

**Management of Abnormal Pap Smear  
Clinical Practice Guideline  
June 2011**

**General Principles:**

The Papanicolaou (Pap) smear is widely credited with reducing mortality from cervical cancer, and remains the single best method for the early detection of cervical intraepithelial neoplasia. Since the introduction of the Pap smear in 1943, substantial advancements have been made in the understanding, evaluation and treatment of the disease process that can result in cervical cancer.

These guidelines focus on the evaluation and treatment of abnormal pap smears in all women who are sexually active, have an unreliable sexual history, or are 18 years and older with an intact uterus/cervix. These clinical practice guidelines are to assist primary care clinicians by providing an evidence-based analytical framework for the evaluation and treatment of patients. They are not intended either to replace a clinician's judgment or to establish a protocol for all patients with a particular condition.

**1. Recommendations**

***Cervical Cancer***

- All women should begin cervical cancer screening about 3 years after they begin having vaginal intercourse, but no later than when they are 21 years old. Screening should be done every year with the regular Pap test or every 2 years using the newer liquid-based Pap test.
- Beginning at age 30, women who have had 3 normal Pap test results in a row may get screened every 2 to 3 years. Another reasonable option for women over 30 is to get screened every 3 years (but not more frequently) with either the conventional or liquid-based Pap test, plus the HPV DNA test. Women who have certain risk factors such as diethylstilbestrol (DES) exposure before birth, HIV infection, or a weakened immune system due to organ transplant, chemotherapy, or chronic steroid use should continue to be screened annually.
- Women 65 years of age or older who have had 3 or more normal Pap tests in a row and no abnormal Pap test results in the last 10 years may choose to stop having cervical cancer screening. Women with a history of cervical cancer, DES exposure before birth, HIV infection or a weakened immune system should continue to have screening as long as they are in good health.
- Women who have had a total hysterectomy (removal of the uterus and cervix) may also choose to stop having cervical cancer screening however, continue screening if prior CIN2, CIN3, or cancer. Women who have had a hysterectomy without removal of the cervix should continue to follow the guidelines above.
- If treated for CIN2, CIN3, or cancer in the past, or if patient has HIV infection or is a transplant recipient, continue screening.
- If no documentation of previous cytology screening can be obtained, continue screening
- Annual Exams Continue: Regardless of the frequency of cervical cancer screening, annual gynecologic examinations, including pelvic exams, are still recommended.

All women who are sexually active, have an unreliable sexual history, or are 18 years or older with intact uterus/cervix should have a routine cytological screening yearly until three consecutive normal results are noted. After that pap smears should be done every 2-3 years in 'low risk' monogamous women. Individuals at risk for cervical neoplasia (see table below) may require more frequent screening, and the reason for this should be documented in the medical record at the time of screening.

<p><b><u>Initial Approval Date and Reviews:</u></b> Originated 1997, reviewed 3.2004, 8.2007, 8.2009 by MPP.MSFC Clinical Practice Committee, Reviewed and adapted for MSH June 2011</p>	<p align="center"><b><u>Most Recent Revision and Approval Date:</u></b> <b>June 2011</b> © Copyright MedStar Health, 2010</p>	<p align="center"><b><u>Next Scheduled Review Date:</u></b> June 2013 MSH Ambulatory Best Practice</p>
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**Guidelines for ordering pap smears and HPV testing**

	Age <21	Age 21-29	Age 30-64	Age 65 or greater
Pap and <u>reflex</u> high- risk HPV testing when ASCUS (LabCorp number 194027 with GC/NG)		√		
Pap <u>with</u> high risk HPV testing (LabCorp number 199123 or 199123 with GC/NG)			√	√
Frequency	Avoid Screening	Every 2 years with liquid based Pap test.	Every 3 years, ONLY: <ul style="list-style-type: none"> <li>• If 3 consecutive normal paps, no Hx of CIN 2-3 or HIV</li> <li><b>OR</b></li> <li>• If low risk for cervical cancer with negative pap and negative HPV testing</li> </ul>	May discontinue (BUT ONLY if 3 consecutive normal paps and no abnormal in past 10 years) Medicare – <b>every 2 years</b> (or yearly if high risk)

Comments: Add CT/NG as necessary to above testing recommendations

**Cytological Sampling Techniques:**

- **Pap test:** using a broom-type (brush) device or plastic spatula and endocervical brush combination, smearing the cytological sample directly onto a microscope slide,
- **ThinPrep**® Thin-layer cytology is a new technology for processing cytological samples. The sample is collected as in the conventional Pap but then the brush suspends the sample cells in a fixative solution, disperses them, and then selectively collects cells on a filter. The cells are then transferred to a microscope slide for cytological interpretation. Because cytological samples are fixed immediately after collection, there are fewer artifacts in cellular morphology. Clinical studies of the ThinPrep® 2000 (Cytoc Corporation, Boxborough, MA) have shown that test sensitivity is improved compared with conventional Pap smears. The improvement in sensitivity appears to be greater in populations with a low incidence of cytological abnormalities. (*Evaluation of Cervical Cytology*. 1999)

Risk Factors for Cervical Neoplasia			
•	Early age of first intercourse (before age 20)		
•	Multiple (two or more) sexual partners*		
•	High risk sexual partners		
•	Human papilloma virus infection (persistent infection is the most significant risk factor for the development of cervical cancer)		
•	Smoking		
•	Immunosuppression (Including HIV infection)		
Other*	Low socioeconomic status Nutritional deficiencies DES exposure	Early first pregnancy Use of cervical cap Oral Contraceptive use	Other STD's

\*Less well-proven, uncommon, or difficult to separate from other, more important risk factors.

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**2. Classification System: Bethesda System**

The Bethesda System was the creation of a standardized framework for laboratory reports that included a descriptive diagnosis and an evaluation of specimen adequacy.

