

Awareness and Prevention of Colorectal Cancer

Key Messages

- ※ Colorectal cancer is one of the most common cancers and an important cause of cancer-related death. In Hong Kong, the number of newly diagnosed colorectal cancer increased from 4 370 cases in 2010 to 5 556 in 2019. As the second leading cause of cancer deaths locally, there were 2 287 registered deaths attributed to colorectal cancer in 2020.
- ※ Colorectal cancer is a highly preventable disease. For preventing colorectal cancer, the Hong Kong SAR Government's Cancer Expert Working Group on Cancer Prevention and Screening recommends the population to maintain a healthy body weight, decrease consumption of red and processed meat, increase intake of dietary fibre, take part in moderate-intensity aerobic physical activities for at least 2 hours and 30 minutes per week, avoid or quit tobacco smoking, and avoid alcohol consumption. Average-risk people aged 50 to 75 should consider screening for colorectal cancer.
- ※ To reduce the burden arising from colorectal cancer, the Hong Kong SAR Government launched the Colorectal Cancer Screening Programme ("Programme") to subsidise asymptomatic average-risk Hong Kong residents aged between 50 and 75 to undergo screening tests in the private sector for prevention of colorectal cancer. For more information about the Programme, please visit the thematic website at www.colonscreen.gov.hk or call 3565 6288 during office hours.
- ※ Together, we can prevent colorectal cancer and reduce the disease burden in Hong Kong !



Awareness and Prevention of Colorectal Cancer

Colorectal cancer is one of the most common cancers and an important cause of cancer-related death, both globally and locally. In 2020, there were estimated 1.93 million new colorectal cancer cases and over 935 000 people died of the disease worldwide¹. The number of newly diagnosed colorectal cancer in Hong Kong increased from 4 370 cases in 2010 to 5 556 in 2019, with an increase of 27%. In 2019, the median age of diagnosis of new colorectal cancer cases was 68 for male and 69 for female. Half (50.0%) of the new cases were diagnosed at an advanced stage (26.3% for Stage III and 23.7% for Stage IV)². As the second leading cause of cancer deaths locally, there were 2 287 registered deaths attributed to colorectal cancer and accounted for 15.4% of all cancer deaths in 2020³.

Risk Factors of Colorectal Cancer

Most colorectal cancers arise from polyps. These polyps are usually benign, but some may progress into cancer after more than 10 years⁴. The risk of developing colorectal cancer is influenced by various factors. While some risk factors are not modifiable (such as advancing age, having family history of colorectal cancer or having hereditary bowel diseases), many lifestyle-related factors known to increase colorectal cancer risk are modifiable (Box 1)^{4, 5}.

Optimal Prevention of Colorectal Cancer

Colorectal cancer is a highly preventable disease¹⁷. Regardless of individual's genetic risk, adherence to a healthy lifestyle can substantially reduce the risk of developing colorectal cancer¹⁸. For preventing colorectal cancer, the Hong Kong SAR Government's Cancer Expert Working Group on Cancer Prevention and Screening ("CEWG") recommends the population to¹⁹:

- ◇ Maintain a healthy body weight. Aim for a body mass index between 18.5 and 22.9, and a waist circumference of less than 90 cm (about 36 inches) for men and less than 80 cm (about 32 inches) for women;
- ◇ Decrease consumption of red and processed meat;
- ◇ Increase intake of dietary fibre, including at least five servings of fruit and vegetables a day;
- ◇ Take part in moderate-intensity aerobic physical activities for at least 2 hours and 30 minutes per week;
- ◇ Avoid or quit tobacco smoking; and
- ◇ Avoid alcohol consumption¹⁹.

Since colorectal cancer typically develops from a precancerous polyp over a long period of time, screening (i.e. examining people without symptoms in order to identify individuals affected by the disease or at an increased risk of having the disease) can allow early diagnosis and treatment so as to improve the cure rate.

Box 1: Major lifestyle risk factors of colorectal cancer

Overweight and Obesity — Higher body fatness can increase the levels of certain hormones (such as insulin) that are linked to tumour formation. It also stimulates the body's inflammatory response, which promotes the development of colorectal cancer⁵. Compared to individuals with normal weight, overweight and obese individuals would have 42% increased risk of early-onset of colorectal cancer⁶. Central obesity (as reflected by greater waist circumference) would also increase risk of colorectal cancer by 42%⁷.

