



MINISTRY OF HEALTH



MALAYSIA NATIONAL CANCER REGISTRY REPORT 2012-2016





MALAYSIA NATIONAL CANCER REGISTRY REPORT (MNCR) 2012-2016

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■ PREFACE

This is the second five-year report of the Malaysia National Cancer Registry (MNCR) since it was established in all states in 2007. The first five-year report for the incidence period of 2007-2011 was published in 2016. The data reported in this report were gathered from 13 states and 2 federal territories population-based cancer registries in the country.

This report is based on new cancers diagnosed in Malaysia for the period of 1st January 2012 through to 31st December 2016 and only captured for Malaysian citizens and residents. The cancer registry database is dynamic, and the data are continually updated in the light of the most recent available information. Accordingly, the numbers in this report for the earlier years may vary slightly from those in previous publications. The data reported in this report were as they stood on the 31st June 2019.

This publication should help health professionals, policy-makers and researchers to identify and make decisions about areas that need more attention and investigation. This publication may also be valuable for the media, educators and members of the public with an interest in cancer. Cancer trends should be interpreted by examining rates over the past several years. This is because there is some random variation in the incidence rates from one year to another. Further, the numbers for latest years might be slightly under reported due to delayed notification of cancer cases as the notification is not mandatory in Malaysia.

The registry collects and disseminates reliable population-based cancer data to assist in the planning of services and in the prevention and treatment of cancer. In addition, timely, accurate, reliable and validated information on cancers occurring in the country is crucial in the planning of effective preventive and management strategies for cancer. Much time and effort has been put into accuracy, completeness and data quality, in the process of collecting the data and in preparing this report. We sincerely hope that the data in this report would be used as a reference material.

We wish to record our thanks to all participating hospitals, clinics, institutions, and laboratories for their cooperation and regular notifications to the respective state cancer registries. We also wish to extend our appreciation to Health Informatics Centre (HIC), Ministry of Health and National Registration Department for their assistance.

Editorial Team

FOREWORD



I would like to acknowledge the admirable teamwork by National Cancer Registry and States Cancer Registries team members who have been involved in producing, gathering and processing the data for the Malaysia National Cancer Registry (MNCR) for the incidence year of 2012-2016.

This is the second five-year MNCR report published by the National Cancer Institute. It is a continuation of report which was produced earlier in 2016 for the incidence year of 2007-2011. This makes us to perceive the cancer trend from all aspects while comparing in a bigger picture.

To understand the impact cancer is having on our community, it is important to monitor the number of people who are affected by the disease, and to what extent. For this reason, the National Cancer Registry regularly gathers information about the number of people diagnosed with cancer, the type of cancers being diagnosed and how advanced the disease is, the number of people who die from cancers and the proportion of people who survive cancer within certain time periods. It is important to look at these data over time. This will show any changes, and look at whether there are any differences between genders, ethnicity groups and geographical areas. This helps to inform cancer control programs at a national, state and local level.

The information from this communiqué will enhance in tailoring the project, harmonization of pertinent allotment of resources and dissemination of cancer care. The success of cancer care is reflected by early detection, prompt treatment and survival improvement after the patient being diagnosed.

In developing national cancer control programmes, it is important for all agencies to create optimal conditions while undertaking a strategy development process for cancer control. This condition includes political will with commitments, collaboration among key national organizations and cost of proposed programmes with regards to reduction in mortality from cancers. This report marked another milestone in strengthening cancer prevention and management in this country.

I would also like to extend my sincere appreciation and gratitude to all the medical oncologist consultants in the country, public health physicians, pathologists, medical record team members in the hospitals and state cancer registries for their contribution to this report.

Thank you.

A handwritten signature in black ink, appearing to read 'Jheh'.

DATUK DR. NOOR HISHAM ABDULLAH
Director General of Health, MALAYSIA

■ MESSAGE



Cancer continues to be a leading cause of premature death and illness in Malaysia, which has a significant impact on the community, and the Malaysian health system. Reducing the incidence of cancer, while ensuring the best quality care and outcomes for those who experience the disease, are key priorities of the Ministry of Health and other related agencies overall.

The cancer burden has increased due to several factors, such as population growth and ageing. It is also linked to economic and social development in a way of rapidly growing economies, particularly cancer related to poverty and lifestyle related infections caused-cancer mimic to industrialised countries.

Since 2007, the National Cancer Registry (NCR) has led the reporting of Malaysian National Cancer Registry based on data collected through 13 states and 2 federal territories cancer registries, which provides nationwide cancer data and information to all related professionals, policy makers, primary health care networks and participating private hospitals.

These data enable the health system to identify opportunities to improve cancer prevention initiatives; enhance early detection by screening programs; and optimise treatment services and clinical trials at a national and local level. Early detection, screening, and diagnosis have been proven to significantly improve patients' survival rates and quality of life as well as significantly reduce the cost and complexity of cancer treatment. However, barriers to achieving higher rates of early cancer detection need to be addressed now at the individual, health system, and governmental level to significantly reduce the personal and financial burden of cancer worldwide.

According to WHO, the need for urgent action to increase early stage cancer detection, screening, and diagnosis to significantly improve cancer patients' chances of survival. The theme for World Cancer Day 2019, 'I Am and I Will', aims to inspire and encourage actions from individuals, the health community, and governments in order to improve public awareness and access to early detection, screening, and diagnosis. Cancer awareness raising efforts can change these behaviours by emphasizing the importance of early diagnosis and encourage early help seeking which are culturally appropriate.

Finally, I would like to express my gratitude and congratulate the editorial team for their efforts in producing this important report. We look forward to the continuation of such efforts in future publications and provide key data and information across the full spectrum of cancer control, including a greater number of indicators that provides a more comprehensive view of cancer health system performance.

Thank you.

A handwritten signature in black ink, appearing to be 'Dzulkefly Ahmad', written in a cursive style.

DATUK SERI DR DZULKEFLY AHMAD
Minister of Health, MALAYSIA

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11. Director of National Registration Department, Malaysia
12. Chief Statistician of Department of Statistics, Malaysia
13. All medical records team of the government and private hospitals
14. Other staff members of the government and private hospitals, institutions, health clinics and private pathology laboratories

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■ LIST OF ABBREVIATIONS

95% CL	95% Confidence Limit
AR	Age-specific rate
ASR	Age-standardised incidence rate
CI5	Cancer Incidence in Five Continents
CR	Crude incidence rate
CR74	Cumulative Rate
CumR	Cumulative Risk
DCO	Death Certificate Only
DOSM	Department of Statistic Malaysia
ENCR	European Network of Cancer Registries
GP	General Practitioner
HIC	Health Informatics Centre
HDI	Human Development Index
IARC	International Agency for Research on Cancer
IACR	International Association of Cancer Registries
ICD-10	International Classification of Diseases, Tenth Revision
ICD-O-3	International Classification of Diseases for Oncology, Third Edition
KKom	Klinik Komuniti
MNCR	Malaysia National Cancer Registry
MOH	Ministry of Health
MV	Morphological Verified
MySCan	Malaysian Study on Cancer Survival
NCDC	Non-Communicable Disease Control
Non-MOH	Non-Ministry of Health
NRD	National Registration Department
NRIC	Number Registration Identification Card
Other skin	Non-Melanoma skin malignancy
RN	Registration Number
SE	Standard Error
TNM	Tumour, Node, Metastasis
WHO	World Health Organisation
WPKL&P	Federal Territory of Kuala Lumpur & Putrajaya



EXECUTIVE *Summary*

Malaysian National Cancer Registry (MNCR) is a population-based registry that was established nationwide in 2007. The first report of the MNCR covered the period from 2007-2011 which was published in 2016. This report covers the second five-year period from 2012 to 2016 which applies only to Malaysian citizens and residents living in Malaysia at the time of diagnosis.

A total of 115,238 new cancer cases were registered for the period of 2012-2016. 44.7% were among males and 55.3% were among females. The Age-standardised incidence rates (ASR) were 86.1 for males and 101.6 for females per 100,000 populations. The incidence rates for all sites combined were increased by 2.3 in females and slightly reduced by 0.8 in males per 100,000 populations when comparing the last five-year period (2012–2016) with the previous one (2007–2011).

Cancer of the colorectal, lung, prostate, lymphoma, nasopharynx, liver, leukaemia, stomach, skin (non-melanoma) and bladder were the 10 most common cancer sites in males, whereas breast, colorectal, cervix uteri, ovary, lung, corpus uteri, lymphoma, thyroid, leukaemia and skin (non-melanoma) were the 10 most common cancer sites in females.

The relative impact of cancers, however, varies considerably by age. Among children (0-14 years of age), leukaemia and cancer in the central nervous system were the most common. These represent more than 50% of all cancer cases in boys and girls. Among children and adolescents (15-24 years of age), lymphoma was the most common cancer in both sexes. In men (25 years of age and above), colorectal cancer was the most common cancer followed by lung cancer. Among women (25-59 years of age), breast cancer followed by colorectal and cervical cancer were the most common cancer sites, colorectal cancer was slightly more common than breast cancer among the older women (70+).

By ethnicity, the overall incidence rates among Chinese and Indians were reduced slightly, whereas the overall incidence rates among Malays were observed to be increased. The ASR was higher in Chinese than other ethnic groups for most of the leading cancers except for lymphoma and leukaemia which were predominant in Malays.

For the most common cancers in males, the largest incidence increased in rates was observed for prostate and slightly increased in colorectal and bladder. On the positive side, the rates for nasopharynx, lung, lymphoma and leukaemia were reduced. For the most common cancers in females, the strongest increase in incidence rate occurred for breast, corpus uteri and thyroid. A reduction in rates was seen for cancer in cervix uteri, ovary and leukaemia. The probability of being diagnosed with cancer before the age of 75 (CumR) is 9.8 in males (lifetime risk of 1 in 10) and 10.8 in females (lifetime risk of 1 in 9).

Only 52.8% of the incident cases were staged at the time of diagnosis with an increase by 1.8% compared to the previous report 2007-2011. Of these, 15.5% were reported as stage I, 20.8% as stage II, 22.8% as stage III, and 40.9% as stage IV. Most of the cancer cases were detected at late stage as the overall proportion of cases diagnosed at advanced stages (stage III & IV) were increased from 58.7% (2007-2011) to 63.7% (2012-2016).

This report demonstrated a significant increase in number of newly diagnosed cancer cases in the country for the past five years. This is prominently seen in breast, colorectal and lung cancers and despite of the availability of screening programme for the above cancers the percentage of advanced cancer are still alarmingly high. Therefore, effective prevention, early detection and enhanced public awareness must be a priority agenda in strengthening the cancer control programme in Malaysia.

1.0 INTRODUCTION

Ministry of Health has started its population-based cancer registry in 1993 with few regional state cancer registries, and was established nationwide in 2007. The National Cancer Registry Department (NCR) has led the reporting of Malaysia National Cancer Registry report based on data collected through 13 states and 2 federal territories cancer registries in the country. The first five-year report which covered the period of 2007-2011 was published in 2016. This is the second five-year report for the period of 2012-2016.

This report aims to provide an epidemiological profile of cancer in Malaysia to assist medical and health professionals, policy-makers, researchers and agencies in the planning and evaluation of National Cancer Control Programme. Over time, the rankings of the most common cancers, as well as the direction and magnitude of change in incidence rates, have varied among the different cancers.

The trends of cancer incidence are likely a result of an array of factors such as lifestyle changes, population ageing, and a declining fertility rate. Lifestyle and behavioural factors such as obesity, physical inactivity, and smoking increase an individual's risk of developing cancer. As such, it is important to encourage healthful behaviour in individuals to minimise the impact of these risk factors on health. Screening for common cancers such as breast, cervical and colorectal cancers is encouraged, especially for individuals with a family history of the cancer in question.

1.1 Geographical Background

Malaysia covers an area of about 330,534 sq. km (Department of Survey & Mapping Malaysia, 2018), consisting of Peninsular Malaysia and East Malaysia (Sabah, Sarawak and Federal Territory of Labuan). It is separated by the South China Sea and has its frontier with Thailand, Singapore, Indonesia and Brunei.

Peninsular Malaysia is located south of Thailand, north of Singapore and east of the Indonesian Island of Sumatera. East Malaysia comprises most of the northern part of Borneo and shares borders with Brunei and Indonesia. Located near the equator, Malaysia's climate is categorised as equatorial, being hot and humid throughout the year.

Malaysia is divided into thirteen states and two Federal Territories. Eleven states and one Federal Territories are found in Peninsular Malaysia meanwhile, two states and one Federal Territory are found in East Malaysia.

The Peninsular Malaysia consists of the following states (from north to south): Perlis, Kedah, Pulau Pinang (Penang), Perak, Selangor, Federal Territory of Kuala Lumpur and Putrajaya (WPKL&P), Negeri Sembilan, Melaka, Johor, Pahang, Terengganu and Kelantan. The East Malaysia consists of Sabah, Sarawak and Federal Territory of Labuan (W.P. Labuan).



Figure 1. Map of Malaysia

1.2 Malaysian Population and Health Status

The Malaysian population in 2016 was 31.6 million including the non-citizens. The population pyramid and its distribution by sex and age group is shown in Figure 2. Among Malaysian citizens, there were 50.6% males and 49.4% females. Majority were Malays (55.6%), followed by Chinese (23.4%), Bumiputera (13.0%), Indians (7%) and Others (1%).

Table 1. Population by sex, ethnic groups and citizenship, Malaysia, 2016

Variables	Characteristics	NO.	%
Sex	Male	14,371,900	50.6
	Female	14,031,500	49.4
Ethnic groups	Malays	15,796,400	55.6
	Bumiputera	3,688,900	13.0
	Chinese	6,645,700	23.4
	Indians	1,991,600	7.0
	Others	280,900	1.0
	Total	28,403,500	100.0
Citizenship	Malaysian	28,403,500	89.8
	Non-Malaysian	3,230,000	10.2
	Total	31,633,500	100.0

Source: Department of Statistics Malaysia, 2016

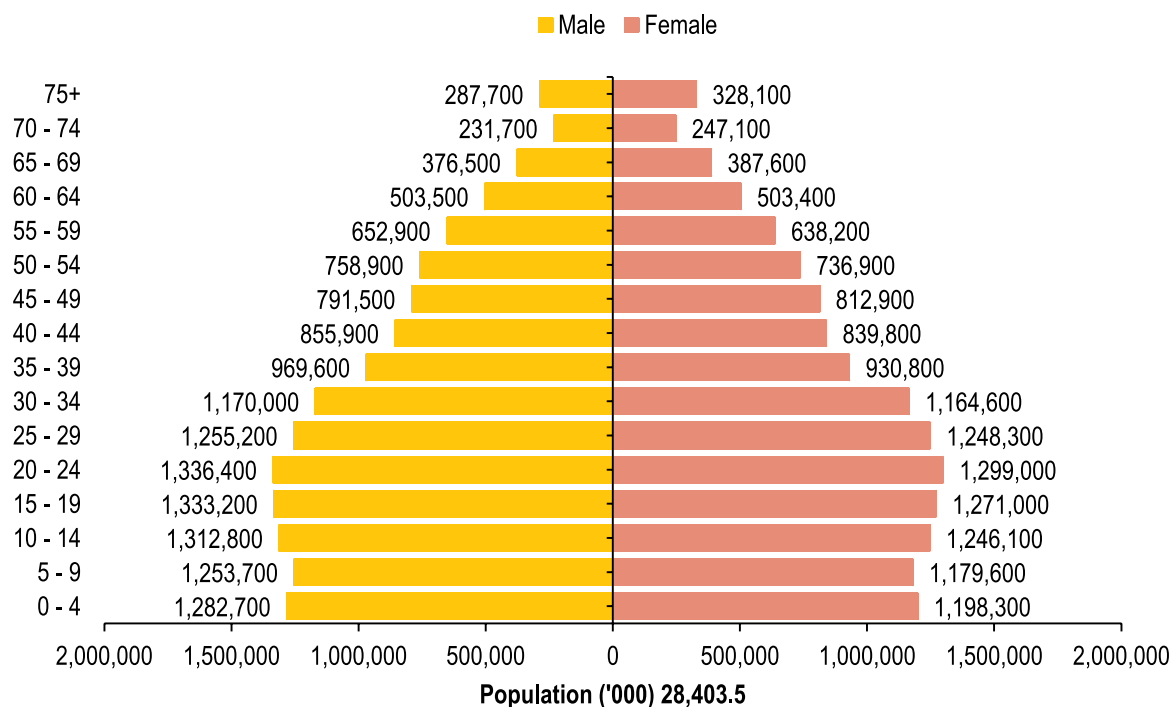
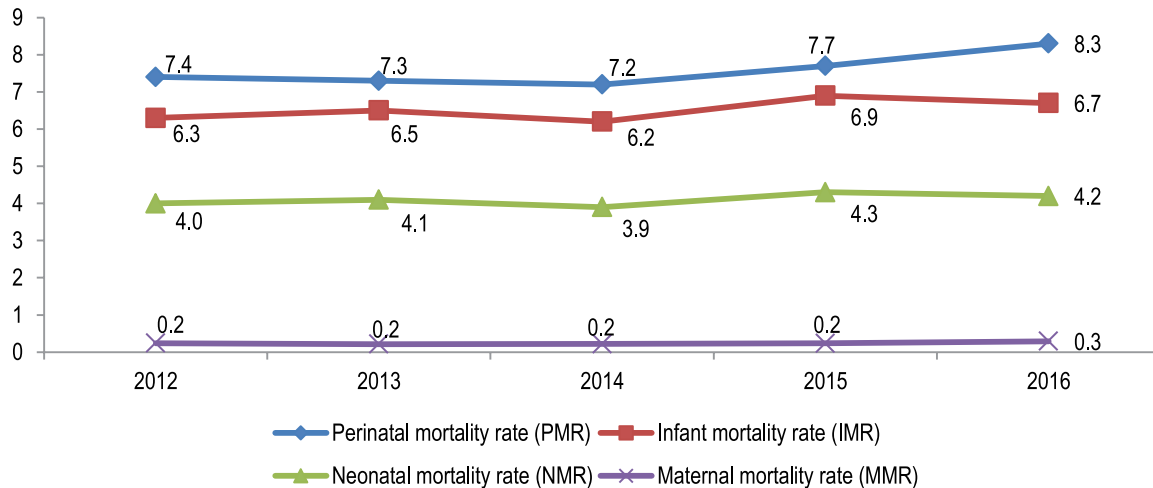


Figure 2. Population pyramid, all residents, Malaysia, 2016

1.2.1 Health Status, Socioeconomic and Health Facilities

Health status: The life expectancy of Malaysian residents continues to rise, reaching 74.7 years in 2016 compared to 72.2 years in 2000. According to report by Statistics Department, a male child born in 2016 can expect to live up to 72.6 years, compared to 71.9 years in 2010, while a female child, up to 77.2 years or up 0.6 years compared to 76.6 years in 2010. The important mortality indicators trends in Malaysia for 2012-2016 as shown in Figure 3.



* Source: Health Informatics Centre, MOH, 2014-2018

Figure 3. Perinatal, neonatal, infant and maternal mortality rates in MOH Hospitals, Malaysia, 2012-2016

Socioeconomic: Malaysia's Human Development Index (HDI) value for 2015 was 0.789 - which put the country in the high human development category - positioning it at 59 out of 188 countries and territories. Between 1990 and 2015, Malaysia's HDI value increased from 0.643 to 0.789, an increase of 22.8 percent. The standard of living is measured by Gross National Income (GNI) per capita expressed in constant 2011 international dollars converted using purchasing power parity (PPP) conversion rates. Table 2 reviews Malaysia's progress in each of the HDI indicators

Table 2. Malaysia's Human Development Index Trends, 2011-2015

	Life expectancy at birth	Expected years of schooling	Mean years of schooling	GNI per capita (2011 PPP\$)	HDI Value
2011	74.3	12.9	10.0	21,348	0.776
2012	74.4	12.9	10.1	21,871	0.779
2013	74.6	13.0	10.1	22,648	0.783
2014	74.7	13.1	10.1	23,644	0.787
2015	74.9	13.1	10.1	24,620	0.789

Health facilities: The following table provides an overview of the health delivery system in Malaysia. An overall number of health facilities and doctors treating all types of diseases are seen in Table 3. From 2012 to 2016 the number of doctors to the population ratio had increased from 1:758 to 1:632. Gradual increases in the total number of government hospitals were from 147 in 2012 to 153 in 2016 and hospital beds from 42,707 in 2012 to 45,678 in 2016. Other public health facilities comprises of government and non-government, form a total of 9,709 in 2012 and have increased to 10,555 by the year 2016.

Table 3. Health facilities and number of doctors in Malaysia, 2012-2016

	2012	2013	2014	2015	2016
No. of Medical Officer					
Government (MOH)	24,277	28,949	33,275	33,545	36,403
Government (non-MOH)	3,201	6,270	NA	NA	NA
Private	11,240	11,697	12,290	12,946	13,684
Total	38,718	46,916	45,565	46,491	50,087
Doctor : Population ratio	1:758	1:633	1:661	1:656	1:632
Hospitals					
Government (MOH)	140	141	142	143	144
Government (non-MOH)	7	8	8	9	9
Private	251	252	223	216	216
Total	398	401	373	368	369
Hospitals Beds					
Government (MOH)	38,978	39,728	40,260	41,389	41,995
Government (non-MOH)	3,729	3,709	3,562	3,698	3,683
Private	14,165	14,602	13,646	13,574	14,619
Total	56,872	58,039	57,468	58,661	55,789
Other facilities					
Gov. Community Clinics (Kkom)	178	254	307	334	357
Government (MOH)	2,856	2,860	2,871	2,869	2,863
Private Practitioners (GP)	6,675	6,801	6,978	7,146	7,335
Total	9,709	9,915	10,156	10,349	10,555

Private Hospitals: Private Hospitals, Private Maternity Home, Private Nursing Home And Hospice

Government (MOH) Health Clinics: Health Clinic, Rural Community Clinic, Maternal and Child Health Clinic

Government (non-MOH) Hospitals: Army Hospitals, University Hospitals,

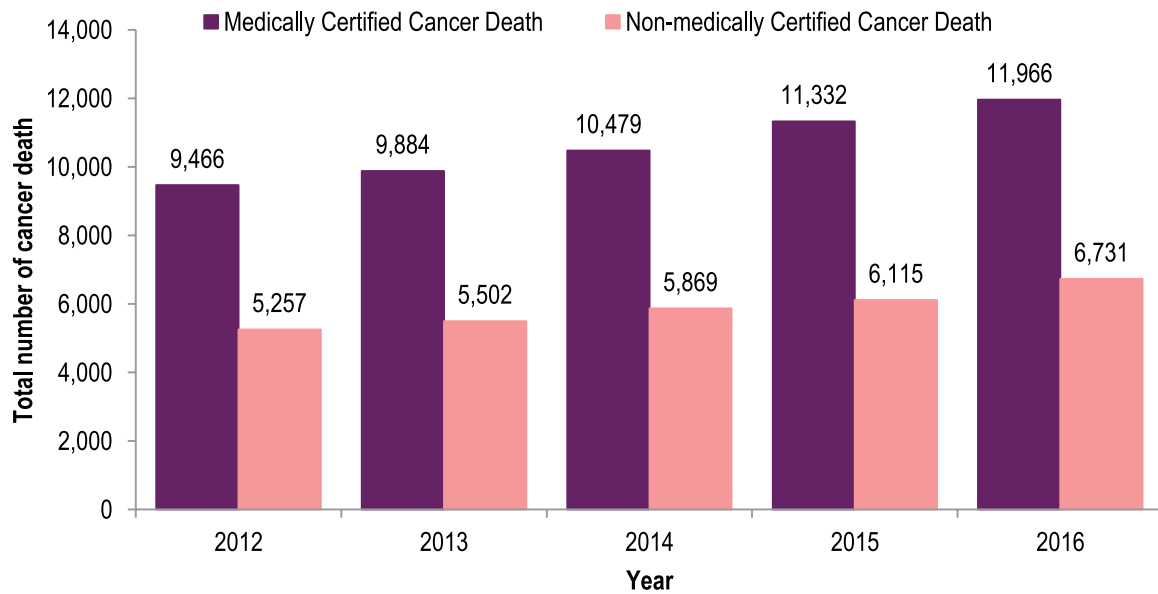
Gov. Community Clinics (Kkom) previously known as 1Msia clinic

NA: Not Available

Source: Health Indicators, Health Informatics Centre, MOH, 2013-2017

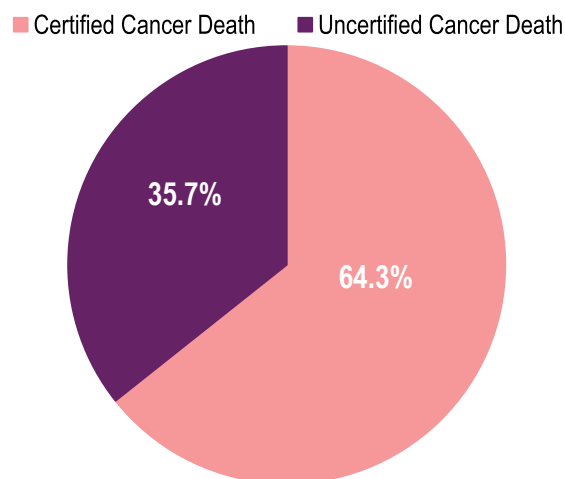
1.2.2 Cancer Death Certification

A total of 82,601 medically certified and non-medically certified cancer deaths were reported by the National Registration Department of the period 2012 to 2016 (Figure 4). Over the years, the numbers of medically certified cancer deaths have gradually increased. The overall percentage of medically certified cancer death was 64.3% and 35.7% are non-medically certified cancer death (Figure 5).



Source: National Registration Department (Death registry 2012-2016)

Figure 4. Number of medically certified and non-medically certified cancer death, Malaysia, 2012-2016



Source: National Registration Department (Death registry 2012-2016)

Figure 5. Certified and uncertified cancer death, Malaysia, 2012-2016

2.0 METHODOLOGY

2.1 Sources of data

As cancer is not a notifiable disease, case registration is based primarily on voluntary notifications. The registry sought to obtain basic epidemiological and clinical data on cases of cancer diagnosed in Malaysia which only captured for Malaysian citizens and residents.

The registry received the notifications from all data source providers in government and private health facilities using a standardised format (Refer Appendix 30). Comprehensive cancer registration was achieved through data obtained from a combination of sources using both passive and active case finding methods, (a) notifications by the medical profession, (b) pathology records, (c) hospital discharges records, (d) mortality data from the National Registration Department (NRD) and hospital death notification, and (e) Hospital based cancer registry. For cancer cases obtained from sources other than physician notification, the data was checked against known registered cases in the registry. If the cases are not in the system, the registry staff will continue with active case findings with the respective facilities. Patient confidentiality was maintained at all times. Passive notification and active case finding are defined as below;

i. Passive notification – registry relies on medical profession or other healthcare workers to complete notification forms and forward them to the registry

ii. Active case finding – collecting at source, whereby registry staff would visit the sources of data to extract the required information and record it onto forms, or to obtain copies of the relevant information. To ensure completeness of the data, active case finding and routine checks were done using government and private hospital discharge records, as well as pathology records from the public and private laboratories. These were supplemented by case detection from death records supplied by the National Registration Department. Any cancer case detected from pathology and death records were then checked with previously registered cases. If they were not yet notified, reminders were sent to the person in-charge for more information. Additional missing data for these cases were also sought by registry staff by searching the relevant hospital records.

2.2 Registration procedure

All updated information collected on hardcopies, either passively or actively, were entered into the Canreg5 software a computer database provided by IARC, Lyon, France (International Agency for Research on Cancer, 2008-2018). As this is a population-based cancer registry, all respective states registries will only register the cases by residential address in their geographical area. Cases from other states will be transferred to the respective state for further action. The outline of the registration process is shown in Figure 6.

Every item relating to the patient was collated and updated which subject to data quality check. All 15 registries registered all new cases of cancer diagnosed in Malaysia by their geographical area. The NCR team consolidated information from all 13 states and 2 federal territories cancer registries for final data quality check and analysis.

Multiple sources of data had assisted in optimising completeness of collection; however, this could create problem of multiple notification of a patient. This issue was addressed by cross checking names, age, date of birth and National Registration Identity Card numbers (NRIC) using CanReg5 software prior to the case registration. Identification card number is a unique number given to each Malaysian citizen.

The CanReg5 program accommodates comparison of essential variables across cases. 80% conformity is the standard used to trigger a further check of duplication. If the patient has been registered before, a check will be

done along with the previous notifications to ascertain if it is a new primary. If the cancer is a new primary, the case is registered with a new registration number and if it is not, the records are updated. Data from hospital discharges and reports from laboratories and death list from NRD were also sent to the registry and the same procedures were followed as described above. The same procedures were followed in NCR in the process of consolidating the data from 15 cancer registries.

Every effort was made to ensure that all the variables were completed. In the event if there was incomplete information, the notification forms with incomplete information were sent back to the respective data providers for further clarification and returned back to the registry upon completion. If there were no clarification, or incomplete forms returned, registries staff would visit the source providers to obtain the required information and to decide whether the case can be registered or not. For most cases the staging used was TNM Classification System. However, for cases with other staging classifications the registry staff assisted in converting it to TNM Classification System too.

Death certificate list were obtained from the NRD, government and private hospitals in the same procedures as explained earlier. Those with mention of cancer on death certificate were identified, and transcripts of associated reports or certificates were used by the registry. If no information was available, then the case would be registered as Death Certificate Only (DCO).

2.3 Quality control

In order to achieve a high validity and accuracy of data MNCR used the same five common indices as indicated in the Cancer Incidence in Five Continents (CI5), Volume XI (Bray et al., 2017) which are (a) Internal consistency; (b) Histological verification; (c) Death certificate only (DCO); (d) Other and unspecified cases (ill-defined cases), and (e) Age unknown.

To ensure data comparability and accuracy, all cases notified to the registry must follow the IARC rules as follows;

Definition of Incidence Date: We use the standard recommendation for the definitions of incidence given by the European Network of Cancer Registries (ENCR) (Tyczynski et al., 2003).

Coding: Topography and morphology were coded to the International Classification of Diseases for Oncology (ICD-O-3) (World Health Organization, 2013).

Multiple Primaries: Registration of multiple primary cancers is in accordance with the IARC/IACR rules (IARC, IACR & ENCR, 2004).

Consistency Check: The logical inconsistencies between the variables in each cancer record were checked using IARC tools. The variables in each record were checked for eligibility (e.g. age and cancer behaviour), definite errors (e.g. sex site errors, invalid dates, impossible date sequence, and missing vital status), and possible errors, including a wide range of inconsistencies between age, cancer site, and morphology.

Morphology verification : The proportion of cancer records with morphological verification of the diagnosis were examined, whether from histology of a biopsy or surgical specimen, cytology of a smear or bone marrow aspirate, or from imaging or biomarkers, including tumours with a specific morphology code.

All data supplied for this report were coded to ICD-O-3, and then were converted to ICD-10 by the system for analysis and report writing.

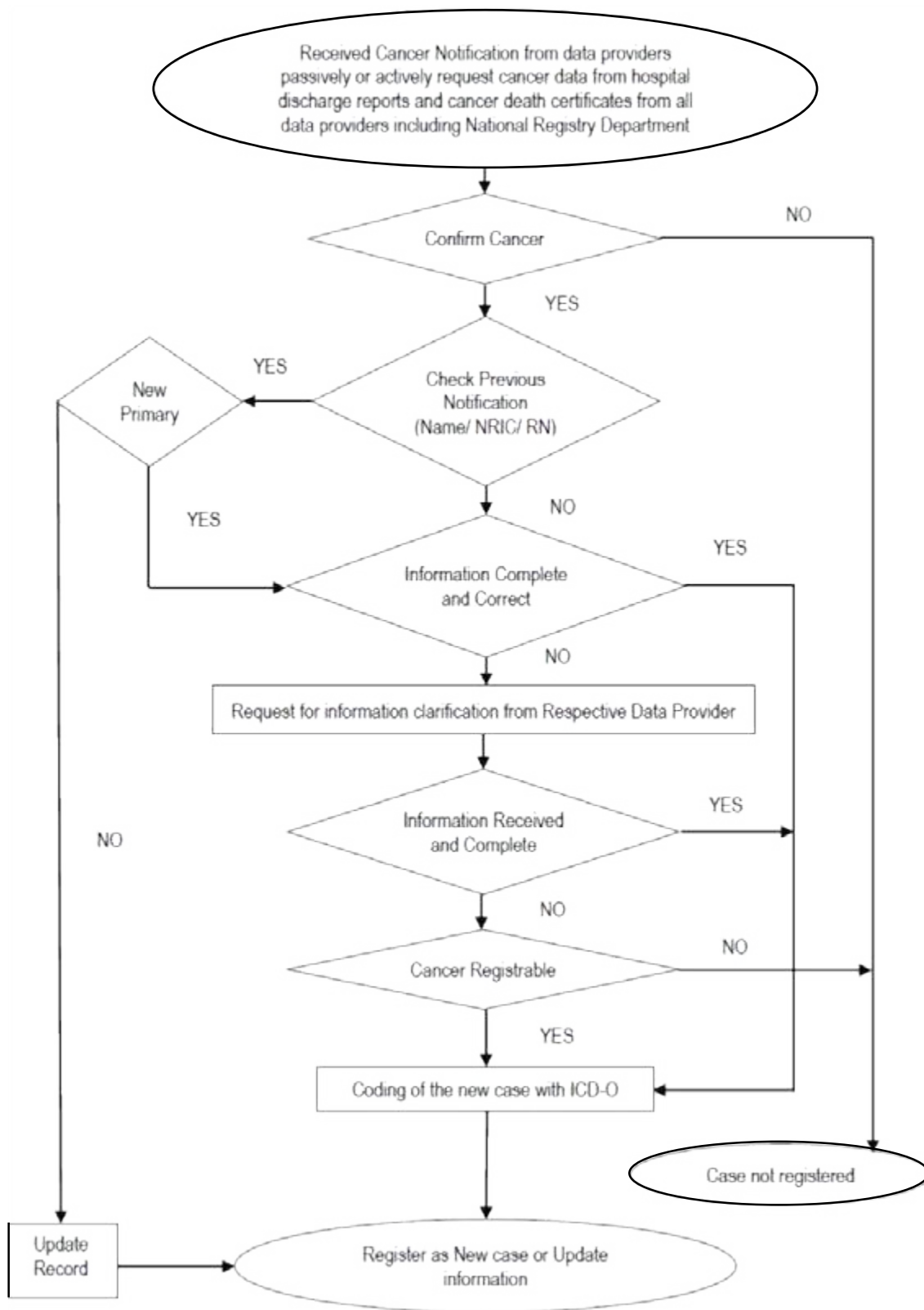


Figure 6. Outline of registration procedure

2.4 Data Analysis

All the results refer only to the Malaysian citizen and resident. Population denominators for the respective years obtained from the Department of Statistics Malaysia (DOSM) were used to compute the rates. Segi's World Population (1960) was used for direct standardisation to calculate age-standardised incidence rates (ASR).

Analysis by ethnicity was done for 3 major ethnic groups which are Malays, Chinese and Indians using respective year's population denominators provided by DOSM. Data were analysed using R statistic inbuilt in Canreg5 software provided by IARC, Lyon, France.

Description of statistical methods

i. Crude incidence rate (CR)

The number of new cancer cases (incidence cases) observed in the population during a defined period, divided by the number of population at risk in the same period. It is usually expressed per 100,000.

$$CR = N / P \times 100,000$$

N - Total number of new cancer cases

P - Person-years at risk

ii. Age-specific incidence rate (AR)

Incidence rate in a specified five-year age group; calculated by dividing the number of cancer cases in the five-year age group by the Malaysian population in the particular age group and multiply by 100,000.

$$AR = N_i / P_i \times 100,000$$

N_i - Number of new cancer occurring in the i^{th} age group

P_i - Person-years at risk in the i^{th} age group

iii. Age-standardised incidence rate (ASR)

Since the incidence of cancer depends heavily on the age structure of the population, there is a need for age adjustment for comparative analysis. The age-standardised incidence rate is a summary measure, indicating the rate that a population would have if it had a standard age structure.

It is calculated by summing the age-specific rates weighting to the world standard population; the calculated incidence rate is then called the World Standardised incidence rate. It is also expressed per 100,000.

$$ASR = \sum (AR_i \times P_{i.std}) / \text{total world standard population}$$

AR_i - Age specific rate in the i^{th} age class

$P_{i.std}$ - The number in the i^{th} age class of world standard population

iv. Standard error (SE)

As with any measurement of a population, incidence rates have a certain amount of chance variation. The index measure of this variability is known as the standard error and is computed as follows:

$$SE = \sqrt{\sum_i d_i(w_i/y_i)^2}$$

d_i - Number of cases of the cancer of interest in the age class i
 w_i - Standard world population for age class i
 y_i - Person-years at risk for age class i

v. 95% Confidence Limit of ASR (95% CL)

ASRs are subject to random variation around the true underlying rate. 95% confidence limits are endpoints of a range in which the true rate would be expected to fall 95% of the time. 95% CLs are computed from the standard error (SE) of the ASR using the following formula:

$$95\% \text{ CL} = \text{ASR} \pm (1.96 \times \text{SE})$$

vi. Cumulative rate (CR74)

Cumulative rate is the weighted sum of age-specific incidence rates until completion of 74 years of age. The weighting used in this calculation is based simply on the widths of the age groups, i.e. multiplying the five-year age-specific rates per person by 5 and summing over age groups from 0-4 to 70-74. CR74 is necessary in order to ascertain the cumulative risk and is expressed in percentages.

$$CR74 = 5 \times \sum_i (d_i / y_i) \times 100$$

i – 5-year age groups
 d_i – Number of cases in age class i
 y_i – Person-years at risk of age class i

vii. Cumulative risk (CumR)

Cumulative risk is defined as a probability that an individual would develop cancer during a certain age period, in the absence of any competing cause of death. The age period over which the risk is accumulated in this report is 0-74 years. The precise mathematical relationship between the cumulative rate and the cumulative risk is:

$$CumR = 100 \times [1 - \exp (- CR74/100)]$$

exp - exponential

viii. Lifetime risk

Lifetime risk is defined as the likelihood that a person who is free of a certain type of cancer will develop or die from that type of cancer during his or her lifetime. Lifetime risk estimates are usually expressed as the odds of developing cancer ('1 in x') or as a percentage.

3.0 RESULTS

3.1 Overall Cancer Incidence

A total of 115,238 new cancer cases were diagnosed in Malaysia for the period of 2012-2016.

The Age-standardised incidence rates (ASR) were 86.1 for males and 101.6 for females per 100,000 populations. When comparing with the previous report (2007-2011), the ASR were increased by 2.3 in females and slightly reduced by 0.8 per 100,000 populations in males.

The cumulative risk (CumR) was 9.8 for male and 10.8 for female, representing the probability of being diagnosed with a cancer before the age of 75, in the absence of other causes of death. The lifetime risk for both sexes did not change compared to the previous report which remained as 1 in 10 among males and 1 in 9 among females (Table 4).

Table 4. Incidence summary of new cancer cases by sex, Malaysia, 2012-2016

Sex	No.	%	CR	ASR	CumR	Lifetime risk
Males	51,505	44.7	75.4	86.1	9.8	1 in 10
Females	63,733	55.3	95.8	101.6	10.8	1 in 9
Total	115,238	100.0				

Table 5. Incidence summary by major ethnic groups and sex, Malaysia, 2012-2016

Ethnicity	Male				Female			
	No.	CR	ASR	CumR	No.	CR	ASR	CumR
Malay	21,841	57.4	73.6	8.4	29,689	79.4	90.9	9.6
Chinese	21,385	127.6	106.1	11.9	22,440	142.1	117.3	12.5
Indian	2,842	58.1	66.7	7.6	5,196	106.7	106.9	11.7

By ethnicity, Chinese had the highest incidence in both males and females. The overall incidence rates among Chinese and Indians were reduced slightly, whereas the overall incidence rates among Malays was observed to be increase compared to previous report in both sexes.

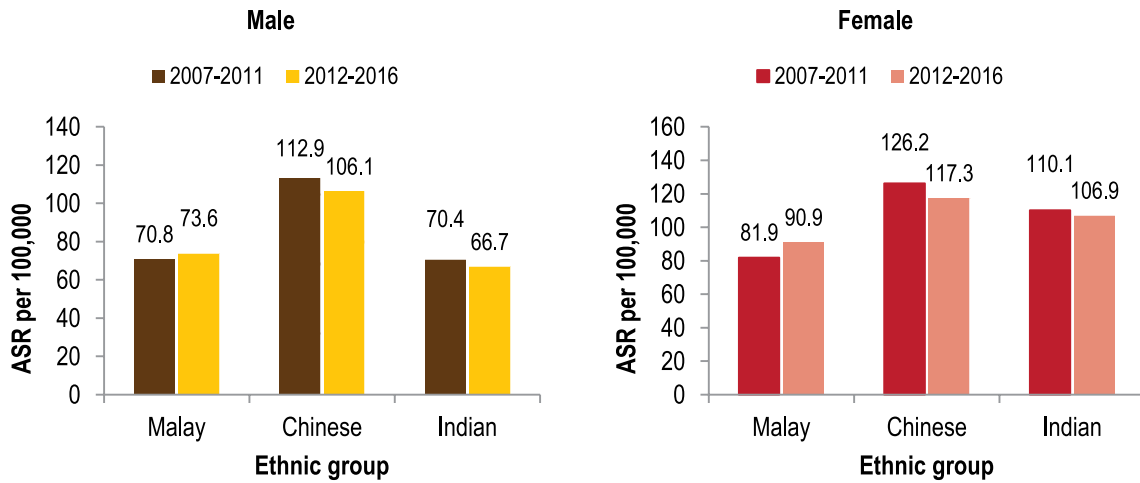


Figure 7. Comparison of incidence summary by ethnicity; 2007-2011 and 2012-2016

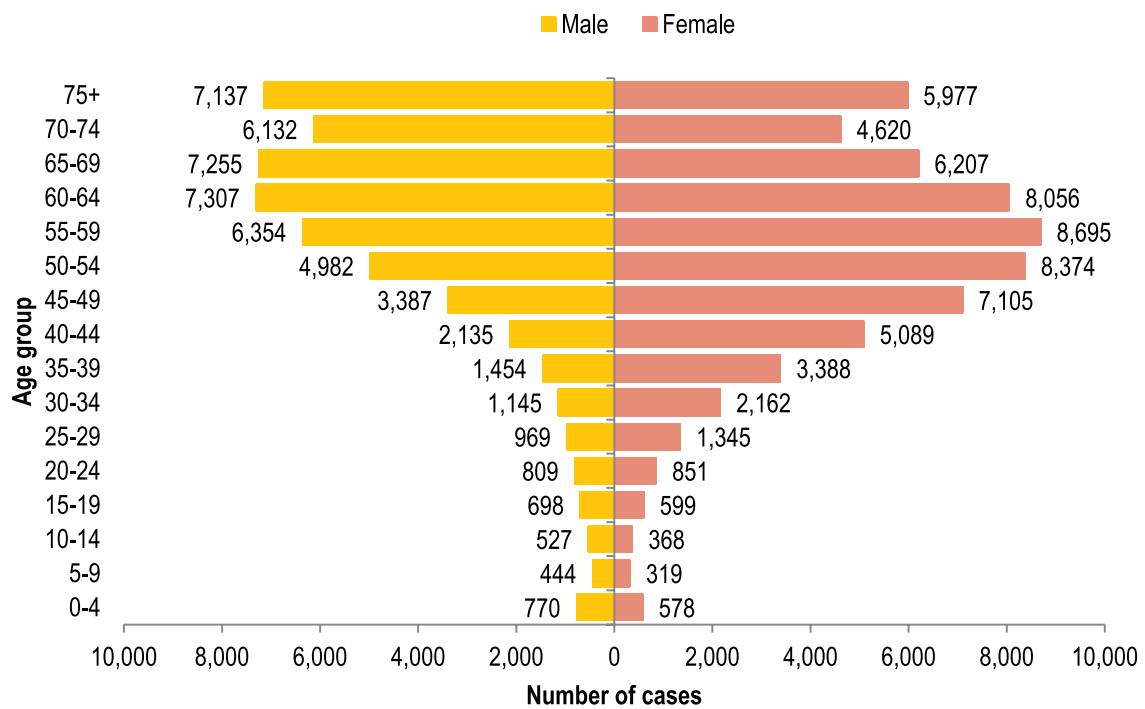


Figure 8. Number of cases by age group and sex, Malaysia, 2012-2016

Number of cancer cases increased exponentially with age with the highest age at diagnosis was within age group of 60-64 years old in males and 55-59 years old in females.

3.1.1 Cancer Trends

The annual cancer incidence in Malaysia is increasing over the 10 years (2007-2016) in males and females as shown in Figure 9. The incidence in females was noted to be higher than males.

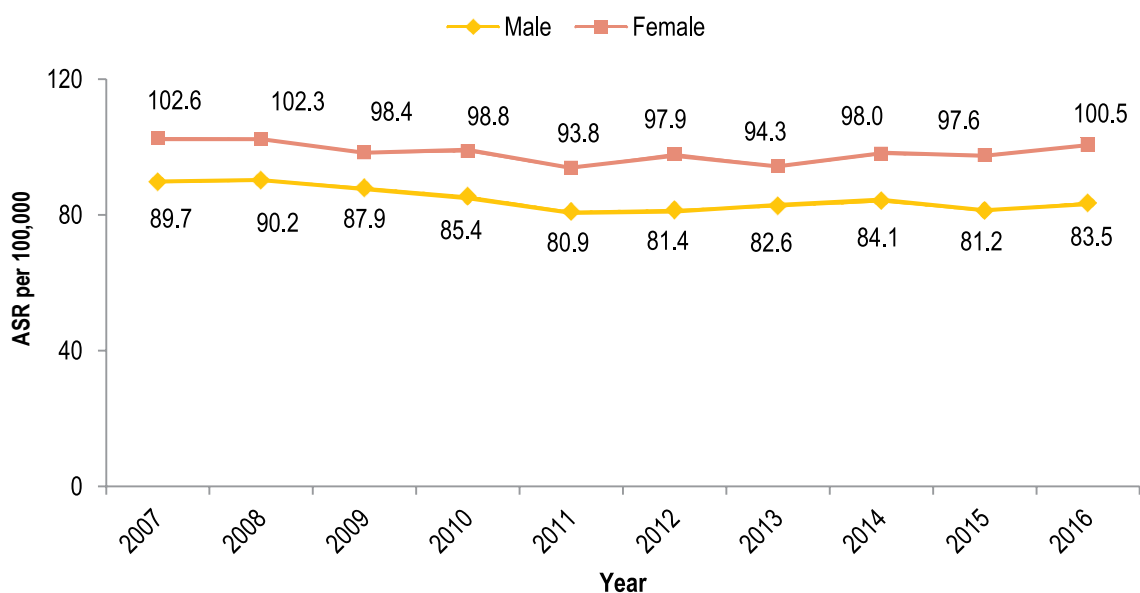


Figure 9. Annual age-standardised rate (ASR) by sex, Malaysia, 2007-2016

3.2 Age-specific Incidence Rates

The incidence of cancer increased for both males and females after the age of 30 years (Figure 10). The incidence rate in males exceeded the incidence rate in females after the age of 60 years.

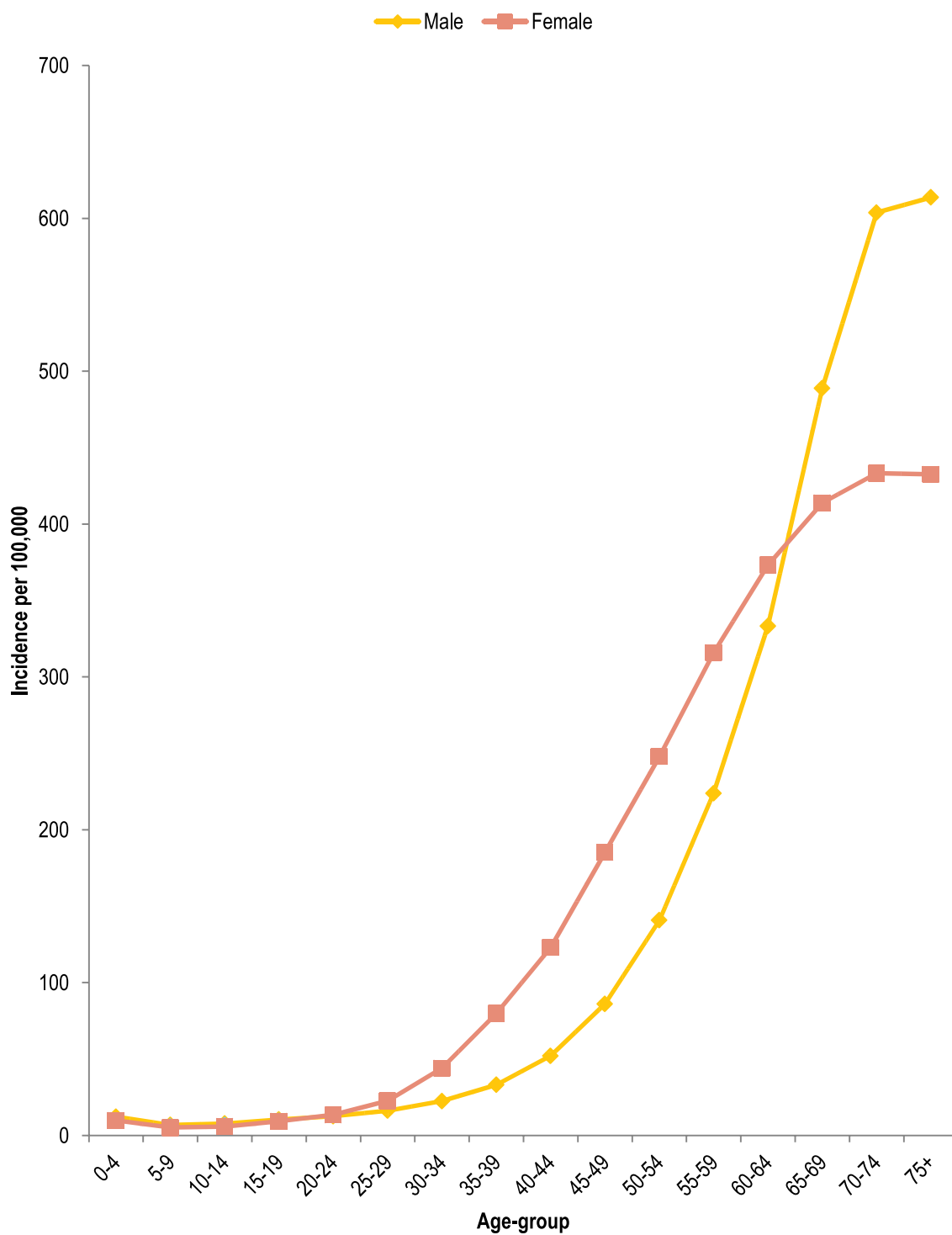


Figure 10. Age-specific incidence rate by sex, all sites, Malaysia, 2012-2016

RESULTS

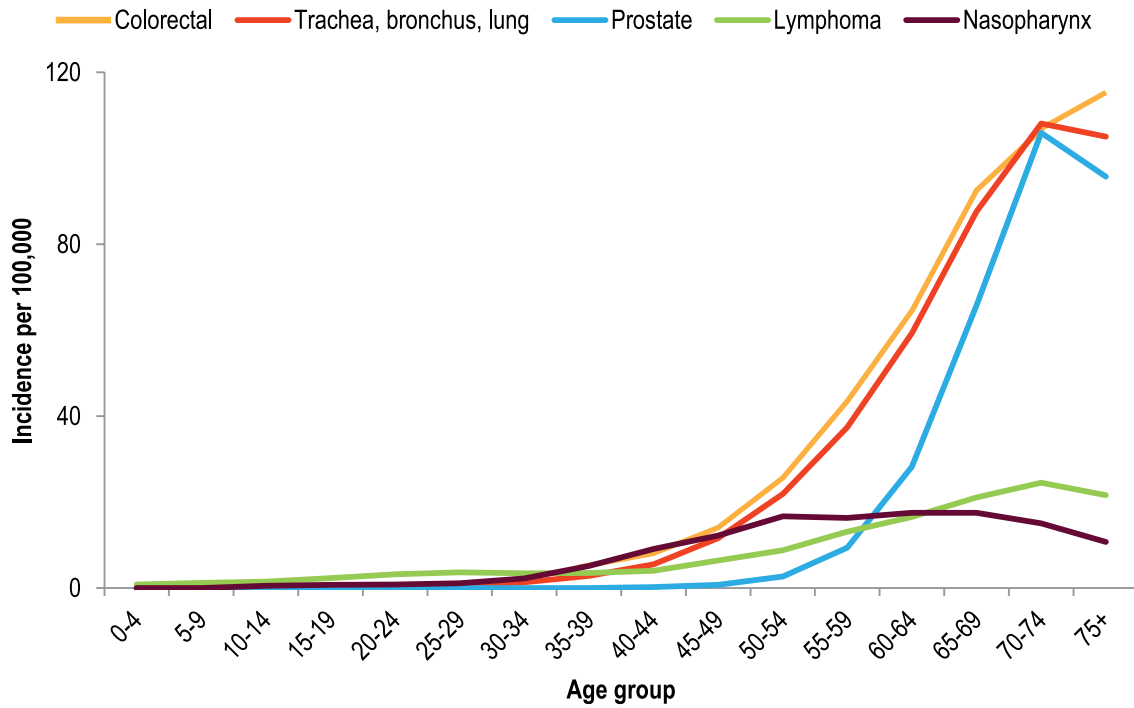


Figure 11. Age-specific incidence rate for five common sites, males, Malaysia, 2012-2016

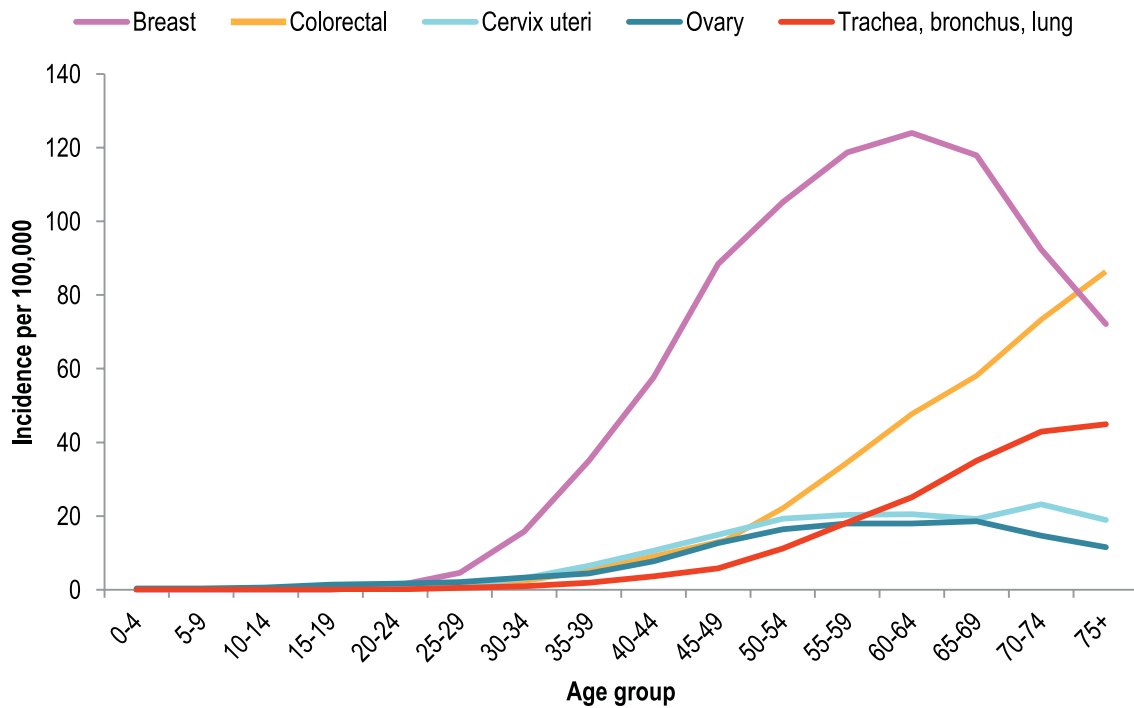


Figure 12. Age-specific incidence rate for five common sites, females, Malaysia, 2012-2016

3.3 Incidence of Ten Most Common Cancers

The ten most common cancers among Malaysian were breast, colorectal, lung, lymphoma, nasopharynx, leukaemia, prostate, liver, cervix uteri and ovary (Table 6 and Figure 13).

