In the September 2008 issue of AOA’s Women and Wellness, I discussed screening for sexually transmitted infections and cervical cancer in women age 19 through 25.1 It was noted that the US Preventive Services Task Force (USPSTF) recommends that all sexually active females under age 25 be screened annually for chlamydia and that at-risk women (including young women) be screened for gonorrhea.2,3

Screening for chlamydia should be performed by using nucleic acid amplified technology (NAAT), a commonly available test based on the analysis of the deoxyribonucleic acid (DNA). Because of increasing antibiotic resistance of neisseria gonorrhoea, the causative agent of gonorrhea, the USPSTF recommends the use of culture to screen for this microorganism.4

Screening for sexually transmitted diseases in women age 26 and over is based on risk factors, primarily sexual history including multiple sexual partners, failure to use condoms appropriately and a new sexual partner within the past six-month period. Screening recommendations for gonorrhea are similar. Other risk factors include substance abuse, women with histories of sexually transmitted infections, those with more than one sexual partner in a single year, those living in correctional facilities and those living in communities with high rates of sexually transmitted infections (STIs).

The federal Centers for Disease Control and Prevention (CDC) also recommends that high-risk women receive annual serological testing for syphilis. Furthermore, because individuals who have positive results on tests for STIs are often difficult to locate for subsequent treatment, presumptive antibiotic therapy for high-risk women is recommended.5

The CDC notes that heterosexual HIV transmission is now “responsible for the most rapid increasing subset of US AIDS cases.” This statement is true for all groups of women and is particularly striking with regard to African American women. Thus, screening for HIV should be offered to all at-risk women. In simpler terms, if a clinician is considering testing for chlamydia and gonorrhea because of a female patient’s sexual behavior, the clinician should also discuss HIV testing with that patient.5

Women in this age group will sometimes request testing for sexually transmitted infections because of concerns stemming from their own sexual activity or those of a sexual partner. Reasonable testing of this population includes screening for chlamydia, gonorrhea, syphilis and HIV. Testing for Hepatitis B should be per-
formed on these women as well. However, screening for Hepatitis C is not indicated unless the woman is immunocompromised. Some clinicians test the cervical secretions of these women for Herpes Simplex Virus (HSV) using PCR technology—even if the patient has never been diagnosed with a genital herpes infection. Such testing is done to identify women who are asymptomatic shedding HSV. The subsequent initiation of antiviral therapy in these women is thought to decrease the risk of spreading the infection to a sexual partner(s). However, the USPSTF recommends against routine serological testing for HSV in asymptomatic adults.

Screening for cervical cancer
Cervical cytology screening, the Papanicolaou (Pap) smear, has been called the ideal screening test for cervical cancer. While the incidence of mortality of cervical cancer has decreased substantially since the initiation of the Pap smear, cervical cancer remains the third most common gynecologic malignancy. Women age 26 to 30 need annual Pap smears.

Pap smear screening in women ages 40 and over
Women age 30 and over who are at low risk for cervical cancer, the human papillomavirus (HPV) infection, or an infection with other sexually transmitted diseases can be screened every two to three years. Ideally, these low-risk women will have had three consecutive normal Pap smears. Women who are infected with HIV, immunosuppressed, or women who have been exposed to diethylstilbestrol in utero, should continue on an annual screening regimen.

The FDA has approved, and many physicians prefer, the combination of cervical cytology and HPV DNA testing in primary screening for cervical cancer in women age 30 and over. When this screening method is used, and the tests are both normal, repeat testing should be performed in three years, (but not sooner). This increase in screening interval offsets the additional cost of the HPV DNA testing.

Using this testing regimen, the clinician will occasionally encounter a low-risk patient with a normal Pap smear who tests positive for oncogenic HPV DNA. When this occurs, both tests should be repeated in 12 months.

Abnormal cytology should be managed according to the usual guidelines. If the repeat again reveals a normal Pap smear and the presence of oncogenic HPV DNA, colposcopy should be performed despite the negative cytological result.

Managing abnormal cytology results
The American Society for Colposcopy and Cervical Pathology (ASCCP) is a tremendously useful resource for physicians who are treating patients with abnormal cervical cytology test results. The ASCCP’s Website (www.asccp.org) provides algorithms for the management of cytologic abnormalities and cervical neoplasia.

The Bethesda System 2001 for reporting cervical/endo-cervical/vaginal cytology results delineates the following five epithelial (ie, squamous) cell abnormalities:

- Atypical squamous cells of undetermined significance (ASCUS)
- Atypical squamous cells, cannot exclude high-grade squamous intraepithelial lesions (ASC-H)
- Low-grade squamous intraepithelial lesions (LSIL)
- High-grade squamous intraepithelial lesions (HSIL)
- Squamous cell carcinoma

Most patients with LSIL will have cervical intraepithelial neoplasia (CIN) grade 1, (previously called mild dysplasia) revealed on biopsy. Patients with HSIL most commonly will have CIN grades 2 or 3 on biopsy. Squamous cell carcinoma is rarely reported in Pap smear results. Of course, if a clinician sees a visible tumor on the cervix, a biopsy should be performed.

Women with a diagnosis of ASC-H, LSIL, HSIL, or squamous cell carcinoma without a visible tumor should undergo a colposcopic examination. Treatment of these women should be based on multiple biopsies taken during the colposcopic examination. The management of a patient’s glandular cell abnormalities is more complex than the previous conditions and is usually referred to a gynecologist.

There are three appropriate ways to manage a patient’s ASCUS result from a Pap smear: repeat cervical cytology screening every six months for two years; a colposcopic examination; or testing for HPV DNA. The latter option is clearly preferred if the Pap smear was performed with a liquid-based medium because no repeat office visit will be required of the patient.

Use of liquid-based cytology
Many clinicians prefer the use of reflex testing for oncogenic strains of HPV in patients who have ASCUS Pap smear results. These clinicians have therefore adopted the routine use of a liquid-based medium for cervical cytology screening. With the use of LBC, the lab can simply perform testing on all patients with ASCUS Pap smear results and discard the specimens of all patients with other Pap smear results.

A patient with an ASCUS Pap smear result who also has positive results for oncogenic...
Physicians should offer HIV testing to any women they consider at risk for chlamydia, gonorrhea, or other STIs. Cervical cytology can be performed at less frequent intervals in low-risk women. The combination of Pap smear plus testing for oncogenic HPV DNA will allow many women to require tri-annual Pap smears.

It should be noted that the use of HPV DNA testing with Pap smears is not appropriate for primary screening in women age 19 through 25. HPV DNA testing is most commonly used in women who are older than 30 years of age to help identify those patients who need cytologic screening at less frequent intervals. It should be noted that the use of HPV DNA testing with Pap smears is not appropriate for primary screening in women age 19 through 25. HPV DNA testing is most commonly used in women who are older than 30 years of age to help identify those patients who need cytologic screening at less frequent intervals.

**References**


