PROVINCIAL COORDINATING OFFICE
Tel.: (709) 643-8719
Toll Free: 1-866-643-8719
Fax: (709) 643-1203
email: lorihamett@westernhealth.nl.ca
Central Health: 709-651-6264
Eastern Health Rural: 709-466-5847
Western Health: 709-637-5000 Ext 6435
Labrador-Grenfell Health: 709-897-3109
Eastern Health Avalon: 709-752-4353

This program is administered by Western Health.
What causes cancer of the cervix?

Most cervical cell changes are caused by a common virus called the human papilloma virus (HPV). HPV is passed during sexual contact. There is no treatment for HPV, in most cases it will go away on its own. If your Pap test indicated that cells have been affected by HPV, you will be followed more closely until cells return to normal. If the changes continue, further tests may be necessary.

A vaccine is available for young women that may help prevent infection with the types of HPV that cause most cases of cervical cancer. Regular Pap tests are still necessary.

Women can reduce their risk of developing cancer of the cervix by:
- Having a routine Pap test
- Limiting their number of sexual partners
- Not having sex at an early age
- Not smoking
- Receiving the HPV vaccine

Don’t just sit there... have a routine Pap test!

What is a Pap test?

A Pap test is a simple test that can help prevent cancer of the cervix. It is a way to pickup any changes in the cells of your cervix. While some women feel uncomfortable or embarrassed, those few minutes could save your life.

Why have a Pap test?

A routine Pap test can find cell changes at an early stage, when women have no signs or symptoms of being ill. If found early and treated, these changes will not develop into cancer. Pap tests find most cases of abnormal cervical cells, but no screening test is perfect. Repeat tests ensure accuracy.

When should you have a Pap test?

If you have ever been sexually active you should start Pap testing at age 20. Young women should visit their health care provider for a health care check and to talk about birth control, and sexually transmitted infections (STI’s). If you have had a hysterectomy (removal of your uterus) you may still need a Pap test. A woman whose cervix is not completely removed, or a woman who has had abnormal results on previous Pap tests, should continue to have a Pap test after a hysterectomy. At age 70, a woman with a good record of Pap testing may stop screening.

How often do you need a Pap test?

Unless your doctor or health care provider tells you otherwise, have a Pap test once a year for 3 years in a row. If all results are normal, begin having Pap tests every 3 years. Women with abnormal history or other health concerns may continue yearly testing.

How do you get ready for a Pap test?

To obtain a good Pap test, it is best if you:
- Have not douched or used birth control creams or jellies for 48 hours
- Have not had sex for 24 hours
- Are not having your period

If you are able to follow this advice, the lab will receive a better cell sample.

How is a Pap test done?

When you go for a Pap test, you will be asked to lie down on an examining table and to slide your bottom down. Your feet are put in foot rests and you will be asked to relax and to let your knees fall to the side. An instrument, called a speculum, is gently placed in your vagina. The speculum opens up your vagina, just a bit, so your cervix can be seen more clearly. Cells are gently taken from your cervix using a brush. These cells are then sent to the lab for further testing.

“Have a Pap test once a year for three years in a row. If your results are normal, have a Pap test every three years.”

“If you’re sexually active, start Pap testing at age 20.”

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