Table 6. Ten most common cancers, all residents, Malaysia, 2012-2016

ICD - 10	Sites	No.	%
C50	Breast	21,925	19.0
C18-21	Colorectal	15,515	13.5
C33-34	Trachea, bronchus and lung	11,256	9.8
C81-85,C96	Lymphoma	5,830	5.1
C11	Nasopharynx	4,597	4.0
C91-95	Leukaemia	4,273	3.7
C61	Prostate	4,189	3.6
C22	Liver	4,033	3.5
C53	Cervix uteri	3,981	3.5
C56	Ovary	3,575	3.1
	Others	36,064	31.3
	Total	115,238	100.0

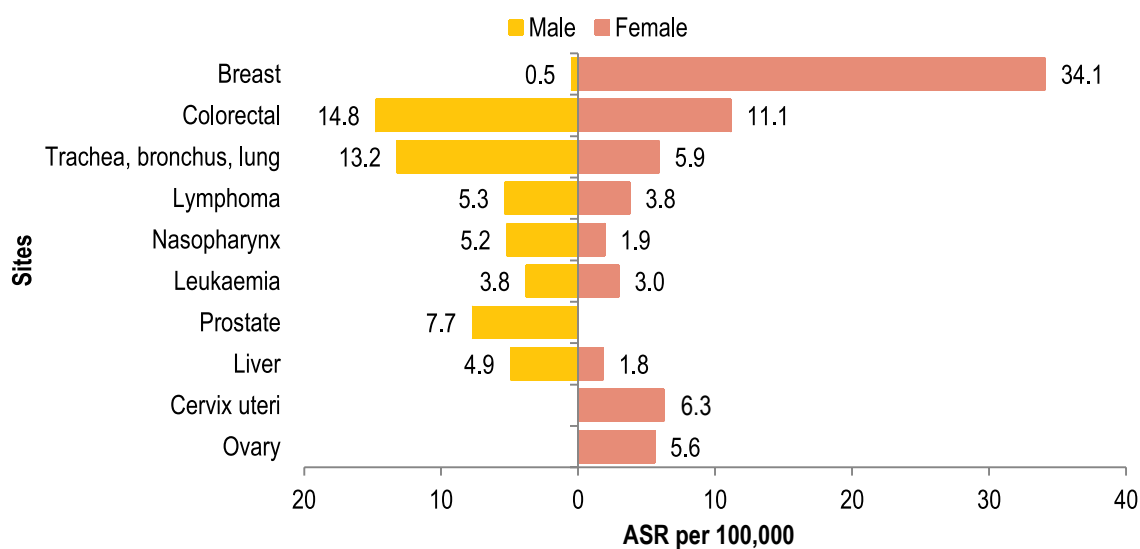


Figure 13. Age-standardised incidence rate for ten most common cancers, all residents, Malaysia, 2012-2016

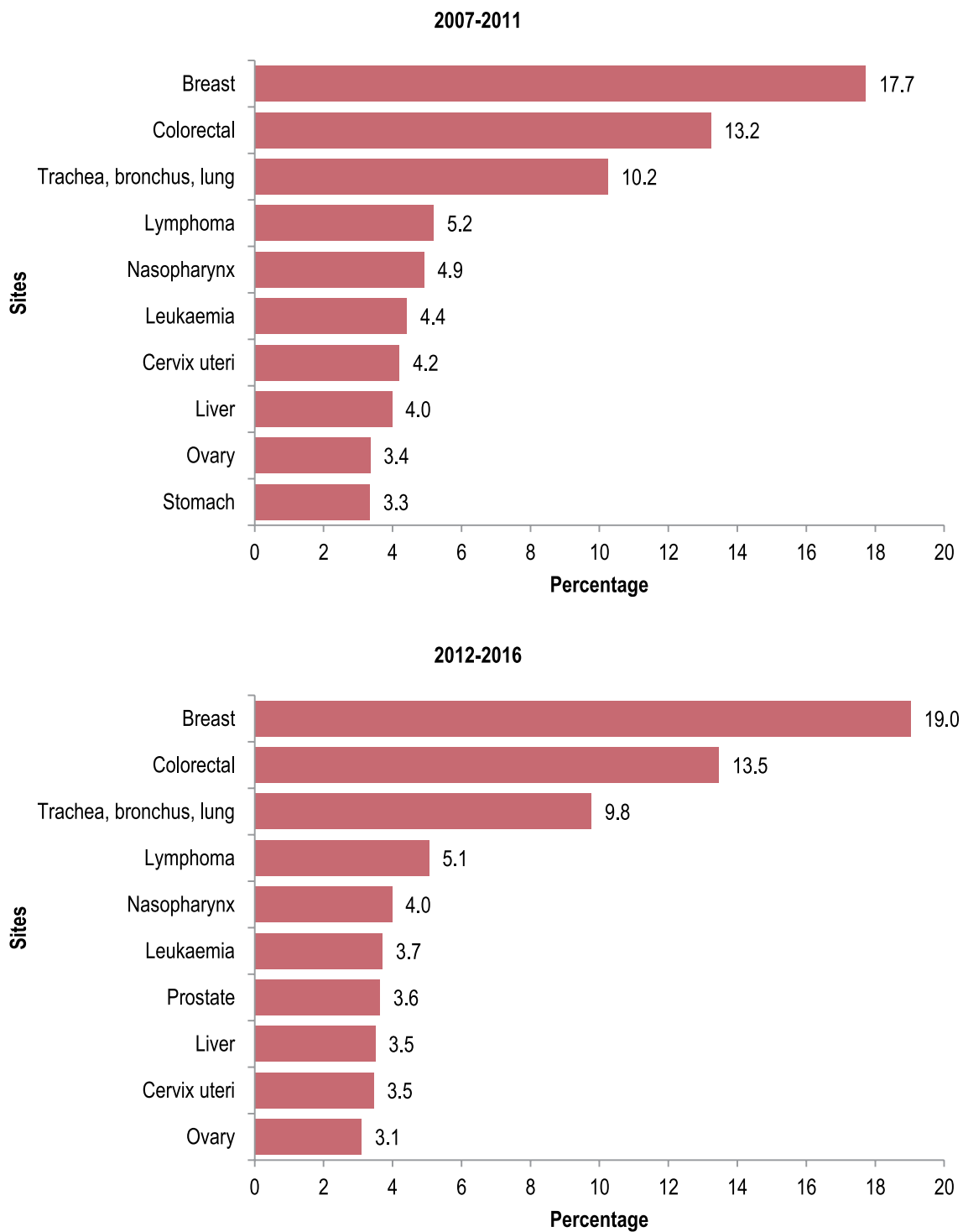


Figure 14. Comparison of ten most common cancers, all residents, Malaysia, 2007-2011 and 2012-2016

Table 7. Ten most common cancers by sex, all residents, Malaysia, 2012-2016

ICD - 10	Sites	No.	%	CR	ASR
Male					
C18-21	Colorectal	8,701	16.9	12.7	14.8
C33-34	Trachea, bronchus and lung	7,686	14.9	11.3	13.2
C61	Prostate	4,189	8.1	6.1	7.7
C81-85,C96	Lymphoma	3,412	6.6	5.0	5.3
C11	Nasopharynx	3,359	6.5	4.9	5.2
C22	Liver	2,949	5.7	4.3	4.9
C91-95	Leukaemia	2,414	4.7	3.5	3.8
C16	Stomach	1,818	3.5	2.7	3.1
C44	Other skin	1,797	3.5	2.6	3.1
C67	Bladder	1,715	3.3	2.5	3.0
	Others	13,465	26.1		
	Total	51,505	100.0	75.4	86.1
Female					
C50	Breast	21,634	33.9	32.5	34.1
C18-21	Colorectal	6,814	10.7	10.3	11.1
C53	Cervix uteri	3,981	6.2	6.0	6.2
C56	Ovary	3,575	5.6	5.4	5.6
C33-34	Trachea, bronchus and lung	3,570	5.6	5.4	5.9
C54	Corpus uteri	2,898	4.5	4.4	4.6
C81-85,C96	Lymphoma	2,418	3.8	3.6	3.8
C73	Thyroid	2,137	3.4	3.2	3.2
C91-95	Leukaemia	1,859	2.9	2.8	3.0
C44	Other skin	1,395	2.2	2.1	2.3
	Others	13,452	21.1		
	Total	63,733	100.0	95.8	101.6

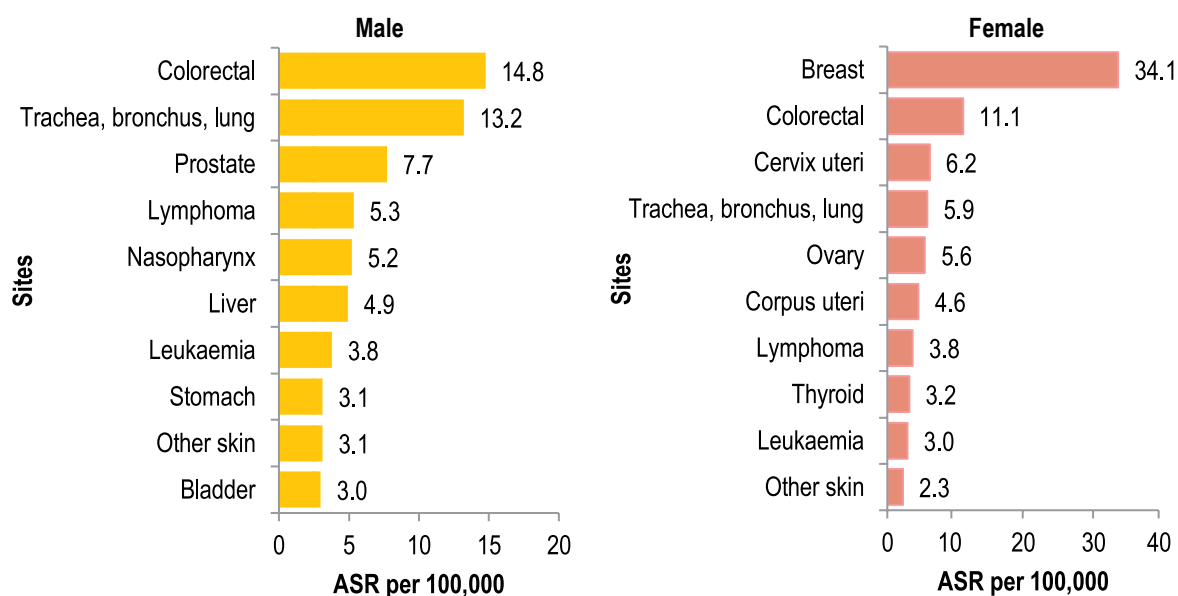


Figure 15. Age-standardised incidence rate for ten common cancers by sex, Malaysia, 2012-2016

3.4 Ethnic Variations

The ASR per 100,000 population of cancer among the ethnic groups for ten common cancers are shown in Table 8 and Table 9. In males, the incidence rates of colorectal, lung, prostate, nasopharynx and liver cancers were more common in Chinese whereas lymphoma, leukaemia and bladder cancers were more common in Malays. In females, the incidence of breast, colorectal, cervix uteri and lung cancers were more common in Chinese whereas ovarian cancer, lymphoma, leukaemia and thyroid cancer were more common in Malays.

Table 8. Age-standardised incidence rates for ten most common cancers in males by major ethnic groups, Malaysia, 2012-2016

Sites	ASR per 100,000 population by ethnicity		
	Malay	Chinese	Indian
Colorectal	12.2	19.6	11.0
Trachea, bronchus and lung	12.5	16.0	5.7
Prostate	6.3	10.1	6.8
Lymphoma	5.6	4.8	3.7
Nasopharynx	2.7	8.6	0.6
Liver	4.3	6.3	3.5
Leukaemia	3.9	3.8	2.8
Stomach	1.6	4.2	3.5
Other skin	2.2	4.5	1.7
Bladder	3.3	3.0	2.4

Table 9. Age-standardised incidence rates for ten most common cancers in females by major ethnic groups, Malaysia, 2012-2016

Sites	ASR per 100,000 population by ethnicity		
	Malay	Chinese	Indian
Breast	31.5	40.7	38.1
Colorectal	9.4	15.2	8.5
Cervix uteri	4.6	6.8	5.5
Ovary	5.9	5.4	5.4
Trachea, bronchus and lung	4.9	7.8	3.0
Corpus uteri	4.4	5.1	5.5
Lymphoma	3.9	3.2	3.0
Thyroid	3.8	2.0	3.2
Leukaemia	2.9	2.9	2.6
Other skin	1.7	3.0	1.7

Among Malay males, the most common cancers were lung, colorectal, lymphoma, prostate and leukaemia, whereas among Malay females were breast, colorectal, ovary, cervix uteri and lung.

Table 10. Ten most common cancers in Malay by sex, Malaysia, 2012-2016

ICD - 10	Sites	No.	%	CR	ASR
Male					
C33-34	Trachea, bronchus and lung	3,500	16.0	9.2	12.5
C18-21	Colorectal	3,493	16.0	9.2	12.2
C81-85,C96	Lymphoma	1,866	8.5	4.9	5.6
C61	Prostate	1,577	7.2	4.1	6.3
C91-95	Leukaemia	1,352	6.2	3.6	3.9
C22	Liver	1,263	5.8	3.3	4.3
C67	Bladder	886	4.1	2.3	3.3
C11	Nasopharynx	862	3.9	2.3	2.7
C70-72	Brain, nervous system	642	2.9	1.7	1.8
C44	Other skin	623	2.9	1.6	2.2
	Others	5,777	26.5		
	Total	21,841	100.0	57.4	73.6
Female					
C50	Breast	10,455	35.2	28.0	31.5
C18-21	Colorectal	2,912	9.8	7.8	9.4
C56	Ovary	1,984	6.7	5.3	5.9
C53	Cervix uteri	1,531	5.2	4.1	4.6
C33-34	Trachea, bronchus and lung	1,492	5.0	4.0	4.9
C54	Corpus uteri	1,409	4.7	3.8	4.4
C81-85,C96	Lymphoma	1,354	4.6	3.6	3.9
C73	Thyroid	1,333	4.5	3.6	3.8
C91-95	Leukaemia	1,019	3.4	2.7	2.9
C70-72	Brain, nervous system	557	1.9	1.5	1.6
	Others	5,643	19.0		
	Total	29,689	100.0	79.4	90.9

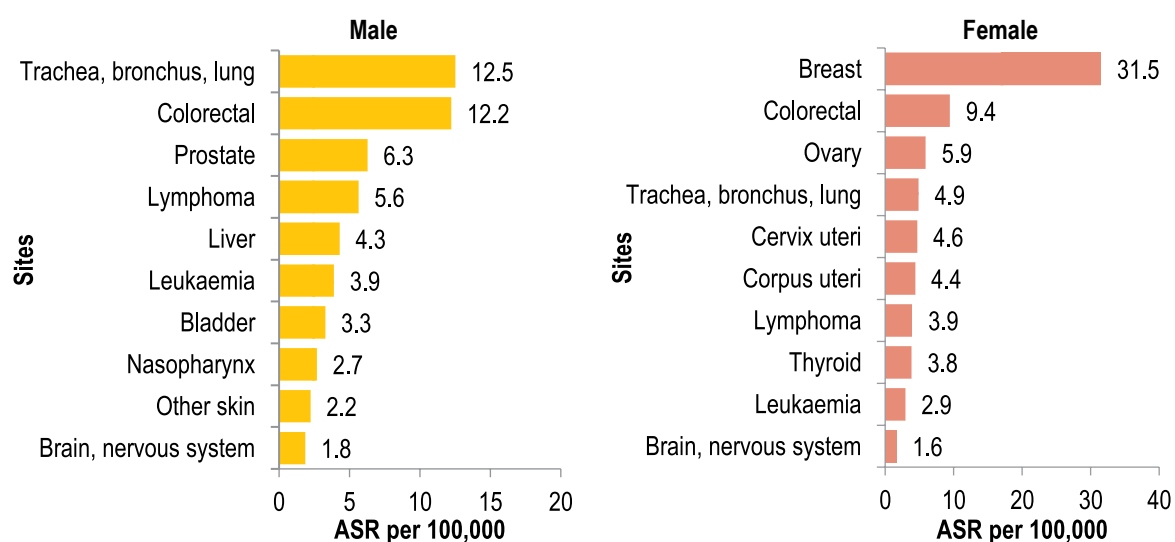


Figure 16. Age-standardised incidence rate for ten common cancers in Malays by sex, Malaysia, 2012-2016

Among Chinese males, the most common cancers were colorectal, lung, prostate, nasopharynx, and liver, whereas among Chinese females were breast, colorectal, lung, cervix uteri and ovary.

Table 11. Ten most common cancers in Chinese by sex, Malaysia, 2012-2016

ICD - 10	Sites	No.	%	CR	ASR
Male					
C18-21	Colorectal	4,008	18.7	23.9	19.6
C33-34	Trachea, bronchus and lung	3,258	15.2	19.4	16.0
C61	Prostate	2,040	9.5	12.2	10.1
C11	Nasopharynx	1,748	8.2	10.4	8.6
C22	Liver	1,284	6.0	7.7	6.3
C81-85,C96	Lymphoma	943	4.4	5.6	4.8
C44	Other skin	914	4.3	5.5	4.5
C16	Stomach	862	4.0	5.1	4.2
C91-95	Leukaemia	661	3.1	3.9	3.8
C67	Bladder	618	2.9	3.7	3.0
	Other	5,049	23.6		
	Total	21,385	100.0	127.6	106.1
Female					
C50	Breast	7,759	34.6	49.1	40.7
C18-21	Colorectal	2,990	13.3	18.9	15.2
C33-34	Trachea, bronchus and lung	1,537	6.8	9.7	7.8
C53	Cervix uteri	1,316	5.9	8.3	6.8
C56	Ovary	1,006	4.5	6.4	5.4
C54	Corpus uteri	977	4.4	6.2	5.1
C44	Other skin	618	2.8	3.9	3.0
C81-85,C96	Lymphoma	602	2.7	3.8	3.2
C16	Stomach	551	2.5	3.5	2.8
C11	Nasopharynx	549	2.4	3.5	2.9
	Others	4,535	20.2		
	Total	22,440	100.0	142.1	117.3

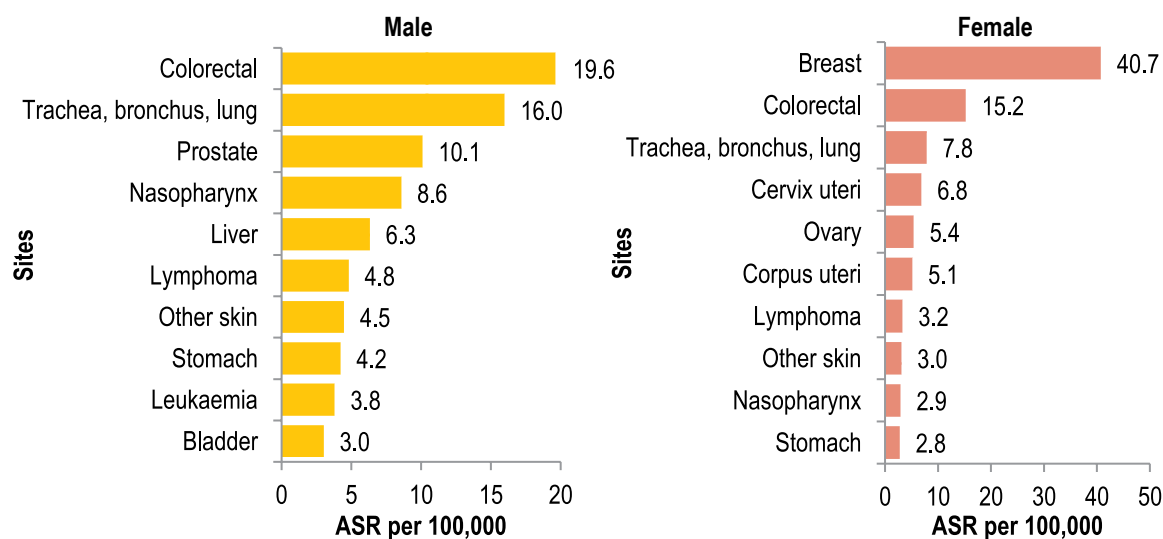


Figure 17. Age-standardised incidence rate for ten common cancers in Chinese by sex, Malaysia, 2012-2016

Among Indian males, the most common cancers were colorectal, prostate, lung, lymphoma and liver, whereas among Indian females were breast, colorectal, cervix uteri, ovary and corpus uteri.

Table 12. Ten most common cancers in Indian by sex, Malaysia, 2012-2016

ICD - 10	Sites	No.	%	CR	ASR
Male					
C18-21	Colorectal	470	16.5	9.6	11.0
C61	Prostate	245	8.6	5.0	6.8
C33-34	Trachea, bronchus and lung	239	8.4	4.9	5.7
C81-85,C96	Lymphoma	178	6.3	3.6	3.7
C22	Liver	147	5.2	3.0	3.5
C16	Stomach	143	5.0	2.9	3.5
C91-95	Leukaemia	129	4.5	2.6	2.8
C15	Oesophagus	98	3.4	2.0	2.4
C64	Kidney	97	3.4	2.0	2.2
C67	Bladder	96	3.4	2.0	2.4
	Others	1,000	35.2		
	Total	2,842	100.0	58.1	66.7
Female					
C50	Breast	1,910	36.8	39.2	38.1
C18-21	Colorectal	401	7.7	8.2	8.5
C53	Cervix uteri	273	5.3	5.6	5.5
C56	Ovary	272	5.2	5.6	5.4
C54	Corpus uteri	265	5.1	5.4	5.5
C03-06	Mouth	220	4.2	4.5	4.9
C73	Thyroid	167	3.2	3.4	3.2
C16	Stomach	155	3.0	3.2	3.3
C81-85,C96	Lymphoma	151	2.9	3.1	3.0
C33-34	Trachea, bronchus and lung	135	2.6	2.8	3.0
	Others	1,247	24.0		
	Total	5,196	100.0	106.7	106.9

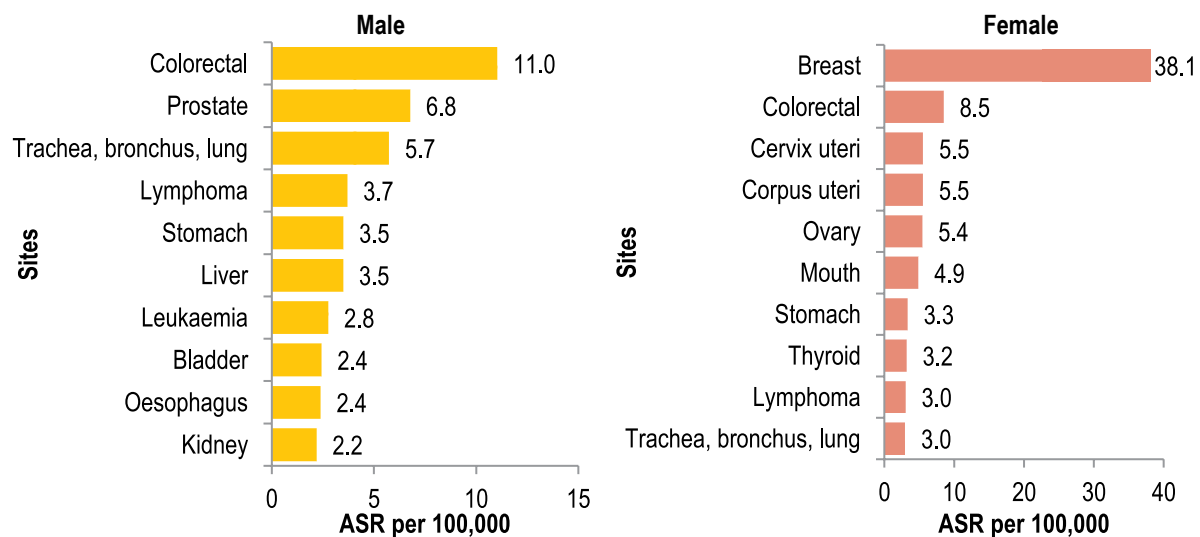


Figure 18. Age-standardised incidence rate for ten common cancers in Indians by sex, Malaysia, 2012-2016

3.5 Staging

Staging was reported for 58,635 cases (52.8%). Of these 9,102 (15.5%) were in stage I, 12,194 (20.8%) in stage II, 13,384 (22.8%) in stage III and 23,955 (40.9%) in stage IV. Thus at the time of diagnosis, 37,339 (63.7%) had advanced cancers (stage III and IV). Table 13 showed the percentage of staging for cancers that may be detected by early screening.

Table 13. Reported staging (I-IV) for cancers that may be detected by early screening, comparison 2007-2011 and 2012-2016, Malaysia

ICD10	Sites	Sex	Stage I (%)		Stage II (%)		Stage III (%)		Stage IV (%)	
			07-11	12-16	07-11	12-16	07-11	12-16	07-11	12-16
C50	Female Breast	F	19.9	17.5	37.0	34.5	23.1	25.1	20.1	22.8
C18-C21	Colorectal	M	10.5	7.4	23.6	20.2	30.4	32.8	35.5	39.6
		F	9.7	6.6	25.1	20.3	31.9	32.9	33.3	40.2
C11	Nasopharynx	M	11.7	10.1	24.8	20.6	29.1	29.5	34.5	39.8
		F	10.7	9.9	29.6	25.0	29.9	31.1	29.8	33.9
C61	Prostate	M	15.6	13.4	24.4	18.0	18.7	15.4	41.3	53.2
C53	Cervix Uteri	F	23.9	23.7	35.8	35.3	21.9	22.3	18.4	18.7
C01-C02	Tongue	M	14.3	17.4	22.8	19.7	23.5	21.1	39.3	41.9
		F	16.3	16.3	25.8	24.4	23.5	18.4	34.4	41.0
C03-C06	Mouth	M	12.4	10.5	21.0	19.0	23.3	19.0	43.3	51.5
		F	15.5	14.7	17.4	21.0	17.4	18.9	49.7	45.5
C62	Testis	M	44.7	30.8	19.6	21.0	10.2	16.3	25.5	31.9

3.6 Validity

The Data Quality in this report was measured through data completeness, comparability and validity. Validity can be defined as the proportion of cases in a data-set which truly have the reported attribute. The Malaysia National Cancer Registry (MNCR) has used the same five common indices as indicated in the Cancer Incidence in Five Continents (CI5), Vol XI, as below:

- Internal consistency:** The IARC/IACR CHECK program used to perform consistency checks. All cases queried are checked by the registry staff, using the software program, before incorporating relevant items into the database.
- Histological verification:** The accuracy of the stated diagnosis is likely to be higher if there is histological confirmation by a pathologist or cytology/haematology confirmation. MNCR used morphologically verification (MV) instead of histological verification. For cancers with specified sites, the morphologically verified proportion was **95.2%** of all cases for both sexes.
- Death Certificate Only (DCO):** All the death notified by the public, private health facilities to the registry was traced and checked with the National Registry Departments. There were **14 cases** classified as DCO.
- Other and unspecified cases (ill-defined cases):** For this category, the percentage was **2.3%** (**2.7%** for males and **1.9%** for females) A low proportion of cases that are assigned to this category generally imply a better diagnostic precision in determining the site of primary cancer.
- Age unknown:** If there are a large number of cases with age unknown, several of the figures and graphs from the data-set would not be accurate. In this report, **all the ages were known.**

3.7 Age Groups and Cancers

The five most common cancers by sex in each of the five broad age groups are shown in Figures 19-23.

In children below age of 14 years, main cancers in both sexes were leukaemia (41.4% in males, 37.9% in females) followed by brain, nervous system (14.6% in males, 15.8% in females) and lymphoma (13.4% in males, 7.7% in females). Childhood cancer age 0 to 18 years old comprised of 3,829 cases, 2,131 (55.7%) cases were males and 1,698 (44.3%) cases were females.

In the 15-24 year age group, the most common cancers in males were lymphoma (24.2%) followed by leukaemia (19.3%) and testicular cancer (12.4%). While in females, the most common cancers were lymphoma (21.1%) followed by thyroid (14.8%) and ovarian cancer (13.2%).

In the group aged 25-59 years, colorectal cancer was the most common cancer in males (16.8%), followed by lung cancer (13.4%), and nasopharyngeal cancer (11.3%). The most common cancers seen in females were breast (41.9%), colorectal (8.0%) and cervix uteri (7.6%).

In the 60-74 year age group, the most common cancers in males were colorectal (18.7%), lung (17.9%) and prostate cancers (12.9%). In females the most common cancers were breast (28.8%), colorectal (14.2%) and lung cancers (8.1%).

In the group aged 75 years and above, cancer of the colorectal remained the most common cancer among males (18.8%) followed by lung (17.1%) and prostate cancers (15.6%). In females, colorectal cancer (20.0%) was followed by cancer of the breast (16.7%) and lung (10.4%).

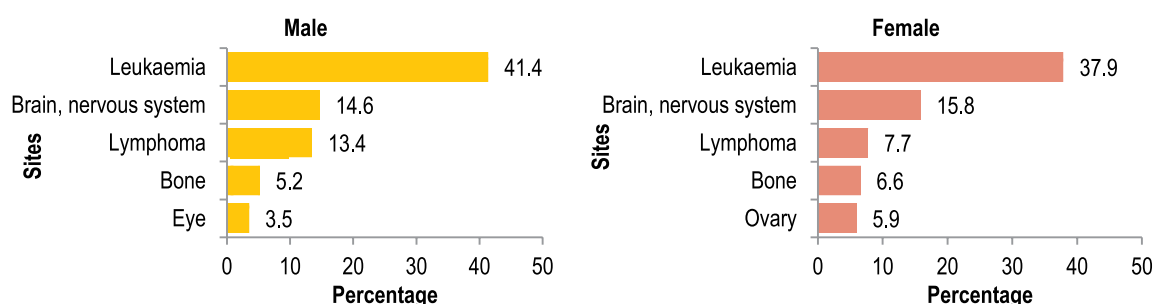


Figure 19. Common cancers among 0-14 years age group by sex, Malaysia, 2012-2016

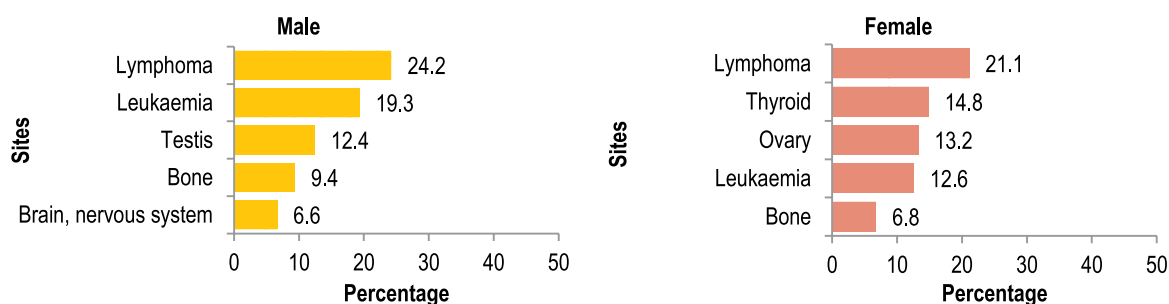


Figure 20. Common cancers among 15-24 years age group by sex, Malaysia, 2012-2016

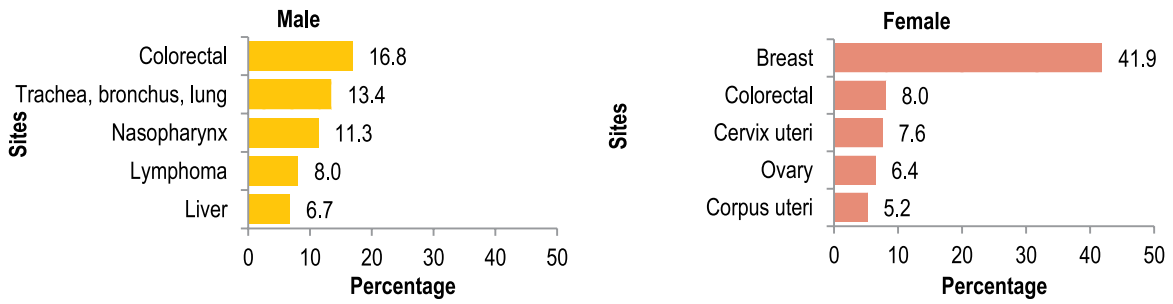


Figure 21. Common cancers among 25-59 years age group by sex, Malaysia, 2012-2016

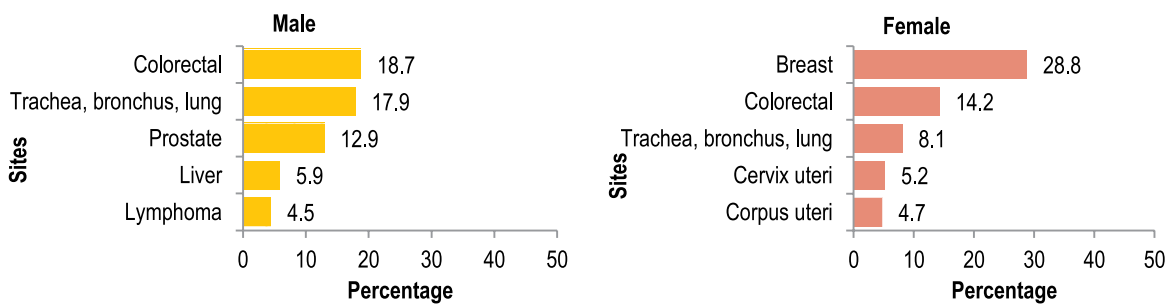
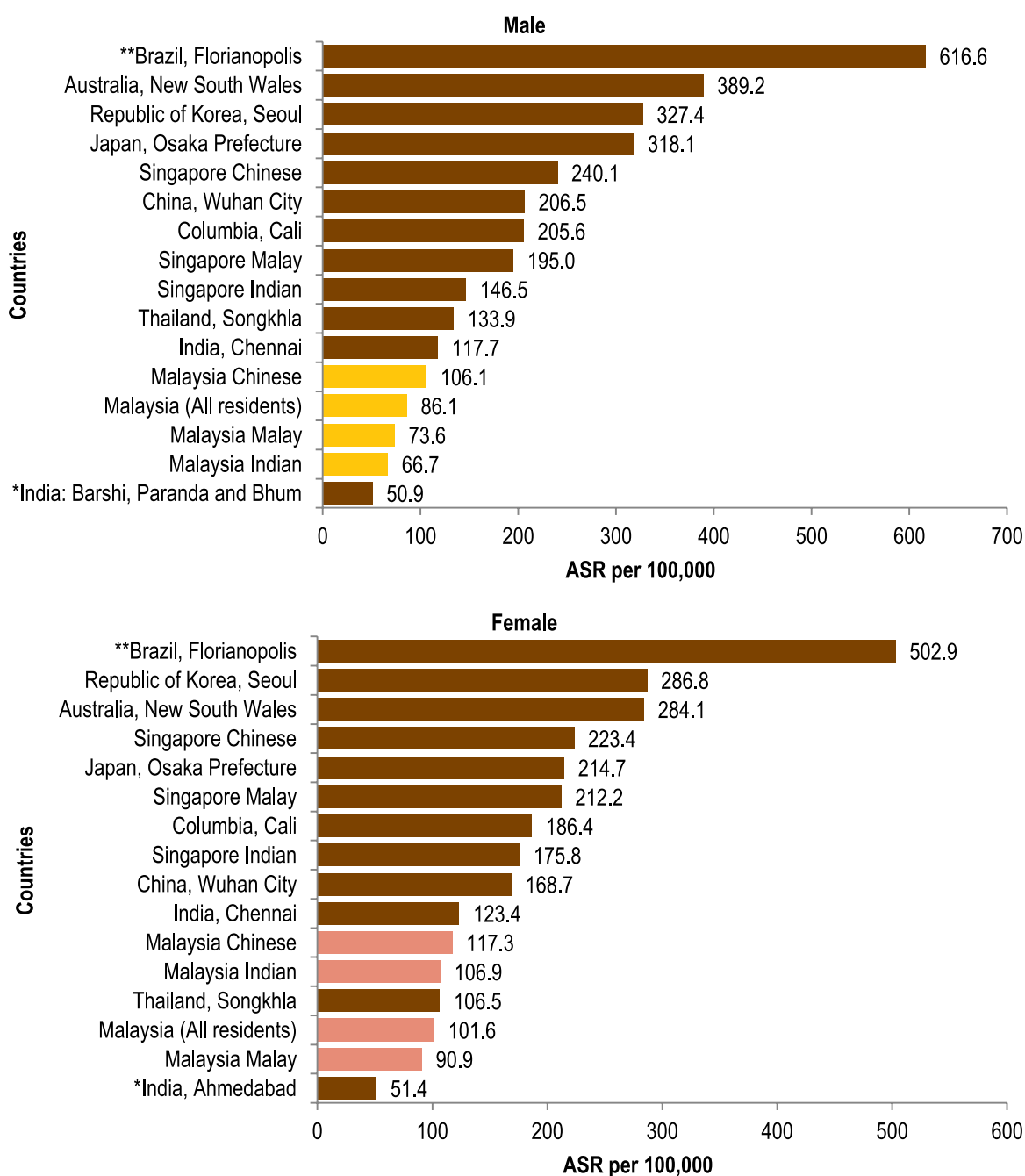


Figure 22. Common cancers among 60-74 years age group by sex, Malaysia, 2012-2016



Figure 23. Common cancers in 75 years and above age group by sex, Malaysia, 2012-2016

3.8 International Comparisons



**The highest incidence from CI5, Volume XI *The lowest incidence from CI5, Volume XI
 NB: National Registry of Diseases Office (2017). Singapore Cancer Registry Annual Registry Report 2015

Figure 24. All Sites: International comparisons – Age-standardised rates

4.0 SUMMARY TABLES

4.1 Incidence Summary Table

Table 14. Incidence summary of all cancer sites by year, ethnic group and state, Malaysia

Year	Male						Female				
	Total	No.	CR	ASR	(95% CL)	CumR	No.	CR	ASR	(95% CL)	CumR
2007	20,004	8,969	70.8	89.7	(87.8,91.6)	10.1	11,035	89.5	102.6	(100.6,104.5)	10.8
2008	20,727	9,383	72.5	90.2	(88.3,92.0)	10.1	11,344	89.7	102.3	(100.4,104.2)	10.9
2009	20,711	9,495	72.5	87.9	(86.1,89.7)	9.9	11,216	88.0	98.4	(96.5,100.2)	10.6
2010	21,243	9,571	71.9	85.4	(83.7,87.2)	9.7	11,672	90.1	98.8	(97.0,100.6)	10.6
2011	20,822	9,376	68.6	80.9	(79.2,82.5)	9.3	11,446	87.2	93.8	(92.0,95.5)	10.0
2012	22,057	9,728	71.2	81.4	(79.7,83.0)	9.2	12,329	92.7	97.9	(96.2,99.7)	10.4
2013	22,455	10,211	73.8	82.6	(81.0,84.2)	9.5	12,244	90.8	94.3	(92.6,96.0)	10.0
2014	23,134	10,450	75.5	84.1	(82.5,85.7)	9.6	12,684	94.1	98.0	(96.3,99.7)	10.4
2015	23,482	10,436	74.4	81.2	(79.6,82.8)	9.2	13,046	95.4	97.6	(95.9,99.2)	10.4
2016	24,110	10,680	76.2	83.5	(81.9,85.1)	9.5	13,430	98.2	100.5	(98.8,102.2)	10.7
Ethnic group (2012-2016)											
Malay	51,530	21,841	57.4	73.6	(72.6,74.6)	8.4	29,689	79.4	90.9	(89.8,91.9)	9.5
Chinese	43,825	21,385	127.6	106.1	(104.7,107.6)	11.9	22,440	142.1	117.3	(115.8,118.9)	12.5
Indian	8,038	2,842	58.1	66.7	(64.2,69.3)	7.6	5,196	106.7	106.9	(104.0,109.9)	11.7
Ethnic group (2007-2011)											
Malay	42,945	18,757	53.1	70.7	(69.7,71.8)	8.0	24,188	69.5	81.9	(80.8,82.9)	8.7
Chinese	42,538	20,424	124.4	112.9	(111.4,114.5)	12.5	22,114	143.2	126.2	(124.5,127.9)	13.2
Indian	7,477	2,679	56.0	70.4	(67.6,73.2)	8.1	4,798	101.2	110.1	(106.9,113.3)	12.2
State (2012-2016)											
Johor	16,434	7,408	91.0	100.6	(98.3,103.0)	11.4	9,026	117.7	121.6	(119.0,124.1)	12.7
Selangor	14,784	5,972	44.9	60.5	(59.0,62.1)	7.1	8,812	68.8	82.9	(81.2,84.7)	9.2
Perak	12,205	5,627	95.7	85.8	(83.5,88.0)	9.2	6,578	114.7	113.5	(110.7,116.3)	10.2
Penang	10,710	4,807	127.7	123.2	(119.7,126.7)	13.6	5,903	155.5	140.3	(136.7,143.9)	14.7
Sarawak	10,297	4,869	78.6	84.2	(81.8,86.6)	9.7	5,428	90.6	96.0	(93.4,98.6)	10.2
Sabah	8,818	4,006	63.5	94.8	(91.8,97.9)	10.8	4,812	78.5	111.1	(107.8,114.4)	11.7
WPKL&P	7,447	3,319	73.4	87.7	(84.6,90.8)	10.1	4,128	94.3	105.9	(102.6,109.3)	11.6
Kedah	6,759	2,944	61.0	64.7	(62.3,67.0)	7.5	3,815	79.3	76.4	(74.0,78.9)	8.0
Pahang	5,962	2,774	73.1	84.8	(81.6,87.9)	9.6	3,188	90.6	96.9	(93.5,100.3)	10.3
Kelantan	5,888	2,675	66.4	80.3	(77.2,83.4)	9.1	3,213	80.0	85.6	(82.6,88.5)	8.9
Melaka	5,242	2,395	120.0	124.5	(119.5,129.5)	13.4	2,847	141.0	136.1	(131.0,141.1)	14.1
N. Sembilan	5,216	2,227	88.8	92.9	(89.0,96.8)	10.4	2,989	122.4	117.6	(113.3,121.8)	12.3
Terengganu	4,233	1,953	71.8	92.1	(88.0,96.3)	10.6	2,280	86.8	100.5	(96.4,104.7)	10.5
Perlis	1,047	445	76.9	75.7	(68.6,82.8)	8.3	602	99.8	95.0	(87.3,102.7)	10.1
W.P. Labuan	196	84	40.7	102.4	(70.9,134.0)	6.2	112	56.3	120.7	(90.9,150.6)	10.4

4.2 Staging by Cancer Sites

Table 15. Staging for all cancer types, Malaysia, 2012-2016

ICD10	SITES	SEX	TOTAL	NO. WITH RECORDED STAGE	% RECORDED STAGE	STAGE							
						I	%	II	%	III	%	IV	%
C00	Lip	M	27	13	48.1	4	30.8	4	30.8	3	23.1	2	15.4
		F	52	34	65.4	10	29.4	9	26.5	8	23.5	7	20.6
C01-02	Tongue	M	560	356	63.6	62	17.4	70	19.7	75	21.1	149	41.9
		F	472	283	60.0	46	16.3	69	24.4	52	18.4	116	41.0
C03-06	Mouth	M	400	237	59.3	25	10.5	45	19.0	45	19.0	122	51.5
		F	464	286	61.6	42	14.7	60	21.0	54	18.9	130	45.5
C07-08	Salivary Glands	M	293	134	45.7	22	16.4	22	16.4	29	21.6	61	45.5
		F	257	137	53.3	26	19.0	39	28.5	21	15.3	51	37.2
C09	Tonsil	M	144	80	55.6	4	5.0	13	16.3	17	21.3	46	57.5
		F	62	34	54.8	1	2.9	7	20.6	9	26.5	17	50.0
C10	Other Oropharynx	M	99	69	69.7	6	8.7	6	8.7	21	30.4	36	52.2
		F	30	19	63.3	2	10.5	4	21.1	2	10.5	11	57.9
C11	Nasopharynx	M	3,359	2,193	65.3	222	10.1	451	20.6	647	29.5	873	39.8
		F	1,238	819	66.2	81	9.9	205	25.0	255	31.1	278	33.9
C12-13	Hypopharynx	M	132	88	66.7	3	3.4	13	14.8	24	27.3	48	54.5
		F	73	47	64.4	3	6.4	4	8.5	11	23.4	29	61.7
C14	Pharynx Unspec.	M	40	17	42.5	2	11.8	6	35.3	2	11.8	7	41.2
		F	17	8	47.1	1	12.5	-	-	1	12.5	6	75.0
C15	Oesophagus	M	788	387	49.1	22	5.7	49	12.7	98	25.3	218	56.3
		F	337	151	44.8	11	7.3	24	15.9	44	29.1	72	47.7
C16	Stomach	M	1,818	855	47.0	57	6.7	105	12.3	254	29.7	439	51.3
		F	1,188	586	49.3	39	6.7	60	10.2	151	25.8	336	57.3
C17	Small Intestine	M	174	63	36.2	6	9.5	8	12.7	15	23.8	34	54.0
		F	128	56	43.8	8	14.3	6	10.7	15	26.8	27	48.2
C18-21	Colorectal	M	8,701	4,806	55.2	357	7.4	971	20.2	1,574	32.8	1,904	39.6
		F	6,814	3,859	56.6	254	6.6	784	20.3	1,270	32.9	1,551	40.2
C22	Liver	M	2,949	1,200	40.7	69	5.8	105	8.8	139	11.6	887	73.9
		F	1,084	435	40.1	26	6.0	32	7.4	52	12.0	325	74.7
C23-24	Gallbladder Etc.	M	491	207	42.2	21	10.1	21	10.1	32	15.5	133	64.3
		F	553	253	45.8	24	9.5	31	12.3	29	11.5	169	66.8
C25	Pancreas	M	1,167	594	50.9	18	3.0	59	9.9	56	9.4	461	77.6
		F	882	477	54.1	18	3.8	51	10.7	64	13.4	344	72.1
C30-31	Nose, Sinuses Etc.	M	276	144	52.2	24	16.7	24	16.7	27	18.8	69	47.9
		F	152	83	54.6	15	18.1	15	18.1	17	20.5	36	43.4
C32	Larynx	M	780	485	62.2	98	20.2	82	16.9	126	26.0	179	36.9
		F	107	54	50.5	6	11.1	10	18.5	17	31.5	21	38.9
C33-34	Trachea, Bronchus, Lung	M	7,686	4,633	60.3	115	2.5	184	4.0	716	15.5	3,618	78.1
		F	3,570	2,187	61.3	67	3.1	100	4.6	242	11.1	1,778	81.3
C37-38	Other Thoracic Organs	M	246	103	41.9	8	7.8	14	13.6	18	17.5	63	61.2
		F	151	56	37.1	5	8.9	7	12.5	11	19.6	33	58.9
C40-41	Bone	M	523	168	32.1	21	12.5	31	18.5	23	13.7	93	55.4
		F	387	104	26.9	20	19.2	12	11.5	18	17.3	54	51.9
C43	Melanoma Of Skin	M	184	72	39.1	8	11.1	10	13.9	12	16.7	42	58.3
		F	163	65	39.9	6	9.2	14	21.5	11	16.9	34	52.3
C44	Other Skin	M	1,797	479	26.7	247	51.6	89	18.6	51	10.6	92	19.2
		F	1,395	368	26.4	214	58.2	78	21.2	30	8.2	46	12.5
C45	Mesothelioma	M	35	13	37.1	-	-	-	-	5	38.5	8	61.5
		F	15	7	46.7	-	-	1	14.3	1	14.3	5	71.4
C46	Kaposi Sarcoma	M	37	7	18.9	1	14.3	2	28.6	1	14.3	3	42.9
		F	3	1	33.3	-	-	-	-	-	-	1	100.0
C47;C49	Connective, Soft Tissue	M	597	175	29.3	35	20.0	36	20.6	31	17.7	73	41.7
		F	469	131	27.9	28	21.4	22	16.8	22	16.8	59	45.0
C50	Breast	M	291	139	47.8	20	14.4	43	30.9	35	25.2	41	29.5
		F	21,634	13,485	62.3	2,366	17.5	4,650	34.5	3,391	25.1	3,078	22.8
C51	Vulva	F	127	63	49.6	16	25.4	11	17.5	19	30.2	17	27.0
C52	Vagina	F	112	55	49.1	8	14.5	15	27.3	9	16.4	23	41.8
C53	Cervix Uteri	F	3,981	2,771	69.6	656	23.7	977	35.3	619	22.3	519	18.7
C54	Corpus Uteri	F	2,898	1,911	65.9	869	45.5	295	15.4	439	23.0	308	16.1
C55	Uterus Unspec.	F	912	537	58.9	242	45.1	68	12.7	110	20.5	117	21.8
C56	Ovary	F	3,575	2,507	70.1	789	31.5	306	12.2	764	30.5	648	25.8
C57	Other Female Genital	F	116	56	48.3	17	30.4	4	7.1	21	37.5	14	25.0
C58	Placenta	F	78	25	32.1	7	28.0	2	8.0	6	24.0	10	40.0
C60	Penis	M	116	31	26.7	6	19.4	6	19.4	7	22.6	12	38.7
C61	Prostate	M	4,189	1,682	40.2	226	13.4	303	18.0	259	15.4	894	53.2
C62	Testis	M	636	276	43.4	85	30.8	58	21.0	45	16.3	88	31.9
C63	Other Male Genital	M	45	17	37.8	5	29.4	4	23.5	3	17.6	5	29.4
C64	Kidney	M	1,276	636	49.8	124	19.5	81	12.7	72	11.3	359	56.4
		F	595	264	44.4	58	22.0	49	18.6	40	15.2	117	44.3
C65	Renal Pelvis	M	24	11	45.8	-	-	4	36.4	3	27.3	4	36.4
		F	7	5	71.4	-	-	-	-	3	60.0	2	40.0
C66	Ureter	M	44	19	43.2	3	15.8	3	15.8	6	31.6	7	36.8
		F	20	12	60.0	2	16.7	3	25.0	4	33.3	3	25.0
C67	Bladder	M	1,715	667	38.9	217	32.5	150	22.5	89	13.3	211	31.6
		F	407	163	40.0	48	29.4	34	20.9	28	17.2	53	32.5
C68	Other Urinary Organs	M	17	4	23.5	1	25.0	1	25.0	2	50.0	-	-
		F	5	1	20.0	-	-	-	-	1	100.0	-	-
C69	Eye	M	89	15	16.9	4	26.7	5	33.3	2	13.3	4	26.7
		F	95	18	18.9	3	16.7	2	11.1	3	16.7	10	55.6
C70-72	Brain, Nervous System	M	1,117	299	26.8	36	12.0	40	13.4	58	19.4	165	55.2
		F	980	242	24.7	53	21.9	41	16.9	42	17.4	106	43.8
C73	Thyroid	M	749	321	42.9	84	26.2	50	15.6	58	18.1	129	40.2
		F	2,137	810	37.9	345	42.6	165	20.4	102	12.6	198	24.4
C74	Adrenal Gland	M	67	23	34.3	-	-	2	8.7	2	8.7	19	82.6
		F	53	19	35.8	1	5.3	2	10.5	3	15.8	13	68.4
C75	Other Endocrine	M	98	15	15.3	3	20.0	3	20.0	3	20.0	6	40.0
		F	49	11	22.4	3	27.3	1	9.1	2	18.2	5	45.5
C81-85;C96	Lymphoma	M	3,412	1,394	40.9	162	11.6	367	26.3	285	20.4	580	41.6
		F	2,418	1,027	42.5	131	12.8	291	28.3	229	22.3	376	36.6
C88	Immunoproliferative Dis.	M	79	24	30.4	2	8.3	3	12.5	4	16.7	15	62.5
		F	45	15	33.3	6	40.0	2	13.3	2	13.3	5	33.3
C88	Multiple Myeloma	M	429	63	14.7	7	11.1	10	15.9	26	41.3	20	31.7
		F	347	46	13.3	2	4.3	12	26.1	17	37.0	15	32.6
C90	Others	M	1,395	432	31.0	47	10.9	37	8.6	53	12.3	295	68.3
		F	1,220	406	33.3	38	9.4	30	7.4	70	17.2	268	66.0
All Sites			110,965	58,635	52.8	9,102	15.5	12,194	20.8	13,384	22.8	23,955	40.9

4.3 Quality Indicators

Table 16. Quality indicators for all cancer types, Malaysia, 2012-2016

ICD-10	SITES	Total	Quality Indicator			
			MV	%*	DCO	%*
C00	Lip	79	78	98.7	0	-
C01-C02	Tongue	1,032	1,019	98.7	0	-
C03-C06	Mouth	864	860	99.5	0	-
C07-C08	Salivary Glands	550	541	98.4	0	-
C09	Tonsil	206	204	99.0	0	-
C10	Other Oropharynx	129	125	96.9	0	-
C11	Nasopharynx	4,597	4,548	98.9	0	-
C12-13	Hypopharynx	205	202	98.5	0	-
C14	Pharynx Unspec.	57	56	98.2	0	-
C15	Oesophagus	1,125	1,087	96.6	0	-
C16	Stomach	3,006	2,934	97.6	1	0.0
C17	Small Intestine	302	293	97.0	0	-
C18-C21	Colorectal	15,515	15,147	97.6	1	0.0
C22	Liver	4,033	2,754	68.3	1	0.0
C23-C24	Gallbladder Etc.	1,044	908	87.0	1	0.1
C25	Pancreas	2,049	1,624	79.3	1	0.0
C30-C31	Nose, Sinuses Etc.	428	421	98.4	0	-
C32	Larynx	887	875	98.6	0	-
C33-C34	Trachea, Bronchus, Lung	11,256	9,945	88.4	1	0.0
C37-C38	Other Thoracic Organs	397	377	95.0	0	-
C40-C41	Bone	910	877	96.4	0	-
C43	Melanoma Of Skin	347	345	99.4	0	-
C44	Other Skin	3,192	3,182	99.7	0	-
C45	Mesothelioma	50	50	100.0	0	-
C46	Kaposi Sarcoma	40	39	97.5	0	-
C47; C49	Connective, Soft Tissue	1,066	1,039	97.5	0	-
C50	Breast	21,925	21,713	99.0	0	-
C51	Vulva	127	126	99.2	0	-
C52	Vagina	112	108	96.4	0	-
C53	Cervix Uteri	3,981	3,919	98.4	1	0.0
C54	Corpus Uteri	2,898	2,861	98.7	0	-
C55	Uterus Unspec.	912	897	98.4	0	-
C56	Ovary	3,575	3,379	94.5	1	0.0
C57	Other Female Genital	116	112	96.6	0	-
C58	Placenta	78	74	94.9	0	-
C60	Penis	116	114	98.3	0	-
C61	Prostate	4,189	4,011	95.8	1	0.0
C62	Testis	636	616	96.9	0	-
C63	Other Male Genital	45	45	100.0	0	-
C64	Kidney	1,871	1,784	95.4	0	-
C65	Renal Pelvis	31	29	93.5	0	-
C66	Ureter	64	63	98.4	0	-
C67	Bladder	2,122	2,061	97.1	1	0.0
C68	Other Urinary Organs	22	22	100.0	0	-
C69	Eye	184	167	90.8	0	-
C70-C72	Brain, Nervous System	2,097	1,793	85.5	1	0.0
C73	Thyroid	2,886	2,841	98.4	0	-
C74	Adrenal Gland	120	111	92.5	0	-
C75	Other Endocrine	147	140	95.2	0	-
C81-C85;C96	Lymphoma	5,830	5,820	99.8	1	0.0
C88	Immunoproliferative Dis.	124	124	100.0	0	-
C90	Multiple Myeloma	776	744	95.9	0	-
C91-C95	Leukaemia	4,273	4,266	99.8	0	-
	Other & Unspecified	2,615	2,255	86.2	2	0.1
	All sites total	115,238	109,725	95.2	14	0.0

*Percentage of cases with Morphologically Verified (MV) *Death Certificate Only (DCO) recorded as basis of diagnosis

5.0 COMMENTARY ON 10 SELECTED CANCER SITES

In this section, cancers are reviewed focussing on ethnic variations, staging, age-specific incidence rate as well as annual distributions. International comparisons were made with Singapore cancer incidence 2011-2015 report National Registry of Diseases Office (2017), Singapore Cancer Registry Annual Registry Report 2015 and other countries based on Cancer Incidence in Five Continents, Volume XI (International Agency for Research on Cancer, 2017). Ten most common cancers (combined males and females) were selected.

5.1 Female Breast (ICD-10: C50)

A total of 21,634 cases of female breast cancer were diagnosed for the period of 2012-2016 compared with 18,206 cases in 2007-2011 report. Breast cancer is the most common cancer and accounted for 34.1% of all cancer among females in Malaysia. The ASR was increased from 31.1 in previous report to 34.1 per 100,000 populations. The incidence was highest among Chinese followed by Indians and Malays.

The overall cumulative risk (CumR) was 3.7, highest among Chinese (4.5) and lowest among Malays (3.4). The overall lifetime risk was 1 in 27 compared to 1 in 30 in previous report. In Chinese it was 1 in 22, Indians 1 in 23 and Malays 1 in 30. The incidence increased after the age of 25 years and the peaked age was 60-64 years then reduced after 65 years of aged.

Staging was reported for 13,485 cases (62.3%). Of these 47.9% were detected at late stage (III & IV) which was higher compared to 2007-2011 report (43.2%).

International comparisons shown the highest ASR was for New Zealand: Maori (ASR 117.9) while the lowest was for India, Tripura (ASR 6.9).

