

## Cervical cancer

1 out of 10 patients are in their 20s or 30s  
Globally, 1 **woman** dies every 2 **minutes**, In  
Korea, 1,000 **women** die every year

### Pap smear + HPV DNA test

Compared to the Pap smear alone, Pap smear  
+ HPV DNA test reduces death rate, cancer  
progression, and incidence rate

**The accuracy of cervical  
cancer screening is enhanced  
by combining a Pap smear and HPV  
DNA test.**



Cervical cancer: **Prevention** is key!

**Ensure accurate detection  
with an HPV molecular  
diagnostic test.**

## Cervical cancer screening

Pap smear +  
Human papillomavirus (HPV) DNA test



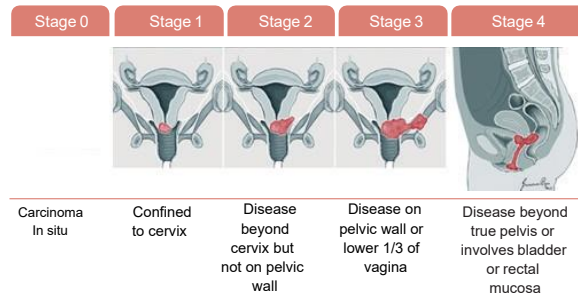
## What is cervical cancer?

Cervical cancer is a type of cancer that occurs in the cervix, the entrance to the uterus in the female reproductive system. It is the second most common cancer in women worldwide. In Korea, approximately 26,658 new cases of cervical cancer are diagnosed each year, and an average of 3 women lose their lives to cervical cancer every day.

## Why do you need screening?

Cervical cancer often doesn't show noticeable symptoms in its early stages, and in many cases, the cancer has often already progressed by the time the patient visits a hospital after symptoms develop. However, having regular screening allows early detection of precancerous conditions like cervical dysplasia or carcinoma in situ (early-stage cancer) before they develop into cancer. Early detection also allows for prompt treatment.

[Source: National cancer information center [www.cancer.go.kr](http://www.cancer.go.kr)]



[Stages of cervical cancer (1995, FIGO)]

## What is HPV—the major cause of cervical cancer?

The major cause of cervical cancer is Human papillomavirus (HPV). HPV is a virus with over 100 different strains, but HPV 16 and 18 are the most common high-risk genotypes found in over 70% of cervical cancer cases worldwide.

## Recommendations for cervical cancer screening

**Summary Recommendations: WHO suggests using the following strategy for cervical cancer prevention**

For the general population of women

Screen and Treat OR Screen, Triage and Treat

- HPV DNA test as primary screening test
- Starting at age 30
- Every 5 to 10 years screening interval

For women living with HIV

Screen, Triage and Treat - ONLY

- HPV DNA test as primary screening test
- Starting at age 25
- Every 3 to 5 years screening interval

## Pap smear + HPV DNA test

### Pap smear

Cervical cells are sampled and observed under a microscope. Although this test has a high false negative rate, it is used for early cervical cancer screening because it is a relatively simple, painless, and affordable procedure.

### HPV DNA test

The test detects HPV, which is found in over 90% of cervical cancer cases. It determines whether a person is infected with HPV and identifies the specific genotype using advanced molecular diagnostic methods.

Since a Pap smear alone cannot determine the specific HPV genotype, **HPV molecular diagnostic test is recommended for accurate results.**

## Age for cervical cancer screening

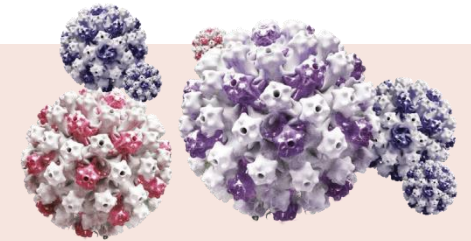
- ✓ Prevention of cervical carcinoma in situ, which is rapidly increasing among women aged 25–29 years
- ✓ Women with precancerous cervical lesions who have undergone surgery have a decreased risk of complications during future pregnancies
  - \* Cervical epithelial neoplasia: A disease at a stage just before cervical cancer caused by HPV infection

## Benefit of early cervical cancer screening

Early detection of precursor conditions of cervical cancer, such as cervical dysplasia

Treat with simple surgery such as cervical conization

Prevention of cervical cancer



Human papillomavirus (HPV)

## HPV DNA test (Real-time PCR)

- ✓ **Screen for 28 HPV genotypes at once**  
Since the progression and natural healing rates vary depending on the HPV genotype, it is important to determine the specific HPV genotype.
- ✓ **Accurately identify the causative HPV genotype**  
Infection by two or more genotypes of HPV increases the risk of cervical cancer.
- ✓ **Semi-quantitative viral load measurement**  
Regular screening reveals any increase or decrease in viral load.