

**SINGAPORE
CANCER
REGISTRY
REPORT NO. 8**

**Cancer Incidence and Mortality 2003 – 2012
and Selected Trends 1973 – 2012
In Singapore**

National Registry of Diseases Office

SINGAPORE CANCER REGISTRY (2015)

Previous Publications:

1. K Shanmugaratnam, HP Lee, NE Day: Cancer Incidence in Singapore 1968-1977. IARC Scientific Publications No. 47, 1983.
2. HP Lee, NE Day, K Shanmugaratnam: Trends in Cancer Incidence in Singapore 1968-1982. IARC Scientific Publications No. 91, 1988.
3. HP Lee, KS Chia, K Shanmugaratnam: Cancer Incidence in Singapore 1983-1987. Singapore Cancer Registry, Report No. 3, 1992.
4. KS Chia, HP Lee, A Seow, K Shanmugaratnam: Trends in Cancer Incidence in Singapore 1968-1992. Singapore Cancer Registry, Report No. 4, 1996.
5. KS Chia, A Seow, HP Lee, K Shanmugaratnam: Cancer Incidence in Singapore 1993-1997. Singapore Cancer Registry, Report No. 5, 2000.
6. A Seow, WP Koh, KS Chia, LM Shi, HP Lee, K Shanmugaratnam: Trends in Cancer Incidence in Singapore 1968-2002. Singapore Cancer Registry, Report No. 6, 2004.
7. CS Wong, KY Chow, GH Lim, V Bhalla, HP Lee, KS Chia: Cancer Survival in Singapore 1968-2002. Singapore Cancer Registry, 2008.
8. National Registry of Diseases Office: Trends in Cancer Incidence in Singapore 1968-2007. Singapore Cancer Registry, Report No. 7, 2010.
9. National Registry of Diseases Office: Cancer Survival in Singapore 1968-2007. Singapore Cancer Registry, 2011.

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EXECUTIVE SUMMARY

Incidence

A total of 56,774 incident cases of cancer were reported in the period 2008-2012. The crude incidence rate of cancer has more than doubled since 1973-1977. The age-standardized incidence rates (ASIR) for all cancers vary by gender, ethnicity, and age, and have been increasing steadily since 1973-1977. Males are observed to have a consistently higher cancer incidence rate, except for the Malays in 2003-2012 and Indians from 1978-2012 (Table 6.1). Overall, the Chinese are at highest risk of being diagnosed with cancer.

Gender

Lung cancer remained the most frequently diagnosed cancer among males for three decades, from 1973 – 2002, but colorectal cancer gradually caught up and overtook lung cancer as the leading cancer diagnosed in men from year 2003 onwards (Table 8.1(a)). On the other hand, female breast cancer has consistently been the most common cancer diagnosed in women, followed by colorectal and lung cancers (Table 8.1(b)).

Ethnicity

Myeloid neoplasms have risen in ranking among Malay males as well as Indian males and females (Table 8.2). The Chinese were at higher risk for all the three leading incident cancers in both men (colo-rectum, lung, prostate) and women (breast, colo-rectum, lung). Malays have a significantly higher risk of being diagnosed with lymphoid neoplasms compared to Chinese, and Indians have a significantly higher risk of being diagnosed with mouth cancer compared to Chinese (Table 6.3). On the other hand, the Malays and Indians also have significantly lower risk of contracting skin cancer as compared to the Chinese.

Age

Lymphoid neoplasms are more common in young adult males, while colo-rectum, lung, and prostate cancers make up an increasing proportion of cancer diagnoses among older males (Figure 7.1(a)). Meanwhile, breast cancer is consistently the most common cancer diagnosis in young and middle-aged adult females; and among older females, colo-rectum and breast cancers are the most common (Figure 7.1(b)).

Trends

On the whole, the data show substantial increases in the rates of colo-rectum and prostate cancers among males, and cancers of the breast, ovary and corpus uteri among females over the period 1973-2012. Although the age-standardized incidence of lung cancer has been falling for both males and females, particularly the former, it still remains among the three leading cancers diagnosed among men and women (Figure 8.3).

Over the past 10 years, the incidence rates have risen the fastest for kidney, prostate and myeloid neoplasms among males and for thyroid, brain and connective tissue among females (Figure 8.4).

Among male incident cancers, skin cancer has risen by two ranks (from 8th to 6th most common) while lymphoid neoplasms and kidney cancer have both risen a notch in ranking compared to 2003-2007 (from 6th to 5th and from 10th to 9th respectively). Among female incident cancers, skin cancer incidence has risen by three ranks (from 9th to 6th) while thyroid cancer has risen a notch in ranking (from 10th to 9th) compared to 2003-2007. Notably, cervical cancer has fallen four notches in ranking, from 6th in the period 2003-2007 to 10th in 2008-2012 (Table 8.1). It must be noted, however, that the rankings are relative, and should not be used in isolation from incidence rates to determine if there is a rise or fall in the incidence of that particular cancer.

Mortality

Cancer has overtaken diseases of the circulatory system (including ischemic heart disease) to become the leading cause of death since 2011 (Fig. 5.1). The three leading cancers that account for the greatest number of cancer fatalities in men are lung, liver, and colon cancers, while that for women are breast, lung, and colon cancers (Table 5.2). Overall, lung, liver, and colon cancers result in the greatest number of fatalities.

The mortality rates of most of the leading cancer sites have declined over the past 15 years while mortality rates of kidney and prostate cancers have significantly increased over the past 2 calendar periods from 2003 – 2007 to 2008 – 2012 (Table 5.2).

International Comparisons

In terms of the three leading cancers diagnosed in males (colo-rectum, lung, prostate) and females (breast, colo-rectum, lung), the incidence rates among the Singapore population in comparison to other populations vary by gender and ethnicity. The incidence of female breast cancer in the three Singaporean ethnic groups are generally lower than those of developed Western countries, but Chinese females in Singapore have higher rates of breast cancer incidence than do other ethnic Chinese communities in other parts of Asia. Singaporean Chinese males have higher incidence rates of lung cancer than a majority of Asian populations, including their Malay and Indian counterparts, whereas Singaporean Chinese females exhibit rates comparable to other ethnic Chinese populations in Asia. The incidence of colorectal cancer in the Singapore population is high as compared to other Asian populations, especially the Chinese, regardless of gender. Incidence rates of prostate cancer among the male resident Singapore population remain low as compared to other Western populations.

1. INTRODUCTION

The Singapore Cancer Registry (SCR) has been collecting and reporting cancer statistics in Singapore since 1968. There were 7 previous SCR publications [1-7] that reported on the cancer incidence in Singapore as well as the organization and operations of the SCR. This latest report aims to update the information from the SCR and to document the trends in cancer incidence between 1973 and 2012.

In this report, we have chosen to use population denominators from the Department of Statistics (DOS), Singapore, to calculate incidence rates. The figures are accurate as at 2nd July 2015. This set of denominators is currently used by most government agencies and by adopting these denominators, we will align our report with other official publications. Previously, SCR used population denominators that were obtained through intra- and extrapolation of population figures from the census years of 1980, 1990 and 2000 [7-9]. In this report, only Singapore citizens and permanent residents (i.e. "Singapore Residents") are included and age standardization is obtained by direct method using the Union for International Cancer Control (UICC) "World Population" [10].

All records in the SCR go through the processes of matching, verification, registration, and classification before they are finalised. The data contained in this document are the 1973-2012 statistics finalised in the SCR as at 15th April 2015.

There were changes in the histological coding systems used by the SCR between 1973 and 2012. The International Classification of Diseases, 9th Revision (ICD-9) [11] and the Manual of Tumour Nomenclature and Coding (MOTNAC) [12] were used for classification of primary sites and morphology coding respectively up till 1992. Between 1993 and 2002, SCR used the International Classification of Diseases for Oncology, 2nd Edition (ICD-O-2) [13] for classification of both primary site and morphology. From 2003 onwards, SCR adopted the International Classification of Diseases for Oncology, 3rd Edition (ICD-O-3) [14]. In this report, we present the entire set of data on primary site using ICD-9 to allow for comparison across periods.

The haematopoietic classifications from 1998 – 2012 in this monograph are adopted from the WHO classification of tumours of the haematopoietic and lymphoid tissues 4th edition, and we have moved in line with both the Surveillance, Epidemiology and End Results (SEER) Program of the National Cancer Institute (NCI) and the North American Association of Central Cancer Registries (NAACCR), which have both used the WHO classification as the coding standard beginning January 1, 2010.

With the new publications of the WHO Classification of Tumours of certain systems during the period 2010 to 2015, there has been the introduction of new classification systems and morphology codes. These have been widely used by the pathologists in Singapore for diagnosis of pathological specimens where appropriate. This has thus brought about certain changes in the reporting of various tumours under different subheadings or morphological terminology and codes. Where possible, the SCR has tried to accommodate these changes in the listing of the various types of tumours. The changes are reflected in the sections on morphology and incidence in the years 2008 – 2012. The new publications by the WHO on classification of tumours are that of tumours of the breast (2012), digestive system (2010), soft tissue and bone (2013), female reproductive system

(2014), and lung, pleura, thymus, and heart (2015). It has to be understood that in some instances changes in the diagnostic terminology can be at best defined only after histological review of the cases in question. The ICD-O-3 SEER Histology Validation list has also been used in conjunction with the new WHO classification.

This report can be downloaded at National Registry of Diseases website www.nrdo.gov.sg.

2. THE COUNTRY AND ITS POPULATION

2.1 Geography And Climate

Singapore is situated in Southeast Asia and it lies at the southern tip of Malaysian peninsular. It has a total land area of approximately 707.1 square kilometres, comprising the mainland and several smaller islands. As Singapore is located close to the equator, it enjoys relatively stable temperatures throughout the year. The average daily maximum and minimum temperatures are around 31.1°C and 24.8°C respectively. The country also experiences high humidity and rainfall. Rain falls throughout the year and the highest rainfalls are usually recorded in November to January, during the monsoon season.

2.2 Population Growth

In this monograph, the label “Singapore residents” refers to citizens and those who have been granted permanent residence in Singapore, and “total population” comprises of both Singapore residents and non-residents. These terms and definitions are identical to those used in the Census of Population [7-9, 17].

The population pyramids for the resident population enumerated from the 1980, 1990, 2000 and 2010 censuses are displayed in Figure 2.1. The historical population sizes and growth rates in the census years of 1970, 1980, 1990, 2000 and 2010 are shown in Table 2.1. Between 2008 and 2010, the growth rate for the total population (using the mid-year population estimates) decreased from 5.5% to 1.8% before increasing again to 2.5% in 2012. In contrast, the rate for the Singapore resident population remained steady around 1.6% [18].

For this report, the resident population denominators for the year 2010 were used.

Figure 2.1 POPULATION PYRAMIDS FOR THE RESIDENT POPULATION: 1980, 1990, 2000 AND 2010

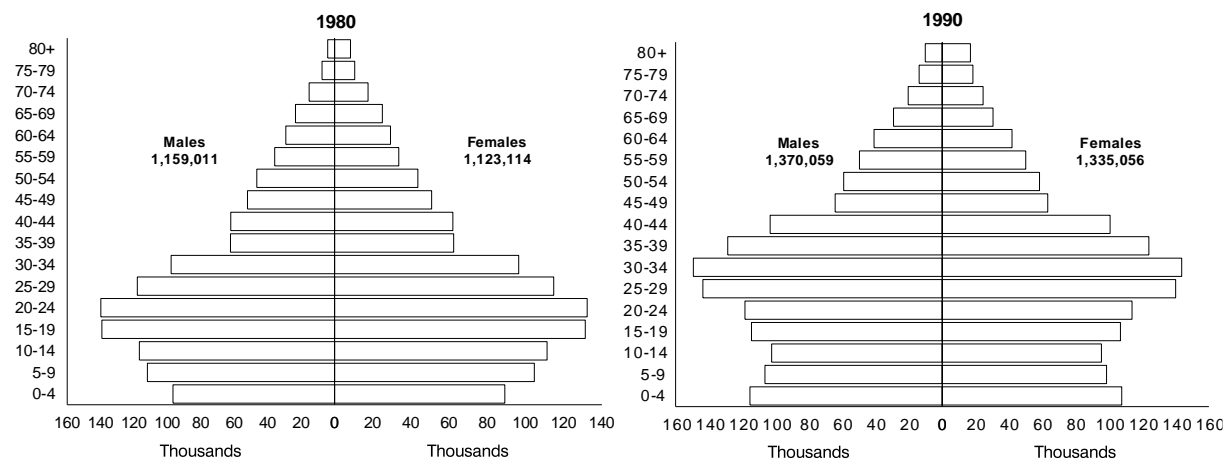


Chart 1.1 Age Pyramid of the Resident Population

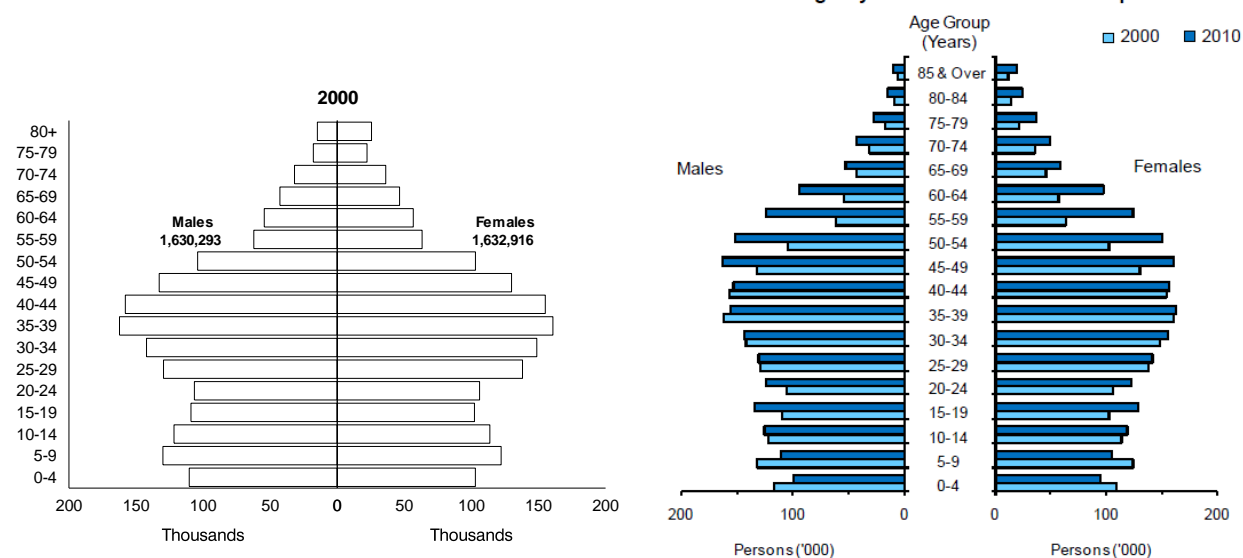


Table 2.1 POPULATION ESTIMATES AND GROWTH RATES FOR THE RESIDENT POPULATION: 1970, 1980, 1990, 2000 AND 2010

| Census year | Resident population (in thousands) | Growth rate (%) |
|-------------|---------------------------------------|-----------------|
| 1970 | 2,013.6 | NA |
| 1980 | 2,282.1 | 1.3 |
| 1990 | 2,735.9 | 1.7 |
| 2000 | 3,273.4 | 1.8 |
| 2010 | 3,771.7 | 1.5 |

2.3 Ethnic Distribution

Singapore is a multiethnic country and the three major ethnic groups in the resident population are the Chinese, the Malays and the Indians. There are also a significant number of residents from other ethnic groups. The ethnic distributions of Singapore residents in the censuses of 1970, 1980, 1990, 2000 and 2010 [7-9, 17] are shown in Table 2.2. As of end June 2012, there were 2,832,000 Chinese, 509,500 Malay and 351,000 Indian Singapore residents. Ethnicity of Singapore residents is recorded based on father's ethnic group and 20.7% of all registered marriages in 2012 were interethnic marriages [18].

Table 2.2 ETHNIC DISTRIBUTION OF SINGAPORE RESIDENTS: 1970, 1980, 1990, 2000 AND 2010

| | Chinese | Malays | Indians | Others |
|------|-----------|---------|---------|--------|
| 1970 | 1,579,900 | 311,400 | 145,200 | 38,100 |
| 1980 | 1,787,800 | 328,700 | 143,400 | 22,200 |
| 1990 | 2,127,900 | 384,300 | 194,000 | 29,600 |
| 2000 | 2,513,847 | 455,207 | 257,866 | 46,443 |
| 2010 | 2,206,695 | 466,766 | 200,919 | 37,554 |

Within each ethnic group, there are further subdivisions. Based on the census conducted in 2010, the major dialect groups in Chinese resident population are Hokkien (40.0%), Teochew (20.1%), Cantonese (14.6%), Hakka (8.3%), Hainanese (6.4%) and Others (10.6%). The Malay resident population comprises of Malays (67.7%), Javanese (17.6%), Boyanese (11.3%) and Others (3.4%). The Indian resident population is made up of Tamils (54.2%), Malayalis (7.6%), Hindis (3.8%), Sikhs (3.7%), Hindustanis (1.4%) and Others (29.3%) [9].

2.4 Gender Distribution

The male to female ratio amongst Singapore residents has been declining over time. The ratios in 1970, 1980, 1990, 2000 and 2010 were 1.049, 1.032, 1.026, 0.998 and 0.974 respectively. As of end June 2012, there were 1,880,000 male and 1,938,200 female Singapore residents, giving a male to female ratio of 0.969:1 [18].

2.5 Migrant Status, Citizenship and Residence

There has been an increase in the proportion of non-residents in the total population of Singapore. The proportion of non-residents rose from 5.5% in 1980 to 25.7% in 2010, where it numbered 1,305,000.

2.6 Healthcare System

Singapore has a comprehensive healthcare system. There are over 2,000 private medical practitioner's clinics and 18 outpatient polyclinics that cater to the primary healthcare needs in Singapore. These are complemented by a network of hospitals, including 8 public hospitals, 10 private hospitals, and 6 national specialty centres for cancer, cardiac, eye, skin, neuroscience and dental care. The public hospitals have capacities of 185-2,010 beds each; whereas the private hospitals tend to be smaller, providing 20-345 beds each. The public healthcare system provides affordable and good quality healthcare services to all Singaporeans through subsidized medical services. Public institutions provide 80% of hospital care and 20% of primary healthcare, while the private sector provides 20% of hospital care and 80% of primary healthcare [19].

Singaporeans are encouraged to take responsibility for their health and adopt healthy lifestyle practices. In order to strengthen health promotion, health education and disease prevention in Singapore, the Health Promotion Board was set up in 2001. Many of the national preventive medicine initiatives such as cancer screening programs like BreastScreen Singapore and CervicalScreen Singapore, and Workplace Health Promotion Programme come under HPB [20].

3. THE SINGAPORE CANCER REGISTRY

3.1. History of the Singapore Cancer Registry

The Singapore Cancer Registry was started in 1967 through the joint efforts of the National University of Singapore, the Ministry of Health and the International Agency for Research on Cancer. The key objective of setting up this registry was to obtain information on population-based cancer trends and patterns in Singapore. Singapore is considered a favourable location for comprehensive cancer registration as it is a small country with a relatively compact and stable population. There is generally good access to medical care so we can expect that most cancer patients are diagnosed and treated in the local hospitals. In addition, there is adequate operational and technological infrastructure to support the cancer registration process.

The Singapore Cancer Registry was first established in Singapore General Hospital (SGH) to collect information on all cancers diagnosed in Singapore from 1st January 1968 and up till 2001, it was staffed by one pathologist, three part time epidemiologists, three secretaries and one record searcher. The Registry was transferred to the Ministry of Health in April 2001 and subsequently came under the National Registry of Diseases Office (NRDO), a unit within the Research and Strategic Planning Division in Health Promotion Board, Singapore. Within NRDO, there are seven disease specific registries, namely those of cancer, end-stage renal failure, stroke, acute myocardial infarction, donor care, trauma, and birth defects (in chronological order of establishment). Each of these are staffed by dedicated teams that perform field data collection. Currently, the operation of the Singapore Cancer Registry is run by two nurse managers, two senior executives, one senior staff nurse, one staff nurse and two management support staff.

3.2. Legislation

In 2007, the National Registry of Diseases Act was enacted to provide legislative cover for national disease registries including the SCR. The Act establishes the National Registry of Diseases and provides for compilation of information on disease incidence of selected diseases for purposes of disease prevention and control.

3.3. Registry structure and methods

3.3.1. Sources of data

We obtain information on incident cancer cases through a) cancer notifications from all sections of the medical profession, b) pathology records, c) hospital records and d) death certificates.

The vast majority of cancer cases are diagnosed histologically and we receive pathology reports of cancer from all public and private laboratories. All cases with mention of cancer in hospital discharge forms and death certificates are also included and certification of death is essentially complete in

Singapore. These records allow us to compare against the cancer notifications received from doctors.

To improve cancer registration, SCR verified all notifications from 2002 onwards for accuracy of information through review of the medical records at the hospitals. The records of cancer cases are maintained electronically and may be updated as new information becomes available.

Cancer notification has become compulsory following the enactment of the National Registry of Diseases Act in 2009. Doctors can notify both histologically confirmed as well as clinically diagnosed cancers to SCR through hand delivery (including courier), registered mail or electronic notification.

3.4. Data processing and coding

a) Identification Key

The primary identification key for Singapore residents is the National Registration Identity Card (NRIC) number. In practice, however, majority of cases were reported using hospital or clinic registration or account numbers. For non-residents, their passport numbers or foreign identification (FIN) numbers are used. These unique numbers allow us to avoid duplication of records in our database, especially when we update our data from multiple sources.

b) Verification of information

All notifications are corroborated with clinical medical records. Registry coordinators (RC) will review the patient's hardcopy medical case-files and electronic medical records to verify discrepancies in information and extract quality data to complete the registration of case records.

c) Primary site registration

The Singapore Cancer Registry adopted the International Classification of Diseases for Oncology, 3rd Edition (ICD-O-3) [14] for classification of primary sites from 2003 onwards. This differs from the last report when we used ICD-O-2 [13] classification for the period 1998-2002.

d) Multiple primary registrations

The following guidelines are used for the registration of single / multiple primaries:

- ICD-O-3 - Multiple Primary Neoplasms
- Multiple Primary and Histology Coding Rules 2007 (National Cancer Institute (NCI) / Surveillance Epidemiology and End Results Program (SEER)).
- A second or subsequent primary is only registered when the 'new' primary site is confirmed histologically.
- The exceptions are liver, kidney, pancreas and brain tumours, which are may be diagnosed clinically. Such cases are reviewed and verified as a new primary by a doctor or visiting pathologist prior to registration.

