

Non-Communicable Diseases Watch

January 2023



衛生防護中心
Centre for Health Protection



衛生署
Department of Health

Cancer Watch

Key Messages

- ※ Among most countries of the world, cancer is the first or second leading cause of premature death (i.e. occurring at ages of 30–70 years).
- ※ Cancer is the top killer among local population. In 2020, the Hong Kong Cancer Registry recorded 34 179 newly diagnosed cancer cases. Of 14 805 registered cancer deaths, lung cancer was the most common cause of cancer death in both genders, followed by colorectal cancer, liver cancer, pancreatic cancer and breast cancer.
- ※ The World Health Organization appraises that 30–50% of cancers can currently be prevented by adopting a healthy lifestyle (such as no smoking, refraining from alcohol drinking, being physically active, eating a balanced diet and maintaining a healthy body weight) along with implementing evidence-based public health measures (such as vaccination of adolescent girls against HPV before onset of sexual activity, vaccination of population against hepatitis B, and appropriate cancer screening programmes).
- ※ The Hong Kong Special Administrative Region Government is committed to reducing the disease burden of cancer in the local population. Following the recommendations by the Cancer Expert Working Group on Cancer Prevention and Screening, the Department of Health (DH) has been providing subsidised cervical screening at DH's Maternal and Child Health Centres and through public-private partnership programme subsidised colorectal cancer screening. In 2021, DH also launched the Breast Cancer Screening Pilot Programme at DH's Women Health Centres and Elderly Health Centres. DH will continue organising health promotional campaigns to raise public awareness about the importance of healthy living and encourage evidence-based cancer screening for the prevention and control cancer.

Cancer Watch

Cancer is a group of diseases in which body cells grow and divide in an uncontrollable way. These malignant cells can invade and spread to nearby tissues and other parts of the body to cause damage. Cancer is generally named after the organ or tissue where it originates, and there are more than 100 types of cancer with their own patterns of causation and manifestation¹.

