

## Prevention of Cervical Cancer: Be Informed, Be Vaccinated and Be Screened

### Key Messages

- ※ Cervical cancer is one of the preventable and largely treatable cancers if detected early. In 2021, the Hong Kong Cancer Registry recorded 596 new cervical cancer cases. While 68.6% of them were diagnosed between the age 25–64, 42.6% of the newly diagnosed cervical cancer cases belonged to an advanced stage when diagnosed. To guard against cervical cancer, the Department of Health (DH) urges females to have increased awareness of the disease, get vaccinated against human papillomavirus (HPV) infection, and have regular screening for cervical cancer.
- ※ Nearly all cervical cancers are caused by persistent infection with high-risk types of HPV. Therefore, cervical cancer is preventable through highly effective vaccination against HPV infection. Other primary measures that can reduce the risk of cervical cancer include taking appropriate precautions (such as practicing safer sex) to reduce the risk of contracting HPV and other sexually-transmitted diseases as well as no smoking.
- ※ Cervical screening (by cytology or HPV testing) aims to timely detect and treat pre-cancerous changes of the cervix or early cancer before symptoms appear. The Cancer Expert Working Group on Cancer Prevention and Screening recommends women aged 25 to 64 who ever had sexual experience (including those being HPV vaccinated) to have regular cervical screening. The DH provides cervical screening for eligible women at Maternal and Child Health Centres. To make appointment for DH's cervical screening service, please call 3166 6631.
- ※ For more information on cervical cancer prevention and screening, please visit the designated website at [www.cervicalscreening.gov.hk](http://www.cervicalscreening.gov.hk).

## **Prevention of Cervical Cancer: Be Informed, Be Vaccinated and Be Screened**

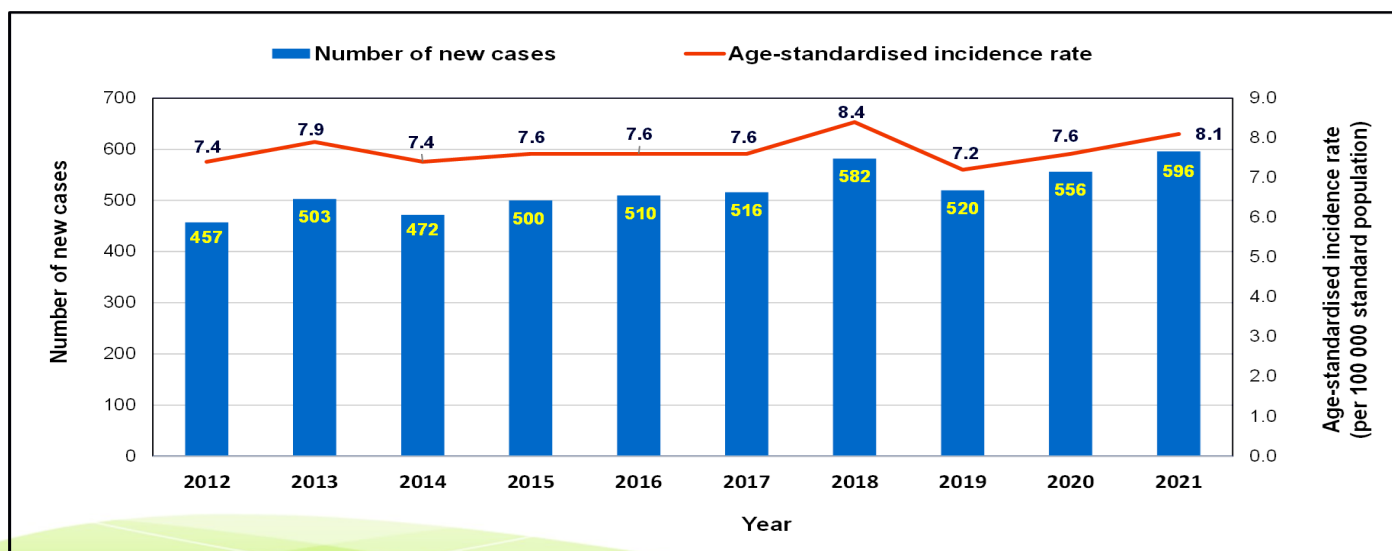
Cervical cancer is one of the preventable and largely treatable cancers if detected early. Although the incidence of cervical cancer varies across different countries and regions, the global burden of cervical cancer remains high with an estimated 604 000 new cases in 2020<sup>1</sup>. In an effort to ramp up coordinated actions to tackle the growing problem, the World Health Organization (WHO) launched a global strategy<sup>2</sup> in 2020 to accelerate elimination of cervical cancer as a public health problem and proposed a goal of less than four incident cases of cervical cancer per 100 000 women per year by 2120. Achieving this vision would rest on three key pillars and their corresponding '90-70-90' targets: by 2030, 90% of girls fully vaccinated with the human papillomavirus (HPV) vaccine by the age of 15; 70% of women screened using a high-performance test by the age of 35, and again by the age of 45; and 90% of women identified with pre-cancer treated and 90% of women with invasive cancer managed<sup>2</sup>.

