

# **HEALTH ADVICE ON PREVENTION AND SCREENING OF CANCER FOR THE PUBLIC**

## **I. Burden of Cancer in Hong Kong**

Cancer has been a major cause of illness and the leading cause of death in Hong Kong with 21 861 new cases in 2002 and 11 510 deaths in 2003. The burden of cancer in the population has been growing. The proportion of cancer deaths among all deaths has been increased from 27% in 1983 to 32% in 2003. In general, 1 in 4 males and 1 in 5 females will have cancer in their lifetime, while 1 in 7 males and 1 in 12 females will die from cancer in their lifetime.

The most common cancers affecting men are lung cancer, colorectal cancer and liver cancer. Among females, the most common cancers are breast cancer, colorectal cancer and lung cancer. Some cancers are occurring more frequently while others are occurring less. After adjusting the effect of aging population, those cancers that are on the increasing trend include prostate cancer and colorectal cancer in males, and breast cancer and ovarian cancer in females.

Cancer mainly affects elderly people in the population. Among all cancer cases, the median age at diagnosis was 68 for males and 65 for females in 2002. Certain cancers are affecting people at relatively young age. These include nasopharyngeal cancer, breast cancer, thyroid cancer, uterine cancer and ovarian cancer, for which the median age at diagnosis of affected persons is around their fifties or even forties.

## **II. Prevention of Cancer**

### **1. Primary Prevention**

Primary prevention refers to preventing the onset of a condition by eliminating or minimizing exposure to the cancer-causing factors of cancer and altering individual susceptibility to such factors. Cancer is largely a preventable disease. Overall, the World Health Organization (WHO) indicates that at least one-third of 10 million newly diagnosed cancer cases every year worldwide are preventable by effective prevention initiatives. Among the cancer prevention methods, the most effective ones include tobacco control, healthy diet, physical activity, avoidance of obesity, reducing alcohol use, reducing carcinogenic occupational and environmental exposures, and immunization against hepatitis B virus.

## **2. Secondary Prevention**

Secondary prevention measures include screening and early detection. They aim at stopping the progression of more severe stages of the disease by identifying the disease at an early and curable stage, where effective treatment prevents the disease or gives better outcomes.

### ***(a). Screening of Cancer***

Screening refers to the systematic use of simple tests applied to a healthy population in order to identify individuals who have a specific disorder, but do not yet have symptoms of that disorder, at a time when they will benefit from early treatment. Screening for cancers aims to detect cancer precursor or cancer when it is localized to the organ of origin without invasion of surrounding tissues or distant organs.

Screening test may not improve an individual's health or help the person live longer if the cancer detected is at advanced stage or has already spread to other parts of the body. It is not sure whether treating cancers found by screening can help a person live longer than if no treatment was given and treatments for cancer may have serious side effects.

Screening tests are not 100% accurate. There are false-positive and false-negative results. False-positive result is the wrong indication of the presence of a condition despite the fact that it does not exist. This may cause anxiety, unnecessary investigation and medical intervention which may be harmful. False-negative result is the failure of the test to detect a condition despite the fact that it is present. This leads to false reassurance and may delay seeking medical care even if there are symptoms. The missed condition may get worse and eventually be lethal. Individuals considering a screening test should seek advice from health care professionals for assessment of need and obtain full information on benefits and potential hazards of having the test for an informed choice.

### ***(b). Early Detection***

Early recognition of signs and symptoms of cancer is a crucial part for early detection of cancer that allows early diagnosis and treatment of potentially fatal cancers and usually improves the chance of cure. Although these signs and symptoms may not

necessarily mean the presence of cancer, they alert the individual to watch out for changes and seek prompt medical attention.

### **3. Tertiary Prevention**

Tertiary prevention refers to the proper rehabilitation of patients with an established disease to minimize residual disabilities and complications. Action taken at this stage aims at improving the quality of life, even if the disease cannot be cured.