- For cases diagnosed from 2010 and after, new primary of the same histology type / group of paired organs (e.g. Breast) is recorded as a subsequent primary but not counted as a cancer incidence in accordance to the rule – ‘ Only one tumour shall be recognized as arising in an organ or pair of organs or a tissue (ICD-O-3 – Multiple Primary Neoplasms, page 35) [14]

e) Coding of Histology

The Singapore Cancer Registry adopted the International Classification of Diseases for Oncology, 3rd Edition (ICD-O-3) [14] for classification of morphology from 2003 onwards. The Manual of Tumour Nomenclature and Coding (MOTNAC) [12] was used for classification of primary sites and morphology coding up till 1992 and between 1993 and 2002, the Singapore Cancer Registry employed the International Classification of Diseases for Oncology, 2nd Edition (ICD-O-2) [13].

We included all malignant tumours (5th digit code ‘3’) and tumours of borderline malignancy (5th digit code ‘1’) in the incidence data.

While cases of carcinoma-in-situ are registered, they are excluded in the calculation of incidence rates. From year 2008, when cases of an invasive tumor are reported within 60 days of an in-situ tumour of the same lesion, only the invasive tumour is registered.

f) Follow-up

All treatments administered within six months from the date of diagnosis are recorded but case record is not updated yearly. Records are updated with the date and cause of death information received from the Death Registry.

g) Data storage

Most of the National Registry of Diseases System (NRDS) was developed to provide full support for the operations of the cancer registry; merging data from varied sources, ensuring valid data capture, data security and generation of timely reports. As much as possible, electronic transmission of data was established between hospitals, pathology laboratories, oncology clinics, cancer treatment centres and the registry. Registry coordinators from the cancer registry visited the medical record offices of the hospitals to collect additional information with their laptops.

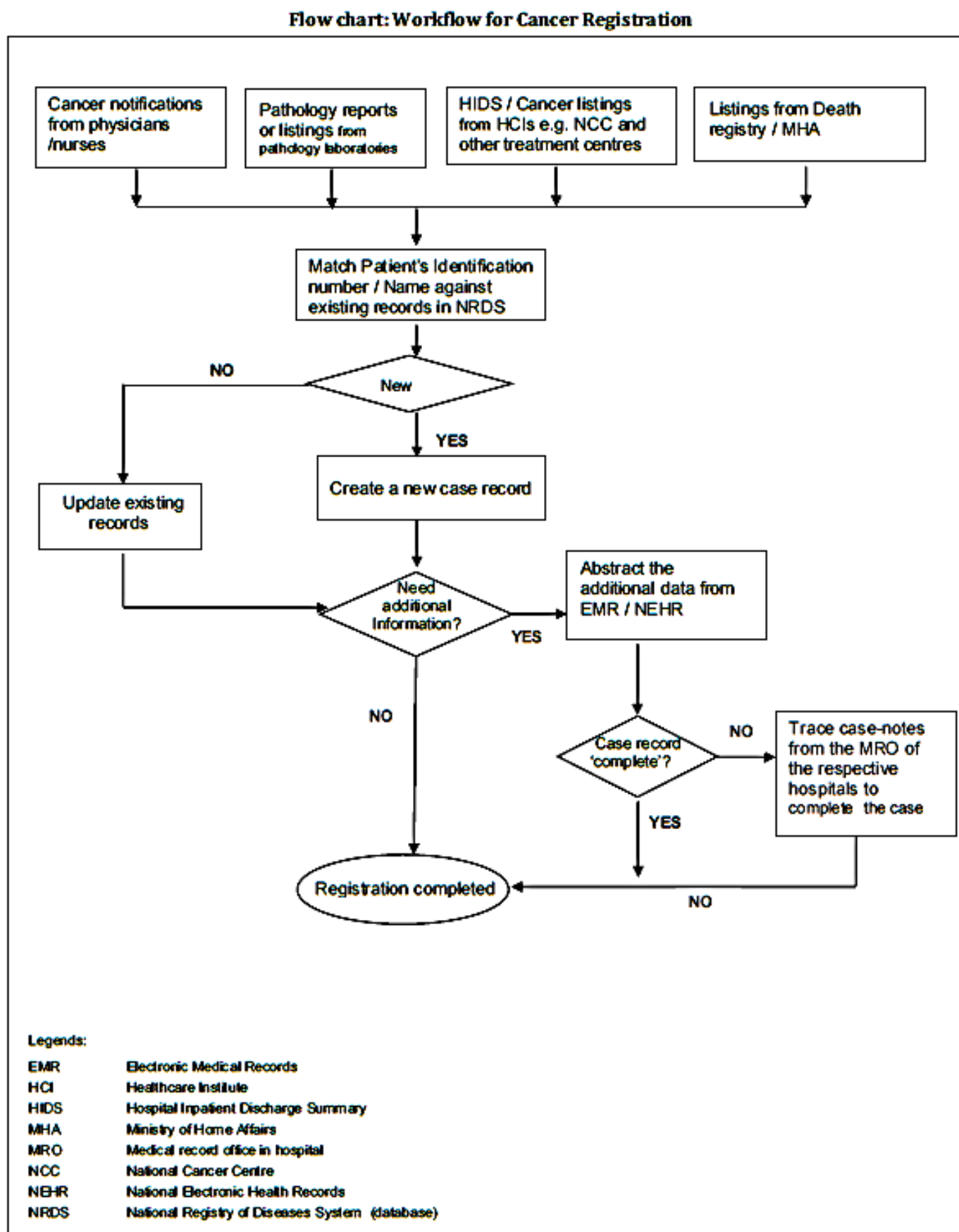
Information submitted by the medical practitioners who continued to notify cancer cases using hard copy notification forms was entered into the NRDS. The hard copy forms were subsequently scanned and stored in an electronic repository. Cancer cases are also reported by nurses and doctors via the E-notification service at the Health Professional Portal.

h) Data requests

The data in the Singapore Cancer Registry is a resource for epidemiological studies, public health research and policy making. Request forms can be downloaded from NRDO’s website. Upon approval, the information is usually released as aggregate data or key-coded records.

The data in the Registry are updated regularly and hence there may be differences in the figures presented in this report when compared to previous reports. The information contained within this report should be considered to be more reliable where differences exist.

Figure 3.1



3.5 Denominators for Cancer Statistics

In the previous seven reports, population denominators (termed as “SCR population denominators” in this publication) that were generated through intra- and extrapolation of enumerated population figures from the censuses of 1970, 1980, 1990 and 2000 were used. The methods used to obtain these population estimates are shown in Appendix A1 in the previous reports. In this report, we continue to use SCR population denominators to calculate rates for the resident population (comprising citizens and permanent residents) for the 5-year periods from 1973 to 1982.

Department of Statistics (DOS) releases mid-year resident population estimates annually and these population denominators are widely used in official publications in Singapore. In this report, we used the 2010 population denominators obtained from DOS (termed as “DOS population denominators” in this publication) in the calculation of incidence rates from 1983 to 2012. We were unable to use DOS population denominators for earlier periods because published resident population denominators from DOS were available only from 1980 onwards.

DOS currently uses a register-based approach to generate the mid-year population estimates. This was first adopted in the 2000 Census where basic information of the population was obtained from the Household Registration Database (HRD), a database that uses information from administrative sources as well as the 1990 Census. The HRD is updated regularly from administrative sources [9, 21]. The register-based approach provides an accurate estimation of the resident and total population in Singapore.

4. CANCER INCIDENCE IN ALL RESIDENTS 2008-2012

There were 56,774 incident cases of cancer diagnosed among Singapore residents in 2008-2012. While there were more female cases and the female crude rate was higher, the age-standardized rate was greater in males.

Table 4.1 TOTAL NUMBER OF INCIDENT CANCERS BY GENDER AND FIVE-YEAR PERIOD, 1973-2012

| PERIOD | GENDER | NUMBER | % | CR | ASR |
|-----------|--------|--------|-------|-------|-------|
| 1973-1977 | Male | 8,556 | 58.0 | 158.0 | 246.3 |
| | Female | 6,187 | 42.0 | 118.9 | 161.2 |
| | Total | 14,743 | 100.0 | 138.8 | 200.6 |
| 1978-1982 | Male | 10,122 | 55.9 | 174.4 | 250.4 |
| | Female | 7,990 | 44.1 | 142.1 | 176.0 |
| | Total | 18,112 | 100.0 | 158.5 | 210.2 |
| 1983-1987 | Male | 11,674 | 53.7 | 185.6 | 243.5 |
| | Female | 10,060 | 46.3 | 164.5 | 183.8 |
| | Total | 21,734 | 100.0 | 175.2 | 210.4 |
| 1988-1992 | Male | 13,639 | 51.7 | 197.7 | 236.8 |
| | Female | 12,749 | 48.3 | 189.5 | 191.7 |
| | Total | 26,388 | 100.0 | 193.7 | 211.5 |
| 1993-1997 | Male | 16,216 | 50.8 | 214.1 | 236.7 |
| | Female | 15,721 | 49.2 | 209.7 | 196.0 |
| | Total | 31,937 | 100.0 | 211.9 | 213.3 |
| 1998-2002 | Male | 19,003 | 49.0 | 232.2 | 234.1 |
| | Female | 19,781 | 51.0 | 241.0 | 203.7 |
| | Total | 38,784 | 100.0 | 236.6 | 215.9 |
| 2003-2007 | Male | 22,308 | 48.7 | 259.0 | 234.2 |
| | Female | 23,491 | 51.3 | 268.7 | 206.1 |
| | Total | 45,799 | 100.0 | 263.9 | 216.6 |
| 2008-2012 | Male | 27,694 | 48.8 | 299.2 | 232.6 |
| | Female | 29,080 | 51.2 | 306.1 | 212.3 |
| | Total | 56,774 | 100.0 | 302.7 | 219.5 |

CR: Crude rate (per 100,000 per year)

ASR: Age-standardized rate (per 100,000 per year)

The sources of cases, types of notification and basis of diagnosis of all cases for the period 2008-2012 are given in Appendix A1. The most valid basis of diagnosis for selected sites in males and females respectively are given in Appendices A2 and A3.

The numbers and age-standardized rates for the highest ranking cancers (first ten ranks) for males and females from 2008-2012 are shown in Table 5.2, and the relative frequencies of the ten most frequent sites are shown in Figures 5.1 (a) and (b).

The numbers of cancers in all Singapore Residents by gender, site and 5-year age group for the period 2008-2012 are given in Appendices B1 (males) and B2 (females); the corresponding incidence rates are given in Appendices C1 and C2.

Figure 4.1(a) TEN MOST FREQUENT CANCERS IN MALES, 2008-2012

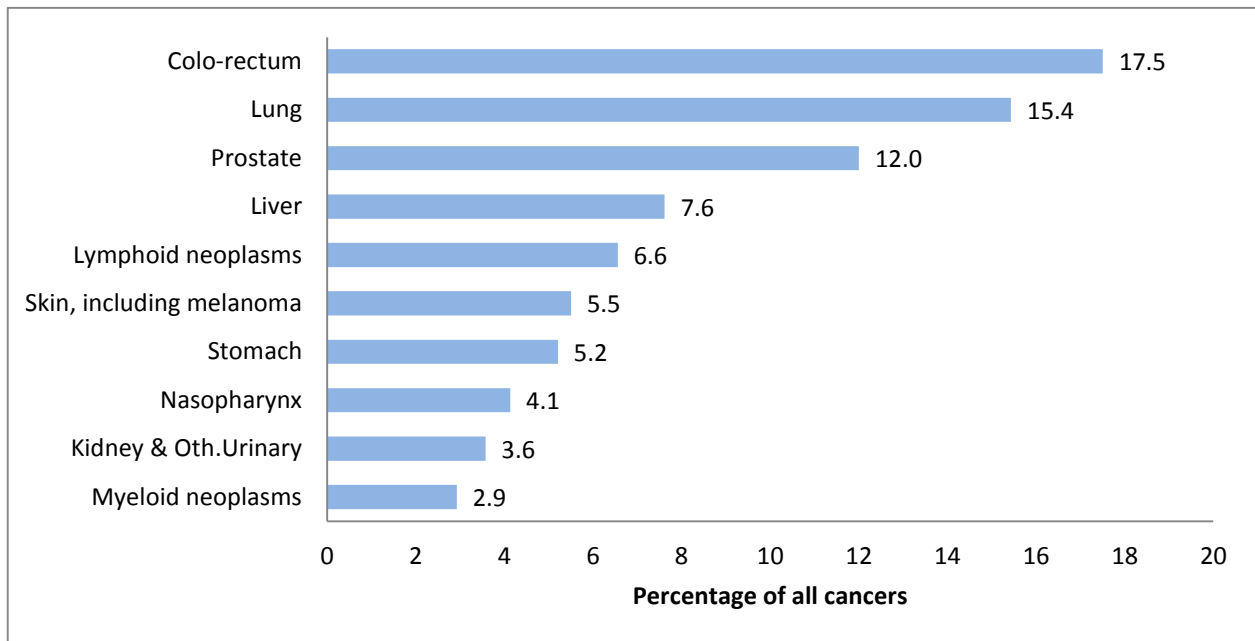


Figure 4.1(b) TEN MOST FREQUENT CANCERS IN FEMALES, 2008-2012

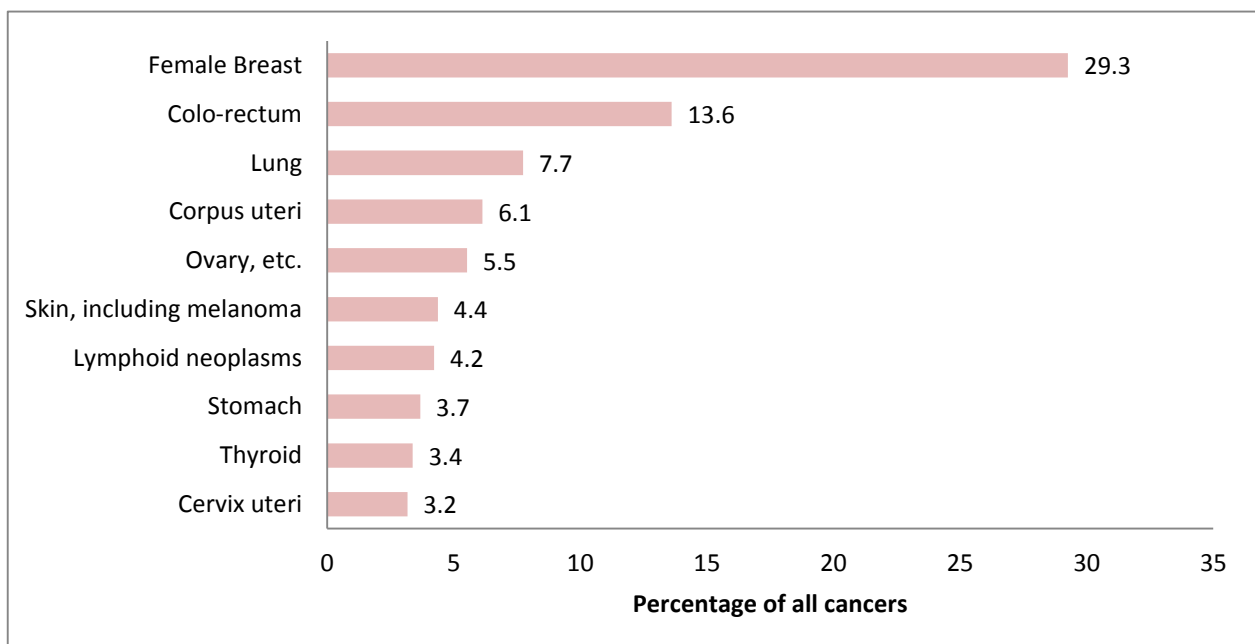


Table 4.2 TEN MOST FREQUENT CANCERS, ALL RESIDENTS, 2008-2012

| MALES | | | | |
|--------------|--------------------------|---------------|--------------|--------------|
| RANK | SITE | NO. | CR | ASR |
| 1 | Colo-rectum | 4,848 | 52.4 | 39.7 |
| 2 | Lung | 4,274 | 46.2 | 35.4 |
| 3 | Prostate | 3,324 | 35.9 | 28.5 |
| 4 | Liver | 2,109 | 22.8 | 17.3 |
| 5 | Lymphoid neoplasms | 1,816 | 19.6 | 16.7 |
| 6 | Skin, including melanoma | 1,524 | 16.5 | 12.5 |
| 7 | Stomach | 1,442 | 15.6 | 11.9 |
| 8 | Nasopharynx | 1,144 | 12.4 | 8.8 |
| 9 | Kidney & Oth.Urinary | 990 | 10.7 | 8.1 |
| 10 | Myeloid neoplasms | 810 | 8.8 | 7.0 |
| | Others | 5,413 | | |
| | All | 27,694 | 299.2 | 232.6 |

| FEMALES | | | | |
|----------------|--------------------------|---------------|--------------|--------------|
| RANK | SITE | NO. | CR | ASR |
| 1 | Female Breast | 8,509 | 89.6 | 62.7 |
| 2 | Colo-rectum | 3,957 | 41.7 | 27.3 |
| 3 | Lung | 2,249 | 23.7 | 15.4 |
| 4 | Corpus uteri | 1,784 | 18.8 | 13.1 |
| 5 | Ovary, etc. | 1,607 | 16.9 | 12.5 |
| 6 | Skin, including melanoma | 1,273 | 13.4 | 8.4 |
| 7 | Lymphoid neoplasms | 1,230 | 12.9 | 10.3 |
| 8 | Stomach | 1,069 | 11.3 | 7.1 |
| 9 | Thyroid | 984 | 10.4 | 7.8 |
| 10 | Cervix uteri | 922 | 9.7 | 6.8 |
| | Others | 5,496 | | |
| | All | 29,080 | 306.1 | 212.3 |

CR: Crude rate (per 100,000 per year)

ASR: Age-standardized rate (per 100,000 per year)

5. CANCER MORTALITY, 1973-2012

Table 5.1 shows the trends of cancer deaths among the total population from 1973-2012. The proportion of cancer deaths among all deaths has increased over the past 4 decades and cancer now accounts for more than a quarter of all deaths in Singapore, as compared to 17.8% in 1973-1977 (Figure 5.1). The crude annual cancer death rate declined slightly over the last two periods and stood at 102.6 per 100,000 in 2008-2012.

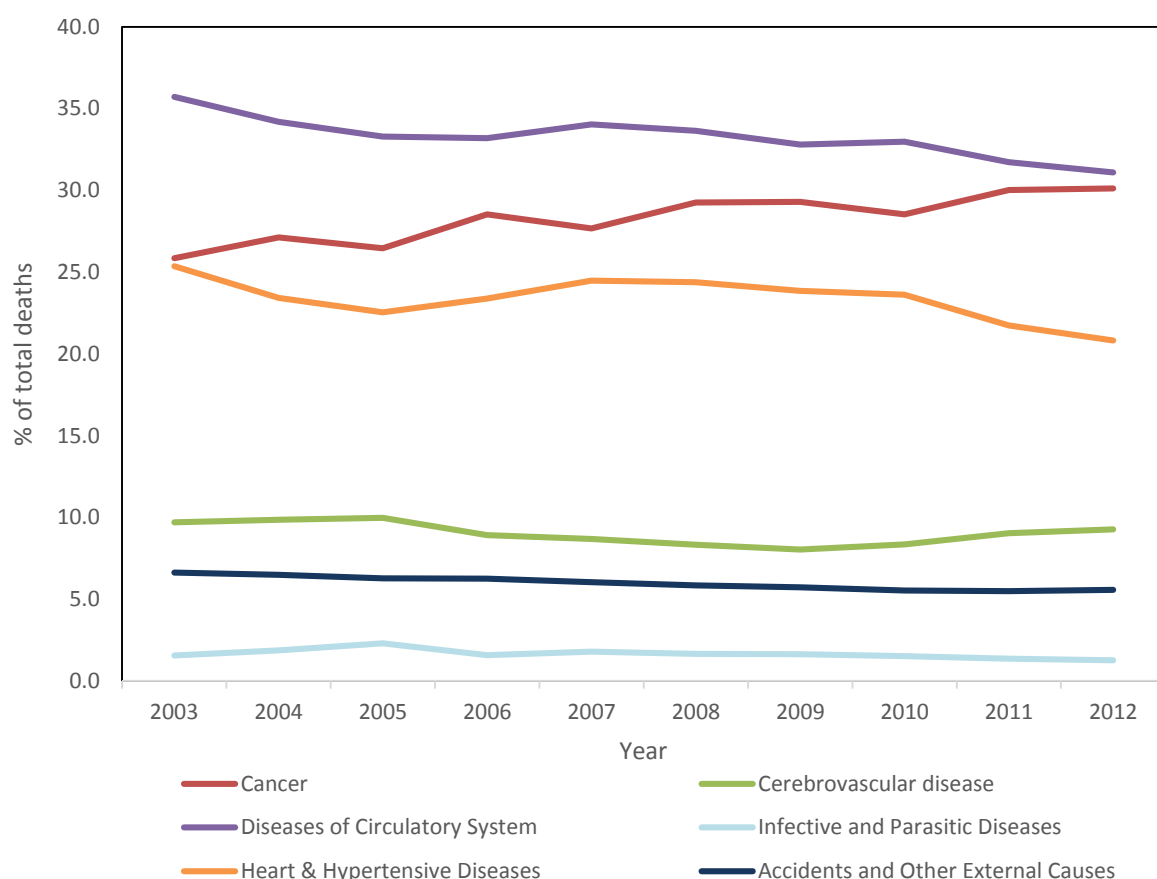
Table 5.1 CANCER DEATHS IN TOTAL POPULATION, 1973-2012

| Period | ^a Population-at-risk | ^a Mean annual number of cancer deaths | Crude annual cancer death rate (per 100,000 mid-term population) | Proportion of cancer deaths among deaths from all causes |
|-----------|---------------------------------|--|--|--|
| 1973-1977 | 2,249,900 (1975 Estimate) | 2,086.4 | 92.9 | 17.8 |
| 1978-1982 | 2,413,900 (1980 Census) | 2,543.8 | 105.4 | 20.2 |
| 1983-1987 | 2,558,000 (1985 Estimate) | 2,909.0 | 113.7 | 22.1 |
| 1988-1992 | 3,047,100 (1990 Census) | 3,312.6 | 109.8 | 23.7 |
| 1993-1997 | 3,524,500 (1995 Estimate) | 3,859.6 | 111.3 | 25.4 |
| 1998-2002 | 4,027,900 (2000 Census) | 4,233.0 | 105.4 | 27.1 |
| 2003-2007 | 4,265,800 (2005 Estimate) | 4,432.0 | 103.9 | 27.1 |
| 2008-2012 | 5,076,700 (2010 Census) | 5,209.8 | 102.6 | 29.5 |

^a Data from Census Reports[7-9, 17] and Yearbook of Statistics [18].