Table 17. Female Breast: Cancer incidence summary by year, Malaysia

All residents	No.	CR	ASR	CumR
2007-2011	18,206	28.6	31.1	3.4
2012-2016	21,634	32.5	34.1	3.7
2012	4,266	32.1	33.5	3.6
2013	4,076	30.2	31.0	3.4
2014	4,150	30.8	31.7	3.5
2015	4,518	33.0	33.4	3.6
2016	4,624	33.8	34.4	3.8

Table 18. Female Breast: Incidence summary by year and ethnicity, Malaysia

	Malay				Chinese				Indian			
	No.	CR	ASR	CumR	No.	CR	ASR	CumR	No.	CR	ASR	CumR
Female												
2007-2011	8,225	23.6	27.2	2.9	7,333	47.5	41.5	4.5	1,705	36.0	37.1	4.2
2012-2016	10,455	28.0	31.5	3.4	7,759	49.1	40.7	4.5	1,910	39.2	38.1	4.4

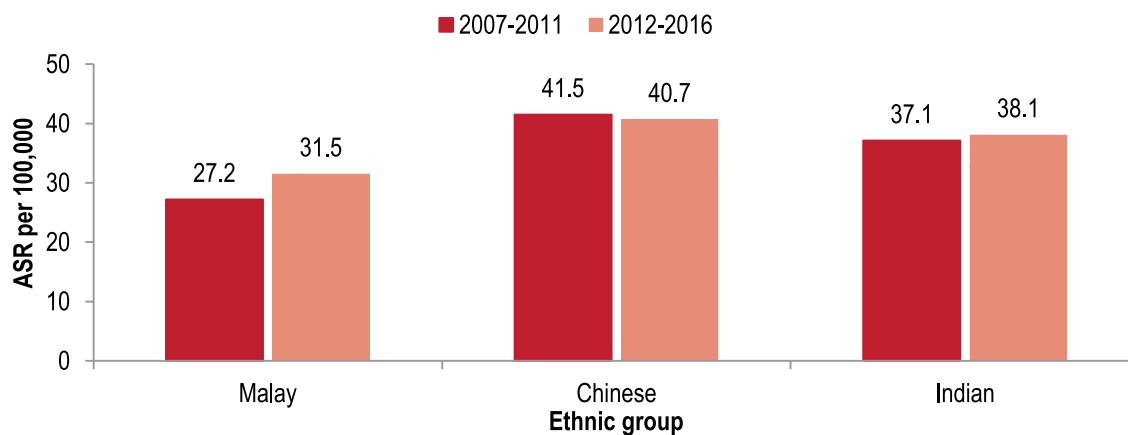


Figure 25. Female Breast: Comparison of age-standardised rate by year and major ethnic group, Malaysia

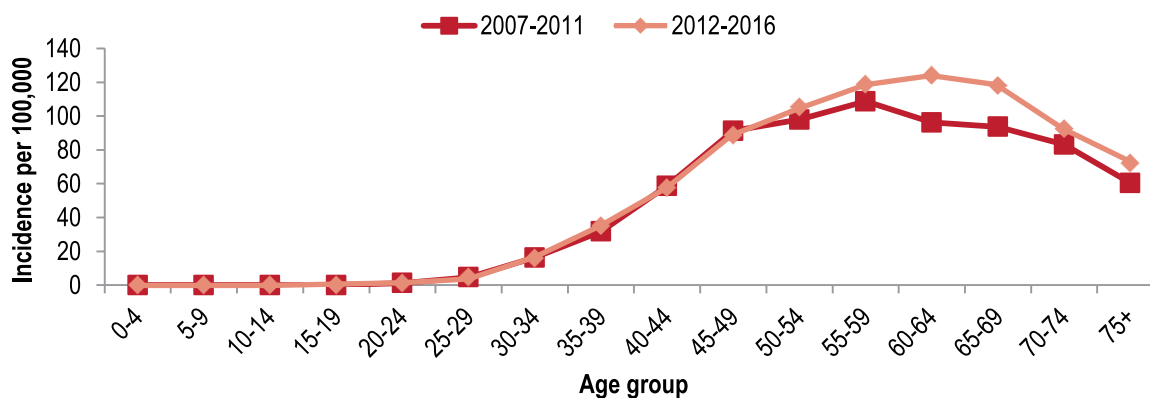


Figure 26. Female Breast: Comparison of age-specific incidence rate by year, Malaysia

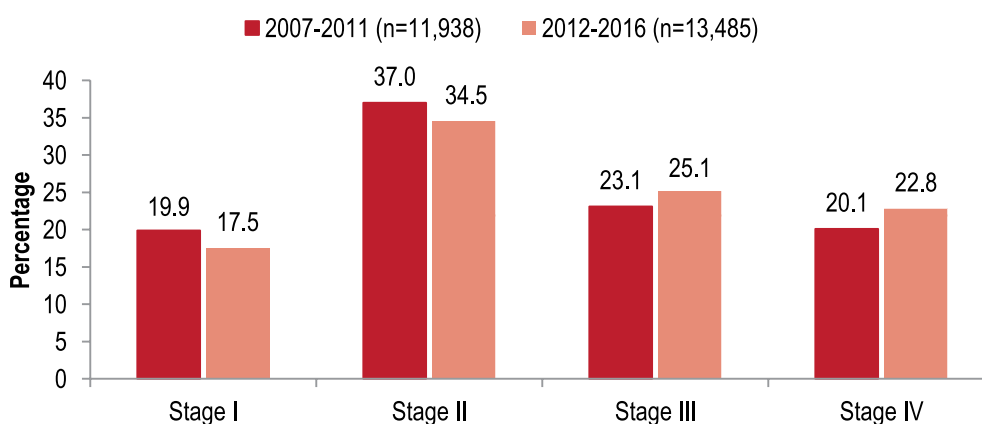
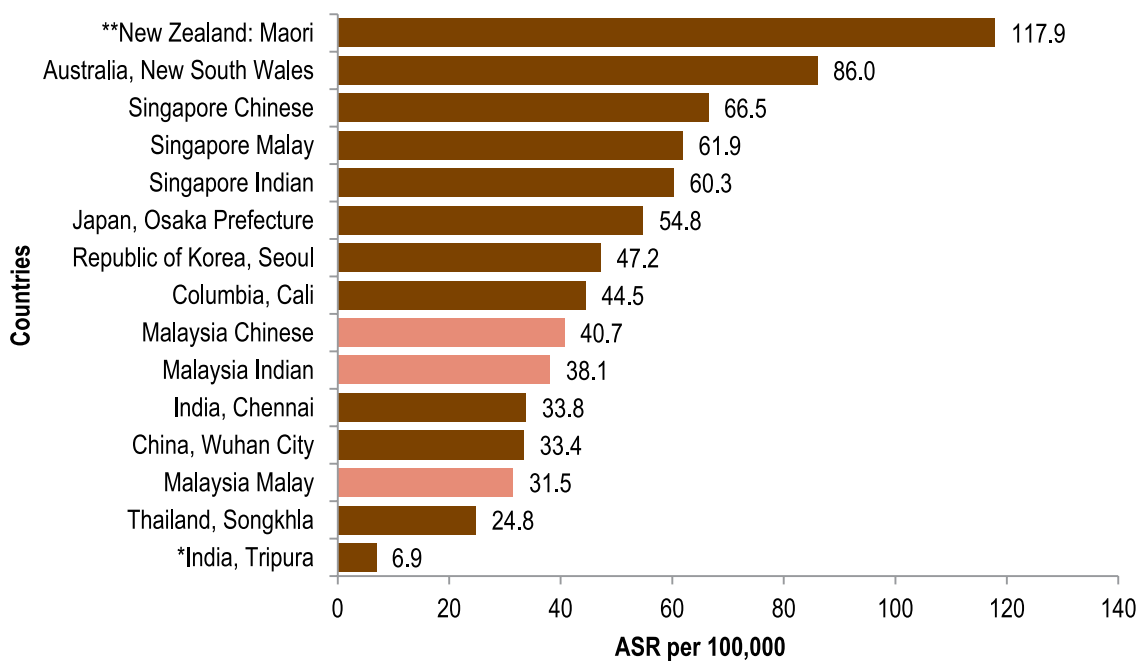


Figure 27. Female Breast: Comparison of staging percentage by year, Malaysia



**The highest incidence from CI5, Volume XI *The lowest incidence from CI5, Volume XI
 NB: National Registry of Diseases Office (2017). Singapore Cancer Registry Annual Registry Report 2015.

Figure 28. Female Breast: International comparisons – Age-standardised rates

5.2 Colorectal (ICD-10: C18-C21)

A total of 15,515 cases of colorectal cancer were registered for the period of 2012-2016 compared with 13,693 cases in 2007-2011 report. 56.1% were among males and 43.9% were among females. Colorectal cancer was the most common cancer in males and second in females. The incidence of colorectal cancer was highest among Chinese for both sexes but the trend is decreasing compared to previous report as in Figures 29. The lifetime risk for males was 1 in 55. It was 1 in 43 for Chinese, 1 in 65 for Malays and 1 in 70 for Indians. The lifetime risk for females was 1 in 76; for Chinese 1 in 57, Malays 1 in 89 and Indians 1 in 95. The incidence increased with age and peak at the age of 70 and above for both sexes.

Staging was reported for 4,806 (55.2%) and 3,859 (56.6%) respectively for both males and females. Of these 72.4% in males and 73.1% in females were detected at late stage (III & IV) which were higher compared to the previous report (figure 32). International comparisons of the ASR for both sexes are shown in Figure 33.

Table 19. Colorectal: Cancer incidence summary by year, Malaysia

All residents	Male				Female			
	No.	CR	ASR	CumR	No.	CR	ASR	CumR
2007-2011	7,646	11.7	14.6	1.8	6,047	9.5	11.1	1.3
2012-2016	8,701	12.7	14.8	1.8	6,814	10.2	11.1	1.3
2012	1,590	11.6	13.5	1.7	1,269	9.5	10.3	1.2
2013	1,628	11.8	13.4	1.6	1,290	9.6	10.2	1.2
2014	1,788	12.9	14.5	1.8	1,291	9.6	10.2	1.2
2015	1,787	12.7	14.0	1.7	1,401	10.2	10.6	1.3
2016	1,908	13.6	15.0	1.9	1,563	11.4	11.9	1.4

Table 20. Colorectal: Incidence summary by sex, year and ethnicity, Malaysia

	Malay				Chinese				Indian			
	No.	CR	ASR	CumR	No.	CR	ASR	CumR	No.	CR	ASR	CumR
Male												
2007-2011	2,872	8.1	11.3	1.4	3,825	23.3	21.1	2.5	389	8.1	10.3	1.2
2012-2016	3,493	9.2	12.2	1.5	4,008	23.9	19.6	2.3	470	9.6	11.0	1.4
Female												
2007-2011	2,231	6.4	8.1	1.0	3,023	19.6	17.1	2.0	364	7.7	8.7	1.1
2012-2016	2,912	7.8	9.4	1.1	2,990	18.9	15.2	1.8	401	8.2	8.5	1.1

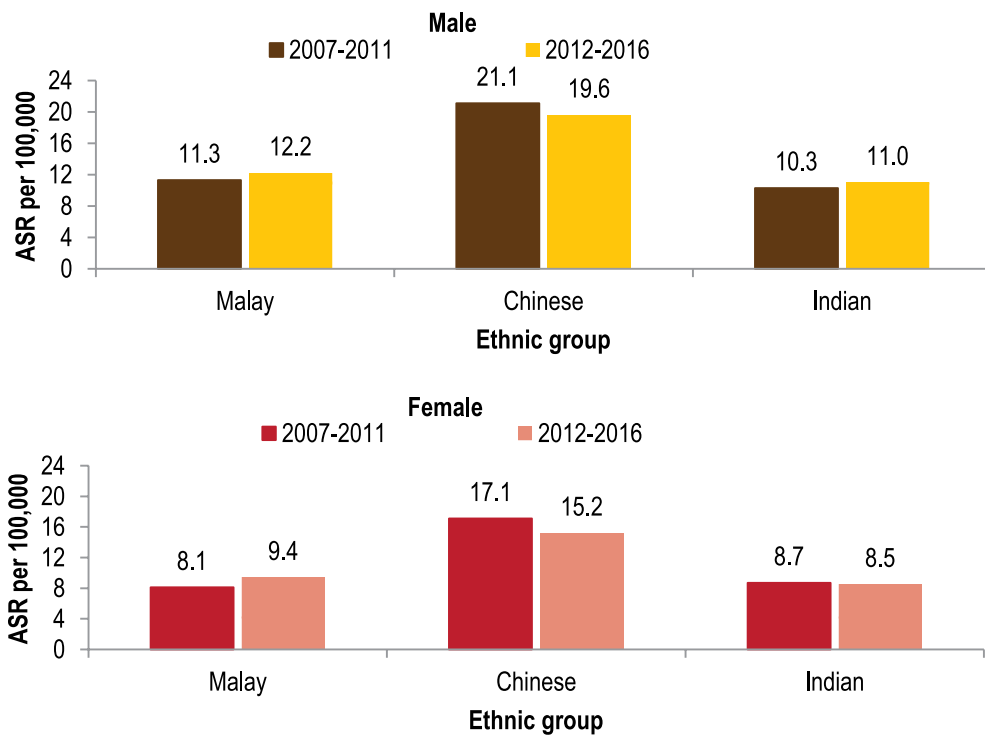


Figure 29. Colorectal: Comparison of age-standardised rate by year, major ethnic group and sex, Malaysia

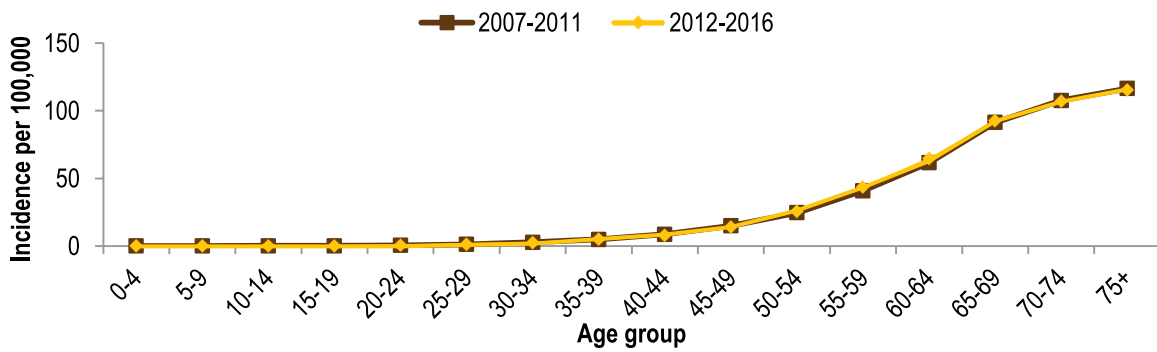


Figure 30. Colorectal: Comparison of age-specific incidence rate by year in males

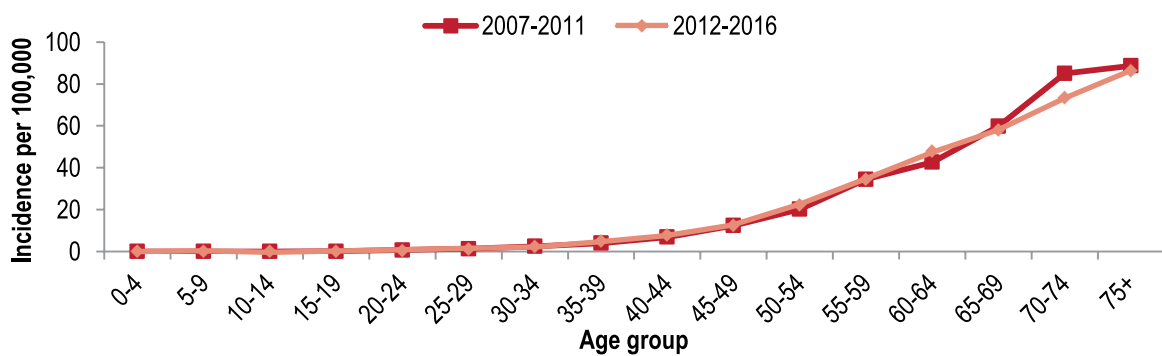


Figure 31. Colorectal: Comparison of age-specific incidence rate by year in females

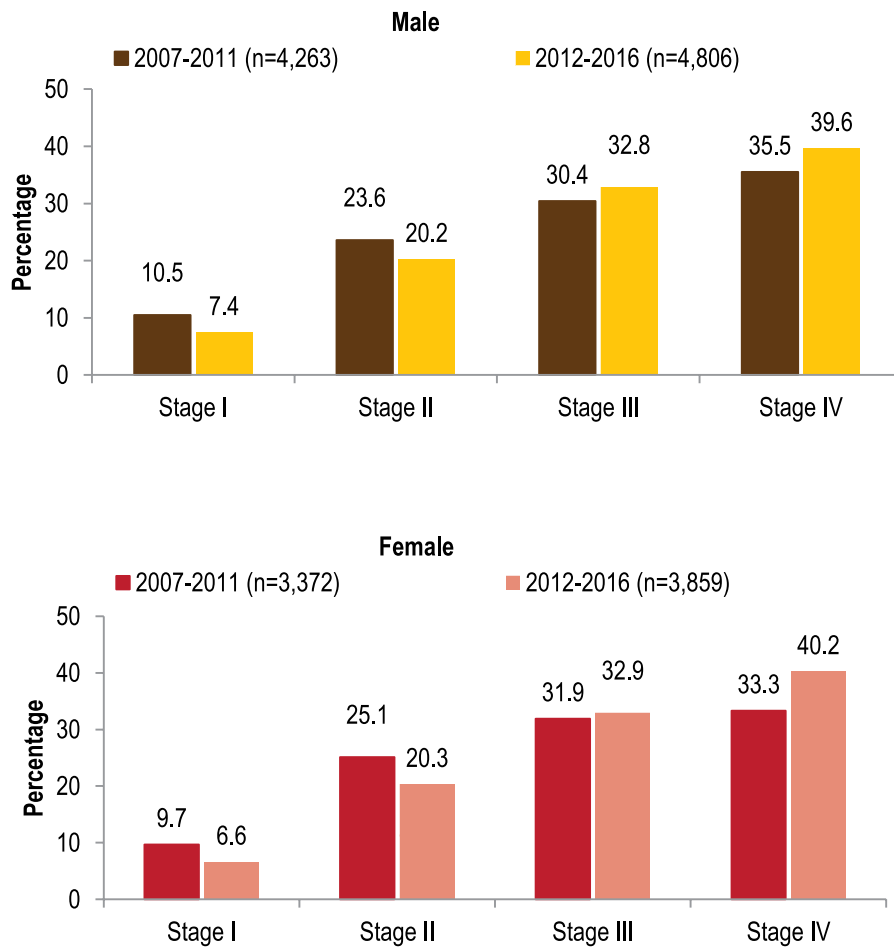
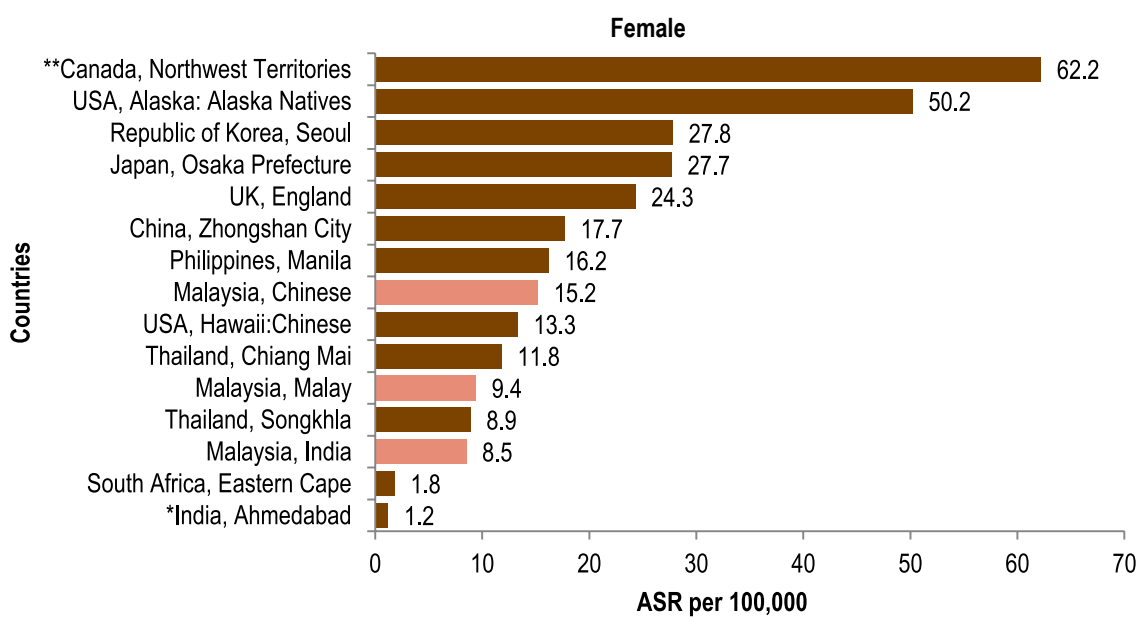
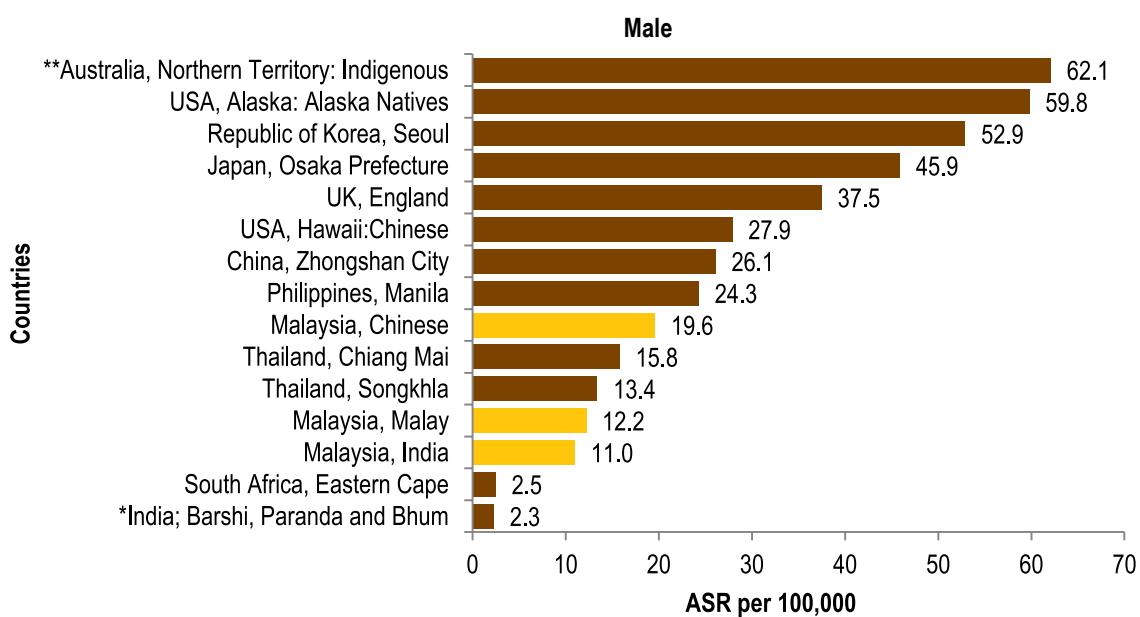


Figure 32. Colorectal: Comparison of staging percentage by year and sex, Malaysia



** The highest incidence from CI5, Volume XI

*The lowest incidence from CI5, Volume XI

Figure 33. Colorectal: International comparisons - Age-standardised rates

5.3 Trachea, bronchus and lung (ICD-10: C33-C34)

A total of 11,256 cases of trachea, bronchus and lung cancers were registered for the period of 2012-2016 compared with 10,608 cases in 2007-2011 report. 68.3% were among males and 31.7% were among females. It was the second most common cancer in males and fifth in females. The lifetime risk for males was 1 in 60. For Chinese, Malays and Indians, it was 1 in 51, 1 in 62 and 1 in 145 respectively. The lifetime risk for females was 1 in 138; for Chinese was 1 in 108, 1 in 169 for Malays and 1 in 251 for Indians.

The ASR was highest among Chinese for both sexes but the trend is increasing among Malays compared to previous report as in Figures 34. The incidence increased with age and peak at the age of 70 and above. Most of the lung cancer cases were detected at very late stage (III & IV) which were above 90% for both sexes (figure 35).

Table 21. Trachea, bronchus and lung: Cancer incidence summary by year, Malaysia

All residents	Male				Female			
	No.	CR	ASR	CumR	No.	CR	ASR	CumR
2007-2011	7,415	11.3	14.4	1.8	3,193	5.0	6.0	0.7
2012-2016	7,686	11.3	13.2	1.7	3,570	5.4	5.9	0.7
2012	1,402	10.3	12.1	1.5	682	5.1	5.6	0.7
2013	1,589	11.5	13.2	1.7	721	5.3	5.7	0.7
2014	1,568	11.3	13.0	1.7	698	5.2	5.6	0.7
2015	1,531	10.9	12.1	1.5	740	5.4	5.7	0.7
2016	1,596	11.4	12.6	1.6	729	5.3	5.6	0.7

Table 22. Trachea, bronchus and lung: Incidence summary by sex, year and ethnicity, Malaysia

	Malay				Chinese				Indian			
	No.	CR	ASR	CumR	No.	CR	ASR	CumR	No.	CR	ASR	CumR
Male												
2007-2011	3,094	8.8	12.6	1.6	3,390	20.6	18.8	2.3	270	5.6	7.6	1.0
2012-2016	3,500	9.2	12.5	1.6	3,258	19.4	16.0	2.0	239	4.9	5.7	0.7
Female												
2007-2011	1,187	3.4	4.4	0.5	1,486	9.6	8.5	1.0	127	2.7	3.1	0.4
2012-2016	1,492	4.0	4.9	0.6	1,537	9.7	7.8	0.9	135	2.8	3.0	0.4

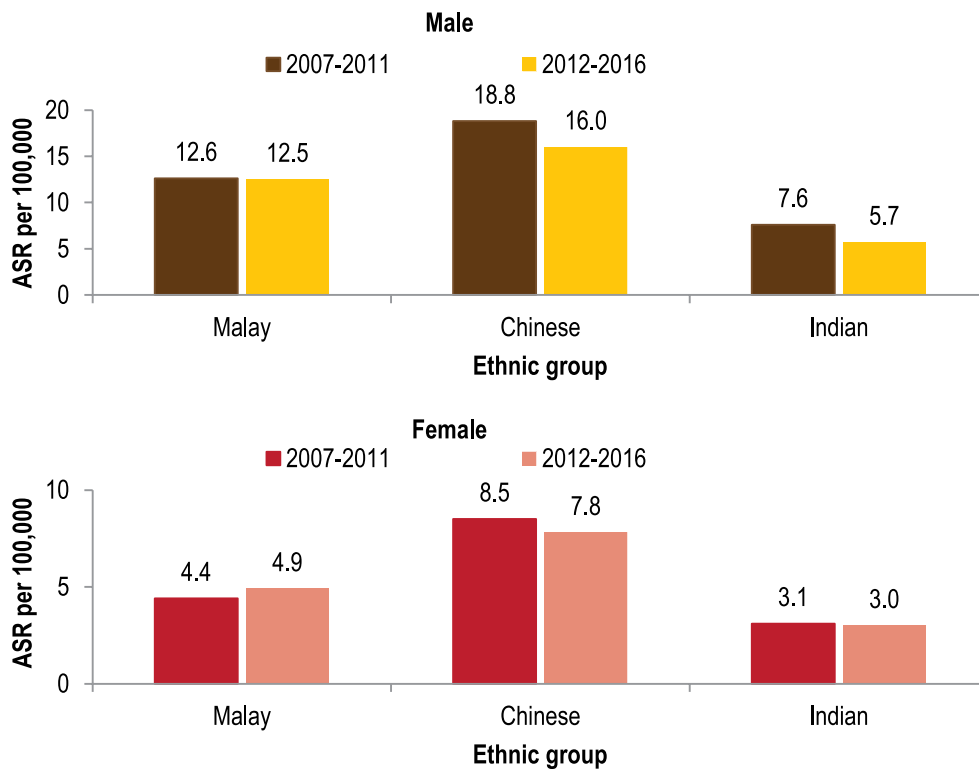


Figure 34. Trachea, bronchus and lung: Comparison of age-standardised rate by year, major ethnic group and sex, Malaysia

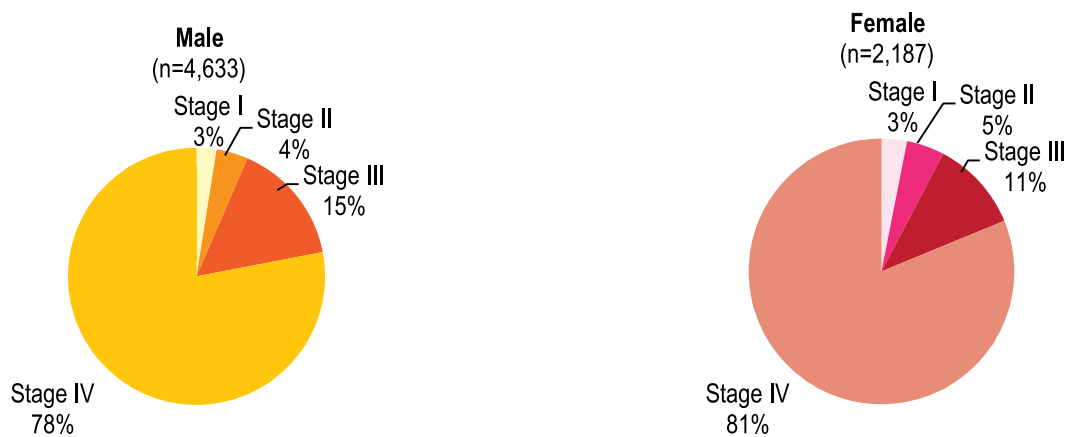


Figure 35. Trachea, bronchus and lung: Staging percentage by sex, Malaysia, 2012-2016

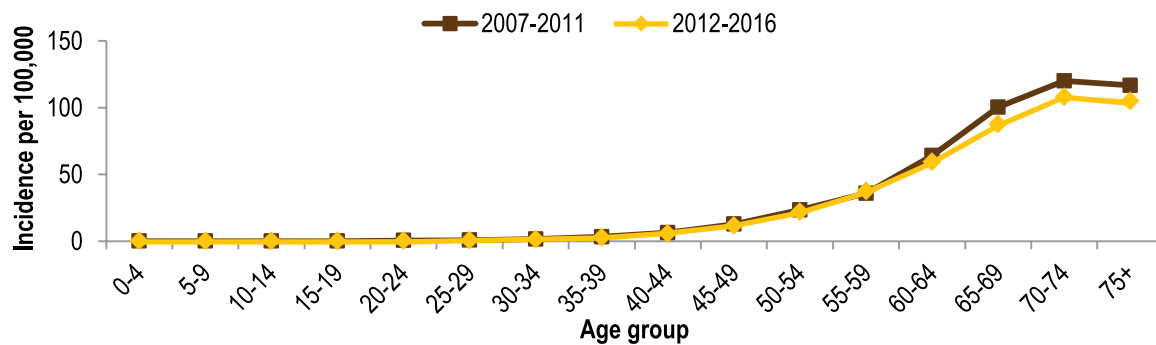


Figure 36. Trachea, bronchus and lung: Comparison of age-specific incidence rate by year in males

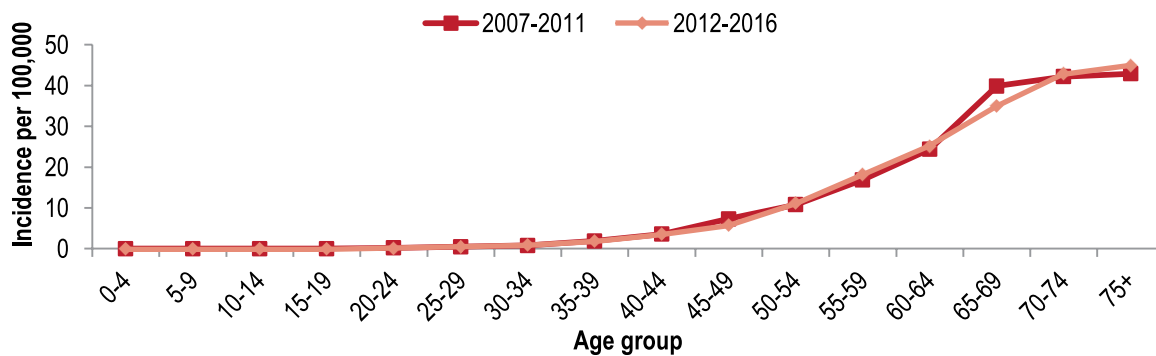
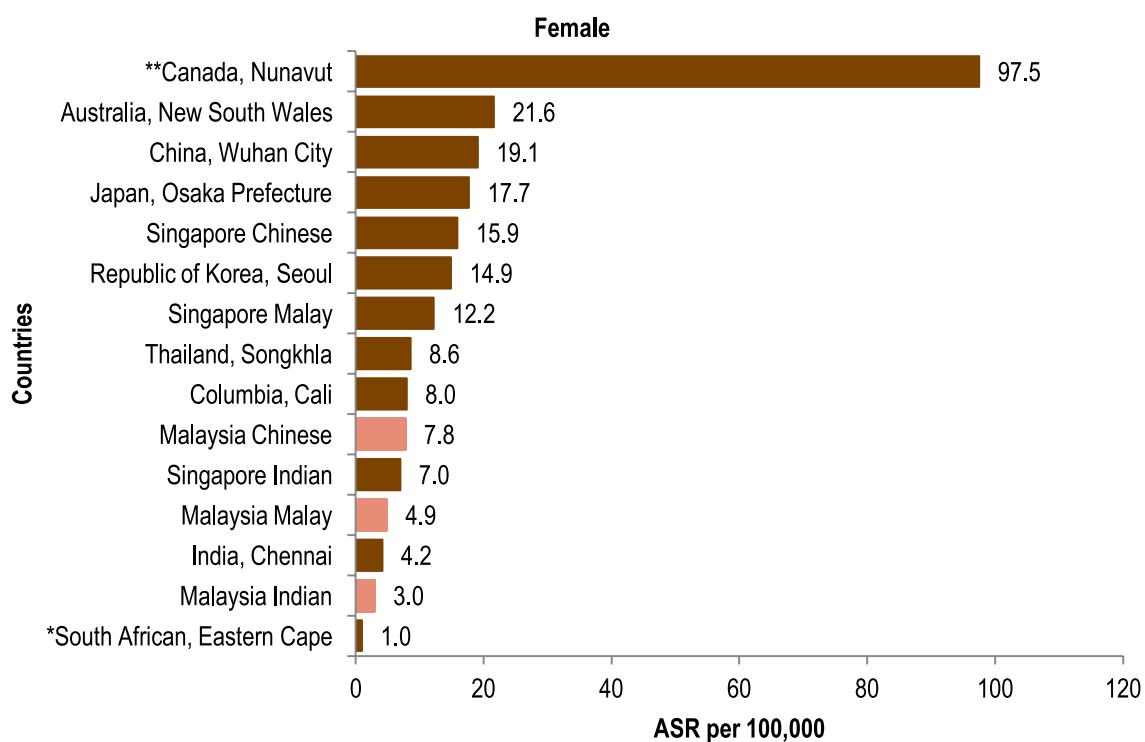
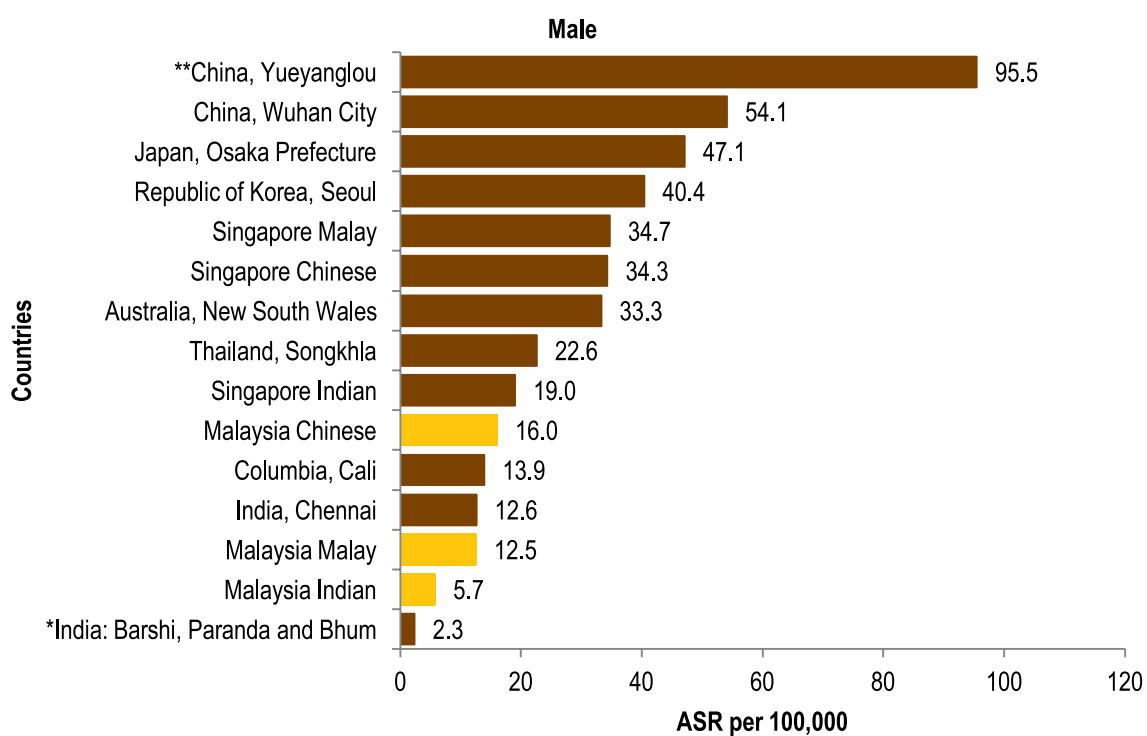


Figure 37. Trachea, bronchus and lung: Comparison of age-specific incidence rate by year in females



**The highest incidence from CI5, Volume XI *The lowest incidence from CI5, Volume XI
 NB: National Registries of Diseases Office (2017). Singapore Cancer Registry Annual Registry Report 2015.

Figure 38. Trachea, bronchus and lung: International comparisons- Age-standardised rates

COMMENTARY

5.4 Lymphoma (ICD-10: C81-C85, C96)

A total of 5,830 cases of lymphoma were registered for the period of 2012-2016 compared with 5,374 cases in 2007-2011 report. 58.5% were among males and 41.5% were among females. Lymphoma ranked fourth in males and seventh in females. Incidence in Malay males was highest compared to Chinese and Indians. The lifetime risk for males was 1 in 176; 1 in 167 for Malays, 1 in 189 for Chinese and 1 in 283 for Indians. The lifetime risk for females was 1 in 252; 1 in 245 for Malays, 1 in 280 for Chinese and 1 in 324 for Indians.

Staging was reported for 1,394 (40.9%) and 1,027 (42.5%) cases respectively for males and females (figure 41). Of these 62% in males and 59% in females were detected at late stage (III & IV). International comparisons of the ASR for both sexes are shown in Figure 44 and 45.

Table 23. Lymphoma: Cancer incidence summary by year, Malaysia

All residents	Male				Female			
	No.	CR	ASR	CumR	No.	CR	ASR	CumR
2007-2011	3,171	4.8	5.5	0.6	2,203	3.5	3.8	0.4
2012-2016	3,412	5.0	5.3	0.6	2,418	3.6	3.8	0.4
2012	656	4.8	5.1	0.5	467	3.5	3.6	0.4
2013	621	4.5	4.8	0.5	506	3.8	3.9	0.4
2014	673	4.9	5.0	0.5	503	3.7	3.8	0.4
2015	784	5.6	5.8	0.6	464	3.4	3.4	0.4
2016	678	4.8	5.1	0.5	478	3.5	3.5	0.4

Table 24. Lymphoma: Incidence summary by sex, year and ethnicity, Malaysia

	Malay				Chinese				Indian			
	No.	CR	ASR	CumR	No.	CR	ASR	CumR	No.	CR	ASR	CumR
Male												
2007-2011	1,639	4.6	5.6	0.6	908	5.5	5.0	0.6	187	3.9	4.2	0.4
2012-2016	1,866	4.9	5.6	0.6	943	5.6	4.8	0.5	178	3.6	3.7	0.4
Female												
2007-2011	1,412	3.3	3.7	0.4	639	4.1	3.7	0.4	130	2.7	3.0	0.4
2012-2016	1,354	3.6	3.9	0.4	602	3.8	3.2	0.4	151	3.1	3.0	0.3

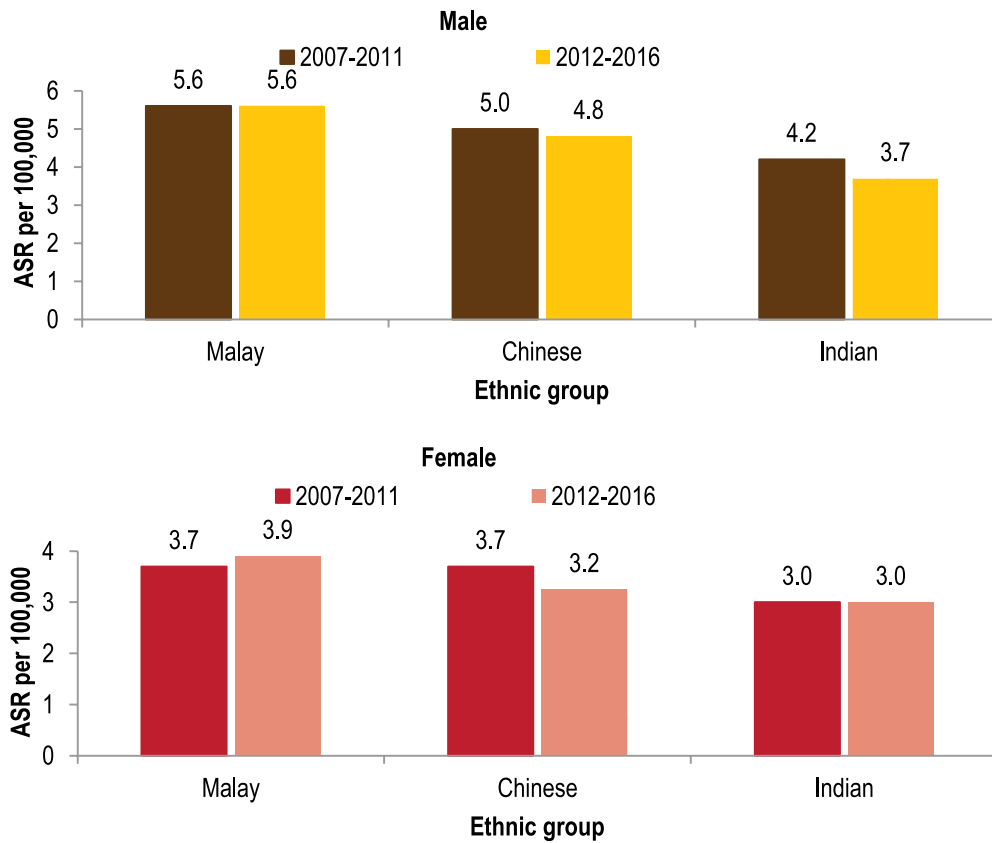


Figure 39. Lymphoma: Comparison of age-standardised rate by year, major ethnic group and sex, Malaysia

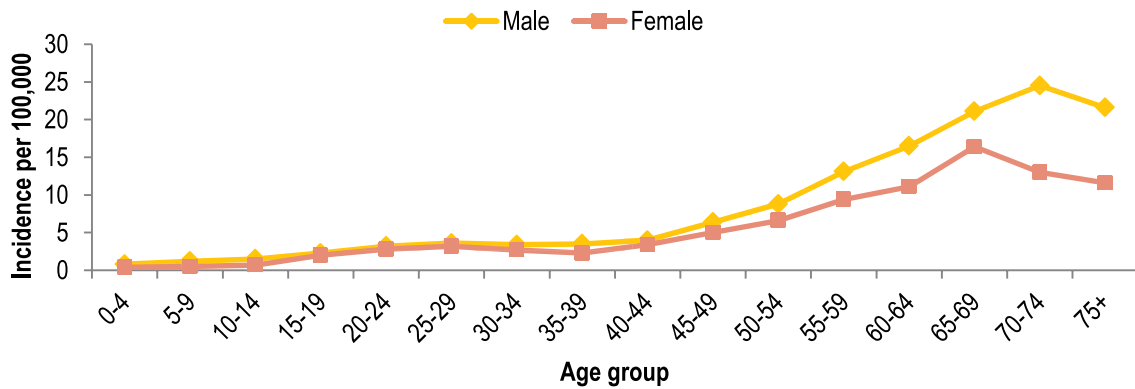


Figure 40. Lymphoma: Age-specific incidence rate by sex, Malaysia, 2012-2016

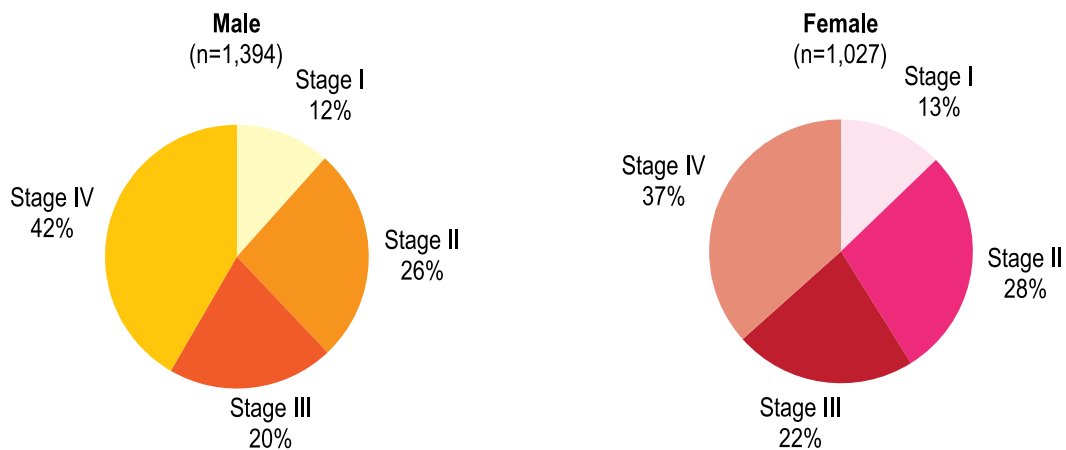


Figure 41. Lymphoma: Staging percentage by sex, Malaysia, 2012-2016

Age-specific incidence rate for Hodgkin and Non-Hodgkin Lymphoma as in Figure 42 and 43

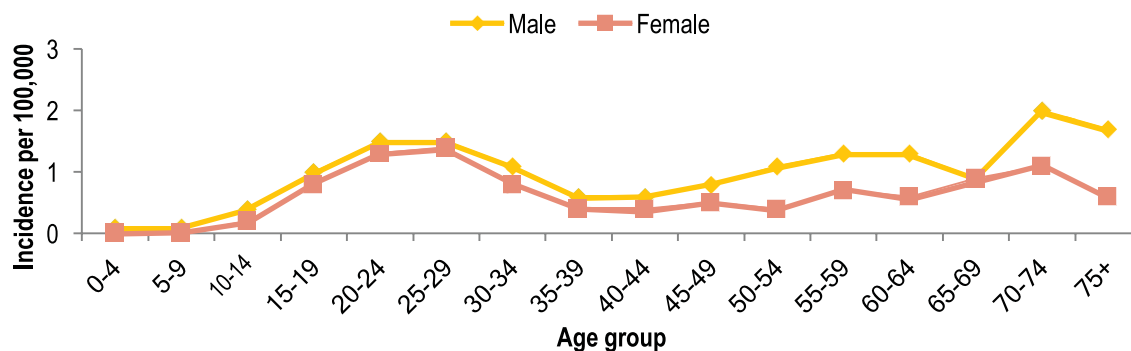


Figure 42. Hodgkin Lymphoma: Age-specific incidence rate by sex, Malaysia, 2012-2016

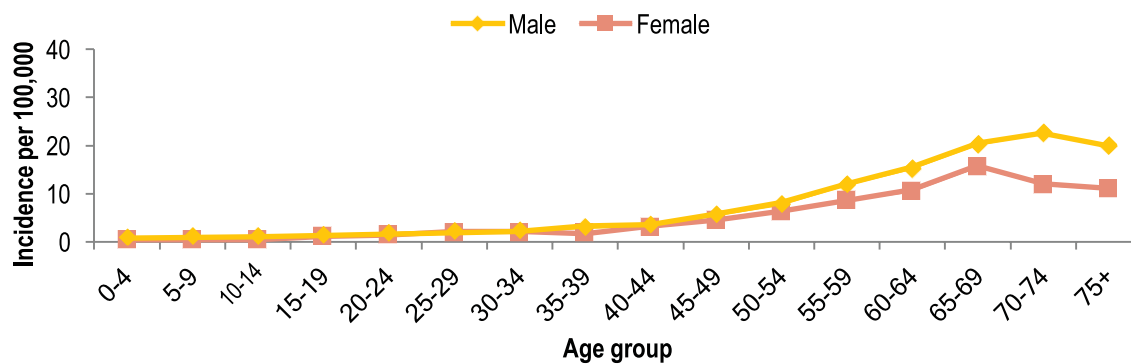
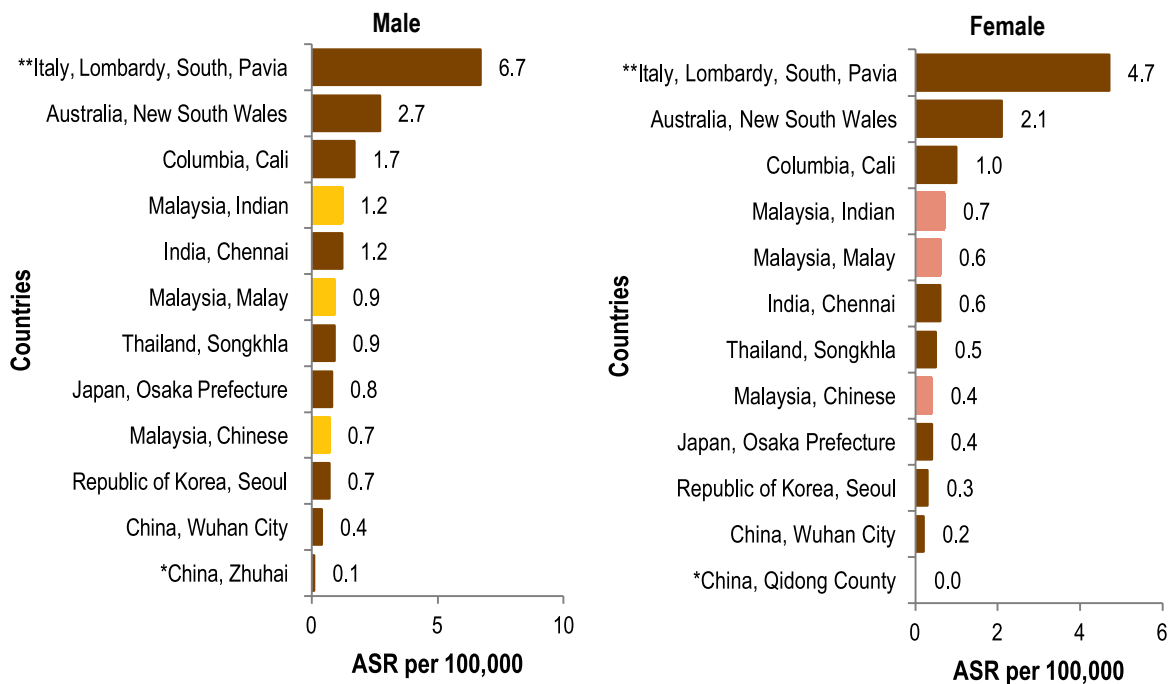
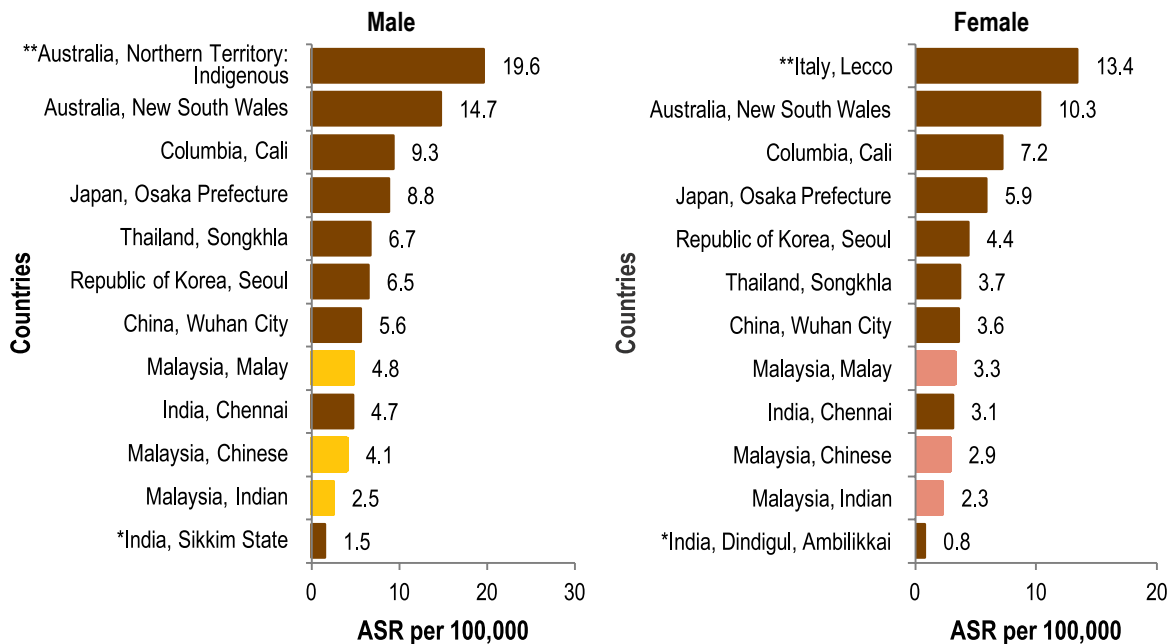


Figure 43. Non-Hodgkin Lymphoma: Age-specific incidence rate by sex, Malaysia, 2012-2016



**The highest incidence from CI5, Volume XI *The lowest incidence from CI5, Volume XI

Figure 44. Hodgkin lymphoma: International comparisons - Age-standardised rates



**The highest incidence from CI5, Volume XI *The lowest incidence from CI5, Volume XI

Figure 45. Non-Hodgkin lymphoma: International comparisons - Age-standardised rates

5.5 Nasopharynx (ICD-10: C11)

A total of 4,597 cases of nasopharynx cancer were registered for the period of 2012-2016 compared with 5,090 cases in 2007-2011 report. 73.1% were among males and 26.9% were among females. Nasopharynx was the fifth most common cancer in males. The lifetime risk for males was 1 in 175, in Chinese it was 1 in 108, and 1 in 341 in Malays. The lifetime risk for females was 1 in 482. The incidence in males increased after the age of 25 and peaked at 65 years old.

Staging was reported for 2,193 (65.3%) and 819 (66.2%) respectively for both males and females. Of these 69% in males and 65% in females were detected at late stage (III & IV) which were higher compared to the previous report (figure 48).

Internationally, the highest incidence rate for males was in Zhongshan City, China (ASR 25.0) and in females was in Zhuhai, China (ASR 9.0). The incidence rates for Malaysian Chinese (ASR 8.6) were almost similar with Singaporean Chinese (ASR 9.0).