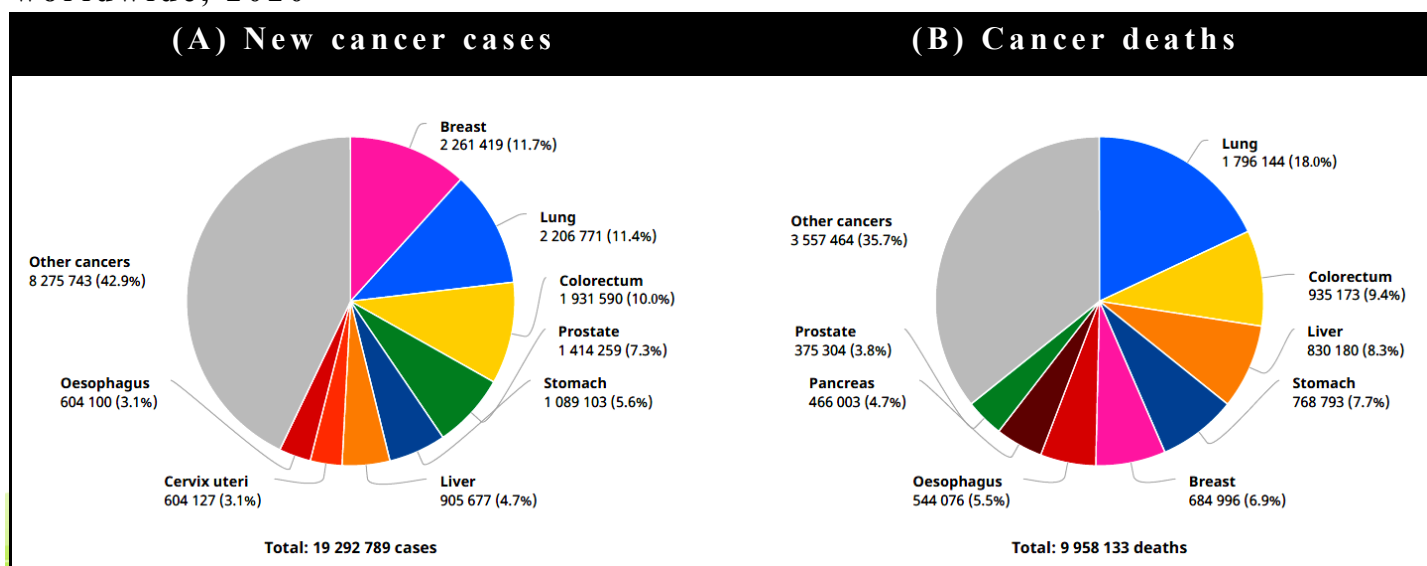
Global Burden of Cancer

According to the GLOBOCAN, there were about 19.3 million new cancer cases worldwide in 2020². For both sexes combined, the five most common newly diagnosed cancers were female breast cancer (11.7% of the total new cancer cases), lung cancer (11.4%), colorectal cancer (10.0%), prostate cancer (7.3%) and stomach cancer (5.6%) (Figure 1(A))². In men, lung cancer (14.3% of the total 10.1 million new cancer cases) was the most common incident cancer, followed by cancers of the prostate (14.1%), colorectum (10.6%), stomach (7.1%) and liver (6.3%)². In women, breast cancer (24.5% of the total 9.2 million new

cancer cases) was the most common incident cancer, followed by cancers of the colorectum (9.4%), lung (8.4%), cervix uteri (6.5%) and thyroid (4.9%)².

Among most countries in the world, cancer is the first or second leading cause of premature death (i.e. occurring at ages of 30 – 70 years)³. In 2020, there were 9.9 million cancer deaths globally². The five top cancer killers for both sexes combined were lung cancer (18.0% of the total cancer deaths), colorectal cancer (9.4%), liver cancer (8.3%), stomach cancer (7.7%) and female breast cancer (6.9%) (Figure 1(B))². In men, lung cancer (21.5% of the total 5.5 million cancer deaths) was the leading cause of cancer death, followed by cancers of the liver (10.5%), colorectum (9.3%), stomach (9.1%) and prostate (6.8%)². In women, breast cancer (15.5% of the total 4.4 million cancer deaths) topped the list, followed by cancers of the lung (13.7%), colorectum (9.5%), cervix uteri (7.7%) and stomach (6.0%)².

Figure 1: Number and distribution of new cancer cases and cancer deaths worldwide, 2020



Major (Modifiable) Risk Factors for Cancer

Many factors contribute to cell damage that can result in cancer⁴. While some risk factors (such as ageing, gender and a family history of cancer) are not avoidable, personal lifestyle choices have long been recognised as important but potentially preventable or modifiable determinants of cancer risk⁵⁻⁷. There is sufficient evidence on increased cancer risk due to tobacco smoking, alcohol drinking, increased body fatness, consuming an unhealthy diet and prolonged sitting (Table 1).

With over 70 carcinogens (cancer-causing substances) in tobacco smoke⁸, smoking is by far the most important cause of cancer^{5, 6}. Globally, over 14% of cancers are caused by smoking⁹. Similar to smoking, there is no safe level for alcohol consumption when it comes to cancer risk. The higher the level of alcohol consumption, the greater the risk of alcohol-associated cancers^{8, 10}. While all types of alcoholic beverages (including beer, red or white wine, rice wine, whisky and brandy) can increase the risk of cancer⁸, over 4% of all new cancer cases globally are ascribed to alcohol drinking¹¹. Increased body fatness is also a major risk factor of various cancers¹². As estimated, the global burden of cancer attributable to obesity is 12% in men and in 13% women¹³. Several dietary factors have been clearly associated with increased cancer risk, in particular consumption of processed meat, red meat, foods preserved by salting or contaminated by aflatoxins¹⁴⁻¹⁶. Epidemiological studies showed that each additional daily 50 grams of

processed meat and 100 grams of red meat consumption was associated with 16% and 12% increased risk of developing colorectal cancer respectively^{15, 16}. While per 20-gram increase in salt-preserved vegetable consumed per day would increase stomach cancer risk by 9%¹⁵, there was 31–35% increased risk of nasopharyngeal cancer per one portion increase in Cantonese-style salted fish consumed per week¹⁶. Emerging studies also indicated that high levels of sedentary behaviour would increase the risk of developing certain cancers^{17, 18}, including cancers of the ovary, endometrium, colon, breast, prostate and rectum (7–29% increases)¹⁸.