Over the past 10 years, the percentage of cancer deaths has been increasing steadily while that of deaths due to other causes has been generally declining (Figure 5.1). The percentage of deaths caused by cancer is inching towards that of diseases of the circulatory system (including ischemic heart disease). The proportion of deaths due to cerebrovascular disease (stroke) has been increasing over the past 3 years.

Figure 5.1. PROPORTION OF BROAD CAUSES OF DEATH IN TOTAL POPULATION, 2003-2012^a



^a Data from Yearbook of Statistics 2009-2014

Table 5.2 shows the trend in mortality rates for selected sites for the past 15 years. The mortality rates of lung, liver, colon, stomach, nasopharyngeal, oesophageal and laryngeal cancers have significantly declined.

Table 5.2. AGE-STANDARDIZED MORTALITY RATES FOR SELECTED CANCER SITES IN RESIDENT POPULATION, 1998-2012

| Site / Period | 1998-2002 | 2003-2007 | 2008-2012 |
|---------------|------------------|------------------|------------------|
| Lung | 41.5 (40.0-42.9) | 36.1 (34.8-37.3) | 30.7 (29.7-31.7) |
| Liver | 18.0 (17.0-18.9) | 15.8 (15.0-16.7) | 13.8 (13.1-14.4) |
| Colon | 13.3 (12.4-14.1) | 12.3 (11.5-13.0) | 10.4 (9.9-11.0) |
| Stomach | 12.5 (11.8-13.3) | 9.8 (9.2-10.5) | 7.7 (7.2-8.2) |
| Pancreas | 5.2 (4.7-5.7) | 5.6 (5.1-6.1) | 5.6 (5.1-6.0) |
| Rectum | 5.9 (5.4-6.5) | 5.8 (5.3-6.3) | 5.6 (5.1-6.0) |
| Prostate | 5.9 (5.3-6.5) | 4.8 (4.4-5.3) | 5.6 (5.1-6.0) |
| Nasopharynx | 6.4 (5.8-6.9) | 5.1 (4.7-5.5) | 4.2 (3.8-4.6) |
| Lymphoma | 4.3 (3.8-4.7) | 3.3 (2.9-3.7) | 3.2 (2.9-3.5) |
| Oesophagus | 4.6 (4.1-5.1) | 3.5 (3.1-3.9) | 3.0 (2.7-3.3) |
| Leukaemias | 3.5 (3.1-3.9) | 2.9 (2.5-3.3) | 3.1 (2.8-3.4) |
| Kidney | 2.4 (2.1-2.8) | 2.2 (1.9-2.5) | 2.7 (2.4-3.0) |
| Bladder | 2.7 (2.4-3.1) | 1.8 (1.5-2.1) | 1.7 (1.5-2.0) |
| Brain, CNS | 1.5 (1.2-1.7) | 1.6 (1.4-1.9) | 1.6 (1.4-1.9) |
| Larynx | 2.5 (2.1-2.9) | 1.6 (1.3-1.8) | 1.2 (1.0-1.4) |

Table 5.3. NUMBERS AND MORTALITY RATES FOR SELECTED CANCER SITES AND FOR ALL CANCERS IN RESIDENT POPULATION, 2008-2012

Table 5.3 shows the number of cancer deaths as well as the crude and age-standardized rates for selected cancer sites among the resident population in 2008-2012. Lung cancer is the most frequent cause of cancer deaths among the male resident population, accounting for almost a third of all cancer deaths and its age standardized mortality rate is more than double than that of liver cancer. Among female residents, breast, lung and colon cancers are the three most frequent causes of cancer deaths. It should be noted that the classifications of lymphoma and leukaemias are still used in this table due to cases that have been diagnosed prior to 1998 and have died during the period after the haematopoietic cancers have been reclassified.

| MALES | ICD9 | NUMBER | %^b | CR^c | ASR^d |
|--------------------------|-------------|---------------|----------------------|-----------------------|------------------------|
| Lung | 162 | 3,681 | 27.6 | 39.8 | 30.7 |
| Liver | 155 | 1,673 | 12.5 | 18.1 | 13.8 |
| Colon | 153 | 1,259 | 9.4 | 13.6 | 10.4 |
| Stomach | 151 | 924 | 6.9 | 10.0 | 7.7 |
| Pancreas | 157 | 670 | 5.0 | 7.2 | 5.6 |
| Rectum | 154 | 665 | 5.0 | 7.2 | 5.6 |
| Prostate | 185 | 652 | 4.9 | 7.0 | 5.6 |
| Nasopharynx | 147 | 531 | 4.0 | 5.7 | 4.2 |
| Lymphomas | 200-2 | 386 | 2.9 | 4.2 | 3.2 |
| Oesophagus | 150 | 369 | 2.8 | 4.0 | 3.0 |
| Leukaemias | 204-8 | 354 | 2.7 | 3.8 | 3.1 |
| Kidney & Oth.Urinary | 189 | 339 | 2.5 | 3.7 | 2.7 |
| Bladder | 188 | 203 | 1.5 | 2.2 | 1.7 |
| Brain, nervous system | 191-2 | 181 | 1.4 | 2.0 | 1.7 |
| Larynx | 161 | 146 | 1.1 | 1.6 | 1.2 |
| All cancer deaths | | 13,339 | 100.0 | 144.1 | 111.0 |

| FEMALES | ICD9 | NUMBER | %^b | CR^c | ASR^d |
|--------------------------|-------------|---------------|----------------------|-----------------------|------------------------|
| Breast | 174 | 1,982 | 17.9 | 20.9 | 14.2 |
| Lung | 162 | 1,846 | 16.7 | 19.4 | 12.2 |
| Colon | 153 | 1,235 | 11.2 | 13.0 | 8.0 |
| Liver | 155 | 703 | 6.4 | 7.4 | 4.5 |
| Stomach | 151 | 690 | 6.2 | 7.3 | 4.4 |
| Pancreas | 157 | 614 | 5.6 | 6.5 | 4.1 |
| Ovary, etc. | 183 | 553 | 5.0 | 5.8 | 3.9 |
| Rectum | 154 | 420 | 3.8 | 4.4 | 2.7 |
| Cervix uteri | 180 | 359 | 3.2 | 3.8 | 2.5 |
| Leukaemias | 204-8 | 267 | 2.4 | 2.8 | 2.0 |
| Lymphomas | 200-2 | 257 | 2.3 | 2.7 | 1.8 |
| Corpus uteri | 182 | 204 | 1.8 | 2.1 | 1.5 |
| Nasopharynx | 147 | 166 | 1.5 | 1.7 | 1.2 |
| Kidney & Oth.Urinary | 189 | 162 | 1.5 | 1.7 | 1.1 |
| Gall bladder, etc. | 156 | 156 | 1.4 | 1.6 | 1.0 |
| All cancer deaths | | 11,053 | 100.0 | 116.4 | 74.7 |

| TOTAL | ICD9 | NUMBER | % ^b | CR ^c | ASR ^d |
|--------------------------|-------|---------------|----------------|-----------------|------------------|
| Lung | 162 | 5,527 | 22.7 | 29.5 | 20.5 |
| Colon | 153 | 2,494 | 10.2 | 13.3 | 9.1 |
| Liver | 155 | 2,376 | 9.7 | 12.7 | 8.8 |
| Stomach | 151 | 1,614 | 6.6 | 8.6 | 5.8 |
| Pancreas | 157 | 1,284 | 5.3 | 6.8 | 4.8 |
| Rectum | 154 | 1,085 | 4.4 | 5.8 | 4.0 |
| Nasopharynx | 147 | 697 | 2.9 | 3.7 | 2.6 |
| Lymphomas | 200-2 | 643 | 2.6 | 3.4 | 2.4 |
| Leukaemias | 204-8 | 621 | 2.5 | 3.3 | 2.5 |
| Kidney & Oth.Urinary | 189 | 501 | 2.1 | 2.7 | 1.8 |
| Oesophagus | 150 | 464 | 1.9 | 2.5 | 1.7 |
| Brain, nervous system | 191-2 | 322 | 1.3 | 1.7 | 1.4 |
| Bladder | 188 | 289 | 1.2 | 1.5 | 1.0 |
| Gall bladder, etc. | 156 | 261 | 1.1 | 1.4 | 1.0 |
| Connective tissues | 171 | 199 | 0.8 | 1.1 | 0.8 |
| All cancer deaths | | 24,392 | 100.0 | 130.1 | 90.7 |

^a Derived from data provided by the Registry of Births and Deaths.

^b % of all cancer deaths.

^c CR = Crude Rate per 100,000 per year.

^d ASR = Age-standardized Rate per 100,000 per year (to 'World' population).

6. ETHNIC GROUP VARIATIONS 1973-2012

The updated age-standardized annual incidence rates per 100,000 population for all sites among the major ethnic groups in Singapore are given in Table 6.1.

Table 6.1 AGE-STANDARDIZED INCIDENCE RATE (PER 100,000 RESIDENT POPULATION PER YEAR) FOR ALL CANCERS BY ETHNIC GROUP, GENDER AND FIVE YEAR PERIOD, 1973 - 2012

| PERIOD | GENDER | ETHNIC GROUP | | |
|-----------|--------|--------------|-------|--------|
| | | CHINESE | MALAY | INDIAN |
| 1973-1977 | Male | 277.0 | 116.5 | 156.8 |
| | Female | 167.8 | 97.2 | 153.9 |
| | Total | 216.0 | 107.6 | 156.9 |
| 1978-1982 | Male | 283.5 | 119.0 | 154.7 |
| | Female | 183.4 | 114.7 | 174.8 |
| | Total | 227.0 | 117.8 | 161.6 |
| 1983-1987 | Male | 275.0 | 131.5 | 138.2 |
| | Female | 194.0 | 117.9 | 144.7 |
| | Total | 228.0 | 126.1 | 144.3 |
| 1988-1992 | Male | 268.1 | 145.7 | 112.4 |
| | Female | 202.3 | 136.0 | 134.5 |
| | Total | 229.3 | 142.0 | 121.5 |
| 1993-1997 | Male | 267.3 | 154.0 | 106.1 |
| | Female | 205.0 | 150.3 | 141.6 |
| | Total | 230.0 | 152.9 | 120.7 |
| 1998-2002 | Male | 259.6 | 172.3 | 113.7 |
| | Female | 212.4 | 165.6 | 151.8 |
| | Total | 230.3 | 168.9 | 129.6 |
| 2003-2007 | Male | 251.7 | 169.2 | 135.8 |
| | Female | 214.9 | 177.4 | 141.3 |
| | Total | 228.3 | 172.5 | 138.4 |
| 2008-2012 | Male | 244.3 | 189.3 | 143.6 |
| | Female | 218.0 | 193.1 | 164.7 |
| | Total | 227.5 | 189.6 | 152.5 |

The numbers and incidence rates for the highest ranking cancers (first ten ranks) for males and females in the three major ethnic groups for the period 2008-2012 are shown in Tables 6.2 (a) to (c) and the relative frequencies of the ten most frequent sites in Figures 6.1 (a) to (f).

The numbers of cancers in each of the major ethnic groups by site, gender and 5-year age groups, 2008-2012 are given in Appendices B3 to B8; the corresponding incidence rates are given in Appendices C3 to C8.

The relative risks, after adjustment for age, for selected cancers among the major ethnic groups (Chinese as reference group) are given in Tables 6.3 for the period 2008-2012. In both males and females, the Malays and Indians remain at significantly lower risk of cancer than the Chinese. These relative risks have risen compared to the past calendar period, narrowing the difference compared to Chinese.

These differences are especially marked for cancers of the oesophagus among males and mouth among females, where the relative protective effect estimate has risen two-fold in Malays compared to the previous 5 year period.

On the other hand, Malays have a significantly higher risk of being diagnosed with lymphoid neoplasms compared to Chinese, and Indians have a significantly higher risk of being diagnosed with mouth cancer compared to Chinese. The RR for lymphoid neoplasms among Malays and the RR for mouth cancer among Indian females have risen over the past calendar period.