To reduce the burden of cancer, including cervical cancer, posed to the local population, the Government of the Hong Kong Special Administrative Region (SAR) set up the Cancer Coordinating Committee under the chairmanship of the Secretary for Health with membership comprising cancer experts and doctors from the public and private sectors, academics and public health professionals to advise on the planning and development of cancer prevention and control strategies<sup>3</sup>. Under the Cancer Coordinating Committee, the Cancer Expert Working Group on Cancer Prevention and Screening regularly reviews international and local evidence, then makes recommendations on cancer prevention and screening applicable to the local setting<sup>4</sup>. In 2019, the SAR Government also launched the Hong Kong Cancer Strategy with a holistic plan for cancer prevention and control for Hong Kong<sup>5</sup>. This article aims to provide an overview of cervical cancer with an update on local situation, initiatives and recommendations on cervical cancer prevention.

## Burden of Cervical Cancer among Local Females

In 2021, the Hong Kong Cancer Registry recorded 596 new cervical cancer cases, representing an increase of 30.4% from 457 cases in 2012<sup>6</sup>. The age-standardised incidence rate of cervical cancer had a downward trend over the past four decades (between 1983 and 2021), while an upward trend was observed over the past 10 years (between 2012 and 2021) (Figure 1). Among all newly diagnosed cervical cancer cases in 2021, over two-thirds (68.6%) of them were diagnosed between the age 25–64 with the median age at diagnosis of 56.5 years. By stage distribution of cervical cancer, over two-fifths (42.6%) of the cases belonged to an advanced stage when diagnosed, which means that the cancer had spread into the pelvic walls or nearby lymph nodes (Stage III: 27.0%) or further metastasised to nearby organs or distant parts of the body (Stage IV: 15.6%)<sup>6</sup>. Being the ninth leading cause of cancer deaths among local women, there were 167 registered deaths attributed to cervical cancer in 2022<sup>7</sup>. Of note, detecting cervical cancer early with timely treatment can increase the chance of cure and survival. Local data show that the 5-year survival rate for Stage I cervical cancer is 90.2%, while the corresponding survival rates would decrease progressively to 75.6% for Stage II, 58.9% for Stage III, and 16.2% for Stage IV<sup>8</sup>. To guard against cervical cancer, the Department of Health (DH) urges females to have increased awareness of the disease, get vaccinated against HPV infection, and have regular screening for cervical cancer.

**Figure 1: Number of new cases and age-standardised incidence rates<sup>^</sup> of cervical cancer, 2012–2021**



Note: <sup>^</sup>Age-standardised incidence rates are age-adjusted to the World Standard Population of Segi (1960).

Source: Hong Kong Cancer Registry.

## Be Informed of Cervical Cancer

There is overwhelming evidence that nearly all cervical cancers are caused by persistent infection with high-risk types of HPV, in particular HPV types 16 and 18 which together account for about 70% of cervical cancer worldwide<sup>9</sup>. While most people with HPV infection do not have any symptoms and will clear the infection on their own, some women with persistent high-risk HPV infection in the cervix will develop abnormal (pre-cancerous) cell changes. If not detected and treated appropriately, such abnormal cells on the cervix can further progress to invasive cancer over time<sup>10</sup>. Apart from the HPV type and its cancer-causing strength, risk factors for persistent HPV infection and thus cervical cancer include sexual intercourse at an early age, multiple sexual partners, co-infection with sexually transmitted diseases, smoking (which may cause cell damage and compromise one's immunity, essential for clearing HPV from the body), chronic immunosuppression, long-term use of oral contraceptive pills for more than five years (the risk returns to normal after 10 years of stopping use), numerous full-term pregnancies and younger age at full-term pregnancy<sup>11</sup>.