Furthermore, infectious agents are an important cause of cancer^{4, 19}, responsible for an estimated 15% of all new cancer cases worldwide annually⁶. The most important cancer-causing infectious agents include high-risk types of human papillomavirus (HPV, which causes almost all cases of cervical cancer⁴), hepatitis B and C viruses (that ascribe to 56% and 20% of liver cancer worldwide respectively²⁰) and *Helicobacter pylori* (which is responsible for an estimated 89% of non-cardia stomach cancers globally⁴). Excessive exposure to ultraviolet radiation (UV) from the sun or artificial sources (such as sun lamps or other indoor tanning devices) is a strong causal risk factor for skin cancer⁶. Notably, over three-quarters (76%) of all new cases of melanoma (the most lethal type of skin cancer) worldwide are attributed to excessive UV exposure²¹.

In occupational settings, numerous substances (including asbestos, nickel and benzene) are known to cause cancer (in particular lung cancer, bladder cancer and non-Hodgkin’s lymphoma)^{6, 22}. As estimated, 2–8% of all cancers worldwide are caused by exposures to cancer-causing substances in the workplace²³. Environmental exposure to cancer-causing chemicals is also possible due to pollution of air (such as from

vehicle emissions and secondhand tobacco smoke), water (such as because of disinfection by-products and organic solvents) and soil (such as by pesticides and herbicides)⁴. Worldwide, an estimated 14% of all lung cancer deaths are attribute-able to ambient air pollution that is second only to tobacco smoking²⁴.

Table 1: Selected lifestyle factors with increased cancer risk

Cancer site	Tobacco smoking ⁸	Alcohol drinking ¹⁰	Body fatness ¹²	Sedentary behaviour ^{17, 18}	Dietary habits		
					Processed or red meat ¹⁶	Foods preserved by salting ¹⁴	Aflatoxin contaminated food ¹⁴
Mouth, pharynx and larynx	✓	✓	✓				
Nasopharynx	✓					✓ (c)	
Oesophagus	✓	✓	✓	✓			
Lung	✓			✓			
Stomach	✓	✓	✓			✓	
Pancreas	✓		✓				
Gallbladder			✓				
Liver	✓	✓	✓				✓
Colorectum	✓	✓	✓	✓	✓		
Kidney	✓		✓				
Urinary bladder	✓			✓			
Breast (female)	✓	✓ (a)	✓ (a)	✓			
Ovary	✓		✓	✓			
Endometrium			✓	✓			
Cervix	✓						
Prostate			✓ (b)	✓			

Notes: (a) Refers to postmenopausal breast cancer; (b) Refers to advanced prostate cancer only; (c) Refers to Cantonese-style salted fish