Fig. 6.1(a) TEN MOST FREQUENT CANCERS IN CHINESE MALES, 2008-2012

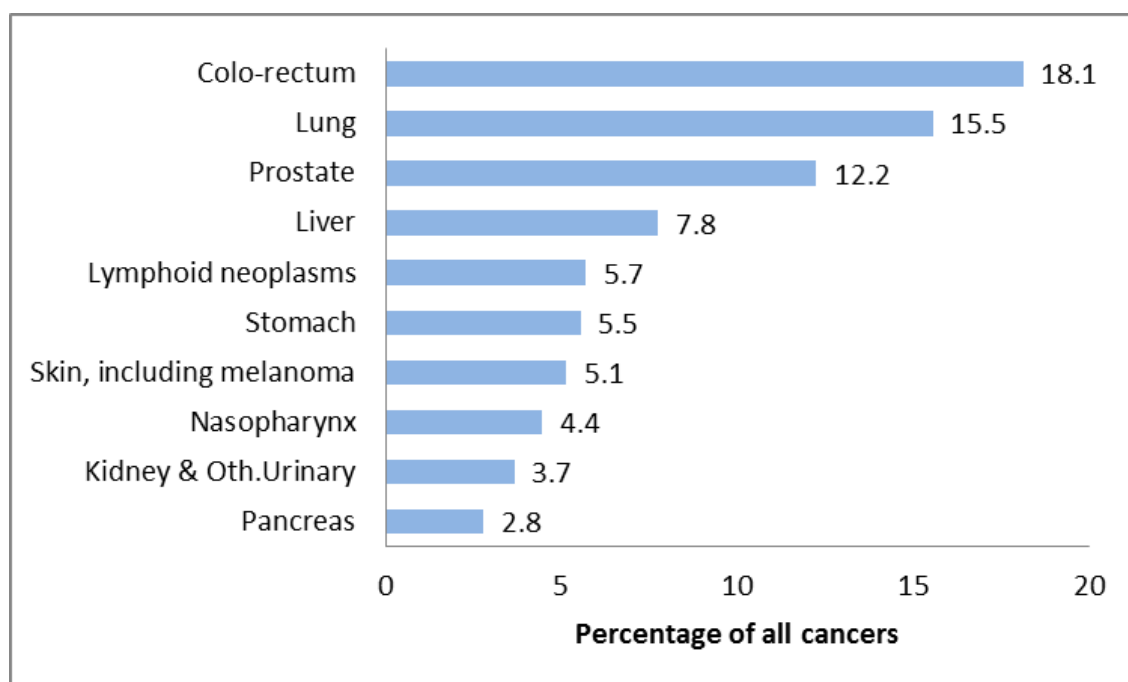


Fig. 6.1(b) TEN MOST FREQUENT CANCERS IN CHINESE FEMALES, 2008-2012

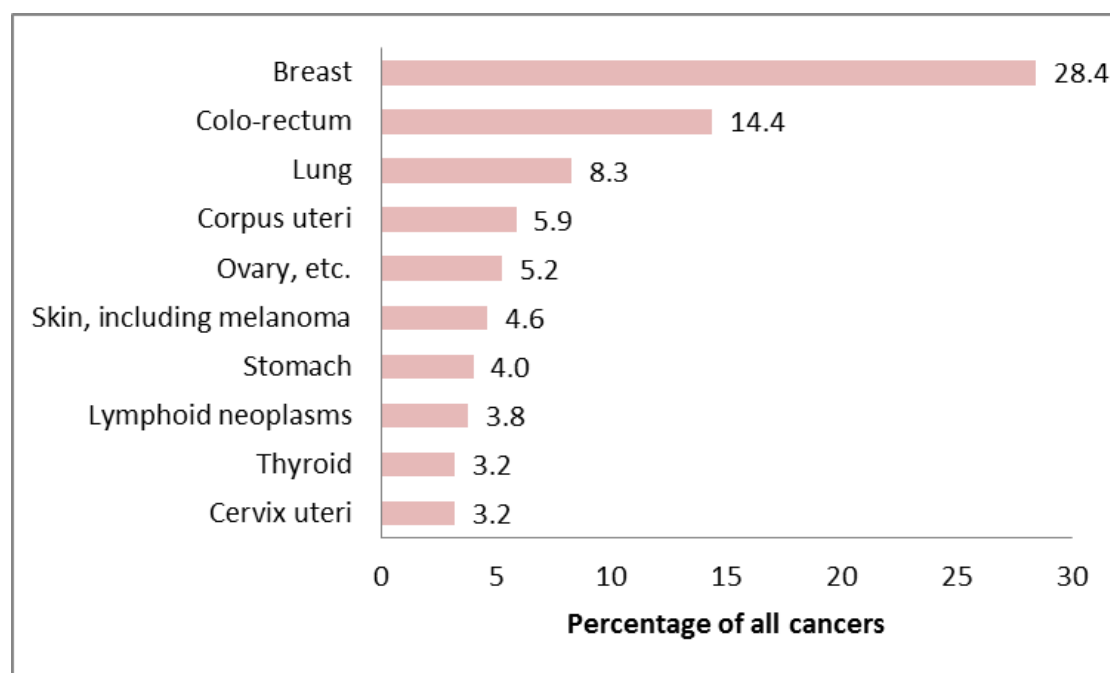


Fig. 6.1(c) TEN MOST FREQUENT CANCERS IN MALAY MALES, 2008-2012

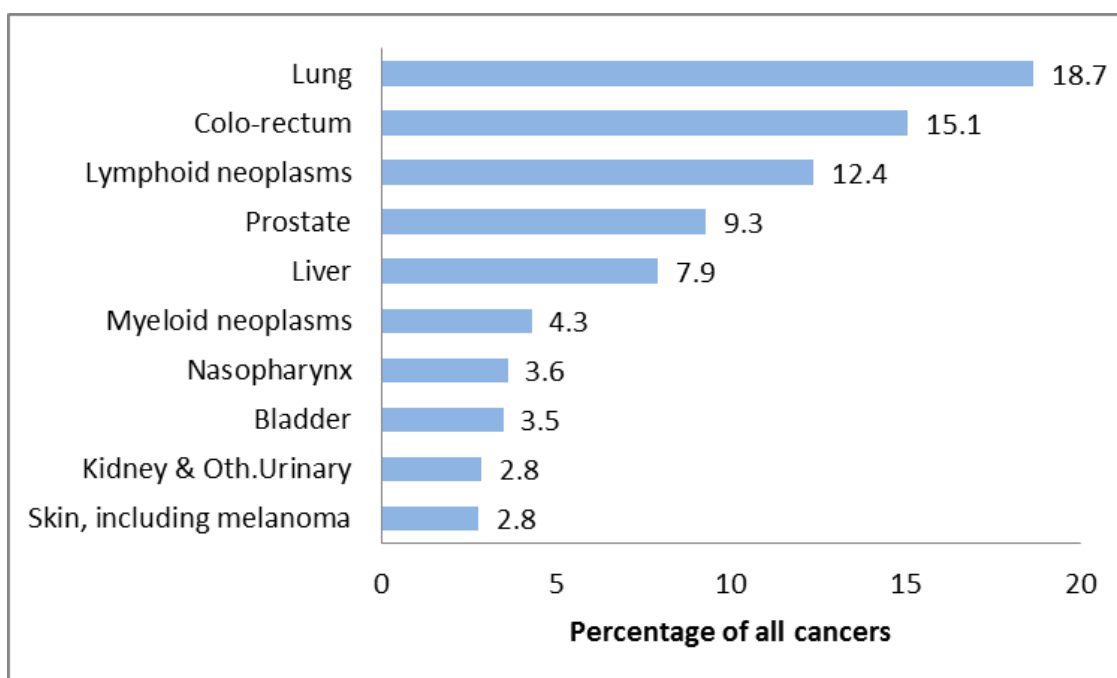


Fig. 6.1(d) TEN MOST FREQUENT CANCERS IN MALAY FEMALES, 2008-2012

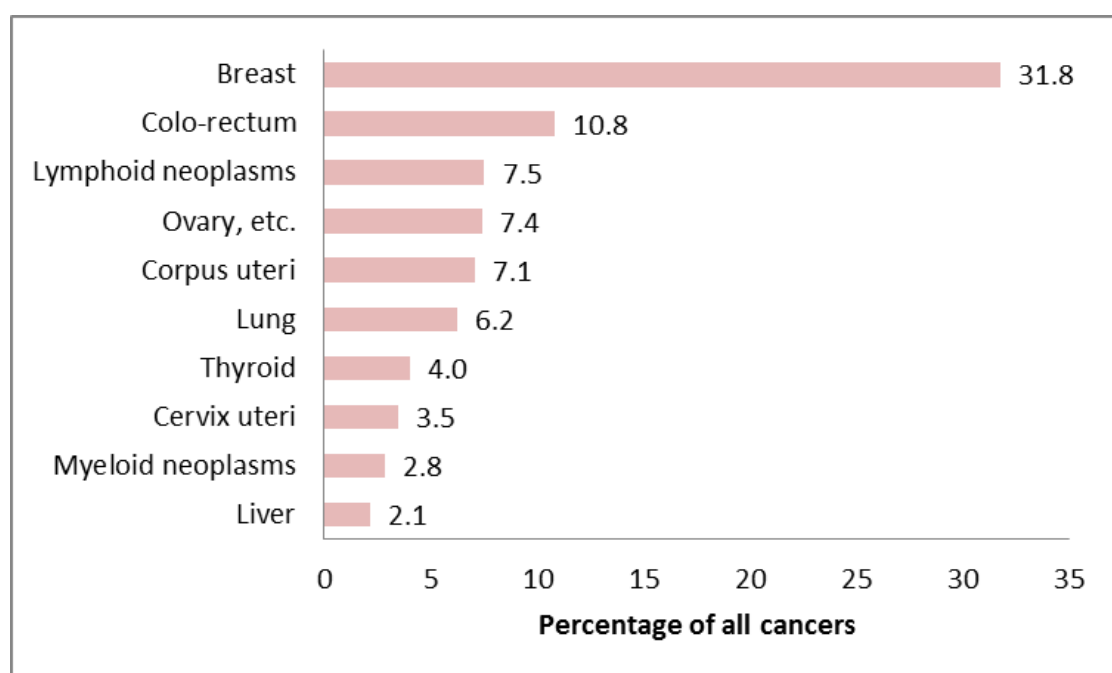


Fig. 6.1(e) TEN MOST FREQUENT CANCERS IN INDIAN MALES, 2008-2012

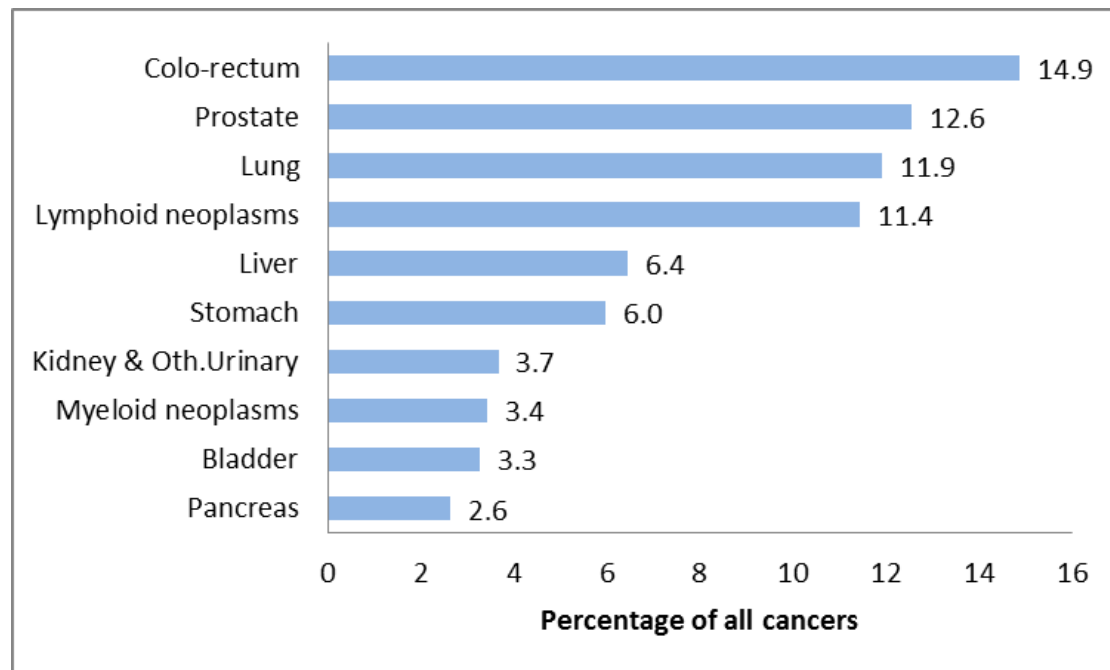


Fig. 6.1(f) TEN MOST FREQUENT CANCERS IN INDIAN FEMALES, 2008-2012

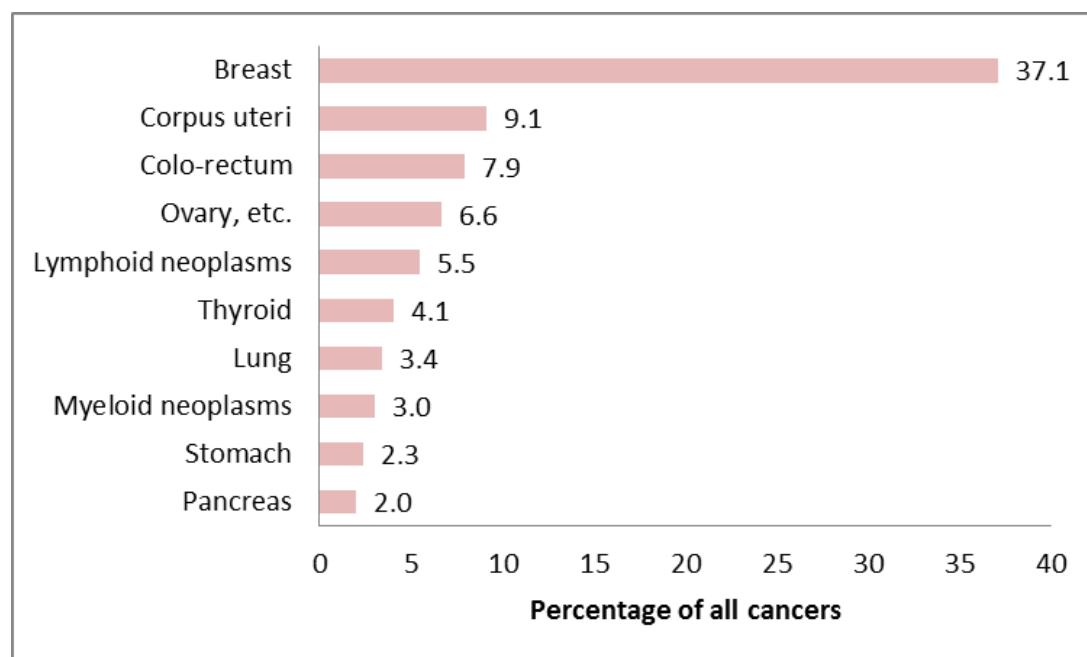


TABLE 6.2(a) TEN MOST FREQUENT CANCERS AMONG CHINESE RESIDENTS, 2008-2012

| MALES | | | | |
|--------------|--------------------------|---------------|--------------|--------------|
| RANK | SITE | NO. | CR | ASR |
| 1 | Colo-rectum | 4,232 | 62.0 | 43.0 |
| 2 | Lung | 3,631 | 53.2 | 37.2 |
| 3 | Prostate | 2,857 | 41.8 | 29.9 |
| 4 | Liver | 1,811 | 26.5 | 18.4 |
| 5 | Lymphoid neoplasms | 1,330 | 19.5 | 15.6 |
| 6 | Stomach | 1,294 | 18.9 | 13.3 |
| 7 | Skin, including melanoma | 1,201 | 17.6 | 12.4 |
| 8 | Nasopharynx | 1,036 | 15.2 | 10.3 |
| 9 | Kidney & Oth.Urinary | 855 | 12.5 | 8.7 |
| 10 | Pancreas | 649 | 9.5 | 6.7 |
| | Others | 4,457 | | |
| | All | 23,353 | 341.9 | 244.3 |

| FEMALES | | | | |
|----------------|--------------------------|---------------|--------------|--------------|
| RANK | SITE | NO. | CR | ASR |
| 1 | Breast | 6,852 | 96.6 | 63.9 |
| 2 | Colo-rectum | 3,468 | 48.9 | 28.9 |
| 3 | Lung | 1,994 | 28.1 | 16.4 |
| 4 | Corpus uteri | 1,414 | 19.9 | 13.1 |
| 5 | Ovary, etc. | 1,264 | 17.8 | 12.5 |
| 6 | Skin, including melanoma | 1,111 | 15.7 | 8.7 |
| 7 | Stomach | 967 | 13.6 | 7.7 |
| 8 | Lymphoid neoplasms | 908 | 12.8 | 9.6 |
| 9 | Thyroid | 775 | 10.9 | 8.0 |
| 10 | Cervix uteri | 772 | 10.9 | 7.1 |
| | | 4,584 | | |
| | All | 24,109 | 339.8 | 218.0 |

CR: Crude rate (per 100,000 per year)

ASR: Age-standardized rate (per 100,000 per year)

TABLE 6.2(b) TEN MOST FREQUENT CANCERS AMONG MALAY RESIDENTS, 2008-2012

| MALES | | | | |
|--------------|--------------------------|--------------|--------------|--------------|
| RANK | SITE | NO. | CR | ASR |
| 1 | Lung | 439 | 35.1 | 35.3 |
| 2 | Colo-rectum | 354 | 28.3 | 28.4 |
| 3 | Lymphoid neoplasms | 291 | 23.2 | 23.3 |
| 4 | Prostate | 218 | 17.4 | 19.5 |
| 5 | Liver | 186 | 14.9 | 14.9 |
| 6 | Myeloid neoplasms | 101 | 8.1 | 8.2 |
| 7 | Nasopharynx | 85 | 6.8 | 6.0 |
| 8 | Bladder | 82 | 6.5 | 6.9 |
| 9 | Kidney & Oth.Urinary | 67 | 5.3 | 5.4 |
| 10 | Skin, including melanoma | 65 | 5.2 | 4.8 |
| | Others | 464 | | |
| | All | 2,352 | 187.8 | 189.3 |

| FEMALES | | | | |
|----------------|--------------------|--------------|--------------|--------------|
| RANK | SITE | NO. | CR | ASR |
| 1 | Female Breast | 908 | 71.9 | 58.1 |
| 2 | Colo-rectum | 309 | 24.5 | 21.4 |
| 3 | Lymphoid neoplasms | 215 | 17.0 | 15.4 |
| 4 | Ovary, etc. | 212 | 16.8 | 14.0 |
| 5 | Corpus uteri | 202 | 16.0 | 13.0 |
| 6 | Lung | 178 | 14.1 | 12.2 |
| 7 | Thyroid | 115 | 9.1 | 7.8 |
| 8 | Cervix uteri | 99 | 7.8 | 6.7 |
| 9 | Myeloid neoplasms | 81 | 6.4 | 5.8 |
| 10 | Liver | 61 | 4.8 | 4.3 |
| | Others | 478 | | |
| | All | 2,858 | 226.4 | 193.1 |

CR: Crude rate (per 100,000 per year)

ASR: Age-standardized rate (per 100,000 per year)

TABLE 6.2(c) TEN MOST FREQUENT CANCERS AMONG INDIAN RESIDENTS, 2008-2012

| MALES | | | | |
|--------------|----------------------|--------------|--------------|--------------|
| RANK | SITE | NO. | CR | ASR |
| 1 | Colo-rectum | 187 | 21.1 | 20.9 |
| 2 | Prostate | 158 | 17.8 | 20.3 |
| 3 | Lung | 150 | 16.9 | 17.5 |
| 4 | Lymphoid neoplasms | 144 | 16.2 | 16.4 |
| 5 | Liver | 81 | 9.1 | 9.2 |
| 6 | Stomach | 75 | 8.5 | 8.3 |
| 7 | Kidney & Oth.Urinary | 46 | 5.2 | 5.2 |
| 8 | Myeloid neoplasms | 43 | 4.8 | 4.6 |
| 9 | Bladder | 41 | 4.6 | 5.0 |
| 10 | Pancreas | 33 | 3.7 | 3.5 |
| | Others | 300 | | |
| | All | 1,258 | 141.9 | 143.6 |

| FEMALES | | | | |
|----------------|--------------------|--------------|--------------|--------------|
| RANK | SITE | NO. | CR | ASR |
| 1 | Female Breast | 537 | 64.9 | 58.0 |
| 2 | Corpus uteri | 132 | 15.9 | 15.3 |
| 3 | Colo-rectum | 115 | 13.9 | 13.7 |
| 4 | Ovary, etc. | 96 | 11.6 | 11.0 |
| 5 | Lymphoid neoplasms | 79 | 9.5 | 9.4 |
| 6 | Thyroid | 59 | 7.1 | 6.0 |
| 7 | Lung | 49 | 5.9 | 5.9 |
| 8 | Myeloid neoplasms | 44 | 5.3 | 4.8 |
| 9 | Stomach | 34 | 4.1 | 3.9 |
| 10 | Pancreas | 29 | 3.5 | 3.6 |
| | Others | 274 | | |
| | All | 1,448 | 174.9 | 164.7 |

CR: Crude rate (per 100,000 per year)

ASR: Age-standardized rate (per 100,000 per year)

Table 6.3 RELATIVE RISKS FOR SELECTED SITES BY ETHNIC GROUP AFTER ADJUSTMENT FOR AGE^a, 2008-2012 (CHINESE AS REFERENCE GROUP)

| MALES | | | | | |
|--------------------------|-------------------|-------------|------------------|-------------|------------------|
| Site | ASR among Chinese | Malay | | Indian | |
| | | RR | 95% CI | RR | 95% CI |
| Tongue | 1.7 | 0.28 | 0.12-0.63 | 1.20 | 0.74-1.93 |
| Mouth | 1.0 | 0.22 | 0.07-0.69 | 1.93 | 1.18-3.15 |
| Nasopharynx | 10.3 | 0.56 | 0.45-0.70 | 0.11 | 0.06-0.19 |
| Oesophagus | 3.8 | 0.50 | 0.33-0.76 | 0.70 | 0.46-1.07 |
| Stomach | 13.3 | 0.35 | 0.27-0.46 | 0.63 | 0.50-0.79 |
| Colo-rectum | 43.0 | 0.66 | 0.59-0.73 | 0.48 | 0.42-0.56 |
| Liver | 18.4 | 0.82 | 0.70-0.95 | 0.50 | 0.40-0.63 |
| Larynx | 3.0 | 0.59 | 0.38-0.90 | 1.09 | 0.74-1.59 |
| Lung | 37.2 | 0.98 | 0.88-1.08 | 0.46 | 0.39-0.54 |
| Skin, including melanoma | 12.4 | 0.42 | 0.33-0.55 | 0.18 | 0.12-0.28 |
| Prostate | 29.9 | 0.65 | 0.56-0.74 | 0.66 | 0.56-0.77 |
| Bladder | 5.7 | 1.16 | 0.92-1.46 | 0.79 | 0.58-1.09 |
| Lymphoid neoplasms | 15.6 | 1.51 | 1.33-1.72 | 1.06 | 0.89-1.25 |
| Myeloid neoplasms | 7.1 | 1.12 | 0.90-1.38 | 0.65 | 0.48-0.89 |
| Pancreas | 6.7 | 0.66 | 0.50-0.88 | 0.57 | 0.40-0.80 |
| All | 244.3 | 0.78 | 0.74-0.81 | 0.58 | 0.54-0.61 |

| FEMALES | | | | | |
|--------------------------|-------------------|-------------|------------------|-------------|------------------|
| Site | ASR among Chinese | Malay | | Indian | |
| | | RR | 95% CI | RR | 95% CI |
| Tongue | 0.7 | 1.44 | 0.83-2.52 | 1.53 | 0.79-2.97 |
| Mouth | 0.5 | 0.81 | 0.35-1.88 | 3.54 | 2.02-6.19 |
| Nasopharynx | 3.3 | 0.50 | 0.33-0.75 | 0.09 | 0.03-0.30 |
| Stomach | 7.7 | 0.51 | 0.39-0.67 | 0.52 | 0.37-0.73 |
| Colo-rectum | 28.9 | 0.73 | 0.65-0.83 | 0.46 | 0.38-0.56 |
| Liver | 5.1 | 0.86 | 0.66-1.12 | 0.55 | 0.36-0.84 |
| Lung | 16.4 | 0.75 | 0.65-0.88 | 0.35 | 0.26-0.47 |
| Skin, including melanoma | 8.7 | 0.45 | 0.35-0.59 | 0.30 | 0.20-0.46 |
| Breast | 63.9 | 0.92 | 0.86-0.99 | 0.89 | 0.81-0.97 |
| Cervix uteri | 7.1 | 0.93 | 0.75-1.15 | 0.33 | 0.21-0.50 |
| Corpus uteri | 13.1 | 1.00 | 0.86-1.16 | 1.07 | 0.90-1.28 |
| Thyroid | 8.0 | 0.99 | 0.81-1.20 | 0.77 | 0.59-1.00 |
| Lymphoid neoplasms | 9.6 | 1.70 | 1.47-1.98 | 1.00 | 0.80-1.26 |
| Myeloid neoplasms | 4.6 | 1.27 | 1.00-1.60 | 1.12 | 0.82-1.53 |
| Ovary, etc. | 12.5 | 1.13 | 0.98-1.31 | 0.84 | 0.68-1.03 |
| All | 218.0 | 0.89 | 0.86-0.92 | 0.74 | 0.70-0.78 |

| TOTAL Site | ASR among Chinese | Malay | | Indian | |
|--------------------------|-------------------|-------------|------------------|-------------|------------------|
| | | RR | 95% CI | RR | 95% CI |
| Tongue | 1.2 | 0.66 | 0.42-1.03 | 1.34 | 0.91-1.98 |
| Mouth | 0.8 | 0.43 | 0.22-0.84 | 2.54 | 1.76-3.67 |
| Nasopharynx | 6.7 | 0.54 | 0.45-0.66 | 0.11 | 0.07-0.18 |
| Stomach | 10.2 | 0.42 | 0.35-0.51 | 0.61 | 0.50-0.74 |
| Colo-rectum | 35.4 | 0.69 | 0.64-0.75 | 0.49 | 0.43-0.54 |
| Liver | 11.4 | 0.82 | 0.72-0.94 | 0.54 | 0.44-0.65 |
| Pancreas | 5.8 | 0.67 | 0.55-0.82 | 0.63 | 0.49-0.81 |
| Larynx | 1.5 | 0.56 | 0.36-0.87 | 1.20 | 0.82-1.74 |
| Lung | 25.7 | 0.91 | 0.83-0.99 | 0.45 | 0.39-0.52 |
| Skin, including melanoma | 10.4 | 0.44 | 0.37-0.53 | 0.23 | 0.17-0.32 |
| Bladder | 3.4 | 1.05 | 0.85-1.30 | 0.87 | 0.66-1.16 |
| Thyroid | 5.3 | 1.09 | 0.92-1.29 | 0.75 | 0.59-0.94 |
| Lymphoid neoplasms | 12.5 | 1.59 | 1.44-1.75 | 1.05 | 0.92-1.21 |
| Myeloid neoplasms | 5.7 | 1.19 | 1.01-1.39 | 0.85 | 0.68-1.06 |
| All | 227.5 | 0.84 | 0.81-0.86 | 0.66 | 0.63-0.68 |

- ^a Adjusted for age and ethnic group using generalized linear regression model for binary data with the Chinese as the reference population.
- ^b Age-standardized rate (per 100,000 per year) to 'World' population.
- ^c Relative risk
- ^d 95% confidence interval

7. AGE PATTERNS 1973-2012

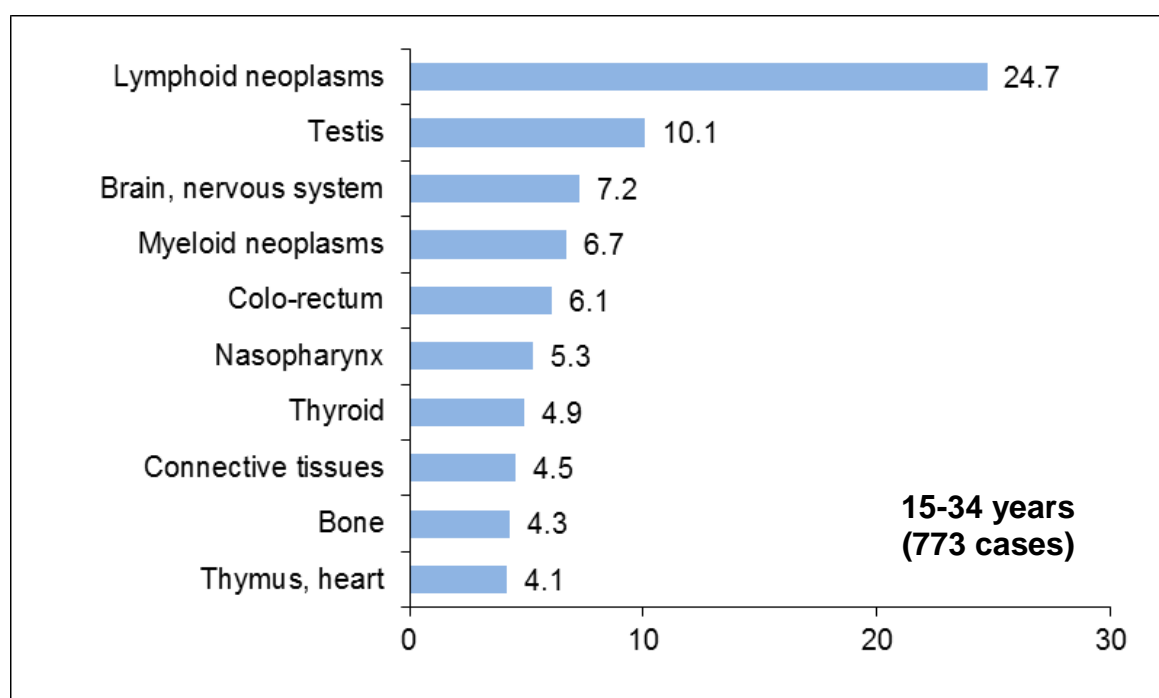
The relative frequencies of the ten most frequent cancers for males and females in each of the three broad adult age-groups (15-34 years; 35-64 years; 65 years and above) for the period 2008-2012 are shown in Figures 7.1(a) and (b). The time trends selected cancers in each age group are described for the period 1973-2012 in Figures 7.2 (a) and (b) for males and females, respectively. The incidence rates in these charts have been age-standardized to the 'World' population for the relevant age groups and expressed as a rate per 100,000 per year.