Table 25. Nasopharynx: Cancer incidence summary by year, Malaysia

All residents	Male				Female			
	No.	CR	ASR	CumR	No.	CR	ASR	CumR
2007-2011	3,785	5.8	6.4	0.7	1,305	2.0	2.2	0.2
2012-2016	3,359	4.9	5.2	0.6	1,238	1.9	1.9	0.2
2012	662	4.9	5.1	0.6	246	1.8	1.9	0.2
2013	625	4.5	4.7	0.5	271	2.0	2.0	0.2
2014	707	5.1	5.3	0.6	233	1.7	1.7	0.2
2015	693	4.9	5.1	0.6	225	1.6	1.7	0.2
2016	672	4.8	5.0	0.6	263	1.9	1.9	0.2

Table 26. Nasopharynx: Incidence summary by sex, year and ethnicity, Malaysia

	Malay				Chinese				Indian			
	No.	CR	ASR	CumR	No.	CR	ASR	CumR	No.	CR	ASR	CumR
Male												
2007-2011	959	2.7	3.3	0.4	2,104	12.8	11.0	1.2	44	0.9	1.1	0.1
2012-2016	862	2.3	2.7	0.3	1,748	10.4	8.6	0.9	25	0.5	0.6	0.1
Female												
2007-2011	401	1.2	1.3	0.1	611	4.0	3.5	0.4	25	0.5	0.6	0.1
2012-2016	383	1.0	1.1	0.1	549	3.5	2.9	0.3	18	0.4	0.4	0.0

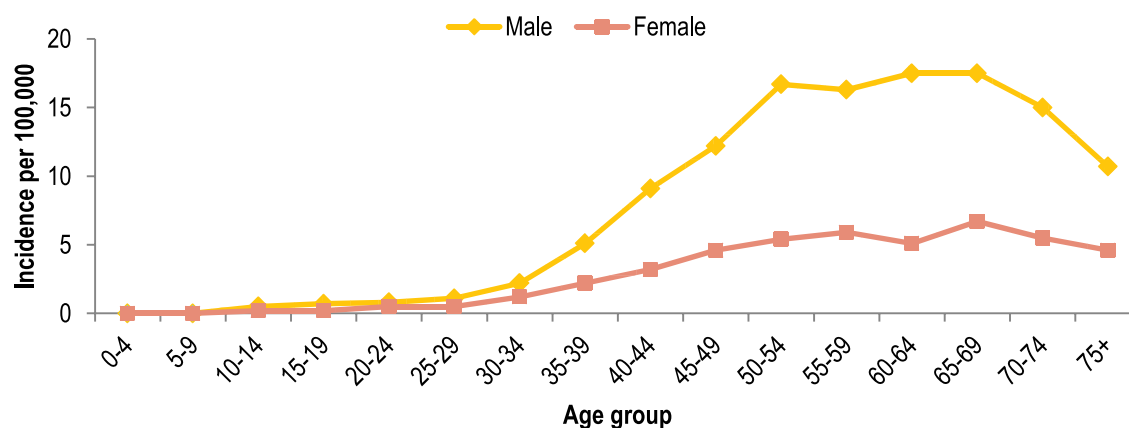


Figure 46. Nasopharynx: Age-specific incidence rate by sex, Malaysia, 2012-2016

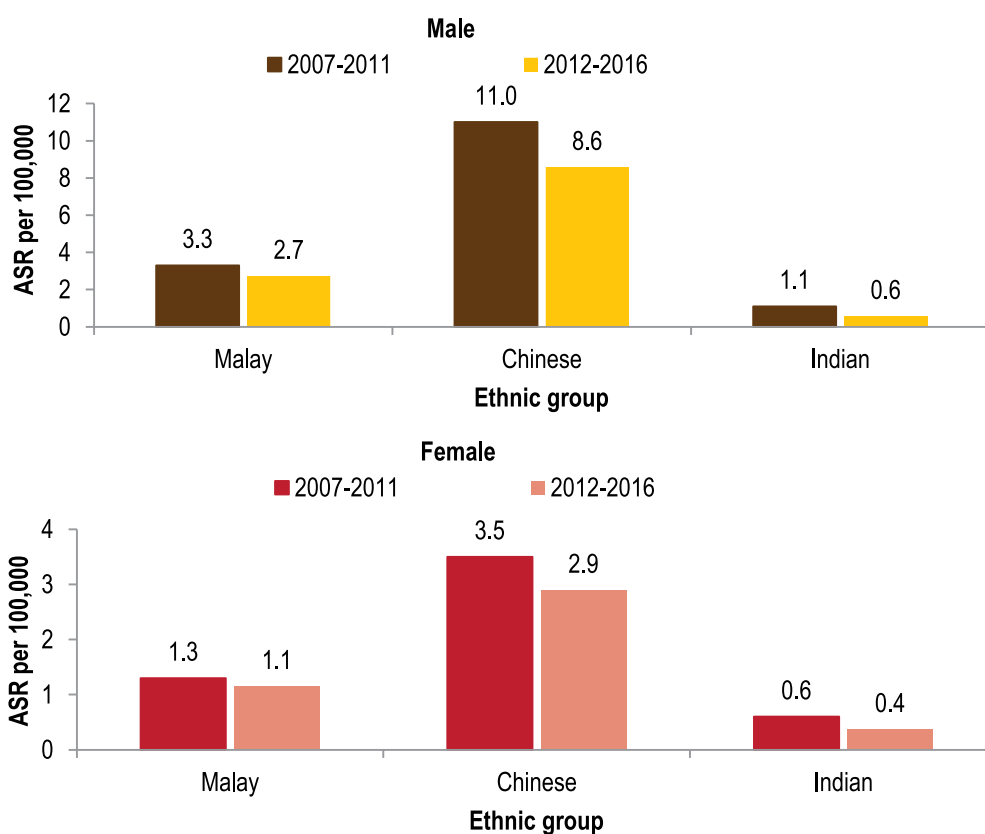


Figure 47. Nasopharynx: Comparison of age-standardised incidence rate by year, major ethnic group and sex, Malaysia

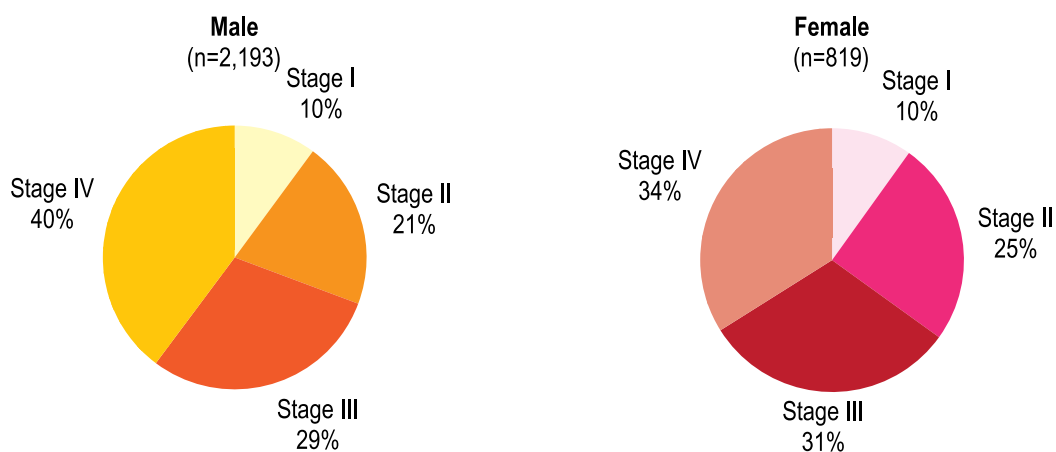
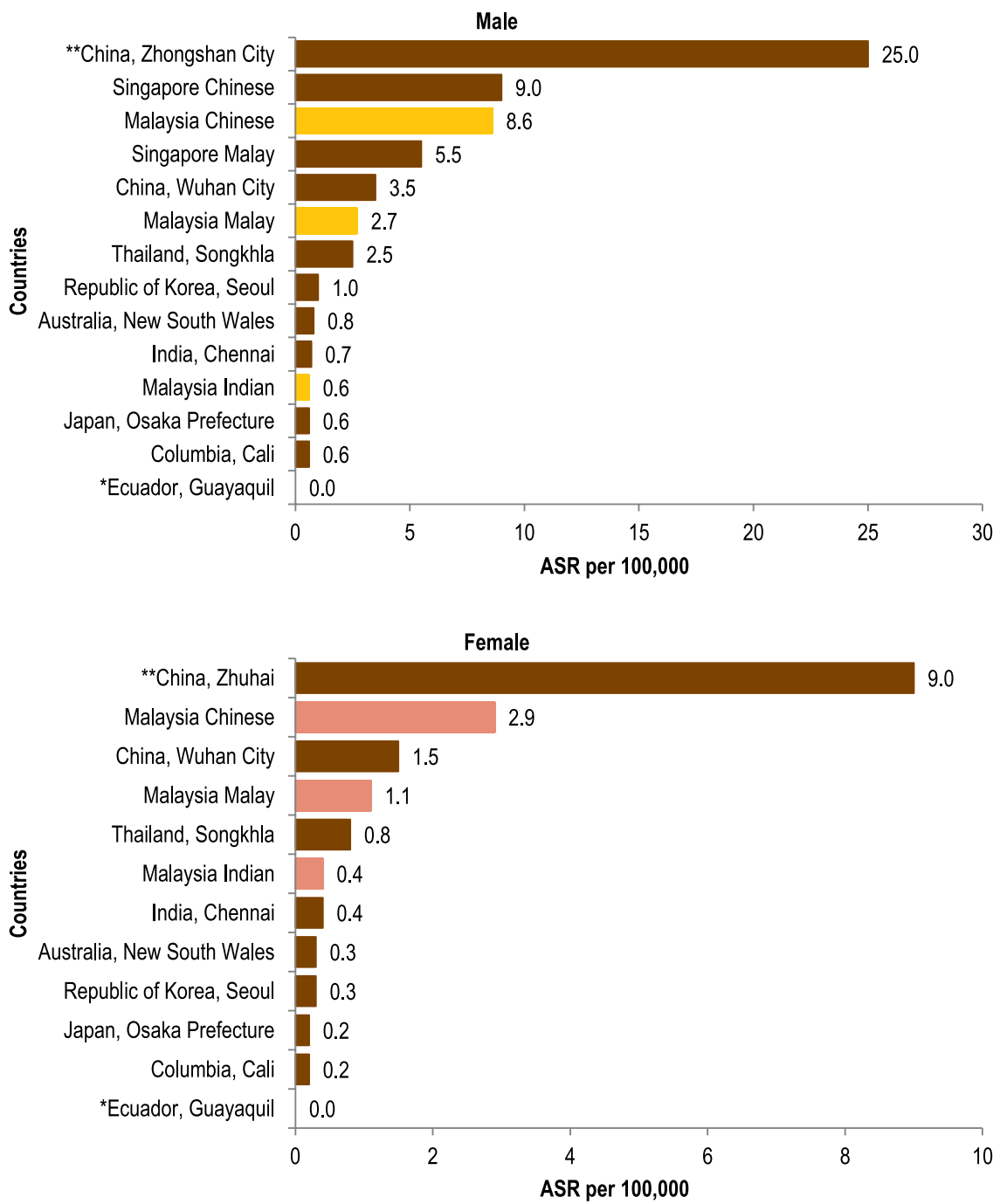


Figure 48. Nasopharynx: Staging percentage by sex, Malaysia, 2012-2016



**The highest incidence from CI5, Volume XI *The lowest incidence from CI5, Volume XI
 NB: National Registry of Diseases Office (2017). Singapore Cancer Registry Annual Registry Report 2015

Figure 49. Nasopharynx: International comparisons - Age-standardised rates

5.6 Leukaemia (ICD-10: C91-C95)

A total of 4,273 cases of leukaemia were registered for the period of 2012-2016 compared with 4,573 cases in 2007-2011 report. 56.5% were among males and 43.5% were among females and majority of the cases were 0-14 years of age. Leukaemia is the sixth most common cancer in Malaysia and seventh in males and ninth in females. Malays had the highest incidence rates followed by Chinese and Indians in both sexes. The lifetime risk for males was 1 in 307 and for females was 1 in 388.

International comparisons of the ASR for both sexes are shown in Figure 54.

Table 27. Leukaemia: Cancer incidence summary by year, Malaysia

All residents	Male				Female			
	No.	CR	ASR	CumR	No.	CR	ASR	CumR
2007-2011	2,549	3.9	4.2	0.4	2,024	3.2	3.4	0.3
2012-2016	2,414	3.5	3.8	0.3	1,859	2.8	3.0	0.3
2012	491	3.6	3.8	0.3	391	2.9	3.1	0.3
2013	468	3.4	3.6	0.3	329	2.4	2.6	0.2
2014	493	3.6	3.8	0.3	377	2.8	2.9	0.2
2015	458	3.3	3.4	0.3	380	2.8	2.9	0.3
2016	504	3.6	3.9	0.3	382	2.8	2.9	0.3

Table 28. Leukaemia: Incidence summary by sex, year and ethnicity, Malaysia

	Malay				Chinese				Indian			
	No.	CR	ASR	CumR	No.	CR	ASR	CumR	No.	CR	ASR	CumR
Male												
2007-2011	1,419	4.0	4.4	0.4	657	4.0	4.0	0.3	171	3.6	3.8	0.3
2012-2016	1,352	3.6	3.9	0.3	661	3.9	3.8	0.3	129	2.6	2.8	0.2
Female												
2007-2011	1,119	3.2	3.5	0.3	527	3.4	3.4	0.3	137	2.9	3.0	0.3
2012-2016	1,019	2.7	2.9	0.2	492	3.1	2.9	0.3	123	2.5	2.6	0.3

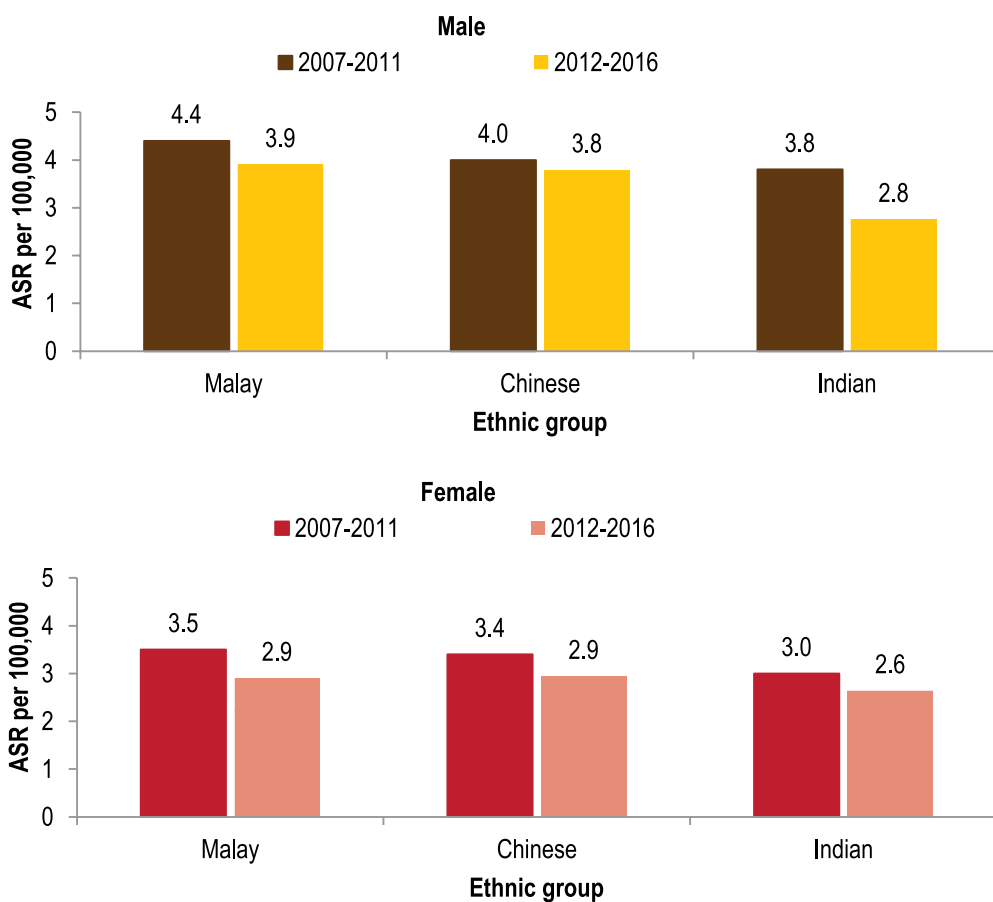


Figure 50. Leukaemia: Comparison of age-standardised incidence rate by year, major ethnic group and sex, Malaysia

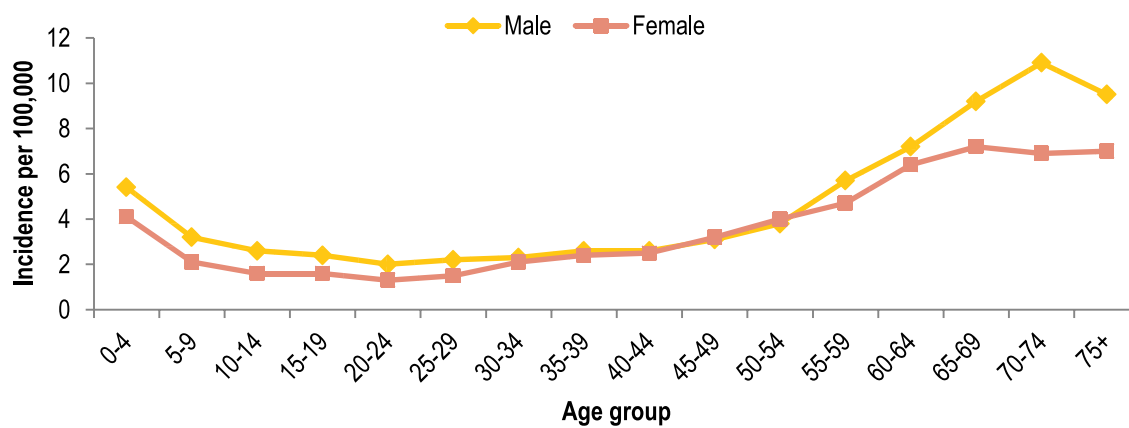


Figure 51. Leukaemia: Age-specific incidence rate by sex, Malaysia, 2012-2016

Leukaemias in this report include lymphoid, myeloid and other unspecified types. The age specific incidence rates by type as shown in figure 52 for male and in figure 53 for female.

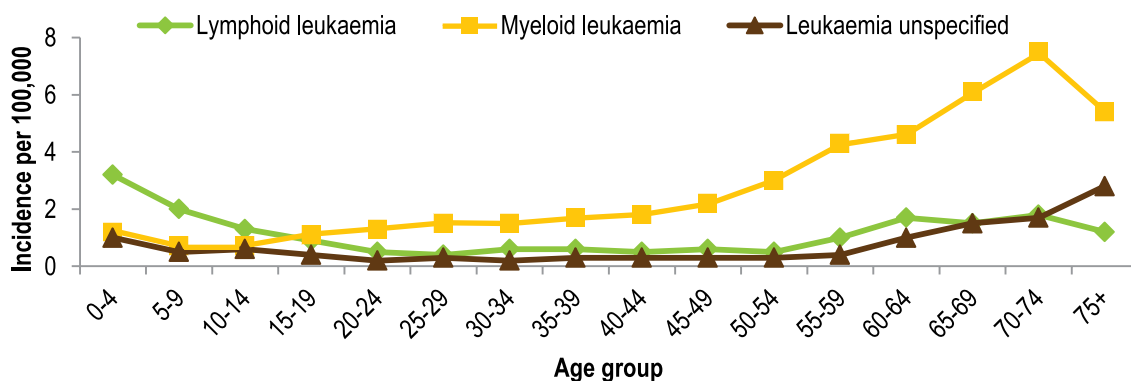


Figure 52. Leukaemia types: Age-specific incidence rate, males, Malaysia, 2012-2016

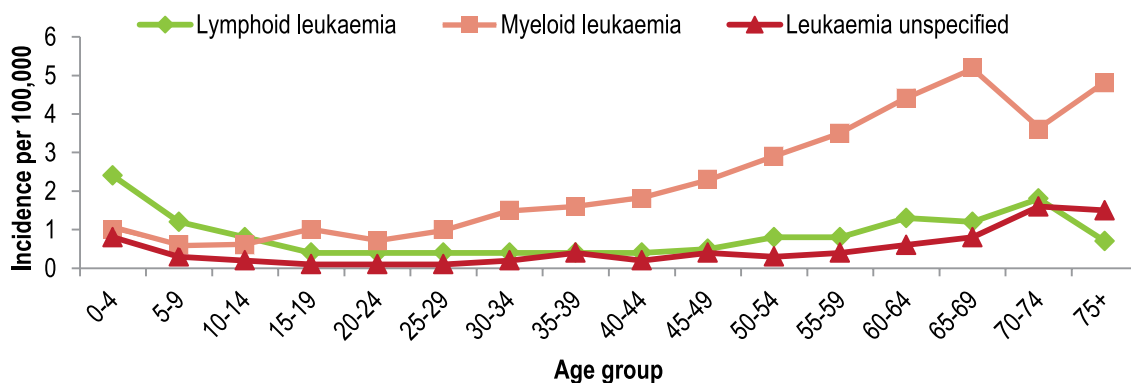
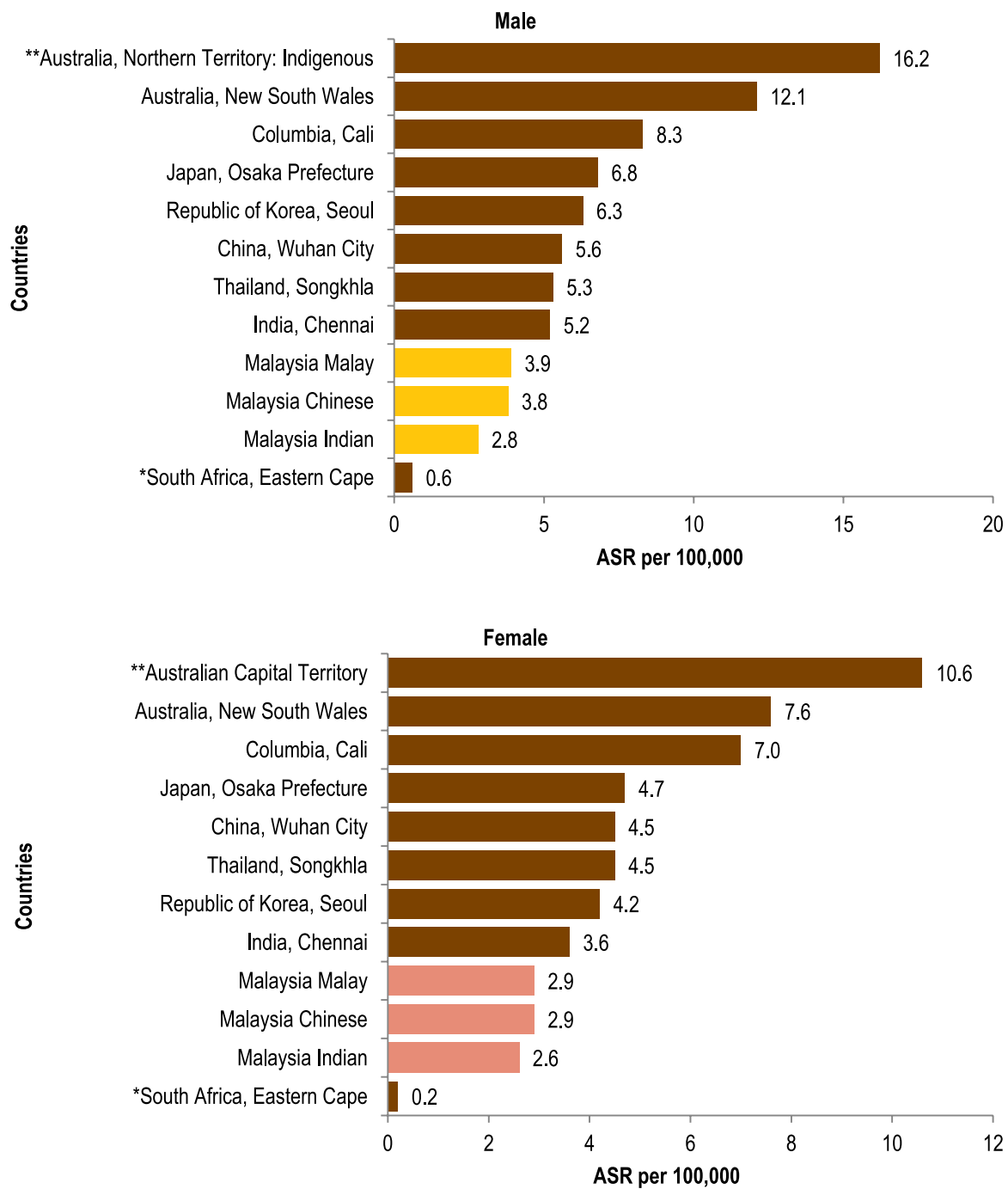


Figure 53. Leukaemia types: Age-specific incidence rate, females, Malaysia, 2012-2016



**The highest incidence from CI5, Volume XI

* The lowest incidence from CI5, Volume XI

Figure 54. Leukaemia: International comparisons - Age-standardised rates

5.7 Prostate (ICD-10: C61)

A total of 4,189 cases of prostate cancer were registered for the period of 2012-2016 compared with 3,132 cases in 2007-2011 report. Prostate cancer was seventh most common cancer in Malaysia and third in males. The incidence was highest among Chinese followed by Indians and Malays. The lifetime risk was 1 in 94. The lifetime risk for Chinese was 1 in 72, Indians was 1 in 108 and Malays was 1 in 117.

Staging was reported for 1,682 cases (40.2%). Of these 68.6% were detected at late stage (III & IV) which was higher compared to 2007-2011 report (60%). International comparisons are shown in Figure 58.

Table 29. Prostate: Cancer incidence summary by year, Malaysia

All residents	No.	CR	ASR	CumR
2007-2011	3,132	4.8	6.6	0.9
2012-2016	4,189	6.1	7.7	1.1
2012	839	6.1	7.7	1.0
2013	824	6.0	7.2	1.0
2014	752	5.4	6.6	0.9
2015	867	6.2	7.3	1.0
2016	907	6.5	7.7	1.1

Table 30. Prostate: Incidence summary by year and ethnicity, Malaysia

	Malay				Chinese				Indian			
	No.	CR	ASR	CumR	No.	CR	ASR	CumR	No.	CR	ASR	CumR
Male												
2007-2011	1,163	3.3	5.3	0.7	1,589	9.7	9.0	1.2	188	3.9	6.1	0.8
2012-2016	1,577	4.1	6.3	0.9	2,040	12.2	10.1	1.4	245	5.0	6.8	0.9

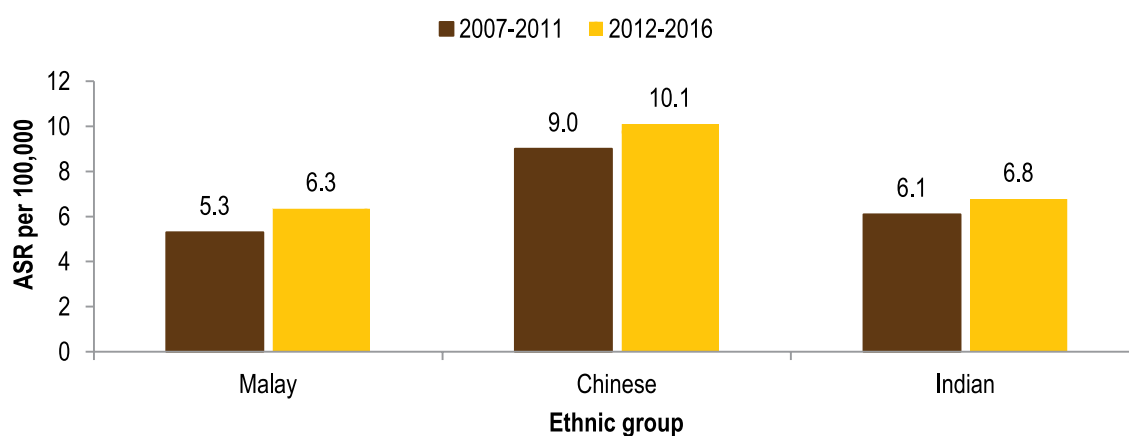


Figure 55. Prostate: Comparison of age-standardised incidence rate by year and major ethnic group, Malaysia

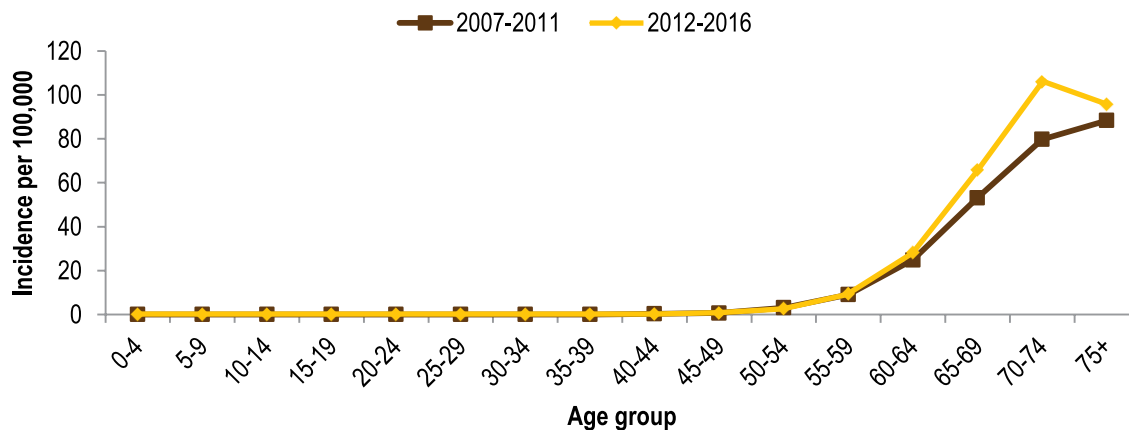


Figure 56. Prostate: Comparison of age-specific incidence rate by year, Malaysia

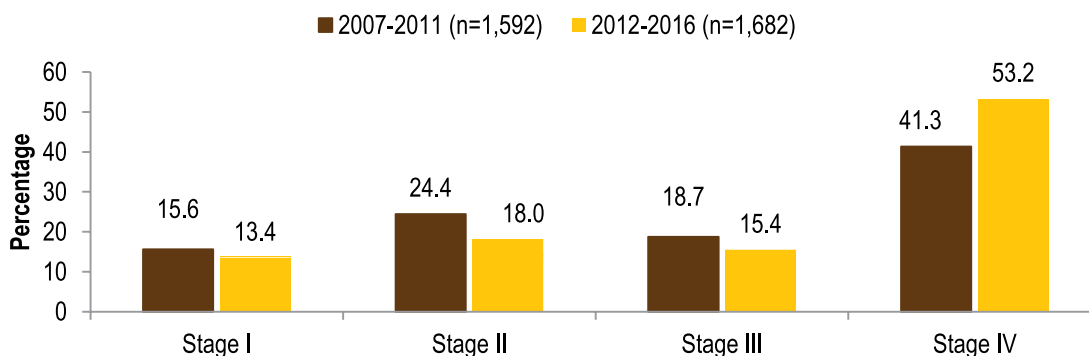
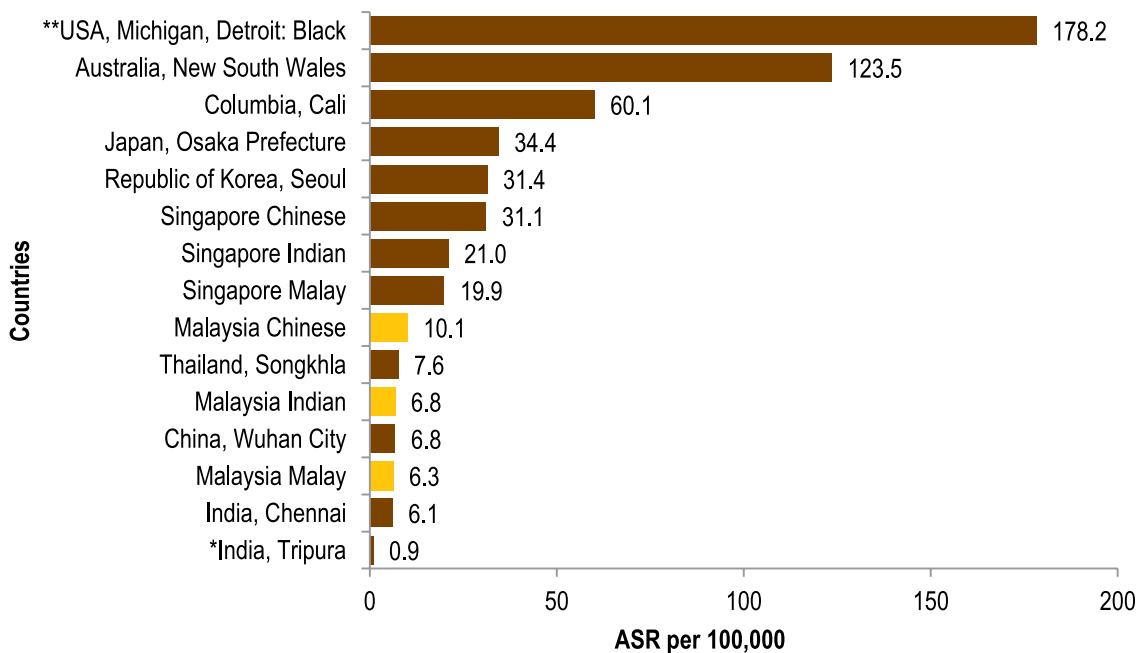


Figure 57. Prostate: Comparison of staging percentage by year, Malaysia



**The highest incidence from CI5, Volume XI *The lowest incidence from CI5, Volume XI
 NB: National Registry of Diseases Office (2017). Singapore Cancer Registry Annual Registry Report 2015

Figure 58. Prostate: International comparisons – Age-standardised rates

5.8 Liver (ICD-10: C22)

A total of 4,033 cases of liver cancer were diagnosed for the period of 2012-2016 compared with 4,128 cases in 2007-2011 report. 73.1% were among males and 26.9% were among females. Liver cancer is the eighth most common cancer in Malaysia and sixth in males. The incidence of liver cancer increased with age and higher in males compared to females. Chinese were noted to have higher incidence rates than Malays and Indians. The overall lifetime risk was 1 in 164 for males and 1 in 452 for females.

Staging was reported for 1,200 (41%) and 435 (40.1%) cases respectively for both males and females. Of these 86% in males and 87% in females were detected at late stage (III & IV). International comparisons of the ASR for both sexes are shown in Figure 62.

Table 31. Liver: Cancer incidence summary by year, Malaysia

All residents	Male				Female			
	No.	CR	ASR	CumR	No.	CR	ASR	CumR
2007-2011	3,054	4.7	5.6	0.7	1,074	1.7	2.0	0.2
2012-2016	2,949	4.3	4.9	0.6	1,084	1.6	1.8	0.2
2012	557	4.1	4.7	0.6	188	1.4	1.6	0.2
2013	665	4.8	5.4	0.7	257	1.9	2.1	0.2
2014	602	4.3	4.9	0.6	246	1.8	2.0	0.2
2015	569	4.1	4.4	0.6	185	1.4	1.4	0.2
2016	556	4.0	4.3	0.5	208	1.5	1.6	0.2

Table 32. Liver: Incidence summary by sex, year and ethnicity, Malaysia

	Malay				Chinese				Indian			
	No.	CR	ASR	CumR	No.	CR	ASR	CumR	No.	CR	ASR	CumR
Male												
2007-2011	1,195	3.4	4.5	0.5	1,416	8.6	7.7	0.9	114	2.4	3.1	0.4
2012-2016	1,263	3.3	4.3	0.5	1,284	7.7	6.3	0.8	147	3.0	3.5	0.4
Female												
2007-2011	477	1.4	1.7	0.2	411	2.7	2.3	0.3	58	1.2	1.5	0.2
2012-2016	517	1.4	1.7	0.2	411	2.6	2.2	0.3	63	1.3	1.4	0.2

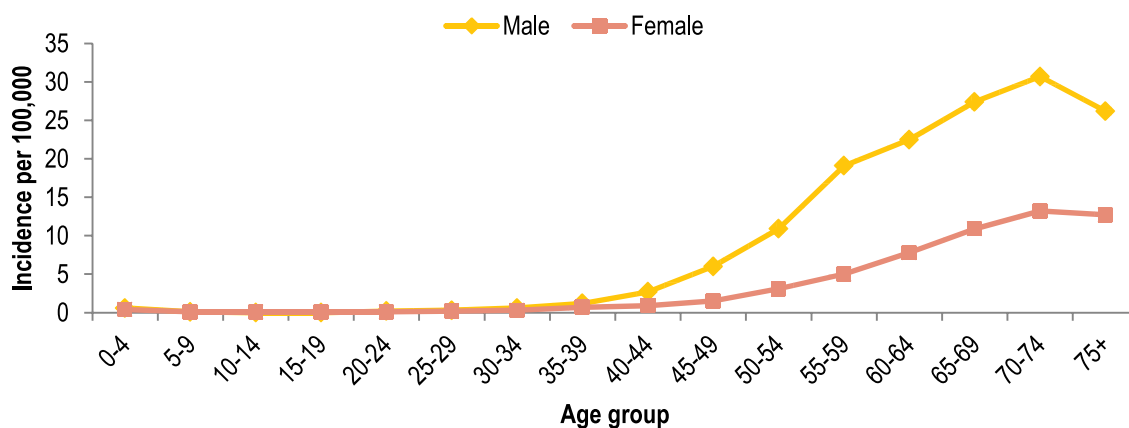


Figure 59. Liver: Age-specific incidence rate by sex, Malaysia, 2012-2016

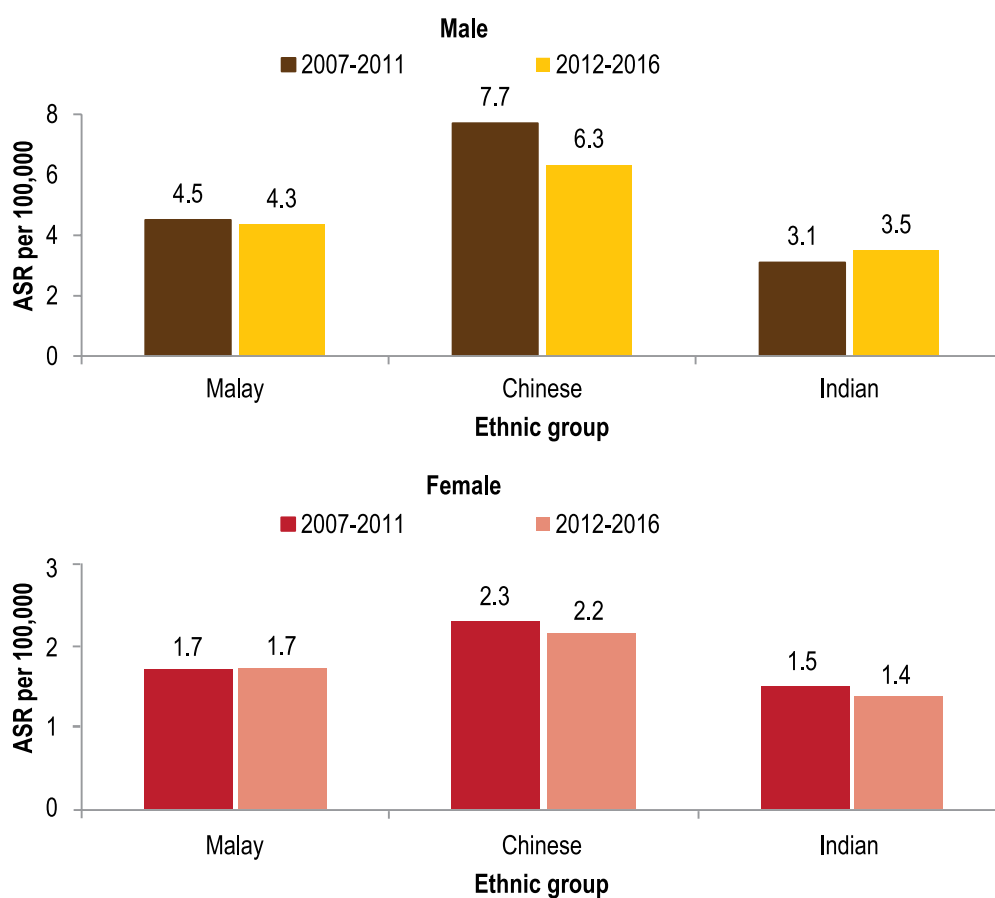


Figure 60. Liver: Comparison of age-standardised incidence rate by year, major ethnic group and sex, Malaysia

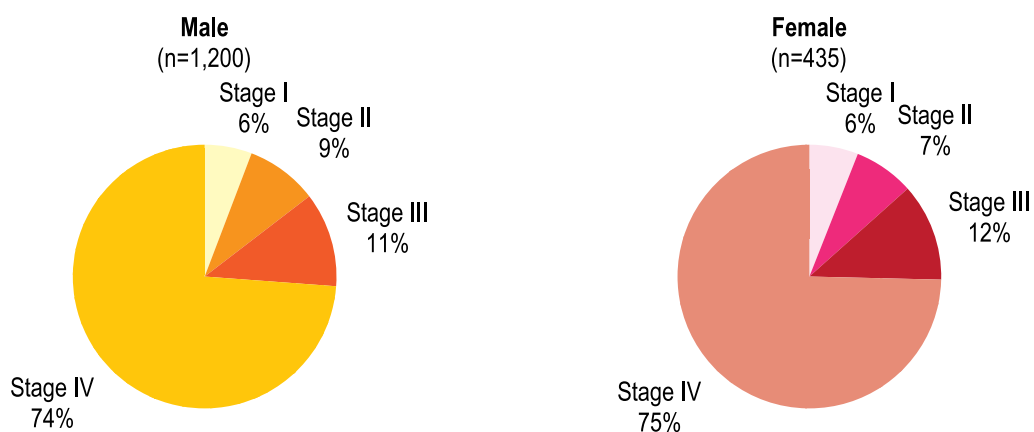
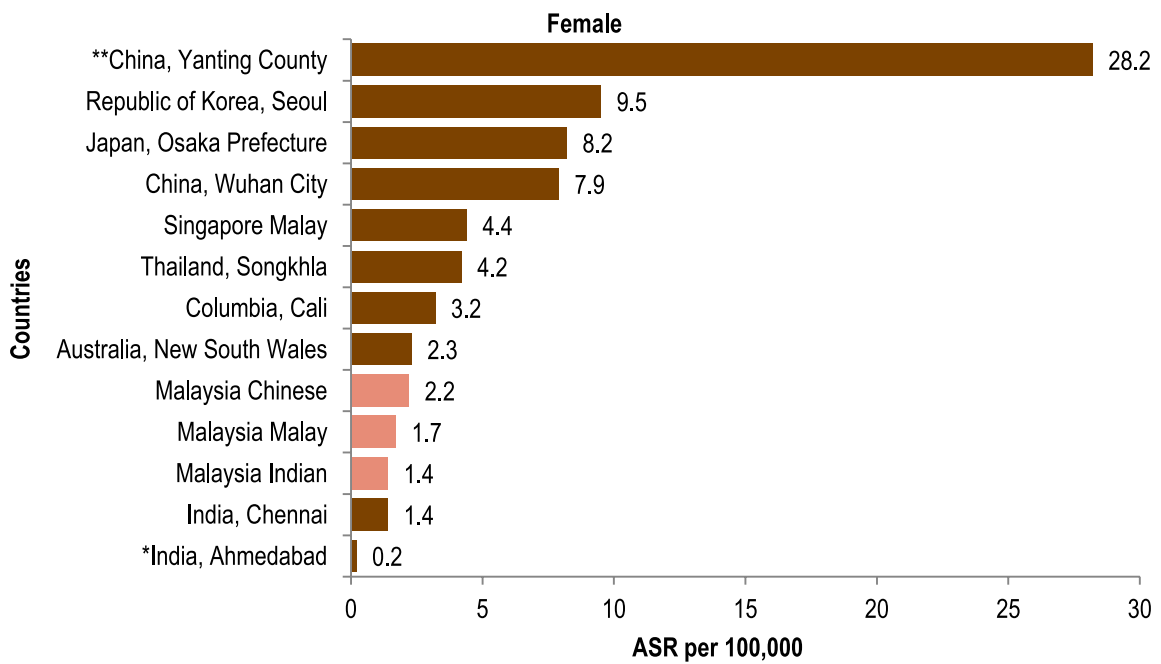
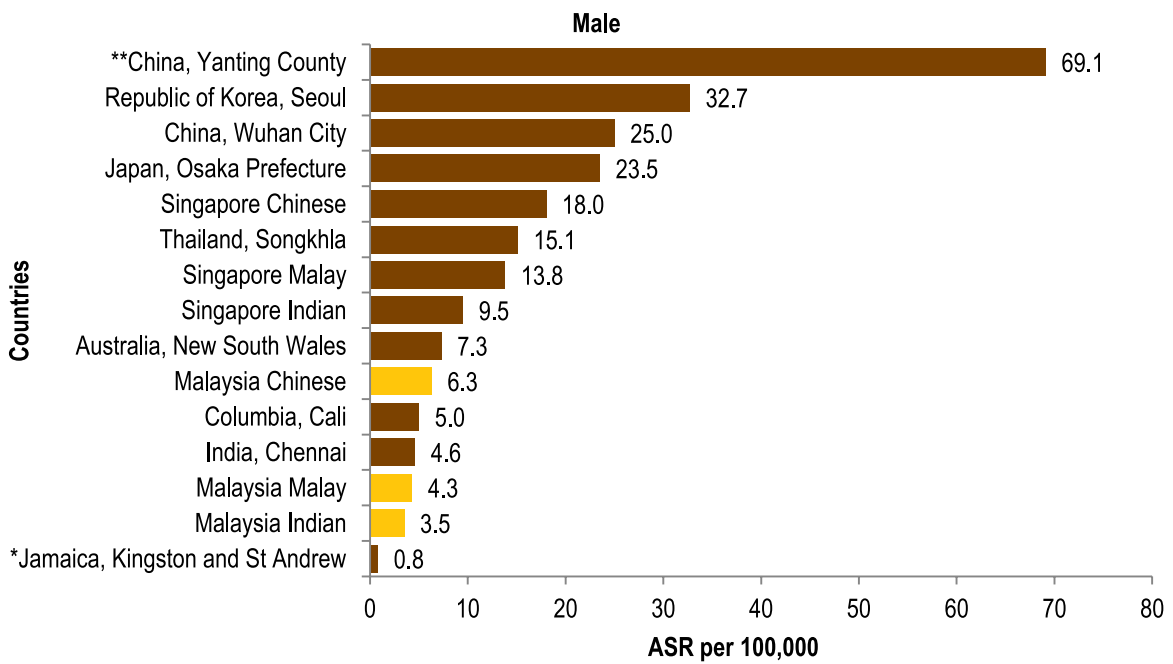


Figure 61. Liver: Staging percentage by sex, Malaysia, 2012-2016



**The highest incidence from CI5, Volume XI *The lowest incidence from CI5, Volume XI
 NB: National Registry of Diseases Office (2017). Singapore Cancer Registry Annual Registry Report 2015

Figure 62. Liver: International comparisons - Age-standardised rates

5.9 Cervix Uteri (ICD-10: C53)

A total of 3,981 cases of cervix uteri cancer were diagnosed for the period of 2012-2016 compared with 4,352 cases in 2007-2011 report. Cancer of the cervix uteri was the third most common cancer in females and ranked ninth in Malaysia compared to seventh in previous report. The incidence rate has decreased from 7.6 to 6.2 per 100,000 populations over the five years. The lifetime risk was 1 in 144. Chinese had higher incidence rate followed by Indians and Malays. The lifetime risk for Chinese was 1 in 129, Indians 1 in 157 and Malays 1 in 194. The trend for age-specific incidence rate were similar in both reports with the highest incidence was at the age 50-65 years.

Staging was reported for 2,771 cases (70%). Of these 41% were detected at late stage (III & IV) which was slightly higher compared to previous report (40.3%). 59% were detected at stage I and II. International comparisons are shown in Figure 66.

Table 33. Cervix Uteri: Cancer incidence summary by year, Malaysia

All residents	No.	CR	ASR	CumR
2007-2011	4,325	6.8	7.6	0.9
2012-2016	3,981	6.0	6.2	0.7
2012	811	6.1	6.3	0.7
2013	746	5.5	5.7	0.6
2014	870	6.5	6.6	0.7
2015	797	5.8	5.9	0.7
2016	757	5.5	5.6	0.6

Table 34. Cervix Uteri: Incidence summary by year and ethnicity, Malaysia

	Malay				Chinese				Indian				
	No.	CR	ASR	CumR	No.	CR	ASR	CumR	No.	CR	ASR	CumR	
Female													
2007-2011	1,502	4.3	5.1	0.6	1,732	11.2	9.8	1.2	327	6.9	7.6	0.9	
2012-2016	1,531	4.1	4.6	0.5	1,316	8.3	6.8	0.8	273	5.6	5.5	0.6	

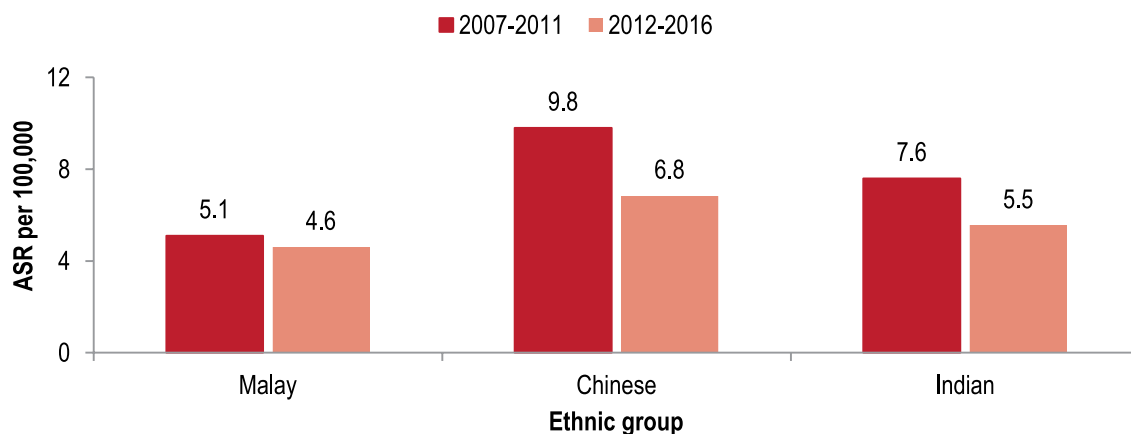


Figure 63. Cervix Uteri: Comparison of age-standardised incidence rate by year and major ethnic group, Malaysia

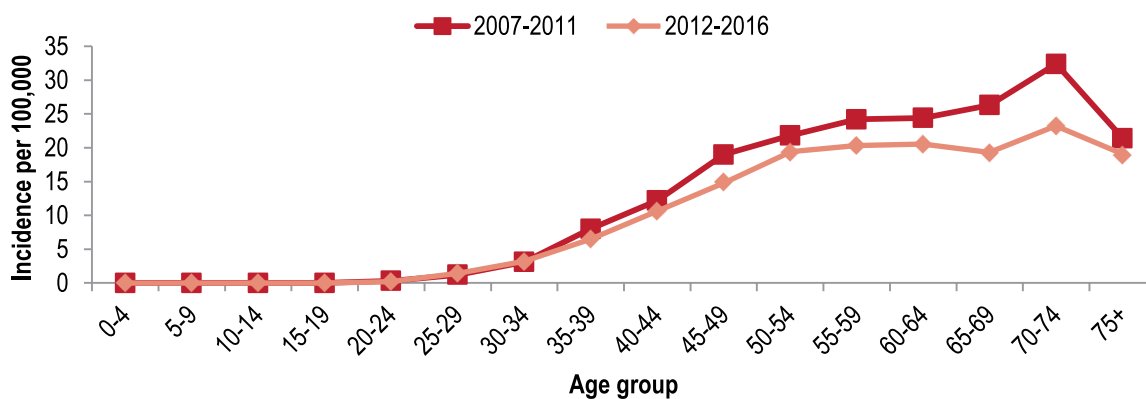


Figure 64. Cervix Uteri: Comparison of age-specific incidence rate by year, Malaysia

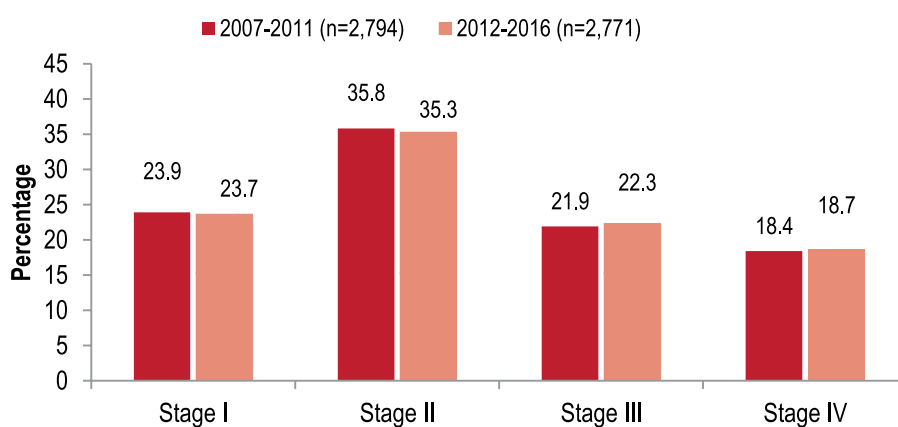
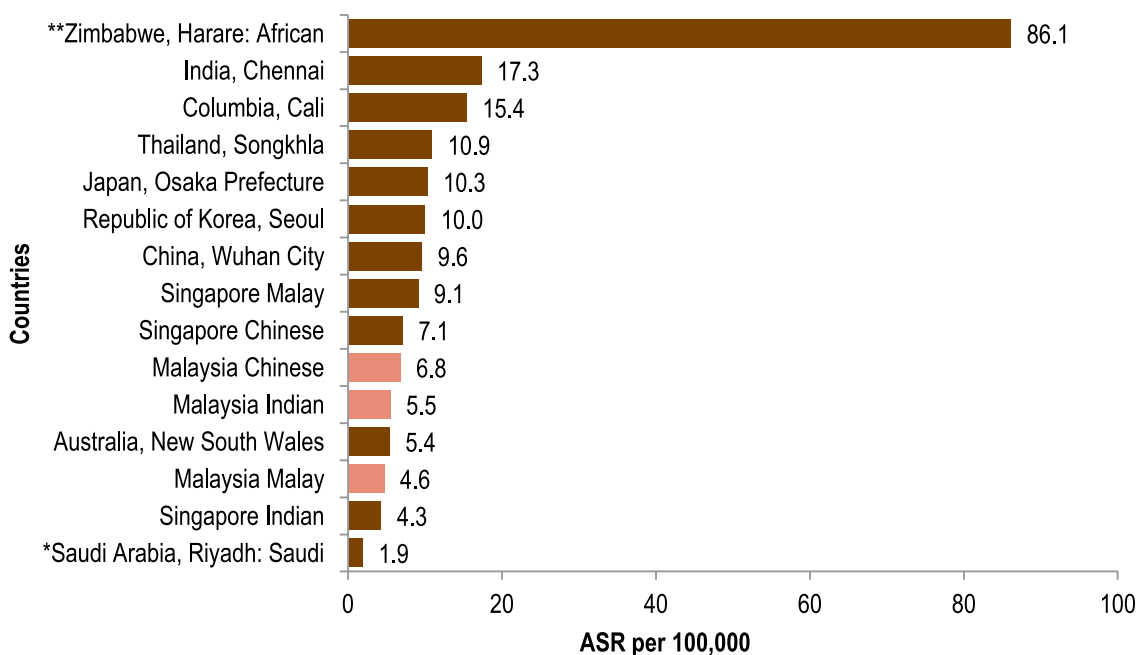


Figure 65. Cervix Uteri: Comparison of staging percentage by year, Malaysia



**The highest incidence from CI5, Volume XI *The lowest incidence from CI5, Volume XI
 NB: National Registry of Diseases Office (2017). Singapore Cancer Registry Annual Registry Report 2015

Figure 66. Cervix Uteri: International comparisons – Age-standardised rates

COMMENTARY

5.10 Ovary (ICD-10: C56)

A total of 3,575 cases of ovarian cancer were registered for the period of 2012-2016 compared with 3,472 cases in 2007-2011 report. Cancer of ovary ranked tenth in Malaysia and fourth in females. The trend for age-specific incidence rate were similar in both reports with the highest incidence was at the age of 65-69. The lifetime risk was 1 in 167. It was 1 in 160 for Malays, 1 in 164 for Indians and 1 in 169 for Chinese.

Staging was reported for 2,507 cases (70%). Of these 56.3% were detected at late stage (III & IV) which was similar as compared to previous report (56%). International comparisons are shown in Figure 70.

