



MINISTRY OF HEALTH  
MALAYSIA



# FACTSHEET

## FOR HEALTHCARE PROVIDERS

**Prepared by:**  
**Cancer Unit (NCD Section)**  
**Disease Control Division**  
**Ministry of Health Malaysia**  
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# Why Cancer?

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Cancer is the second leading cause of death worldwide and is responsible for an estimated 9.6 million deaths in 2018. About 1 in 6 deaths is due to cancer and approximately 70% of deaths from cancer occur in low- and middle-income countries<sup>1</sup>. One in 5 men and one in 6 women worldwide develop cancer during their lifetime, and one in 8 men and one in 11 women die from the disease. Globally, the total number of people who are alive within 5 years of a cancer diagnosis, known as the 5-year prevalence, is estimated to be 50.6 million<sup>2</sup>.

Malaysia, like most developed and advanced developing countries, is approaching an epidemiologic transition where diseases related to lifestyle particularly cancers have progressively become more prevalent. Over the last decades, cancer is one of the five major cause of death in Malaysia. Based on Ministry of Health (MOH) Health Facts 2020, cancer contributed to 12.18% of all deaths in government hospitals in 2019 compared to 9.08% in 1999.

More than one third of cancer cases can be prevented, and another third can be cured if detected early and treated properly. Hence by implementing resource-appropriate strategies on prevention, early detection and treatment, up to 3.7 million lives can be saved every year worldwide.

## World Cancer Day 2020<sup>3</sup>

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World Cancer Day is one singular initiative in which the entire world can unite together in the fight against the global cancer epidemic. Every year, World Cancer Day is celebrated on the **4<sup>th</sup> February**. Many activities related to cancer awareness are carried out around the world during this period. It aims to save millions of preventable cancer deaths each year by raising awareness and education about cancer, and pressing governments and individuals across the world to take action against the disease. Year 2021 marks the end-point of the three-year World Cancer Day Campaign theme (2019-2021) launched by The Union for International cancer Control (UICC), which is:



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<sup>1</sup> WHO cancer key facts 2018

<sup>2</sup> Globocan 2020

<sup>3</sup> World Cancer Day official website, UICC

‘I Am and I Will’ is an empowering call-to-action urging for personal commitment and represents the power of individual action taken now to impact the future. Whoever you are, no matter how big or small your actions are, you have the power to reduce the impact of cancer for yourself, the people you love and for the world. It is time to make personal commitment to create a cancer-free world. It is very important for everyone to take part and play their role in fighting cancer to get good impact in reducing the cancer burden in the world. The number of premature deaths from cancer and non-communicable diseases can be reduced by one third by 2030 if actions are taken today.

## Key issues To Be Addressed<sup>4</sup>

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For World Cancer Day 2021, these are the most urgent issues in cancer that has to be addressed in an effort to reduce the rising incidence of cancer:

- (1) **COVID-19 and cancer care** The impact of the current pandemic on delivering cancer and services care
- (2) **Awareness, understanding, myths and misinformation** Access to information and knowledge about cancer can empower us all
- (3) **Prevention and risk reduction** Over one third of cancers are preventable
- (4) **Beyond physical: mental and emotional Impact** The impact of cancer goes beyond physical health, impacting the mental and emotional wellbeing of patients and their caregivers
- (5) **Financial and economic burden** The financial impact on nations, individuals and families have a huge impact on sustainable economic and human development. By focusing on saving lives, we can also save money.
- (6) **Reducing the skill gap** A shortage of skilled healthcare workers is one of the greatest barriers in delivering quality cancer care.
- (7) **Working together as one** By joining forces, we help to strengthen efforts that stimulate powerful advocacy, action and accountability at every level.

## COVID-19 and cancer care

The COVID-19 pandemic has affected health care systems globally. The health services were disrupted in many dimensions, starting from interrupting the regular patient flow to health care facilities, stressing and overwhelming health care resources, implementation of extra protective measures and social distancing with increased utilization of virtual telemedicine.

Cancer patients are a vulnerable population and they are more susceptible to high-risk infections due to their immuno-compromised state. Hence, specific measures such as reducing the number of patients in outpatient clinics and reducing unnecessary or elective procedures were

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<sup>4</sup> Source: UICC

implemented as precautionary approach. This has resulted in interruption of usual cancer care in many health care facilities.

An evaluation study on the impact of the COVID-19 pandemic on cancer care were executed in 2020 involving various oncology centers over 54 countries<sup>5</sup>. It is reported that 88.2% centers reduced their usual level of care mainly due to precautionary measures followed by overwhelmed systems and staff shortage. Whereas 46.35% of the centers reported that more than 10% of their patients missed at least one session of chemotherapy and many centers reduced their outpatient visits, switching to virtual clinics. The responses of oncology centers to the pandemic remain a challenge as to balance the delivery of cancer care while minimizing risk of exposure during treatment.

Other than cancer care, cancer screening was severely impacted as well during this pandemic. Cancer screening plays a critical role in early cancer detection, but COVID-19 has significantly disrupted screening services and screening programmes within the community. Late detection leads to delayed diagnosis and treatment, thus increased risk of death.