Since HPV is mainly transmitted through sexual contact, vaccination against HPV infection before initiation of sexual activity is the most effective long-term intervention against cervical cancer<sup>2, 12</sup>. In addition to HPV vaccination, other primary measures that can reduce the risk of cervical cancer include taking appropriate precautions (such as practicing safer sex) to reduce the risk of contracting HPV and other sexually-transmitted diseases as well as no smoking<sup>11</sup>. It is noteworthy that HPV infection and the early stage of cervical cancer may produce no symptoms at all. Common symptoms of cervical cancer include abnormal vaginal bleeding (between periods, during or after intercourse, or after menopause), foul-smelling vaginal discharge, and discomfort or pain during sex<sup>11</sup>. Women should visit their doctors promptly if suspicious symptoms develop.

## Vaccination against HPV Infection

The first vaccine for the prevention of HPV-related disease was licensed in 2006. Currently, six types of prophylactic HPV vaccines are available<sup>12</sup>. Clinical trials and post-licensure surveillance have shown that all the licensed HPV vaccines are safe and provide durable protection against HPV infections, pre-malignant cervical lesions and cervical cancer<sup>10,13</sup>. As the WHO recommends, primary target population for HPV vaccination is girls aged 9–14 years before they become sexually active (i.e. before exposure to HPV). All countries are urged to introduce HPV vaccines for girls aged 9–14 years and prioritise catch-up of older girls up to 18 years old<sup>12</sup>. To date, approximately 64% of WHO Member States have introduced HPV vaccine into their national immunisation programme for girls<sup>12</sup>.

In 2018, the Scientific Committee on Vaccine Preventable Diseases and Scientific Committee on AIDs and Sexually Transmitted Infections under the Centre for Health Protection of the DH made a joint recommendation that HPV vaccination be included in the Hong Kong Childhood Immunisation Programme for girls of suitable ages before sexual debut as one of the public health strategies for prevention of cervical cancer. Since the 2019/20 school year, the DH has been providing free 9-valent HPV vaccination to eligible Primary Five and Six school girls through the school outreach vaccination service. As of end-December 2022, coverage rates for the first and second doses among Primary Five and Six school girls were both 88%<sup>14</sup>. The Scientific Committee on Vaccine Preventable Diseases has also updated the use of HPV vaccine in Hong Kong and recommended the Government to provide mop-up HPV vaccination for secondary school female students or older girls (18 years or below)<sup>15</sup>. A one-off catch-up programme is under planning, in which mop-up vaccination would be arranged for the girls in the aforementioned target group in 2024 subject to the availability of vaccines. Of note, HPV vaccine does not protect against the HPV types not included in the vaccine nor can it cure pre-existing HPV infection. Thus, regular cervical cancer screening remains an important component of cervical cancer prevention<sup>16</sup>. Vaccinated females still need to have regular cervical screening and adopt other preventive measures for reducing the risk of HPV infection and cervical cancer<sup>11, 12</sup>.



## Screening and Treating Cervical Pre-cancer Lesions for Cervical Cancer Prevention

As a tool for secondary prevention, cervical screening (by cytology or HPV testing) aims to timely detect and treat pre-cancerous changes of the cervix or early cancer before symptoms appear<sup>10, 11</sup>. Box 1 presents the updated recommendations from the Cancer Expert Working Group on Cancer Prevention and Screening on cervical cancer screening for the local female population. In gist, women aged 25 to 64 who ever had sexual experience should have regular cervical screening<sup>11</sup>.

