

CERVICAL CANCER SCREENING & HPV TEST

1. Overview of Cervical Cancer

- Cervical cancer is the 4th most common cancer in women worldwide¹. It is the 9th most common cancer and the 9th leading cause of cancer-related deaths amongst women in Hong Kong². Yet it is one of the truly preventable cancers.

2. About HPV

- The leading cause of cervical cancer is HPV (Human papillomavirus), which is responsible for more than 99 percent of all cases³.
- Most HPV infections, precancerous lesions and early cervical cancer have no symptoms, and if treatment is not timely, the cancer will develop to an advanced stage and is difficult to treat. Therefore, regular screening (for example, Pap smear and high-risk HPV test) is very important for women^{4, 5}.
- HPV infection is very common, affecting 4 in 5 women at some points in their life.
- HPV is transmitted through sexual contact. Anyone can be infected with HPV, even if you have only one sexual partner, or used condom. In most cases, the body's immune system clears HPV infection naturally in 1 to 2 years. However, in some cases, persistent HPV infection develops to precancerous lesion and cervical cancer⁵.

3. HPV & Cervical Cancer

- HPV has more than 100 different types, while there are 14 high-risk HPV strains contributing to cervical cancer^{6, 7}. HPV 16 and HPV 18 are the highest risk and cause 70 percent of all cervical cancer cases^{3, 5}.
- Women with HPV 16 or HPV 18 are 35 times more likely to develop cervical precancerous lesion than those without HPV⁶.
- High-risk HPV test detects the presence of HPV (including HPV 16 and 18), and to evaluate the risk for precancerous lesion³.



4. An advanced screening method: co-testing

- Co-testing: High-risk HPV test + pap smear
- Pap smear is a traditional cervical cancer screening method, combining with high-risk HPV test (Co-testing) increased the ratio of cervical cancer or precancerous lesions detection from 57 – 74% to more than 90%^{8,9,10,11,12}.
- Co-testing has been validated to be very effective in assessing the risk of cervical cancer and helping women to prevent cervical cancer. The Hong Kong College of Obstetricians and Gynaecologists (HKCOG) has included co-testing in its latest 2016 Cervical Cancer Screening Guideline¹³.
- Sample for both Pap smear and high-risk HPV test can be collected at the same time in a clinic before sending it to the laboratory for testing.
- Positive HPV 16 and 18 result does not necessary mean cervical cancer; however, it means a higher risk of cervical cancer¹⁴. Early risk identification allows physicians to take appropriate action for treatment and prevention to lower the risk of developing cervical cancer¹⁵.

5. HPV Vaccination

- Vaccination can help to prevent certain HPV infection, but it cannot provide protection if women are already infected with HPV during the time of vaccination. HPV vaccine cannot provide protection for all high-risk HPV. Therefore, regular high-risk HPV test is still required to find out the risk of precancerous lesion¹⁵.



對抗子宮頸癌 由你開始



References:

1. International Agency for Research on Cancer, World Health Organization. <http://gco.iarc.fr/today/online-analysis-multi-bars>. Accessed 02 February 2019.
2. Hong Kong Hospital Authority. Hong Kong Cancer Registry, Top Ten Cancers. <http://www3.ha.org.hk/cancereg/topten.html>. Accessed 02 February 2019.
3. World Health Organisation. Human papillomavirus (HPV). <http://www.who.int/immunization/topics/hpv/en/>. Accessed 17 January 2017.
4. World Health Organisation. Cervical Cancer, human papillomavirus (HPV), and HPV vaccines Key points for policy-makers and health professionals. https://apps.who.int/iris/bitstream/10665/69873/1/WHO_RHR_08.14_eng.pdf. Accessed 12 July 2017.
5. Centers for Disease Control and Prevention. Basic Information about HPV and Cancer. http://www.cdc.gov/cancer/hpv/basic_info/. Accessed 17 January 2017.
6. de Sanjose S, Quint WG, Alemany L, et al. Human papillomavirus genotype attribution in invasive cervical cancer: a retrospective cross-sectional worldwide study. *Lancet Oncol.* 2010; 11:1048-1056.
7. Wright, TC, et al. Evaluation of HPV-16 and HPV-18 genotyping for the triage of women with high-risk HPV+ cytology-negative results. *Am J Clin Pathol.* 2011; 136:578-586.
8. Mayrand, MH, et al. Human Papillomavirus DNA versus Papanicolaou Screening Tests for Cervical Cancer. *N Engl J Med* 2007; 357:1579-1588
9. Coste J, et al. Cross sectional study of conventional cervical smear, monolayer cytology, and human papillomavirus DNA testing for cervical cancer screening. *BMJ.* 2003;326(7392):733
10. Taylor, S, et al. Direct comparison of liquid-based and conventional cytology in a South African screening trial. *Int J Cancer.* 2006;118(4):957-62
11. Ronco, G, et al. Human papillomavirus testing and Liquid-Based Cytology: Results at recruitment from the new technologies for Cervical Cancer randomized controlled trial. *J Natl Cancer Inst.* 2006;98:765-774
12. Sankaranarayanan, R, et. al, A critical assessment of screening methods for cervical neoplasia. *Int J of Gynecology and Obstetrics* (2005) 89, S4 — S12
13. The Hong Kong College of Obstetricians and Gynaecologists, Guidelines for Cervical Cancer Prevention and Screening, Number 4, November 2016, http://www.hkco.org.hk/hkco/Download/Cervical_Cancer_Prevention_and_Screening_revised_November_2016.pdf
14. Centers for Disease Control and Prevention. Cervical Cancer – Basic Information. https://www.cdc.gov/cancer/cervical/basic_info/test-result.htm. Accessed 12 July 2017.
15. American Cancer Society, American Society for Colposcopy and Cervical Pathology, and American Society for Clinical Pathology Screening Guidelines for the Prevention and Early Detection of Cervical Cancer, American Society for Colposcopy and Cervical Pathology *Journal of Lower Genital Tract Disease*, Volume 16, Number 3, 2012, 00-00.