Despite all the challenges faced, we should not stop fighting against cancer as COVID-19 will continue to impact the lives of patients, caregivers and society for a long time to come.



#### **What can we do as an individuals or health professionals?**

- As caregivers and cancer patients, extra precautionary measures should be undertaken including physical distancing from others, washing hands often and disinfecting commonly touched surfaces. It is also important to adhere strictly to treatment regime schedule.
- As individuals, do not delay to seek medical advice if you have worrying and concerned symptoms. Schedule an appointment with a primary care physician as soon as possible to minimize the delay in diagnosis and treatment, if necessary.

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<sup>5</sup> Jazieh, A.R. et al (2020). *Impact of the COVID-19 Pandemic on Cancer Care: A Global Collaborative Study*. JCO Global Oncology 6:1428-1438.

## Awareness, understanding, myths and misinformation

The earlier a cancer is detected, the better the chance of it being treated successfully. Earlier diagnosis is facilitated through improving awareness of different cancer symptoms and signs, by obtaining accurate information and knowledge. This will enable everyone to recognize early warning signs to act on and therefore make informed choices regarding one's own health and counter own fears and misconceptions about cancer.

### *Early detection saves lives*

Although not all cancers show early signs and symptoms, many do show signs that are not normal such as lumps, sores that fail to heal, abnormal bleeding, persistent indigestion, and chronic hoarseness. Early diagnosis is particularly relevant for cancers of breast, cervix, mouth, larynx, colorectal and skin.

Recognising early signs of cancer leads to earlier diagnosis and increases the chances for successful treatment. Each of us can be empowered with the right information to know what's normal for our bodies and recognise unusual changes and seek medical help promptly.



#### What can we do as an individuals or health professionals?

- As an **individual**, we can teach ourselves, the people we love – including teachers, parents and caregivers and our communities - about the common signs and symptoms.
- **Health professionals** need to understand the signs and symptoms to avoid misdiagnosis and understand and encourage the value of early detection in their patients

### *Screening for cancer*

Screening refers to the use of simple tests across a healthy population in order to identify individuals who have the disease, but do not yet have symptoms. Some cancers that can be effectively screened for includes bowel, breast, cervical, colorectal (colon) and lung.

The Ministry of Health Malaysia (MOH) provides screening services for the following four types of cancers (breast, cervical, colorectal and oral). These services are available at public health clinics throughout the country. Cancer screening for high-risk groups for certain cancers such as liver, prostate and nasopharyngeal cancers are available in hospitals. Lung cancer screening using Low Dose CT Scan is provided by certain Private Hospitals with certain cost. The breast, cervix and colorectal screenings are also provided by other Government facilities such as University, Private facilities and NGO's.

Following the current COVID-19 pandemic, screening services provided by government clinics requires patient to get an appointment prior to clinic attendance. Most clinics in Kuala Lumpur, Selangor, Putrajaya, Negeri Sembilan and Johor offers an online system for appointment booking and it is accessible via these website;

- (1) Kuala Lumpur, Selangor, Putrajaya, Negeri Sembilan: <https://qmed.asia/booking> or <https://www.doctoroncall.com.my/find-doctor/kementerian-kesihatan-malaysia>
- (2) Johor: <http://jknj4.moh.gov.my/qrtca/>



### What can we do as individuals or health professionals?

- As **individuals**, we should go for cancer screening at nearby health facilities regularly at the prescribed intervals. We can also encourage our family members, friends, neighbours and local community to come forward for cancer screening. In addition, we should share correct and accurate information on cancer screening to address misconception within the community.
- **Health professionals** should promote screening services that is available, to all eligible patients and their family members, at every encounter. They should advice patients on the availability of proven screening modalities and encourage eligible individuals to undergo screening.

### *Myths, misinformation and stigma*

Some common myths and misconceptions about cancer - including that there is no cure or there is nothing that can be done about cancer - can understandably cause fear. However, misinformation, misconceptions and stigma around cancer creates a negative cycle that further acts to confirm one's fears which subsequently can prevent those affected from seeking early detection, or to delay or avoid treatment and care altogether.

Hence, by receiving diagnosis at a late stage or avoiding seeking treatment, or opted for certain unproven therapy will result in worst outcomes, in which will perpetuate the myths and misconceptions of cancer being incurable or untreatable.



### What can we do as individuals?

- **Access accurate cancer information** – By being informed, one can counter their own misconceptions and reduce their own fears around cancer. Through knowledge, awareness and understanding, one can empowered to challenge negative beliefs and attitudes and behaviours in others that perpetuate myths about cancer.

- **Use your voice** – By talking, we can help to reduce fear and stigma and discrimination, shift perceptions and strengthen support for people with cancer.
- **Understand different cultural beliefs** – Understanding cultural beliefs and practices around cancer is essential in responding to it and changing attitudes and dispelling common myths.
- **Empower individuals and communities** – Governments, communities, employers and media all have a role to play to challenge perceptions about cancer to create a culture and a population where people living with cancer do not face discrimination in the workplace, in the health system or in our society.

## Prevention and risk reduction

According to the World Health Organization (WHO), at least one third of cancers can be prevented through lifestyle choices alone. Hence, by adapting healthy diet, maintaining a healthy weight and being physically active, it gives us the best chance to prevent and reduce our cancer risks.