### III. Primary Preventive Measures

#### 1. Diet and Nutrition

##### (a). *Vegetables and Fruits*

##### **Evidence**

- There is strong and consistent evidence showing that diets high in vegetables and fruits decrease the risk of many cancers, such as oral cancer, gastric cancer, oesophageal cancer and colorectal cancer, and probably lung cancer and breast cancer.
- Frequent consumption of pickled or salted vegetables is associated with a higher cancer risk.

##### **Recommendations**

- Consume at least 400 grams or 5 or more servings (2 servings of fruits and 3 servings of vegetables) a day of a variety of vegetables and fruits.

One serving of fruits is approximately defined as one of the following:

- 2 pieces of small-sized fruits (e.g. plum).
- 1 piece of medium-sized fruit (e.g. orange, apple, kiwifruit).
- 1/2 piece of large-sized fruit (e.g. banana, grapefruit, star fruit).
- 1/2 cup of cut-up fruits or berries (e.g. watermelon, cantaloupe, honeydew melon, cherries, strawberries).
- 1/2 cup of other types of fruits (e.g. grapes, lychee).
- 1/4 cup of dried fruits without added sugar or salt (e.g. raisin, prune).
- 3/4 cup of fresh fruit juice without added sugar (e.g. fresh orange juice with pulp).

(Remark: 1 cup = 240 ml)

One serving of vegetables is approximately defined as one of the following:

- 1 bowl of raw leafy vegetables (e.g. lettuce, purple cabbage).
- 1/2 bowl of cooked vegetables, sprouts, gourds or mushrooms (e.g. Chinese flowering cabbage, Chinese kale, spinach, white cabbage, bean sprouts, eggplant, carrot).
- 3/4 cup of fresh vegetable juice without added sugar (e.g. fresh tomato juice with pulp).
- 1/2 bowl of cooked beans (e.g. snow peas, red kidney beans).

(Remark: 1 bowl = 240 ml)

- Minimize the consumption of pickled or salted vegetables.

**(b). *Meat and Fish***

**Evidence**

- Red meat consumption is associated with increased risk of colorectal cancer, breast cancer and probably prostate cancer. For colorectal cancer, stronger association is found for processed meat.
- Chinese-style salted fish increases the risk of nasopharyngeal cancer and probably gastric cancer.

**Recommendations**

- Decrease consumption of red meat (for examples, beef, lamb and pork), especially processed meat (for examples, ham, sausages and bacon).
- Minimize consumption of Chinese-style salted fish, particularly in infancy and childhood.

**(c). *Nutrition Supplements***

**Evidence**

- The use of micronutrients such as  $\beta$ -carotene and  $\alpha$ -tocopherol (vitamin E) in prevention against cancer is not sufficiently proven.

**Recommendations**

- Maintain a well-balanced diet which means: choose a variety of food; consume whole grains as the major component of each meal; eat plenty of fruits and vegetables; eat adequate amount of lean meat (including poultry, fish, seafood and eggs) or beans and low fat dairy products; avoid processed or preserved food and food that is rich in fat, cholesterol, salt and sugar; and drink adequate amounts of fluids.

**(d). *Breastfeeding***

**Evidence**

- Reduction in risk of developing breast cancer is associated with longer cumulative duration of breastfeeding.

## **Recommendations**

- Breastfeed each child for longer duration.

## **2. Tobacco**

### **Evidence**

- Tobacco is recognized as the largest avoidable cause of premature death and the most important known carcinogen.
- There is carcinogenic effect of cigarette smoking on cancers of the lung, oral cavity, pharynx, larynx, oesophagus, pancreas, urinary bladder, nasal cavities and nasal sinuses, stomach, liver, kidney and cervix, and myeloid leukaemia.
- Increase in the number of cigarettes smoked per day is related to increase in risk of developing these cancers.
- Environmental tobacco smoke or second-hand smoking is another cause of lung cancer.

### **Recommendations**

- Do not smoke
- Minimize exposure to environmental tobacco smoke or second-hand smoking.

## **3. Alcoholic Beverages**

### **Evidence**

- Prolonged heavy alcohol drinking causes cancer of the oral cavity, larynx, pharynx, oesophagus and liver, and may increase the risk of breast and colorectal cancer.
- Higher level of alcohol use is related to higher risk of having cancer of the breast and the upper gastrointestinal tract.

