# SECTION 1
# Preventive Health

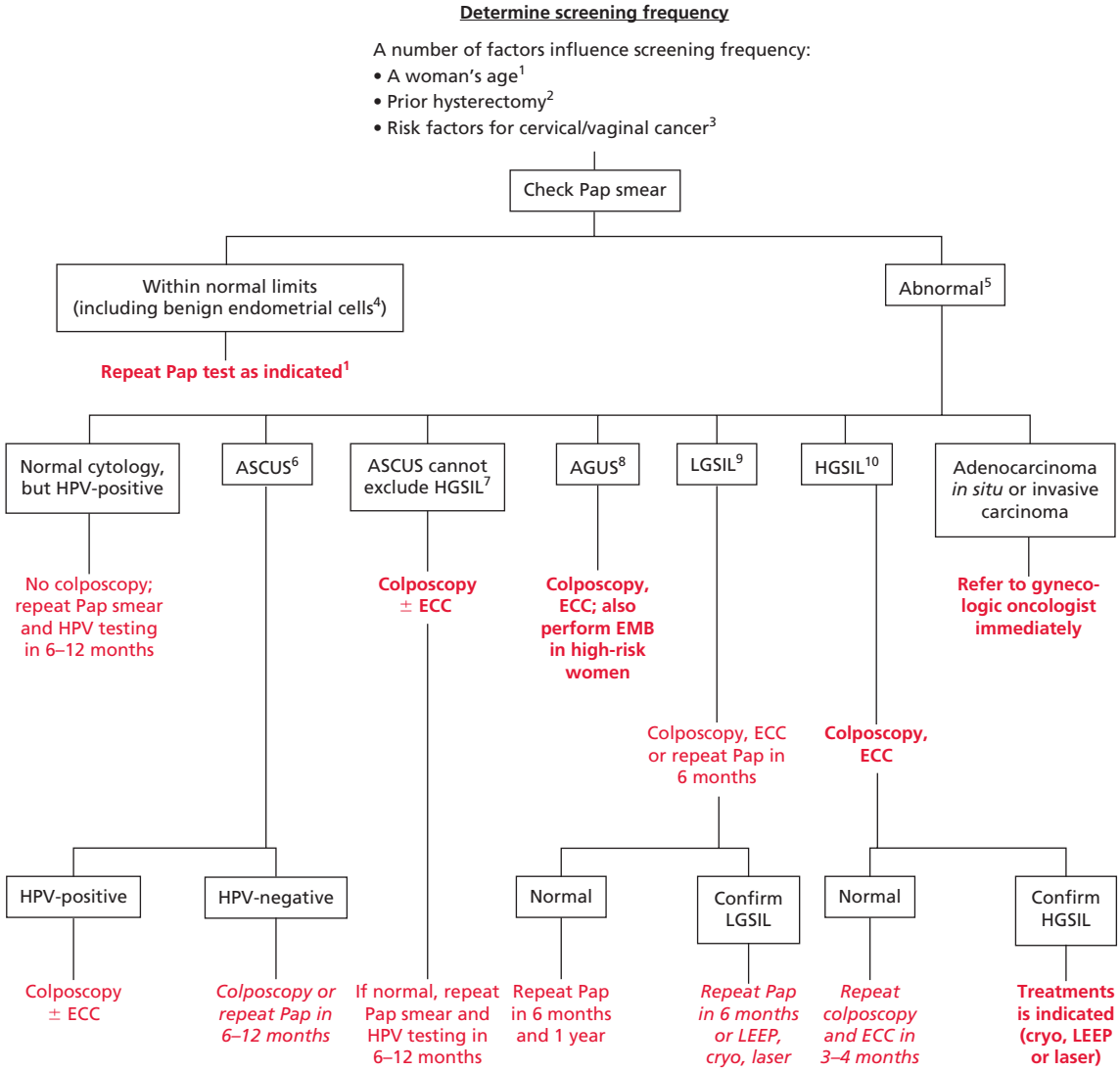


**Levels of evidence**

The levels of evidence used in this book are those recommended by the U.S. Preventive Services Task Force, an independent panel of experts responsible for developing evidence-based recommendations for primary care and prevention, in 2007 (http://www.ahrq.gov/clinic/uspstmeth.htm):

**Level I: Evidence obtained from at least one properly designed randomized controlled trial.**
Level II: Evidence obtained from controlled trials without randomization or cohort / case-controlled studies that include a comparison group.
*Level III: Evidence from uncontrolled descriptive studies (including case series) or opinions of respected authorities or expert committees.*
Level IV: Evidence from uncontrolled descriptive studies (including case series) or opinions of respected authorities or expert committees.