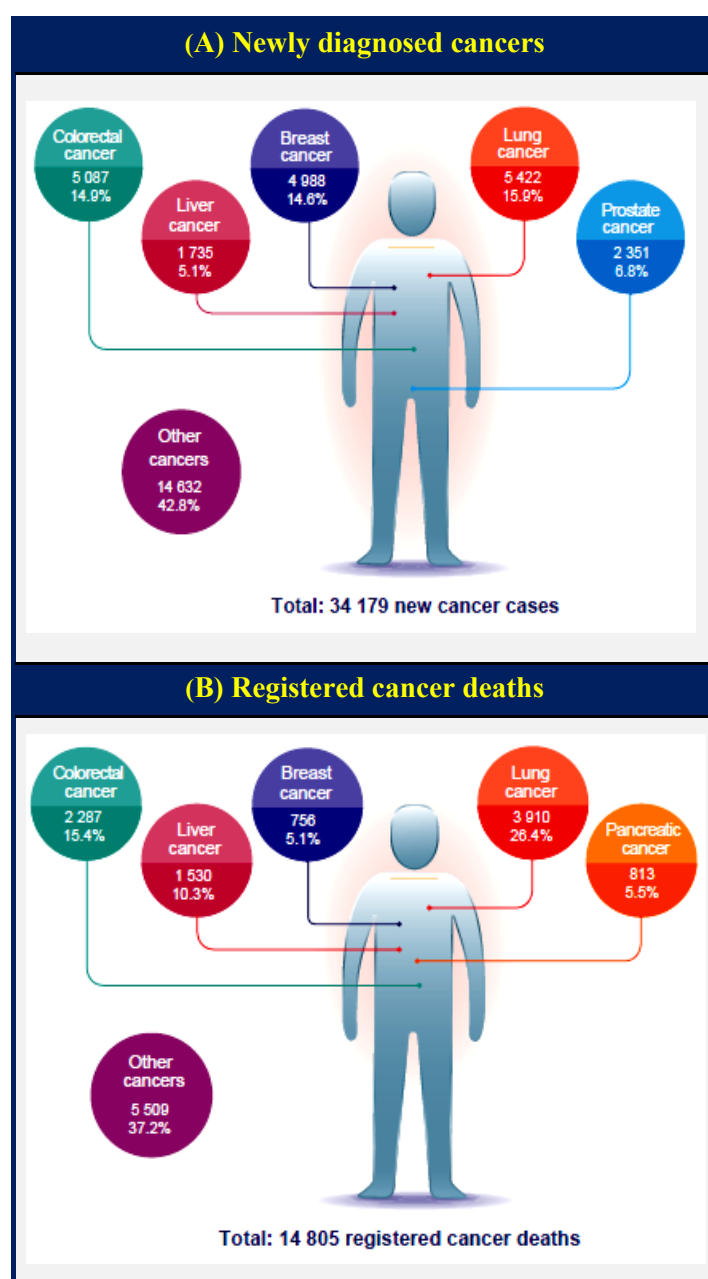
Local Situation

Due to the growth and ageing of the population, along with an unhealthy lifestyle in the wake of its rising affluence, the number of new cases attributed to cancer in Hong Kong Special Administrative Region (SAR) have increased substantially in the past few decades. In 1983, the Hong Kong Cancer Registry recorded 14 988 newly diagnosed cancer cases. The number increased to 34 179 in 2020²⁵. As shown in Figure 2(A), the top five most commonly diagnosed cancers for both genders combined in 2020 were lung cancer (15.9%), colorectal cancer (14.9%), breast cancer (14.6%), prostate cancer (6.8%) and liver cancer (5.1%). Together, they accounted for over half (57.2%) of new cancer cases diagnosed in that year. For males, the five leading cancers were cancers of the lung (19.5% of the total 16 703 newly diagnosed cancers), colorectum (17.4%), prostate (13.9%), liver (7.5%) and stomach (4.3%). For females, the top five most common cancers were cancers of the breast (28.4% of the total 17 476 newly diagnosed cancers), colorectum (12.5%), lung (12.4%), corpus uteri (6.8%) and thyroid (4.4%)²⁶.

Cancer is the top killer among the local population. Between 1983 and 2020, the number of registered cancer deaths more than doubled from 7 226 to 14 805²⁷. In 2020, lung cancer (26.4%) was the most common cause of cancer death in both genders, followed by colorectal cancer (15.4%), liver cancer (10.3%), pancreatic cancer (5.5%) and breast cancer (5.1%) (Figure 2B). For males, the top five cancer killers were cancers of the lung (29.3% of the total 8 634 registered

cancer deaths), colorectum (15.2%), liver (13.0%), prostate (5.6%) and pancreas (5.4%). For females, the top five cancer killers were cancers of the lung (22.4% of the total 6 171 registered cancer deaths), colorectum (15.8%), breast (12.2%), liver (6.6%) and pancreas (5.7%)²⁷.

Figure 2: Five most common newly diagnosed cancers and registered cancer deaths in Hong Kong SAR, 2020



Sources: Hong Kong Cancer Registry, Department of Health and Census and Statistics Department.

Cancer Prevention and Screening

The World Health Organization appraises that 30–50% of cancers can currently be prevented by adopting a healthy lifestyle (Box 1) and implementing evidence-based public health measures²⁸ (such as vaccination of adolescent girls against HPV before onset of sexual activity, vaccination of population against hepatitis B, and appropriate cancer screening programmes²⁹).