Tobacco use is the single largest preventable cause of cancer and stopping smoking is one of the best things we can do to reduce our risk of cancer. Besides lung cancer tobacco use also increases risk of oral cancers, lung, liver, stomach, bowel and ovarian cancers, as well as some types of leukemia. Smokeless tobacco products are a major source of cancer-causing nitrosamines and a known cause of human cancer, particularly mouth and throat, esophagus and pancreas<sup>6</sup>.

Quitting at any age can make huge a difference, increasing one's life expectancy and improving quality of life.

Malaysia is a signatory and has ratified the WHO Framework Convention on Tobacco Control (FCTC) and implementing all components under this framework. To protect the health of non-smokers, the MOH has already gazetted more than 20 non-smoking areas. Last year, on 1<sup>st</sup> January 2019, MOH gazetted all eateries as a non-smoking area, and, an educational enforcement was carried out throughout the year. Starting from 1<sup>st</sup> January 2020, the regulation is now fully enforced.

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<sup>6</sup> Source: American Cancer Society, Cancer Facts & Figures 2014





### *Alcohol*

Alcohol is strongly linked with an increased risk of several cancers. By reducing and limiting how much you drink, you can reduce your risk of cancers of the mouth, pharynx, larynx, esophagus, bowel and breast, and may also reduce the risk of liver and bowel cancers.



### *Physical activity*

Maintaining a healthy weight and making physical activity part of your everyday life can help reduce your risk of ten cancers, which include bowel, breast, uterine, ovarian, pancreatic, esophagus, kidney, liver, advanced prostate and gallbladder cancers.



### *Vaccination*

Chronic infections (commonly caused by viruses) are estimated to cause approximately 16% of all cancers globally. Some of the most common forms of cancers such as liver, cervical and stomach cancers are associated with infections with the hepatitis B virus (HBV), the human papillomavirus (HPV), and the bacterium *Helicobacter pylori* virus (H. pylori), respectively. Currently, there are safe and effective vaccines against HBV and HPV, which can help to protect against the infection-related cancers of liver and cervical cancers.

MOH provides free HBV vaccination for the newborns since 1989 and HPV vaccination for 13 years old girls (Form One) since 2010 respectively. The HBV vaccination coverage for 3<sup>rd</sup> dose completion and HPV vaccination 2<sup>nd</sup> dose completion was 99.16%\* and 82.23%\*\* respectively<sup>7</sup>.



### **What can we do as an individuals or health professionals?**

- As **individuals** we can take responsibility for our health, including getting vaccinated and reminding others to get vaccinated, maintaining a healthy and active lifestyle, avoiding alcohol, tobacco and excessive/prolonged sun exposure
- **Schools** can be champions of healthy behaviours among children, staff, parents, families and the wider community by cultivating an environment that supports good nutrition and physical activity, as well as providing information on other cancer risk factors.

<sup>7</sup> MOH Health facts 2019

\* Denominator: Live Birth 2017 (DOSM)

\*\* Denominator: Female population aged 13 years (DOSM)

- **Workplaces and employers** can implement measures in the workplace that will motivate and sustain healthy habits throughout a person's everyday life and put in place policies to prevent occupational exposure to cancer-causing agents, such as asbestos and other workplace carcinogens, as well as fostering physical activity, healthy nutrition and creating smoke-free spaces.
- **Cities and communities** can take the lead in creating a quality urban environment that promotes and protects the health and wellbeing of its citizens.

## Beyond physical: mental and emotional Impact

Quality cancer care includes dignity, respect, support and love and considers not just the physical impact of cancer but respects the emotional, sexual and social wellbeing of each individual and their care.



### *Preserving dignity*

Many cancer patients and their families describe feeling a loss of control of their lives after a cancer diagnosis. Patients and families should be empowered to participate actively in decisions about their care and treatment plan which respects their individual needs and preferences. This can go a long way in helping individuals to regain a sense of control and preserve their dignity throughout their cancer journey.



### *Body image and sexual wellbeing*

Physical changes that can occur during and after treatment such as the removal of a part of the body, hair loss, speech impairment or urinary incontinence can affect the way patients look and feel about themselves. Issues of body image and sexuality can have a significant impact on partner relationships, with cancer patients and survivors facing issues around self-esteem and sexual intimacy.



### *Support and love*

Studies have found that cancer support groups can enhance self-esteem, reduce depression, decrease anxiety and improve relationships with family members and friends. For a person living with cancer, strong emotional support and loving relationships with partners, friends and families can make a big difference in their life.



### *Caregivers*

Cancer carers – most commonly partners, family members or friends – often receive little preparation, information, or support to carry out their vital role. Often, carers also put their own needs and feelings aside to focus on the person with cancer which can lead social isolation and depression in some cases.



### *The power of colleagues*

Many people living with cancer want to return to work. Sometimes the people at work make up another vital network of support. Talking about cancer with colleagues as well as keeping in touch during work absences can have a positive impact on recovery.



