Cervical Cancer Screening
Co-testing

Shortly after the discovery that the human papillomavirus (HPV) causes almost all cases of cervical cancer, DNA- and mRNA-based HPV tests became available. They’ve since been used to complement the Pap test, which has been the gold standard for cervical cancer screening for many decades. In this newsletter, we’ll take a look at the benefits of co-testing (a Pap test plus an HPV test). We’ll also review how co-testing fits in with cervical cancer screening guidelines.

Screening Guidelines Include Co-testing
The most recent cervical cancer screening guidelines were published this year by the American College of Obstetricians and Gynecologists (ACOG). They reiterate the preference for using co-testing to screen women 30 to 65 years of age.

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>Recommended Screening</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;21</td>
<td>No screening</td>
</tr>
<tr>
<td>21 to 29</td>
<td>Pap test every 3 years</td>
</tr>
<tr>
<td>30 to 65</td>
<td>Pap test + HPV co-testing every 5 years (preferred) or Pap test every 3 years</td>
</tr>
<tr>
<td>&gt;65</td>
<td>No screening (if low cancer risk)*</td>
</tr>
</tbody>
</table>

* 3 consecutive negative Pap tests or 2 consecutive negative co-tests within the last 10 years, with the most recent test within the past 5 years.

Benefits of Co-testing
The guideline committee identified these benefits of co-testing every 5 years compared with Pap testing alone every 3 years:

- Increased sensitivity for detecting cervical intraepithelial neoplasia (CIN3)
- Lower subsequent risk of cervical intraepithelial neoplasia or higher (CIN3+) following a negative HPV result
- Lower subsequent risk of cancer following a negative HPV result
- Increased detection of adenocarcinoma of the cervix

Basis for Co-testing Recommendation
The co-testing recommendation was based in part on results from large, randomized trials. The trials compared co-testing with Pap testing alone in women aged 25 to 60 years. They showed that co-testing detects high-grade lesions earlier, enabling prevention of more cases of CIN3+ and cervical cancer.
The co-testing screening interval was selected by benchmarking it against the performance of Pap testing alone every 3 years. Studies showed that co-testing every 5 years results in a slightly lower rate of cancer, fewer screens, and fewer colposcopies.

Finally, co-testing improves the detection of adenocarcinoma of the cervix relative to Pap testing alone.\(^4,7\) This is important, as the incidence of adenocarcinoma has been increasing.

**A 2015 Co-testing Study\(^8\)**

The benefits of co-testing were also demonstrated in a more recent study. Scientists used a large database composed of co-testing results and looked at the data in 3 ways: Pap-only result, HPV-only result, and co-test result. They found that co-testing was the most sensitive of the 3 for detecting precancer (CIN3+):

- Pap only—91% sensitivity (95% CI, 91%-93%)
- HPV only—94% sensitivity (95% CI, 93%-95%)
- Co-testing—99% sensitivity (95% CI, 98.6%-99.2%)

Co-testing also missed the fewest cases of cancer. Of the cervical cancers detected in this study:

- 5.5% were co-test negative
- 12.2% were Pap-only negative
- 18.6% were HPV-only negative

**How the Laboratory Can Help**

Quest Diagnostics offers a selection of tests for cervical cancer screening. These include image- and nonimage-guided Pap testing, HPV mRNA testing, co-testing, and HPV genotyping. Information about these tests can be found in the [Test Center](https://www.QUESTDiagnostics.com).

Quest also offers panels that combine Pap screening with screening for certain common sexually transmitted infections (STIs). These panels are performed according to the age-dependent guidelines for cervical cancer screening. The STI screening is consistent with current guidelines for screening average-risk women of various ages and women at high risk. The panels include the initial screen and a reflex to follow-up testing as needed. More information on these tests can be found at [QuestDiagnostics.com/SMARTcodes](https://www.QUESTDiagnostics.com/SMARTcodes).
Screening for cervical cancer has been used to save lives for many years. Screening was first done using only the Pap test. For decades, this was the gold standard test for screening. Then scientists learned that a virus causes almost all cervical cancers. This virus is called the human papillomavirus (HPV). After this discovery, doctors started to use an HPV test for screening too. When an HPV test is used with a Pap test, doctors call it a co-test. This newsletter will help you learn more about co-testing and cervical cancer screening and prevention.