### **Recommendations**

- Abstain from alcoholic beverages.
- For drinkers, practise 'low-risk drinking'.

For healthy men, 'low-risk drinking' is no more than three to four standard drinks per day, less than 21 standard drinks a week and at least 2 alcohol-free days per week. For non-pregnant women, 'low-risk drinking' is no more than one to two standard drinks a day, less than 14 standard drinks a week and at

least 2 alcohol-free days a week. Examples of a standard drink are:

- two-third of a can/small bottle (370 ml) of beer at 5% ABV
- 1 serve (100 ml) of table wine at 12% ABV
- 1 small glass (35 ml) of Chinese wine at 30% ABV (for example double-evaporated rice water)
- 1 pub measure (30 ml) of spirits at 40% ABV (for examples, brandy, whisky, gin or vodka).

The term 'ABV' means 'alcohol by volume' which is the percentage of alcohol in the total liquid.

#### **4. Physical Activity and Weight Control**

##### **Evidence**

- Overweight and obesity are associated with an increased risk of cancer of the endometrium, kidney, colon, oesophagus and breast in post-menopausal women.
- Physical activity is associated with lower risk of breast cancer, colorectal cancer and endometrial cancer, and it may protect against prostate cancer.

##### **Recommendations**

- Control body weight.
- Have physical activity for at least 30 minutes every day.

#### **5. Vaccine**

##### **Evidence**

- Hepatitis B infection is an important causal factor of liver cancer.
- Hepatitis B vaccination effectively prevents liver cancer by decreasing the chance of becoming carriers of hepatitis B virus.

##### **Recommendations**

- Newborn babies should receive three doses of hepatitis B vaccine at recommended intervals of 0, 1, 6 months.
- Babies born to mothers of hepatitis B carrier status should receive an additional dose of hepatitis B immunoglobulin within 24 hours of birth.

## **6. Ultraviolet Radiation**

### **Evidence**

- Excess exposure to solar radiation, and specifically its ultra-violet (UV) component, is an established cause of skin cancer. The major source of UV radiation exposure is from sunlight.
- Sun exposure during childhood and adolescence contributes markedly to lifelong risk of skin cancer.
- The use of sunlamps and sunbeds probably also causes skin cancer, particularly if the dose of exposure is high and if it causes sunburn.

### **Recommendations**

- Do not expose to direct sunlight, especially between 11:00 and 15:00 of the day and during sunny seasons.
- Take precaution whenever UV radiation level is high (UV index 6 or above, as measured by the Hong Kong Observatory), for examples, wear long-sleeved clothing, wear broad-brim hat, wear UV blocking sun glasses and use an umbrella.
- Use sunscreen products with a high sun protection factor (SPF greater than 15) on usually exposed skin when having outdoor work or recreation. (The Sun Protection Factor indicates the effectiveness of the sunscreen products on protecting the skin from sunburn. The higher the SPF, the greater the protection. For example, a sunscreen lotion with SPF 4 means that the exposure to ultraviolet (UV) radiation received after a given time is one-quarter that received in the absence of any protection.).
- Protect children and adolescents against excessive sun exposure.
- Do not use sunlamps and sunbeds inappropriately.

## **7. Sexual Behaviour**

### **Evidence**

- Women who become sexually active at an early age, have high lifetime number of sexual partners or have male partner having multiple sexual partners, have a significantly increased risk of cervical cancer.
- Human papillomavirus infection is an important factor in causing cervical cancer.
- Other sexually transmitted diseases such as hepatitis B, hepatitis C and human immunodeficiency virus (HIV) infections may increase the risk of developing

cancers including hepatocellular carcinoma, lymphoma, Kaposi sarcoma, cervical and anal cancer.

### **Recommendations**

- Have long-term, mutually monogamous relationship with an uninfected partner.
- Practise safer sex by using barrier contraception (for example, condom) and spermicides (for examples, contraceptive foam or jelly).