### **What can we do as individuals or health professionals?**

- As **individuals**: find out more about cancer services in your country or region, help to share accurate information about cancer to dispel myths and misconceptions, support those individuals around you
- As **caregivers**: take advantage of support services in your country or region or online to support yourself and your family member/friend with cancer, these services might be able to direct you to more resources
- As **employers/colleagues**: explore how you can support colleagues or employees with cancer (or caregivers) through measures like flexible working hours or creating an open environment to talk (or not talk) about cancer.

## **Financial and economic burden**

There is a compelling financial argument for committing resources to cancer control. Financial investment can be cost-effective and can potentially save the global economy billions of dollars in cancer treatment costs and offer positive gains in increased survival, productivity and improved quality of life. Individuals living with cancer and their carers often take a double-hit on their finances. Out-of-pocket expenditures for ongoing and expensive treatments like surgery or chemotherapy and lost income and benefits from taking time off work can combine to create a catastrophic financial burden. For many, this can lead to drained savings, borrowing money or selling assets. Those who struggle often give up on going to medical appointments because of the cost of transportation, cutting back on food, education and/or defaulting on bill payment.

Cancer treatment does take a big toll on patients and their families. The ASEAN Costs in Oncology (ACTION) study conducted by the George Institute for Global Health found 45% of cancer patients in Malaysia are actually facing financial catastrophe a year after diagnosis; i.e. the cost of treatment exceeds 30% of family income; after a year being diagnosed with cancer. They have spent their money and are no longer able to pay the costs<sup>8</sup>.

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<sup>8</sup> ASEAN Cost in Oncology (ACTION) Study 2015. NMRR-11-800-10093

## Reducing the skills gap

One of the biggest obstacles we face today in delivering quality cancer care is the shortage of trained healthcare professionals. Addressing the gap is the clearest way to achieving progress in reducing cancer.

### *The skills shortage*

In many parts of the world and especially in remote and rural regions, there is a severe shortage of healthcare providers for cancer (especially oncologists and oncology nurses). In fact, some countries do not have clinical oncologists to provide care. In addition to a shortage of general oncologists, there is also a lack of specialist oncologists, for example gynaecological oncologists with skills and experience in ovarian, cervical and vaginal cancers, and in paediatric oncology, where clinicians and nurses specialised for cancer care in children, are very limited in number.

As the number of cancer cases rise and the skills gap widens, this exerts pressure on healthcare workers and health systems, impacting on the quality of care for patients and further exacerbates the cancer health disparities that already exist.

### *The skills gap*

Inadequate education of healthcare providers is one of the most urgent issues in delivering and receiving quality cancer care. To ensure accurate diagnosis and quality treatment, we must address the skills gap. One way to do this is by training healthcare providers across the entire cancer care continuum. Also, healthcare providers can be trained to recognise the early signs and symptoms, understand appropriate early detection measures, ensure the safe and proper administration of cancer treatments and be able to deliver palliative care and pain and distress management.



### **What can we do as individuals or health professionals?**

Advocate for more resources in training, thereby increasing the number of healthcare workers in oncology

- Address policies on strategies for retention of skilled healthcare workers
- Healthcare workers can support the development of locally adapted, culturally sensitive materials to improve knowledge transfer
- Educators can increase the use of mobile and online technology to complement traditional methods
- Hospitals, clinics and governments can where possible build on existing materials, training networks and infrastructure
- Engage traditionally non-cancer specialists such as community health workers, clinical health assistants, nurses and physicians in cancer care tasks (e.g., effective clinical breast exams, performing diagnostic tests).

## Working together as one

Working together towards common goals allows us to share skills, knowledge, perspectives and networks so that we are in the best position to drive action on all fronts at every level. We need strategic collaborations that involve civil society, companies, cities, international organisations and agencies, research and academic institutions to help expand awareness and support, convert political will into action and deliver comprehensive and cohesive solutions.



### *Governments*

By placing cancer at the heart of national health plans, governments have the power to save millions of lives. Policy makers have the legal and regulatory power to enact policies that can reduce exposure to cancer risk factors, encourage early detection and diagnosis of cancers, and improve access and availability of essential cancer medicines and quality cancer care.

Working alongside patients, families, healthcare providers and civil society, governments can implement effective policies and programmes that addresses their country's unique situation, needs and resources.



### *Companies*

There is a huge opportunity to use the workplace to drive cancer prevention and early detection. Workplaces of all sizes can adopt policies and programmes that empower employees to adopt healthier behaviours through providing access to healthy food options, promoting active transport to and from work, and increasing movement in the workplace, through use of stairs. Wellness programmes can also promote early detection by using communications channels to share information about the signs and symptoms of some cancers and where appropriate, encourage and support participation in cancer screening programmes for early diagnosis.



### *Schools*

Healthy habits and behaviours established at a young age and at adolescence can last a lifetime. Every school can foster a culture of healthy choices and habits by providing nutritious food and drink choices, as well as time for recreation and sport, and putting practical education about food, physical activity, and the cancer risks of smoking and alcohol consumption on the school curriculum.