Unhealthy Eating — The World Health Organization's International Agency for Research on Cancer ("IARC") had classified consumption of processed meat as "carcinogenic to humans" and consumption of red meat as "probably carcinogenic to humans"⁸. While each additional daily intake of 50 grams (g) processed meat was positively associated with 17% increased risk of colorectal cancer, each additional daily intake of 100 g red meat would increase colorectal cancer risk by 12%⁹. Low fibre diet with insufficient consumption of fruit and vegetables can also increase the risk of colorectal cancer⁵. Compared to individuals who consumed more than 2.5 servings of fruit and vegetables per day, those who consumed less than 1.5 servings per day would have 65% increased risk of developing colorectal cancer¹⁰.

Physical Inactivity / Sedentary Behaviours — Prolonged sitting is a risk factor for various chronic diseases, including colorectal cancer¹¹. Increasing two hours per day of television viewing and occupation sitting time would increase colorectal cancer risk by 7% and 4%, respectively. In addition, increasing two hours of total sitting time per day was associated with 2% increment in the risk of developing colorectal cancer¹².

Tobacco smoking — With at least 69 known carcinogens contained in cigarettes, IARC had classified tobacco smoking as "carcinogenic to humans"¹³. Compared to never smokers, current smokers have 14% increased colorectal cancer risk. Besides, the higher the smoking intensity and duration, the higher the risk of developing colorectal cancer risk¹⁴.

Alcohol Consumption — The consumption of alcoholic beverages had been classified by IARC as "carcinogenic to humans"¹³. Alcoholic beverages (including beer, wine and liquor) contain numerous toxic compounds, including ethanol and its metabolite acetaldehyde that can be carcinogenic^{13, 15}. There is strong evidence that alcohol consumption increases the risk of colorectal cancer¹⁵. Drinking 1–2 alcoholic drinks per day is associated with 10% increased risk of colorectal cancer¹⁶.

Based on review of local and international evidences and practices, the CEWG recommends that average-risk people aged 50 to 75 (e.g. individuals without significant family history of colorectal cancer or those without hereditary bowel diseases) should consider colorectal cancer screening by one of the screening methods as shown in Box 2¹⁹. For people at higher risk of colorectal cancer (such as those who have immediate relatives diagnosed with hereditary bowel diseases such as familial adenomatous polyposis or Lynch Syndrome), the CEWG recommends them to undergo screening by endoscopic examination at an earlier age and repeat at shorter time intervals depending on their individual condition and age¹⁹. They may consult their family doctor in order to decide an appropriate screening option.

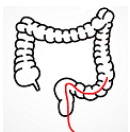
Colorectal Cancer Screening Programme

To reduce the burden arising from colorectal cancer, the Hong Kong SAR Government launched the Colorectal Cancer Screening Programme (“Programme”) to subsidise asymptomatic average-risk Hong Kong residents aged between 50 and 75 to undergo screening tests in the private sector for prevention of colorectal cancer. As shown in the screening flow-chart in Box 3, eligible participants are required to register with the Electronic Health Record Sharing System (“eHRSS”). The Programme adopted a two-tier screening approach. To participate in the Programme, they would first visit a primary care doctor enrolled in the Programme. Then they would be screened using the Faecal Immunochemical Test (“FIT”), an improved version of FOBT. For participants with negative FIT result, they are recommended to repeat FIT every two years. For participants with positive FIT result, a referral for colonoscopy will be made. If polyps are found and considered safe to remove during colonoscopy, they will be removed for further analysis. Members of the public including those with negative FIT result should watch out for symptoms of colorectal cancer, such as blood or large amount of mucous in the stool, change in bowel habits, abdominal discomfort, persistent urge after passing stool, weight loss and tiredness without known reasons.