Table 35. Ovary: Cancer incidence summary by year, Malaysia

All residents	No.	CR	ASR	CumR
2007-2011	3,472	5.4	5.9	0.6
2012-2016	3,575	5.4	5.6	0.6
2012	687	5.2	5.4	0.6
2013	668	5.0	5.0	0.5
2014	696	5.2	5.2	0.6
2015	748	5.5	5.5	0.6
2016	776	5.7	5.7	0.6

Table 36. Ovary: Incidence summary by year and ethnicity, Malaysia

	Malay				Chinese				Indian			
	No.	CR	ASR	CumR	No.	CR	ASR	CumR	No.	CR	ASR	CumR
Female												
2007-2011	1,754	5.0	5.8	0.6	1,107	7.2	6.3	0.7	277	5.8	6.1	0.7
2012-2016	1,984	5.3	5.9	0.6	1,006	6.4	5.4	0.6	272	5.6	5.4	0.6

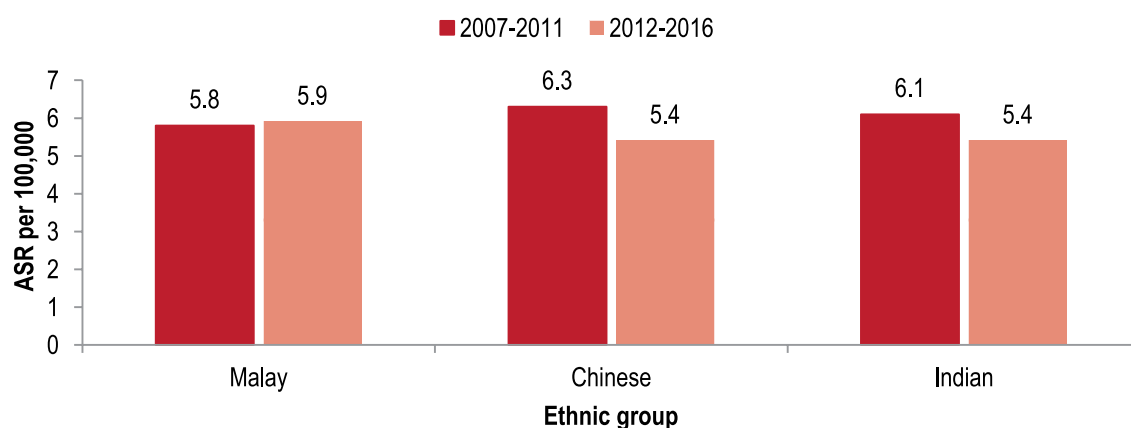


Figure 67. Ovary: Comparison of age-standardised incidence rate by year and major ethnic group, Malaysia

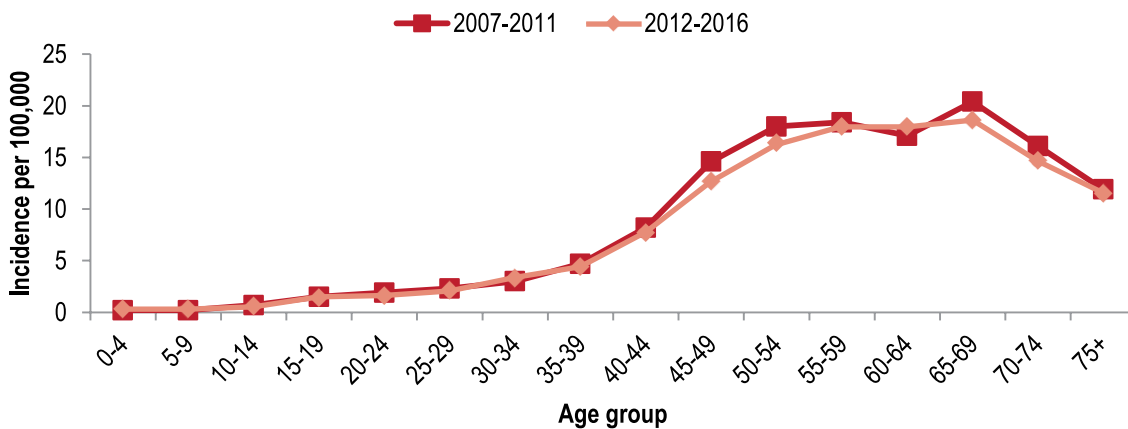


Figure 68. Ovary: Comparison of age-specific incidence rate by year, Malaysia

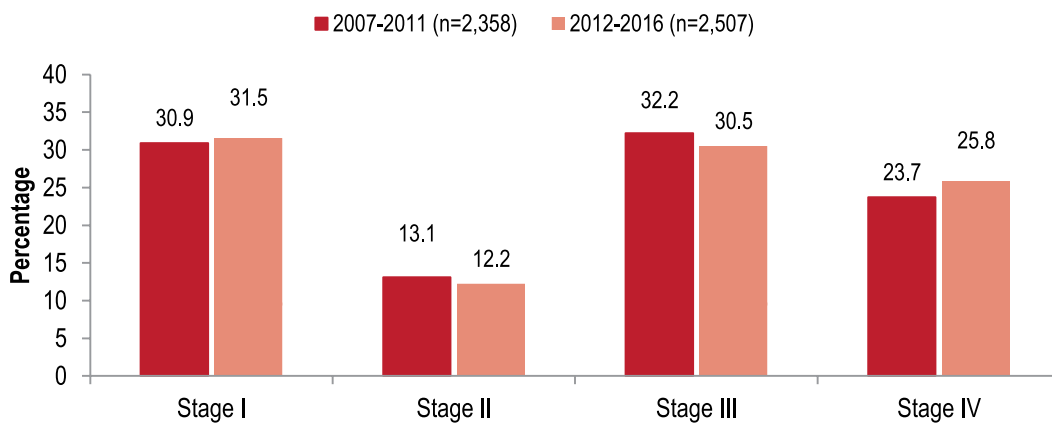
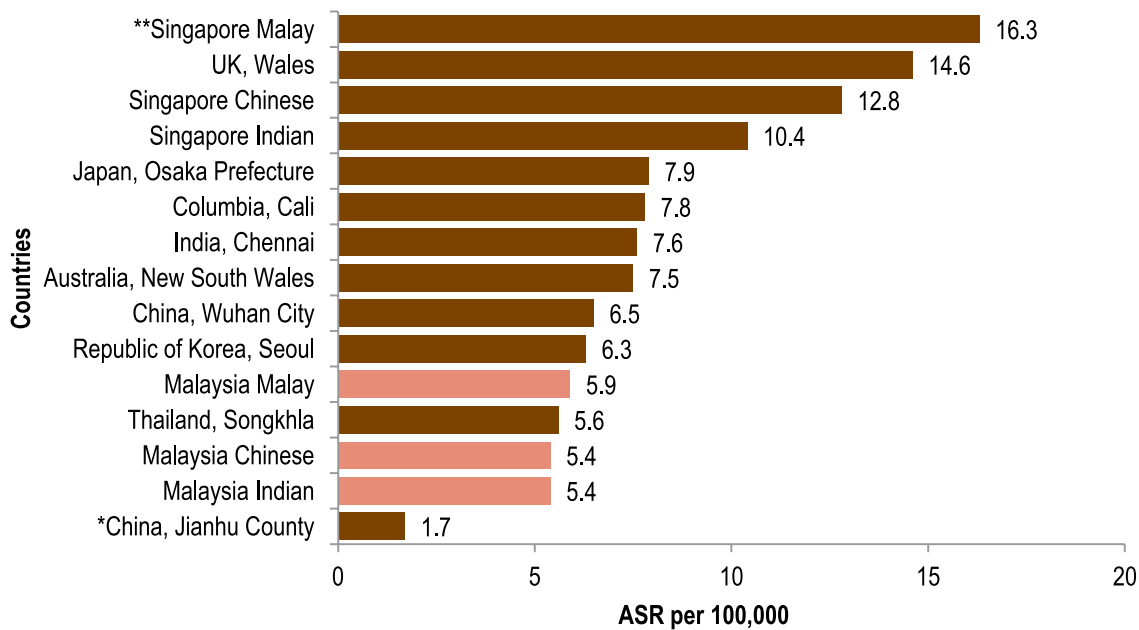


Figure 69. Ovary: Comparison of staging percentage by year, Malaysia



**The highest incidence from CI5, Volume XI *The lowest incidence from CI5, Volume XI
 NB: National Registry of Diseases Office (2017). Singapore Cancer Registry Annual Registry Report 2015

Figure 70. Ovary: International comparisons – Age-standardised rates

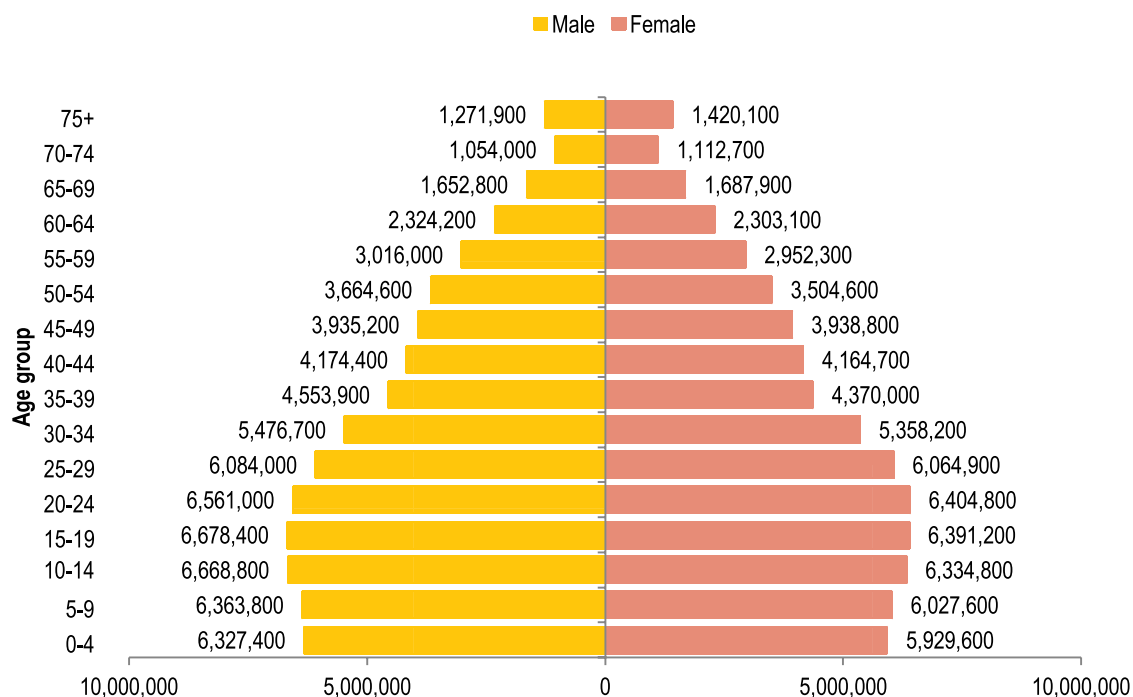
COMMENTARY

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APPENDICES

Appendix 1: Person-years at risk, all Malaysian, 2012-2016



Age Group	MALAYSIAN POPULATION		WORLD STANDARD POPULATION
	Male	Female	
0-4	6,327,400	5,929,600	12,000
5-9	6,363,800	6,027,600	10,000
10-14	6,668,800	6,334,800	9,000
15-19	6,678,400	6,391,200	9,000
20-24	6,561,000	6,404,800	8,000
25-29	6,084,000	6,064,900	8,000
30-34	5,476,700	5,358,200	6,000
35-39	4,553,900	4,370,000	6,000
40-44	4,174,400	4,164,700	6,000
45-49	3,935,200	3,938,800	6,000
50-54	3,664,600	3,504,600	5,000
55-59	3,016,000	2,952,300	4,000
60-64	2,324,200	2,303,100	4,000
65-69	1,652,800	1,687,900	3,000
70-74	1,054,000	1,112,700	2,000
75+	1,271,900	1,420,100	2,000
TOTAL	69,847,800	68,053,000	100,000

Source: Department of Statistics Malaysia, 2012-2016

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Appendix 2: Population table by sex, ethnicity and age group, Malaysian residents, 2012-2016

Age Group	ETHNIC GROUPS				
	Malay	Chinese	Indian	Others	Total
Male					
0-4	4,115,600	1,024,600	344,400	842,800	6,327,400
5-9	3,896,400	1,163,900	394,800	908,700	6,363,800
10-14	3,996,000	1,299,700	437,100	936,000	6,668,800
15-19	3,931,700	1,368,700	446,400	931,600	6,678,400
20-24	3,842,500	1,393,800	456,800	867,900	6,561,000
25-29	3,556,500	1,349,000	461,600	716,900	6,084,000
30-34	3,109,800	1,319,300	421,600	626,000	5,476,700
35-39	2,456,800	1,238,100	360,500	498,500	4,553,900
40-44	2,180,900	1,192,000	321,100	480,400	4,174,400
45-49	2,014,100	1,161,400	309,700	450,000	3,935,200
50-54	1,852,000	1,116,200	294,700	401,700	3,664,600
55-59	1,506,000	960,400	233,200	316,400	3,016,000
60-64	1,146,300	793,100	171,300	213,500	2,324,200
65-69	789,900	609,200	109,200	144,500	1,652,800
70-74	473,700	416,600	60,400	103,300	1,054,000
75+	580,600	481,700	76,900	132,700	1,271,900
Total	39,448,800	16,880,500	4,921,800	8,596,700	69,847,800
Female					
0-4	3,857,600	946,500	324,900	800,600	5,929,600
5-9	3,684,600	1,088,300	380,800	873,900	6,027,600
10-14	3,795,600	1,227,100	418,600	893,500	6,334,800
15-19	3,759,700	1,293,900	434,500	903,100	6,391,200
20-24	3,760,000	1,332,700	446,500	865,600	6,404,800
25-29	3,531,500	1,335,300	443,900	754,200	6,064,900
30-34	3,050,300	1,257,700	412,000	638,200	5,358,200
35-39	2,387,100	1,134,000	347,000	501,900	4,370,000
40-44	2,221,500	1,130,600	329,900	482,700	4,164,700
45-49	2,080,200	1,104,300	321,900	432,400	3,938,800
50-54	1,842,800	995,500	297,200	369,100	3,504,600
55-59	1,548,300	875,200	248,300	280,500	2,952,300
60-64	1,187,800	735,600	187,400	192,300	2,303,100
65-69	847,500	570,800	126,700	142,900	1,687,900
70-74	542,800	391,800	71,600	106,500	1,112,700
75+	703,200	478,900	93,800	144,200	1,420,100
Total	38,800,500	15,928,500	4,917,200	8,406,800	68,053,000
Both sexes					
0-4	7,973,200	1,971,100	669,300	1,643,400	12,257,000
5-9	7,581,000	2,252,200	775,600	1,782,600	12,391,400
10-14	7,791,600	2,526,800	855,700	1,829,500	13,003,600
15-19	7,691,400	2,662,600	880,900	1,834,700	13,069,600
20-24	7,602,500	2,726,500	903,300	1,733,500	12,965,800
25-29	7,088,000	2,684,300	905,500	1,471,100	12,148,900
30-34	6,160,100	2,577,000	833,600	1,264,200	10,834,900
35-39	4,843,900	2,372,100	707,500	1,000,400	8,923,900
40-44	4,402,400	2,322,600	651,000	963,100	8,339,100
45-49	4,094,300	2,265,700	631,600	882,400	7,874,000
50-54	3,694,800	2,111,700	591,900	770,800	7,169,200
55-59	3,054,300	1,835,600	481,500	596,900	5,968,300
60-64	2,334,100	1,528,700	358,700	405,800	4,627,300
65-69	1,637,400	1,180,000	235,900	287,400	3,340,700
70-74	1,016,500	808,400	132,000	209,800	2,166,700
75+	1,283,800	960,600	170,700	276,900	2,692,000
Total	78,249,300	32,809,000	9,839,000	17,003,500	137,900,800

APPENDICES

Appendix 3: Population table by sex, state and age group, Malaysian residents, 2012-2016

Age Group	STATE				
	Perlis	Kedah	Penang	Perak	Selangor
Male					
0-4	53,600	458,800	283,300	448,600	2,067,900
5-9	51,800	441,600	295,800	478,600	1,926,100
10-14	51,400	496,200	310,500	566,000	1,879,300
15-19	59,600	546,800	333,300	593,900	1,742,100
20-24	72,200	463,700	334,200	572,800	1,857,400
25-29	53,900	368,600	316,700	475,100	2,283,500
30-34	37,600	318,600	316,200	351,100	2,227,700
35-39	28,500	292,400	280,200	327,100	1,781,500
40-44	26,900	283,800	270,400	325,500	1,535,700
45-49	31,700	280,800	249,900	341,200	1,316,400
50-54	31,800	268,000	226,100	346,900	1,140,100
55-59	27,800	229,400	194,900	316,000	880,900
60-64	23,500	182,800	158,600	263,500	645,000
65-69	17,800	130,100	120,400	202,900	447,200
70-74	11,900	81,600	74,500	135,200	246,700
75+	15,000	105,700	75,600	174,200	281,700
Total	595,000	4,948,900	3,840,600	5,918,600	22,259,200
Female					
0-4	49,600	434,400	263,300	430,800	3,877,600
5-9	47,300	420,400	276,300	467,700	3,613,000
10-14	49,300	465,600	301,100	560,400	3,524,400
15-19	59,800	504,300	320,000	597,100	3,267,300
20-24	68,000	442,700	336,800	554,500	3,480,800
25-29	43,100	368,400	335,800	428,900	4,279,000
30-34	35,900	319,600	318,100	345,800	4,177,300
35-39	28,700	292,900	275,600	323,000	3,346,000
40-44	32,600	301,500	269,600	334,400	2,881,300
45-49	32,800	295,900	255,900	359,100	2,469,800
50-54	32,200	275,800	224,300	345,400	2,139,000
55-59	29,500	245,300	199,900	315,600	1,654,000
60-64	24,500	194,700	165,400	272,000	1,211,000
65-69	18,300	138,100	126,300	215,800	839,800
70-74	12,600	97,500	83,400	144,700	464,100
75+	17,000	123,800	107,700	158,700	528,700
Total	581,200	4,920,900	3,859,500	5,853,900	41,753,100
Both sexes					
0-4	103,200	893,200	546,600	879,400	5,945,500
5-9	99,100	862,000	572,100	946,300	5,539,100
10-14	100,700	961,800	611,600	1,126,400	5,403,700
15-19	119,400	1,051,100	653,300	1,191,000	5,009,400
20-24	140,200	906,400	671,000	1,127,300	5,338,200
25-29	97,000	737,000	652,500	904,000	6,562,500
30-34	73,500	638,200	634,300	696,900	6,405,000
35-39	57,200	585,300	555,800	650,100	5,127,500
40-44	59,500	585,300	540,000	659,900	4,417,000
45-49	64,500	576,700	505,800	700,300	3,786,200
50-54	64,000	543,800	450,400	692,300	3,279,100
55-59	57,300	474,700	394,800	631,600	2,534,900
60-64	48,000	377,500	324,000	535,500	1,856,000
65-69	36,100	268,200	246,700	418,700	1,287,000
70-74	24,500	179,100	157,900	279,900	710,800
75+	32,000	229,500	183,300	332,900	810,400
Total	1,176,200	9,869,800	7,700,100	11,772,500	64,012,300

APPENDICES

Appendix 3: Population table by sex, state and age group, Malaysian residents, 2012-2016 (continue)

Age Group	STATE				
	W.P. KL & P	N. Sembilan	Melaka	Johor	Pahang
Male					
0-4	329,000	213,700	174,900	727,900	353,700
5-9	330,900	222,900	174,200	728,500	377,900
10-14	321,000	251,800	186,900	785,000	386,500
15-19	296,300	249,600	206,300	774,500	402,200
20-24	371,700	252,500	218,900	714,100	387,000
25-29	407,100	218,400	176,700	711,600	325,200
30-34	422,000	171,300	146,700	673,900	304,600
35-39	347,600	149,500	119,900	574,800	225,600
40-44	271,800	140,800	112,900	525,700	198,200
45-49	244,400	136,900	113,500	486,700	193,200
50-54	248,400	136,700	114,100	448,800	184,500
55-59	192,500	125,700	94,200	365,600	161,300
60-64	141,500	101,600	75,200	283,900	131,400
65-69	100,700	67,000	56,800	207,900	99,800
70-74	62,100	42,500	37,700	133,300	60,800
75+	72,600	53,800	46,900	170,200	71,200
Total	4,159,600	2,534,700	2,055,800	8,312,400	3,863,100
Female					
0-4	308,800	205,800	166,100	633,400	331,500
5-9	306,200	209,500	170,700	630,100	340,100
10-14	305,500	225,800	174,000	681,200	350,000
15-19	295,500	228,600	196,000	663,000	363,800
20-24	370,300	230,700	222,900	620,800	344,600
25-29	440,800	207,700	180,200	615,000	291,100
30-34	439,200	168,800	153,000	585,800	272,800
35-39	321,800	150,900	119,300	482,300	201,200
40-44	277,100	145,600	120,200	459,300	198,300
45-49	281,700	148,400	130,100	432,600	192,700
50-54	217,500	145,700	114,600	378,700	190,000
55-59	179,800	132,300	99,300	327,600	162,500
60-64	137,800	100,400	80,800	253,400	127,300
65-69	99,200	69,100	64,500	183,000	96,900
70-74	63,700	46,400	40,300	120,000	57,100
75+	71,300	64,200	47,300	167,700	76,800
Total	4,116,200	2,479,900	2,079,300	7,233,900	3,596,700
Both sexes					
0-4	637,800	419,500	341,000	1,361,300	685,200
5-9	637,100	432,400	344,900	1,358,600	718,000
10-14	626,500	477,600	360,900	1,466,200	736,500
15-19	591,800	478,200	402,300	1,437,500	766,000
20-24	742,000	483,200	441,800	1,334,900	731,600
25-29	847,900	426,100	356,900	1,326,600	616,300
30-34	861,200	340,100	299,700	1,259,700	577,400
35-39	669,400	300,400	239,200	1,057,100	426,800
40-44	548,900	286,400	233,100	985,000	396,500
45-49	526,100	285,300	243,600	919,300	385,900
50-54	465,900	282,400	228,700	827,500	374,500
55-59	372,300	258,000	193,500	693,200	323,800
60-64	279,300	202,000	156,000	537,300	258,700
65-69	199,900	136,100	121,300	390,900	196,700
70-74	125,800	88,900	78,000	253,300	117,900
75+	143,900	118,000	94,200	337,900	148,000
Total	8,275,800	5,014,600	4,135,100	15,546,300	7,459,800

APPENDICES

Appendix 3: Population table by sex, state and age group, Malaysian residents, 2012-2016 (continue)

Age Group	STATE				
	Terengganu	Kelantan	Sabah	Sarawak	W.P. Labuan
Male					
0-4	449,700	473,900	664,400	531,800	20,800
5-9	406,400	448,600	712,200	584,400	22,200
10-14	422,700	475,200	717,700	633,700	20,000
15-19	423,400	500,300	691,900	625,400	17,500
20-24	419,500	457,700	663,800	596,500	18,000
25-29	348,700	298,300	571,500	497,700	22,400
30-34	265,800	251,100	522,400	434,200	24,700
35-39	209,400	204,900	389,600	387,700	14,200
40-44	190,000	190,700	349,100	400,600	11,800
45-49	185,800	196,100	325,900	389,500	10,000
50-54	182,300	191,200	298,100	353,900	10,000
55-59	152,300	161,800	236,500	294,000	7,900
60-64	114,600	128,500	153,500	223,100	5,000
65-69	82,500	98,000	95,500	162,800	2,800
70-74	51,700	57,800	69,300	110,400	2,400
75+	58,900	71,500	81,400	138,400	1,000
Total	3,963,700	4,205,600	6,542,800	6,364,100	210,700
Female					
0-4	834,500	451,000	625,500	500,100	19,400
5-9	755,100	410,700	679,400	575,800	20,400
10-14	784,800	444,700	682,900	616,600	19,400
15-19	786,700	474,600	672,100	602,200	18,900
20-24	778,100	421,300	663,000	586,300	20,000
25-29	646,400	271,000	604,500	513,700	22,400
30-34	493,100	227,300	533,600	428,700	23,300
35-39	388,400	212,700	392,700	380,700	13,600
40-44	352,800	223,600	351,300	384,900	12,400
45-49	345,100	225,800	312,000	356,100	10,500
50-54	338,400	215,900	267,800	314,700	8,800
55-59	282,400	182,400	206,200	258,400	6,500
60-64	212,600	138,500	135,300	205,600	4,400
65-69	152,900	106,400	93,000	151,900	2,600
70-74	96,000	73,000	68,000	109,400	2,200
75+	109,200	95,800	83,700	153,800	1,100
Total	7,356,500	4,174,700	6,371,000	6,138,900	205,900
Both sexes					
0-4	1,284,200	924,900	1,289,900	1,031,900	40,200
5-9	1,161,500	859,300	1,391,600	1,160,200	42,600
10-14	1,207,500	919,900	1,400,600	1,250,300	39,400
15-19	1,210,100	974,900	1,364,000	1,227,600	36,400
20-24	1,197,600	879,000	1,326,800	1,182,800	38,000
25-29	995,100	569,300	1,176,000	1,011,400	44,800
30-34	758,900	478,400	1,056,000	862,900	48,000
35-39	597,800	417,600	782,300	768,400	27,800
40-44	542,800	414,300	700,400	785,500	24,200
45-49	530,900	421,900	637,900	745,600	20,500
50-54	520,700	407,100	565,900	668,600	18,800
55-59	434,700	344,200	442,700	552,400	14,400
60-64	327,200	267,000	288,800	428,700	9,400
65-69	235,400	204,400	188,500	314,700	5,400
70-74	147,700	130,800	137,300	219,800	4,600
75+	168,100	167,300	165,100	292,200	2,100
Total	11,320,200	8,380,300	12,913,800	12,503,000	416,600

APPENDICES

Appendix 4: Incidence summary table, all residents, males, Malaysia, 2012-2016

ICD-10	SITE	No.	%	CR	CR74	ASR	(95%CL)	CumR
C18-C21	Colorectal	8,701	16.9	12.7	1.8	14.8	(14.4,15.1)	1.8
C33-C34	Trachea, Bronchus, Lung	7,686	14.9	11.3	1.7	13.2	(12.9,13.5)	1.7
C61	Prostate	4,189	8.1	6.1	1.1	7.7	(7.5,7.9)	1.1
C81-C85;C96	Lymphoma	3,412	6.6	5.0	0.6	5.3	(5.2,5.5)	0.6
C11	Nasopharynx	3,359	6.5	4.9	0.6	5.2	(5.0,5.4)	0.6
C22	Liver	2,949	5.7	4.3	0.6	4.9	(4.7,5.1)	0.6
C91-C95	Leukaemia	2,414	4.7	3.5	0.3	3.8	(3.6,3.9)	0.3
C16	Stomach	1,818	3.5	2.7	0.4	3.1	(3.0,3.3)	0.4
C44	Other Skin	1,797	3.5	2.6	0.4	3.1	(3.0,3.3)	0.4
C67	Bladder	1,715	3.3	2.5	0.4	3.0	(2.8,3.1)	0.4
Others	Other & Unspecified	1,395	2.7	2.0	0.3	2.3	(2.2,2.4)	0.3
C64	Kidney	1,276	2.5	1.9	0.3	2.1	(2.0,2.3)	0.3
C25	Pancreas	1,167	2.3	1.7	0.3	2.0	(1.9,2.1)	0.3
C70-C72	Brain, Nervous System	1,117	2.2	1.6	0.2	1.7	(1.6,1.8)	0.2
C15	Oesophagus	788	1.5	1.2	0.2	1.4	(1.3,1.4)	0.2
C32	Larynx	780	1.5	1.1	0.2	1.3	(1.3,1.4)	0.2
C73	Thyroid	749	1.5	1.1	0.1	1.2	(1.1,1.3)	0.1
C62	Testis	636	1.2	0.9	0.1	0.9	(0.8,1.0)	0.1
C47; C49	Connective, Soft Tissue	597	1.2	0.9	0.1	0.9	(0.9,1.0)	0.1
C01-C02	Tongue	560	1.1	0.8	0.1	0.9	(0.8,1.0)	0.1
C40-C41	Bone	523	1.0	0.8	0.1	0.8	(0.7,0.8)	0.1
C23-C24	Gallbladder Etc.	491	1.0	0.7	0.1	0.8	(0.8,0.9)	0.1
C90	Multiple Myeloma	429	0.8	0.6	0.1	0.7	(0.6,0.8)	0.1
C03-C06	Mouth	400	0.8	0.6	0.1	0.7	(0.6,0.7)	0.1
C07-C08	Salivary Glands	293	0.6	0.4	0.1	0.5	(0.4,0.5)	0.1
C50	Breast	291	0.6	0.4	0.1	0.5	(0.4,0.5)	0.1
C30-C31	Nose, Sinuses Etc.	276	0.5	0.4	0.1	0.4	(0.4,0.5)	0.1
C37-C38	Other Thoracic Organs	246	0.5	0.4	0.0	0.4	(0.3,0.4)	0.0
C43	Melanoma Of Skin	184	0.4	0.3	0.0	0.3	(0.3,0.4)	0.0
C17	Small Intestine	174	0.3	0.3	0.0	0.3	(0.2,0.3)	0.0
C09	Tonsil	144	0.3	0.2	0.0	0.2	(0.2,0.3)	0.0
C12-C13	Hypopharynx	132	0.3	0.2	0.0	0.2	(0.2,0.3)	0.0
C60	Penis	116	0.2	0.2	0.0	0.2	(0.2,0.2)	0.0
C10	Other Oropharynx	99	0.2	0.1	0.0	0.2	(0.1,0.2)	0.0
C75	Other Endocrine	98	0.2	0.1	0.0	0.1	(0.1,0.2)	0.0
C69	Eye	89	0.2	0.1	0.0	0.2	(0.1,0.2)	0.0
C88	Immunoproliferative Dis.	79	0.2	0.1	0.0	0.1	(0.1,0.2)	0.0
C74	Adrenal Gland	67	0.1	0.1	0.0	0.1	(0.1,0.1)	0.0
C63	Other Male Genital	45	0.1	0.1	0.0	0.1	(0.1,0.1)	0.0
C66	Ureter	44	0.1	0.1	0.0	0.1	(0.1,0.1)	0.0
C14	Pharynx Unspec.	40	0.1	0.1	0.0	0.1	(0.0,0.1)	0.0
C46	Kaposi Sarcoma	37	0.1	0.1	0.0	0.1	(0.0,0.1)	0.0
C45	Mesothelioma	35	0.1	0.1	0.0	0.1	(0.0,0.1)	0.0
C00	Lip	27	0.1	0.0	0.0	0.0	(0.0,0.1)	0.0
C65	Renal Pelvis	24	0.0	0.0	0.0	0.0	(0.0,0.1)	0.0
C68	Other Urinary Organs	17	0.0	0.0	0.0	0.0	(0.0,0.0)	0.0
All	All sites total	51,505	100.0	75.4	10.3	86.1	(85.3,86.8)	9.7

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Appendix 5: Incidence summary table, all residents, females, Malaysia, 2012-2016

ICD-10	SITE	No.	%	CR	CR74	ASR	(95%CL)	CumR
C50	Breast	21,634	33.9	32.5	3.8	34.1	(33.6,34.5)	3.7
C18-C21	Colorectal	6,814	10.7	10.2	1.3	11.1	(10.9,11.4)	1.3
C53	Cervix Uteri	3,981	6.2	6.0	0.7	6.2	(6.1,6.4)	0.7
C56	Ovary	3,575	5.6	5.4	0.6	5.6	(5.4,5.7)	0.6
C33-C34	Trachea, Bronchus, Lung	3,570	5.6	5.4	0.7	5.9	(5.7,6.1)	0.7
C54	Corpus Uteri	2,898	4.5	4.4	0.5	4.6	(4.5,4.8)	0.5
C81-C85;C96	Lymphoma	2,418	3.8	3.6	0.4	3.8	(3.6,3.9)	0.4
C73	Thyroid	2,137	3.4	3.2	0.3	3.2	(3.1,3.4)	0.3
C91-C95	Leukaemia	1,859	2.9	2.8	0.3	3.0	(2.8,3.1)	0.3
C44	Other Skin	1,395	2.2	2.1	0.3	2.3	(2.2,2.4)	0.3
C11	Nasopharynx	1,238	1.9	1.9	0.2	1.9	(1.8,2.0)	0.2
Others	Other & Unspecified	1,220	1.9	1.8	0.2	2.0	(1.9,2.1)	0.2
C16	Stomach	1,188	1.9	1.8	0.2	1.9	(1.8,2.0)	0.2
C22	Liver	1,084	1.7	1.6	0.2	1.8	(1.7,1.9)	0.2
C70-C72	Brain, Nervous System	980	1.5	1.5	0.1	1.6	(1.5,1.7)	0.1
C55	Uterus Unspec.	912	1.4	1.4	0.2	1.4	(1.4,1.5)	0.2
C25	Pancreas	882	1.4	1.3	0.2	1.5	(1.4,1.6)	0.2
C64	Kidney	595	0.9	0.9	0.1	1.0	(0.9,1.1)	0.1
C23-C24	Gallbladder Etc.	553	0.9	0.8	0.1	0.9	(0.8,1.0)	0.1
C01-C02	Tongue	472	0.7	0.7	0.1	0.8	(0.7,0.8)	0.1
C47; C49	Connective, Soft Tissue	469	0.7	0.7	0.1	0.7	(0.7,0.8)	0.1
C03-C06	Mouth	464	0.7	0.7	0.1	0.8	(0.7,0.8)	0.1
C67	Bladder	407	0.6	0.6	0.1	0.7	(0.6,0.7)	0.1
C40-C41	Bone	387	0.6	0.6	0.0	0.6	(0.5,0.6)	0.0
C90	Multiple Myeloma	347	0.5	0.5	0.1	0.6	(0.5,0.6)	0.1
C15	Oesophagus	337	0.5	0.5	0.1	0.5	(0.5,0.6)	0.1
C07-C08	Salivary Glands	257	0.4	0.4	0.0	0.4	(0.3,0.4)	0.0
C43	Melanoma Of Skin	163	0.3	0.2	0.0	0.3	(0.2,0.3)	0.0
C30-C31	Nose, Sinuses Etc.	152	0.2	0.2	0.0	0.2	(0.2,0.3)	0.0
C37-C38	Other Thoracic Organs	151	0.2	0.2	0.0	0.2	(0.2,0.3)	0.0
C17	Small Intestine	128	0.2	0.2	0.0	0.2	(0.2,0.2)	0.0
C51	Vulva	127	0.2	0.2	0.0	0.2	(0.2,0.2)	0.0
C57	Other Female Genital	116	0.2	0.2	0.0	0.2	(0.1,0.2)	0.0
C52	Vagina	112	0.2	0.2	0.0	0.2	(0.1,0.2)	0.0
C32	Larynx	107	0.2	0.2	0.0	0.2	(0.1,0.2)	0.0
C69	Eye	95	0.1	0.1	0.0	0.2	(0.1,0.2)	0.0
C58	Placenta	78	0.1	0.1	0.0	0.1	(0.1,0.1)	0.0
C12-C13	Hypopharynx	73	0.1	0.1	0.0	0.1	(0.1,0.1)	0.0
C09	Tonsil	62	0.1	0.1	0.0	0.1	(0.1,0.1)	0.0
C74	Adrenal Gland	53	0.1	0.1	0.0	0.1	(0.1,0.1)	0.0
C00	Lip	52	0.1	0.1	0.0	0.1	(0.1,0.1)	0.0
C75	Other Endocrine	49	0.1	0.1	0.0	0.1	(0.1,0.1)	0.0
C88	Immunoproliferative Dis.	45	0.1	0.1	0.0	0.1	(0.1,0.1)	0.0
C10	Other Oropharynx	30	0.0	0.0	0.0	0.0	(0.0,0.1)	0.0
C66	Ureter	20	0.0	0.0	0.0	0.0	(0.0,0.1)	0.0
C14	Pharynx Unspec.	17	0.0	0.0	0.0	0.0	(0.0,0.0)	0.0
C45	Mesothelioma	15	0.0	0.0	0.0	0.0	(0.0,0.0)	0.0
C65	Renal Pelvis	7	0.0	0.0	0.0	0.0	(0.0,0.0)	0.0
C68	Other Urinary Organs	5	0.0	0.0	0.0	0.0	(0.0,0.0)	0.0
C46	Kaposi Sarcoma	3	0.0	0.0	0.0	0.0	(0.0,0.0)	0.0
All	All sites total	63,733	100.0	95.8	11.4	101.6	(100.8,102.4)	10.8

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Appendix 6: Incidence summary table, Malay males, Malaysia, 2012-2016

ICD-10	SITE	No.	%	CR	CR74	ASR	(95%CL)	CumR
C33-C34	Trachea, Bronchus, Lung	3,500	16.0	9.2	1.6	12.5	(12.1,12.9)	1.6
C18-C21	Colorectal	3,493	16.0	9.2	1.5	12.2	(11.8,12.6)	1.5
C81-C85;C96	Lymphoma	1,866	8.5	4.9	0.6	5.6	(5.4,5.9)	0.6
C61	Prostate	1,577	7.2	4.1	0.9	6.3	(6.0,6.6)	0.9
C91-C95	Leukaemia	1,352	6.2	3.6	0.3	3.9	(3.7,4.1)	0.3
C22	Liver	1,263	5.8	3.3	0.5	4.3	(4.0,4.5)	0.5
C67	Bladder	886	4.1	2.3	0.4	3.3	(3.0,3.5)	0.4
C11	Nasopharynx	862	3.9	2.3	0.3	2.7	(2.5,2.9)	0.3
C70-C72	Brain, Nervous System	642	2.9	1.7	0.2	1.8	(1.7,2.0)	0.2
C44	Other Skin	623	2.9	1.6	0.3	2.2	(2.0,2.4)	0.3
Others	Other & Unspecified	568	2.6	1.5	0.2	1.9	(1.7,2.1)	0.2
C64	Kidney	527	2.4	1.4	0.2	1.8	(1.7,2.0)	0.2
C16	Stomach	454	2.1	1.2	0.2	1.6	(1.4,1.7)	0.2
C73	Thyroid	451	2.1	1.2	0.2	1.5	(1.3,1.6)	0.2
C25	Pancreas	424	1.9	1.1	0.2	1.5	(1.4,1.6)	0.2
C62	Testis	404	1.8	1.1	0.1	1.0	(0.9,1.1)	0.1
C40-C41	Bone	319	1.5	0.8	0.1	0.9	(0.8,1.0)	0.1
C47; C49	Connective, Soft Tissue	300	1.4	0.8	0.1	0.9	(0.8,1.0)	0.1
C15	Oesophagus	294	1.3	0.8	0.1	1.1	(0.9,1.2)	0.1
C32	Larynx	238	1.1	0.6	0.1	0.9	(0.8,1.0)	0.1
C23-C24	Gallbladder Etc.	223	1.0	0.6	0.1	0.8	(0.7,0.9)	0.1
C90	Multiple Myeloma	216	1.0	0.6	0.1	0.7	(0.6,0.8)	0.1
C01-C02	Tongue	200	0.9	0.5	0.1	0.6	(0.5,0.7)	0.1
C07-C08	Salivary Glands	142	0.7	0.4	0.0	0.4	(0.4,0.5)	0.0
C50	Breast	135	0.6	0.4	0.1	0.5	(0.4,0.5)	0.1
C03-C06	Mouth	125	0.6	0.3	0.1	0.4	(0.3,0.5)	0.1
C37-C38	Other Thoracic Organs	124	0.6	0.3	0.0	0.4	(0.3,0.4)	0.0
C30-C31	Nose, Sinuses Etc.	113	0.5	0.3	0.0	0.4	(0.3,0.4)	0.0
C43	Melanoma Of Skin	74	0.3	0.2	0.0	0.2	(0.2,0.3)	0.0
C17	Small Intestine	60	0.3	0.2	0.0	0.2	(0.2,0.3)	0.0
C69	Eye	50	0.2	0.1	0.0	0.2	(0.1,0.2)	0.0
C75	Other Endocrine	46	0.2	0.1	0.0	0.1	(0.1,0.2)	0.0
C09	Tonsil	39	0.2	0.1	0.0	0.1	(0.1,0.2)	0.0
C88	Immunoproliferative Dis.	39	0.2	0.1	0.0	0.1	(0.1,0.2)	0.0
C74	Adrenal Gland	36	0.2	0.1	0.0	0.1	(0.1,0.1)	0.0
C10	Other Oropharynx	31	0.1	0.1	0.0	0.1	(0.1,0.1)	0.0
C12-C13	Hypopharynx	29	0.1	0.1	0.0	0.1	(0.1,0.2)	0.0
C60	Penis	21	0.1	0.1	0.0	0.1	(0.0,0.1)	0.0
C63	Other Male Genital	19	0.1	0.0	0.0	0.1	(0.0,0.1)	0.0
C46	Kaposi Sarcoma	16	0.1	0.0	0.0	0.0	(0.0,0.1)	0.0
C45	Mesothelioma	15	0.1	0.0	0.0	0.0	(0.0,0.1)	0.0
C66	Ureter	15	0.1	0.0	0.0	0.1	(0.0,0.1)	0.0
C14	Pharynx Unspec.	10	0.0	0.0	0.0	0.0	(0.0,0.1)	0.0
C65	Renal Pelvis	8	0.0	0.0	0.0	0.0	(0.0,0.1)	0.0
C00	Lip	6	0.0	0.0	0.0	0.0	(0.0,0.0)	0.0
C68	Other Urinary Organs	6	0.0	0.0	0.0	0.0	(0.0,0.0)	0.0
All	All sites total	21,841	100.0	57.4	8.7	73.6	(72.6,74.6)	8.4

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Appendix 7: Incidence summary table, Malay females, Malaysia, 2012-2016

ICD-10	SITE	No.	%	CR	CR74	ASR	(95%CL)	CumR
C50	Breast	10,455	35.2	28.0	3.4	31.5	(30.9,32.1)	3.4
C18-C21	Colorectal	2,912	9.8	7.8	1.1	9.4	(9.1,9.8)	1.1
C56	Ovary	1,984	6.7	5.3	0.6	5.9	(5.6,6.2)	0.6
C53	Cervix Uteri	1,531	5.2	4.1	0.5	4.6	(4.4,4.9)	0.5
C33-C34	Trachea, Bronchus, Lung	1,492	5.0	4.0	0.6	4.9	(4.6,5.1)	0.6
C54	Corpus Uteri	1,409	4.7	3.8	0.5	4.4	(4.1,4.6)	0.5
C81-C85;C96	Lymphoma	1,354	4.6	3.6	0.4	3.9	(3.7,4.1)	0.4
C73	Thyroid	1,333	4.5	3.6	0.4	3.8	(3.6,4.0)	0.4
C91-C95	Leukaemia	1,019	3.4	2.7	0.2	2.9	(2.8,3.1)	0.2
Others	Other & Unspecified	564	1.9	1.5	0.2	1.8	(1.6,1.9)	0.2
C70-C72	Brain, Nervous System	557	1.9	1.5	0.1	1.6	(1.5,1.7)	0.1
C22	Liver	517	1.7	1.4	0.2	1.7	(1.6,1.9)	0.2
C44	Other Skin	504	1.7	1.3	0.2	1.7	(1.5,1.8)	0.2
C55	Uterus Unspec.	452	1.5	1.2	0.2	1.4	(1.3,1.5)	0.2
C11	Nasopharynx	383	1.3	1.0	0.1	1.1	(1.0,1.3)	0.1
C25	Pancreas	330	1.1	0.9	0.1	1.1	(1.0,1.2)	0.1
C16	Stomach	277	0.9	0.7	0.1	0.9	(0.8,1.0)	0.1
C64	Kidney	257	0.9	0.7	0.1	0.8	(0.7,0.9)	0.1
C40-C41	Bone	254	0.9	0.7	0.1	0.7	(0.6,0.8)	0.1
C23-C24	Gallbladder Etc.	245	0.8	0.7	0.1	0.8	(0.7,0.9)	0.1
C47; C49	Connective, Soft Tissue	237	0.8	0.6	0.1	0.7	(0.6,0.8)	0.1
C67	Bladder	187	0.6	0.5	0.1	0.6	(0.5,0.7)	0.1
C01-C02	Tongue	185	0.6	0.5	0.1	0.6	(0.5,0.7)	0.1
C90	Multiple Myeloma	174	0.6	0.5	0.1	0.6	(0.5,0.7)	0.1
C15	Oesophagus	116	0.4	0.3	0.0	0.4	(0.3,0.5)	0.0
C07-C08	Salivary Glands	112	0.4	0.3	0.0	0.3	(0.3,0.4)	0.0
C03-C06	Mouth	103	0.3	0.3	0.0	0.3	(0.3,0.4)	0.0
C43	Melanoma Of Skin	75	0.3	0.2	0.0	0.2	(0.2,0.3)	0.0
C30-C31	Nose, Sinuses Etc.	74	0.2	0.2	0.0	0.2	(0.2,0.3)	0.0
C69	Eye	65	0.2	0.2	0.0	0.2	(0.2,0.2)	0.0
C37-C38	Other Thoracic Organs	63	0.2	0.2	0.0	0.2	(0.1,0.2)	0.0
C17	Small Intestine	61	0.2	0.2	0.0	0.2	(0.1,0.2)	0.0
C57	Other Female Genital	58	0.2	0.2	0.0	0.2	(0.1,0.2)	0.0
C58	Placenta	57	0.2	0.2	0.0	0.1	(0.1,0.2)	0.0
C52	Vagina	46	0.2	0.1	0.0	0.1	(0.1,0.2)	0.0
C51	Vulva	44	0.1	0.1	0.0	0.1	(0.1,0.2)	0.0
C32	Larynx	32	0.1	0.1	0.0	0.1	(0.1,0.1)	0.0
C74	Adrenal Gland	32	0.1	0.1	0.0	0.1	(0.1,0.1)	0.0
C75	Other Endocrine	30	0.1	0.1	0.0	0.1	(0.1,0.1)	0.0
C09	Tonsil	26	0.1	0.1	0.0	0.1	(0.1,0.1)	0.0
C88	Immunoproliferative Dis.	22	0.1	0.1	0.0	0.1	(0.0,0.1)	0.0
C12-C13	Hypopharynx	19	0.1	0.1	0.0	0.1	(0.0,0.1)	0.0
C00	Lip	14	0.0	0.0	0.0	0.0	(0.0,0.1)	0.0
C10	Other Oropharynx	10	0.0	0.0	0.0	0.0	(0.0,0.1)	0.0
C45	Mesothelioma	5	0.0	0.0	0.0	0.0	(0.0,0.0)	0.0
C14	Pharynx Unspec.	4	0.0	0.0	0.0	0.0	(0.0,0.0)	0.0
C46	Kaposi Sarcoma	3	0.0	0.0	0.0	0.0	(0.0,0.0)	0.0
C65	Renal Pelvis	3	0.0	0.0	0.0	0.0	(0.0,0.0)	0.0
C66	Ureter	2	0.0	0.0	0.0	0.0	(0.0,0.0)	0.0
C68	Other Urinary Organs	1	0.0	0.0	0.0	0.0	(0.0,0.0)	0.0
All	All sites total	29,689	100.0	79.4	10.0	90.9	(89.8,91.9)	9.5

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Appendix 8: Incidence summary table, Chinese males, Malaysia, 2012-2016

ICD-10	SITE	No.	%	CR	CR74	ASR	(95%CL)	CumR
C18-C21	Colorectal	4,008	18.7	23.9	2.4	19.6	(19.0,20.2)	2.3
C33-C34	Trachea, Bronchus, Lung	3,258	15.2	19.4	2.0	16.0	(15.4,16.5)	2.0
C61	Prostate	2,040	9.5	12.2	1.4	10.1	(9.7,10.5)	1.4
C11	Nasopharynx	1,748	8.2	10.4	0.9	8.6	(8.2,9.0)	0.9
C22	Liver	1,284	6.0	7.7	0.8	6.3	(6.0,6.7)	0.8
C81-C85;C96	Lymphoma	943	4.4	5.6	0.5	4.8	(4.5,5.1)	0.5
C44	Other Skin	914	4.3	5.5	0.5	4.5	(4.2,4.8)	0.5
C16	Stomach	862	4.0	5.1	0.5	4.2	(3.9,4.5)	0.5
C91-C95	Leukaemia	661	3.1	3.9	0.3	3.8	(3.5,4.1)	0.3
C67	Bladder	618	2.9	3.7	0.4	3.0	(2.8,3.3)	0.4
Others	Other & Unspecified	610	2.9	3.6	0.4	3.0	(2.8,3.3)	0.4
C64	Kidney	585	2.7	3.5	0.4	2.9	(2.7,3.2)	0.4
C25	Pancreas	576	2.7	3.4	0.4	2.8	(2.6,3.1)	0.4
C32	Larynx	374	1.7	2.2	0.2	1.8	(1.6,2.0)	0.2
C15	Oesophagus	321	1.5	1.9	0.2	1.6	(1.4,1.7)	0.2
C70-C72	Brain, Nervous System	311	1.5	1.9	0.2	1.7	(1.5,1.9)	0.2
C01-C02	Tongue	202	0.9	1.2	0.1	1.0	(0.9,1.1)	0.1
C47; C49	Connective, Soft Tissue	189	0.9	1.1	0.1	1.0	(0.8,1.1)	0.1
C23-C24	Gallbladder Etc.	182	0.9	1.1	0.1	0.9	(0.8,1.0)	0.1
C73	Thyroid	173	0.8	1.0	0.1	0.9	(0.7,1.0)	0.1
C03-C06	Mouth	138	0.6	0.8	0.1	0.7	(0.6,0.8)	0.1
C62	Testis	135	0.6	0.8	0.1	0.7	(0.6,0.9)	0.1
C40-C41	Bone	132	0.6	0.8	0.1	0.7	(0.6,0.8)	0.1
C50	Breast	125	0.6	0.8	0.1	0.6	(0.5,0.7)	0.1
C90	Multiple Myeloma	124	0.6	0.7	0.1	0.6	(0.5,0.7)	0.1
C30-C31	Nose, Sinuses Etc.	123	0.6	0.7	0.1	0.6	(0.5,0.7)	0.1
C07-C08	Salivary Glands	95	0.4	0.6	0.1	0.5	(0.4,0.6)	0.1
C17	Small Intestine	82	0.4	0.5	0.1	0.4	(0.3,0.5)	0.1
C37-C38	Other Thoracic Organs	79	0.4	0.5	0.0	0.4	(0.3,0.5)	0.0
C09	Tonsil	66	0.3	0.4	0.0	0.3	(0.2,0.4)	0.0
C43	Melanoma Of Skin	60	0.3	0.4	0.0	0.3	(0.2,0.4)	0.0
C12-C13	Hypopharynx	56	0.3	0.3	0.0	0.3	(0.2,0.4)	0.0
C60	Penis	47	0.2	0.3	0.0	0.2	(0.2,0.3)	0.0
C10	Other Oropharynx	38	0.2	0.2	0.0	0.2	(0.1,0.3)	0.0
C75	Other Endocrine	33	0.2	0.2	0.0	0.2	(0.1,0.3)	0.0
C66	Ureter	27	0.1	0.2	0.0	0.1	(0.1,0.2)	0.0
C63	Other Male Genital	24	0.1	0.1	0.0	0.1	(0.1,0.2)	0.0
C88	Immunoproliferative Dis.	24	0.1	0.1	0.0	0.1	(0.1,0.2)	0.0
C74	Adrenal Gland	20	0.1	0.1	0.0	0.1	(0.1,0.2)	0.0
C14	Pharynx Unspec.	17	0.1	0.1	0.0	0.1	(0.0,0.1)	0.0
C00	Lip	15	0.1	0.1	0.0	0.1	(0.0,0.1)	0.0
C45	Mesothelioma	15	0.1	0.1	0.0	0.1	(0.0,0.1)	0.0
C69	Eye	15	0.1	0.1	0.0	0.1	(0.1,0.2)	0.0
C65	Renal Pelvis	13	0.1	0.1	0.0	0.1	(0.0,0.1)	0.0
C46	Kaposi Sarcoma	12	0.1	0.1	0.0	0.1	(0.0,0.1)	0.0
C68	Other Urinary Organs	11	0.1	0.1	0.0	0.1	(0.0,0.1)	0.0
All	All sites total	21,385	100.0	127.6	12.6	106.1	(104.7,107.6)	11.9

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Appendix 9: Incidence summary table, Chinese females, Malaysia, 2012-2016

ICD-10	SITE	No.	%	CR	CR74	ASR	(95%CL)	CumR
C50	Breast	7,759	34.6	49.1	4.6	40.7	(39.8,41.6)	4.5
C18-C21	Colorectal	2,990	13.3	18.9	1.8	15.2	(14.7,15.7)	1.8
C33-C34	Trachea, Bronchus, Lung	1,537	6.8	9.7	0.9	7.8	(7.4,8.2)	0.9
C53	Cervix Uteri	1,316	5.9	8.3	0.8	6.8	(6.5,7.2)	0.8
C56	Ovary	1,006	4.5	6.4	0.6	5.4	(5.0,5.7)	0.6
C54	Corpus Uteri	977	4.4	6.2	0.6	5.1	(4.8,5.4)	0.6
C44	Other Skin	618	2.8	3.9	0.3	3.0	(2.8,3.3)	0.3
C81-C85;C96	Lymphoma	602	2.7	3.8	0.4	3.2	(3.0,3.5)	0.4
C16	Stomach	551	2.5	3.5	0.3	2.8	(2.5,3.0)	0.3
C11	Nasopharynx	549	2.4	3.5	0.3	2.9	(2.7,3.1)	0.3
C91-C95	Leukaemia	492	2.2	3.1	0.3	2.9	(2.7,3.2)	0.3
C25	Pancreas	444	2.0	2.8	0.3	2.3	(2.1,2.5)	0.3
Others	Other & Unspecified	430	1.9	2.7	0.3	2.2	(2.0,2.4)	0.3
C22	Liver	411	1.8	2.6	0.3	2.2	(1.9,2.4)	0.3
C73	Thyroid	383	1.7	2.4	0.2	2.0	(1.8,2.2)	0.2
C55	Uterus Unspec.	277	1.2	1.8	0.2	1.4	(1.3,1.6)	0.2
C70-C72	Brain, Nervous System	263	1.2	1.7	0.1	1.5	(1.4,1.7)	0.1
C64	Kidney	255	1.1	1.6	0.2	1.4	(1.2,1.5)	0.2
C23-C24	Gallbladder Etc.	218	1.0	1.4	0.1	1.1	(0.9,1.2)	0.1
C67	Bladder	170	0.8	1.1	0.1	0.9	(0.7,1.0)	0.1
C47; C49	Connective, Soft Tissue	137	0.6	0.9	0.1	0.8	(0.6,0.9)	0.1
C01-C02	Tongue	126	0.6	0.8	0.1	0.7	(0.5,0.8)	0.1
C90	Multiple Myeloma	100	0.4	0.6	0.1	0.5	(0.4,0.6)	0.1
C07-C08	Salivary Glands	85	0.4	0.5	0.0	0.4	(0.3,0.5)	0.0
C15	Oesophagus	77	0.3	0.5	0.0	0.4	(0.3,0.5)	0.0
C03-C06	Mouth	72	0.3	0.5	0.0	0.4	(0.3,0.5)	0.0
C40-C41	Bone	65	0.3	0.4	0.0	0.4	(0.3,0.5)	0.0
C37-C38	Other Thoracic Organs	55	0.2	0.3	0.0	0.3	(0.2,0.4)	0.0
C51	Vulva	55	0.2	0.3	0.0	0.3	(0.2,0.4)	0.0
C43	Melanoma Of Skin	52	0.2	0.3	0.0	0.3	(0.2,0.3)	0.0
C17	Small Intestine	51	0.2	0.3	0.0	0.3	(0.2,0.3)	0.0
C30-C31	Nose, Sinuses Etc.	47	0.2	0.3	0.0	0.2	(0.2,0.3)	0.0
C52	Vagina	45	0.2	0.3	0.0	0.2	(0.2,0.3)	0.0
C57	Other Female Genital	34	0.2	0.2	0.0	0.2	(0.1,0.2)	0.0
C32	Larynx	31	0.1	0.2	0.0	0.2	(0.1,0.2)	0.0
C09	Tonsil	23	0.1	0.1	0.0	0.1	(0.1,0.2)	0.0
C66	Ureter	18	0.1	0.1	0.0	0.1	(0.0,0.1)	0.0
C88	Immunoproliferative Dis.	17	0.1	0.1	0.0	0.1	(0.0,0.1)	0.0
C69	Eye	16	0.1	0.1	0.0	0.1	(0.1,0.2)	0.0
C12-C13	Hypopharynx	13	0.1	0.1	0.0	0.1	(0.0,0.1)	0.0
C00	Lip	12	0.1	0.1	0.0	0.1	(0.0,0.1)	0.0
C74	Adrenal Gland	12	0.1	0.1	0.0	0.1	(0.0,0.2)	0.0
C75	Other Endocrine	12	0.1	0.1	0.0	0.1	(0.0,0.1)	0.0
C10	Other Oropharynx	8	0.0	0.1	0.0	0.0	(0.0,0.1)	0.0
C58	Placenta	8	0.0	0.1	0.0	0.0	(0.0,0.1)	0.0
C45	Mesothelioma	7	0.0	0.0	0.0	0.0	(0.0,0.1)	0.0
C14	Pharynx Unspec.	6	0.0	0.0	0.0	0.0	(0.0,0.1)	0.0
C65	Renal Pelvis	4	0.0	0.0	0.0	0.0	(0.0,0.0)	0.0
C68	Other Urinary Organs	4	0.0	0.0	0.0	0.0	(0.0,0.0)	0.0
C46	Kaposi Sarcoma	0	0.0	0.0	0.0	0.0	(0.0,0.0)	0.0
All	All sites total	22,440	100.0	142.1	13.3	117.3	(115.8,118.9)	12.5

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Appendix 10: Incidence summary table, Indian males, Malaysia, 2012-2016