Co-testing

Co-testing is a cervical cancer screening test that includes an HPV test and a Pap test. The HPV test detects the virus that can cause cervical cancer. The Pap test detects the presence of abnormal cells. These abnormal cells indicate that cancer is either present or might develop.

If both tests are negative, screening doesn't have to be done again until 5 years later. If one or both of the tests are positive, there are a couple of options:

- Repeat the co-test in 1 or 3 years
- Do follow-up testing right away to learn more

Co-testing and the Cervical Cancer Screening Guidelines

Co-testing is not recommended for teens and young adults. In fact, screening is not needed at all for girls and women <21 years old. About 90% of HPV infections in this group go away by themselves. Thus, the risk for cervical cancer is very low.

Co-testing is not recommended for women 21 to 29 years of age either. This is because most HPV infections in this age group still go away by themselves. But the risk for cancer is a little higher than in those <21. So for women 21 to 29 years old, screening with a Pap test alone is recommended.

Co-testing is recommended for women 30 to 65 years of age. In fact, it's the preferred test. In this age group, fewer HPV infections go away on their own. Thus the risk for cancer is higher. Using both the HPV and the Pap test helps to:

- Detect precancer earlier than Pap testing alone
- Detect some types of cervical cancer that are not detected by the Pap test alone
- Decrease the frequency of screening needed

No screening is needed for women >65 if they have a low cancer risk.
**Should I Have a Co-test?**

Each year during your well-woman exam, your doctor will let you know if you are due for cervical cancer screening. If you are, your doctor will talk to you about which test is best for you. The best test will depend on your age and medical history. Remember, screening doesn't have to be done every year, but a well-woman exam does.

**Why Screening for Cervical Cancer Is Important**

Screening has helped to decrease the number of deaths from cervical cancer. It used to be the number 1 cause of cancer deaths in women in the United States. Now it's number 15. But not all women get screened regularly, and it shows. About half of all cervical cancers occur in women who have never been screened. Another 10% occur in women who haven’t been screened in the last 5 years.

**How the Laboratory Can Help**

The laboratory plays a big role in cervical cancer screening. When you are due to be screened, your doctor will collect the specimen. Then it gets sent to the laboratory for testing. The laboratory can do both the Pap test and the HPV test. If your doctor orders a co-test, both tests will be done. The lab can also do a follow-up HPV test. This test can tell you if you have one of the 2 types of HPV most likely to cause cancer. This follow-up test is called an HPV genotype test.

**What You Can Do**

Regular screening should be part of your personal healthcare. Talk with your doctor about what kind of cervical cancer screening is best for you.

And don't forget that an annual check-up is an important part of your healthcare. It gives your doctor a chance to check your overall health. This can help uncover any health problems early on.

If you are 26 years of age or younger, getting an HPV vaccine is another step you can take. It lowers your risk of cervical cancer.

**HPV Vaccines**

There are currently 3 vaccines that help protect against HPV infection. They protect against the HPV types that are most likely to cause cancer. Two of them also protect against HPV types that cause genital warts. To be most effective, a person needs 3 shots over a 6-month period.

The vaccine can be given to girls or women 11 through 26 years of age. Two of the vaccines can also be given to boys or men 9 through 26 years of age. Experts prefer girls and boys to get vaccinated when they are 11 to 12 years old.

**Screening Is Covered by Health Plans**

Under the Affordable Care Act, cervical cancer screening must be covered by health plans. So if you have health insurance, you can't be charged a copay.

**References**