




**Proactively** help protect yourself,  
say no to **cervical cancer**

Quadrivalent  
HPV Vaccine for  
cervical cancer  
prevention

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**Cervical cancer** ranks the second most common female cancer in the world. It is also the 4<sup>th</sup> most common female cancer in Hong Kong.<sup>5</sup> Cervical cancer is caused by the abnormal changes of the intraepithelial cells of the lower end of the uterus.<sup>2</sup> If not cleared and left untreated, these abnormal cells changes (or "precancerous") can lead to cancer over years of time.<sup>2</sup> According to the survey of Hong Kong Department of Health, among the 400 new cases per year, around 30% of them are young women of age group from 20-44 years old.<sup>5</sup> However, according to the recent findings of a local survey, many young women under-recognize the risk of this women "killer".

*Launch an attack is  
the best way to defence  
Vaccination is  
a new way to prevent  
cervical cancer  
Proactively help protect yourself,  
say no to cervical cancer*

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## Q1. How is HPV related to cervical cancer?

**A:** 99.7% of cervical cancer is caused by HPV.<sup>1</sup> HPV infection is very common. At least 50% of sexually active people will get HPV at some time in their lives. Most of the HPV infections have no symptoms. And for most of the time, HPV infection and mild abnormal changes of the cells go away on their own.

However, if the body cannot clear the virus leading to persistent infection, HPV could cause the cells lining of the cervix to develop abnormalities, causing cervical cancer.<sup>2</sup> There are more than 100 types of HPV. HPV types 6, 11, 16 and 18 are the most common HPV types. HPV types 6, 11, 16 and 18 cause around 70% of all cervical cancer cases and cervical dysplasia, 90% of all genital warts.<sup>3,4</sup>

Besides, HPV may also cause vaginal and vulvar cancers.<sup>2</sup>

## Q2. What is Quadrivalent HPV cervical cancer vaccine?

**A:** The first quadrivalent HPV vaccine for cervical cancer prevention has been approved for registration by the HK Government, and US FDA. This vaccine is also the only cervical cancer prevention vaccine recommended by ACIP<sup>†</sup> under CDC\* in U.S.<sup>2</sup>

Quadrivalent HPV cervical cancer vaccine is a vaccine indicated in girls and women 9-26 years of age for the prevention of HPV types 6, 11, 16, and 18 related diseases, including:

- Cervical cancer,
- vulvar precancer,
- vaginal precancer,
- and genital warts.<sup>7</sup>

<sup>†</sup> Advisory Committee of Immunization Practices  
<sup>\*</sup> Centers for Disease Control and Prevention

## Q3. How does Quadrivalent HPV cervical cancer vaccine work?

**A:** Quadrivalent HPV cervical cancer vaccine is made of virus-like vaccine particles by bioengineering, to form empty particles that closely resemble the HPV particle. These vaccine particles are empty shells, containing no viral DNA, and are therefore not capable of causing infection or HPV-related diseases. However, the vaccine particles are able to mimic the virus and elicit an antibody response.<sup>9,10</sup>

## Q4. Efficacy of Quadrivalent HPV cervical cancer vaccine?

**A:**

- The vaccine has been studied in young women who had not been exposed to HPV. Studies have found the vaccine to be highly effective in preventing diseases caused by the four HPV types: 6, 11, 16, 18, including the formation of precancers in the cervix, vulva and vagina, and genital warts.<sup>2</sup>
- The vaccine is less effective in young women who had already been exposed to any one of the HPV types covered by the vaccine, when compare with those who have never been exposed to the virus. However, they can still get protection from other 3 remaining HPV types covered by the vaccine.<sup>2</sup>

This vaccine is not intended to be used for the treatment of any pre-vaccination infection of HPV, genital warts, precancer and cancer. This vaccine will not protect against disease that are not caused by HPV.<sup>2</sup>

## Q5. Will sexually active females benefit from Quadrivalent HPV cervical cancer vaccine?

**A:** Ideally, females should get the vaccine before they are sexually active. This is because the vaccine is most effective in girls/women who have not yet acquired any of the four HPV types covered by the vaccine. Females who are sexually active may also benefit from the vaccine, even though they may have already infected by one or more vaccine-related HPV types. The vaccine can still protect them from infection caused by the remaining HPV types. Few young women are infected with all four of these HPV types.<sup>2</sup>