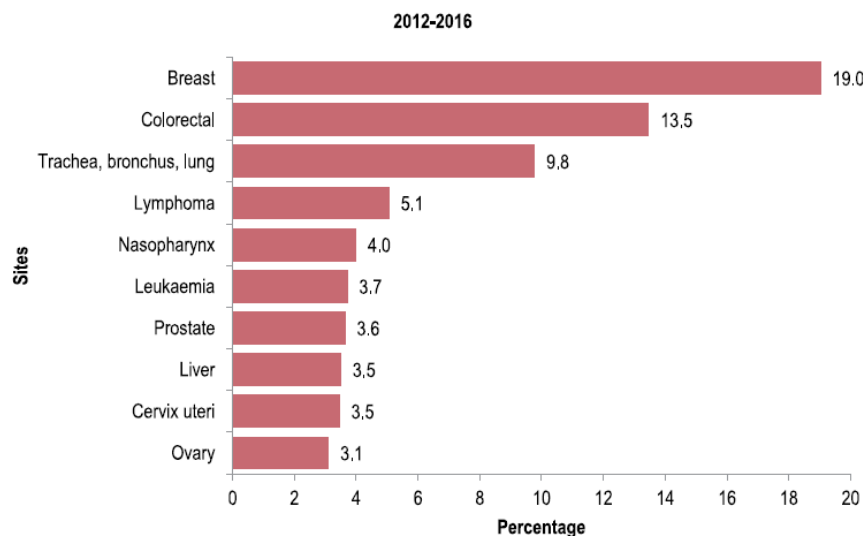
# Cancer Situation in Malaysia

## Overview

The Malaysian National Cancer Registry Report 2012-2016<sup>9</sup> estimated that the lifetime risk in developing cancer for Malaysian male and Malaysian female are one in ten and one in nine respectively. In cancer, early detection and prompt treatment improves the chances of cure. Unfortunately, delays in presentation are commonly found among our cancer patients. Almost 60% of cancers in Malaysia are detected late (stage III and IV). This is mainly because most of the patients did not come early for check-ups or screening. Detecting cancer at late stages lead to higher cost of treatment and reduce chances of cure.

## The Statistics

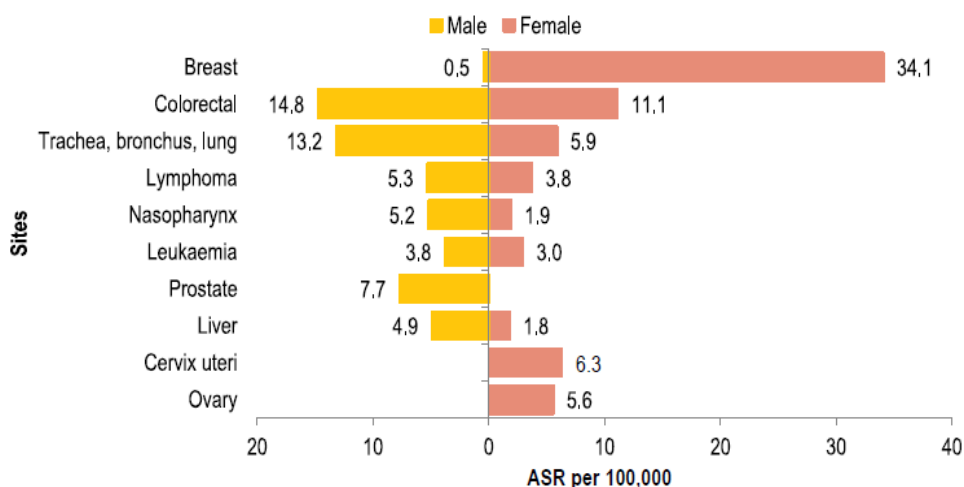
The ten most common cancers in general population, regardless of gender and ethnicity in Malaysia for the period of 2012-2016 are as shown in **Figure 1** below. The most common cancer was breast (19.0%) followed by colorectal (13.5%) and lung (9.8%).



**Figure 1:** Percentage of ten most common cancers, all residents, Malaysia, 2012-2016

<sup>9</sup> Malaysia National Cancer Registry 2012-2016 (June 2019)

The ten most frequent cancers in general population, males and females in Malaysia for the period of 2012-2016 are shown in **Figure 2**. The three most common cancers among males in Malaysia were colorectal (14.8%), lung (13.2%) and prostate (7.7%); whilst the three most common cancers among females in Malaysia were breast (34.1%), colorectal (11.1%) and cervix (6.3%).



**Figure 2:** Age-standardised rate for ten common cancers by sex, Malaysia 2012-2016

## Most Common Cancers in Malaysia



### Breast Cancer

Breast cancer is the most common type of cancer affecting women in Malaysia and accounted for 34.1% from all cancers. The incidence of breast cancer was highest among Chinese, followed by Indian and Malays. Risk for Chinese female was 1:22, Indian female was 1:23 and Malay female was 1:30. The percentage of breast cancer detected at stage III and IV was 47.9%. About one in 27 women in this country are at risk of developing this cancer.