ICD-10	SITE	No.	%	CR	CR74	ASR	(95%CL)	CumR
C18-C21	Colorectal	470	16.5	9.6	1.4	11.0	(10.0,12.1)	1.4
C61	Prostate	245	8.6	5.0	0.9	6.8	(5.9,7.6)	0.9
C33-C34	Trachea, Bronchus, Lung	239	8.4	4.9	0.7	5.7	(5.0,6.5)	0.7
C81-C85;C96	Lymphoma	178	6.3	3.6	0.4	3.7	(3.1,4.2)	0.4
C22	Liver	147	5.2	3.0	0.4	3.5	(2.9,4.1)	0.4
C16	Stomach	143	5.0	2.9	0.4	3.5	(2.9,4.1)	0.4
C91-C95	Leukaemia	129	4.5	2.6	0.2	2.8	(2.3,3.2)	0.2
C15	Oesophagus	98	3.4	2.0	0.3	2.4	(1.9,2.9)	0.3
C64	Kidney	97	3.4	2.0	0.3	2.2	(1.7,2.6)	0.3
C67	Bladder	96	3.4	2.0	0.3	2.4	(1.9,2.9)	0.3
C32	Larynx	93	3.3	1.9	0.3	2.2	(1.7,2.6)	0.3
C01-C02	Tongue	87	3.1	1.8	0.2	2.0	(1.5,2.4)	0.2
C03-C06	Mouth	87	3.1	1.8	0.3	2.0	(1.6,2.5)	0.3
Others	Other & Unspecified	86	3.0	1.8	0.2	2.0	(1.6,2.4)	0.2
C25	Pancreas	85	3.0	1.7	0.2	1.9	(1.5,2.4)	0.2
C44	Other Skin	69	2.4	1.4	0.2	1.7	(1.3,2.1)	0.2
C70-C72	Brain, Nervous System	60	2.1	1.2	0.2	1.4	(1.0,1.7)	0.2
C73	Thyroid	52	1.8	1.1	0.1	1.1	(0.8,1.4)	0.1
C62	Testis	37	1.3	0.8	0.1	0.7	(0.5,1.0)	0.1
C47; C49	Connective, Soft Tissue	35	1.2	0.7	0.1	0.8	(0.5,1.1)	0.1
C12-C13	Hypopharynx	29	1.0	0.6	0.1	0.7	(0.4,1.0)	0.1
C40-C41	Bone	27	1.0	0.6	0.0	0.6	(0.3,0.8)	0.0
C07-C08	Salivary Glands	26	0.9	0.5	0.1	0.6	(0.4,0.8)	0.1
C90	Multiple Myeloma	26	0.9	0.5	0.1	0.6	(0.4,0.8)	0.1
C11	Nasopharynx	25	0.9	0.5	0.1	0.6	(0.3,0.8)	0.1
C23-C24	Gallbladder Etc.	24	0.8	0.5	0.1	0.6	(0.3,0.8)	0.1
C50	Breast	21	0.7	0.4	0.1	0.5	(0.3,0.7)	0.1
C60	Penis	21	0.7	0.4	0.0	0.5	(0.3,0.7)	0.0
C09	Tonsil	19	0.7	0.4	0.0	0.4	(0.2,0.6)	0.0
C10	Other Oropharynx	16	0.6	0.3	0.0	0.4	(0.2,0.6)	0.0
C17	Small Intestine	12	0.4	0.2	0.0	0.3	(0.1,0.5)	0.0
C30-C31	Nose, Sinuses Etc.	12	0.4	0.2	0.0	0.2	(0.1,0.4)	0.0
C37-C38	Other Thoracic Organs	10	0.4	0.2	0.0	0.2	(0.1,0.4)	0.0
C75	Other Endocrine	9	0.3	0.2	0.0	0.2	(0.1,0.3)	0.0
C14	Pharynx Unspec.	8	0.3	0.2	0.0	0.2	(0.1,0.4)	0.0
C43	Melanoma Of Skin	4	0.1	0.1	0.0	0.1	(0.0,0.2)	0.0
C88	Immunoproliferative Dis.	4	0.1	0.1	0.0	0.1	(0.0,0.1)	0.0
C00	Lip	3	0.1	0.1	0.0	0.1	(0.0,0.2)	0.0
C45	Mesothelioma	2	0.1	0.0	0.0	0.0	(0.0,0.1)	0.0
C46	Kaposi Sarcoma	2	0.1	0.0	0.0	0.0	(0.0,0.1)	0.0
C65	Renal Pelvis	2	0.1	0.0	0.0	0.1	(0.0,0.1)	0.0
C66	Ureter	2	0.1	0.0	0.0	0.1	(0.0,0.1)	0.0
C69	Eye	2	0.1	0.0	0.0	0.1	(0.0,0.2)	0.0
C74	Adrenal Gland	2	0.1	0.0	0.0	0.0	(0.0,0.1)	0.0
C63	Other Male Genital	1	0.0	0.0	0.0	0.0	(0.0,0.1)	0.0
C68	Other Urinary Organs	0	0.0	0.0	0.0	0.0	(0.0,0.0)	0.0
All	All sites total	2,842	100.0	58.1	7.9	66.7	(64.2,69.3)	7.6

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Appendix 11: Incidence summary table, Indian females, Malaysia, 2012-2016

ICD-10	SITE	No.	%	CR	CR74	ASR	(95%CL)	CumR
C50	Breast	1,910	36.8	39.2	4.5	38.1	(36.4,39.8)	4.4
C18-C21	Colorectal	401	7.7	8.2	1.1	8.5	(7.6,9.3)	1.1
C53	Cervix Uteri	273	5.3	5.6	0.6	5.5	(4.9,6.2)	0.6
C56	Ovary	272	5.2	5.6	0.6	5.4	(4.8,6.1)	0.6
C54	Corpus Uteri	265	5.1	5.4	0.7	5.5	(4.8,6.2)	0.7
C03-C06	Mouth	220	4.2	4.5	0.6	4.9	(4.2,5.5)	0.6
C73	Thyroid	167	3.2	3.4	0.3	3.2	(2.7,3.7)	0.3
C16	Stomach	155	3.0	3.2	0.4	3.3	(2.8,3.9)	0.4
C81-C85;C96	Lymphoma	151	2.9	3.1	0.3	3.0	(2.5,3.5)	0.3
C33-C34	Trachea, Bronchus, Lung	135	2.6	2.8	0.4	3.0	(2.4,3.5)	0.4
C91-C95	Leukaemia	123	2.4	2.5	0.3	2.6	(2.2,3.1)	0.3
C55	Uterus Unspec.	115	2.2	2.4	0.3	2.4	(2.0,2.9)	0.3
Others	Other & Unspecified	115	2.2	2.4	0.3	2.4	(2.0,2.9)	0.3
C15	Oesophagus	97	1.9	2.0	0.2	2.1	(1.6,2.5)	0.2
C01-C02	Tongue	93	1.8	1.9	0.2	2.0	(1.6,2.4)	0.2
C44	Other Skin	76	1.5	1.6	0.2	1.7	(1.3,2.1)	0.2
C70-C72	Brain, Nervous System	75	1.4	1.5	0.2	1.6	(1.2,1.9)	0.2
C22	Liver	63	1.2	1.3	0.2	1.4	(1.0,1.7)	0.2
C25	Pancreas	52	1.0	1.1	0.2	1.1	(0.8,1.4)	0.2
C64	Kidney	48	0.9	1.0	0.1	1.1	(0.7,1.4)	0.1
C23-C24	Gallbladder Etc.	46	0.9	0.9	0.1	1.0	(0.7,1.3)	0.1
C47; C49	Connective, Soft Tissue	31	0.6	0.6	0.1	0.7	(0.4,0.9)	0.1
C90	Multiple Myeloma	30	0.6	0.6	0.1	0.6	(0.4,0.9)	0.1
C67	Bladder	29	0.6	0.6	0.1	0.7	(0.4,0.9)	0.1
C12-C13	Hypopharynx	27	0.5	0.6	0.1	0.6	(0.3,0.8)	0.1
C32	Larynx	27	0.5	0.6	0.1	0.6	(0.4,0.8)	0.1
C40-C41	Bone	24	0.5	0.5	0.0	0.5	(0.3,0.7)	0.0
C07-C08	Salivary Glands	23	0.4	0.5	0.1	0.5	(0.3,0.7)	0.1
C57	Other Female Genital	20	0.4	0.4	0.0	0.4	(0.2,0.6)	0.0
C11	Nasopharynx	18	0.3	0.4	0.0	0.4	(0.2,0.5)	0.0
C52	Vagina	16	0.3	0.3	0.0	0.3	(0.2,0.5)	0.0
C51	Vulva	13	0.3	0.3	0.0	0.3	(0.1,0.4)	0.0
C17	Small Intestine	11	0.2	0.2	0.0	0.2	(0.1,0.3)	0.0
C00	Lip	10	0.2	0.2	0.0	0.2	(0.1,0.4)	0.0
C30-C31	Nose, Sinuses Etc.	10	0.2	0.2	0.0	0.2	(0.1,0.4)	0.0
C37-C38	Other Thoracic Organs	9	0.2	0.2	0.0	0.2	(0.1,0.3)	0.0
C43	Melanoma Of Skin	8	0.2	0.2	0.0	0.2	(0.0,0.3)	0.0
C10	Other Oropharynx	7	0.1	0.1	0.0	0.2	(0.0,0.3)	0.0
C14	Pharynx Unspec.	7	0.1	0.1	0.0	0.1	(0.0,0.2)	0.0
C09	Tonsil	6	0.1	0.1	0.0	0.1	(0.0,0.2)	0.0
C74	Adrenal Gland	5	0.1	0.1	0.0	0.1	(0.0,0.2)	0.0
C75	Other Endocrine	5	0.1	0.1	0.0	0.1	(0.0,0.2)	0.0
C45	Mesothelioma	3	0.1	0.1	0.0	0.1	(0.0,0.1)	0.0
C58	Placenta	3	0.1	0.1	0.0	0.1	(0.0,0.1)	0.0
C69	Eye	2	0.0	0.0	0.0	0.0	(0.0,0.1)	0.0
C46	Kaposi Sarcoma	0	0.0	0.0	0.0	0.0	(0.0,0.0)	0.0
C65	Renal Pelvis	0	0.0	0.0	0.0	0.0	(0.0,0.0)	0.0
C66	Ureter	0	0.0	0.0	0.0	0.0	(0.0,0.0)	0.0
C68	Other Urinary Organs	0	0.0	0.0	0.0	0.0	(0.0,0.0)	0.0
C88	Immunoproliferative Dis.	0	0.0	0.0	0.0	0.0	(0.0,0.0)	0.0
All	All sites total	5,196	100.0	106.7	12.5	106.9	(104.0,109.9)	11.7

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Appendix 12: Incidence summary table for 12 selected cancer sites by state and sex, Malaysia 2012-2016

State	Total	MALE						FEMALE					
		No.	CR	CR74	ASR	(95% CL)	CumR	No.	CR	CR74	ASR	(95% CL)	CumR
1. Breast													
Selangor	3,624	60	0.5	0.1	0.6	(0.4,0.7)	0.1	3,564	27.8	3.7	32.4	(31.3,33.5)	3.7
Johor	3,300	36	0.4	0.1	0.5	(0.3,0.6)	0.1	3,264	42.6	4.8	43.3	(41.8,44.8)	4.7
Perak	2,152	23	0.4	0.0	0.4	(0.2,0.5)	0.0	2,129	37.1	3.6	35.0	(33.4,36.5)	3.5
Penang	2,139	43	1.1	0.1	1.1	(0.8,1.4)	0.1	2,096	55.2	5.6	49.3	(47.2,51.4)	5.5
WPKL&P	1,629	25	0.6	0.1	0.6	(0.4,0.9)	0.1	1,604	36.6	4.6	39.8	(37.8,41.8)	4.5
Sarawak	1,601	20	0.3	0.0	0.4	(0.2,0.5)	0.0	1,581	26.4	3.1	27.8	(26.4,29.1)	3.0
Kedah	1,452	32	0.7	0.1	0.7	(0.4,0.9)	0.1	1,420	29.5	3.1	28.4	(26.9,29.9)	3.0
Sabah	1,218	12	0.2	0.0	0.3	(0.1,0.5)	0.0	1,206	19.7	2.9	26.7	(25.1,28.3)	2.9
Pahang	1,066	15	0.4	0.1	0.5	(0.2,0.7)	0.1	1,051	29.9	3.4	31.6	(29.7,33.5)	3.4
N. Sembilan	1,031	8	0.3	0.1	0.4	(0.1,0.6)	0.1	1,023	41.9	4.5	39.8	(37.4,42.3)	4.4
Melaka	982	6	0.3	0.0	0.3	(0.1,0.5)	0.0	976	48.3	5.2	46.8	(43.8,49.7)	5.1
Kelantan	845	8	0.2	0.0	0.3	(0.1,0.4)	0.0	837	20.8	2.4	22.4	(20.9,23.9)	2.4
Terengganu	660	2	0.1	0.0	0.1	(-0.0,0.2)	0.0	658	25.0	3.0	28.7	(26.5,30.9)	3.0
Perlis	200	0	0.0	0.0	0.0	(0.0,0.0)	0.0	200	33.2	3.5	31.7	(27.2,36.1)	3.5
W.P. Labuan	26	1	0.5	0.0	4.0	(-3.8,11.8)	0.0	25	12.6	2.0	21.3	(10.6,32.0)	2.0
2. Colorectal													
Johor	2,405	1,350	16.6	2.4	18.7	(17.6,19.7)	2.3	1,055	13.8	1.7	14.7	(13.8,15.6)	1.7
Selangor	2,019	1,125	8.5	1.5	11.8	(11.1,12.5)	1.5	894	7.0	1.1	9.2	(8.6,9.9)	1.1
Penang	1,541	852	22.6	2.6	21.7	(20.2,23.2)	2.6	689	18.2	1.9	16.2	(15.0,17.4)	1.9
Perak	1,528	847	14.4	1.5	12.7	(11.8,13.5)	1.5	681	11.9	1.1	12.1	(11.1,13.0)	1.1
Sarawak	1,337	793	12.8	1.7	13.8	(12.8,14.8)	1.7	544	9.1	1.2	9.8	(8.9,10.6)	1.2
Sabah	1,053	622	9.9	1.9	15.5	(14.2,16.8)	1.9	431	7.0	1.3	10.9	(9.8,11.9)	1.3
Kedah	965	525	10.9	1.5	11.6	(10.6,12.6)	1.5	440	9.1	1.1	8.8	(7.9,9.6)	1.1
WPKL&P	946	565	12.5	1.9	15.3	(14.0,16.6)	1.9	381	8.7	1.4	10.6	(9.6,11.7)	1.4
N. Sembilan	804	436	17.4	2.2	18.1	(16.4,19.9)	2.2	368	15.1	1.5	14.3	(12.8,15.8)	1.5
Pahang	793	466	12.3	1.8	14.4	(13.1,15.7)	1.7	327	9.3	1.2	10.1	(9.0,11.2)	1.2
Kelantan	724	370	9.2	1.4	11.4	(10.3,12.6)	1.4	354	8.8	1.2	9.6	(8.6,10.6)	1.2
Melaka	678	363	18.2	2.3	19.1	(17.1,21.1)	2.2	315	15.6	1.7	14.9	(13.3,16.7)	1.7
Terengganu	560	305	11.2	1.9	14.8	(13.2,16.5)	1.9	255	9.7	1.4	11.6	(10.2,13.1)	1.4
Perlis	134	69	11.9	1.4	11.7	(8.9,14.5)	1.4	65	10.8	1.4	10.3	(7.8,12.8)	1.4
W.P. Labuan	28	13	6.3	0.9	18.6	(4.3,32.8)	0.9	15	7.5	2.4	20.9	(7.6,34.2)	2.3
3. Trachea, bronchus, lung													
Johor	1,731	1,237	15.2	2.2	17.3	(16.3,18.2)	2.2	494	6.4	0.8	6.9	(6.2,7.5)	0.8
Perak	1,356	912	15.5	1.7	13.6	(12.7,14.5)	1.6	444	7.7	0.7	8.0	(7.3,8.8)	0.7
Sarawak	1,142	722	11.7	1.6	12.7	(11.7,13.6)	1.6	420	7.0	1.0	7.7	(6.9,8.4)	1.0
Selangor	1,025	681	5.1	1.0	7.4	(6.8,7.9)	1.0	344	2.7	0.5	3.6	(3.2,4.0)	0.5
Penang	1,001	676	18.0	2.1	17.3	(16.0,18.6)	2.1	325	8.6	0.9	7.7	(6.9,8.5)	0.9
Sabah	774	483	7.6	1.6	12.3	(11.2,13.4)	1.6	291	4.7	1.0	7.9	(6.9,8.8)	1.0
WPKL&P	723	507	11.2	1.6	13.5	(12.3,14.8)	1.6	216	4.9	0.7	5.9	(5.1,6.7)	0.7
Kelantan	712	485	12.0	1.9	15.0	(13.6,16.3)	1.9	227	5.7	0.8	6.1	(5.3,6.9)	0.8
Pahang	648	447	11.8	1.9	14.1	(12.8,15.4)	1.8	201	5.7	0.8	6.4	(5.5,7.2)	0.8
Kedah	614	419	8.7	1.2	9.4	(8.5,10.3)	1.2	195	4.1	0.5	3.8	(3.3,4.4)	0.5
Terengganu	523	382	14.0	2.4	18.9	(17.0,20.8)	2.4	141	5.4	0.8	6.5	(5.4,7.6)	0.8
Melaka	471	351	17.6	2.3	18.3	(16.4,20.3)	2.3	120	5.9	0.8	5.8	(4.7,6.8)	0.8
N. Sembilan	425	307	12.2	1.6	12.9	(11.4,14.3)	1.6	118	4.8	0.6	4.7	(3.8,5.5)	0.6
Perlis	84	62	10.7	1.4	10.4	(7.8,13.0)	1.4	22	3.6	0.5	3.4	(2.0,4.8)	0.5
W.P. Labuan	27	15	7.3	1.4	20.9	(6.4,35.5)	1.4	12	6.0	1.2	20.8	(6.0,35.6)	1.2

NB: Sequence by highest numbers of cases by state

APPENDICES

Appendix 12: Incidence summary table for 12 selected cancer sites by state and sex, Malaysia 2012-2016 (continue)

State	Total	MALE						FEMALE					
		No.	CR	CR74	ASR	(95% CL)	CumR	No.	CR	CR74	ASR	(95% CL)	CumR
4. Lymphoma													
Selangor	867	469	3.5	0.5	4.1	(3.7,4.5)	0.5	398	3.1	0.4	3.5	(3.2,3.9)	0.4
Johor	846	505	6.2	0.7	6.5	(5.9,7.0)	0.7	341	4.5	0.5	4.5	(4.0,5.0)	0.5
Sabah	585	345	5.5	0.8	7.4	(6.6,8.2)	0.8	240	3.9	0.6	5.1	(4.4,5.8)	0.6
Perak	524	306	5.2	0.5	4.8	(4.3,5.4)	0.5	218	3.8	0.3	3.8	(3.2,4.3)	0.3
Sarawak	501	281	4.5	0.5	4.7	(4.2,5.3)	0.5	220	3.7	0.4	3.8	(3.3,4.4)	0.4
Penang	428	250	6.6	0.7	6.3	(5.5,7.1)	0.6	178	4.7	0.5	4.3	(3.7,4.9)	0.5
WPKL&P	390	221	4.9	0.6	5.5	(4.7,6.2)	0.6	169	3.9	0.5	4.2	(3.6,4.9)	0.5
Pahang	350	228	6.0	0.7	6.5	(5.7,7.4)	0.7	122	3.5	0.4	3.7	(3.0,4.4)	0.4
Melaka	293	181	9.1	1.0	9.2	(7.9,10.6)	1.0	112	5.6	0.6	5.3	(4.3,6.3)	0.6
Kelantan	289	182	4.5	0.5	5.1	(4.3,5.8)	0.5	107	2.7	0.3	2.8	(2.3,3.4)	0.3
Kedah	267	163	3.4	0.4	3.5	(2.9,4.0)	0.4	104	2.2	0.2	2.1	(2.1,1.7)	0.2
Terengganu	229	121	4.5	0.6	5.2	(4.3,6.2)	0.6	108	4.1	0.5	4.5	(3.6,5.4)	0.5
N. Sembilan	196	116	4.6	0.5	4.6	(3.8,5.5)	0.5	80	3.3	0.3	3.2	(2.5,3.9)	0.3
Perlis	61	41	7.1	0.8	7.0	(4.8,9.2)	0.8	20	3.3	0.3	3.0	(1.7,4.4)	0.3
W.P. Labuan	4	3	1.5	0.1	1.7	(-0.2,3.5)	0.1	1	0.5	0.0	0.5	(-0.5,1.4)	0.0
5. Nasopharynx													
Sarawak	963	707	11.4	1.3	11.6	(10.7,12.4)	1.3	256	4.3	0.5	4.4	(3.9,5.0)	0.5
Johor	658	478	5.9	0.7	6.0	(5.5,6.6)	0.7	180	2.4	0.3	2.4	(2.0,2.8)	0.3
Perak	553	418	7.1	0.7	6.6	(6.0,7.2)	0.7	135	2.4	0.2	2.2	(1.8,2.5)	0.2
Sabah	493	353	5.6	0.8	7.3	(6.5,8.1)	0.8	140	2.3	0.3	3.1	(2.5,3.6)	0.3
Selangor	467	336	2.5	0.3	2.9	(2.5,3.2)	0.3	131	1.0	0.1	1.2	(1.0,1.4)	0.1
Penang	314	234	6.2	0.6	5.7	(4.9,6.4)	0.6	80	2.1	0.2	1.9	(1.5,2.3)	0.2
WPKL&P	240	179	4.0	0.5	4.1	(3.5,4.7)	0.5	61	1.4	0.1	1.4	(1.1,1.8)	0.1
Melaka	195	143	7.2	0.8	7.2	(6.1,8.4)	0.8	52	2.6	0.3	2.5	(1.8,3.2)	0.3
Kedah	185	138	2.9	0.3	2.9	(2.4,3.4)	0.3	47	1.0	0.1	1.0	(0.7,1.2)	0.1
Pahang	175	129	3.4	0.4	3.8	(3.1,4.4)	0.4	46	1.3	0.2	1.4	(1.0,1.8)	0.2
N. Sembilan	146	108	4.3	0.5	4.3	(3.5,5.2)	0.5	38	1.6	0.2	1.5	(1.0,2.0)	0.2
Kelantan	105	72	1.8	0.2	2.1	(1.6,2.6)	0.2	33	0.8	0.1	0.8	(0.6,1.1)	0.1
Terengganu	77	50	1.8	0.3	2.2	(1.6,2.9)	0.3	27	1.0	0.1	1.2	(0.7,1.6)	0.1
Perlis	18	10	1.7	0.2	1.7	(0.6,2.7)	0.2	8	1.3	0.1	1.3	(0.4,2.2)	0.1
W.P. Labuan	8	4	1.9	0.2	2.3	(0.0,4.5)	0.2	4	2.0	0.3	2.8	(0.1,5.6)	0.3
6. Leukaemia													
Johor	659	387	4.8	0.4	5.0	(4.5,5.5)	0.4	272	3.6	0.3	3.7	(3.3,4.2)	0.3
Selangor	476	270	2.0	0.2	2.3	(2.0,2.6)	0.2	206	1.6	0.2	1.8	(1.6,2.1)	0.2
Sabah	402	222	3.5	0.4	4.1	(3.5,4.6)	0.4	180	2.9	0.3	3.5	(3.0,4.1)	0.3
Perak	382	198	3.4	0.3	3.4	(2.9,3.9)	0.3	184	3.2	0.3	3.5	(3.0,4.0)	0.3
Penang	360	196	5.2	0.5	5.4	(4.6,6.2)	0.5	164	4.3	0.4	4.4	(3.7,5.1)	0.4
Sarawak	329	182	2.9	0.2	3.1	(2.6,3.6)	0.2	147	2.5	0.2	2.7	(2.2,3.1)	0.2
Kedah	306	176	3.7	0.3	3.7	(3.2,4.3)	0.3	130	2.7	0.2	2.8	(2.3,3.3)	0.2
Kelantan	290	168	4.2	0.4	4.4	(3.8,5.1)	0.4	122	3.0	0.3	3.2	(2.6,3.8)	0.3
Terengganu	253	151	5.6	0.6	6.1	(5.1,7.2)	0.6	102	3.9	0.4	4.1	(3.3,4.9)	0.4
Melaka	219	129	6.5	0.6	6.7	(5.5,7.9)	0.6	90	4.5	0.4	4.6	(3.6,5.5)	0.4
WPKL&P	215	116	2.6	0.3	2.9	(2.4,3.5)	0.3	99	2.3	0.2	2.6	(2.1,3.1)	0.2
Pahang	178	101	2.7	0.3	2.8	(2.3,3.4)	0.3	77	2.2	0.2	2.3	(1.8,2.8)	0.2
N. Sembilan	153	91	3.6	0.3	3.8	(3.0,4.5)	0.3	62	2.5	0.3	2.7	(2.0,3.3)	0.3
Perlis	43	25	4.3	0.3	4.9	(2.9,6.8)	0.3	18	3.0	0.2	3.3	(1.7,4.8)	0.2
W.P. Labuan	8	2	1.0	0.1	1.0	(-0.4,2.5)	0.1	6	3.0	0.5	4.2	(0.6,7.8)	0.5

NB: Sequence by highest numbers of cases by state

APPENDICES

Appendix 12: Incidence summary table for 12 selected cancer sites by state and sex, Malaysia 2012-2016 (continue)

State	Total	MALE						FEMALE					
		No.	CR	CR74	ASR	(95% CL)	CumR	No.	CR	CR74	ASR	(95% CL)	CumR
7. Liver													
Johor	594	440	5.4	0.7	6.0	(5.4,6.5)	0.7	154	2.0	0.3	2.2	(1.9,2.6)	0.3
Selangor	515	395	3.0	0.5	4.1	(3.6,4.5)	0.5	120	0.9	0.2	1.2	(1.0,1.5)	0.2
Perak	427	312	5.3	0.6	4.7	(4.2,5.2)	0.6	115	2.0	0.2	2.1	(1.7,2.5)	0.2
Sarawak	328	232	3.8	0.5	4.1	(3.6,4.6)	0.5	96	1.6	0.2	1.8	(1.4,2.1)	0.2
Penang	312	230	6.1	0.7	5.8	(5.1,6.6)	0.7	82	2.2	0.2	2.0	(1.6,2.5)	0.2
Pahang	299	215	5.7	0.8	6.5	(5.6,7.3)	0.8	84	2.4	0.3	2.6	(2.1,3.2)	0.3
Kelantan	266	199	4.9	0.7	6.0	(5.2,6.9)	0.7	67	1.7	0.2	1.8	(1.4,2.2)	0.2
Terengganu	259	178	6.5	1.0	8.4	(7.2,9.7)	1.0	81	3.1	0.5	3.9	(3.0,4.7)	0.5
Sabah	251	183	2.9	0.6	4.6	(3.9,5.2)	0.6	68	1.1	0.2	1.7	(1.3,2.2)	0.2
Kedah	206	125	2.6	0.3	2.7	(2.2,3.2)	0.3	81	1.7	0.2	1.7	(1.3,2.1)	0.2
N. Sembilan	190	148	5.9	0.8	6.1	(5.1,7.1)	0.7	42	1.7	0.2	1.7	(1.2,2.2)	0.2
Melaka	189	145	7.3	0.9	7.4	(6.2,8.7)	0.9	44	2.2	0.3	2.1	(1.5,2.7)	0.3
WPKL&P	157	117	2.6	0.4	3.0	(2.5,3.6)	0.4	40	0.9	0.1	1.1	(0.8,1.5)	0.1
Perlis	34	26	4.5	0.6	4.5	(2.8,6.2)	0.6	8	1.3	0.1	1.2	(0.4,2.1)	0.1
W.P. Labuan	6	4	1.9	0.2	12.8	(-0.9,26.5)	0.2	2	1.0	0.1	4.7	(-3.2,12.7)	0.1

8. Thyroid

Selangor	433	134	1.0	0.1	1.1	(0.9,1.3)	0.1	299	2.3	0.3	2.5	(2.2,2.8)	0.3
Johor	397	94	1.2	0.2	1.2	(1.0,1.5)	0.2	303	4.0	0.4	3.9	(3.5,4.4)	0.4
Kelantan	290	69	1.7	0.3	2.1	(1.6,2.7)	0.3	221	5.5	0.6	5.9	(5.1,6.6)	0.6
Sabah	264	54	0.9	0.1	1.2	(0.9,1.5)	0.1	210	3.4	0.5	4.4	(3.8,5.0)	0.5
Perak	217	58	1.0	0.1	0.9	(0.7,1.1)	0.1	159	2.8	0.2	2.6	(2.2,3.1)	0.2
Penang	209	55	1.5	0.2	1.3	(1.0,1.7)	0.2	154	4.1	0.4	3.6	(3.0,4.2)	0.4
W.P. KL&P	208	68	1.5	0.2	1.6	(1.2,2.0)	0.2	140	3.2	0.3	3.2	(2.7,3.8)	0.3
Terengganu	157	29	1.1	0.2	1.4	(0.9,1.9)	0.2	128	4.9	0.6	5.5	(4.6,6.5)	0.6
Kedah	157	41	0.9	0.1	0.9	(0.6,1.2)	0.1	116	2.4	0.2	0.3	(1.9,2.7)	0.2
Pahang	145	31	0.8	0.1	0.9	(0.6,1.2)	0.1	114	3.2	0.3	3.3	(2.7,4.0)	0.3
Sarawak	136	34	0.6	0.1	0.6	(0.4,0.7)	0.1	102	1.7	0.2	1.7	(1.4,2.1)	0.2
Melaka	135	36	1.8	0.2	1.9	(1.2,2.5)	0.2	99	4.9	0.4	4.6	(3.7,5.5)	0.4
N. Sembilan	97	30	1.2	0.2	1.3	(0.8,1.7)	0.2	67	2.7	0.3	2.6	(2.0,3.2)	0.3
Perlis	36	13	2.3	0.2	2.1	(0.9,3.2)	0.2	23	3.8	0.4	3.8	(2.2,5.3)	0.4
W.P. Labuan	5	3	1.5	0.4	2.8	(-0.6,6.3)	0.4	2	1.0	0.1	1.0	(-0.4,2.4)	0.1

State	MALE						
	No.	CR	CR74	ASR	(95% CL)	CumR	
9. Prostate							
Johor	519	6.4	1.1	7.6	(7.0,8.3)	1.0	
Selangor	474	3.6	0.8	6.0	(5.4,6.5)	0.8	
Perak	427	7.3	0.8	6.2	(5.6,6.8)	0.8	
Penang	419	11.1	1.6	11.2	(10.2,12.3)	1.6	
Sarawak	411	6.6	1.1	7.7	(6.9,8.4)	1.1	
WPKL&P	343	7.6	1.5	10.5	(9.3,11.6)	1.5	
Kedah	299	6.2	1.0	7.0	(6.2,7.7)	1.0	
Sabah	265	4.2	1.1	7.7	(6.8,8.7)	1.1	
Pahang	257	6.8	1.1	8.5	(7.4,5.0)	1.1	
Melaka	229	11.5	1.6	12.3	(10.7,13.9)	1.6	
Kelantan	200	5.0	0.9	6.5	(5.6,7.4)	0.9	
N. Sembilan	183	7.3	1.1	8.1	(7.0,9.3)	1.1	
Terengganu	121	4.5	0.9	6.5	(5.3,7.7)	0.9	
Perlis	37	6.4	0.7	6.0	(4.1,8.0)	0.7	
W.P. Labuan	5	2.4	0.7	7.3	(-1.2,15.8)	0.7	

NB: Sequence by highest numbers of cases by state

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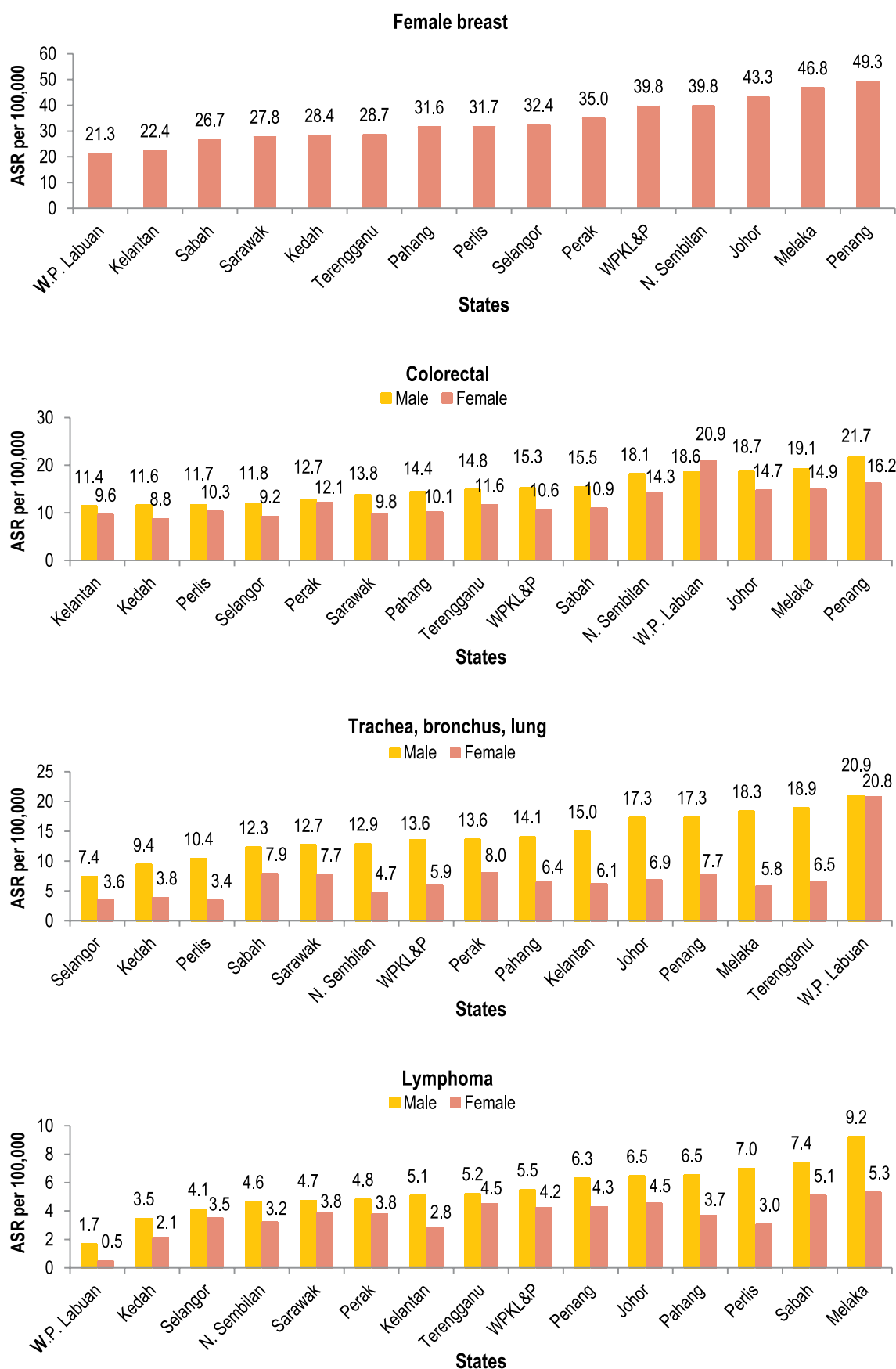
Appendix 12: Incidence summary table for 12 selected cancer sites by state and sex, Malaysia 2012-2016 (continue)

State	FEMALE					
	No.	CR	CR74	ASR	(95% CL)	CumR
10. Cervix Uteri						
Sarawak	575	9.6	1.1	10.0	(9.2,10.8)	1.1
Sabah	570	9.3	1.4	12.6	(11.5,13.6)	1.4
Johor	501	6.5	0.7	6.6	(6.0,7.2)	0.7
Selangor	447	3.5	0.5	4.1	(3.7,4.5)	0.5
Perak	310	5.4	0.5	5.4	(4.8,6.1)	0.5
Penang	307	8.1	0.9	7.2	(6.4,8.0)	0.9
Kedah	227	4.7	0.5	4.6	(4.0,5.2)	0.5
Pahang	208	5.9	0.7	6.3	(5.5,7.2)	0.7
WPKL&P	179	4.1	0.5	4.3	(3.7,4.9)	0.5
Kelantan	178	4.4	0.5	4.7	(4.0,5.5)	0.5
N. Sembilan	176	7.2	0.8	7.0	(6.0,8.1)	0.8
Melaka	142	7.0	0.8	6.8	(5.7,7.9)	0.8
Terengganu	100	3.8	0.5	4.5	(3.6,5.3)	0.5
Perlis	51	8.5	1.0	8.0	(5.8,10.2)	1.0
W.P. Labuan	10	5.0	0.7	6.8	(2.5,11.1)	0.7
11. Ovary						
Johor	505	6.6	0.7	6.6	(6.1,7.2)	0.7
Selangor	496	3.9	0.5	4.5	(4.1,4.9)	0.5
Perak	343	6.0	0.6	5.7	(5.0,6.3)	0.6
Penang	314	8.3	0.8	7.4	(6.6,8.3)	0.8
Sarawak	285	4.8	0.5	4.9	(4.4,5.5)	0.5
Kelantan	248	6.2	0.7	6.5	(5.7,7.4)	0.7
Sabah	229	3.7	0.5	4.9	(4.2,5.6)	0.5
Kedah	219	4.6	0.5	4.4	(3.8,5.0)	0.5
WPKL&P	197	4.5	0.5	4.6	(4.0,5.3)	0.5
Terengganu	181	6.9	0.8	7.8	(6.6,8.9)	0.8
N. Sembilan	175	7.2	0.7	6.8	(5.8,7.8)	0.7
Pahang	172	4.9	0.5	5.1	(4.3,5.8)	0.5
Melaka	167	8.3	0.9	7.9	(6.7,9.1)	0.9
Perlis	41	6.8	0.7	6.6	(4.5,8.7)	0.7
W.P. Labuan	3	1.5	0.4	2.7	(-0.4,5.8)	0.4
12. Corpus Uteri						
Johor	482	6.3	0.8	6.5	(5.9,7.1)	0.8
Selangor	375	2.9	0.5	3.6	(3.2,4.0)	0.5
Perak	299	5.2	0.5	4.8	(4.3,5.4)	0.5
Sarawak	275	4.6	0.6	4.9	(4.4,5.5)	0.6
Penang	229	6.0	0.6	5.4	(4.7,6.1)	0.6
W.P. KL&P	209	4.8	0.7	5.4	(4.7,6.2)	0.7
Sabah	190	3.1	0.5	4.2	(3.6,4.9)	0.5
Kedah	172	3.6	0.4	3.5	(3.0,4.1)	0.4
Melaka	155	7.7	0.8	7.3	(6.2,8.5)	0.8
Pahang	145	4.1	0.5	4.3	(3.6,5.1)	0.5
Kelantan	135	3.4	0.4	3.7	(3.0,4.3)	0.4
N. Sembilan	108	4.4	0.5	4.3	(3.4,5.1)	0.5
Terengganu	91	3.5	0.5	4.1	(3.3,5.0)	0.5
Perlis	30	5.0	0.5	4.9	(3.1,6.6)	0.5
W.P. Labuan	3	1.5	0.2	2.0	(-0.3,4.2)	0.2

NB: Sequence by highest numbers of cases by state

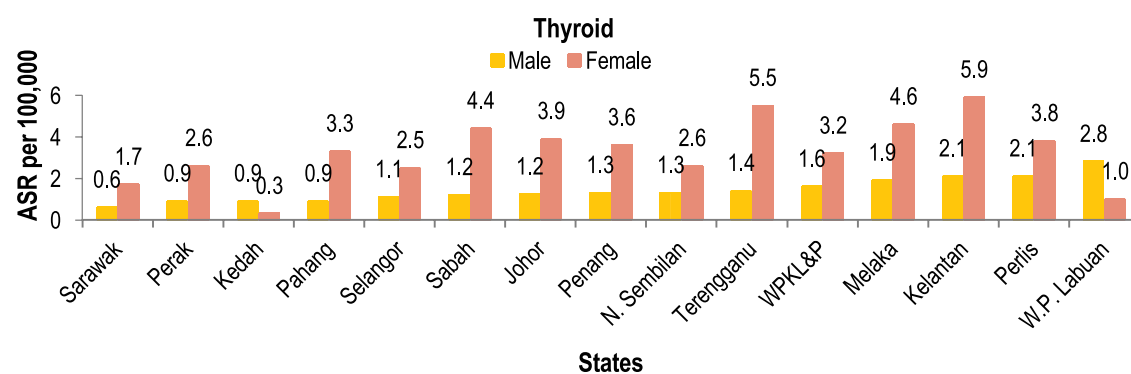
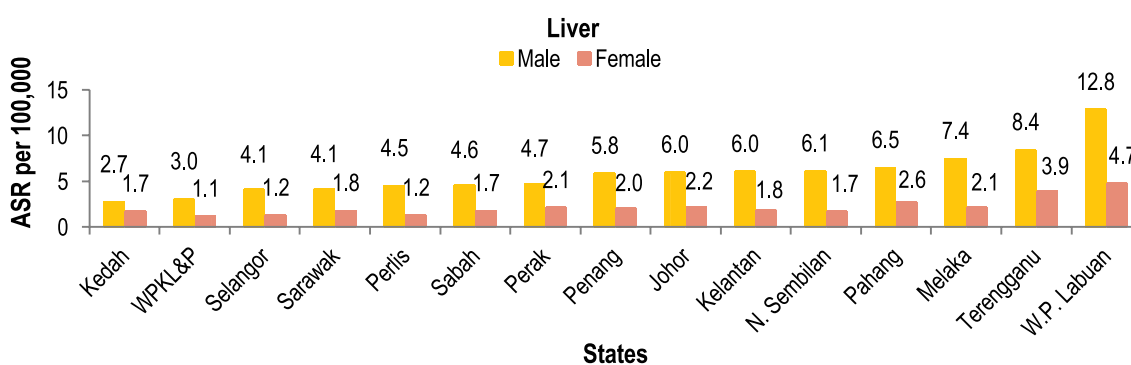
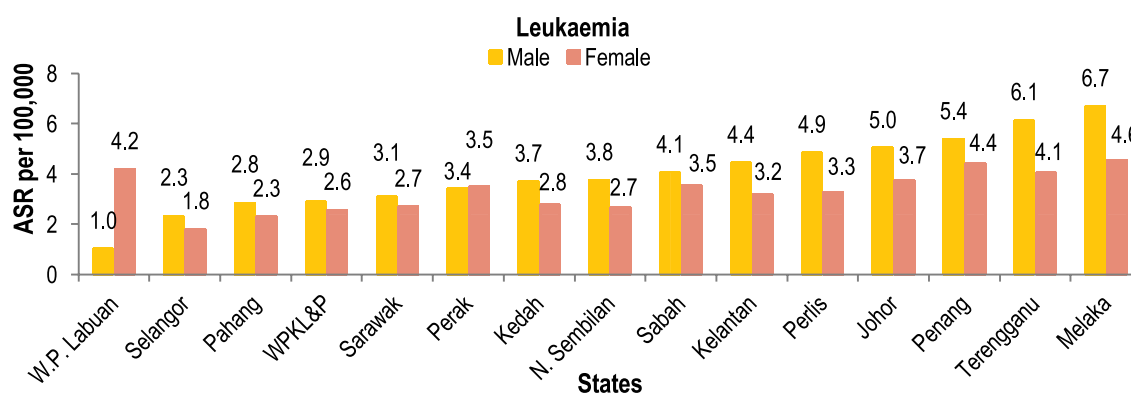
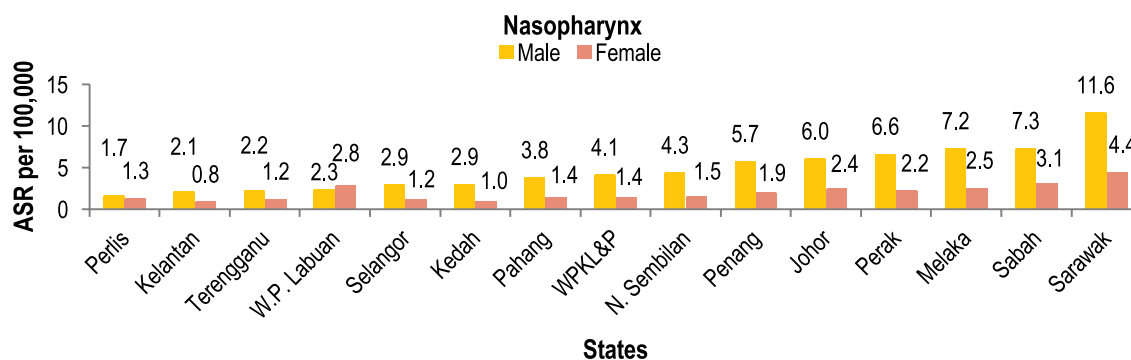
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Appendix 13: Age-standardised incidence rate (ASR) for 12 selected cancers by state, Malaysia, 2012-2016



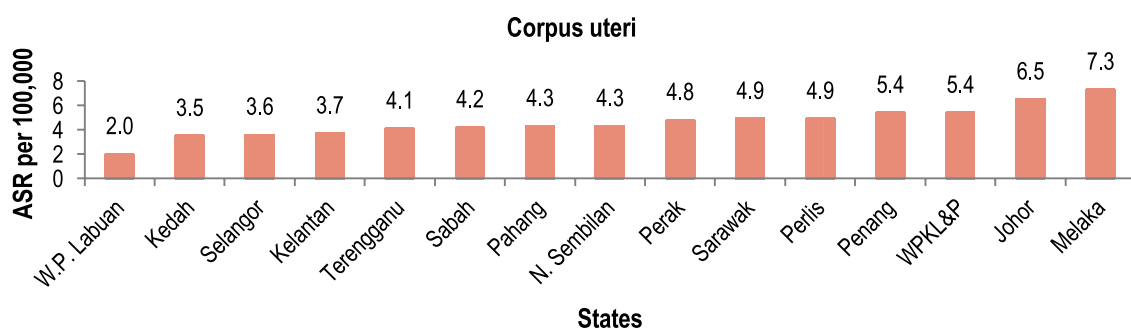
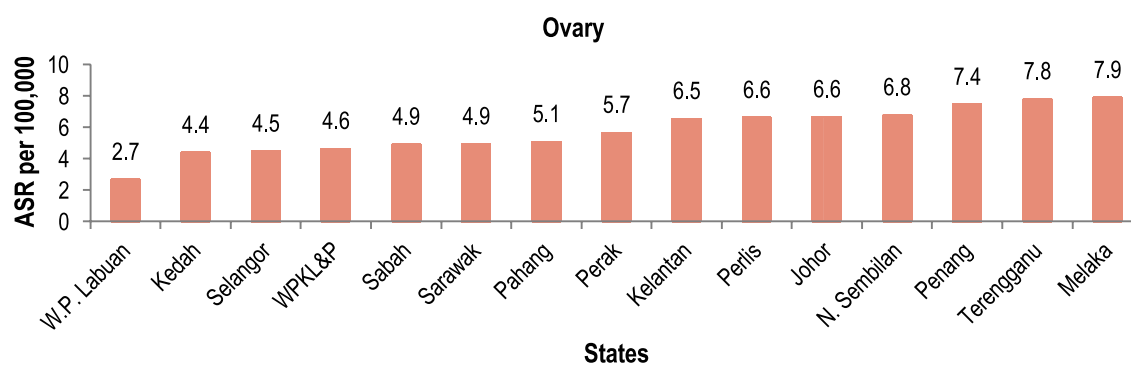
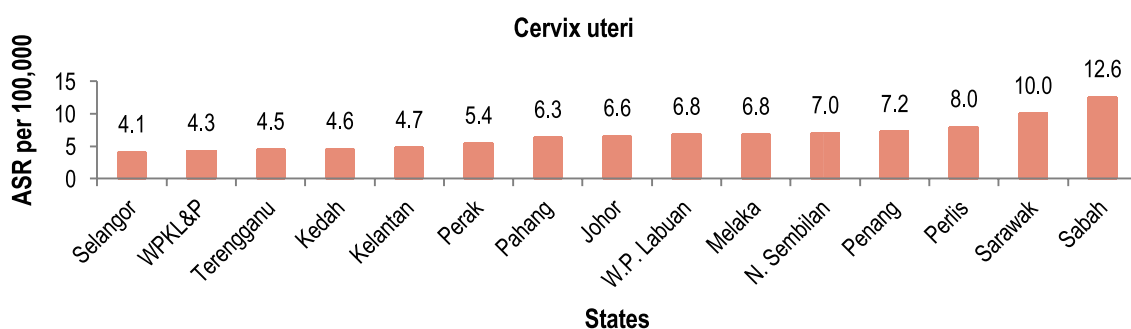
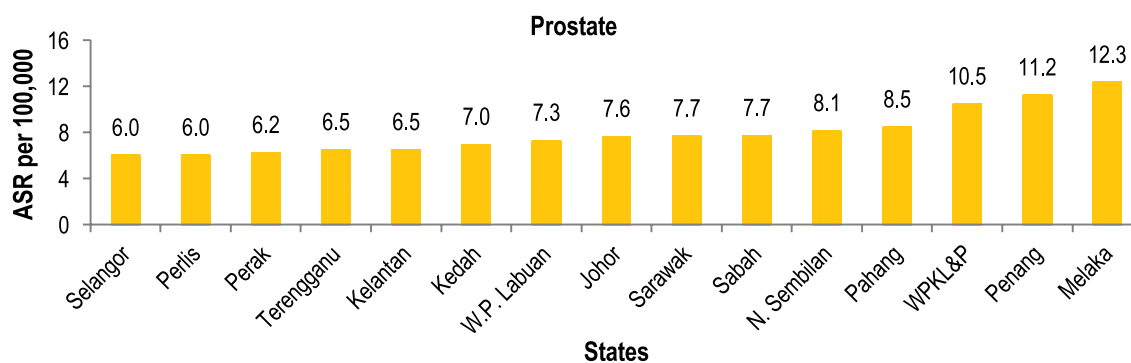
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Appendix 13: Age-standardised incidence rate (ASR) for 12 selected cancers by state, Malaysia, 2012-2016 (continue)



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Appendix 13: Age-standardised incidence rate (ASR) for 12 selected cancers by state, Malaysia, 2012-2016 (continue)



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Appendix 14: Number of new cancer cases by site and age group, all residents, male, Malaysia, 2012-2016

SITE	ALL AGES	AGE UNK	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	(%)	ICD (10th)
Lip	27	0	0	0	0	0	0	0	0	0	0	1	1	4	4	8	5	4	0.1	C00
Tongue	560	0	0	0	2	2	9	15	22	27	44	56	78	76	71	64	55	55	1.1	C01-C02
Mouth	400	0	0	2	2	1	1	5	7	12	17	29	42	73	60	46	47	57	0.8	C03-C06
Salivary glands	293	0	0	2	7	11	11	7	16	8	20	34	38	34	41	27	26	19	0.6	C07-C08
Tonsil	144	0	0	0	0	0	0	1	3	2	8	7	25	29	20	18	12	19	0.3	C09
Other oropharynx	99	0	0	0	0	0	0	0	0	0	4	15	18	7	10	14	10	20	0.2	C10
Nasopharynx	3359	0	0	34	47	52	52	67	111	225	371	479	592	462	384	259	152	124	6.8	C11
Hypopharynx	132	0	0	0	0	0	0	1	1	4	5	3	11	16	28	21	18	23	0.3	C12-C13
Pharynx unspecified	40	0	0	0	0	0	1	2	2	0	2	3	3	7	6	6	7	5	0.1	C14
Oesophagus	788	0	0	0	0	0	1	4	12	8	25	50	76	104	155	116	115	122	1.6	C15
Stomach	1818	0	0	0	2	2	7	19	21	36	70	128	170	194	271	290	230	379	3.7	C16
Small intestine	174	0	0	0	0	0	1	4	6	2	10	22	15	28	26	19	25	16	0.4	C17
Colon	4328	0	1	1	1	16	16	40	62	114	166	261	421	609	707	666	540	723	8.7	C18
Rectum	4206	0	1	0	1	18	18	36	52	105	149	275	471	609	687	685	524	582	8.5	C19-C20
Anus	167	0	0	0	0	0	0	3	6	1	8	16	17	20	22	22	23	26	0.3	C21
Liver	2949	0	5	3	2	10	17	17	30	54	112	236	384	543	494	407	312	305	5.9	C22
Gallbladder etc.	491	0	0	0	0	0	1	4	5	11	17	36	50	70	73	79	62	85	1	C23-C24
Pancreas	1167	0	1	0	1	1	1	4	13	14	42	94	118	165	208	207	143	155	2.3	C25
Nose, sinuses etc.	276	0	3	0	1	1	4	7	8	12	19	30	32	50	29	26	27	27	0.6	C30-C31
Larynx	780	0	0	0	0	0	0	1	2	5	18	31	77	123	138	146	98	141	1.6	C32
Trachea, bronchus and lung	7686	0	0	4	3	20	31	68	122	225	225	458	776	1060	1300	1098	1221	155	15.5	C33-C34
Other thoracic organs	246	0	5	0	8	21	14	18	12	12	13	8	23	33	28	21	13	17	0.5	C37-C38
Bone	523	0	4	21	65	93	48	34	17	15	24	20	42	30	33	26	21	30	1.1	C40-C41
Melanoma of skin	184	0	0	1	1	1	2	1	5	7	12	13	14	20	23	23	31	31	0.4	C43
Other skin	1797	0	2	3	2	4	14	17	26	31	37	90	132	171	222	286	297	463	3.6	C44
Mesothelioma	35	0	0	0	0	0	1	1	1	0	3	4	4	2	3	5	5	6	0.1	C45
Kaposi sarcoma	37	0	0	0	1	1	1	8	7	2	3	0	4	1	1	2	4	4	0.1	C46
Connective and soft tissue	597	0	28	13	17	14	26	24	36	30	42	46	62	60	65	54	22	58	1.2	C47-C49
Breast	291	0	0	0	0	0	2	2	5	16	17	29	41	37	43	42	24	33	0.6	C50
Penis	116	0	0	0	0	0	0	1	3	4	7	11	19	19	15	9	11	17	0.2	C60
Prostate	4189	0	0	0	2	0	0	2	1	1	7	28	96	268	618	977	1075	1113	8.4	C61
Testis	636	0	42	5	9	79	108	89	111	77	34	22	12	13	7	10	10	8	1.3	C62
Other male genital organs	45	0	2	0	0	1	3	2	0	1	3	3	3	0	3	10	7	7	0.1	C63
Kidney	1276	0	47	7	1	2	3	11	25	37	64	103	139	179	224	196	120	118	2.6	C64
Renal pelvis	24	0	0	0	0	0	0	0	0	0	0	0	2	4	7	4	3	4	0	C65
Ureter	44	0	0	0	0	0	0	0	0	1	0	3	2	4	10	6	7	10	0.1	C66
Bladder	1715	0	1	2	1	1	2	7	15	28	35	80	120	196	270	257	289	411	3.5	C67
Other urinary organs	17	0	0	0	0	0	1	0	1	0	0	0	0	0	1	7	2	4	0	C68
Eye	89	0	55	5	1	1	2	1	1	1	3	1	1	4	4	2	4	3	0.2	C69
Brain, nervous system	1117	0	105	84	66	51	49	53	50	61	73	75	102	104	94	71	44	35	2.2	C70-C72
Thyroid	749	0	1	1	4	7	19	41	43	36	58	74	75	108	94	84	54	50	1.5	C73
Adrenal gland	67	0	20	2	2	1	0	4	3	6	6	1	5	6	5	4	3	3	0.1	C74
Other endocrine	98	0	3	2	16	14	2	8	8	4	6	2	3	2	8	5	3	4	0.2	C75
Hodgkin disease	586	0	4	8	27	70	98	87	57	25	23	31	38	36	29	13	20	20	1.2	C81
Non-Hodgkin lymphoma	2826	0	49	71	75	87	110	125	118	128	139	221	274	336	333	300	229	231	5.7	C82-85
Immunoproliferative diseases	79	0	0	0	0	0	2	2	2	2	6	8	7	17	10	9	7	7	0.2	C86
Multiple myeloma	429	0	1	0	0	2	3	4	4	12	19	33	49	73	87	65	42	35	0.9	C88
Lymphoid leukaemia	771	0	203	127	87	60	29	25	33	27	19	24	18	27	37	23	18	14	1.6	C89
Myeloid leukaemia	1279	0	75	44	48	76	82	89	74	74	74	85	106	122	100	91	76	63	2.6	C92-C94
Leukaemia unspecified	364	0	61	35	40	28	16	20	8	14	12	12	12	12	21	23	17	33	0.7	C95
Myeloproliferative disorders	49	0	1	0	1	1	1	1	3	2	3	0	3	11	6	7	3	6	0.1	MPD
Myelodysplastic syndromes	109	0	0	0	1	1	0	3	1	1	3	4	7	7	19	21	17	24	0.2	MDS
Other and unspecified	1237	0	19	6	4	9	15	23	29	37	62	91	145	169	154	176	141	157	2.5	OKU
All sites	51505	0	770	444	527	698	809	969	1145	1454	2135	3387	4982	6354	7307	7255	6132	7137	103.6	ALL

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Appendix 15: Cancer incidence by site and age group, all residents, males, Malaysia 2012-2016

