HPV:
A Hidden Epidemic

Deaths from cervical cancer have decreased dramatically in the United States since the Pap smear came into wide use as a screening and early detection tool following its introduction in 1941. Today, improvements in technology and increased knowledge about the disease have led doctors to focus on human papillomavirus (HPV) as a cause of the majority of cervical cancer cases. The Centers for Disease Control and Prevention considers HPV a "hidden epidemic," with an estimated 20 million Americans infected at any given time.

In this column, gynecologic oncologist Robert McLellan, MD, answers questions about HPV and cervical cancer.

Q: What is HPV and how is it linked to cervical cancer?

A: HPV is a sexually transmitted virus that is very common, but largely transient. While some subtypes of HPV can cause genital warts, which can be treated, most subtypes cause no symptoms. Usually the immune system will clear the virus naturally, and people won't even know they had it.

There are more than 70 subtypes of HPV, and only a few of them are known to be related to cervical cancer. Even these "high-risk" HPV subtypes usually clear up on their own and have no long-term consequences. In about 10 percent of people with high-risk HPV, the infection persists, putting them at significant risk for cancerous changes.

Q: If there are generally no symptoms, how is HPV detected?

A: The goal of the Pap test is to identify cellular changes in the cervix—precancerous changes or dysplasia—before they become cancerous. In about 5 percent of cases, Pap smears may show atypical squamous cells of undetermined significance, or ASCUS. Although these cells are neither clearly normal nor clearly precancerous, only 5 to 10 percent of these patients will harbor a precancerous lesion on the cervix.

An advance in testing technology is the ThinPrep Pap test. This method involves scraping cells from the cervix and placing them into a liquid fixative, rather than smearing the cellular material on a slide as is done in conventional Pap tests. Liquid-based cytology clearly improves the detection of precancerous lesions and reduces the number of false positives and false negatives. After the cells are examined, the residual liquid can be used to test for sexually transmitted diseases such as HPV. At Lahey, any Pap test that shows ASCUS is routinely tested for high-risk HPV.

Q: If HPV is present, what kind of follow-up is recommended?

A: In women found to have ASCUS, half will test negative for high-risk HPV. Because our knowledge has improved so much in the past few years, we can say, "If you don't harbor the virus, you're not at risk for squamous cell cancer of the cervix." The half who test positive for high-risk HPV are called back in to undergo additional testing and possible biopsy to look for the presence of precancerous lesions.

Q: Why not test everyone for HPV to begin with?

A: HPV is so common that if we tested women in their 20s using modern techniques, too many would test positive for it to be effective as a screening tool. One in four women in their 20s tests positive for high-risk HPV subtypes, but for the vast majority, the infection is transient.

Women in their 30s, however, are less likely to test positive for HPV. Last August, the American College of Obstetrics and Gynecology approved the use of HPV testing with Pap smear as a primary screening tool in women 30 years of age or older. If a woman has negative results from both tests, she does not need another Pap for three years.

Q: How are men affected? Is there a screening tool for them?

A: Currently there is no method to test men for the presence of HPV. Men are carriers, and while HPV can cause penile or anal cancers, those are very rare.

To make an appointment with a gynecologist at Lahey, call 781-744-3250.