### Signs and symptoms

The signs and symptoms may vary from person to person. However, having any of the abnormal findings in the list below should lead to a suspicion of breast cancer:

- A lump which is hard, fixed or irregular. Sometimes it appears as a thickening mass in the breast or axilla
- Enlargement of lymph nodes in the axilla
- Nipple discharge or retracted
- Scaly skin around nipple
- Dimpling of the skin or skin become like orange
- Change in size and shape of breast

## Risk Factors

Non-modifiable risk factors	<ul style="list-style-type: none"><li>• Gender</li><li>• Aging</li><li>• Genetic risk factors</li><li>• Family history of breast cancer</li><li>• Personal history of breast cancer</li><li>• Certain benign breast conditions</li><li>• Early menarche (before age 12 years) or and late menopause (after age 55 years)</li><li>• Nulliparous</li></ul>
Modifiable risk factors	<ul style="list-style-type: none"><li>• Alcohol intake</li><li>• Overweight or obese</li><li>• Tobacco smoke</li><li>• Physical inactivity</li><li>• Hormone replacement therapy (HRT)</li><li>• Not breastfeeding</li></ul>

## Screening

To identify asymptomatic individuals who may have the disease.

a. Clinical Breast Examination (CBE)	<ul style="list-style-type: none"><li>• Is done by health care providers (doctor or paramedic)</li><li>• To detect breast abnormality</li><li>• Age 20 to 39 years: every 3 years</li><li>• 40 years and above: every year</li><li>• High risk women, at any age: every year</li><li>• Patients are referred for mammogram if abnormality is detected</li></ul>
b. Mammogram	<ul style="list-style-type: none"><li>• Recommended for high risk women aged 40 years and above with certain criteria such as strong family history</li><li>• Mammography <b>may</b> be performed biennially in women from 50-74 years of age</li></ul>
c. Breast Self Examination (BSE)	<ul style="list-style-type: none"><li>• Is not a screening modality</li><li>• Women are encouraged to do BSE monthly to detect any abnormalities at their breast</li></ul>



## Challenges for early detection

- Poor uptake of screening
  - A cross-sectional study to determine the practice and barriers of mammography among Malaysian women in the general population was executed in 2012<sup>10</sup>. It is reported that lack of time (42.5%), lack of knowledge (32%), not knowing where to go for the test (21%) and fear of the test result (20%) were the most important barriers to Mammography screening.
- Poor public awareness in the availability of screening services
- Poor awareness in recognising the early signs and symptoms
- Ignorance: Fear of the disease and facing the reality leads to late screening
- Culture & social barriers: shy, myths and society perceptions, poor family support
- Limited resources in certain hospital settings
- Logistic limitations for people living in rural settings



## Colorectal cancer

In Malaysia, colorectal cancer is the overall second most common cancer after breast. Amongst men, it is the most common cancer whereas it is second most common among women in Malaysia (MNCR 2012-2016). The incidence increases with age and is slightly higher in males compared to females. The standardised incidence rate (ASR) for male is 14.8 per 100,000 population and for female is 11.1 per 100,000 population. The incidence is highest among Chinese, as compared to Malay and Indian ethnicities. Colorectal cancer can be detected early through screening. According to MNCR 2012-2016 report, 72.4% males and 73.1% females of colorectal cancer patients were diagnosed at stage III and IV.

## Signs and symptoms

- A change in bowel habits, including persistent diarrhoea or constipation or a change in the consistency of stool
- Rectal bleeding or blood in stool
- Persistent abdominal discomfort, such as cramps, gas or pain
- Tenesmus
- Weakness or fatigue
- Unexplained weight loss

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<sup>10</sup> Al-Naggar RA, Bobryshev YV (2012). Practice and Barriers of Mammography among Malaysian Women in the General Population. Asian Pacific Journal of Cancer Prevention, Vol 13: 3595-3600.

### ***Risk factors***

Non-modifiable risk factors	<ul style="list-style-type: none"><li>• A personal history of colorectal cancer or polyps</li><li>• Inflammatory intestinal conditions such as ulcerative colitis and Crohn's disease</li><li>• Family history of colon cancer</li><li>• Age</li></ul>
Modifiable risk factors	<ul style="list-style-type: none"><li>• Low-fiber, high-fat diet</li><li>• Diets high in red meat and processed meat</li><li>• Sedentary lifestyle</li><li>• Obesity</li><li>• Smoking</li><li>• Alcohol</li><li>• Diabetes (people with diabetes and insulin resistance may have an increased risk of colon cancer)</li></ul>

### ***Screening***

- In Malaysia, colorectal cancer screening is offered to every asymptomatic male and female aged 50-75 years
- Test is done using Immunological Faecal Occult Blood Test (iFOBT)
- Those who have positive iFOBT are referred to hospital for confirmatory diagnosis using colonoscopy

Note: Those who present with signs and symptoms or have higher risk (such as strong family history, history of colonic polyps and inflammatory bowel diseases) are to be assessed properly and referred for colonoscopy

### ***Challenges for early detection***

- Poor awareness on signs and symptoms for colorectal cancer
- Poor screening uptake among clients
  - A study to evaluate the participation and barriers to colorectal cancer screening in Malaysia was executed in 2012<sup>11</sup>. The study reported that the main patient factor was embarrassment (35.2%), main test factors was feeling uncomfortable (30.0%) and about 11% of respondents never received any advice to do screening.
- Current limited scope facilities in many MOH hospitals
- Logistic limitations: limited resources and infrastructure in rural areas

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<sup>11</sup> Mohamed Yusoff H, Norwati Daud N, Norhayati Mohd Noor N, Abdul Rahim A (2012). Participation and Barriers to Colorectal Cancer Screening in Malaysia. *Asian Pacific J Cancer Prev, Vol 13, 3983-3987*.