## **8. Occupational and Environmental Exposure to Carcinogen**

### **Evidence**

- At present, 25 chemicals, groups of chemicals or mixtures for which exposures are mostly occupational or environmental, have been established as human carcinogens.
- About 5% of all cancers in the developed world are attributable to occupational exposures and about 1% to environmental pollution.
- Radon gas, coming from radium content in building materials, is one of the carcinogenic indoor air pollutants and excess exposure to radon gas is associated with increased lung cancer risk.
- Environmental tobacco smoke (passive or second-hand smoke) also imposes cancer hazard.
- Exhaust emissions from motor vehicles are also a source of carcinogenic environmental pollution.

### **Recommendations**

- Reduce the occupational and environmental exposure to potentially carcinogenic matters by reducing emissions, replacing the carcinogen with alternative chemicals, re-engineering of manufacturing processes, improving ventilation, and ensuring proper use of protective equipment or clothing in occupational settings.
- Do not smoke and minimize exposure to environmental tobacco smoke or second-hand smoking.
- Maintain adequate ventilation to reduce residential exposure to radon gas.
- Minimize exposure to exhaust emissions from motor vehicles.

## **IV. Selected Cancers**

### **1. Lung Cancer**

#### ***Facts and Figures***

- Lung cancer was the most common cancer in Hong Kong in 2002. There were 3 941 new cases, accounting for 22% of new cancer cases in males and 13% of new cases in females. The median age at diagnosis was 70 for males and 73 for females. The chance of developing lung cancer in the lifetime was 1 in 16 for males and 1 in 39 for females.
- Lung cancer was the leading cause of cancer deaths in Hong Kong. In 2003, a total of 3 403 persons died of lung cancer which accounted for one-third of cancer deaths in males and a quarter of cancer deaths in females.

#### ***Risk Factors***

- Smoking, the single most important preventable cause of lung cancer.
- Environmental tobacco smoke or second-hand smoking.
- Lack of vegetables and fruits in diet.
- Occupational exposure to asbestos or radon.

#### ***Primary Prevention***

- Do not smoke and minimize exposure to environmental tobacco smoke or second-hand smoking.
- Have diet rich in vegetables and fruits.
- Minimize exposure to radon and asbestos in occupational setting by wearing protective equipment and following recommended work practices and safety procedures.

#### ***Screening***

##### **Tests used for lung cancer screening**

- Chest X-ray  
Radiological examination of the organs of the chest, like the lungs.
- Sputum cytology  
Examination of cells in a sample of sputum under microscopy
- Spiral computed tomography (CT) scan  
A procedure that makes detailed computerized pictures of the body using an X-ray machine that scans the body in a spiral path.

### Evidence for screening

- Studies in lung cancer screening using chest X-ray or sputum cytology failed to demonstrate any reduction in lung cancer mortality. Frequent screening with chest X-ray was associated with increased risk of mortality in lung cancer compared with less frequent screening.
- Spiral CT scan is a relatively new technology, which has not been fully evaluated. At present, there is no sufficient evidence showing that spiral CT scan can reduce mortality from lung cancer.

### Recommendations

#### *General public*

- Routine screening for lung cancer with chest X-ray or sputum cytology in asymptomatic persons or among smokers is not recommended.
- There is insufficient evidence to recommend for or against the inclusion of spiral CT scan as part of periodic health examination in asymptomatic persons.

### ***Early Detection***

Individuals should seek prompt medical advice if symptoms of lung cancer are present, such as prolonged coughing, blood in sputum, and chest pain during coughing or deep breathing.

## **2. Colorectal Cancer**

### ***Facts and Figures***

- Colorectal cancer was the second most common cancer in 2002. There were 3519 new cases, accounting for 16% of all new cancer cases. The median age at diagnosis was 70 for males and 72 for females. The chance of developing colorectal cancer in the lifetime was 1 in 21 for males and 1 in 31 for females. On average, the number of new cases of colorectal cancer increased by 5% per year in the past decade.
- Colorectal cancer was the second most common cause of cancer deaths in Hong Kong. There were 1 537 deaths, accounting for 13% of all cancer deaths in 2003
- About 10-20% of colon cancers are related to heredity.

