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# Cervical Cancer Screening

## The power of cervical cancer screening

Cervical cancer was once the deadliest cancer among women in the United States.<sup>1</sup> But since 1975, the number of cases and the number of deaths have decreased each year.<sup>2</sup> So instead of ranking number 1, it now ranks 14<sup>th</sup> among all cancer deaths in women.<sup>3</sup>

This progress in the fight against cervical cancer has primarily been due to screening. However, many women still aren't getting screened regularly. In the United States, about half of cervical cancers are diagnosed in women who were never screened.<sup>4</sup> Another 10% occur in women who were not screened within the past 5 years.<sup>4</sup> So we need to continue focusing on using the tools we have—vaccination and screening—to wipe out this cancer.

In this newsletter, we'll review the screening guidelines. We'll pay special attention to human papillomavirus (HPV) testing—when and how to incorporate it.

## Cervical cancer screening guidelines

The screening recommendations depend on a woman's age.

Age (years)	Recommended Screening <sup>4</sup>
<21	No screening
21 to 29	Pap test every 3 years
30 to 65	Pap test + HPV co-testing every 5 years (preferred) <b>or</b> Pap test every 3 years
>65	No screening (if low cancer risk)

HPV infection is quite common among teens. But about 90% of these infections go away on their own.<sup>5</sup> Thus the risk for cervical cancer is very low. That's why the guidelines don't recommend screening teens.<sup>4</sup>

Women 21 to 29 years of age still have a high prevalence of HPV infection. But their risk for cancer is a little higher than it is for teens. So experts recommend starting to screen at age 21.



## The annual well-woman visit is important

Some women think an annual check-up isn't necessary if they aren't due for a Pap test. But an annual well-woman visit is an important part of a woman's medical care. It is a chance to uncover and address medical problems early or to identify risk factors for disease. In addition, the annual visit is an excellent time to counsel patients, respond to their concerns, and set health goals. Services that you can provide at a well-woman visit include:

- Updating medical and family history information
- Physical exam including a clinical breast exam and pelvic exam
- Guideline-recommended vaccinations
- Guideline-recommended screening for heart disease, diabetes, colon cancer, osteoporosis, etc.
- Counseling re diet, weight management, exercise, monthly breast self-exam, sexually transmitted diseases, pregnancy prevention, etc.

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In the past, a yearly Pap test was recommended for 21 to 29 year-olds. But this has changed for 2 reasons. First, yearly screening detects only a few more cases than does screening every 3 years. Second, screening every 3 years substantially reduces the number of false positives. This in turn reduces the number of needless colposcopies. So the guidelines recommend a Pap test every 3 years starting at 21 years of age.<sup>4</sup>

### Co-testing—the preferred option for women 30 to 65 years old

The preferred screen for women 30 to 65 years of age is a Pap test *plus* an HPV test.<sup>4</sup> This is called co-testing. Co-testing screens for both the virus that causes the cancer and the presence of abnormal cells. Co-testing is preferred to a Pap test alone because<sup>4</sup>:

- It detects precancer better than either test alone.
- It is better able to detect adenocarcinomas.
- It allows for less frequent screening.

The guidelines stress that the screening interval for co-testing should be every 5 years (not every 3 years). Co-testing every 3 years does not improve detection. However, it does increase the number of unneeded colposcopies and treatment. Note that this screening interval is only for patients who have tested negative.

### Reflex testing vs. co-testing

An HPV test is the preferred follow-up test for an ASC-US Pap test in women  $\geq 25$  years old.<sup>6</sup> So ordering a Pap test with a reflex to an HPV test could be a good strategy for women age 25 to 29. It would also be a good strategy for older women if only a Pap test was used for screening. But remember, the preferred option for screening women over 30 is a co-test.

### High-risk vs. low-risk HPV

All HPV assays used for cervical cancer screening detect high-risk HPV genotypes. They do not detect low-risk genotypes. This is because only high-risk genotypes can cause cervical cancer. Low-risk types are the ones that cause warts.

### HPV test vs. HPV genotype test

Most HPV screening assays test for a *pool* of high-risk genotypes. They do not differentiate between the types. A positive test result means high-risk HPV is present. Exactly which of the high-risk genotypes is present can't be determined from the screening test. An HPV genotype test is needed

### FDA approves new HPV vaccine

On December 10, 2014, the FDA announced that it approved a new HPV vaccine. This vaccine, called Gardasil® 9, protects against 5 additional high-risk HPV types. Current vaccines protect against either 2 or 4 HPV types.

Gardasil 9 is approved for use in girls and women aged 9 through 26. It is also approved for boys aged 9 through 15. Gardasil 9 is administered as 3 separate shots. The first dose is followed by additional doses 2 and 6 months later.

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for that. But most genotype tests only test for 2 of the high-risk types: types 16 and 18. These 2 types are the ones most likely to cause cervical cancer. Sometimes type 45 will be included, too. Type 45 is the third most common genotype that causes cervical cancer.<sup>7</sup>

Because the genotype test only tests for 2 or 3 of the high-risk types of HPV, it should not be used for routine screening. An HPV screening assay should be used instead. A genotype test is only used as a follow-up test.

### When to use an HPV genotype test

Guidelines recommend using a genotype test for following up on a Pap negative/HPV positive co-test. If type 16 or 18 is present, a colposcopy is advised. Current guidelines don't specify what to do if type 45 is present, but presumably a colposcopy would be the next step.

Note that the guidelines also recommend another option for following up on a Pap negative/HPV positive co-test. That option is to repeat the co-test in a year. So doctors can either do a genotype test right away or do a Pap/HPV co-test in a year.

### Additional Information

You can find more information about cervical cancer screening and HPV at these Web sites:

- Centers for Disease Control and Prevention: [cdc.gov/cancer/cervical/pdf/guidelines.pdf](http://cdc.gov/cancer/cervical/pdf/guidelines.pdf)
- National Cancer Institute: [cancer.gov/cancertopics/screening/cervical](http://cancer.gov/cancertopics/screening/cervical)
- U.S. Preventive Services Task Force: [uspreventiveservicestaskforce.org/uspstf/uspscerv.htm](http://uspreventiveservicestaskforce.org/uspstf/uspscerv.htm)
- American Cancer Society: [cancer.org/cancer/news/newsbytopic/index?topic=Cervical%20Cancer](http://cancer.org/cancer/news/newsbytopic/index?topic=Cervical%20Cancer)

### References

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