Box 2: Colorectal cancer screening methods



- annual or biennial faecal occult blood test (“FOBT”)



- sigmoidoscopy (i.e. use of an endoscope to examine lower part of the colon) every 5 years



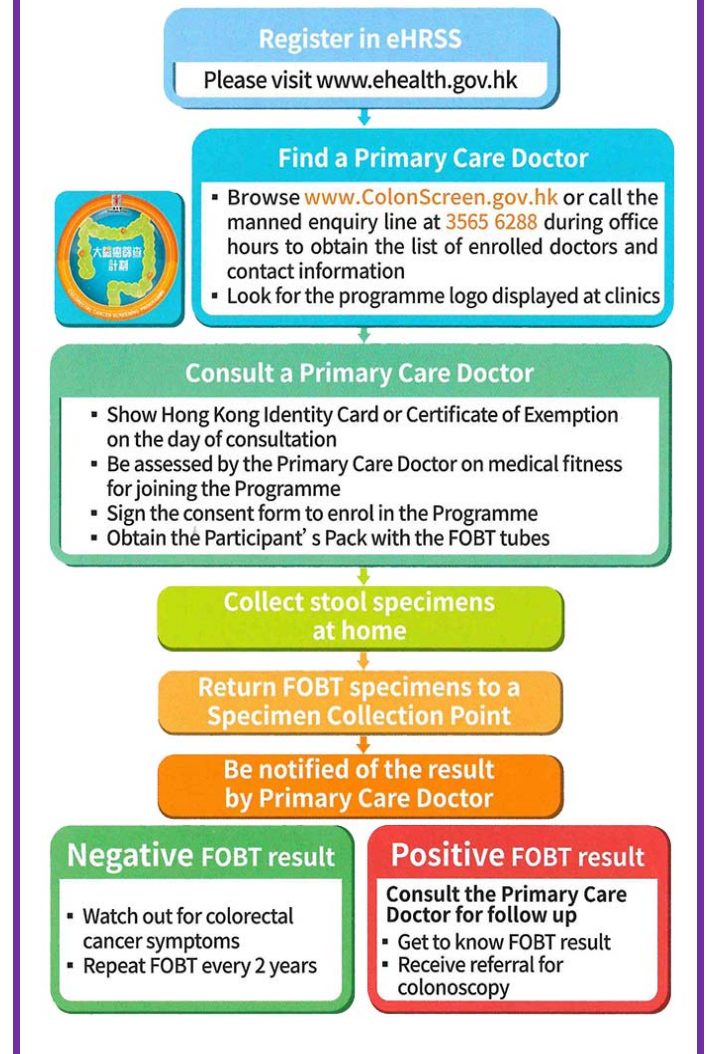
- colonoscopy (i.e. use of an endoscope to examine the entire colon) every 10 years

The Programme was implemented as a pilot in 2016, regularised in 2018 and fully implemented in 2020. More than 275 000 eligible persons have participated and received a FIT screening as at end of November 2021. The screening outcomes showed that²⁰:

- Among participants who had submitted FIT tube samples with analysable results, about 33 900 persons (13.0%) had positive results in the first round of screening, around 7 300 persons (10.8%) and around 800 persons (10.2%) had positive results in the second and third round of screening respectively.
- Among FIT-positive participants who underwent a colonoscopy examination, about 22 000 persons (61.7%) had colorectal adenoma (a type of polyp that can turn into cancer) and around 2 000 persons had colorectal cancer (5.5%).
- Preliminary analysis of about 1 300 colorectal cancer cases diagnosed under the Programme revealed that about 60% of these cases belonged to earlier stages, while about 40% of colorectal cancer cases in the general population (excluding cases from the Programme) belonged to earlier stages.

It is noteworthy that detecting colorectal cancer early with timely treatment can increase the chance of cure and survival. The 5-year survival rate for Stage I colorectal cancer is 95.7%. For diagnosis at later stages, the corresponding survival rates decrease progressively to 87.3% for Stage II, 68.7% for stage III and 9.3% for Stage IV²¹. Screening results reflect that the Programme is effective in identifying people who have colorectal cancer before they have symptoms and those who have colonic adenoma which can turn into colorectal cancer. This enables them to receive early treatment and thus have a better disease outcome.

Box 3: Screening Flowchart



For preventing colorectal cancer, members of the public should lead a healthy lifestyle. Eligible persons are also urged to join the Programme as soon as possible and have well-organised screenings. For more information about the Programme, please visit the thematic website at www.colonscreen.gov.hk. Together, we can prevent colorectal cancer and reduce the disease burden in Hong Kong !

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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 the cancer care they need.

To know more about World Cancer Day, please visit 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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