In young adults (15-34 years), cancers of the nasopharynx have fallen by about 5 percentage points compared to the previous 10-year period. The other relatively frequent cancers in males are lymphoid neoplasms, testicular and brain cancer. Among women in this age group, cancers of the breast, thyroid and ovary together comprise about 50% of all malignancies, and the incidence of these cancers has shown an upward trend over the last 40 years.

In the middle-aged (35-64 years), colorectal cancer is the most common primary site, followed closely by lung and prostate in males. Among females, breast cancer lies in first place and accounts for more than one-third of all malignancies, with colorectal cancers a distant second.

In the elderly (65 years and above), cancers of the lung and colo-rectum continue to be prominent among both males and females. Lung cancer incidence rates have fallen since 1978 among males in this age group, but remain relatively stable in females. The rate of increase in prostate cancer has slowed over the past calendar period and accounts for approximately 15.9% of all male cancers in this age group.

Figure 7.1(a) TEN MOST FREQUENT CANCERS IN MALE RESIDENTS BY BROAD AGE GROUP, 2008-2012



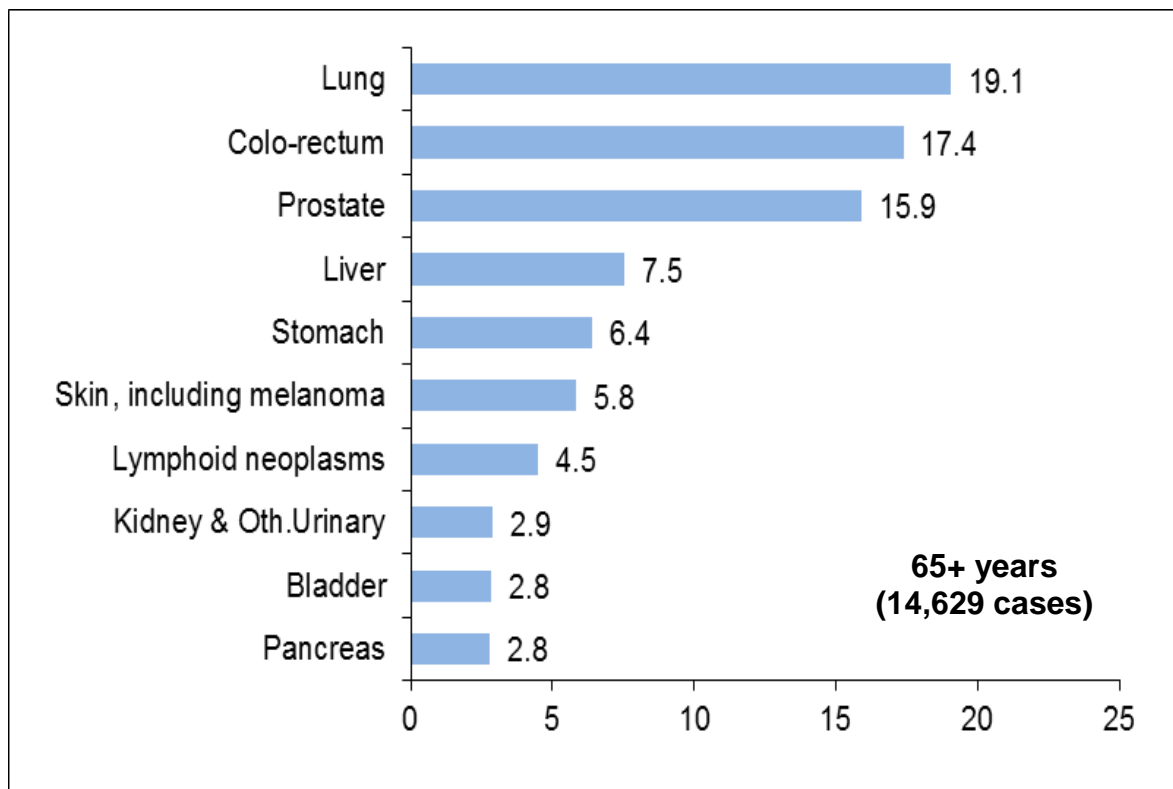
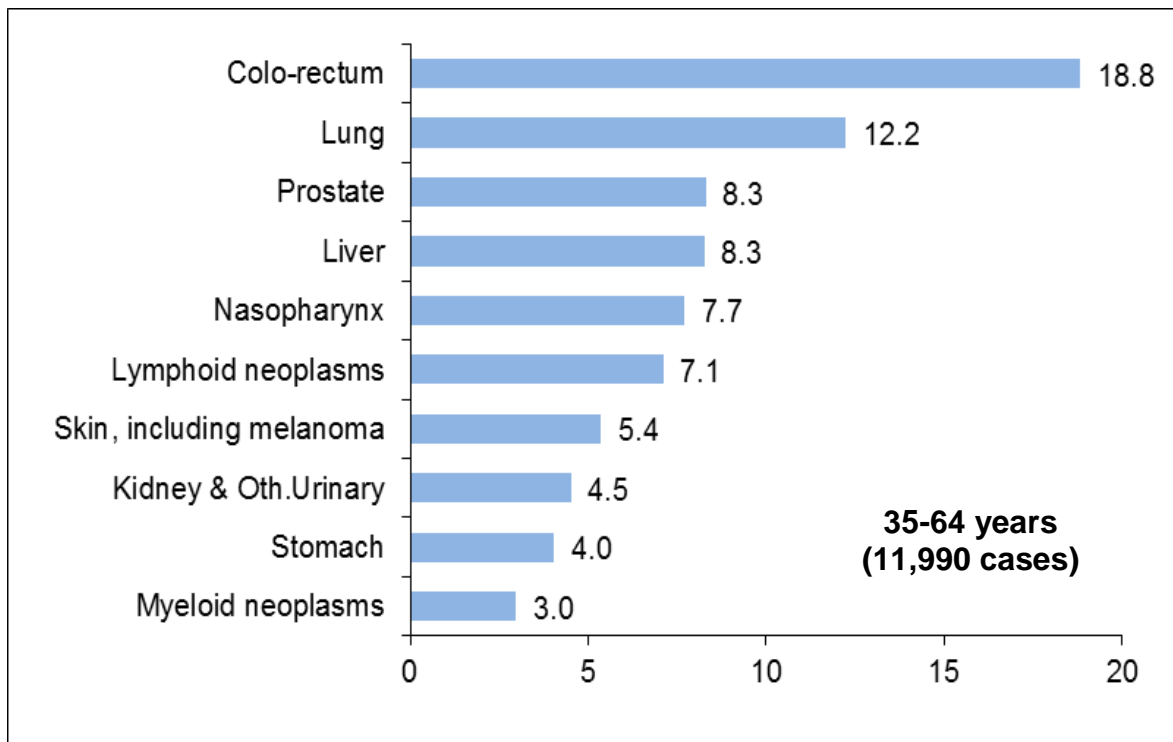


Figure 7.1(b) TEN MOST FREQUENT CANCERS IN FEMALE RESIDENTS BY BROAD AGE GROUP, 2008-2012

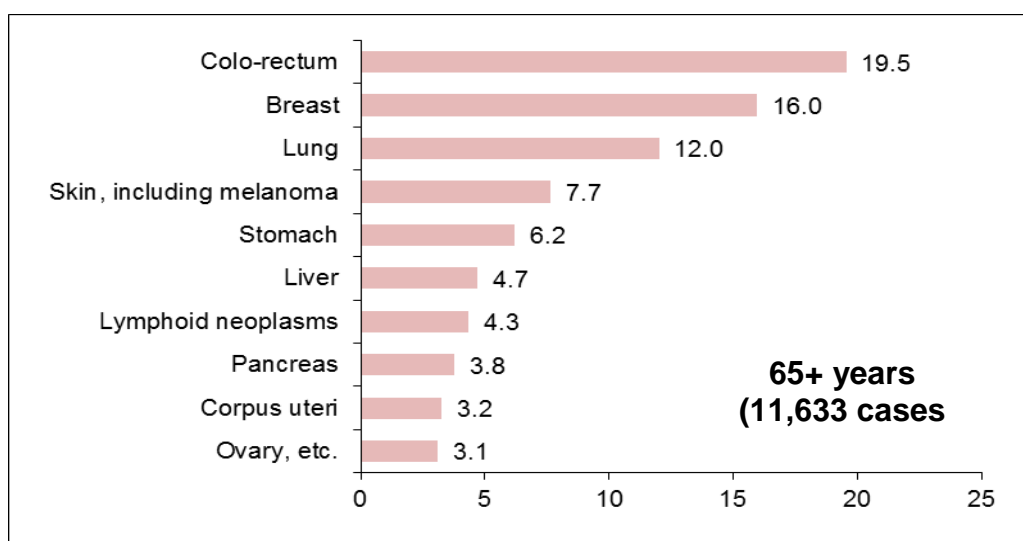
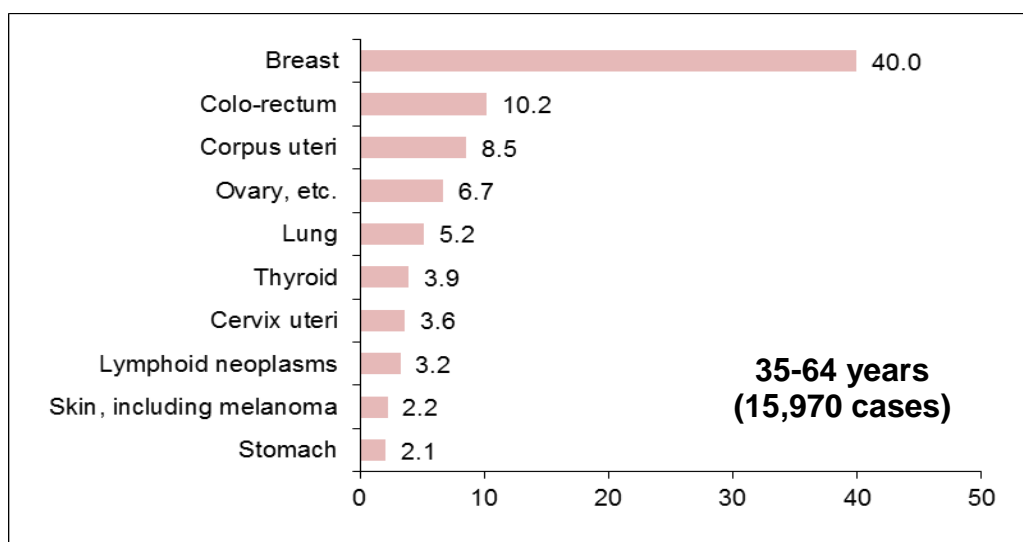
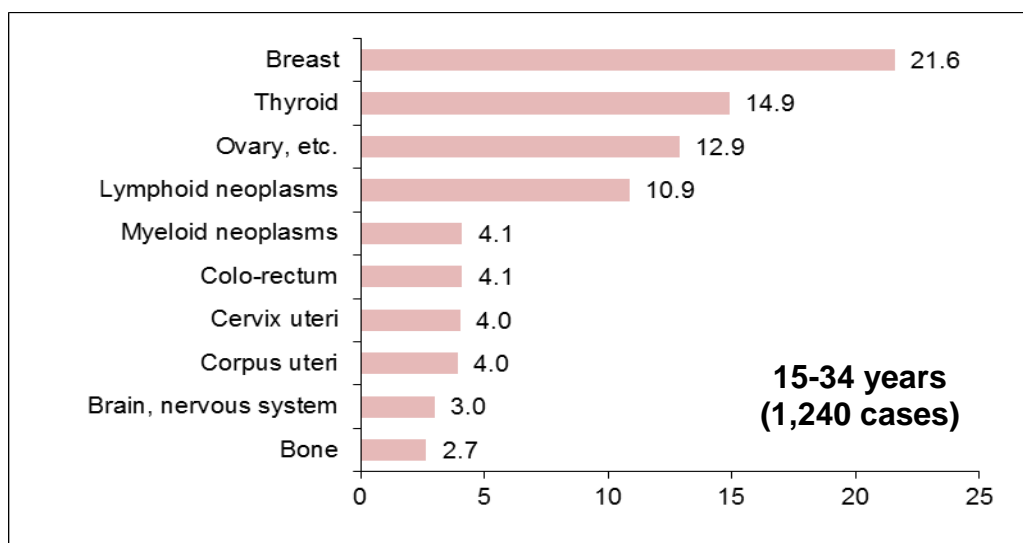
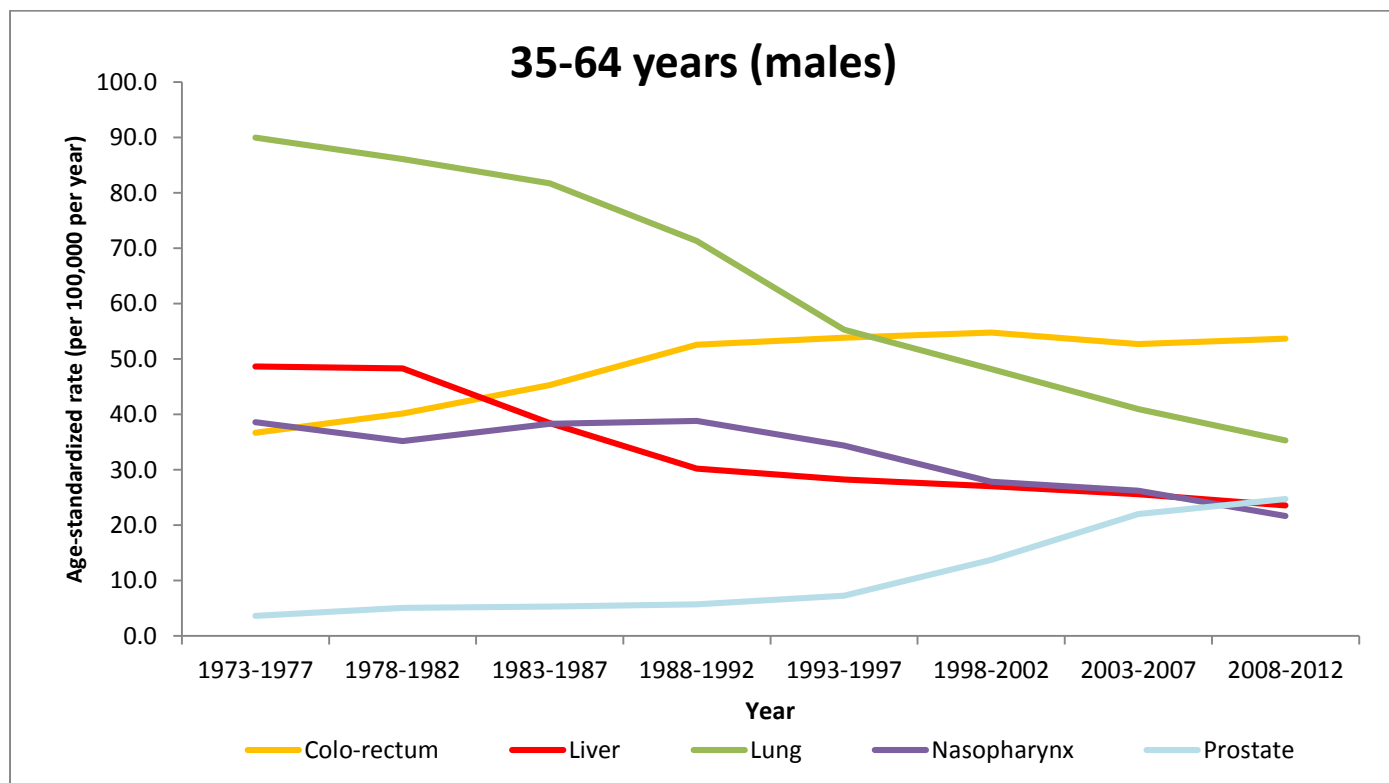
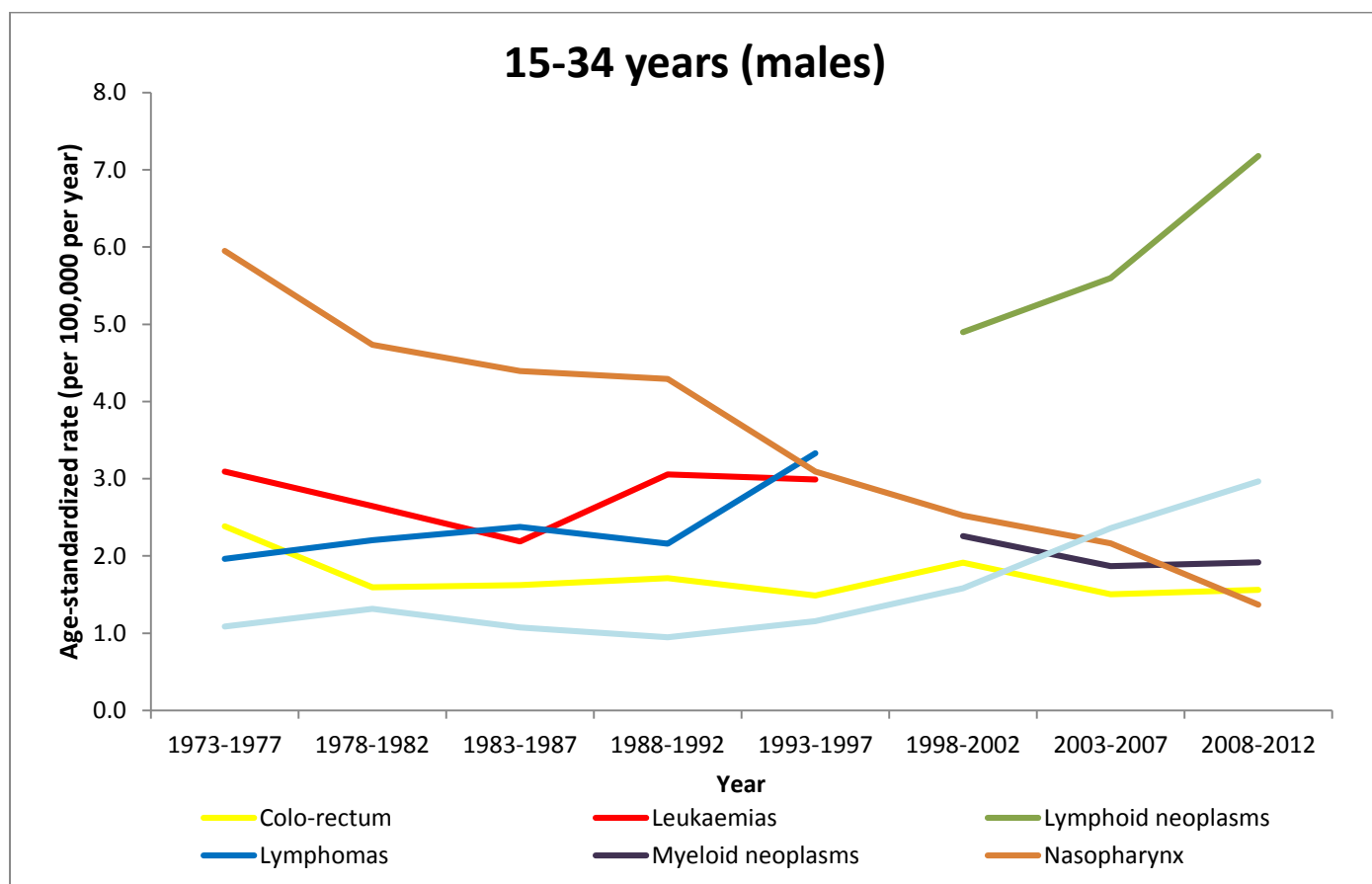