### ***Risk Factors***

- Family history of colorectal cancer, particularly in close relatives (parents, siblings or children).
- Having siblings with adenomatous polyps before the age of 60.
- Familial adenomatous polyposis (FAP).
- Genetic mutation for hereditary non-polyposis colorectal cancer (HNPCC).
- High consumption of red meat or processed meat.
- Lack of vegetables and fruits in diet.
- Smoking.
- Lack of physical activity.
- Being overweight or obese as indicated by high body mass index (BMI) and/or high waist to hip circumference ratio.

### ***Primary Prevention***

- Avoid high consumption of red and processed meat.
- Increase consumption of vegetables and fruits.
- Do not smoke and minimize exposure to environmental tobacco smoke or second-hand smoking.
- Control body weight by reducing caloric intake and having regular physical activity.

### ***Screening***

#### *Tests used for colorectal cancer screening*

- Faecal occult blood test (FOBT)  
A chemical test performed on the stool samples to detect the presence of blood.
- Flexible sigmoidoscopy (FS)  
Using a flexible endoscope to examine the rectum and lower part of the colon.
- Colonoscopy  
An endoscopic procedure for examination of the colon.
- Virtual colonoscopy  
The examination of computer-generated images of the colon obtained from an abdominal computerized tomography scanning.

#### *Evidence for screening*

- Although FOBT screening can reduce mortality from colorectal cancer in

Western population, it is not sure whether FOBT screening is effective in reducing colorectal cancer mortality among asymptomatic Asian or Chinese populations.

- There is insufficient evidence that demonstrated the effectiveness of using FS alone or in combination with FOBT, or colonoscopy as routine screening test for colorectal cancer among asymptomatic persons in reducing mortality.
- Physical harm may arise from the colonoscopy procedures.

### Recommendations

#### *General public*

- There is insufficient evidence to recommend FOBT, FS, colonoscopy or virtual colonoscopy for routine screening for colorectal cancer among asymptomatic persons.

#### *High-risk groups*

- Mutated gene carriers of FAP are recommended to have screening by FS every two years from age 12 onwards.
- Mutated gene carriers of HNPCC are recommended to have colonoscopy 1-2 yearly from age 25 onwards.
- Regular monitoring of the large bowel with colonoscopy or barium enema (a special imaging method to examine the colon and rectum) together with endoscopy is recommended for people with one first degree relative affected by colorectal cancer aged <45 years or with two affected first degree relatives.

### ***Early Detection***

Individuals should seek prompt medical advice if symptoms of colorectal cancer are present, such as blood in stool, recent and persistent change in bowel habit to looser bowel motions or to constipation.

## **3. Liver Cancer**

### ***Facts and Figures***

- Liver cancer was the fourth most common cancer in 2002. There were 1 576 new cases, accounting for 7% of all new cancer cases. The median age at diagnosis was 63 for males and 72 for females. The chance of developing liver cancer in the lifetime was 1 in 32 for males and 1 in 131 for females.
- Liver cancer was the third most common cause of cancer deaths in Hong Kong.

There were 1 412 deaths, accounting for 12% of all cancer deaths.

- Approximately 8-10% of the Hong Kong population are hepatitis B carriers, a group at greater risk of developing liver cancer.

### ***Risk Factors***

- Infection with hepatitis B or hepatitis C virus.
- Cirrhosis of liver.
- Haemochromatosis, glycogen storage disease and Wilson's disease.
- Excessive consumption of alcohol.
- Ingestion of foods contaminated with aflatoxin (a toxin found in some food such as mouldy peanuts and cereals).
- Liver fluke (*Clonorchis sinensis*) infection.

### ***Primary Prevention***

- Newborn babies should receive hepatitis B vaccination through mass vaccination programme.
- Babies born to mothers of hepatitis B carrier status should receive hepatitis B immunoglobulin within 24 hours of birth.
- Practise safety measures against the spread of hepatitis B and hepatitis C virus through blood transfusions, contaminated needles of intravenous drug users and unprotected sex.
- Abstain from alcohol or practise 'low-risk drinking'.
- Avoid food items contaminated with aflatoxin.
- Avoid raw or under-cooked freshwater fish.