## Cervical cancer

In Malaysia, cervical cancer is the third most common cancer among women. However, the incidence rate has decreased from 7.6 (2007-2011) to 6.2 (2012-2016) per 100,000 populations. Around 41% of the cases were detected at Stage III and IV. Infection of the cervix by Human Papilloma Virus is the most common cause of cervical cancer. In women, high-risk types of HPV such as type 16, 18, 31 and 45 cause abnormal changes in the cells of the cervix.

### ***Signs and symptoms***

There are rarely any symptoms in the early stages of cervical cancer. As cervical cancer progresses, symptoms begin to appear and these are:

- Abnormal vaginal bleeding or discharge
- Bleeding after menopause
- Lower back pain
- Pain during sexual intercourse
- Painful urination
- Foul smelling vaginal discharge
- Post coital bleeding
- Pelvic pain

### ***Risk factors***

- HPV infection
- Early sexual debut
- Multiple sexual partners
- Smoking

### ***Screening***

Screening detects any abnormalities in the cervix so that early treatment can be initiated. Cervical cancer screening in Malaysia using conventional Pap smear was initiated in 1969 which then later led to development of “National Pap Smear Screening Programme” in 1998. Previously, the main modality used is either conventional Pap smear or liquid-based cytology (LBC).

However, in recent years, HPV DNA testing has been shown to be more effective than cervical cytology in detection of precancerous cervical lesions. MOH has initiated the first phase of HPV DNA test as a primary screening in 2019 and implementation was planned for four phases. With this approach, HPV DNA test is aimed to be available nationwide by the year 2023 or 2024. At present, HPV DNA screening is available in all government clinics within Wilayah Persekutuan Kuala Lumpur & Putrajaya, Negeri Sembilan, Kelantan, Kedah and two districts in Selangor (Gombak and Klang).

The current screening policy in Malaysia are<sup>12</sup>:

- Target age group: All sexually active women aged 30-49 years old should be screened using HPV DNA.
- Screening HPV DNA via cervico-vaginal sample can be either self-sampling or by health-care professional.
- Screening interval is every five years for those who are tested HPV negative.
- Women less than 30 years old (21-29) and 50-65 years old are advisable for Pap smear screening

### ***Primary prevention***

- Primary prevention is through HPV vaccination
- The MOH provides free HPV vaccination to 13 years old girls (Form One students) i.e. two doses at 0 and 6 months.
- Malaysia is the first country in the region with a national HPV vaccination programme, introduced in 2010 through the School Health Programme and is included under the Extended Programme for Immunisation EPI).

### ***Challenges in early detection***

The major challenge in early detection is the poor uptake in screening. Mostly it is due to:

- Inconvenience and fear
  - A study conducted in 2012 to determine the practice and barriers towards cervical cancer screening among University staff at Malaysian University<sup>13</sup>, reported that the most common barrier among study participants was lack of time (29.9%), followed by the excuse that the Pap smear test is a painful procedure (17.9%).
- Embarrassment
- Shame
- Negative experience (such as an uncondusive screening environment in health facilities)
- Lack of awareness on the importance of screening
- **Note:** Poor knowledge in recognising the signs and symptoms leads to late in seeking help from health care providers.

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<sup>12</sup> Source: Guidelines for Primary HPV Testing in Cervical Cancer Screening in Malaysia, Family Health Development Division, Ministry of Health 2019

<sup>13</sup> Al-Naggar RA, Chen R (2012). Practice and Barriers towards Cervical Cancer Screening among University Staff at a Malaysian University. J Community Med Health Edu 2:120.



## Oral cancer

Oral cancer is part of head and neck cancer. Most of oral cancers begin in the tongue and floor of mouth. Although oral cancer is not one of the top 10 common cancer in Malaysia, it is however one of the most common cancer among Indians. According to MNCR 2012-2016, the ASR for oral cancer (lip, mouth, tongue) were 4.1 per 100,000 population in Indian males and 7.1 per 100,000 in Indian females. As opposed to ASR 1.0 and 1.8 per 100,000 Malay males and Chinese males respectively; ASR 0.9 and 1.2 per 100,000 Malay females and Chinese females respectively.

Oral cancer has an overall survival rate of only 50%<sup>14</sup>. But if detected early, the survival rate is very high up to 90%.