Cancer screening and early detection are crucial to the prevention and control of cancer. Screening aims to detect early cancer or pre-cancerous changes before symptoms appear, so that early treatment can be initiated. Based on the review of local and international evidence and practices, the Hong Kong SAR Government's Cancer Expert Working Group on Cancer Prevention and Screening (CEWG) makes recommendations on cancer prevention and screening applicable to Hong Kong SAR.

Box 1: Ways to reduce cancer risk

- ◇ Do not smoke and avoid secondhand smoke
- ◇ Avoid alcohol consumption
- ◇ Have a balanced diet with at least five servings of fruit and vegetables a day; limit the consumption of processed meat and red meat, as well as reduce the consumption of foods high in fat, salt or sugars; and do not eat mouldy nuts, cereals or pulses
- ◇ Be physically active in everyday life and reduce the time spent sitting
- ◇ Maintain a healthy body weight (with a body mass index between 18.5 and 22.9 for Chinese adults in Hong Kong SAR) and waist circumference (below 90 cm for men and below 80 cm for women)
- ◇ Get vaccinated against hepatitis B virus and HPV
- ◇ Protect against excessive sunlight exposure and use sunscreen appropriately; do not use tanning beds or sun lamps
- ◇ Observe occupational safety and health rules including the use of protective gear where appropriate to minimise occupational exposure to carcinogenic substances
- ◇ Practise safer sex (such as condom use) for reducing the cancer risk associated with sexually transmitted infections (such as HPV)

Following the recommendations by the CEWG, the Department of Health (DH) has been providing subsidised cervical screening at DH's Maternal and Child Health Centres and through public-private partnership programme subsidised colorectal cancer screening. In 2021, DH also launched the Breast Cancer Screening Pilot Programme at DH's Women Health Centres and Elderly Health Centres (Box 2). Individuals considering cancer screening should consult their doctors first to assess the need and to obtain full information about the screening before making an informed decision.

Other than screening, early recognition of the warning signs and symptoms of cancer allows early diagnosis and treatment with better outcomes. While the symptoms do not necessarily mean the presence of cancer as they can also be caused by benign tumors or other medical problem, anyone with changes in health should see a doctor for proper investigation and diagnosis.

Box 2: Cancer Screening Programmes in Hong Kong



◆ **Cervical Cancer Screening Programme**

Women aged 25–64 who ever had sexual experience (including those vaccinated against HPV) should have regular cervical screening. For more information about cervical cancer, please visit <https://www.cervicalscreening.gov.hk>.



◆ **Colorectal Cancer Screening Programme**

Individuals aged 50–75 are recommended to have colorectal cancer screening by biennial faecal immunochemical test. For more information about the CRCSP, please visit <https://www.colonscreen.gov.hk/en/index.html>.



◆ **Breast Cancer Screening Pilot Programme**

Women aged 44–69 with certain combinations of personalised risk factors putting them at increased risk of breast cancer are recommended to consider mammography screening every two years and consult doctor. For estimating individual risks of developing breast cancer, women can use the Breast Cancer Risk Assessment Tool that is accessible at the Cancer Online Resource Hub: <https://www.cancer.gov.hk/en/bctool/index.html>.

The Hong Kong SAR Government is committed to reducing the disease burden of cancer in the local population. DH will continue organising health promotional campaigns to raise public awareness about the importance of healthy living and encourage evidence-based cancer screening for the prevention and control of cancer.

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World Cancer Day is an initiative of the Union for International Cancer Control which takes place every year on 4 February. For World Cancer Day 2022–2024, the theme is about identifying and addressing the barriers that exist for many people around the world in access to the cancer care they need.

To know more about World Cancer Day, please visit <https://www.worldcancerday.org/>.

Non-Communicable Diseases (NCD) WATCH is dedicated to promote public's awareness of and disseminate health information about non-communicable diseases and related issues, and the importance of their prevention and control. It is also an indication of our commitments in responsive risk communication and to address the growing non-communicable disease threats to the health of our community. The Editorial Board welcomes your views and comments. Please send all comments and/or questions to so_dp3@dh.gov.hk.

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