### ***Screening***

#### ***Tests used for liver cancer screening***

- Alpha-fetoprotein (AFP) test  
A blood test that measures the level of AFP in the body.
- Ultrasonography (USG)  
Using high-frequency sound waves to examine the organs and structures of the body, like the liver.

#### ***Evidence***

- There is no evidence to establish that screening by AFP and USG would result in decrease in mortality from liver cancer.
- The consequence of over-diagnosis is revealing a large number of nodules of uncertain malignant potential, which leads to unnecessary invasive

interventions that may cause harmful effects.

- The cost-effectiveness of screening in high risk persons (for example, hepatitis B carriers) is uncertain and early tumour diagnosis does not generally result in better prognosis.
- There is no consensus on the screening protocol at present and further research to evaluate the effectiveness of periodic screening for high risk group is required.

### Recommendations

#### *General public*

- Routine screening with AFP or USG for asymptomatic persons is not recommended.

#### *High-risk group*

- Selected high-risk group, such as hepatitis B carriers, may undertake periodic screening with AFP and USG in consultation with health care professionals.

### ***Early Detection***

Individuals should seek prompt medical advice if symptoms of liver cancer are present, such as weight loss, malaise, yellow skin or eyes, abdominal swelling, dark urine and pain in right upper abdomen.

## **4. Nasopharyngeal Cancer**

### ***Facts and Figures***

- Nasopharyngeal cancer (NPC) is frequently seen among Chinese in South-east Asia, Southern China and Hong Kong.
- NPC ranked sixth among the most common cancers in 2002. There were 963 new cases, accounting for 4% of new cancer cases. NPC is affecting relatively young adults with the median age at diagnosis being 50 for males and 48 for females. The chance of developing NPC in the lifetime was 1 in 63 for males and 1 in 170 for females.
- In 2003, NPC was the sixth most common cause of cancer deaths. There were 366 deaths, accounting for 3% of all cancer deaths.

### ***Risk Factors***

- Family history of NPC.
- Epstein-Barr virus (EBV) infection.

- Consumption of Chinese-style salted fish, in particular in infancy and childhood.
- Smoking.

### ***Primary Prevention***

- Minimize consumption of Chinese-style salted fish, in particular in infancy and childhood.
- Do not smoke and minimize exposure to environmental tobacco smoke or second-hand smoking.

### ***Screening***

#### *Tests used for NPC screening*

- IgA against specific EBV viral antigens  
A blood test that measures the level of IgA antibody to EBV in the body.
- EBV DNA  
A blood test that measures the level of DNA of EBV in plasma

#### *Evidence for screening*

- There is lack of evidence on the effectiveness of screening test using EBV DNA and using IgA against specific EBV viral antigens in reducing NPC mortality.

#### *Recommendations*

##### *General public*

- There is insufficient evidence to recommend a population-based NPC screening programme using IgA against specific EBV viral antigens or EBV DNA.

### ***Early Detection***

Individuals should seek prompt medical advice if symptoms of NPC are present, such as unexplained bleeding through the nose, prolonged nasal blockage, lumps in the neck, ear pain, ringing in the ear and hearing difficulty.

## **5. Breast Cancer (for females)**

### ***Facts and Figures***

- Breast cancer was the most common cancer among females in Hong Kong in

2002. There were 2 059 new cases, accounting for 21% of all new cancer cases in females. The chance of developing breast cancer in the lifetime was 1 in 23. Breast cancer is diagnosed in relatively young women. The median age at diagnosis was 51 in 2002.

- Breast cancer was the third most common cause of female cancer deaths in 2003. There were 431 deaths, accounting for 10% of all female cancer deaths.

### ***Risk Factors***

- Advancing age, nulliparity, early menarche, late age at first birth and late menopause.
- Family history of breast cancer, particularly in first degree relatives who developed the disease before the age of 50.
- History of cancer in the other breast, previous benign breast disease and irradiation of the chest.
- Obesity in postmenopausal women.
- Lack of physical activity.
- High alcohol consumption.
- High fat diet.
- Lack of vegetables and fruits in diet.
- Use of hormonal replacement therapy in postmenopausal women.