## Q6. Can those females who have abnormal Pap test, or a positive HPV DNA test, or genital warts take the vaccine?

**A:** Yes. However, vaccine recipients should understand the vaccine cannot treat abnormal cell changes, HPV infections and genital warts. Vaccination of these females would only provide protection against infection with vaccine HPV types not already acquired.<sup>6</sup>

## Q7. Can pregnant women get Quadrivalent HPV cervical cancer vaccine? If I get pregnant during the vaccination period or after vaccination, will it cause any harm to the infant?

**A:** This vaccine is not recommended for pregnant women. So far, studies suggest that the vaccine has not caused health problems during pregnancy, nor it has caused health problems for the infant. If you are pregnant, you should be vaccinated with Quadrivalent HPV cervical cancer vaccine only if your doctor or health-care provider decide it is clearly needed. If a woman finds out she is pregnant after she has started getting the vaccine series, she should complete her pregnancy before finishing the three-dose series.<sup>2,8</sup>

## Q8. Can breast-feeding women be vaccinated?

**A:** Breast-feeding women or women planning to breast-feed may receive the vaccine.<sup>7</sup>



## Q9. How is Quadrivalent HPV cervical cancer vaccine given?

**A:** This vaccine should be given in 3 doses in 6 months.<sup>7</sup>

Ideally the doses are given as:

- First dose : at a chosen date
- Second dose : 2 months after the first dose
- Third dose : 6 months after the first dose

(e.g. If the first dose is given on 1 Jan, the second and third dose should be given on 1 Mar and 1 Jul respectively)<sup>7</sup>

## Q10. Should girls/women be screened before getting vaccinated?

**A:** No. Girls/women do not need to get an HPV test or Pap test to find out if they should get the vaccine.

Even girls/women infected with one HPV type, they can still get protection from the other HPV types covered by the vaccine which they have not yet acquired.<sup>2,\*</sup>

<sup>\*</sup>This vaccine is not intended to be used for treatment of active genital warts, cervical cancer, vulva or vaginal precancers, CIN, VIN or VaIN

## Q11. How long does vaccine protection last? Will a booster shot be needed?

**A:** Same as with other vaccines, a longer period and more researches will let us know how long the vaccination protection last and whether a booster may be needed. So far, studies have followed women for up to five years and found that women were still protected.<sup>2</sup>

## Q12. Is there any side effects after vaccination?

**A:** So far in clinical tests, it has shown no serious side effects. Vaccine-related adverse experiences that were observed in clinical trials at a frequency of at least 1.0% among recipients of Quadrivalent HPV cervical cancer vaccine and also greater than those observed among recipients of placebo, respectively, were pain (83.9% vs. 75.4%), swelling (25.4% vs. 15.8%), erythema (24.6% vs. 18.4%), pruritis (3.1% vs. 2.8%) at injection site, and fever (10.3% vs. 8.6%).<sup>7</sup>

## Q13. Will girls/women who have been vaccinated still need cervical cancer screening?

**A:** Yes. There are three reasons why women will still need regular cervical cancer screening.<sup>2</sup>

First, the vaccine will NOT protect against all types of HPV that cause cervical cancer, so vaccinated women will still be at risk for some cancers.<sup>2</sup>

Second, as for any vaccine, vaccination with Quadrivalent HPV cervical cancer vaccine may not result in protection in all vaccine recipients.<sup>2</sup>

Third, women may not get the full benefit of the vaccine if they receive it after they've already acquired one of the four HPV types.<sup>2</sup>

Therefore, women who receive Quadrivalent HPV cervical cancer vaccine should continue to undergo cervical cancer screening per standard of care.<sup>2</sup>

## Q14. Who is contraindicated with the vaccine?

**A:** Quadrivalent HPV cervical cancer vaccine is contraindicated in individuals who are hypersensitive to the active substances or to any of the excipients of the vaccine.<sup>7</sup>