### ***Signs and symptoms***

- Sore or ulcers in the mouth which do not heal within 2 weeks
- White or red patches, or both in the mouth
  - White patches (leukoplakia) are the most common and sometimes become malignant.
  - Mixed red and white patches (erythroleukoplakia) are more likely than white patches to become malignant
  - Red patches (erythroplakia) are brightly coloured, smooth areas that often become malignant
- Swelling or lumps in the mouth, face or neck
- Pain upon swallowing
- Difficulty in chewing and moving the jaw or tongue
- A persistent unexplained earache
- Unexplained loose or wobbly tooth
- Numbness of the tongue or mouth

### ***Risk factors***

- Smoking or chewing tobacco
- Betel quid chewing
- High alcohol consumption (synergistic with tobacco)
- *Human Papillomavirus* (HPV) infection
- A personal history of head and neck cancer

Other possible risk factor includes:

- Exposure to secondary smoker
- Family history of cancer

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<sup>14</sup> Anna Carolina Omena Vasconcellos Le Campion, Camila Maria Beder Ribeiro, Ronir Raggio Luiz, et al., "Low Survival Rates of Oral and Oropharyngeal Squamous Cell Carcinoma," *International Journal of Dentistry*, vol. 2017, Article ID 5815493

### ***Screening***

Screening for oral cancer targeted individuals without any signs and symptoms. Screening method includes Mouth Self Examination (MSE) by patient or by Clinical Oral Examination (COE) by dentist, to check for any abnormalities within the mouth. COE can be done in public or private dental clinics around Malaysia but it is based on opportunistic screening.

### ***Challenges in early detection***

Most health professionals do not regularly examine the mouth and some are not properly trained to evaluate lesions. Hence delay in recognizing the disease will lead to late referral and late diagnosis.



### **Lung cancer**

Lung cancer is the second most common cancer among males and third most common cancer in Malaysia. The MNCR 2012-2016 showed that the incidence rate for male was 13.2 per 100,000 population and 5.9 per 100,000 population for female. As comparison to the previous 5 years in 2007-2011, the incidence rate shows slight decrement (14.4 per 100,000 population for male and 6.0 per 100,000 for female). The incidence by ethnicity showed that for male, the ASR among Chinese was higher (16.0 per 100,000) compared to Malays (12.5 per 100,000) and Indians (5.7 per 100,000).

The age of peak incidence of lung cancer in Malaysia is the seventh decade of life. Most lung cancer is detected late; whereby more than 70% of the cases were detected at stage IV.

### ***Signs and symptoms***

- Persistent cough
- Coughing up blood or rust-coloured sputum
- Pleuritic chest pain
- Hoarseness of voice
- Weight loss
- Loss of appetite
- Shortness of breath
- Feeling tired or weak

### ***Risk factors***

- Smoking
- Exposure to second hand smoke
- Exposure to occupational hazards such as asbestos and other carcinogens
- Family history of lung cancers

### ***Challenges In early detection***

Lung cancer generally does not cause any signs and symptoms in its earlier stages. Symptoms occur only when the disease is advanced. The only recommended screening test for lung cancer is low-dose computed tomography for persons who are at high risk for lung cancer because of their age and cigarette smoking history. However, it is not cost effective and not applicable for population-based screening.



### **Nasopharyngeal cancer**

Nasopharyngeal cancer (NPC) is the fifth most common cancer in Malaysia (MNCR 2012-2016). It is also the fifth most frequent cancer amongst men with an ASR of 5.2 per 100,000 population. The lifetime risk for males was 1 in 175 whereas for females, the lifetime risk was 1 in 482.

The incidence in men begins to increase at the age of 25 and peaks at the age of 65. The incidence is higher among Chinese compared to the other major ethnic groups in the country. The incidence rate of this cancer in Malaysia is amongst the highest in the world, especially in certain ethnic groups in Malaysia (Bidayuh, Chinese, other indigenous people of Sabah and Sarawak and Malay) have increased risk of NPC compared to the average world population.

### ***Signs and symptoms***

The common signs and symptoms are:

- A painless lump at the neck area is the commonest sign
- Unilateral hearing loss
- Tinnitus (ringing in one ear)
- Fluid collection in one ear
- Blocked or stuffy nose – particularly if unilateral
- Numbness of the lower part of the face

The other symptoms may include:

- Frequent blood stained saliva or blood stained nasal discharge
- Frequent headaches
- Blurred or double vision
- Unexplained weight lost
- Fatigue
- Dysphagia (difficulty in swallowing)
- Changes in voice – such as hoarseness

***Risk factors***

- Family history
- Epstein-Barr virus (EBV) infection
- Diet high in salt- cured fish and meat
- Smoking
- Alcohol
- Chemicals such as formaldehyde

***Challenges in early detection***

- There is no specific screening program available
- Failure to recognise common presenting symptoms of NPC
- Patients presenting late to seek advice
- Lack of awareness about NPC among the public
- NPC screening using EBV DNA testing was reported to be able to downstage NPC. A Health Technology Assessment done by MOH in 2011 revealed that there is fair evidence to demonstrate acceptable diagnostic accuracy of the EBV serological test in a NPC screening programme; however, there is no evidence on cost-effectiveness.

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For further information on World Cancer Day 2021 celebration and the factsheet, please contact Cancer Unit, Ministry of Health Malaysia:

Dr. Nor Saleha Ibrahim Tamin  
Public Health Physician

☎ 03-8892 4411

✉ drnorsaleha@moh.gov.my

Dr. Siti Norain Sallahuddin  
Medical Officer

☎ 03-8892 4520

✉ ppctnor@moh.gov.my