### ***Primary Prevention***

- Control body weight and have regular physical activity.
- Abstain from alcohol or practise 'low-risk' drinking.
- Avoid too much fat in diet.
- Have high intake of fruits and vegetables.
- Have childbirth at an earlier age and breastfeed each child for longer duration.

### ***Screening***

#### *Tests used for breast cancer screening*

- Breast self examination (BSE)  
Examination of the breasts by the woman herself for lumps or anything that appears unusual.
- Clinical breast examination (CBE)  
Examination of the breast by a doctor for lumps or any abnormal features.
- Mammography.  
An imaging technique that uses X-ray for examining the breasts.

### Evidence

- There is evidence to demonstrate that BSE cannot reduce mortality from breast cancer and may cause harm through unnecessary medical interventions.
- There is insufficient evidence regarding the effectiveness of CBE alone or in combination with mammography in reducing mortality of breast cancer.
- Although screening by mammography has been found to reduce mortality from breast cancer in Western population, evidence is lacking over the usefulness of mammography screening in Asian or Chinese populations.
- Adverse effects of mammography include physical harm and anxiety of unnecessary breast biopsies as a result of false positive screening results.

### Recommendations

#### *General public*

- Mass education programme on BSE is not recommended.
- All women are encouraged to be breast aware, that is, to be familiar with the texture of their normal breast tissue and to seek professional advice if they suspect any abnormality, so that early investigation or treatment can be possible.
- There is currently insufficient evidence in Hong Kong to recommend CBE or routine mammography screening to asymptomatic women in the population.
- Any woman considering mammography screening should seek detailed information from medical professionals for an informed choice about whether or not to proceed with the test.

#### *High-risk group*

- Individuals with higher risk of developing breast cancer, such as women with previous history of breast cancer, family history of breast cancer and those on hormonal replacement therapy, may be individually assessed by medical professionals to determine the appropriateness of breast cancer screening through clinical breast examination and/or mammography.

### **Early Detection**

- Individuals should seek prompt medical advice if symptoms of breast cancer are present, such as breast lump, changes in appearance and shape of the breast, ‘orange-skin’ appearance of the breast, abnormal discharge or bleeding from the nipple, in-drawing of the nipple, and swellings or lumps in the armpit.

## **6. Cervical Cancer (for females)**

### ***Facts and Figures***

- Cervical cancer was the fourth most common cancer among females in Hong Kong in 2002. There were 442 new cases, accounting for 5% of all new cancer cases in females. The median age at diagnosis was 52. The chance of developing cervical cancer in the lifetime was 1 in 104.
- Cervical cancer was the tenth most common cause of female cancer deaths in 2003. There were 106 deaths, accounting for 2% of all cancer deaths in females.

### ***Risk Factors***

- Infection with human papillomavirus (HPV).
- Sexual activity at an early age, having multiple sexual partners, having sexual intercourse with a male partner who had multiple sexual partners.
- Smoking.
- Lack of vegetables and fruits in diet.

### ***Primary Prevention***

- Have long-term, mutually monogamous relationship with an uninfected partner.
- Practise safer sex by using barrier and spermicidal contraceptives.
- Do not smoke and minimize exposure to environmental tobacco smoke or second-hand smoking.
- Have diets rich in vegetables and fruits.

### ***Screening***

#### **Tests used for cervical cancer screening**

- Cervical smear test  
Examination of cells taken from the cervix to detect abnormal cell changes.
- HPV DNA test  
A DNA test to detect high risk types of HPV in cervical cells.

#### **Evidence**

- According to overseas experience, organized population-based screening with cervical smear has been found effective in reducing cervical cancer

incidence and deaths.