# 1 Abnormal Pap Smear




1. Guidelines for screening frequency are based on 2004 recommendations by the American Cancer Society for detection of cervical cancer. Pap tests should be performed for women annually, starting within 3 years of first vaginal intercourse and no later than age 21. For women over 30 years of age who have had three sequential normal Pap tests, screening may be done every 2–3 years. Women over 70 years of age with ≥3 sequential normal

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Pap tests and no abnormal tests in the last 10 years may stop screening altogether. Women with a history of cervical cancer or other risk factors should continue screening.

2. Women who have had a total hysterectomy may choose to stop screening altogether, unless the surgery was performed for cancer or precancerous lesions in which case vaginal vault smears are indicated. Women who have had a supracervical hysterectomy (and therefore still have their cervix in place) should continue to follow the guidelines for Pap testing outlined above.

3. Women who have risk factors for cervical/vaginal cancer (such as a history of *in utero* diethylstilbestrol (DES) exposure, HIV, women who are immune compromised or those on chronic steroids) should be screened annually.

4. Finding of benign endometrial cells occurs in 10% of Pap smears from premenopausal women and 0.01–0.5% of postmenopausal women. The incidence varies throughout the menstrual cycle and with the use of oral contraceptives or hormone replacement therapy. Of note, the presence of benign endometrial cells in a postmenopausal woman should raise concerns about endometrial cancer, especially if associated with postmenopausal vaginal bleeding. All such women should have an endometrial biopsy (EMB).

5. Women should always be informed of an abnormal Pap result by their physician or another healthcare professional who can answer basic questions and allay anxiety. Verbal notification should be followed with written information and clear recommendations for follow-up. Additionally, if there is evidence of infection along with cellular abnormalities, the infection should be treated.

6. Controversy exists as to whether all women with atypical squamous cells of undetermined significance (ASCUS) smears should be referred for colposcopy. Clinicians should consider risk factors and reliability of patient follow-up in determining whether or not to proceed directly to colposcopy. Women who test positive for high-risk (oncogenic) HPV serotypes (including 16, 18, 31) should be referred immediately for colposcopy. An endocervical curettage (ECC) is indicated if the colposcopy cannot adequately visualize the transformation zone; ECC is contraindicated in pregnancy. If a postmenopausal woman has an ASCUS Pap test and is not on hormone replacement therapy, consider treating her for 6 weeks with vaginal estrogen and repeating the Pap test in 3–4 months. If ASCUS cytology persists, she should be referred for colposcopy and ECC.

7. This category includes 5–10% of all ASCUS smears. The likelihood that this actually represents low-grade squamous intraepithelial lesions (LGSIL) or high-grade squamous intraepithelial lesions (HGSIL) is 10–20%. As such, all such women should be referred for colposcopy. All lesions should be biopsied. If no lesions are evident on colposcopy, then an ECC should be performed.

8. Abnormal glandular cells of undetermined significance (AGUS) warrants an aggressive investigation and close follow-up. All such women should have colposcopy with ECC. Although many of all these patients will have a normal exam on colposcopy, 20–60% will have a significant lesion. In addition, an EMB should be performed in women with AGUS who are $>$35 years of age with abnormal vaginal bleeding, are morbidly obese, have oligomenorrhea or have clinical results suggesting endometrial cancer. Normal exams should be followed up with Pap smears every 6 months for 2 years.

9. Approximately 60% of LGSIL will regress spontaneously without treatment. Such lesions can be followed by either repeat Pap test in 6 months or colposcopy and ECC. Recent studies suggest a high rate of loss to follow-up and a small risk of delaying diagnosis of cancer and therefore recommend colposcopy/direct biopsy/ECC unless special circumstances exist (such as pregnancy or adolescence). Treatment will depend on the histologic lesion. Cervical intraepithelial neoplasia 1 (CIN 1) can be managed expectantly; CIN 2 and 3 (in the absence of pregnancy) should be managed by excision (loop electrosurgical excision procedure (LEEP)) or ablation (cryotherapy, laser). After treatment, Pap smears should be performed every 3–4 months for a minimum of 1 year. The goal of colposcopy in pregnancy is to exclude invasive cancer.

10. High-grade squamous intraepithelial lesions can progress to invasive cervical cancer. Colposcopy and ECC are therefore recommended in all such women. Treatment is indicated if HGSIL is confirmed. After treatment, Pap smears should be performed every 3 months for 1 year. If the patient is young, nulliparous, and likely to follow up, one can consider q 3–4 monthly Pap smears, with colposcopy/ECC and treatment if HGSIL is persistent.