SITE	ALL AGES	AGE UNK	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75+	CRUDE RATE (%)	CUM 0-64	CUM 0-74	ASR	ICD (10th)	
Lip	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5	0.5	0.3	0.04	0	0.01	0	C00	
Tongue	560	0	0	0	0	0.1	0.3	0.4	0.4	0.6	1.1	1.4	2.2	2.7	3.2	4.3	4	4.7	0.82	0.06	0.01	0.9	C01-02	
Mouth	400	0	0	0	0	0.1	0.1	0.1	0.1	0.3	0.4	0.7	1.2	2.6	2.7	3.1	4.6	4.9	0.59	0.04	0.08	0.7	C03-06	
Salivary glands	293	0	0	0	0.1	0.3	0.2	0.5	0.9	1.1	1.2	1.9	1.8	2.6	1.9	1.8	2.6	1.6	0.43	0.03	0.05	0.5	C07-08	
Tonsil	144	0	0	0	0	0	0	0	0.2	0.2	0.2	0.2	0.7	1	0.9	1.2	1.2	1.6	0.21	0.03	0.03	0.2	C09	
Other oropharynx	99	0	0	0	0	0	0	0	0.1	0.4	0.5	0.9	1	1.7	1.7	1.7	1.7	1.7	0.42	0.01	0.02	0.2	C10	
Nasopharynx	3359	0	0	0.5	0.7	0.8	1.1	2.2	5.1	9.1	12.2	16.7	16.3	17.5	17.5	15	10.7	4.92	6.8	0.41	0.57	5.2	C11	
Hypopharynx	132	0	0	0	0	0	0	0	0.1	0.1	0.1	0.3	0.6	1.3	1.4	1.8	2	0.19	0.3	0.01	0.03	0.2	C12-13	
Pharynx unspecified	788	0	0	0	0	0	0	0	0	0	0	0.1	0.1	0.2	0.1	0.4	0.7	0.4	0.06	0	0.01	0.1	C14	
Oesophagus	400	0	0	0	0	0.1	0.2	0.2	0.6	1.3	2.1	3.7	7.1	7.8	11.3	10.5	1.15	1.6	1.6	0.08	0.17	1.4	C15	
Stomach	1818	0	0	0	0	0.1	0.3	0.4	0.8	1.7	3.3	4.8	6.8	12.4	19.5	22.6	32.6	37.7	2.66	3.7	0.36	3.1	C16	
Small intestine	174	0	0	0	0	0	0.1	0.1	0	0.2	0.6	0.4	1	1.2	1.3	2.5	1.4	0.25	0.4	0.02	0.04	0.3	C17	
Colon	4328	0	0	0	0	0.2	0.7	1.2	2.6	4.1	6.6	11.9	21.5	32.2	44.9	53.2	62.2	63.4	8.7	0.41	0.9	7.3	C18	
Rectum	4206	0	0	0	0	0.3	0.6	1	2.4	3.6	7	13.3	21.5	31.3	48.2	51.6	50.9	61.6	8.5	0.41	0.89	7.1	C19-20	
Anus	167	0	0	0	0	0	0	0	0.1	0.2	0.4	0.5	0.7	1.1	1.5	2.3	2.2	2.2	0.24	0.02	0.03	0.3	C21	
Liver	2949	0	0.6	0.1	0	0.2	0.3	0.6	1.2	2.7	6	10.9	19.1	22.5	27.4	30.7	26.2	4.32	5.9	0.32	0.61	4.9	C22	
Gallbladder etc.	491	0	0	0	0	0	0	0.1	0.3	0.4	0.9	1.4	2.5	3.3	5.3	6.1	7.3	0.72	1	0.04	0.1	0.8	C23-24	
Pancreas	1167	0	0	0	0	0	0	0.1	0.3	0.3	1	2.4	3.3	5.8	9.5	13.9	14.1	13.3	1.71	0.11	0.25	2	C25	
Nose, sinuses etc.	276	0	0	0	0	0	0.1	0.1	0.2	0.3	0.5	0.8	0.9	1.8	1.3	1.8	2.7	2.3	0.4	0.03	0.05	0.4	C30-31	
Larynx	780	0	0	0	0	0	0	0	0.1	0.4	0.8	2.2	4.3	6.3	9.8	9.7	12.1	1.14	1.6	0.07	0.17	1.3	C32	
Trachea, bronchus and lung	7686	0	0	0.1	0.3	0.5	1.3	2.8	5.5	11.6	21.2	37.4	59.3	87.6	108.1	105	11.25	15.5	11.25	0.7	1.68	13.2	C33-34	
Other thoracic organs	246	0	0.1	0.1	0.3	0.2	0.3	0.2	0.3	0.3	0.3	0.4	0.9	1.4	1.3	1.4	1.3	1.5	0.36	0.5	0.03	0.4	C37-38	
Bone	523	0	0.1	0.3	1	1.4	0.7	0.6	0.3	0.3	0.6	0.5	1.2	1.1	1.5	1.8	2.1	2.6	0.77	1.1	0.05	0.07	C40-41	
Melanoma of skin	184	0	0	0	0	0	0	0	0.1	0.2	0.3	0.3	0.4	0.7	1	1.5	3.1	2.7	0.27	0.4	0.02	0.04	C43	
Other skin	1797	0	0	0	0.1	0.2	0.3	0.5	0.7	0.9	2.3	3.7	6	10.1	19.3	29.2	38.8	38.8	2.63	3.6	0.37	3.1	C44	
Mesothelioma	35	0	0	0	0	0	0	0	0	0	0.1	0.1	0.1	0.1	0.1	0.3	0.5	0.5	0.05	0	0	0.1	C45	
Kaposi sarcoma	37	0	0	0	0	0	0	0	0	0	0.1	0.1	0.1	0	0	0	0.2	0.3	0.05	0	0	0.1	C46	
Connective and soft tissue	597	0	0.4	0.2	0.3	0.2	0.4	0.4	0.7	0.7	1	1.2	1.8	2.1	3	3.6	2.2	5	0.87	0.06	0.09	0.9	C47,C49	
Breast	291	0	0	0	0	0	0	0	0.1	0.4	0.7	1.2	1.3	2	2.8	2.4	2.8	2.4	0.43	0.03	0.06	0.5	C50	
Penis	116	0	0	0	0	0	0	0	0.1	0.1	0.2	0.3	0.5	0.7	0.7	0.6	1.1	1.5	0.17	0.02	0.02	0.2	C60	
Prostate	4189	0	0	0	0	0	0	0	0.2	0.7	2.7	9.4	28.2	65.8	105.9	95.7	61.3	8.4	6.13	0.21	1.07	7.7	C61	
Testis	636	0	0.7	0.1	1.2	1.7	1.5	2.2	1.8	0.8	0.6	0.3	0.5	0.3	0.5	0.7	1	0.7	0.93	0.06	0.07	0.9	C62	
Other male genital organs	45	0	0	0	0	0	0	0	0	0	0.1	0.1	0.1	0.1	0.1	0.7	0.7	0.6	0.07	0	0.01	0.1	C63	
Kidney	1276	0	0.7	0.1	0	0	0	0	0.2	0.5	0.8	1.6	2.6	3.9	6.3	10.2	13.2	11.8	1.87	0.14	0.26	2.1	C64	
Renal pelvis	24	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	0.3	0.3	0.3	0.04	0	0.01	0	C65	
Ureter	44	0	0	0	0	0	0	0	0	0	0	0.1	0.1	0.1	0.5	0.4	0.7	0.9	0.06	0.1	0.01	0.1	C66	
Bladder	1715	0	0	0	0	0	0	0	0.1	0.3	0.6	0.9	2	3.4	6.9	12.3	17.3	28.5	2.51	0.13	0.36	3	C67	
Other urinary organs	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0.2	0.3	0.02	0	0	0	C68	
Eye	89	0	0.9	0.1	0	0	0	0	0	0	0.1	0	0	0	0.2	0.1	0.4	0.3	0.13	0.01	0.01	0.2	C69	
Brain, nervous system	1117	0	1.7	1.3	1	0.8	0.8	0.9	1	1.4	1.8	1.9	2.9	3.7	4.3	4.8	4.3	3	1.64	0.12	0.16	1.7	C70-72	
Thyroid	749	0	0	0	0.1	0.1	0.3	0.7	0.8	0.8	1.4	1.9	2.1	3.8	4.3	5.7	5.3	4.3	1.1	1.5	0.08	0.14	1.2	C73
Adrenal gland	67	0	0.3	0	0	0	0	0.1	0.1	0.1	0	0	0	0.2	0.2	0.3	0.3	0.3	0.1	0.01	0.01	0.1	C74	
Other endocrine	96	0	0	0	0.2	0.2	0	0.1	0.2	0.1	0.1	0.1	0.3	0.1	0.4	0.3	0.3	0.3	0.14	0.01	0.01	0.1	C75	
Hodgkin disease	586	0	0.1	0.1	0.4	1	1.5	1.5	1.1	0.6	0.6	0.8	1.1	1.3	1.3	0.9	2	1.7	0.86	0.06	0.07	0.8	C81	
Non-Hodgkin lymphoma	2826	0	0.8	1.1	1.3	1.7	2.1	2.3	2.9	3.4	5.6	7.7	11.8	15.2	22.6	22.6	19.9	4.14	5.7	0.29	0.5	4.5	C82-85,C96	
Immunoproliferative diseases	79	0	0	0	0	0	0	0	0	0	0.1	0.2	0.2	0.6	0.5	0.6	0.7	0.6	0.12	0.01	0.02	0.1	C88	
Multiple myeloma	429	0	0	0	0	0	0	0	0	0	0.1	0.2	0.2	0.6	0.5	0.6	0.7	0.6	0.02	0.01	0.02	0.1	C89	
Lymphoid leukaemia	771	0	3.2	2	1.3	0.9	0.5	0.4	0.6	0.6	0.5	0.6	0.5	1	1.7	1.5	1.8	1.2	0.63	0.05	0.09	0.7	C91	
Myeloid leukaemia	1279	0	1.2	0.7	0.7	1.1	1.3	1.5	1.7	1.8	2.2	3	4.3	4.6	6.1	7.5	5.4	2.8	1.87	0.13	0.2	2	C92-94	
Leukaemia unspecified	364	0	1	0.5	0.6	0.4	0.2	0.3	0.2	0.3	0.3	0.3	0.3	0.4	1	1.5	1.7	2.8	0.53	0.03	0.05	0.6	C95	
Myeloproliferative disorders	49	0	0	0	0	0	0	0	0	0	0.1	0.1	0.1	0.4	0.3	0.5	0.3	0.5	0.07	0.01	0.01	0.1	MPS	
Myelodysplastic syndromes	109	0	0	0	0	0	0	0	0	0	0.1	0.1	0.1	0.2	0.2	0.9	1.4	1.7	0.16	0.01	0.02	0.2	MDS	
Other and unspecified	1237	0	0.3	0.1	0.1	0.2	0.4	0.6	0.8	1.5	2.3	4.1	6	11.9	13.9	13.5	11.9	13.5	1.81	0.12	0.25	2.1	OKU	
All sites	51505	0	12.3	6.9	7.8	10.4	12.6	16.2	22.5	33.1	52.1	86.1	140.8	223.9	333.3	485.9	603.8	613.7	75.4	4.79	10.25	86.1	ALL	

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Appendix 16: Number of new cancer cases by site and age group, all residents, females, Malaysia, 2012-2016

SITE	ALL AGES	AGE UNK	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	(%)	ICD (10th)
Lip	52	0	1	0	1	0	1	0	0	2	1	3	3	4	8	7	6	15	0.1	C00
Tongue	472	0	0	0	0	2	6	7	22	35	32	43	51	63	51	51	45	64	0.8	C01-02
Mouth	464	0	0	0	1	1	2	2	9	9	11	24	39	60	73	71	54	108	0.7	C03-06
Salivary glands	257	0	0	0	5	8	11	10	11	24	20	24	30	21	26	22	16	29	0.4	C07-08
Tonsil	62	0	0	0	0	0	2	2	1	3	3	5	6	9	6	6	6	11	0.1	C09
Other oropharynx	30	0	0	0	0	0	0	0	0	2	1	2	7	3	2	5	2	6	0	C10
Nasopharynx	1238	0	1	1	12	16	30	32	59	95	133	178	184	163	111	101	59	63	2	C11
Hypopharynx	73	0	0	0	0	0	0	2	1	3	5	7	9	7	13	7	9	10	0.1	C12-13
Pharynx unspecified	17	0	0	0	0	0	0	0	0	0	2	0	2	2	3	1	0	7	0	C14
Oesophagus	337	0	0	0	0	0	2	4	8	5	11	18	29	46	53	44	35	82	0.5	C15
Stomach	1188	0	1	0	1	6	4	12	23	44	53	74	102	131	162	148	151	276	1.9	C16
Small intestine	128	0	0	0	1	1	1	2	4	3	8	9	6	26	14	15	23	16	0.2	C17
Colon	3788	0	0	1	2	7	19	38	67	125	181	240	411	482	551	491	447	696	6	C18
Rectum	2928	0	0	1	1	3	3	32	45	83	136	228	328	454	467	365	315	471	4.7	C19-20
Anus	128	0	0	0	1	0	0	0	2	4	9	10	12	13	16	14	21	26	0.2	C21
Liver	1084	0	21	6	5	6	7	10	13	28	38	58	105	139	169	163	141	175	1.7	C22
Gallbladder etc.	553	0	0	0	0	0	2	4	3	9	16	30	53	76	79	82	84	115	0.9	C23-24
Pancreas	882	0	0	1	0	1	5	11	6	11	25	49	76	108	167	157	118	147	1.4	C25
Nose, sinuses etc.	152	0	4	0	0	1	6	4	5	4	7	16	14	21	19	11	18	22	0.2	C30-31
Larynx	107	0	0	0	0	0	1	0	4	1	3	7	12	11	22	12	15	19	0.2	C32
Trachea, bronchus and lung	3570	0	2	1	2	3	7	31	43	81	150	224	380	502	541	525	457	621	5.7	C33-34
Other thoracic organs	151	0	1	1	4	3	4	3	2	8	14	12	13	14	23	19	18	12	0.2	C37-38
Bone	387	0	14	25	44	67	31	14	14	26	15	21	33	23	22	13	9	16	0.6	C40-41
Melanoma of skin	163	0	2	1	2	2	3	3	8	9	9	12	21	13	18	15	16	29	0.3	C43
Other skin	1395	0	2	4	4	5	9	12	15	25	41	49	83	130	149	180	229	462	2.2	C44
Mesothelioma	15	0	0	0	0	0	0	1	0	0	0	2	5	3	2	2	0	0	0	C45
Kaposi sarcoma	3	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	0	C46
Connective and soft tissue	469	0	32	11	12	17	23	23	16	25	33	44	49	41	41	41	30	31	0.8	C47-C49
Breast	21634	0	0	1	3	2	64	275	777	1486	2383	3393	3554	3269	2676	1769	985	997	34.7	C50
Vulva	127	0	0	0	1	0	1	1	3	3	8	5	8	14	19	16	16	32	0.2	C51
Vagina	112	0	1	1	0	0	1	0	2	4	3	8	9	19	18	14	12	20	0.2	C52
Cervix uteri	3981	0	0	0	1	1	10	83	151	278	439	570	652	598	443	288	247	261	6.4	C53
Corpus uteri	2898	0	0	0	0	1	7	41	100	175	228	324	432	576	482	264	150	118	4.6	C54
Uterus unspecified	912	0	0	0	0	0	0	16	30	53	79	110	137	166	131	90	46	48	1.5	C55
Ovary	3575	0	15	19	41	89	103	123	163	187	317	487	553	388	279	157	157	159	5.7	C56
Other female genital organs	116	0	0	0	2	1	3	0	8	9	7	12	15	17	17	13	6	6	0.2	C57
Placenta	78	0	1	0	3	14	14	18	13	14	8	5	2	0	0	0	0	0	0.1	C58
Kidney	595	0	32	8	3	2	5	10	9	22	39	50	66	76	95	78	57	43	1	C64
Ureter	7	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	2	2	0	C65
Bladder	407	0	2	0	0	0	2	3	2	7	16	15	33	35	56	62	69	105	0.7	C67
Other urinary organs	5	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	C68
Eye	95	0	53	7	0	1	0	3	3	3	2	1	3	5	2	2	5	5	0.2	C69
Brain, nervous system	980	0	84	67	49	28	39	42	46	49	67	68	88	106	94	60	38	55	1.6	C70-72
Thyroid	2137	0	0	2	16	77	138	169	189	166	191	241	211	201	200	133	100	103	3.4	C73
Adrenal gland	53	0	12	1	0	1	1	1	3	4	7	7	3	4	2	4	2	1	0.1	C74
Other endocrine	49	0	2	3	15	49	82	83	40	17	17	17	14	20	14	14	12	8	0.7	C75
Hodgkin disease	409	0	2	3	15	49	82	83	40	17	17	17	14	20	14	14	12	8	0.7	C81
Non-Hodgkin lymphoma	2009	0	24	26	28	78	97	104	91	79	124	173	210	238	226	232	127	152	3.2	C82-85
Immunoproliferative diseases	45	0	1	0	0	0	0	1	2	1	4	3	9	5	7	1	7	4	0.1	C88
Multiple myeloma	347	0	0	0	0	0	0	1	4	6	17	27	37	58	66	58	31	41	0.6	C89
Lymphoid leukaemia	542	0	139	73	50	28	28	23	18	19	18	19	28	23	29	18	19	10	0.9	C91
Myeloid leukaemia	1080	0	61	36	40	67	42	61	72	66	76	88	97	96	96	78	38	66	1.7	C92-94
Leukaemia unspecified	237	0	45	20	15	8	9	6	12	16	9	14	10	10	13	12	17	21	0.4	C95
Myeloproliferative disorders	48	0	0	1	1	0	0	1	1	2	3	2	4	4	6	6	5	7	0.1	MPD
Myelodysplastic syndromes	94	0	0	2	0	2	2	2	4	2	4	6	9	11	9	11	13	18	0.2	IMDS
Other and unspecified	1078	0	20	5	2	14	12	17	34	51	63	63	119	8	8	129	125	155	1.7	O&U
All sites	63733	0	578	319	368	599	851	1345	2162	3388	5089	7105	8374	8695	8056	6207	4620	5977	102.2	ALL

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Appendix 17: Cancer incidence by site and age group, all residents, females, Malaysia 2012-2016

SITE	ALL AGES	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	CRUDE RATE	(%)	CUM 0-64	CUM 0-74	ASR	ICD (10th)	
Lip	52	0	0	0	0	0	0	0	0	0	0.1	0.1	0.1	0.4	0.5	0.6	1.1	0.08	0.1	0	0.01	0.1	C00	
Tongue	472	0	0	0	0	0.1	0.1	0.4	0.8	0.8	1.1	1.5	2.3	2.4	3.4	4.2	4.6	0.71	0.8	0.05	0.09	0.8	C01-02	
Mouth	464	0	0	0	0	0.2	0.2	0.2	0.3	0.6	0.6	1.2	2.2	3.4	3.4	4.7	5.1	0.7	0.7	0.04	0.04	0.8	C03-06	
Salivary glands	257	0	0	0	0.1	0.2	0.2	0.2	0.6	0.5	0.6	0.9	0.8	1.2	1.5	1.5	2.1	0.39	0.4	0.03	0.04	0.4	C07-08	
Tonsil	62	0	0	0	0	0	0	0	0	0.1	0.1	0.2	0.3	0.4	0.4	0.6	0.8	0.09	0.1	0.01	0.01	0.1	C09	
Other oropharynx	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.05	0	0	0	0	C10	
Nasopharynx	1238	0	0	0	0.2	0.5	0.5	1.2	2.2	3.2	4.6	5.4	5.9	5.1	6.7	5.5	4.6	1.86	2	0.15	0.21	1.9	C11	
Hypopharynx	73	0	0	0	0	0	0	0	0	0.1	0.2	0.3	0.3	0.6	0.5	0.8	0.7	0.11	0.1	0.01	0.01	0.1	C12-13	
Pharynx unspecified	17	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	0.1	0	0.5	0.03	0	0	0	C14		
Oesophagus	337	0	0	0	0	0	0.1	0.2	0.1	0.3	0.5	0.9	1.7	2.5	2.9	3.3	5.9	0.51	0.5	0.03	0.06	0.5	C15	
Stomach	1188	0	0	0	0	0.1	0.2	0.5	1	1.3	1.9	3	4.8	7.5	9.9	14.2	20	1.79	1.9	0.1	0.22	1.9	C16	
Small intestine	128	0	0	0	0	0	0	0.1	0.1	0.2	0.2	0.2	0.9	0.6	1	2.2	1.2	0.19	0.2	0.01	0.03	0.2	C17	
Colon	3758	0	0	0	0.1	0.3	0.6	1.4	2.9	4.4	6.3	12.2	17.5	25.5	32.7	41.9	50.4	5.65	6	0.36	0.73	6.1	C18	
Rectum	2928	0	0	0	0	0.5	0.9	2	3.3	5.9	9.7	16.5	21.6	24.3	29.5	34.1	4.4	4.4	4.7	0.3	0.57	4.8	C19-20	
Anus	128	0	0	0	0	0	0	0	0.1	0.2	0.3	0.4	0.5	0.7	0.9	2	1.9	0.19	0.2	0.01	0.03	0.2	C21	
Liver	1084	0	0.4	0.1	0.1	0.1	0.2	0.3	0.7	0.9	1.5	3.1	5	7.8	10.9	13.2	12.7	1.63	1.7	0.1	0.22	1.8	C22	
Gallbladder etc.	553	0	0	0	0	0	0.1	0.1	0.2	0.4	0.8	1.6	2.8	3.7	5.5	7.9	8.3	0.83	0.9	0.05	0.11	0.9	C23-24	
Pancreas	882	0	0	0	0	0.1	0.2	0.1	0.3	0.6	1.3	2.2	3.9	7.7	10.5	11.1	10.6	1.33	1.4	0.08	0.19	1.5	C25	
Nose, sinuses etc.	152	0	0	0	0	0	0	0.1	0.1	0.1	0.2	0.4	0.4	0.9	0.7	1.7	1.6	0.23	0.2	0.02	0.03	0.2	C30-31	
Larynx	107	0	0	0	0	0	0	0	0	0.1	0.2	0.4	0.4	1	0.8	1.4	1.4	0.16	0.2	0.01	0.02	0.2	C32	
Trachea, bronchus and lung	3570	0	0	0	0	0	0	0.5	0.9	1.9	3.6	5.8	11.2	18.2	25.1	35	42.9	5.37	5.7	0.34	0.73	5.9	C33-34	
Other thoracic organs	151	0	0	0	0	0.1	0.1	0.1	0.2	0.3	0.3	0.4	0.5	1.1	1.3	1.7	0.9	0.23	0.2	0.02	0.03	0.2	C37-38	
Bone	387	0	0.2	0.4	0.7	1	0.5	0.2	0.3	0.6	0.4	0.5	1	0.8	1	0.9	1.2	0.58	0.6	0.04	0.05	0.6	C40-41	
Melanoma of skin	163	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.5	2.1	0.25	0.3	0.02	0.03	0.3	C43	
Other skin	1395	0	0	0	0	0.1	0.1	0.2	0.3	0.6	1	1.3	2.5	4.7	6.9	12	21.5	33.4	2.2	0.09	0.26	2.3	C44	
Mesothelioma	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.02	0	0	0	0	C45	
Kaposi sarcoma	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C46	
Connective and soft tissue	469	0	0.5	0.2	0.2	0.3	0.4	0.4	0.3	0.6	0.8	1.1	1.5	1.9	2.7	2.8	2.2	0.71	0.8	0.05	0.08	0.7	C47-C49	
Breast	21634	0	0	0	0	1	4.6	15.8	35	57.6	88.5	112	182	251	35	42.9	92.4	32.53	34.7	2.75	3.8	34.1	C50	
Vulva	127	0	0	0	0	0	0	0	0	0.1	0.2	0.5	0.9	1.1	1.6	2.3	2.3	0.19	0.2	0.01	0.02	0.2	C51	
Vagina	112	0	0	0	0	0	0	0	0	0.1	0.2	0.3	0.7	0.8	0.9	1.1	1.4	0.17	0.2	0.01	0.02	0.2	C52	
Cervix uteri	3981	0	0	0	0	0.2	1.4	3.1	6.5	10.6	14.9	19.3	20.3	20.5	19.2	23.2	18.9	5.99	6.4	0.48	0.7	6.2	C53	
Corpus uteri	2898	0	0	0	0	0.1	0.7	2	4.1	5.5	8.5	12.8	20.9	22.3	17.6	14.1	8.5	4.36	4.6	0.38	0.54	4.6	C54	
Uterus unspecified	912	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6	1.37	1.5	0.12	0.17	1.4	C55	
Ovary	3575	0	0.3	0.3	0.6	1.4	2.1	3.3	4.4	7.7	12.7	16.4	18	18.6	14.7	11.5	5.38	5.7	0.43	0.6	5.6	C56		
Other female genital organs	116	0	0	0	0	0	0	0.2	0.2	0.2	0.3	0.4	0.6	0.8	0.9	0.6	0	0.12	0.1	0.01	0.02	0.2	C57	
Placenta	78	0	0	0	0	0	0	0.3	0.3	0.3	0.2	0.1	0.1	0	0	0	0	0	0.12	0.1	0.01	0.1	C58	
Kidney	595	0	0.5	0.1	0	0	0	0.2	0.2	0.5	0.9	1.3	2	2.8	4.4	5.2	5.3	0.89	1	0.07	0.12	1	C64	
Renal pelvis	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C65	
Ureter	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C66	
Bladder	407	0	0	0	0	0	0	0	0	0.2	0.4	0.4	1	1.3	2.6	4.1	6.5	0.61	0.7	0.03	0.08	0.7	C67	
Other urinary organs	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C68	
Eye	95	0	0	0.1	0	0	0	0	0	0	0	0	0.1	0.2	0.1	0.5	0.4	0.14	0.2	0.01	0.01	0.2	C69	
Brain, nervous system	980	0	1.4	1.1	0.8	0.4	0.6	0.7	0.9	1.2	1.6	1.8	2.6	3.9	4.4	4	3.6	1.47	1.6	0.11	0.14	1.6	C70-72	
Thyroid	2137	0	0	0.3	1.2	2.2	2.9	3.8	3.9	4.6	6.3	6.2	7.3	9.3	8.9	9.4	7.5	3.21	3.4	0.24	0.33	3.2	C73	
Adrenal gland	53	0	0.2	0	0	0	0	0	0	0	0	0	0.1	0.1	0.1	0.3	0.2	0.1	0.08	0.1	0.01	0.01	0.1	C74
Other endocrine	49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.07	0.1	0.01	0.01	0.1	C75	
Hodgkin disease	409	0	0	0	0.2	0.8	1.3	1.4	0.8	0.4	0.4	0.7	0.6	0.9	1.1	0.6	0.6	0.62	0.7	0.04	0.05	0.6	C81	
Non-Hodgkin lymphoma	2009	0	0.4	0.4	1.2	1.5	1.8	1.9	1.9	3	4.5	6.2	8.6	10.5	15.5	11.9	11	3.02	3.2	0.21	0.35	3.2	C82-85, C86	
Immunoproliferative diseases	45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C86	
Multiple myeloma	347	0	0	0	0	0	0	0	0.1	0.1	0.1	0.3	0.2	0.3	0.1	0.7	0.3	0.07	0.1	0.01	0.01	0.1	C89	
Lymphoid leukaemia	542	0	2.4	1.2	0.8	0.4	0.4	0.4	0.4	0.4	0.5	0.8	0.8	1.3	1.2	1.8	0.7	0.82	0.9	0.05	0.07	0.6	C90	
Myeloid leukaemia	1080	0	1	0.6	0.6	1	0.7	1	1.5	1.6	1.8	2.3	2.9	3.5	4.4	5.2	3.6	1.62	1.7	0.11	0.16	1.7	C92-94	
Leukaemia unspecified	237	0	0.8	0.3	0.2	0.1	0.1	0.2	0.4	0.2	0.4	0.3	0.4	0.6	0.8	1.5	0.5	0.36	0.4	0.02	0.03	0.4	C95	
Myeloproliferative disorders	48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	MPD	
Myelodysplastic syndromes	94	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.14	0.2	0.01	0.02	0.2	MDS
Other and unspecified	1078	0	0.3	0.1	0	0	0.2	0.3	0.7	1.2	1.5	1.6	3.5	4.2	7.1	8.6	11.7	1.62	1.7	0.11	0.21	1.8	O&U	
All sites	63733	0	9.8	5.2	5.8	9.3	13.5	22.7	44	79.8	123	185.3	247.9	315.8	413.8	433.2	432.5	95.83	102.2	7.18	11.41	101.6	ALL	

APPENDICES

Appendix 18: Number of new cancer cases by site and age group, Malay males, Malaysia, 2012-2016

SITE	ALL AGES	AGES													75+	ICD (10th)							
		UNK	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-			60-	65-	70-	(%)			
Lip	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	C00	
Tongue	200	0	0	0	0	0	0	0	2	6	10	14	14	0	1	32	20	19	2	19	0.9	C01-02	
Mouth	125	0	0	0	0	1	1	1	1	1	6	6	9	9	9	10	23	14	12	15	0.6	C03-06	
Salivary glands	142	0	0	0	1	7	3	4	3	4	9	9	4	11	17	18	16	17	6	8	0.7	C07-08	
Tonsil	39	0	0	0	0	0	0	0	0	1	2	1	2	2	6	10	10	5	3	3	0.2	C09	
Other oropharynx	31	0	0	0	0	0	0	0	0	0	0	0	0	1	5	4	4	4	2	9	0.1	C10	
Nasopharynx	862	0	0	0	13	17	21	27	17	84	25	59	59	84	109	157	114	100	35	35	4.1	C11	
Hypopharynx	29	0	0	0	0	0	0	0	0	0	1	1	1	0	2	1	8	6	5	5	0.1	C12-13	
Pharynx unspecified	10	0	0	0	0	0	1	1	1	0	0	0	0	0	0	3	2	1	1	1	0	C14	
Oesophagus	294	0	0	0	0	0	1	1	1	12	8	5	5	12	21	27	40	59	38	1.4	C15		
Stomach	454	0	1	0	0	0	1	4	10	13	10	10	13	21	43	54	70	74	60	38	2.1	C16	
Small intestine	60	0	0	0	0	0	0	0	0	1	6	6	1	1	6	5	10	8	9	4	0.3	C17	
Colon	1581	0	1	0	0	0	0	0	0	80	33	52	52	80	112	189	249	257	238	156	7.5	C18	
Rectum	1836	0	1	0	0	0	0	0	0	74	35	49	49	74	136	228	275	287	301	215	8.7	C19-20	
Anus	76	0	0	0	0	0	0	0	2	3	2	3	3	5	7	12	12	11	12	9	0.4	C21	
Liver	1263	0	20	2	1	2	2	5	6	16	16	31	31	63	128	178	236	218	151	94	6	C22	
Gallbladder etc.	223	0	0	0	0	0	0	0	0	11	4	3	3	11	15	28	33	34	24	35	1.1	C23-24	
Pancreas	424	0	1	0	0	0	0	0	3	7	3	7	3	17	43	44	65	71	73	41	56	2	C25
Nose, sinuses etc.	113	0	2	0	0	0	0	2	5	10	2	4	4	15	10	11	26	8	9	9	0.5	C30-31	
Larynx	238	0	0	0	0	0	0	0	0	6	2	1	1	6	9	20	42	46	49	21	42	1.1	C32
Trachea, bronchus and lung	3500	0	0	0	3	2	17	21	41	68	41	68	114	236	405	536	595	586	441	435	16.5	C33-34	
Other thoracic organs	319	0	2	0	6	16	9	13	5	10	5	10	7	7	10	14	14	11	5	3	0.6	C37-38	
Bone	319	0	4	14	43	67	29	8	7	10	8	9	9	10	7	17	18	12	12	16	1.5	C40-41	
Melanoma of skin	74	0	0	0	1	2	2	0	3	6	3	3	6	5	13	9	13	9	8	9	0.3	C43	
Other skin	623	0	1	3	1	3	6	6	9	16	16	17	16	16	69	65	71	102	88	115	2.9	C44	
Mesothelioma	15	0	0	0	0	0	0	0	1	0	1	0	0	1	2	3	1	0	2	2	0.1	C45	
Kaposi sarcoma	16	0	0	0	0	0	0	0	1	2	0	1	1	2	0	1	0	1	1	0	0.1	C46	
Connective and soft tissue	300	0	23	7	11	10	13	14	22	18	22	18	22	23	24	30	29	26	8	20	1.4	C47,C49	
Breast	135	0	0	0	0	0	2	1	4	9	11	17	19	15	15	15	15	15	21	8	13	0.6	C50
Kidney	527	0	32	6	1	1	1	5	8	13	24	41	60	79	93	90	93	90	39	34	2.5	C64	
Penis	21	0	0	0	0	0	0	0	0	0	0	0	0	3	0	7	4	2	2	2	0.1	C60	
Prostate	1577	0	0	0	0	0	0	0	2	0	0	1	4	14	45	102	102	251	369	402	7.4	C61	
Testis	404	0	26	3	4	60	84	68	74	38	13	12	6	6	6	6	1	1	2	6	1.9	C62	
Other male genital organs	19	0	2	0	0	0	2	2	0	0	0	0	1	1	1	1	0	0	3	3	0.1	C63	
Breast	135	0	0	0	0	0	2	1	4	9	11	17	19	15	15	15	15	21	8	13	0.6	C64	
Uterus	1577	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	1	1	0	0	C65
Renal pelvis	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	0	2	0	C66	
Ureter	15	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2	1	1	2	0.1	C66	
Bladder	886	0	1	1	1	1	1	3	9	12	18	45	71	108	151	108	151	146	131	188	4.2	C67	
Other urinary organs	6	0	0	0	0	0	0	1	1	0	0	0	1	0	0	0	0	4	0	0	0	C68	
Eye	50	0	32	4	1	1	1	1	0	0	0	0	0	0	0	2	2	2	1	1	0.2	C69	
Brain, nervous system	642	0	77	56	45	32	34	29	31	35	40	37	59	59	59	59	49	27	15	17	3	C70-72	
Thyroid	451	0	1	1	2	4	14	26	23	19	37	37	37	37	37	52	67	55	28	30	2.1	C73	
Adrenal gland	36	0	14	2	1	1	1	1	0	5	1	0	1	0	4	2	2	2	2	2	0	0.2	C74
Other endocrine	46	0	2	0	6	9	1	4	6	2	3	1	1	1	6	1	1	1	2	0	0.2	C75	
Hodgkin disease	336	0	4	6	14	44	66	55	39	14	11	16	15	15	15	15	14	14	6	6	1.6	C81	
Non-Hodgkin lymphoma	1530	0	30	52	39	61	65	81	77	78	69	69	127	156	190	190	176	133	107	89	7.2	C82-85,C86	
Immunoproliferative diseases	39	0	0	0	0	0	0	0	0	1	3	4	2	6	6	6	3	3	5	6	0.2	C86	
Multiple myeloma	216	0	1	0	0	1	2	2	0	8	10	8	10	8	14	15	15	15	28	18	16	1	C90
Lymphoid leukaemia	441	0	136	73	55	35	17	19	18	10	7	11	8	16	11	11	37	47	28	18	7	2.1	C91
Myeloid leukaemia	654	0	45	23	26	41	53	45	40	32	38	49	51	65	52	44	44	44	27	23	3.1	C92-94	
Leukaemia unspecified	257	0	49	28	29	19	15	15	4	10	9	9	7	9	9	9	11	17	17	10	16	1.2	C95
Myeloproliferative disorders	17	0	0	0	0	1	0	0	1	1	0	0	0	3	4	4	2	2	1	2	2	0.1	IMPDP
Myelodysplastic syndromes	518	0	0	0	0	0	0	0	0	0	3	3	3	3	3	3	3	10	6	6	6	0.2	MDS
Other and unspecified	21841	0	519	287	312	444	512	592	630	683	943	1486	2230	2790	2987	2936	2987	2987	2148	2342	102.9	O&U	
All sites	21841	0	519	287	312	444	512	592	630	683	943	1486	2230	2790	2987	2936	2987	2987	2148	2342	102.9	ALL	

APPENDICES

Appendix 19: Cancer incidence by site and age group, Malay males, Malaysia 2012-2016

SITE	ALL AGES	AGE UNK	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75+	CRUDE RATE	(%)	CUM 0-64	CUM 0-74	ASR	ICD (10th)	
Lip	6	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	0	0.4	0.4	0.02	0	0	0	0	C00	
Tongue	200	0	0	0	0	0.1	0.2	0.3	0.5	0.5	0.8	1.1	1.8	1.4	1.8	2.9	2	3.6	0.53	0.9	0.04	0.07	0.6	C01-02	
Mouth	125	0	0	0	0	0	0	0	0.2	0.4	0.4	0.4	0.6	1.1	2.1	2.1	2.6	2.9	0.33	0.6	0.03	0.05	0.4	C03-06	
Salivary glands	142	0	0	0	0.1	0.1	0.2	0.1	0.3	0.2	0.5	0.9	1	1.3	1.5	2.5	1.3	1.5	0.37	0.7	0.03	0.05	0.4	C07-08	
Tonsil	39	0	0	0	0	0	0	0	0.1	0	0.1	0.2	0.3	0.7	0.5	0.6	0.4	0.6	0.1	0.2	0.01	0.01	0.1	C09	
Other oropharynx	31	0	0	0	0	0	0	0	0	0	0	0.2	0.3	0.3	0.1	0.6	0.4	1.7	0.08	0.1	0	0.01	0.1	C10	
Nasopharynx	862	0	0	0	0.3	0.4	0.6	0.8	0.9	2.6	4	5.5	8.9	8.2	9.4	9.7	7.6	6.7	2.27	4.1	0.21	0.29	2.7	C11	
Hypopharynx	29	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	0.2	0.8	0.9	1.1	0.03	0.1	0	0.01	0.1	C12-13	
Pharynx unspecified	10	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.1	0.2	0.2	0.2	0.08	0	0	0	0	C14	
Oesophagus	294	0	0	0	0	0	0	0	0.3	0.2	0.6	1.1	1.5	2.9	5.5	6.9	7.6	7.3	0.77	1.4	0.06	0.13	1.1	C15	
Stomach	454	0	0	0	0	0.1	0.1	0.3	0.4	0.6	1	2.2	3.1	5	7	8.8	8.3	10.5	1.19	2.1	0.1	0.18	1.6	C16	
Small intestine	60	0	0	0	0	0	0	0	0.2	0	0	0.3	0.3	0.7	0.8	1.3	2	0.8	0.16	0.3	0.01	0.03	0.2	C17	
Colon	1581	0	0	0	0	0.2	0.8	1.2	2.2	3.8	5.6	10.7	17.8	24.1	35	34	33.8	4.16	4.75	7.5	0.33	0.68	5.5	C18	
Rectum	1836	0	0	0	0	0	0.1	0.8	1.2	2.1	3.5	6.8	13	19.7	27	44.3	46.8	39	4.83	8.7	0.37	0.83	6.5	C19-20	
Anus	76	0	0	0	0	0	0	0.1	0.1	0	0.1	0.3	0.4	0.9	1	1.8	2.6	1.7	0.2	0.4	0.01	0.04	0.3	C21	
Liver	1263	0	0.5	0.1	0	0.1	0.1	0.2	0.6	1.3	3	6.4	10.1	16.9	20.5	22.2	24.4	18	3.32	6	0.3	0.53	4.3	C22	
Gallbladder etc.	223	0	0	0	0	0	0	0	0.1	0.1	0.5	0.8	1.6	2.4	3.2	5	5.2	6.7	0.59	1.1	0.04	0.09	0.8	C23-24	
Pancreas	424	0	0	0	0	0	0	0.1	0.2	0.1	0.8	2.2	2.5	4.7	6.7	10.7	8.9	10.7	1.11	2	0.09	0.18	1.5	C25	
Nose, sinuses etc.	113	0	0.1	0	0	0	0.1	0.1	0.1	0.2	0.7	0.5	0.6	1.1	3	4.3	7.2	4.6	0.3	0.5	0.02	0.04	0.4	C30-31	
Larynx	238	0	0	0	0	0	0	0	0	0	0.3	0.5	1.1	1	3	4.3	7.2	4.6	0.63	1.1	0.05	0.11	0.9	C32	
Trachea, bronchus and lung	3500	0	0	0	0.1	0.5	0.6	0.6	1.5	2.9	5.4	11.8	23	38.4	55	87.6	96.1	83.1	9.2	16.5	0.7	1.61	12.5	C33-34	
Other thoracic organs	124	0	0.1	0	0.2	0.4	0.2	0.4	0.2	0.4	0.3	0.2	0.6	1	1.5	1.1	1.1	0.6	0.33	0.6	0.02	0.04	0.4	C37-38	
Bone	319	0	0.1	0.4	1.1	1.7	0.8	0.8	0.3	0.4	0.5	0.4	1.5	1.2	1.7	1.8	2.6	3.1	0.84	1.5	0.05	0.08	0.9	C40-41	
Melanoma of skin	74	0	0	0	0	0	0	0.1	0.1	0.1	0.3	0.3	0.3	0.3	0.9	0.8	1.2	2	1.7	0.19	0.03	0.01	0.2	C43	
Other skin	623	0	0	0.1	0	0.1	0.2	0.3	0.6	0.7	0.8	2.1	3.9	4.7	6.7	15	19.2	22	1.64	2.9	0.1	0.27	2.2	C44	
Mesothelioma	15	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	0.1	0	0.3	0.4	0.04	0.1	0	0.01	0	C45	
Kaposi sarcoma	16	0	0	0	0	0	0	0	0.1	0	0.1	0	0.1	0	0.1	0	0	0.2	0	0.04	0.1	0	0	C46	
Connective and soft tissue	300	0	0.6	0.2	0.3	0.3	0.3	0.4	0.8	0.8	1	1.2	1.4	2.1	2.7	3.8	1.7	3.8	0.79	1.4	0.06	0.09	0.9	C47-C49	
Breast	135	0	0	0	0	0	0.1	0	0.1	0.4	0.5	0.9	1.1	1.1	1.4	3.1	1.7	2.5	0.35	0.6	0.03	0.05	0.5	C50	
Penis	21	0	0	0	0	0	0	0	0	0	0.2	0	0	0.5	0.4	0.3	0.4	0.4	0.06	0.1	0.01	0.01	0.1	C60	
Prostate	1577	0	0.7	0.1	0.1	1.5	2.2	2	2.6	1.6	0.6	0.6	0.3	0.4	0.1	0.1	0.4	1.1	1.06	1.9	0.06	0.07	1	C61	
Testis	404	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	0	0.1	0.1	0	0	0.4	0.7	0.6	0.05	0.1	0	0.01	0.1	C62	
Other male genital organs	19	0	0.1	0	0	0	0.1	0	0.1	0.3	0.6	1.1	2.1	3.4	5.7	8.7	13.2	8.5	1.39	2.5	0.12	0.22	1.8	C63	
Kidney	527	0	0.8	0.2	0	0	0	0	0.1	0.3	0.6	1.1	2.1	3.4	5.7	8.7	13.2	8.5	1.39	2.5	0.12	0.22	1.8	C64	
Renal pelvis	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4	0.2	0.2	0.04	0	0	0	0	C65	
Ureter	15	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	0.1	0.4	0.4	0.04	0.1	0	0.01	0.1	C66	
Bladder	886	0	0	0	0	0	0	0.1	0.3	0.5	0.9	2.3	4	7.7	14.2	21.5	28.5	35.9	2.33	4.2	0.15	0.4	3.3	C67	
Other urinary organs	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	0	0	0.02	0	0	0	0	C68	
Eye	50	0	0.8	0.1	0	0	0	0	0	0	0.1	0	0	0	0.1	0.2	0.1	0.4	0.2	0.13	0.2	0.01	0.01	0.2	C69
Brain, nervous system	642	0	2	1.4	1.1	0.8	0.9	0.8	1.1	1.5	1.9	1.9	3.4	4.2	4.6	4	3.3	3.2	1.89	3	0.13	0.16	1.8	C70-72	
Thyroid	451	0	0	0	0.1	0.1	0.4	0.8	0.8	0.8	1.8	1.9	3	4.8	5.2	8.1	6.1	5.7	1.19	2.1	0.1	0.17	1.5	C73	
Adrenal gland	36	0	0.4	0.1	0	0	0	0	0	0.2	0	0	0.2	0.1	0.2	0.3	0.4	0	0.09	0.2	0.01	0.01	0.1	C74	
Other endocrine	46	0	0.1	0.2	0.4	0.2	0.2	0	0.1	0.2	0.1	0.1	0.3	0.1	0.1	0.3	0	0.4	0.12	0.2	0.01	0.01	0.1	C75	
Hodgkin disease	336	0	0.1	0.2	0.4	1.1	1.8	1.6	1.4	0.6	0.5	0.8	0.9	1.1	1.3	0.9	1.3	2.1	0.88	1.6	0.06	0.07	0.9	C81	
Non-Hodgkin lymphoma	1530	0	0.8	1.3	1	1.6	1.7	2.4	2.7	3.4	3.3	6.4	8.9	13.6	16.5	19.6	23.3	17	4.02	7.2	0.32	0.53	4.8	C82-85,C96	
Immunoproliferative diseases	39	0	0	0	0	0	0	0	0	0	0.1	0.2	0.1	0.4	0.6	0.4	1.1	1.1	0.1	0.2	0.01	0.02	0.1	C88	
Multiple myeloma	216	0	0	0	0	0	0.1	0.1	0	0	0.3	0.7	0.8	1.5	2.7	4.4	4.1	3.9	0.57	1	0.05	0.09	0.7	C90	
Lymphoid leukaemia	441	0	3.4	1.9	1.4	0.9	0.5	0.6	0.6	0.4	0.3	0.6	0.5	1.1	1	1.3	2	1.3	1.16	2.1	0.07	0.08	1.2	C91	
Myeloid leukaemia	654	0	1.1	0.6	0.7	1	1.4	1.3	1.4	1.4	1.8	2.5	2.9	4.7	4.9	6.5	5.9	4.4	1.72	3.1	0.13	0.19	1.9	C92-94	
Leukaemia unspecified	257	0	1.2	0.7	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.6	1	2.5	2.2	3.1	0.88	1.2	0.04	0.06	0.8	C95	
Myeloproliferative disorders	17	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3	0.2	0.1	0.4	0.04	0.1	0	0.01	0.1	MFD	
Myelodysplastic syndromes	33	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.1	0.3	1.1	0.09	0.2	0	0	0.1	MDS	
Other and unspecified	518	0	0.3	0.1	0.1	0.1	0.3	0.4	0.5	0.9	1.6	1.8	4	5.4	5.8	10.9	9.2	8.4	1.36	2.4	0.11	0.21	1.7	ORU	
All sites	21841	0	13.2	7.3	7.8	11.3	13.7	17.3	22.5	29.5	44.7	74.4	126.7	199.9	280.6	432.1	488	447.4	57.42	102.9	4.24	8.74	73.6	ALL	

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Appendix 20: Number of new cancer cases by site and age group, Malay females, Malaysia, 2012-2016

SITE	ALL AGES	AGE UNK	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	(%)	ICD (10th)
Lip	14	0	1	0	1	0	1	0	0	1	0	0	1	0	4	1	1	3	0	C00
Tongue	185	0	0	0	0	1	4	5	10	13	16	20	28	23	14	13	20	18	0.6	C01-02
Mouth	103	0	0	0	0	1	1	2	6	3	3	4	8	14	14	15	12	21	0.4	C03-06
Salivary glands	112	0	0	0	0	6	6	6	7	10	9	9	13	12	10	9	6	4	0.4	C07-08
Tonsil	26	0	0	0	0	1	1	1	1	1	1	2	0	3	3	4	3	4	0.1	C09
Other oropharynx	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C10
Nasopharynx	383	0	1	0	4	10	11	19	19	30	36	56	56	49	30	30	18	14	1.3	C11
Hypopharynx	19	0	0	0	0	0	0	0	0	0	0	0	0	1	3	3	4	2	0.1	C12-13
Pharynx unspecified	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	0	C14
Oesophagus	116	0	0	0	0	0	0	0	6	6	6	6	11	11	22	16	12	25	0.4	C15
Stomach	277	0	1	0	1	5	2	2	7	16	17	21	29	35	39	37	30	35	0.9	C16
Small intestine	61	0	0	0	0	1	1	2	4	2	6	4	4	11	6	7	8	5	0.2	C17
Colon	1460	0	0	0	1	5	15	30	38	66	98	119	171	220	221	175	133	168	5	C18
Rectum	1388	0	0	0	0	1	1	22	21	52	76	120	162	223	235	176	133	167	4.8	C19-20
Anus	64	0	0	0	0	0	0	0	0	2	6	7	7	9	5	7	10	11	0.2	C21
Liver	517	0	4	5	4	1	4	3	7	14	30	34	48	80	82	77	59	37	1.8	C22
Gallbladder etc.	245	0	0	0	0	0	0	4	2	5	9	14	22	37	37	40	37	37	0.8	C23-24
Pancreas	330	0	0	0	0	0	0	10	3	8	11	28	33	40	67	54	40	34	1.1	C25
Nose, sinuses etc.	74	0	0	0	0	1	4	2	4	3	4	8	8	14	6	3	9	4	0.3	C30-31
Larynx	32	0	0	0	0	0	0	0	0	0	1	3	4	2	7	4	3	4	0.1	C32
Trachea, bronchus and lung	1492	0	2	0	2	2	6	23	24	52	77	105	204	228	209	195	168	195	5.1	C33-34
Other thoracic organs	63	0	1	1	3	2	2	3	1	2	4	8	6	10	3	6	5	6	0.2	C37-38
Bone	254	0	12	17	24	40	23	12	9	18	10	13	26	14	18	5	6	7	0.9	C40-41
Melanoma of skin	75	0	2	1	2	2	1	1	4	5	5	5	5	6	4	7	5	13	0.3	C43
Other skin	504	0	1	0	3	2	7	7	7	15	26	29	38	64	64	58	68	115	1.7	C44
Mesothelioma	5	0	0	0	0	0	0	1	0	0	0	0	2	0	1	1	0	0	0	C45
Kaposi sarcoma	3	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	C46
Connective and soft tissue	237	0	18	9	6	12	11	12	10	14	19	25	30	20	23	13	5	10	0.8	C47-C49
Breast	10455	0	0	1	2	40	178	478	816	1290	1779	1847	1847	1561	1162	681	335	284	35.8	C50
Vulva	44	0	0	0	0	1	0	0	2	1	3	3	3	2	7	6	5	11	0.2	C51
Vagina	46	0	1	0	0	0	1	0	1	4	1	3	6	6	8	2	5	8	0.2	C52
Cervix uteri	1531	0	0	0	1	5	43	62	107	187	239	263	263	207	174	93	84	66	5.2	C53
Corpus uteri	1409	0	0	0	0	0	7	25	55	113	127	181	197	252	213	132	63	44	4.8	C54
Uterus unspecified	452	0	0	0	0	0	4	12	15	29	42	63	66	80	63	41	19	18	1.5	C55
Ovary	1984	0	7	10	30	54	69	78	106	110	179	262	307	276	207	153	63	73	6.8	C56
Other female genital organs	58	0	0	0	0	1	3	0	7	3	3	7	7	6	8	7	1	3	0.2	C57
Placenta	57	0	1	0	0	1	11	14	10	9	6	3	2	0	0	0	0	0	0.2	C58
Kidney	257	0	20	3	2	2	3	8	8	11	20	26	29	31	37	28	19	10	0.9	C64
Renal pelvis	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	C65
Ureter	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	C66
Bladder	187	0	1	0	0	0	1	2	2	3	9	9	19	19	25	33	26	38	0.6	C67
Other urinary organs	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C68
Eye	65	0	40	6	0	1	0	3	2	1	2	1	1	3	1	1	2	1	0.2	C69
Brain, nervous system	557	0	53	44	28	20	30	26	31	32	39	41	49	50	47	23	18	26	1.9	C70-72
Thyroid	1333	0	0	1	10	55	94	111	132	99	117	152	119	127	121	87	54	54	4.6	C73
Adrenal gland	32	0	7	0	0	1	1	1	2	1	6	3	3	3	0	3	0	1	0.1	C74
Other endocrine	30	0	1	1	1	0	7	1	2	3	2	3	4	0	2	0	1	2	0.1	C75
Hodgkin disease	255	0	0	2	8	32	56	60	25	15	11	7	7	12	8	5	5	2	0.9	C81
Non-Hodgkin lymphoma	1099	0	16	18	18	48	60	70	59	51	73	78	115	149	124	104	55	61	3.8	C82-85
Immunoproliferative diseases	22	0	1	0	0	0	0	1	2	0	3	2	2	2	5	0	1	3	0.1	C88
Multiple myeloma	174	0	0	0	0	0	0	1	2	4	7	13	19	32	38	33	13	12	0.6	C90
Lymphoid leukaemia	289	0	77	45	31	16	14	15	11	11	8	10	17	8	11	6	4	5	1	C91
Myeloid leukaemia	560	0	48	17	26	36	26	32	50	29	48	43	47	40	39	33	15	31	1.9	C92-94
Leukaemia unspecified	170	0	41	15	8	5	8	6	10	11	5	10	7	9	8	7	11	9	0.6	C95
Myeloproliferative disorders	26	0	0	1	0	0	0	1	0	1	1	1	3	7	3	2	3	2	0.1	MPD
Myelodysplastic syndromes	506	0	2	0	0	0	0	2	1	1	0	2	5	2	4	4	5	4	0.1	IMDS
Other and unspecified	29689	0	386	200	219	375	554	868	1289	1835	2690	3615	4127	4070	3514	2499	1655	1793	101.7	O&U
All sites																				

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Appendix 22: Number of new cancer cases by site and age group, Chinese males, Malaysia, 2012-2016

SITE	ALL AGES	AGE UNK	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75+	(%)	ICD (10th)
Lip	15	0	0	0	0	0	0	0	0	0	0	1	1	3	2	6	2	0	0.1	C00
Tongue	202	0	0	0	0	0	2	0	6	9	13	16	30	30	27	26	18	24	1	C01-02
Mouth	138	0	0	0	1	0	0	1	1	2	2	11	17	22	21	11	22	26	0.7	C03-06
Salivary glands	95	0	0	0	0	1	2	0	4	2	6	13	12	12	16	6	13	7	0.5	C07-08
Tonsil	66	0	0	0	0	0	0	0	1	0	4	1	11	12	10	10	6	11	0.3	C09
Other oropharynx	38	0	0	0	0	0	0	0	0	0	2	6	9	1	6	4	6	4	0.2	C10
Nasopharynx	1748	0	0	0	4	4	11	18	57	123	201	272	303	251	218	142	84	60	8.5	C11
Hypopharynx	56	0	0	0	0	0	0	0	0	3	3	2	2	7	10	9	8	12	0.3	C12-13
Pharynx unspecified	17	0	0	0	0	0	0	1	1	2	2	2	2	2	3	3	3	2	0.1	C14
Oesophagus	321	0	0	0	0	0	0	1	2	2	7	15	31	41	56	47	59	60	1.6	C15
Stomach	862	0	0	0	0	1	1	4	3	13	21	46	77	73	119	148	118	238	4.2	C16
Small intestine	82	0	0	0	0	0	1	4	0	1	4	12	8	11	12	7	13	11	0.4	C17
Colon	2208	0	0	0	0	0	4	8	17	40	96	110	167	274	357	361	335	479	10.8	C18
Rectum	1743	0	0	0	0	0	5	3	8	31	47	89	170	238	292	304	241	314	8.5	C19-20
Anus	57	0	0	0	0	0	0	0	3	0	2	5	6	4	12	7	6	12	0.3	C21
Liver	1284	0	9	2	1	0	2	3	10	16	29	82	162	231	212	201	161	163	6.3	C22
Gallbladder etc.	182	0	0	0	0	0	0	0	0	6	3	9	10	21	24	35	31	43	0.9	C23-24
Pancreas	576	0	0	0	0	1	0	0	1	9	17	33	51	78	111	109	87	77	2.8	C25
Nose, sinuses etc.	123	0	1	0	0	0	0	2	5	8	2	16	13	14	16	13	17	16	0.6	C30-31
Larynx	374	0	0	0	0	0	0	0	0	3	8	9	37	53	64	69	59	72	1.8	C32
Trachea, bronchus and lung	3258	0	0	0	1	1	2	5	19	33	74	148	260	375	538	569	556	679	15.9	C33-34
Other thoracic organs	79	0	2	0	1	2	4	3	6	1	4	4	7	11	13	7	5	9	0.4	C37-38
Bone	132	0	0	2	8	13	8	4	7	6	9	12	13	6	13	12	8	11	0.6	C40-41
Melanoma of skin	60	0	0	0	0	0	0	0	2	1	2	4	4	3	7	12	11	13	0.3	C43
Other skin	914	0	1	0	0	0	4	5	6	11	13	29	44	77	109	151	172	292	4.5	C44
Mesothelioma	15	0	0	0	0	0	0	0	0	0	2	1	0	1	1	3	3	4	0.1	C45
Kaposi sarcoma	12	0	0	0	0	0	0	0	1	1	1	0	1	0	0	0	1	3	0.1	C46
Connective and soft tissue	189	0	2	3	3	1	7	4	7	8	13	14	22	23	24	19	12	27	0.9	C47-C49
Breast	125	0	0	0	0	0	0	0	1	6	4	9	17	18	24	19	10	17	0.6	C50
Kidney	585	0	6	1	0	1	1	2	10	17	32	48	55	75	107	86	71	73	2.9	C51
Penis	47	0	0	0	0	0	0	0	0	3	2	6	5	7	7	5	7	5	0.2	C60
Prostate	2040	0	0	0	0	2	0	0	0	0	2	10	35	112	279	464	579	557	10	C61
Testis	135	0	6	0	3	7	13	8	21	27	16	7	6	5	4	5	6	1	0.7	C62
Other male genital organs	24	0	0	0	0	0	0	0	1	2	2	2	2	0	3	7	2	4	0.1	C63
Kidney	585	0	6	1	0	1	1	2	10	17	32	48	55	75	107	86	71	73	2.9	C64
Renal pelvis	13	0	0	0	0	0	0	0	0	0	0	0	2	3	2	3	1	2	0.1	C65
Ureter	27	0	0	0	0	0	0	0	0	0	0	0	2	2	6	5	4	8	0.1	C66
Bladder	618	0	0	0	1	1	1	1	3	11	10	27	31	62	89	85	124	173	3	C67
Other urinary organs	11	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	2	4	0.1	C68
Eye	15	0	4	0	0	0	0	0	1	0	1	1	0	1	1	1	2	2	0.1	C69
Brain, nervous system	311	0	13	13	11	11	12	13	13	18	20	25	29	33	30	35	21	14	1.5	C70-72
Thyroid	173	0	0	0	1	2	3	7	11	6	14	20	10	25	23	21	18	12	0.8	C73
Adrenal gland	20	0	2	0	0	0	0	0	3	1	1	1	1	3	2	3	2	2	0.1	C74
Other endocrine	33	0	1	2	4	1	0	3	1	2	3	0	2	3	6	3	2	2	0.2	C75
Hodgkin disease	125	0	0	5	16	15	12	7	7	6	7	8	12	13	7	3	10	4	0.6	C81
Non-Hodgkin lymphoma	818	0	3	6	12	12	24	24	20	35	39	56	63	95	113	117	95	104	4	C82-85,C96
Immunoproliferative diseases	24	0	0	0	0	1	0	0	0	0	2	2	2	8	6	6	1	0	0.1	C88
Multiple myeloma	124	0	0	0	0	0	0	0	2	2	3	5	11	20	23	27	17	13	0.6	C90
Lymphoid leukaemia	181	0	22	18	18	13	5	4	8	15	6	10	8	9	21	11	7	6	0.9	C91
Myeloid leukaemia	405	0	13	7	12	21	20	21	18	20	24	28	34	34	35	41	42	35	2	C92-94
Leukaemia unspecified	75	0	8	3	6	5	0	3	1	2	2	2	3	3	9	6	7	16	0.4	C95
Myeloproliferative disorders	14	0	0	0	0	0	0	0	1	1	0	0	0	5	1	2	1	3	0.1	IMPD
Myelodysplastic syndromes	56	0	0	0	0	0	0	0	1	0	3	0	3	3	12	8	10	15	0.3	MDS
Other and unspecified	540	0	4	0	0	2	1	7	11	12	22	36	49	68	71	86	78	93	2.6	O&U
All sites	21385	0	97	59	94	119	149	179	300	513	761	1265	1851	2479	3168	3343	3175	3833	104.5	ALL