- Compared with no screening, the percentage reduction in cumulative risk is found to be 91% when the interval between cervical smear is 3 years. Screening every one to two years provides little additional protection compared with screening every three years.
- There is a comparatively high chance of detecting cell abnormalities that would spontaneously regress among women below age 25. Screening before this age on a population-wide basis therefore could cause undue anxiety and result in a considerable number of unnecessary interventions.
- It was reported that low rates of abnormal cell changes were observed in women aged 65 and over who had at least one previous normal smear result within the last three years.
- The HPV DNA test was found to have comparable accuracy with cervical smear test but was more costly.
- About half of the women with cervical smear test result showing ‘atypical squamous cells of undetermined significance’ (ASCUS) have high risk types of HPV.
- Women with smear results of ASCUS or ‘low-grade squamous intraepithelial lesion’ (LSIL) and are positive for high risk HPV-types, are more likely to carry high-grade lesions or cervical cancer.
- There is insufficient evidence to show that using HPV DNA test as an adjunct to cervical smear test or using the test in primary screening for cervical cancer is cost-effective in reducing mortality from cervical cancer.

### Recommendations

#### *General public*

- All women aged 25-64 years who have ever had sexual intercourse are recommended to have smears every 3 years after two normal consecutive annual smears.
- Screening may be discontinued in women aged 65 or above if three previous consecutive smears within 10 years are normal.
- Women at or over 65 years of age who have never had a cervical smear should have the test.
- Women who have never had sexual intercourse or who have had total hysterectomy need not have cervical screening.

#### *High risk group*

- Women aged below 25 years and with risk factors (for example, immuno-compromised women) may be screened, depending on assessment

by medical professionals.

- Women at high risk of developing cervical cancer may require more frequent screening interval based on assessment by medical professionals.
- HPV DNA test could be performed for women with cervical smear test result showing ASCUS, as an alternative to repeat cervical smear after 6 months, in decision for referral for colposcopy as further investigation

### ***Early Detection***

Individuals should seek prompt medical advice if symptoms of cervical cancer are present, such as abnormal vaginal bleeding (for example, after sexual intercourse or after menopause), abnormal vaginal discharge and pain during urination.

## **7. Prostate Cancer (for males)**

### ***Facts and Figures***

- The number of new cases of prostate cancer has increased from 206 in 1990 to 912 in 2002.
- Prostate cancer was the fourth most common cancer in men in 2002. There were 912 new cases, accounting for 8% of all new cancer cases in males. The chance of developing prostate cancer in the lifetime was 1 in 48. Prostate cancer is rare in men under 50 years old. The median age at diagnosis was 73 in 2002.
- Prostate cancer was the seventh most common cause of male cancer deaths in 2003. There were 209 deaths, accounting for 3% of all cancer deaths in men.

### ***Risk Factors***

- Age 75 and above.
- Family history of prostate cancer.
- Diet high in meat and fat, especially saturated fats and fats of animal origin.

### ***Primary Prevention***

- Have a diet low in meat and other fatty foods of animal origin.

### ***Screening***

#### **Tests used for prostate cancer screening**

- Digital rectal examination (DRE)  
Examination of the prostate gland by the doctor with the finger in the rectum.

- Serum prostate-specific antigen (PSA) test  
A blood test that measures the level of PSA in the blood.

### Evidence

- Effectiveness of screening for prostate cancer using DRE or PSA test in reducing prostate cancer mortality has not been established.
- The higher the level of PSA, the more likely it is to be prostate cancer. However, approximately 2 out of 3 men with a raised PSA level will not have prostate cancer.
- The PSA test cannot distinguish between men with slow-growing prostate cancer that may never cause any symptom or shortened life-span from those with more aggressive disease.
- Potential adverse effects from investigations and treatment following a positive screening test for prostate cancer include erectile problem, urinary and bowel problems.

### Recommendations

#### *General public*

- There is insufficient evidence to recommend for or against screening by DRE or PSA test in asymptomatic men.
- Any men considering screening by PSA test are advised to obtain full information on benefits and potential hazards of having the test for an informed consent.

### ***Early Detection***

Individuals should seek prompt medical advice if symptoms of prostate cancer are present, such as difficulty in passing urine, pain during urination and blood in the urine.