<b>Specimen Adequacy</b>	
<ul style="list-style-type: none"> <li>Satisfactory</li> <li>Unsatisfactory</li> </ul>	
<b>General Categorization</b>	<b>Interpretation/Result</b>
<p>A. <u>Negative for intraepithelial lesion or malignancy</u></p> <p>Includes:</p> <ul style="list-style-type: none"> <li>"Within normal limits"</li> <li>"benign cellular changes"</li> </ul>	<p><u>Organisms</u></p> <p><i>Trichomonas vaginalis</i></p> <p>Fungal organisms morphologically consistent with <i>candida</i> species</p> <p>Shift in flora suggestive of bacterial vaginosis</p> <p>Bacteria morphologically consistent with <i>actinomyces</i> species</p> <p>Cellular changes consistent with herpes simplex virus</p> <p><u>Other non-neoplastic findings (optional to report; list not comprehensive)</u></p> <p>Reactive cellular changes associated with</p> <p>Inflammation (includes typical repair)</p> <p>Radiation</p>
<p>B. <u>Epithelial cell abnormality</u></p>	<p><b><u>Squamous cell</u></b></p> <p>Atypical squamous cells (ASC)</p> <ul style="list-style-type: none"> <li>Of undetermined significance (ASC-US)                             <ul style="list-style-type: none"> <li>Low-grade squamous intraepithelial lesion (LSIL)</li> </ul> </li> <li>Cannot exclude HSIL (ASC-H)                             <ul style="list-style-type: none"> <li>High-grade squamous intraepithelial lesion (HSIL)</li> </ul> </li> </ul> <p>Encompassing: human papillomavirus/mild dysplasia/cervical intraepithelial neoplasia (CIN) 1</p> <p>Encompassing: moderate and severe dysplasia, carcinoma in situ; CIN 2 and CIN 3</p> <p>Squamous cell carcinoma</p> <p><b><u>Glandular cell</u></b></p> <p>Atypical glandular cells (AGC) (<i>specify endocervical, Endometrial, or not otherwise specified</i>)</p> <ul style="list-style-type: none"> <li>Atypical glandular cells, favor neoplastic (<i>specify endocervical or not otherwise specified</i>)</li> <li>Endocervical adenocarcinoma in situ (AIS)</li> </ul> <p>Adenocarcinoma</p>
<p>C. <u>Others</u></p>	<p>Cases in which there are no morphological abnormalities in the cells per se; however, the findings may indicate some increased risk: for example, benign-appearing "Endometrial cells in a woman 40 years of age"</p>

**3. Abnormal Pap Smear that Requires Immediate Colposcopy**

- Hyperkeratosis/Parakeratosis- in high risk patients
- ASCUS Dysplasia or Dysplasia
- ASCUS Reactive/Inflammation in a non-compliant patient
- LSIL (low grade squamous intraepithelial lesions)
- HSIL (high grade squamous intraepithelial lesions)
- Endocervical ASCUS (AGUS) - Atypical Glandular cells of Undetermined Significance, needs colposcopy and gyn consultation
- CIN - gyn consultation
- Carcinoma in situ - gyn consultation

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**4. Referrals:**

- a) Gyn consultation and colposcopy is recommended immediately for any of the following results:
  - Hyperkeratosis/Parakeratosis- in high risk patients
  - ASCUS Dysplasia or Dysplasia
  - ASCUS Reactive/Inflammation in a noncompliant patient
  - LSIL- Low grade squamous intraepithelial lesion
  - HSIL-High grade squamous intraepithelial lesion
  - Endocervical ASCUS (AGUS) - Atypical Glandular cells of Undetermined Significance
  - CIN - gyn consultation
  - Carcinoma in situ - GYN consultation
- b) Colposcopy is indicated when repeat pap smear following treatment does not show elimination of the abnormality such as;
  - inflammation with repeat pap smear abnormal (obscuring inflammation or more severe inflammation).
  - ASCUS with repeat pap smear showing ASCUS in pre or post-menopausal women.
  - Hyperkeratosis/Parakeratosis in low risk women when repeat pap smear shows same result.

**Patient Education/Counseling:**

**Suggested literature;** "What is a Pap Smear" (Office of Population Affairs, this can be obtained free call 1-301-654-6190 item # FP-110068). Understanding Abnormal Pap Smear Test Results (ACOG ISSN 1074-8601)

**A. Explain and discuss the following:**

1. *What is a Pap Smear.*  
A Pap smear is a screening test to detect precancerous and cancerous conditions of the cervix.
2. *How is a Pap smear performed?*
3. *How often should a woman have a Pap smear?*  
The first Pap test should be performed by age 21 or earlier if a woman becomes sexually active  
All women should have a Pap smear as part of a pelvic examination once a year. After three consecutive Pap smears are normal, physicians may recommend that the test be performed less frequently. However it is important to have a yearly GYN exam.
4. *Risk Factors for Cervical Cancer- See Table Page 2.*
5. *What an abnormal Pap smear indicates.*  
While an abnormal Pap smear may be a sign of cancer, many different changes on the cervix can cause an abnormal Pap smear. Pap smears can be abnormal if the cervix is inflamed or irritated. This can be caused by an infection of the cervix. The cervix may also be going through some changes called Dysplasia. Dysplasia means the cells on the Pap Smear look abnormal under a microscope.
6. *How can a woman improve the accuracy of her Pap test?*
  - a) Don't douche or use vaginal medications, lubricants, or contraceptive products, such as spermicide, 2-3 days prior to the test
  - b) Try to schedule your Pap smear so it takes place between the 12th and 16th days of the menstrual cycle.
  - c) Abstain from sexual intercourse for 1 to 2 days prior to the test.

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