Figure 7.2(a) TRENDS IN SELECTED CANCERS IN MALE RESIDENTS BY BROAD AGE GROUP, 1973-2012



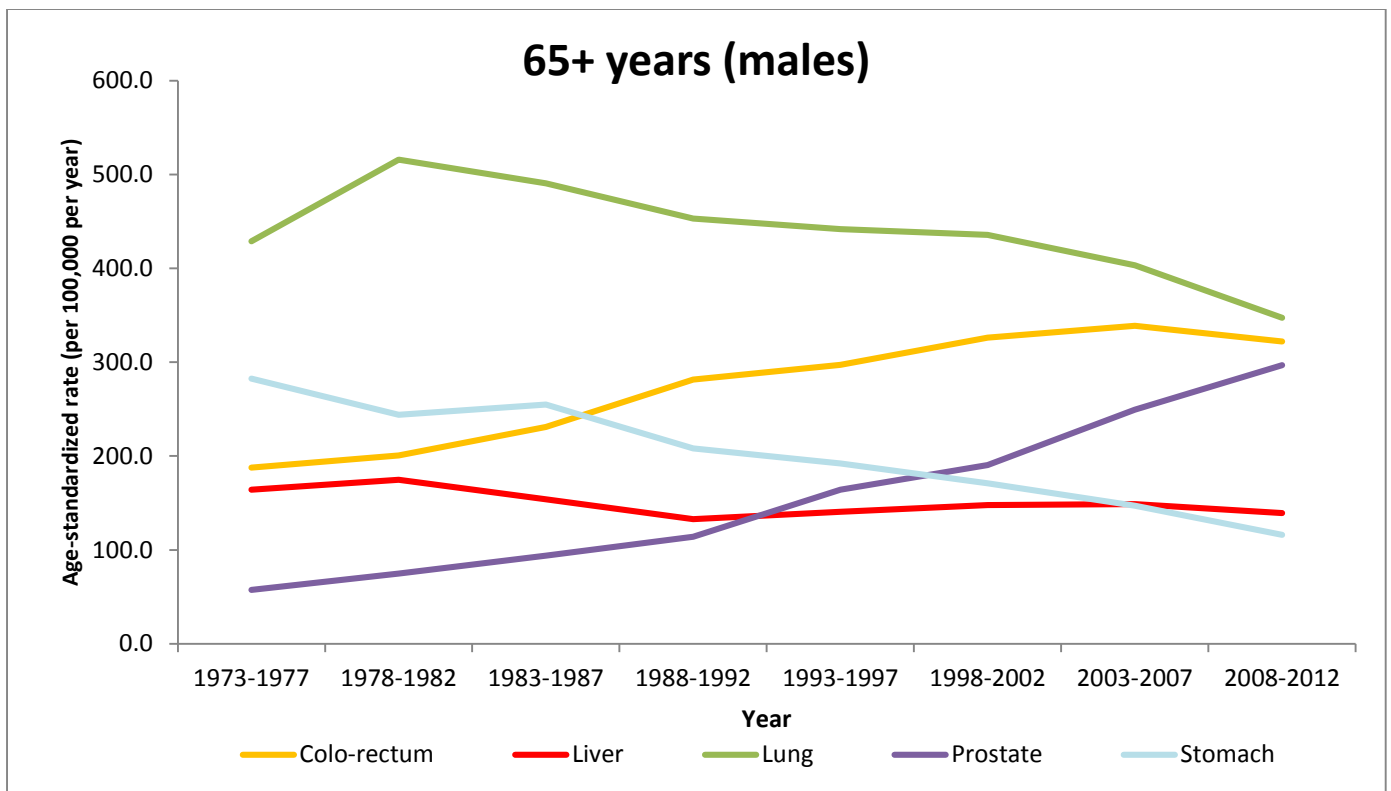
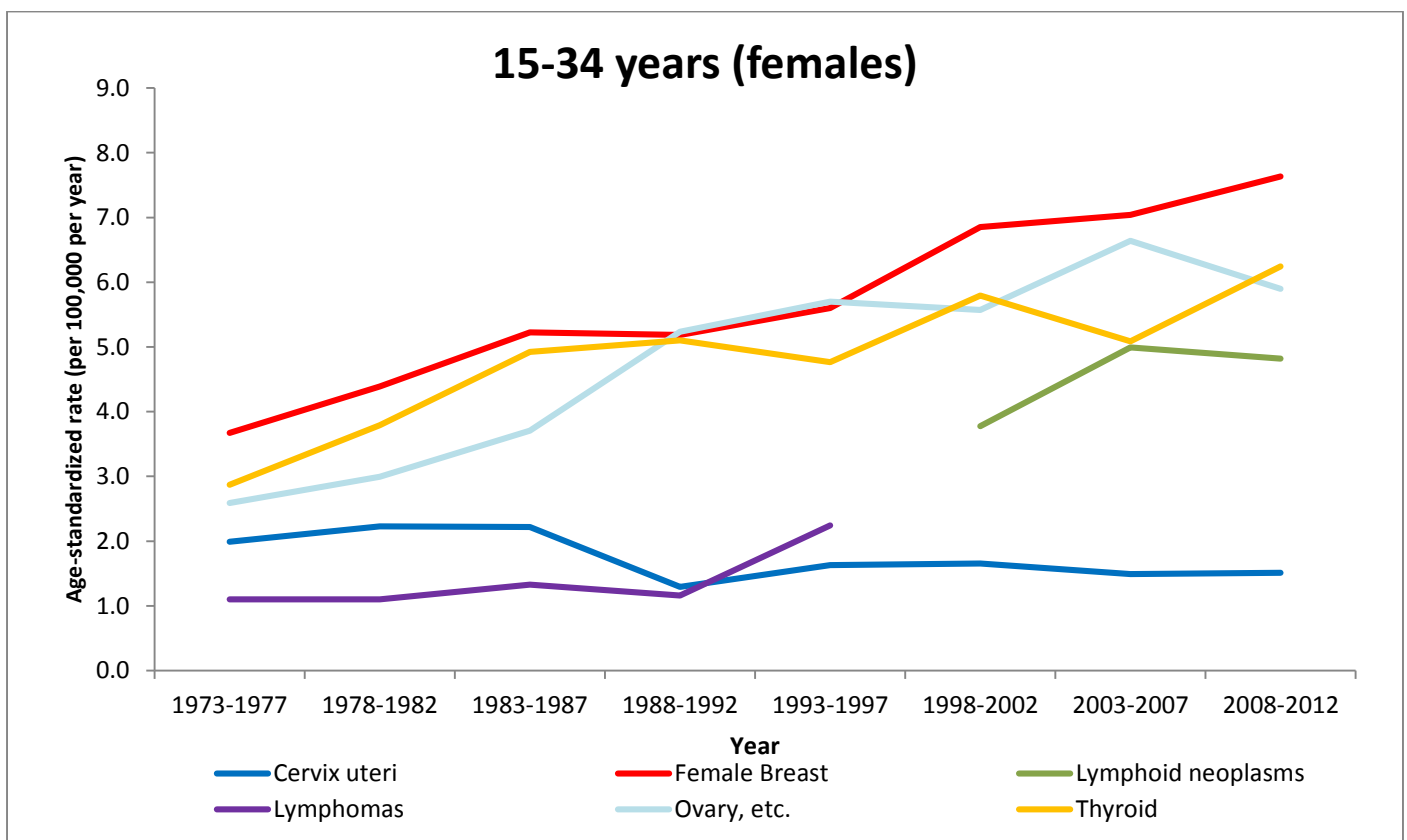
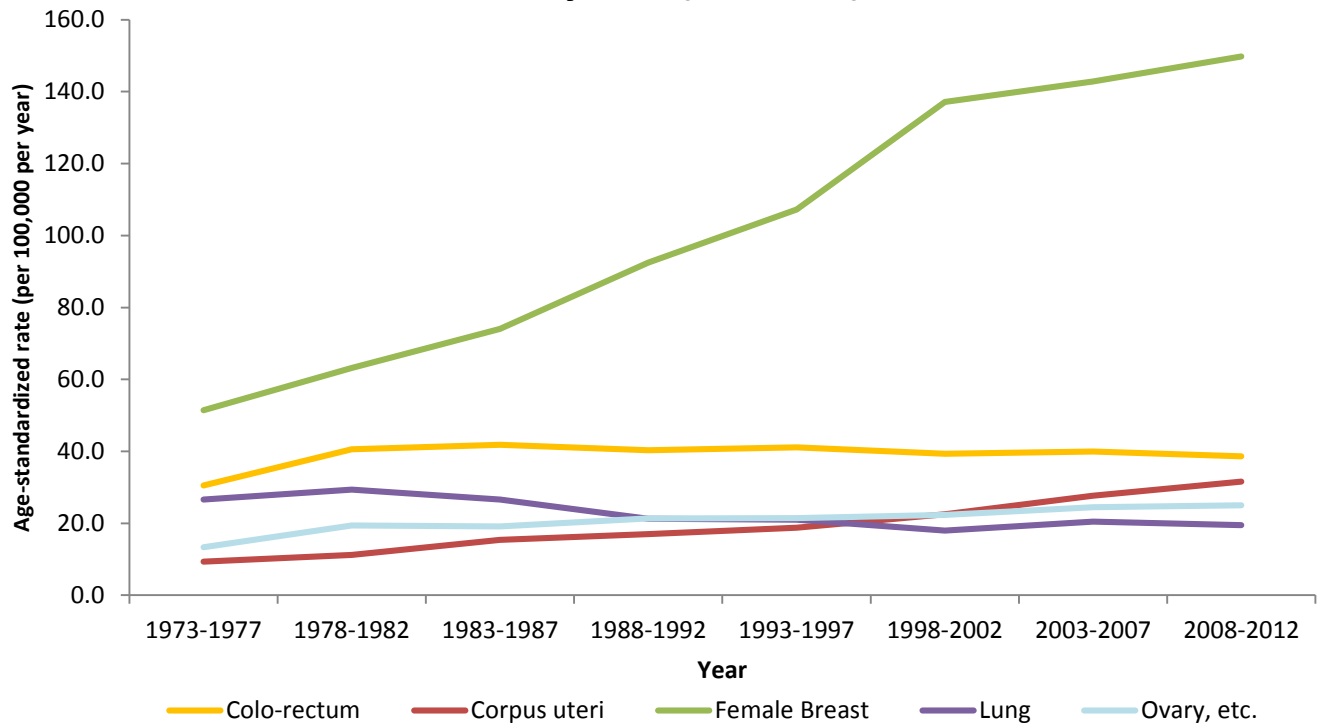


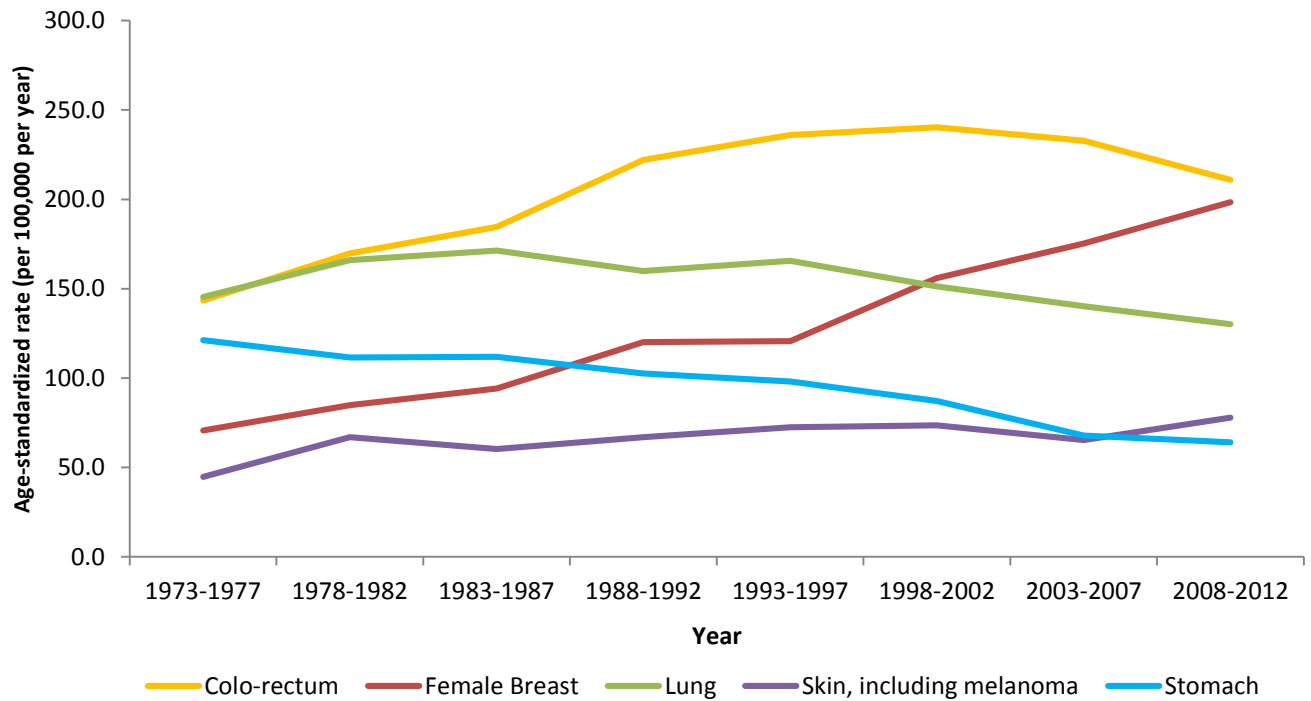
Figure 7.2(b) TRENDS IN SELECTED CANCERS IN FEMALE RESIDENTS BY BROAD AGE GROUP, 1973-2012



35-64 years (females)



65+ years (females)



8. TRENDS IN CANCER INCIDENCE 1973-2012

This report presents updated figures on cancers occurring since 1973 and documents incidence trends over a 40-year period. Changes in the age-standardized cancer incidence rates for the total resident population are presented in Figure 8.1, and for the major ethnic groups in Figures 8.2(a) and (b).

The age-standardized incidence of all cancers in males declined between 1973 and 2012 after an initial rise whereas the rate for females has shown a consistent upward trend since 1973 (Fig 8.1). Overall, the age-standardized rate for cancer in females for 2008-2012 was 31.7% higher than in 1973-1977, an average annual change of 0.8%. A similar trend is evident in the Chinese population. Malays appear to have experienced an increase in total cancer incidence rates, narrowing the gap compared to the Chinese. Indians have seen a decline for females and for males until 1997, after which the rates have started to increase closer to the original 1973-1977 rates (Fig 8.2(a), (b) and (c)).

The time trends for cancers of selected sites in males and females are presented in Figures 8.3(a), (b) and (c). Tables 8.1 and 8.2 present the ten most frequent cancers for each five-year period by gender and by ethnic group, respectively, to allow a comparison in the incidence rates and relative frequencies of these cancers over time. Overall changes in age-standardized incidence rates between 1973 and 2012 are summarized in terms of the average annual percent change in Figures 8.4(a) and (b); it should be noted that this figure does not take into account changes in different directions within this period.

On the whole, the data show substantial increases in the rate of prostate and kidney cancers, as well as myeloid neoplasms among males, and cancers of the breast, ovary and corpus uteri among females. The incidence of lymphomas, colorectal, pancreatic, thyroid, leukaemias and skin (including melanoma) cancers have increased in both sexes. Importantly, the incidence of cervical cancer has been declining since 1975. Some of the malignancies with relatively large declines over the 40 years include cancers of the stomach, liver, mouth, bladder and nasopharynx. These trends are described in greater detail in Chapter 12.

