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Abnormal Pap Smear in Pregnancy

Determine screening frequency

A number of factors influence screening frequency:

- A woman's age[1]
- Risk factors for cervical/vaginal cancer[2]

Check Pap smear

- Normal cytology (including benign endometrial cells[3]) → **Repeat Pap test as indicated[1]**
- Unsatisfactory cytology → **Repeat Pap test in 2–4 months or colposcopy[4]**
- Abnormal[5]
  - ASCUS, 21–24 years of age → No colposcopy; repeat Pap in 12 months if HPV+ or in 3 years if HPV-
  - ASCUS >25 years of age[6]
    - HPV-positive → Colposcopy ± ECC postpartum
    - HPV-negative → Repeat Pap in 3 years
  - ASC-H[7] → **Colposcopy** → Repeat colposcopy + ECC postpartum
  - AGC or AIS[8] → **Immediate colposcopy,** repeat colposcopy+ ECC postpartum
  - LGSIL[9] → Immediate colposcopy; repeat colposcopy+ ECC postpartum
    - Normal → Follow-up per age and HPV status
    - Confirm LGSIL → Follow-up per age and HPV status
  - HGSIL[10] → **Colposcopy, ECC**
    - Normal → *Repeat colposcopy + ECC in 3–4 months*
    - Confirm HGSIL → **Treatment Follow-up postpartum with** colposcopy + ECC
  - Invasive carcinoma → **Refer to a Gynecologic Oncologist immediately**

1. Recommendations for screening and management of abnormal cervical cytology in pregnancy follow from the general guidelines for screening onset and frequency that were updated in 2012 to reflect the recommendations of the American Cancer Society ACOG, and U.S. Preventive Services Task Force for detection of cervical cancer.
2. Routine pap screening should not be collected until age 21 regardless of first vaginal intercourse. The risk of severe dysplasia or cancer is very low among adolescents, but they should be encouraged to receive human papilloma virus (HPV) vaccination and counseled about safe sex practices to limit exposure to sexually transmitted infections. Women between the age of 21–29 years should be screened with cervical cytology alone. Women >30 years of age should be screened with cytology and HPV testing every 5 years (or with cytology alone every 3 years). Women with a history of cervical cancer, HIV or other risk factors (such as immunocompromise) should continue annual screening.
3. These guidelines and the associated algorithm are based on a large database of patients including adolescents who were managed using former criteria in the Kaiser Healthcare system. The American Society of Colposcopy and Cervical Pathology (ASCCP) has developed an updated free App that can assist with the current recommendations.
4. Women who have risk factors for cervical/vaginal cancer (such as a history of in utero diethylstilbestrol (DES) exposure, HIV, women who are immunocompromised, or those on chronic steroids) should be screened annually

1. The 2012 criteria substantially clarify the management of ASCUS, which is guided by HPV test results whether obtained reflexively or as a co-test. The management in pregnancy differs only in that colposcopy and endocervical curettage (ECC) should be deferred until 6 weeks postpartum unless a CIN 2+ lesion is suspected. Women >25 years old with a negative HPV test should be returned to a regular three-year follow-up cycle.
2. Following pregnancy colposcopy is recommended in women who are HPV+ with annual co-test follow-up. Similarly, an endocervical curettage (ECC) should be obtained whenever possible and excisional procedures should be avoided to prevent over-treatment. In women 21–24 years old, cytology should be repeated in one year. A positive HPV result does not change the recommended follow-up, but a negative result should return the woman to a three-year follow-up cycle.

3. Atypical squamous cells cannot exclude high-grade squamous intraepithelial lesions (HSIL) (ASC-H), which is associated with a higher risk of CIN 3+ regardless of patient age and a five-year invasive cancer risk of 2% regardless of HPV status. That said, HPV is highly correlated with ASC-H, but the cancer risk demands that all women receive immediate colposcopy, including those 21–24 years of age.

4. Colposcopy with directed biopsies of any area that might be concerning for micro invasion should be done by a highly trained clinician. Treatment should be dictated by histologic evaluation of the biopsied lesions.

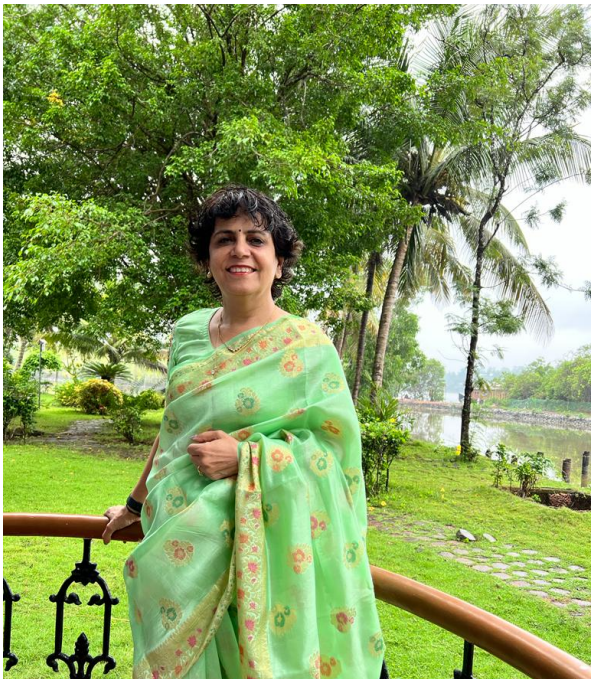
1. Atypical glandular cells (AGC) or adenocarcinoma in situ (AIS) warrant aggressive investigation and close follow-up. Although the risk of cancer is lower in younger age groups, women >30 years have a 9% risk of CIN3+ and 2% risk of invasive cancer. All such women of all ages should have antenatal colposcopy with 6-weeks postpartum follow-up to include colposcopy, ECC and endometrial biopsy (EMB). Subsequent treatment and follow-up are dictated by the biopsy results, maternal age, and the histologic evaluation of the glandular elements.

2. Approximately 60% of low-grade squamous intraepithelial lesions (LGSIL) will regress spontaneously without treatment depending on the age of the patient, HPV status, and HPV genotype. For women >25 years old in whom HPV testing is negative, repeat co-testing in ome year is preferred but colposcopy is acceptable. However, if the HPV is positive, then colposcopy is preferred.

3. If colposcopy is not part of the initial evaluation, subsequent co-testing needs to be entirely normal to allow patients to return to three-year follow-up. Any abnormality at the one-year follow-up visit should result in colposcopy. In women 21–24 years old, annual repeat cytology without HPV testing is preferred and colposcopy should be avoided unless the results recur for two consecutive years or if one of the following lesions is detected: ASC-H, AGC, or HSIL.
4. Pregnant women >25 years old with low-grade squamous intraepithelial lesions should undergo immediate colposcopy without ECC, while those 21–24 years old should be evaluated postpartum

1. High-grade squamous intraepithelial lesions (HGSIL) are associated with a 60% risk of CIN2+ and a 2% risk of invasive cervical cancer. Immediate colposcopy with directed biopsies of any area that might be concerning for micro invasion is recommended, regardless of maternal age.

2. The antepartum diagnosed of HGSIL should prompt a 6-weeks postpartum follow-up colposcopy with ECC and treatment as dictated by the biopsy results. If diagnosed early in pregnancy, colposcopy can be repeated every 12 weeks. Treatment during pregnancy should be reserved for invasive carcinoma and should be managed in concert with a gynecologic oncologist.



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