### Box 1: Recommendations from the Cancer Expert Working Group on Cancer Prevention and Screening on cervical cancer screening<sup>11</sup>

#### For Asymptomatic Women at Average Risk

- Women **aged 25 to 29** who ever had sexual experience should have screening by cytology every 3 years after two consecutive normal annual screenings
- Women **aged 30 to 64** who ever had sexual experience should have the screening by:
  - i) Cytology every 3 years after two consecutive normal annual screenings; or
  - ii) HPV testing every 5 years; or
  - iii) Co-testing (cytology and HPV testing) every 5 years
- Women **aged 65 or above** who ever had sexual experience:
  - \* May discontinue screening if routine screenings within 10 years are normal
  - \* Should be screened if they never had cervical screening

#### For Women at Increased Risk

- Women **aged 21 to 24** who ever had sexual experience and with risk factors for HPV infection or cervical cancer are considered at increased risk. They should receive screening based on the doctor's assessment and recommendations
- **Other women at high risk of developing cervical cancer** may require more frequent screenings based on the doctor's assessment

Since 2004, the DH launched the Cervical Screening Programme ([www.cervicalscreening.gov.hk](http://www.cervicalscreening.gov.hk)) in collaboration with the healthcare sector and non-governmental organisations to facilitate and encourage women aged between 25 and 64 who ever had sex to receive regular cervical cancer screening. Subsidised cervical screening is offered at Maternal and Child Health Centres (MCHCs) of the DH where eligible persons pay \$100 for each screening. Payment is waived for recipients of Comprehensive Social Security Assistance and holders of the Certificate for Waiver of Medical Charges. Owing to various clinical benefits (including higher sensitivity for earlier detection of precancerous lesions and longer screening intervals), primary HPV test was introduced to women aged 30 to 64 attending the DH's screening service since April 2023. Eligible women interested in cervical screening services at the MCHCs under the DH can call the Cervical Screening Service 24-hour Phone Booking and Information Hotline 3166 6631 for arrangement. For details about how to use such phone booking and information hotline, please visit the designated webpage [www.fhs.gov.hk/english/main\\_ser/woman\\_health/phone\\_booking.html](http://www.fhs.gov.hk/english/main_ser/woman_health/phone_booking.html).



According to the Population Health Survey 2020-22<sup>17</sup>, 52.1% of female aged 25–64 reported that they ever had cervical screening, in which 38.4% had the screening within 5 years. Among females aged 25–64 who reported that they never had or did not have regular cervical screening, a significant proportion indicated that they perceived themselves as healthy with no symptoms of cervical cancer, or that they did not need the test. Some also reported no time to take this test, too embarrassed, fear of pain or discomfort<sup>17</sup>. The DH has hence strengthened and adjusted the promotional strategies which target to address such myths and barriers to cervical screening (Box 2). Studies showed that self-collected HPV testing, which involves an individual obtaining a kit and collecting one's own vaginal sample, could improve participation in cervical cancer screening among under-screened and never-screened women<sup>18, 19</sup>.

End-users generally found that HPV self-sampling at home was more convenient with less embarrassment or physical discomfort compared with clinician sampling<sup>20</sup>. While vaginal self-sampling for HPV is considered by some overseas public health agencies, including the WHO, as an effective approach to cervical cancer screening, urine self-sampling for HPV has yet to be further studied on its clinical use, efficacy and cost-effectiveness, and is currently not recommended as a cervical screening modality. Nevertheless, given that HPV self-sampling may help overcome the barriers to cervical screening and increase screening uptake, the DH would keep abreast of the latest scientific evidence.

The SAR Government is committed to reducing the impacts of cervical cancer among local females, echoing the WHO's Call for Action<sup>21</sup> to accelerate elimination of cervical cancer as a public health problem. The DH will continue using a variety of strategies to increase public awareness of cervical cancer prevention as well as to encourage the uptake of both HPV vaccination and cervical screening among local females.

### Box 2: Love yourself! Have you had your screening yet?





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Cervical Cancer Awareness Month has been designated as every January by the International Agency for Research on Cancer under the World Health Organization, with an aim of reducing the burden of cervical cancer on society and ultimately eliminating the preventable disease through global co-operation by the end of this century.

The Department of Health (DH) urges members of the public to support Cervical Cancer Awareness Month through increasing their awareness of preventing cervical cancer and having regular cervical screening. Apart from vaccination against HPV and regular participation in cervical screening as recommended, members of the public are also urged to practise safer sex (e.g. use condoms and avoid having multiple sexual partners) and avoid smoking to further reduce the risk of developing cervical cancer. The DH provides cervical screening for eligible women at Maternal and Child Health Centres. To make appointment for DH's cervical screening service, please call 3166 6631. For more information on cervical cancer prevention and screening, please visit the designated website at [www.cervicalscreening.gov.hk](http://www.cervicalscreening.gov.hk).

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