Figure 8.1: TRENDS IN AGE-STANDARDIZED INCIDENCE FOR ALL CANCERS BY GENDER, 1973-2012

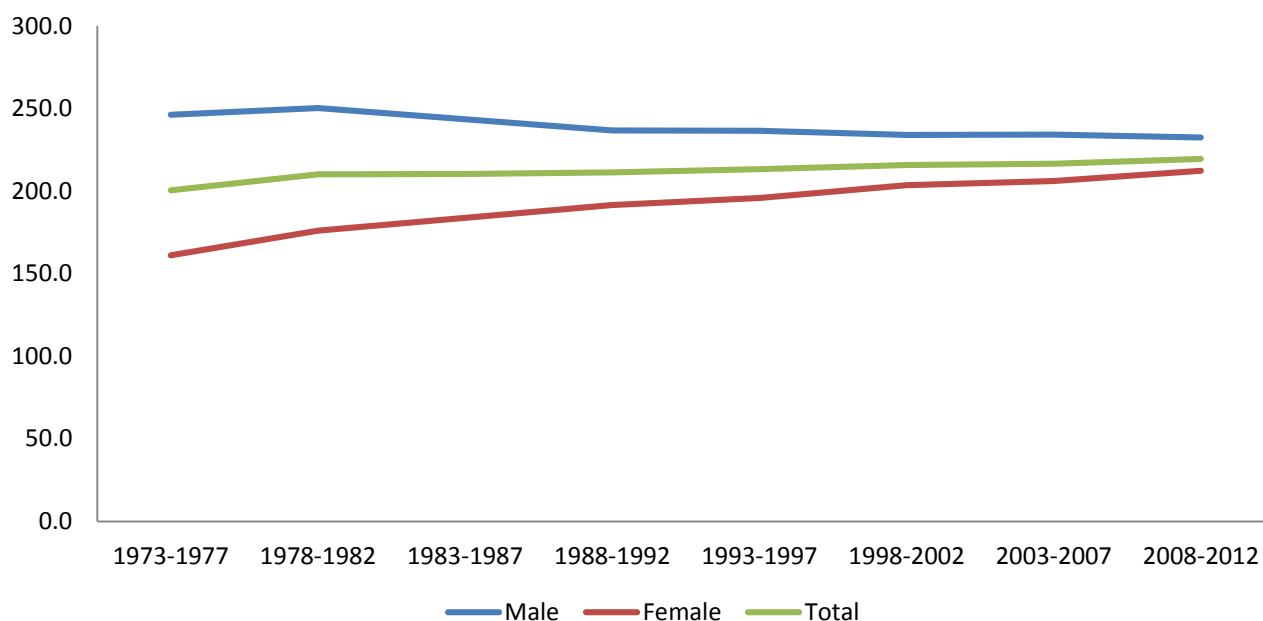


Figure 8.2(a): TRENDS IN AGE-STANDARDIZED INCIDENCE FOR ALL CANCERS BY ETHNIC GROUP IN MALES, 1973-2012

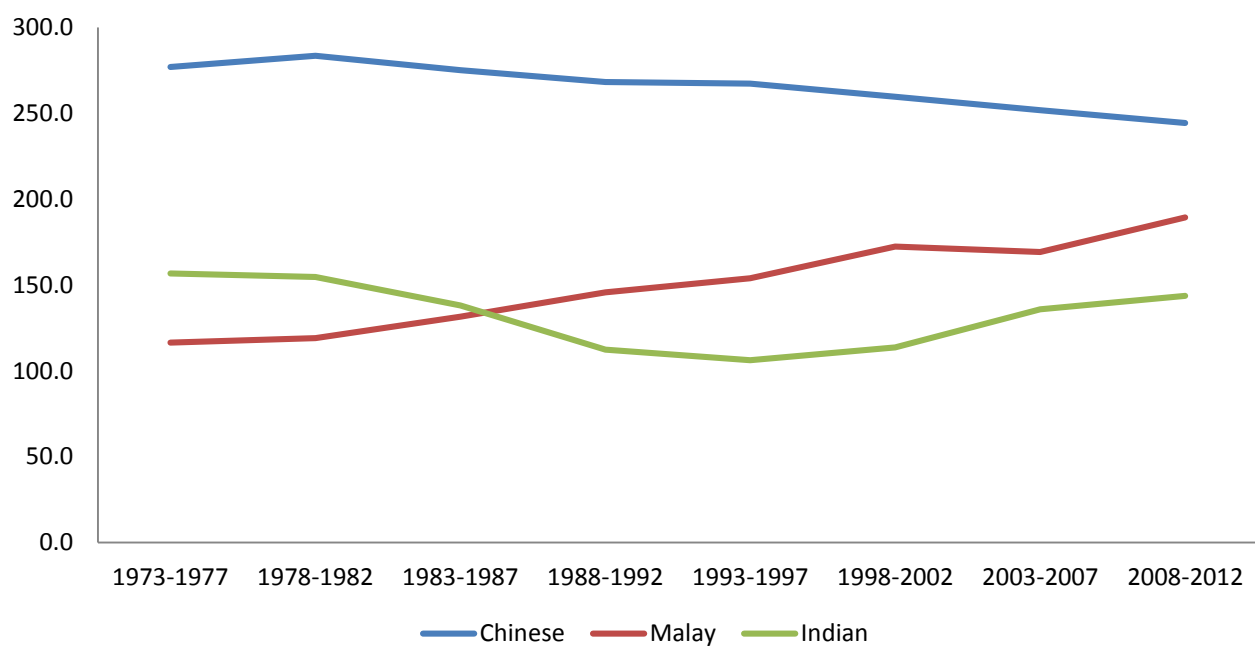


Figure 8.2(b): TRENDS IN AGE-STANDARDIZED INCIDENCE FOR ALL CANCERS BY ETHNIC GROUP IN FEMALES, 1973-2012

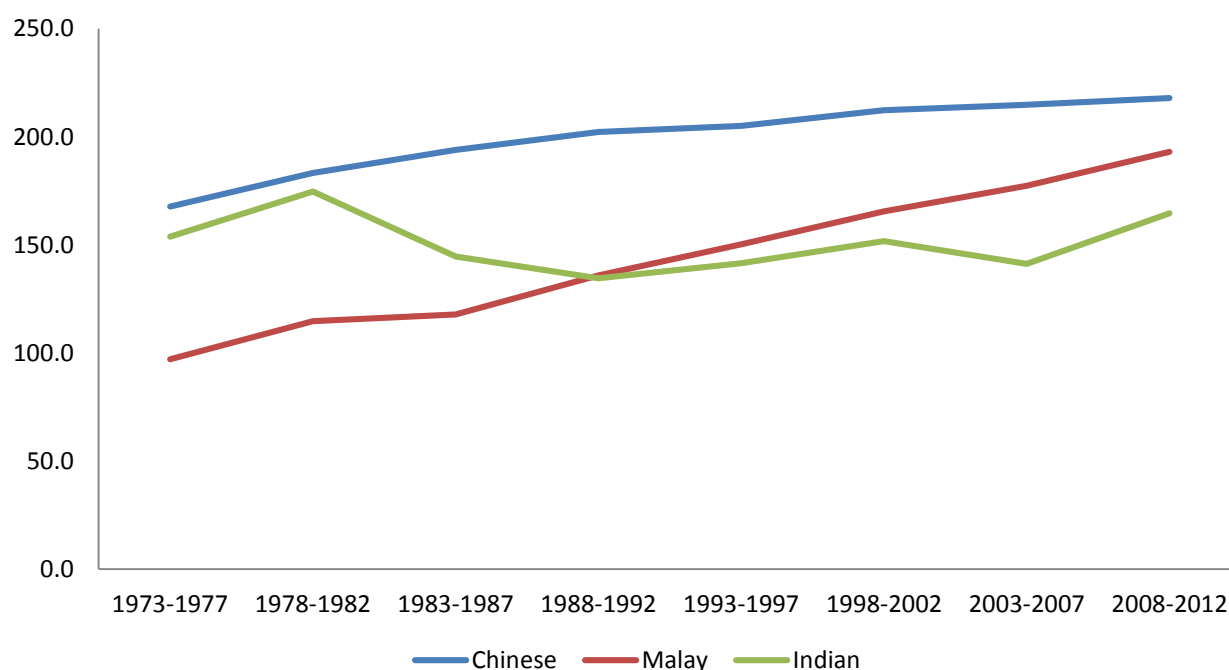


Figure 8.2(c): TRENDS IN AGE-STANDARDIZED INCIDENCE FOR ALL CANCERS BY ETHNIC GROUP, 1973-2012

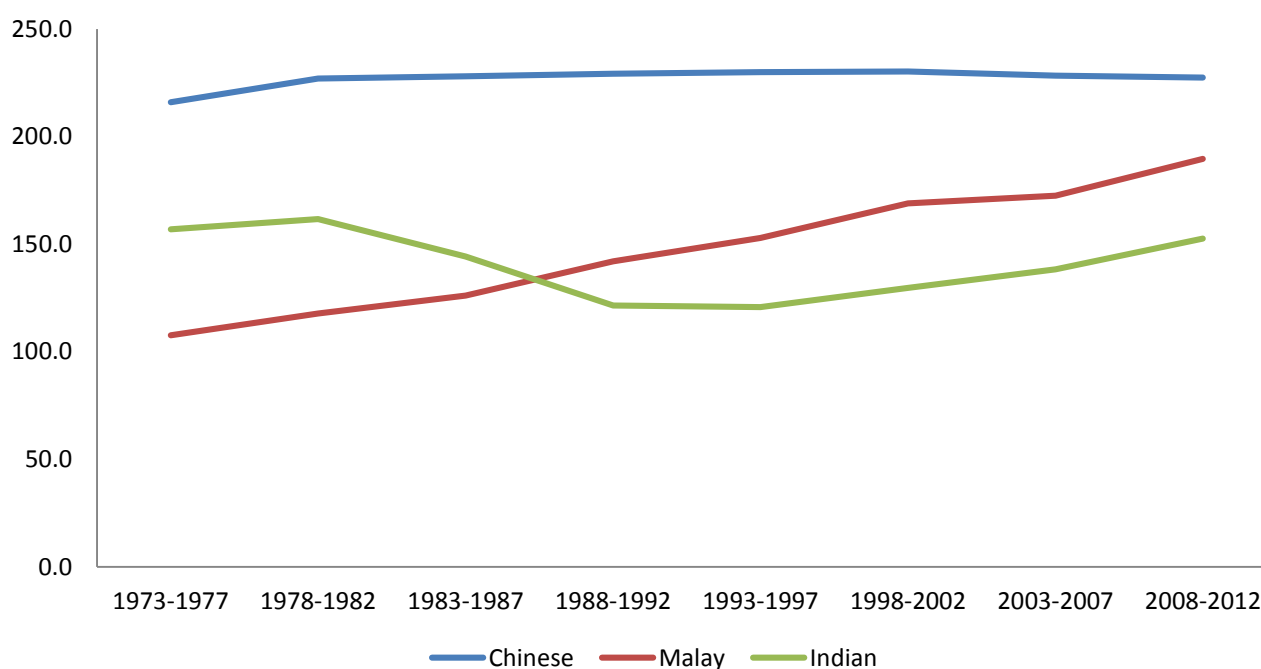


Figure 8.3(a): TRENDS IN AGE-STANDARDISED INCIDENCE FOR SELECTED CANCER SITES IN MALES, 1973-2012

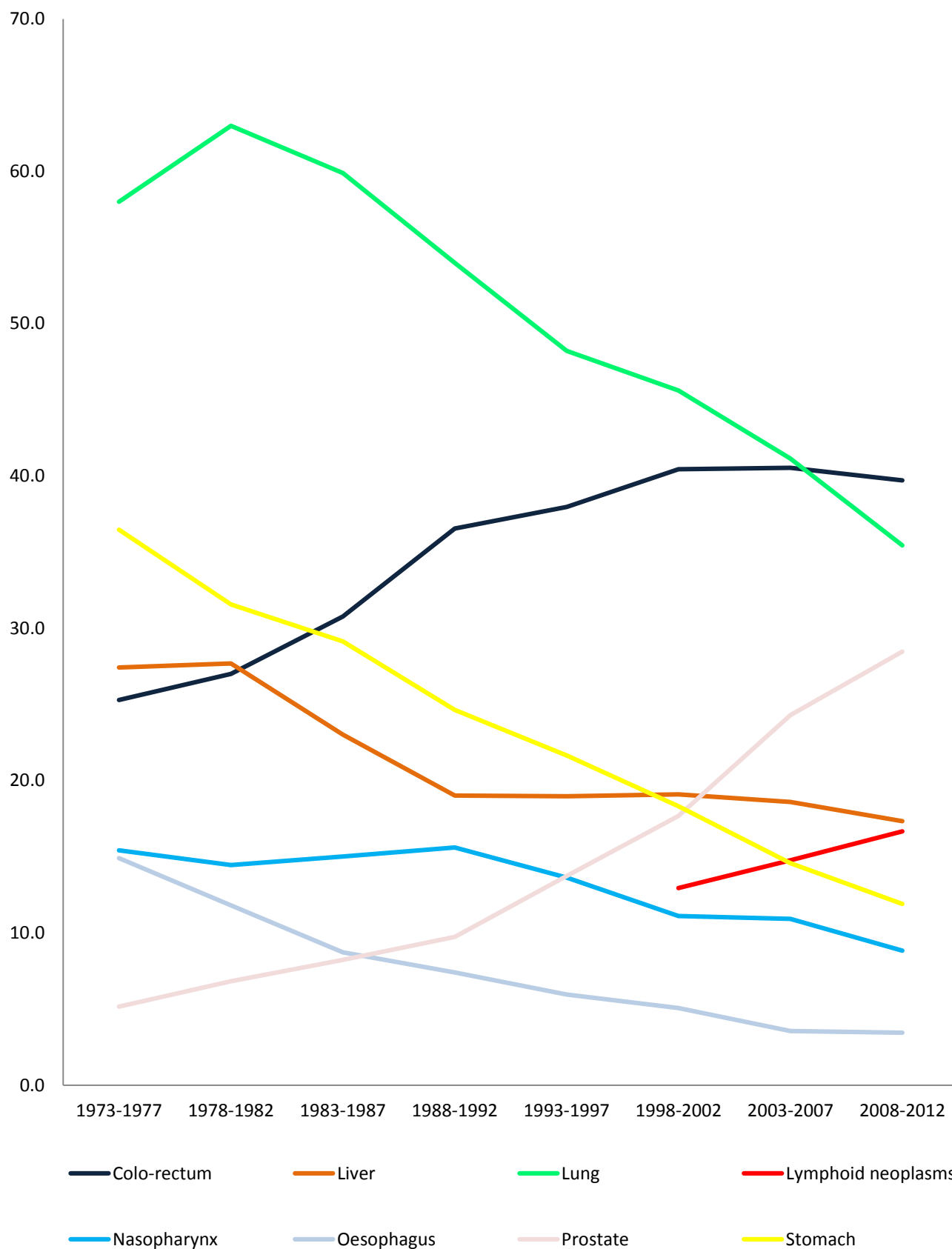


Figure 8.3(b): TRENDS IN AGE-STANDARDIZED INCIDENCE FOR SELECTED CANCER SITES IN FEMALES, 1973-2012

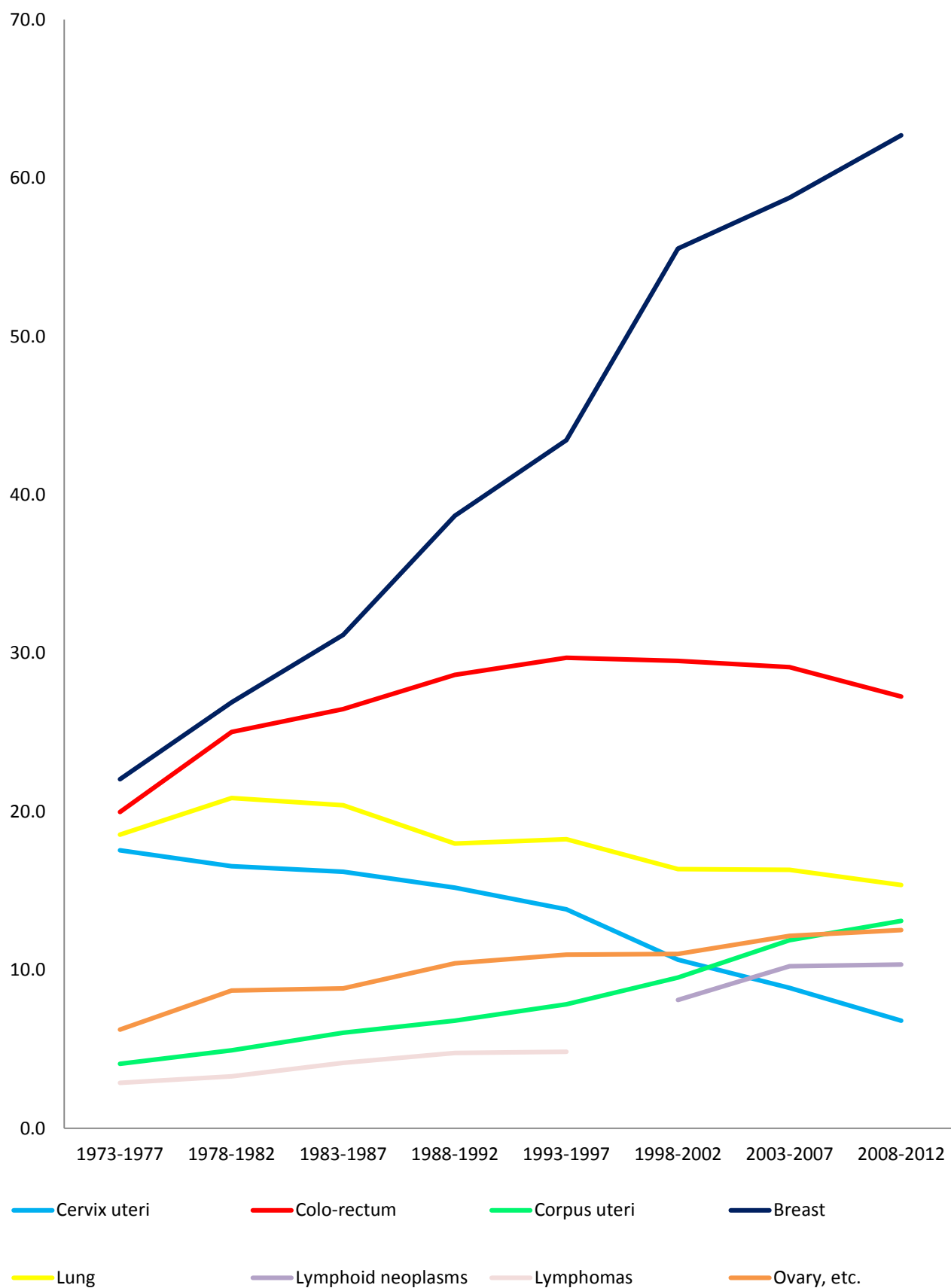


Fig. 8.4(a) AVERAGE ANNUAL PERCENT CHANGE IN AGE-STANDARDIZED INCIDENCE RATE OF SELECTED CANCER SITES IN MALES, 2003-2012

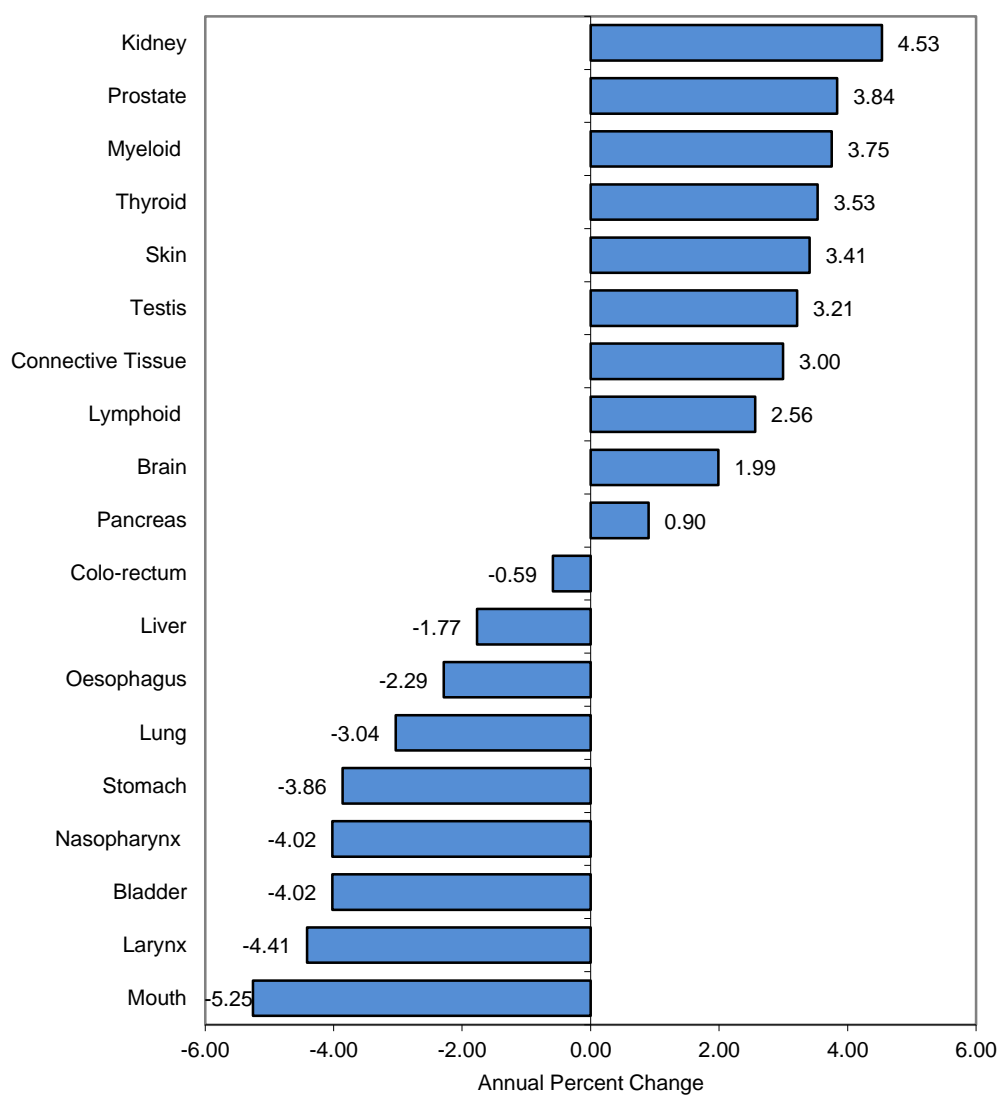


Fig. 8.4(b) AVERAGE ANNUAL PERCENT CHANGE IN AGE-STANDARDIZED INCIDENCE RATE OF SELECTED CANCER SITES IN FEMALES, 2003-2012

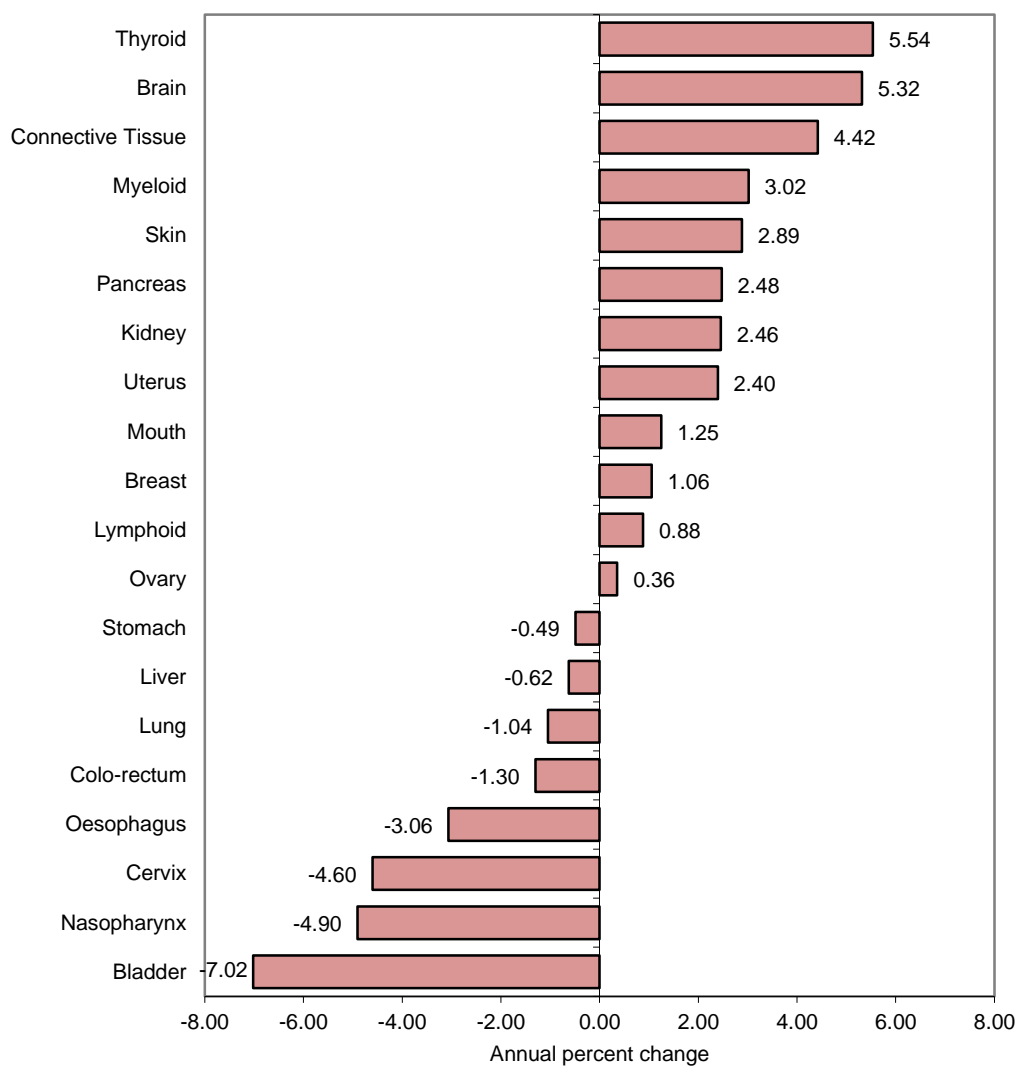


Table 8.1(a) TEN MOST FREQUENT CANCERS IN MALES BY FIVE-YEAR PERIOD, 1973-2012

| 1973-1977 | | | 1978-1982 | | | 1983-1987 | | | 1988-1992 | | |
|----------------------|--------------|--------------|----------------------|---------------|--------------|----------------------|---------------|--------------|----------------------|---------------|--------------|
| SITE | NO. | ASR | SITE | NO. | ASR | SITE | NO. | ASR | SITE | NO. | ASR |
| Lung | 1,920 | 58.0 | Lung | 2,440 | 63.0 | Lung | 2,770 | 59.9 | Lung | 2,971 | 54.0 |
| Stomach | 1,215 | 36.5 | Stomach | 1,232 | 31.6 | Colo-rectum | 1,457 | 30.8 | Colo-rectum | 2,083 | 36.5 |
| Liver | 965 | 27.4 | Liver | 1,126 | 27.7 | Stomach | 1,333 | 29.1 | Stomach | 1,374 | 24.6 |
| Colo-rectum | 841 | 25.3 | Colo-rectum | 1,068 | 27.0 | Liver | 1,095 | 23.0 | Liver | 1,089 | 19.0 |
| Nasopharynx | 672 | 15.4 | Nasopharynx | 704 | 14.4 | Nasopharynx | 866 | 15.0 | Nasopharynx | 1,068 | 15.6 |
| Oesophagus | 465 | 14.9 | Oesophagus | 440 | 11.8 | Oesophagus | 398 | 8.7 | Skin, incl. melanoma | 530 | 9.1 |
| Skin, incl. melanoma | 265 | 8.1 | Skin, incl. melanoma | 349 | 8.8 | Skin, incl. melanoma | 393 | 8.4 | Prostate | 529 | 9.7 |
| Leukaemias | 232 | 4.8 | Larynx | 290 | 7.3 | Prostate | 356 | 8.2 | Bladder | 414 | 7.3 |
| Larynx | 221 | 6.7 | Bladder | 271 | 7.1 | Lymphomas | 351 | 6.7 | Lymphomas | 411 | 6.6 |
| Bladder | 197 | 6.3 | Lymphomas | 269 | 6.0 | Bladder | 316 | 7.0 | Oesophagus | 408 | 7.4 |
| All | 8,556 | 246.3 | All | 10,122 | 250.4 | All | 11,674 | 243.5 | All | 13,639 | 236.8 |

| 1993-1997 | | | 1998-2002 | | | 2003-2007 | | | 2008-2012 | | |
|----------------------|---------------|--------------|----------------------|---------------|--------------|----------------------|---------------|--------------|----------------------|---------------|--------------|
| SITE | NO. | ASR | SITE | NO. | ASR | SITE | NO. | ASR | SITE | NO. | ASR |
| Lung | 3,168 | 48.2 | Lung | 3,599 | 45.6 | Colo-rectum | 3,907 | 40.5 | Colo-rectum | 4,848 | 39.7 |
| Colo-rectum | 2,570 | 38.0 | Colo-rectum | 3,281 | 40.4 | Lung | 3,858 | 41.1 | Lung | 4,274 | 35.4 |
| Stomach | 1,439 | 21.7 | Liver | 1,554 | 19.1 | Prostate | 2,201 | 24.3 | Prostate | 3,324 | 28.5 |
| Liver | 1,302 | 19.0 | Stomach | 1,451 | 18.3 | Liver | 1,780 | 18.6 | Liver | 2,109 | 17.3 |
| Nasopharynx | 1,130 | 13.6 | Prostate | 1,359 | 17.7 | Stomach | 1,379 | 14.6 | Lymphoid neoplasms | 1,816 | 16.7 |
| Prostate | 899 | 13.7 | Nasopharynx | 1,104 | 11.1 | Lymphoid neoplasms | 1,336 | 14.8 | Skin, incl. melanoma | 1,524 | 12.5 |
| Skin, incl. melanoma | 697 | 10.0 | Lymphoid neoplasms | 1,042 | 12.9 | Nasopharynx | 1,210 | 10.9 | Stomach | 1,442 | 11.9 |
| Lymphomas | 603 | 8.3 | Skin, incl. melanoma | 826 | 10.1 | Skin, incl. melanoma | 991 | 10.3 | Nasopharynx | 1,144 | 8.8 |
| Leukaemias | 499 | 7.2 | Bladder | 606 | 7.6 | Bladder | 674 | 7.1 | Kidney & Oth.Urinary | 990 | 8.1 |
| Bladder | 484 | 7.1 | Kidney & Oth.Urinary | 469 | 5.6 | Kidney & Oth.Urinary | 646 | 6.5 | Myeloid neoplasms | 810 | 7.0 |
| All | 16,216 | 236.7 | All | 19,003 | 234.1 | All | 22,308 | 234.2 | All | 27,693 | 232.6 |