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Appendix 23: Cancer incidence by site and age group, Chinese males, Malaysia 2012-2016

SITE	ALL AGES	AGE UNK	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	CRUDE RATE	(%)	CUM 0-64	CUM 0-74	ASR	ICD (10th)
Lip	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.09	0.1	0	0.01	0.1	C00
Tongue	202	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.21	1	0.07	0.11	1	C01-02
Mouth	138	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.82	0.7	0.04	0.08	0.7	C03-06
Salivary glands	95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.57	0.5	0.03	0.06	0.5	C07-08
Tonsil	66	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.39	0.3	0.02	0.04	0.3	C09
Other oropharynx	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.23	0.2	0.01	0.02	0.2	C10
Nasopharynx	1748	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10.43	8.5	0.7	0.93	8.6	C11
Hypopharynx	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.33	0.3	0.01	0.03	0.3	C12-13
Pharynx unspecified	321	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.92	1.6	0.08	0.2	1.6	C14
Oesophagus	862	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5.14	4.2	0.19	0.47	4.2	C15
Stomach	82	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.49	0.4	0.03	0.05	0.4	C16
Small intestine	2208	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13.18	10.8	0.55	1.29	10.8	C17
Colon	1743	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10.4	8.5	0.47	1.04	8.5	C18
Rectum	57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.34	0.3	0.02	0.03	0.3	C19-20
Anus	1284	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7.66	6.3	0.4	0.78	6.3	C21
Liver	182	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.09	0.9	0.04	0.11	0.9	C22
Gallbladder etc.	576	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.44	2.8	0.16	0.37	2.8	C23-24
Pancreas	123	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.73	0.6	0.04	0.07	0.6	C25
Nose, sinuses etc.	374	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.23	1.8	0.1	0.23	1.8	C30-31
Larynx	3268	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19.44	15.9	0.79	1.99	16	C32
Trachea, bronchus and lung	79	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.47	0.4	0.03	0.04	0.4	C33-34
Other thoracic organs	132	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.79	0.6	0.04	0.07	0.7	C37-38
Bone	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.36	0.3	0.01	0.04	0.3	C40-41
Melanoma of skin	914	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5.45	4.5	0.16	0.51	4.5	C43
Other skin	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.09	0.1	0	0.01	0.1	C44
Mesothelioma	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.07	0.1	0	0.01	0.1	C45
Kaposi sarcoma	189	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.13	0.9	0.06	0.1	1	C46
Connective and soft tissue	125	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.75	0.6	0.04	0.07	0.6	C47-C49
Breast	47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.28	0.2	0.02	0.03	0.2	C50
Penis	2040	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12.17	10	0.26	1.4	10.1	C60
Prostate	135	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.81	0.7	0.05	0.06	0.7	C61
Testis	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.14	0.1	0.01	0.01	0.1	C62
Other male genital organs	585	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.49	2.9	0.18	0.35	2.9	C63
Kidney	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.08	0.1	0	0.01	0.1	C64
Renal pelvis	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.16	0.1	0.01	0.02	0.1	C65
Ureter	618	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.69	3	0.13	0.36	3	C66
Bladder	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.07	0.1	0	0.01	0.1	C67
Other urinary organs	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.09	0.1	0	0.01	0.1	C68
Eye	311	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0.5	0	0.01	0.1	C69
Brain, nervous system	173	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.86	1.5	0.11	0.17	1.7	C70-72
Thyroid	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.03	0.8	0.06	0.1	0.9	C73
Adrenal gland	33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.12	0.1	0.01	0.01	0.1	C74
Other endocrine	125	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2	0.02	0.02	0.2	C75
Hodgkin disease	818	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.75	0.6	0.05	0.06	0.7	C81
Non-Hodgkin lymphoma	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.14	0.1	0.01	0.02	0.1	C82-86,C96
Immunoproliferative diseases	124	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.48	0.4	0.25	0.47	4.1	C87
Multiple myeloma	181	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.74	0.6	0.04	0.08	0.6	C88
Lymphoid leukaemia	405	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.08	0.9	0.07	0.09	1.2	C89
Myeloid leukaemia	75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.42	2	0.13	0.22	2.2	C92-94
Leukaemia unspecified	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.45	0.4	0.02	0.04	0.5	C95
Myeloproliferative disorders	56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.33	0.3	0.01	0.01	0.1	MPD
Myelodysplastic syndromes	540	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.22	2.6	0.14	0.32	2.7	MDS
Other and unspecified	21385	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	127.6	104.5	5.7	12.63	106.1	08U
All sites																								ALL

APPENDICES

Appendix 24: Number of new cancer cases by site and age group, Chinese females, Malaysia, 2012-2016

SITE	ALL AGES	AGE UNK	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70-	75+	(%)	ICD (10th)
Lip	12	0	0	0	0	0	0	0	0	0	1	2	0	0	1	2	2	3	0.1	C00
Tongue	126	0	0	0	0	1	2	0	5	15	7	8	12	17	14	15	11	19	0.6	C01-02
Mouth	72	0	0	1	0	0	0	0	0	2	4	5	4	8	6	11	11	20	0.3	C03-06
Salivary glands	85	0	0	0	0	0	2	0	3	9	8	5	11	4	10	10	5	15	0.4	C07-08
Tonsil	23	0	0	0	0	0	1	0	0	1	0	3	4	4	4	1	2	2	0.1	C09
Other oropharynx	8	0	0	0	0	0	0	0	0	2	0	1	3	0	0	0	2	0	0	C10
Nasopharynx	549	0	0	0	0	0	10	5	17	43	68	86	85	74	54	49	28	30	2.5	C11
Hypopharynx	13	0	0	0	0	0	0	0	0	1	1	0	2	0	3	1	2	3	0.1	C12-13
Pharynx unspecified	6	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	2	0	C14
Oesophagus	77	0	0	0	0	0	1	1	0	2	3	4	4	6	6	14	10	26	0.4	C15
Stomach	551	0	0	0	0	0	2	5	9	12	20	34	28	49	69	65	75	183	2.5	C16
Small intestine	51	0	0	0	0	0	0	0	0	0	2	2	1	11	8	8	13	6	0.2	C17
Colon	1837	0	0	1	0	0	2	2	16	32	98	96	177	193	261	267	260	472	8.4	C18
Rectum	1117	0	0	0	0	0	0	4	11	19	35	73	102	161	163	149	141	259	5.1	C19-20
Anus	36	0	0	0	0	0	0	0	0	1	1	1	1	2	7	4	9	10	0.2	C21
Liver	411	0	0	0	0	2	2	4	4	8	7	18	31	43	64	69	63	91	1.9	C22
Gallbladder etc.	218	0	0	0	0	0	0	0	1	1	3	11	18	27	27	32	34	64	1	C23-24
Pancreas	444	0	0	0	0	0	2	1	1	1	8	15	33	45	87	86	66	99	2	C25
Nose, sinuses etc.	47	0	0	0	0	0	0	1	0	0	3	5	2	5	8	5	5	13	0.2	C30-31
Larynx	31	0	0	0	0	0	0	0	0	0	1	1	4	3	2	4	5	10	0.1	C32
Trachea, bronchus and lung	1537	0	0	0	0	1	0	2	12	17	55	73	111	198	247	248	205	368	7	C33-34
Other thoracic organs	55	0	0	0	0	0	0	0	1	5	7	3	4	3	10	10	8	4	0.3	C37-38
Bone	65	0	0	1	4	6	4	2	2	2	3	5	3	7	3	6	2	6	0.3	C40-41
Melanoma of skin	52	0	0	0	0	0	0	0	2	3	3	3	4	3	9	5	6	13	0.2	C43
Other skin	618	0	0	0	0	3	2	1	5	5	6	8	23	36	55	82	125	265	2.8	C44
Mesothelioma	7	0	0	0	0	0	0	0	0	0	0	1	3	1	1	1	0	0	0	C45
Kaposi sarcoma	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C46
Connective and soft tissue	137	0	0	6	2	5	3	5	4	4	8	10	11	13	8	21	17	16	0.6	C47,C49
Breast	7759	0	0	1	0	1	15	53	186	421	722	1092	1085	1176	1081	835	509	583	35.6	C50
Vulva	55	0	0	0	0	0	0	0	1	1	2	2	2	2	7	9	9	13	0.3	C51
Vagina	45	0	0	0	0	0	0	0	0	0	1	4	1	7	9	8	5	10	0.2	C52
Cervix uteri	1316	0	0	0	0	0	2	15	41	68	94	150	196	192	176	111	125	146	6	C53
Corpus uteri	977	0	0	0	0	1	7	22	27	27	64	98	157	229	167	87	62	56	4.5	C54
Uterus unspecified	277	0	0	0	0	0	1	9	9	11	22	36	47	52	40	22	20	17	1.3	C55
Ovary	1006	0	5	5	10	17	18	18	31	43	81	149	158	132	126	90	73	63	4.6	C56
Other female genital organs	34	0	0	0	0	0	0	0	1	5	2	4	6	5	2	4	5	0	0.2	C57
Placenta	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C58
Kidney	255	0	3	2	1	0	1	2	2	8	14	20	23	30	47	43	31	29	1.2	C64
Renal pelvis	4	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	2	0	C65
Ureter	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	6	0.1	C66
Bladder	170	0	0	0	0	0	1	1	0	1	2	4	10	12	28	20	34	57	0.8	C67
Other urinary organs	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	C68
Eye	16	0	0	5	0	0	0	0	0	0	0	0	2	2	1	1	3	2	0.1	C69
Brain, nervous system	263	0	14	11	12	5	4	12	9	7	11	14	25	41	36	26	14	22	1.2	C70-72
Thyroid	383	0	0	1	1	7	21	17	25	32	30	36	43	37	42	31	25	35	1.8	C73
Adrenal gland	12	0	0	0	0	0	0	0	0	2	0	3	0	0	1	1	1	0	0.1	C74
Other endocrine	12	0	0	1	0	1	0	0	0	0	0	0	1	2	0	2	0	0	0.1	C75
Hodgkin disease	67	0	0	0	4	6	9	7	7	2	1	5	3	2	3	6	6	6	0.3	C81
Non-Hodgkin lymphoma	535	0	1	1	3	15	18	20	15	14	25	51	50	48	66	93	47	68	2.5	C82-85,C96
Immunoproliferative diseases	17	0	0	0	0	0	0	0	0	1	0	0	4	3	2	1	6	0	0.1	C88
Multiple myeloma	100	0	0	0	0	0	0	0	0	1	4	8	4	16	15	16	15	17	0.5	C90
Lymphoid leukaemia	135	0	20	12	9	7	9	2	1	4	7	7	8	10	14	9	11	5	0.6	C91
Myeloid leukaemia	313	0	4	9	5	16	17	10	19	19	17	30	33	33	30	30	15	28	1.4	C92-94
Leukaemia unspecified	44	0	2	3	2	3	1	0	1	3	3	1	2	1	4	4	5	9	0.2	C95
Myeloproliferative disorders	14	0	0	0	0	0	0	0	1	1	0	0	0	1	4	4	1	5	0.1	MPD
Myelodysplastic syndromes	38	0	0	0	0	0	0	0	1	0	0	0	3	5	1	7	5	9	0.2	MDS
Other and unspecified	378	0	2	0	1	2	2	7	7	9	18	24	38	35	58	54	75	51	1.7	O&U
All sites	22440	0	74	51	60	93	142	212	465	868	1437	2218	2587	2994	3098	2683	2194	3264	102.8	ALL

APPENDICES

Appendix 25: Cancer incidence by site and age group, Chinese females, Malaysia 2012-2016

SITE	ALL AGES	AGE UNK	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75+	CRUDE RATE	(%)	CUM 0-64	CUM 0-74	ASR	ICD (10th)	
Lip	12	0	0	0	0	0	0	0	0	0.1	0.1	0.2	0	0	0.1	0.4	0.5	0.6	0.08	0.1	0	0.01	0.1	C00	
Tongue	126	0	0	0	0.1	0.2	0	0	0.4	1.3	0.6	0.7	1.2	2	2	2.9	2.9	4	0.8	0.6	0.04	0.07	0.1	C01-02	
Mouth	72	0	0	0	0	0	0	0	0.2	0.4	0.5	0.5	0.4	1	0.8	2.1	2.9	4.2	0.46	0.4	0.02	0.04	0.4	C03-06	
Salivary glands	85	0	0	0	0	0	0.2	0.1	0.2	0.8	0.7	0.6	1.1	0.5	1.4	1.9	1.3	3.1	0.54	0.4	0.03	0.04	0.4	C07-08	
Tonsil	23	0	0	0	0	0	0	0	0	0.1	0	0.3	0.5	0.5	0.6	0.2	0.5	0.4	0.15	0.1	0.01	0.01	0.1	C09	
Other oropharynx	8	0	0	0	0	0	0	0	0	0.2	0	0.1	0.3	0	0	0	0.5	0	0.05	0	0	0.01	0	C10	
Nasopharynx	549	0	0	0	0	0.8	0.4	1.4	3.8	6	8	8.7	8.8	7.6	9.5	7.5	6.3	3.48	3.48	2.5	0.23	0.31	2.9	C11	
Hypopharynx	13	0	0	0	0	0	0	0	0	0.1	0.1	0	0.2	0	0.4	0.2	0.5	0.6	0.08	0.1	0	0.01	0.1	C12-13	
Pharynx unspecified	6	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	0.3	0	0.4	0.4	0.04	0	0	0	0	C14	
Oesophagus	77	0	0	0	0	0	0.1	0.1	0.1	0.2	0.3	0.4	0.4	0.7	0.8	2.7	2.7	5.4	0.49	0.4	0.01	0.04	0.4	C15	
Stomach	551	0	0	0	0	0.2	0.4	0.4	0.7	1.1	1.8	3.2	2.9	5.8	9.7	12.5	20.1	38.3	3.49	2.5	0.13	0.29	2.8	C16	
Small intestine	51	0	0	0	0	0	0	0	0	0	0.2	0.2	0.1	1.3	1.1	1.5	3.5	1.3	0.32	0.2	0.01	0.04	0.3	C17	
Colon	1837	0	0	0.1	0	0.2	0.2	1.3	2.9	5.1	8.9	18.2	23	36.6	51.5	69.6	98.8	116.3	8.4	8.4	1.09	1.09	9.3	C18	
Rectum	1117	0	0	0	0	0	0.3	0.9	1.7	3.1	6.8	10.5	19.2	22.9	28.8	37.8	54.2	7.07	7.07	5.1	0.33	0.66	5.7	C19-20	
Anus	36	0	0	0	0	0.1	0	0	0	0.1	0.1	0	0.1	0.2	1	0.8	2.4	2.1	0.23	0.2	0.02	0.02	0.2	C21	
Liver	411	0	0.5	0	0	0.2	0.2	0.3	0.3	0.7	0.6	1.7	3.2	5.1	9	13.3	16.9	19.1	2.6	1.9	0.11	0.26	2.2	C22	
Gallbladder etc.	218	0	0	0	0	0	0	0	0.1	0.1	0.3	1	1.9	3.2	3.8	6.2	9.1	13.4	1.38	1.1	0.05	0.13	1.1	C23-24	
Pancreas	444	0	0	0	0	0	0.2	0.1	0.1	0.1	0.7	1.4	3.4	5.4	12.2	16.6	17.7	20.7	2.81	2	0.12	0.29	2.3	C25	
Nose, sinuses etc.	47	0	0	0	0	0	0	0	0	0	0.3	0.5	0.2	0.6	1.1	1	1.3	2.7	0.3	0.2	0.01	0.03	0.2	C30-31	
Larynx	31	0	0	0	0	0	0	0	0	0	0.1	0.1	0.4	0.4	0.3	0.8	1.3	2.1	0.2	0.1	0.01	0.02	0.2	C32	
Trachea, bronchus and lung	1537	0	0	0	0	0.1	0	0.2	1	1.5	4.8	6.8	11.4	23.6	34.7	47.9	54.9	77.1	9.73	7	0.42	0.93	7.8	C33-34	
Other thoracic organs	55	0	0	0	0	0	0	0	0	0.1	0.4	0.6	0.3	0.4	0.4	1.4	1.9	2.1	0.8	0.35	0.3	0.02	0.04	0.3	C37-38
Bone	65	0	0.1	0.4	0.5	0.7	0.3	0.2	0.2	0.2	0.3	0.5	0.3	0.8	0.4	1.2	0.5	1.3	0.41	0.4	0.02	0.03	0.4	C40-41	
Melanoma of skin	52	0	0	0	0	0	0	0.1	0.2	0.3	0.3	0.3	0.4	0.4	1.3	1	1.6	2.7	0.33	0.2	0.02	0.03	0.3	C43	
Other skin	618	0	0.1	0	0	0.2	0.2	0.4	0.4	0.4	0.5	0.7	2.4	4.3	7.7	15.8	33.5	55.5	3.91	2.8	0.09	0.33	3	C44	
Mesothelioma	7	0	0	0	0	0	0	0	0	0	0	0.1	0.3	0.1	0.1	0.2	0	0	0.04	0	0	0	0	C45	
Kaposi sarcoma	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C46	
Connective and soft tissue	137	0	0	0.6	0.2	0.4	0.2	0.4	0.3	0.4	0.7	0.9	1.1	1.6	1.1	4.1	4.6	3.4	0.87	0.6	0.04	0.08	0.8	C47-C49	
Breast	7759	0	0	0	0	1.1	1.1	4	15.4	37.6	63.3	101.3	111.6	140.3	151.7	161.2	136.3	122.1	49.13	35.6	3.13	4.62	40.7	C50	
Vulva	55	0	0	0	0	0	0	0	0.1	0.1	0.2	0.2	0.2	1.1	1	1.7	2.4	2.7	0.35	0.3	0.03	0.03	0.3	C51	
Vagina	45	0	0	0	0	0	0	0	0	0	0.1	0.4	0.1	0.8	1.3	1.5	1.3	2.1	0.28	0.2	0.01	0.03	0.2	C52	
Cervix uteri	1316	0	0	0	0	0	0.2	1.1	3.4	6.1	8.2	13.9	20.2	22.9	24.7	21.4	33.5	30.6	8.33	6	0.5	0.78	6.8	C53	
Corpus uteri	977	0	0	0	0	0	0	0.5	1.8	2.4	5.6	9.1	16.1	27.3	23.4	16.8	16.6	11.7	6.19	4.5	0.43	0.6	5.1	C54	
Uterus unspecified	277	0	0	0	0	0	0	0	0.1	0.7	1	1.9	3.3	4.8	5.6	4.2	5.4	3.6	1.75	1.3	0.12	0.17	1.4	C55	
Ovary	1006	0	0.5	0.4	0.4	0.8	1.3	1.4	2.6	3.8	7.1	13.8	16.2	15.7	17.7	17.4	19.5	13.2	6.37	4.6	0.41	0.59	5.4	C56	
Other female genital organs	34	0	0	0	0	0	0	0	0.2	0.2	0.1	0.2	0.4	0.6	0.3	0.8	1.3	0	0.22	0.2	0.01	0.02	0.2	C57	
Placenta	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C58	
Kidney	255	0	0.3	0.2	0.1	0	0.1	0.2	0.1	0.7	1.2	1.9	2.4	3.6	6.6	8.3	8.3	6.1	1.61	1.2	0.09	0.17	1.4	C64	
Renal pelvis	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C65	
Ureter	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.8	1.6	1.3	0.11	0.1	0	0.01	0.1	C66	
Bladder	170	0	0	0	0	0	0.1	0.1	0.1	0.1	0.2	0.4	1	1.4	3.9	3.9	9.1	11.9	1.08	0.8	0.04	0.1	0.9	C67	
Other urinary organs	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.03	0	0	0	0	C68	
Eye	16	0	0	0.5	0	0	0	0	0	0	0	0	0.2	0.2	0.1	0.2	0.8	0.4	0.1	0.1	0.01	0.01	0.1	C69	
Brain, nervous system	263	0	1.4	1	1	0.4	0.3	0.9	0.7	0.6	1	1.3	2.6	4.9	5.1	5	3.7	4.6	1.67	1.2	0.11	0.15	1.5	C70-72	
Thyroid	383	0	0	0.1	0.1	0.5	1.6	1.3	2.1	2.9	2.6	3.3	4.4	4.4	5.9	6	6.7	7.3	2.43	1.8	0.15	0.21	2	C73	
Adrenal gland	12	0	0.4	0	0	0	0	0	0	0.2	0	0.3	0	0	0.1	0.2	0.3	0	0.08	0.1	0.01	0.01	0.1	C74	
Other endocrine	12	0	0.1	0	0.1	0.1	0	0	0	0	0	0.3	0.1	0.2	0	0.4	0	0	0.08	0.1	0	0.01	0.1	C75	
Hodgkin disease	67	0	0	0	0.3	0.5	0.7	0.5	0.6	0.2	0.1	0.5	0.3	0.2	0.4	1.2	1.6	1.3	0.42	0.3	0.02	0.04	0.4	C81	
Non-Hodgkin lymphoma	535	0	0.1	0.1	0.2	1.1	1.4	1.5	1.2	1.2	2.2	4.7	5.1	5.7	9.3	18	12.6	14.2	3.39	2.5	0.17	0.32	2.9	C82-86,C96	
Immunoproliferative diseases	17	0	0	0	0	0	0	0	0	0.1	0	0	0.4	0.4	0.3	0.2	1.6	0	0.11	0.1	0.01	0.01	0.1	C88	
Multiple myeloma	100	0	0	0	0	0	0	0	0	0.1	0.4	0.7	0.7	1.9	2.1	3.1	4	3.6	0.63	0.5	0.03	0.07	0.5	C90	
Lymphoid leukaemia	135	0	2	1.1	0.7	0.5	0.7	0.2	0.1	0.4	0.6	0.6	0.8	1.2	2	1.7	2.9	1	0.85	0.6	0.05	0.08	0.9	C91	
Myeloid leukaemia	313	0	0.4	0.8	0.4	1.2	0.5	1.3	0.8	1.7	1.5	2.8	3.4	3.9	5.6	5.8	4	5.9	1.98	1.4	0.12	0.17	1.7	C92-94	
Leukaemia unspecified	44	0	0.2	0.3	0.2	0.2	0.1	0	0.1	0.3	0.3	0.1	0.2	0.1	0.6	0.8	1.3	1.9	0.28	0.2	0.01	0.02	0.3	C95	
Myeloproliferative disorders	14	0	0	0	0	0	0	0	0	0.1	0.1	0	0	0.1	0.1	0.8	0.3	1	0.09	0.1	0	0.01	0.1	MPD	
Myelodysplastic syndromes	38	0	0	0	0	0	0	0	0	0	0	0.3	0.6	0.1	1.4	1.3	1.9	0.24	0.2	0.2	0.01	0.02	0.2	O&U	
Other and unspecified	378	0	0.2	0	0.1	0.2	0.2	0.2	0.2	0.6	0.8	1.6	2.2	3.9	4.2	8.1	10.4	13.7	2.39	1.7	0.11	0.23	2	O&U	
All sites	22440	0	7.6	4.5	4.8	7.1	10.7	15.9	38.4	77.4	125.9	205.7	266	357.1	434.8	518	587.4	683.6	142.1	102.8	7.78	13.31	117.3	ALL	

APPENDICES

Appendix 26: Number of new cancer cases by site and age group, Indian males, Malaysia, 2012-2016

SITE	ALL AGES	AGE UNK	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	(%)	ICD (10th)
Lip	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0.1	C00
Tongue	87	0	0	0	0	0	0	2	1	2	6	10	10	18	13	13	4	8	3.1	C01-02
Mouth	87	0	0	0	1	0	0	0	0	0	3	8	10	25	10	14	9	7	3.1	C03-06
Salivary glands	26	0	0	0	0	0	0	0	0	1	2	2	5	2	6	3	2	2	0.9	C07-08
Tonsil	19	0	0	0	0	0	0	0	0	0	1	2	4	3	4	1	1	1	0.7	C09
Other oropharynx	16	0	0	0	0	0	0	0	0	1	0	3	3	2	3	2	1	2	0.6	C10
Nasopharynx	25	0	0	0	0	0	0	0	1	1	1	1	3	4	4	2	1	5	0.9	C11
Hypopharynx	29	0	0	0	0	0	0	0	0	0	1	1	5	4	7	4	2	5	1	C12-13
Pharynx unspecified	9	0	0	0	0	0	0	0	0	0	0	1	1	1	0	2	2	1	0.3	C14
Oesophagus	88	0	0	0	0	0	0	1	0	0	3	7	9	15	24	11	10	18	3.5	C15
Stomach	143	0	0	0	0	0	0	0	6	3	12	14	9	14	24	19	20	22	5.2	C16
Small intestine	12	0	0	0	0	0	0	0	0	0	0	1	0	3	3	3	1	0	0.4	C17
Colon	223	0	0	1	0	1	1	2	3	7	12	16	26	42	44	31	22	16	8	C18
Rectum	240	0	0	0	1	1	1	1	3	12	8	13	27	43	46	37	25	23	8.7	C19-20
Anus	7	0	0	0	0	0	0	0	0	0	1	2	1	0	0	1	0	2	0.3	C21
Liver	147	0	3	0	0	0	1	2	0	0	5	7	16	36	26	17	15	19	5.3	C22
Gallbladder etc.	24	0	0	0	0	0	0	0	0	0	1	2	0	7	4	5	1	4	0.9	C23-24
Pancreas	85	0	0	0	0	0	0	0	3	1	5	11	11	12	14	14	2	12	3.1	C25
Nose, sinuses etc.	12	0	0	0	0	0	1	0	0	0	1	1	1	6	2	0	0	1	0.4	C30-31
Larynx	93	0	0	0	0	0	0	0	1	0	2	8	12	19	18	19	3	11	3.4	C32
Trachea, bronchus and lung	239	0	0	0	0	0	2	2	1	3	4	17	25	41	52	31	23	38	8.6	C33-34
Other thoracic organs	10	0	0	0	1	0	0	1	0	0	1	0	0	2	1	1	0	3	0.4	C37-38
Bone	27	0	2	5	3	4	1	1	1	0	1	0	0	5	1	1	0	3	1	C40-41
Melanoma of skin	4	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0.1	C43
Other skin	69	0	0	0	0	0	1	0	1	1	3	4	7	10	14	6	8	14	2.5	C44
Mesothelioma	2	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0.1	C45
Kaposi sarcoma	2	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0.1	C46
Connective and soft tissue	35	0	1	1	1	1	1	1	0	0	0	0	1	0	0	0	0	6	1.3	C47-C49
Breast	21	0	0	0	0	0	0	0	0	0	0	3	6	4	3	1	4	3	0.8	C50
Penis	21	0	0	0	0	0	0	0	0	0	2	1	7	2	3	1	2	4	0.8	C60
Prostate	245	0	0	0	0	0	0	0	0	0	0	3	7	26	43	50	54	62	8.8	C61
Testis	37	0	1	2	6	5	4	5	3	3	3	1	0	1	1	4	1	0	1.3	C62
Other male genital organs	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C63
Kidney	97	0	5	0	0	0	0	1	6	3	7	11	12	16	13	13	5	5	3.5	C64
Renal pelvis	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0.1	C65
Ureter	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.1	C66
Bladder	96	0	0	0	0	0	0	1	0	0	2	4	11	7	15	12	13	27	3.5	C67
Other urinary organs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C68
Eye	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	C69
Brain, nervous system	60	0	4	1	2	0	2	2	1	2	3	6	8	7	10	5	5	2	2.2	C70-72
Thyroid	52	0	0	0	0	0	0	4	6	6	4	5	4	7	6	4	3	3	1.9	C73
Adrenal gland	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0.1	C74
Other endocrine	9	0	0	0	2	2	0	1	1	0	0	1	1	0	0	0	1	0	0.3	C75
Hodgkin disease	61	0	0	4	6	7	12	5	1	1	1	5	5	7	4	3	2	1	2.2	C81
Non-Hodgkin lymphoma	117	0	1	2	11	6	5	6	5	2	10	5	11	15	13	12	12	10	4.2	C82-85
Immunoproliferative diseases	4	0	0	0	0	0	0	0	0	0	1	0	1	2	0	0	0	0	0.1	C88
Multiple myeloma	26	0	0	0	0	0	0	1	0	0	1	3	6	4	5	1	4	1	0.9	C90
Lymphoid leukaemia	43	0	12	9	2	6	3	0	2	0	2	1	1	4	2	2	1	0	1.6	C91
Myeloid leukaemia	71	0	3	1	3	4	5	8	10	9	6	3	5	6	3	2	2	1	2.6	C92-94
Leukaemia unspecified	15	0	0	2	5	3	1	1	3	0	0	0	0	0	0	0	0	0	0.5	C95
Myeloproliferative disorders	6	0	0	0	0	0	1	0	1	0	0	0	0	1	0	2	0	1	0.2	MPD
Myelodysplastic syndromes	5	0	0	0	0	0	0	0	0	0	0	0	0	2	1	2	0	0	0.2	MDS
Other and unspecified	75	0	0	1	0	0	3	1	0	4	1	8	10	9	13	7	7	11	2.7	O&U
All sites	2842	0	31	18	39	41	44	61	71	66	116	194	284	432	460	364	264	357	102.5	ALL

APPENDICES

Appendix 27: Cancer incidence by site and age group, Indian males, Malaysia 2012-2016

SITE	ALL AGES	AGE UNK	AGE											CRUDE RATE	CUM 0-64 (%)	CUM 0-74	ASR	ICD (10th)							
			0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-						55-	60-	65-	70-	75+		
Lip	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0.01	0.1	C00		
Tongue	87	0	0	0	0	0	0	0	0	0.4	0.2	0.6	1.9	3.2	0	0	0	0	0	0.6	2.7	10.8	17.8	C01-C02	
Mouth	87	0	0	0	0.2	0	0	0	0	0	0	0	1	2.5	3.5	11.1	6.1	14.4	15.5	1.78	9.5	17.8	1.4	C03-C06	
Salivary glands	26	0	0	0	0	0.4	0	0	0	0.4	0	0.3	0.6	0.6	1.7	0.9	3.6	3.1	3.4	1.4	0.53	0.04	0.07	C07-C08	
Tonsil	19	0	0	0	0	0	0	0	0	0	0	0.3	0.3	0.6	1.4	1.3	2.4	1	1.7	2.7	0.39	0.7	0.05	C09	
Other oropharynx	16	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0.9	1.8	2.1	1.7	2.7	0.33	0.6	0.04	C10	
Nasopharynx	25	0	0	0	0.2	0	0	0	0	0.2	0.2	0.3	0.3	0.3	0.3	1	1.8	2.4	2.1	1.7	6.8	0.51	0.05	C11	
Hypopharynx	29	0	0	0	0	0	0	0	0	0	0	0.3	0.3	0.3	1.7	1.8	4.2	4.1	3.4	1.8	0.59	1	0.04	C12-C13	
Pharynx unspecified	8	0	0	0	0	0	0	0	0	0	0	0	0.3	0.3	0.3	0.4	0	2.1	3.4	1.4	0.16	0.3	0.03	C14	
Oesophagus	98	0	0	0	0	0	0	0	0	0.2	0	0	1	2.2	3.1	6.7	14.5	11.3	17.2	24.3	2	2.92	0.28	C15	
Stomach	143	0	0	0	0	0	0	1.5	0.9	3.8	4.5	3.1	6.2	4.5	19.6	14.5	19.6	34.5	29.7	2.92	5.2	0.44	3.5	C16	
Small intestine	12	0	0	0	0	0	0	0	0	0.2	0	0	0	0.3	0	1.3	1.8	3.1	1.7	0	0.25	0.4	0.02	C17	
Colon	223	0	0	0.2	0	0.4	0.7	2	3.8	5.1	9	18.7	32	37.9	21.6	18.7	32	37.9	21.6	4.56	8	0.33	0.68	C18	
Rectum	240	0	0	0	0.2	0.2	0.7	3.4	2.5	4.1	9.3	19.1	27.9	38.1	43.1	31.1	4.9	31.1	4.9	0.75	8.7	0.34	0.75	C19-C20	
Anus	7	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6	0.3	0	0	1	0	0.14	0.3	0.01	0.2	C21	
Liver	147	0	0.8	0	0	0.2	0.4	0	0	0.2	0.4	0	1.6	2.2	5.5	16	15.8	17.5	25.9	3	2.57	0.43	3.5	C22	
Gallbladder etc.	24	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6	0	3.1	2.4	5.2	1.7	5.4	0.49	0.9	0.03	C23-C24	
Pancreas	85	0	0	0	0	0	0	0.7	0.3	1.6	3.5	8.5	14.4	3.4	16.2	1.74	8.5	14.4	3.4	1.74	3.1	0.12	0.21	C25	
Nose, sinusses etc.	12	0	0	0	0	0	0	0	0	0	0	0	0.3	0.3	0.3	2.7	1.2	0	0	1.4	0.25	0.4	0.02	C30-C31	
Larynx	93	0	0	0	0	0	0	0.2	0	0	0.2	0	0.6	2.5	4.1	8.4	10.9	19.6	5.2	14.9	1.9	1.9	0.26	C32	
Trachea, bronchus and lung	239	0	0	0	0.4	0.4	0.2	0.9	1.3	5.4	8.6	18.2	31.5	32	38.7	51.4	4.88	8.6	3.4	4.88	0.34	0.69	5.7	C33-C34	
Other thoracic organs	10	0	0	0	0.2	0.2	0.2	0	0.3	0	0	0.9	0	1	1	0	0	1	0	0.2	4.1	0.02	0.01	0.2	C37-C38
Bone	27	0	0.5	1.1	0.7	0.9	0.2	0.2	0	0.3	0	0	0.2	0.6	1	0	0.6	1	0	0.55	1	0.03	0.04	0.6	C40-C41
Melanoma of skin	4	0	0	0	0	0	0	0	0	0	0	0	0.3	0	0	0	0.6	0	1.7	1.4	0.08	0.1	0.01	0.1	C43
Other skin	69	0	0	0	0	0	0	0.2	0.3	1	1.3	2.4	4.4	8.5	6.2	13.8	18.9	14.1	14.1	1.41	1.7	0.19	1.7	C44	
Mesothelioma	2	0	0	0	0	0	0	0	0	0	0.3	0	0	0	0	0	0	0	0	0.04	0	0	0	0	C45
Kaposi sarcoma	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.04	0	0	0	0	C46
Connective and soft tissue	35	0	0	0.2	0.2	0.2	1	0	0	0.6	2.1	0.4	2.4	5.2	3.4	8.1	0.72	1.3	0.04	0.08	0.8	0.07	0.6	0	C47-C49
Breast	21	0	0	0	0	0	0	0	0	0	0	1	1.8	1.8	1	6.9	4.1	0.43	0.8	0.03	0.07	0.5	0.03	C50	
Penis	21	0	0	0	0	0	0	0	0	0	0	0.6	0.3	0	2.4	0.9	1.2	1	3.4	5.4	0.43	0.8	0.05	C60	
Prostate	245	0	0	0	0	0	0	0	0	0	0	2.4	11.6	26.1	51.5	93.1	83.8	5.01	8.8	0.2	0.93	6.8	0.8	C61	
Testis	37	0	0.3	0.4	1.3	1.1	0.9	1.2	0.9	1	0.3	0	0.4	0.6	4.1	1.7	0	0	1.7	0	0.76	0.7	0.07	0	C62
Other male genital organs	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.02	0	0.01	0	0	C63
Kidney	97	0	1.4	0	0	0	0	1.5	0.9	2.2	3.5	4.1	7.1	7.9	13.4	8.6	6.8	1.98	3.5	0.25	2.2	0.05	2.2	C64	
Renal pelvis	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	1	0	0	0.04	0	0.01	0.1	0	C65
Ureter	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	0	0	1.7	0	0.04	0.1	0.1	0	C66
Bladder	96	0	0	0	0	0	0	0.2	0	0	0	1.1	0.6	1.3	3.8	3.1	9.1	12.4	22.4	36.5	0.04	0.1	0.27	2.4	C67
Other urinary organs	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C68
Eye	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.04	0	0	0	0	C69
Brain, nervous system	60	0	1.1	0.2	0.4	0	0.4	0.4	0.2	0.6	1	1.9	2.8	3.1	6.1	5.2	8.6	2.7	1.23	2.2	0.09	0.16	1.4	1.4	C70-C72
Thyroid	52	0	0	0	0	0	0	0.9	1.5	1.7	1.3	1.6	1.4	3.1	3.6	4.1	5.2	4.1	1.06	1.9	0.08	0.12	1.1	1.1	C73
Adrenal gland	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0	1	0	0.04	0	0	0	0	C74
Other endocrine	9	0	0	0	0.4	0	0	0	0.2	0.2	0	0.3	0.3	0	0	0	0	0	1.7	0	0.18	0.3	0.02	0.2	C75
Hodgkin disease	61	0	0	0	0.9	1.3	1.5	2.6	1.2	0.3	0.3	1.6	1.7	3.1	2.4	1	3.4	1.4	1.25	2.2	0.08	0.11	1.2	0.81	C81
Non-Hodgkin lymphoma	117	0	0.3	0.5	2.5	1.3	1.1	1.3	1.2	0.6	3.2	1.6	3.8	6.7	7.9	12.4	5.2	13.5	2.39	4.2	0.16	0.25	2.5	2.5	C82-C85,C96
Immunoproliferative diseases	4	0	0	0	0	0	0	0	0	0	0	0.3	0.9	0	0	0	0	0	0.08	0.1	0.01	0.01	0.1	0.1	C88
Multiple myeloma	26	0	0	0	0	0	0	0	0	0	0	0.3	1	2.1	1.8	3	1	6.9	1.4	0.53	0.9	0.04	0.08	0.6	C90
Lymphoid leukaemia	43	0	3.3	2.2	0.4	1.3	0.6	0	0.2	0	0.5	0	0	0.3	0.3	0	1.2	2.1	1.7	0.88	1.6	0.05	0.07	1.1	C91
Myeloid leukaemia	71	0	0.8	0.2	0.7	0.9	1.1	1.7	2.5	2.6	1.9	1	1.7	2.7	1.8	2.1	3.4	1.4	1.45	2.6	0.1	0.13	1.4	1.4	C92-C94
Leukaemia unspecified	15	0	0	0.5	1.1	0.7	0.2	0.2	0.7	0	0	0	0	0	0	0	0	0	0.31	0.5	0.02	0.02	0.3	0.3	C95
Myeloproliferative disorders	6	0	0	0	0	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0.12	0.2	0	0	0.01	0.1	MPD
Myelodysplastic syndromes	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.12	0.2	0.01	0.02	0.1	0.1	MDS
Other and unspecified	75	0	0	0	0	0.2	0	0.6	0.2	0	1.1	0.3	2.5	3.5	4	7.9	7.2	12.1	14.9	1.53	2.7	0.1	0.2	1.7	OUU
All sites	2842	0	8.6	4.4	8.7	9.1	9.4	13.2	17.4	18.9	36.8	61.8	98.1	192	278.8	375.3	452.2	482.4	58.08	102.5	3.79	7.94	66.7	ALL	

APPENDICES

Appendix 28: Number of new cancer cases by site and age group, Indian females, Malaysia, 2012-2016

SITE	ALL AGES	AGE UNK	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75+	(%)	ICD (10th)
Lip	10	0	0	0	0	0	0	0	0	0	0	0	0	3	2	1	1	3	0.2	C00
Tongue	93	0	0	0	0	0	0	1	4	3	4	10	5	9	16	16	8	17	1.8	C01-02
Mouth	220	0	0	0	0	0	0	0	2	1	3	13	18	27	41	38	21	56	4.3	C03-06
Salivary glands	23	0	0	0	0	0	0	0	0	1	3	2	2	4	4	2	1	4	0.4	C07-08
Tonsil	6	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	1	2	0.1	C09
Other oropharynx	7	0	0	0	0	0	0	0	0	0	0	0	2	0	1	3	0	1	0.1	C10
Nasopharynx	18	0	0	0	0	0	1	0	1	1	0	4	4	2	3	2	2	1	0.4	C11
Hypopharynx	27	0	0	0	0	0	0	1	1	0	3	2	4	4	4	2	2	4	0.5	C12-13
Pharynx unspecified	7	0	0	0	0	0	0	0	0	0	2	0	1	1	1	0	0	2	0.1	C14
Oesophagus	97	0	0	0	0	1	2	0	0	0	7	10	18	15	11	11	7	25	1.9	C15
Stomach	155	0	0	0	0	3	3	1	1	10	9	7	22	16	22	22	19	24	3	C16
Small intestine	11	0	0	0	0	0	0	0	0	1	0	3	1	3	0	0	1	2	0.2	C17
Colon	216	0	0	1	1	1	0	1	7	9	10	11	25	34	38	23	29	27	4.2	C18
Rectum	176	0	0	0	0	0	0	0	3	3	9	9	22	36	35	20	14	25	3.4	C19-20
Anus	9	0	0	0	0	0	0	0	1	0	0	0	0	1	2	2	2	2	0.2	C21
Liver	63	0	1	0	0	0	0	1	0	3	0	1	11	9	8	7	8	14	1.2	C22
Gallbladder etc.	46	0	0	0	0	0	1	0	0	2	2	0	7	4	9	3	10	8	0.9	C23-24
Pancreas	52	0	0	0	0	0	2	0	1	2	2	1	4	9	8	8	7	8	1	C25
Nose, sinuses etc.	10	0	0	0	0	0	1	0	0	1	2	1	4	0	3	0	3	4	0.2	C30-31
Larynx	27	0	0	0	0	0	0	0	0	1	1	2	3	4	6	2	4	4	0.5	C32
Trachea, bronchus and lung	135	0	1	0	0	0	0	0	0	2	4	15	13	21	27	21	18	13	2.6	C33-34
Other thoracic organs	9	0	0	0	0	0	2	0	0	0	1	0	0	0	1	0	0	2	0.2	C37-38
Bone	24	0	0	5	3	2	2	0	1	2	1	3	3	0	6	3	3	2	0.5	C40-41
Melanoma of skin	8	0	0	0	0	0	0	0	1	0	1	1	0	2	1	1	0	1	0.2	C43
Other skin	76	0	0	1	0	0	2	0	1	2	2	2	6	9	13	12	9	17	1.5	C44
Mesothelioma	3	0	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0.1	C45
Kaposi sarcoma	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C46
Connective and soft tissue	31	0	1	0	0	1	2	0	3	2	1	4	3	3	6	3	3	2	0.6	C47, C49
Breast	1910	0	0	0	0	6	15	44	84	153	272	343	319	301	181	95	97	37.3	C50	
Vulva	13	0	0	0	0	0	0	0	0	2	0	2	2	4	4	0	2	3	0.3	C51
Vagina	16	0	1	0	0	0	0	0	1	0	1	0	1	5	2	3	2	2	0.3	C52
Cervix uteri	273	0	0	0	0	0	3	7	15	20	26	40	49	36	32	16	29	29	5.3	C53
Corpus uteri	265	0	0	0	0	0	4	10	16	16	16	29	41	65	34	17	17	52	5.2	C54
Uterus unspecified	115	0	0	0	0	2	0	3	5	6	3	16	18	21	24	6	11	22	2.2	C55
Ovary	272	0	0	1	7	2	12	9	13	26	31	42	39	33	27	14	16	16	5.3	C56
Other female genital organs	20	0	0	0	0	0	0	0	0	1	2	0	2	6	5	1	0	3	0.4	C57
Placenta	3	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	C58
Kidney	48	0	0	0	0	1	0	0	0	3	4	1	5	11	8	3	7	1	0.9	C59
Renal pelvis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C65
Ureter	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C66
Bladder	29	0	1	0	0	0	0	0	0	1	2	2	2	1	2	6	6	6	0.6	C67
Other urinary organs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C68
Eye	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	C69
Brain, nervous system	75	0	3	1	4	1	3	1	2	7	5	10	7	8	7	8	7	6	1.5	C70-72
Thyroid	167	0	0	1	6	7	15	12	23	16	23	15	19	11	11	7	7	5	3.3	C73
Adrenal gland	5	0	0	0	0	0	0	0	1	0	0	0	1	1	1	0	1	0	0.1	C74
Other endocrine	5	0	0	0	0	0	0	0	0	0	1	0	1	1	1	0	0	0	0.1	C75
Hodgkin disease	39	0	1	1	1	5	7	8	3	0	1	3	3	4	2	0	0	0	0.8	C81
Non-Hodgkin lymphoma	112	0	2	3	1	9	6	6	5	1	8	8	15	16	9	9	9	5	2.2	C82-85, C96
Immunoproliferative diseases	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C88
Multiple myeloma	30	0	0	0	0	0	0	0	0	1	2	4	3	3	5	6	1	5	0.6	C90
Lymphoid leukaemia	39	0	9	4	2	1	2	2	0	1	2	3	3	3	3	1	4	0	0.8	C91
Myeloid leukaemia	71	0	1	3	2	6	1	4	7	5	4	3	10	8	6	7	3	1	1.4	C92-94
Leukaemia unspecified	13	0	0	1	3	0	0	0	1	1	1	3	0	0	1	0	1	1	0.3	C95
Myeloproliferative disorders	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	MPD
Myelodysplastic syndromes	10	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	2	3	0.2	MDS
Other and unspecified	104	0	1	0	2	1	1	5	4	5	4	17	11	15	10	12	16	2	2	O&U
All sites	5196	0	24	16	23	44	49	86	137	229	337	506	722	787	807	557	378	494	101.5	ALL

APPENDICES

Appendix 29: Cancer incidence by site and age group, Indian females, Malaysia 2012-2016

SITE	ALL AGES	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	CRUDE RATE (%)	CUM 0-64	CUM 0-74	ASR	ICD (10th)
Lip	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.21	0.01	0.02	0.2	C00
Tongue	93	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.91	0.1	0.23	2	C01-02
Mouth	220	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4.52	0.3	0.55	4.9	C03-06
Salivary glands	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4.3	0.03	0.05	0.5	C07-08
Tonsil	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.12	0.01	0.01	0.1	C09
Other oropharynx	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.14	0.01	0.02	0.2	C10
Nasopharynx	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.37	0.04	0.04	0.4	C11
Hypopharynx	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.55	0.04	0.06	0.5	C12-13
Pharynx unspecified	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.14	0.01	0.01	0.1	C14
Oesophagus	97	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.99	0.11	0.21	2	C15
Stomach	155	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.62	0.28	0.59	4.6	C16
Small intestine	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.23	0.01	0.02	0.2	C17
Colon	216	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4.44	0.42	0.82	5.6	C18
Rectum	176	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.62	0.25	0.44	3.7	C19-20
Anus	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.18	0.01	0.03	0.2	C21
Liver	63	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.29	0.07	0.16	1.4	C22
Gallbladder etc.	46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.94	0.05	0.14	1	C23-24
Pancreas	52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.07	0.06	0.13	1.1	C25
Nose, sinuses etc.	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.21	0.01	0.03	0.2	C30-31
Larynx	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.43	0.02	0.04	0.5	C32
Trachea, bronchus and lung	135	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.77	0.26	0.47	3	C33-34
Other thoracic organs	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.06	0.01	0.01	0.1	C45
Bone	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.18	0.02	0.01	0.2	C46
Melanoma of skin	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.49	0.05	0.03	0.5	C40-41
Other skin	76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.56	0.08	0.17	1.7	C44
Mesothelioma	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.06	0.01	0.01	0.1	C45
Kaposi sarcoma	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C46
Connective and soft tissue	31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.64	0.04	0.08	0.7	C47-C49
Breast	1910	0	0	0	0	1.3	3.3	11.2	24.9	45.9	84.9	117.1	136.3	167.7	163.8	135.7	103.2	39.23	2.96	4.46	38.1	C50
Vulva	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.27	0.02	0.03	0.3	C51
Vagina	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.33	0.02	0.04	0.3	C52
Cervix uteri	273	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5.61	0.38	0.64	5.5	C53
Corpus uteri	265	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5.44	0.41	0.68	5.5	C54
Uterus unspecified	115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.36	0.22	0.32	2.4	C55
Ovary	272	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5.59	0.39	0.61	5.4	C56
Other female genital organs	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.41	0.03	0.04	0.4	C57
Placenta	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.06	0	0	0.1	C58
Kidney	48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.99	0.07	0.14	1.1	C64
Ureter	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C65
Renal pelvis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C66
Bladder	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	0.02	0.09	0.7	C67
Other urinary organs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C68
Eye	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.04	0	0	0	C69
Brain, nervous system	75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.54	0.1	0.15	1.6	C70-72
Thyroid	167	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.43	0.24	0.32	3.2	C73
Adrenal gland	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.01	0.01	0.1	C74
Other endocrine	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.01	0.01	0.1	C75
Hodgkin disease	39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.8	0.06	0.06	0.7	C81
Non-Hodgkin lymphoma	112	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.3	0.15	0.25	2.3	C82-85,C96
Immunoproliferative diseases	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C86
Multiple myeloma	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.62	0.04	0.07	0.6	C90
Lymphoid leukaemia	39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.8	0.05	0.09	0.9	C91
Myeloid leukaemia	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.4	0.1	0.15	1.4	C92-94
Leukaemia unspecified	71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.27	0.02	0.02	0.3	C95
Myeloproliferative disorders	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.02	0	0	0	MFPD
Myelodysplastic syndromes	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.21	0.01	0.03	0.2	MDS
Other and unspecified	104	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.14	0.13	0.26	2.2	O&U
All sites	5196	0	6.9	4.1	5.4	10	10.9	19.2	34.8	67.8	101.2	157.9	246.4	449.6	504.1	540	525.5	106.73	7.25	12.47	106.9	ALL

APPENDICES

Appendix 30: Cancer notification form

CANCER NOTIFICATION FORM (Explanatory notes overleaf) Cancer Registry Unit Institut Kanser Negara No. 4, Jalan P7, Presint 7 62250 Putrajaya Malaysia Tel: 03-88925555 Fax: 03-88925625		NCR 02 CONFIDENTIAL	REGISTRY COPY FOR REGISTRY USE Case No. CR4: <input type="checkbox"/> Pending <input type="checkbox"/> Confirmed Mode of notification 1. Spontaneous 3. Other 2. On request
1. PATIENT			
Identification No: <input type="text"/>		Old I.C. No: <input type="text"/>	
[Malaysian New I.C.]		[Malaysia Old I.C./Police/Arm Force/Passport]	
Name: _____			
Usual Residential Address: _____			
Postcode: <input type="text"/>		State: _____ District: _____	
Date of birth: <input type="text"/> / <input type="text"/> / <input type="text"/>		Ethnic group: _____ Sex: _____ Citizenship: _____	
D D / M M / Y Y		1 <input type="checkbox"/> Malay 5 <input type="checkbox"/> Others.... 1 <input type="checkbox"/> Male 1 <input type="checkbox"/> Malaysian	
Age <input type="text"/> Years		2 <input type="checkbox"/> Chinese [Please specify] 2 <input type="checkbox"/> Female 2 <input type="checkbox"/> Permanent Resident	
		3 <input type="checkbox"/> Indian 3 <input type="checkbox"/> Others [Please specify]	
		4 <input type="checkbox"/> Other Indig [Please specify]	
2. SOURCE INFORMATION		6. STAGE OF DIAGNOSIS [at time of diagnosis]	
1 <input type="checkbox"/> Hospital/Clinic _____		<input type="checkbox"/> Stage I <input type="checkbox"/> Stage IV	
Reg. No: _____		<input type="checkbox"/> Stage II <input type="checkbox"/> Unknown	
2 <input type="checkbox"/> Pathology lab _____		Lymph node involvement 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No	
Reg. No: _____		Remote metastasis 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No	
3 <input type="checkbox"/> Other sources _____			
3. DIAGNOSIS [Specify primary organ/ site cancer/exact location/ laterality if possible]		7. TYPE OF TREATMENT [Date started treatment]	
Topography (Site) _____		<input type="checkbox"/> None <input type="checkbox"/> Surgery (/ /)	
Morphology (Histology) _____		<input type="checkbox"/> Chemotherapy (/ /) <input type="checkbox"/> Radiotherapy (/ /)	
		<input type="checkbox"/> Hormonal (/ /) <input type="checkbox"/> Unknown	
		<input type="checkbox"/> Others (/ /) [Please specify]	
4. DATE OF DIAGNOSIS <input type="text"/> / <input type="text"/> / <input type="text"/>		8. PRESENT STATUS	
D D / M M / Y Y		1 <input type="checkbox"/> Alive 2 <input type="checkbox"/> Dead	
5. BASIS OF DIAGNOSIS		Date last seen <input type="text"/> / <input type="text"/> / <input type="text"/>	
<input type="checkbox"/> Death certificate only <input type="checkbox"/> 6 Histology of metastasis		D D / M M / Y Y	
<input type="checkbox"/> 1 Clinical <input type="checkbox"/> 7 Histology of primary tumor		If dead, date of death <input type="text"/> / <input type="text"/> / <input type="text"/>	
<input type="checkbox"/> 2 Clinical investigation <input type="checkbox"/> 9 Unknown		D D / M M / Y Y	
<input type="checkbox"/> 4 Specific tumor markers		Cause of death: _____	
<input type="checkbox"/> 5 Cytology			
9. REMARKS [if any]			
DATE OF NOTIFICATION <input type="text"/> / <input type="text"/> / <input type="text"/>		Notified by: _____	
D D / M M / Y Y		[Name and designation of reporting Officer]	
		Clinic/Hospital name: _____	
		Tel. No: <input type="text"/> <input type="text"/>	
<p>PLEASE FILL THIS FORM WITH ANY INFORMATION AVAILABLE WITH YOU AND SEND IT AS SOON AS POSSIBLE</p> <p>PLEASE MAINTAIN CONFIDENTIALITY AT ALL TIME</p> <p>THANK YOU FOR YOUR COOPERATION</p>			

APPENDICES

Appendix 31: Explanatory notes for completing cancer notification form

Please Notify

- a) All case of cancers (i.e. carcinomas, sarcomas, leukaemias and all other malignant tumours) diagnosed or treated in your hospital, clinic or practice.
- b) Confirmed cases of cancer as well as cases of 'probable cancer' in which the diagnosis is based only on clinical finding (i.e. without histological, radiological or other methods of confirmation).
- c) All cases diagnosed in Malaysia regardless of citizenships or place of domicile of the patient.
- d) Cancer cases referred to your hospital/clinic/practice which may have already been notified by the previous attending doctor.
- e) Follow up cases; please use the same form (Fill in name, I/C number, source of information and any other information that is different from the original previous notification form). You may choose to notify only once.

PROCEDURE

1. Patient
 - Identification No.
 - For Malaysian patient with new I/C No. fill up all the 12 digits and the old I/C No. if available.
 - For patient with only old I/C No. fill up his/her I/C No. in the Identification No. boxes.
 - Children below 12 years without NRIC, insert patient's I/C No. with additional M or F in the appropriate boxes indicating mother or father NRIC was used (e.g. A 1234567M).
 - Passport No. Police/ Arm Forces Identification Card Number to be used for foreigners/ police/ arms personnel. (Please indicate).
 - Name – Full name in block letters as in NRIC / passport.
 - Usual Resident Address: Address where the patient usually resides at least for 6 months [Note: The address NRIC may not be the same].
 - Date of birth: Insert date of birth of patient into boxes. [If not available insert year of birth].
 - Sex, Ethnic Group, Citizenship: Tick appropriate box.
2. Source of Information (refers to Hospital/ Clinic the notifying doctor is working in).
3. Diagnosis (If insufficient space, write the information on a piece of paper and attach as appendix).
Diagnosis (Site for topography): Please write in words with as much detail as possible.
Pathological Diagnosis (Morphology): Please write in words with as much detail as possible.
4. Date of Diagnosis: Insert date of diagnosis made (Date that can be verified from records) and follow IARC definition*.
5. Basis of diagnosis: Tick appropriate box(es).
6. Stage of Disease at the time of diagnosis: Fill in and tick appropriate box(es).
7. Type of treatment: Tick appropriate box(es) and fill in date of first treatment.
8. Present status: Tick the appropriate box and fill in relevant details.
9. Date of notification: Insert the date into the appropriate box.
10. Notified by: Fill in the relevant details. Please give the accessible contact number of the ward, clinic or hospital.

* If patient is being followed up frequently: for example when undergoing treatment, the attending practitioner may choose to notify only once

*Definition of Incidence Date

1. Date of first histological or cytological confirmation
 - a) Date when the specimen was taken (biopsy or operation).
 - b) Date of receipt by the pathologist.
 - c) Date of the pathology report.
2. Date of admission to the hospital because of this malignancy.
3. Date of first consultation at the outpatient clinic (only).
4. Date of diagnosis, other than 1, 2 or 3.
5. Date of death, if no information than that the patient has died because of a malignancy.
6. Date of death, if the malignancy is discovered at autopsy.



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