Table 8.1(b) TEN MOST FREQUENT CANCERS IN FEMALES BY FIVE-YEAR PERIOD, 1973-2012

| 1973-1977 | | | 1978-1982 | | | 1983-1987 | | | 1988-1992 | | |
|----------------------|--------------|--------------|----------------------|--------------|--------------|----------------------|---------------|--------------|----------------------|---------------|--------------|
| SITE | NO. | ASR | SITE | NO. | ASR | SITE | NO. | ASR | SITE | NO. | ASR |
| Breast | 861 | 22.0 | Breast | 1,236 | 26.9 | Breast | 1,732 | 31.2 | Breast | 2,626 | 38.7 |
| Colo-rectum | 727 | 20.0 | Colo-rectum | 1,097 | 25.0 | Colo-rectum | 1,413 | 26.5 | Colo-rectum | 1,869 | 28.6 |
| Cervix uteri | 676 | 17.5 | Lung | 893 | 20.9 | Lung | 1,072 | 20.4 | Lung | 1,174 | 18.0 |
| Lung | 663 | 18.5 | Cervix uteri | 751 | 16.6 | Cervix uteri | 897 | 16.2 | Cervix uteri | 1,000 | 15.2 |
| Stomach | 610 | 16.6 | Stomach | 643 | 14.6 | Stomach | 772 | 14.4 | Stomach | 826 | 12.4 |
| Nasopharynx | 273 | 6.3 | Ovary, etc. | 414 | 8.7 | Ovary, etc. | 503 | 8.8 | Ovary, etc. | 702 | 10.4 |
| Ovary, etc. | 262 | 6.2 | Skin, incl. melanoma | 344 | 7.7 | Skin, incl. melanoma | 391 | 7.2 | Skin, incl. melanoma | 563 | 8.2 |
| Liver | 255 | 6.9 | Nasopharynx | 326 | 6.6 | Nasopharynx | 374 | 6.3 | Nasopharynx | 441 | 6.2 |
| Skin, incl. melanoma | 212 | 5.7 | Liver | 305 | 6.9 | Thyroid | 368 | 5.8 | Corpus uteri | 435 | 6.8 |
| Leukaemias | 182 | 4.0 | Thyroid | 225 | 4.2 | Liver | 354 | 6.7 | Thyroid | 435 | 5.9 |
| All | 6,187 | 161.2 | All | 7,990 | 176.0 | All | 10,060 | 183.8 | All | 12,749 | 191.7 |

| 1993-1997 | | | 1998-2002 | | | 2003-2007 | | | 2008-2012 | | |
|----------------------|---------------|--------------|----------------------|---------------|--------------|----------------------|---------------|--------------|----------------------|---------------|--------------|
| SITE | NO. | ASR | SITE | NO. | ASR | SITE | NO. | ASR | SITE | NO. | ASR |
| Breast | 3,585 | 43.4 | Breast | 5,547 | 55.5 | Breast | 6,835 | 58.8 | Breast | 8,509 | 62.7 |
| Colo-rectum | 2,326 | 29.7 | Colo-rectum | 2,833 | 29.5 | Colo-rectum | 3,390 | 29.1 | Colo-rectum | 3,957 | 27.3 |
| Lung | 1,444 | 18.3 | Lung | 1,602 | 16.4 | Lung | 1,905 | 16.3 | Lung | 2,249 | 15.4 |
| Cervix uteri | 1,129 | 13.8 | Ovary, etc. | 1,054 | 11.0 | Corpus uteri | 1,351 | 11.9 | Corpus uteri | 1,784 | 13.1 |
| Stomach | 915 | 11.4 | Cervix uteri | 1,038 | 10.7 | Ovary, etc. | 1,340 | 12.1 | Ovary, etc. | 1,607 | 12.5 |
| Ovary, etc. | 885 | 11.0 | Stomach | 969 | 9.9 | Cervix uteri | 1,012 | 8.9 | Skin, incl. melanoma | 1,273 | 8.4 |
| Skin, incl. melanoma | 705 | 8.6 | Corpus uteri | 907 | 9.5 | Lymphoid neoplasms | 1,000 | 10.2 | Lymphoid neoplasms | 1,230 | 10.3 |
| Corpus uteri | 608 | 7.8 | Skin, incl. melanoma | 824 | 8.2 | Stomach | 887 | 7.4 | Stomach | 1,069 | 7.1 |
| Thyroid | 491 | 5.7 | Lymphoid neoplasms | 713 | 8.1 | Skin, incl. melanoma | 851 | 7.2 | Thyroid | 984 | 7.8 |
| Nasopharynx | 404 | 4.7 | Thyroid | 648 | 6.6 | Thyroid | 653 | 5.9 | Cervix uteri | 922 | 6.8 |
| All | 15,721 | 196.0 | All | 19,781 | 203.7 | All | 23,491 | 206.1 | All | 29,080 | 212.3 |

Table 8.2(a) TEN MOST FREQUENT CANCERS IN CHINESE MALES BY FIVE-YEAR PERIOD, 1973-2012

| 1973-1977 | | | 1978-1982 | | | 1983-1987 | | | 1988-1992 | | |
|----------------------|--------------|--------------|----------------------|--------------|--------------|----------------------|---------------|--------------|----------------------|---------------|--------------|
| SITE | NO. | ASR | SITE | NO. | ASR | SITE | NO. | ASR | SITE | NO. | ASR |
| Lung | 1,728 | 66.8 | Lung | 2,226 | 73.9 | Lung | 2,475 | 69.9 | Lung | 2,617 | 62.7 |
| Stomach | 1,104 | 42.5 | Stomach | 1,128 | 37.3 | Colo-rectum | 1,294 | 35.6 | Colo-rectum | 1,858 | 42.5 |
| Liver | 840 | 31.1 | Liver | 988 | 31.6 | Stomach | 1,219 | 34.5 | Stomach | 1,251 | 29.5 |
| Colo-rectum | 732 | 28.1 | Colo-rectum | 954 | 31.2 | Liver | 974 | 26.8 | Nasopharynx | 1,011 | 18.8 |
| Nasopharynx | 641 | 19.6 | Nasopharynx | 678 | 18.1 | Nasopharynx | 825 | 18.3 | Liver | 960 | 22.1 |
| Oesophagus | 436 | 17.7 | Oesophagus | 404 | 13.9 | Oesophagus | 377 | 10.7 | Skin, incl. melanoma | 452 | 10.1 |
| Skin, incl. melanoma | 221 | 8.7 | Skin, incl. melanoma | 297 | 9.5 | Skin, incl. melanoma | 332 | 9.1 | Prostate | 413 | 9.8 |
| Larynx | 188 | 7.3 | Larynx | 255 | 8.3 | Lymphomas | 272 | 6.7 | Oesophagus | 366 | 8.7 |
| Leukaemias | 179 | 4.8 | Bladder | 229 | 7.8 | Bladder | 262 | 7.4 | Bladder | 339 | 7.9 |
| Bladder | 172 | 7.0 | Lymphomas | 204 | 5.9 | Prostate | 257 | 7.5 | Lymphomas | 314 | 6.6 |
| All | 7,466 | 277.0 | All | 8,877 | 283.5 | All | 10,147 | 275.0 | All | 11,813 | 268.1 |

| 1993-1997 | | | 1998-2002 | | | 2003-2007 | | | 2008-2012 | | |
|----------------------|---------------|--------------|----------------------|---------------|--------------|----------------------|---------------|--------------|----------------------|---------------|--------------|
| SITE | NO. | ASR | SITE | NO. | ASR | SITE | NO. | ASR | SITE | NO. | ASR |
| Lung | 2,818 | 56.5 | Lung | 3,151 | 52.0 | Colo-rectum | 3,463 | 44.8 | Colo-rectum | 4,232 | 43.0 |
| Colo-rectum | 2,306 | 44.4 | Colo-rectum | 2,920 | 46.4 | Lung | 3,343 | 44.7 | Lung | 3,631 | 37.2 |
| Stomach | 1,322 | 26.0 | Liver | 1,372 | 21.7 | Prostate | 1,862 | 25.6 | Prostate | 2,857 | 29.9 |
| Liver | 1,121 | 21.2 | Stomach | 1,318 | 21.6 | Liver | 1,552 | 20.3 | Liver | 1,811 | 18.4 |
| Nasopharynx | 1,053 | 16.0 | Prostate | 1,097 | 18.7 | Stomach | 1,241 | 16.5 | Lymphoid neoplasms | 1,330 | 15.6 |
| Prostate | 715 | 14.4 | Nasopharynx | 1,018 | 12.9 | Nasopharynx | 1,111 | 12.6 | Stomach | 1,294 | 13.3 |
| Skin, incl. melanoma | 595 | 11.1 | Lymphoid neoplasms | 791 | 12.8 | Lymphoid neoplasms | 1,045 | 14.8 | Skin, incl. melanoma | 1,201 | 12.4 |
| Lymphomas | 468 | 8.2 | Skin, incl. melanoma | 696 | 10.9 | Skin, incl. melanoma | 806 | 10.6 | Nasopharynx | 1,036 | 10.3 |
| Bladder | 398 | 7.7 | Bladder | 485 | 7.9 | Bladder | 550 | 7.3 | Kidney & Oth.Urinary | 855 | 8.7 |
| Leukaemias | 383 | 7.3 | Kidney & Oth.Urinary | 414 | 6.4 | Kidney & Oth.Urinary | 536 | 6.7 | Pancreas | 649 | 6.7 |
| All | 14,053 | 267.3 | All | 16,300 | 259.6 | All | 19,105 | 251.7 | All | 23,353 | 244.3 |

Table 8.2(b) TEN MOST FREQUENT CANCERS IN CHINESE FEMALES BY FIVE-YEAR PERIOD, 1973-2012

| 1973-1977 | | | 1978-1982 | | | 1983-1987 | | | 1988-1992 | | |
|----------------------|-------|-------|----------------------|-------|-------|----------------------|-------|-------|----------------------|--------|-------|
| SITE | NO. | ASR | SITE | NO. | ASR | SITE | NO. | ASR | SITE | NO. | ASR |
| Breast | 738 | 22.6 | Breast | 1,047 | 27.5 | Breast | 1,457 | 31.9 | Breast | 2,201 | 39.5 |
| Colo-rectum | 672 | 21.3 | Colo-rectum | 999 | 26.6 | Colo-rectum | 1,311 | 29.0 | Colo-rectum | 1,719 | 31.2 |
| Lung | 622 | 20.0 | Lung | 849 | 22.9 | Lung | 992 | 22.0 | Lung | 1,096 | 19.8 |
| Cervix uteri | 588 | 18.3 | Cervix uteri | 639 | 17.0 | Cervix uteri | 802 | 17.6 | Cervix uteri | 880 | 16.2 |
| Stomach | 568 | 17.9 | Stomach | 583 | 15.3 | Stomach | 719 | 15.6 | Stomach | 766 | 13.6 |
| Nasopharynx | 266 | 7.5 | Ovary, etc. | 342 | 8.8 | Ovary, etc. | 403 | 8.7 | Ovary, etc. | 587 | 10.7 |
| Liver | 231 | 7.3 | Skin, incl. melanoma | 315 | 8.0 | Skin, incl. melanoma | 363 | 7.7 | Skin, incl. melanoma | 512 | 8.6 |
| Ovary, etc. | 201 | 5.8 | Nasopharynx | 314 | 7.8 | Nasopharynx | 360 | 7.5 | Nasopharynx | 420 | 7.2 |
| Skin, incl. melanoma | 195 | 6.1 | Liver | 273 | 7.2 | Liver | 314 | 7.0 | Corpus uteri | 370 | 7.1 |
| Leukaemias | 148 | 4.0 | Corpus uteri | 190 | 5.2 | Thyroid | 303 | 5.9 | Thyroid | 356 | 6.0 |
| All | 5,469 | 167.8 | All | 7,027 | 183.4 | All | 8,876 | 194.0 | All | 11,186 | 202.3 |

| 1993-1997 | | | 1998-2002 | | | 2003-2007 | | | 2008-2012 | | |
|----------------------|--------|-------|----------------------|--------|-------|----------------------|--------|-------|----------------------|--------|-------|
| SITE | NO. | ASR | SITE | NO. | ASR | SITE | NO. | ASR | SITE | NO. | ASR |
| Breast | 2,983 | 44.4 | Breast | 4,649 | 57.6 | Breast | 5,617 | 60.2 | Breast | 6,852 | 63.9 |
| Colo-rectum | 2,113 | 32.2 | Colo-rectum | 2,559 | 32.0 | Colo-rectum | 3,073 | 31.7 | Colo-rectum | 3,468 | 28.9 |
| Lung | 1,336 | 20.1 | Lung | 1,441 | 17.6 | Lung | 1,720 | 17.7 | Lung | 1,994 | 16.4 |
| Cervix uteri | 993 | 14.9 | Cervix uteri | 913 | 11.5 | Corpus uteri | 1,116 | 12.2 | Corpus uteri | 1,414 | 13.1 |
| Stomach | 848 | 12.6 | Stomach | 886 | 10.9 | Ovary, etc. | 1,078 | 12.2 | Ovary, etc. | 1,264 | 12.5 |
| Ovary, etc. | 711 | 10.9 | Ovary, etc. | 835 | 10.9 | Cervix uteri | 864 | 9.4 | Skin, incl. melanoma | 1,111 | 8.7 |
| Skin, incl. melanoma | 622 | 8.9 | Corpus uteri | 757 | 9.7 | Stomach | 814 | 8.2 | Stomach | 967 | 7.7 |
| Corpus uteri | 495 | 7.8 | Skin, incl. melanoma | 746 | 8.8 | Lymphoid neoplasms | 767 | 9.9 | Lymphoid neoplasms | 908 | 9.6 |
| Thyroid | 405 | 5.9 | Lymphoid neoplasms | 547 | 7.7 | Skin, incl. melanoma | 758 | 7.6 | Thyroid | 775 | 8.0 |
| Nasopharynx | 383 | 5.5 | Thyroid | 515 | 6.6 | Liver | 511 | 5.2 | Cervix uteri | 772 | 7.1 |
| All | 13,593 | 205.0 | All | 16,943 | 212.4 | All | 19,969 | 214.9 | All | 24,109 | 218.0 |

Table 8.2(c) TEN MOST FREQUENT CANCERS IN MALAY MALES BY FIVE-YEAR PERIOD, 1973-2012

| 1973-1977 | | | 1978-1982 | | | 1983-1987 | | | 1988-1992 | | |
|----------------------|------------|--------------|----------------------|------------|--------------|----------------------|------------|--------------|----------------------|--------------|--------------|
| SITE | NO. | ASR | SITE | NO. | ASR | SITE | NO. | ASR | SITE | NO. | ASR |
| Lung | 111 | 26.2 | Lung | 122 | 26.3 | Lung | 191 | 32.5 | Lung | 241 | 37.2 |
| Liver | 75 | 17.0 | Liver | 78 | 15.5 | Liver | 78 | 12.8 | Colo-rectum | 123 | 18.4 |
| Colo-rectum | 45 | 11.5 | Colo-rectum | 54 | 10.6 | Colo-rectum | 77 | 14.1 | Liver | 82 | 11.5 |
| Stomach | 36 | 9.6 | Stomach | 41 | 9.5 | Lymphomas | 49 | 7.0 | Lymphomas | 61 | 7.9 |
| Leukaemias | 32 | 4.2 | Lymphomas | 33 | 5.9 | Prostate | 45 | 9.3 | Stomach | 56 | 8.3 |
| Nasopharynx | 26 | 5.3 | Leukaemias | 31 | 4.4 | Leukaemias | 36 | 4.9 | Prostate | 54 | 8.8 |
| Lymphomas | 22 | 3.8 | Prostate | 25 | 7.0 | Stomach | 33 | 6.0 | Leukaemias | 54 | 6.5 |
| Prostate | 20 | 7.0 | Skin, incl. melanoma | 24 | 4.6 | Nasopharynx | 30 | 4.3 | Nasopharynx | 51 | 6.6 |
| Skin, incl. melanoma | 15 | 3.3 | Nasopharynx | 23 | 3.8 | Skin, incl. melanoma | 29 | 5.0 | Bladder | 45 | 6.9 |
| Bladder | 12 | 3.2 | Bladder | 17 | 3.4 | Bladder | 28 | 5.2 | Skin, incl. melanoma | 30 | 4.1 |
| All | 507 | 116.5 | All | 606 | 119.0 | All | 787 | 131.5 | All | 1,012 | 145.7 |

| 1993-1997 | | | 1998-2002 | | | 2003-2007 | | | 2008-2012 | | |
|----------------------|--------------|--------------|----------------------|--------------|--------------|----------------------|--------------|--------------|----------------------|--------------|--------------|
| SITE | NO. | ASR | SITE | NO. | ASR | SITE | NO. | ASR | SITE | NO. | ASR |
| Lung | 241 | 30.6 | Lung | 318 | 35.9 | Lung | 356 | 34.0 | Lung | 439 | 35.3 |
| Colo-rectum | 164 | 20.8 | Colo-rectum | 212 | 23.4 | Colo-rectum | 266 | 26.0 | Colo-rectum | 354 | 28.4 |
| Liver | 122 | 15.6 | Lymphoid neoplasms | 178 | 18.2 | Lymphoid neoplasms | 183 | 17.3 | Lymphoid neoplasms | 291 | 23.3 |
| Prostate | 89 | 12.6 | Prostate | 140 | 16.7 | Prostate | 173 | 18.1 | Prostate | 218 | 19.5 |
| Lymphomas | 86 | 9.9 | Liver | 114 | 12.6 | Liver | 142 | 13.6 | Liver | 186 | 14.9 |
| Leukaemias | 75 | 8.1 | Bladder | 72 | 7.9 | Nasopharynx | 84 | 6.9 | Myeloid neoplasms | 101 | 8.2 |
| Nasopharynx | 60 | 6.5 | Myeloid neoplasms | 64 | 6.7 | Myeloid neoplasms | 65 | 6.0 | Nasopharynx | 85 | 6.0 |
| Stomach | 52 | 6.6 | Nasopharynx | 63 | 5.5 | Bladder | 62 | 5.9 | Bladder | 82 | 6.9 |
| Bladder | 45 | 5.7 | Stomach | 63 | 6.6 | Kidney & Oth.Urinary | 55 | 5.0 | Kidney & Oth.Urinary | 67 | 5.4 |
| Skin, incl. melanoma | 38 | 4.7 | Skin, incl. melanoma | 46 | 5.5 | Stomach | 53 | 5.0 | Skin, incl. melanoma | 65 | 4.8 |
| All | 1,242 | 154.0 | All | 1,592 | 172.3 | All | 1,776 | 169.2 | All | 2,352 | 189.3 |

Table 8.2(d) TEN MOST FREQUENT CANCERS IN MALAY FEMALES BY FIVE-YEAR PERIOD, 1973-2012

| 1973-1977 | | | 1978-1982 | | | 1983-1987 | | | 1988-1992 | | |
|--------------|-----|------|--------------|-----|-------|--------------|-----|-------|--------------|-------|-------|
| SITE | NO. | ASR | SITE | NO. | ASR | SITE | NO. | ASR | SITE | NO. | ASR |
| Breast | 69 | 14.9 | Breast | 111 | 21.1 | Breast | 153 | 22.6 | Breast | 260 | 33.4 |
| Ovary, etc. | 49 | 10.6 | Ovary, etc. | 57 | 9.8 | Ovary, etc. | 65 | 9.2 | Colo-rectum | 94 | 13.9 |
| Cervix uteri | 43 | 8.9 | Colo-rectum | 55 | 12.9 | Colo-rectum | 63 | 11.4 | Cervix uteri | 81 | 11.2 |
| Colo-rectum | 29 | 8.6 | Cervix uteri | 49 | 9.4 | Lung | 61 | 12.0 | Ovary, etc. | 81 | 9.9 |
| Stomach | 24 | 7.3 | Thyroid | 33 | 4.8 | Cervix uteri | 56 | 8.9 | Lung | 60 | 9.5 |
| Leukaemias | 24 | 3.8 | Lung | 29 | 7.8 | Thyroid | 43 | 4.9 | Thyroid | 59 | 6.3 |
| Lung | 22 | 6.5 | Stomach | 28 | 6.5 | Liver | 33 | 6.2 | Lymphomas | 46 | 5.9 |
| Corpus uteri | 17 | 4.5 | Liver | 23 | 5.5 | Lymphomas | 30 | 5.2 | Corpus uteri | 38 | 5.1 |
| Thyroid | 17 | 3.6 | Leukaemias | 22 | 3.5 | Stomach | 29 | 5.4 | Leukaemias | 36 | 4.4 |
| Lymphomas | 14 | 2.8 | Lymphomas | 20 | 3.6 | Leukaemias | 29 | 3.5 | Stomach | 35 | 5.4 |
| All | 410 | 97.2 | All | 575 | 114.7 | All | 733 | 117.9 | All | 1,010 | 136.0 |

| 1993-1997 | | | 1998-2002 | | | 2003-2007 | | | 2008-2012 | | |
|----------------------|-------|-------|--------------------|-------|-------|--------------------|-------|-------|--------------------|-------|-------|
| SITE | NO. | ASR | SITE | NO. | ASR | SITE | NO. | ASR | SITE | NO. | ASR |
| Breast | 357 | 37.4 | Breast | 524 | 44.9 | Breast | 729 | 54.7 | Breast | 908 | 58.1 |
| Colo-rectum | 133 | 16.4 | Colo-rectum | 177 | 19.0 | Colo-rectum | 219 | 19.9 | Colo-rectum | 309 | 21.4 |
| Ovary, etc. | 112 | 11.7 | Ovary, etc. | 147 | 13.5 | Ovary, etc. | 165 | 12.9 | Lymphoid neoplasms | 215 | 15.4 |
| Cervix uteri | 90 | 10.0 | Lung | 115 | 12.0 | Lymphoid neoplasms | 159 | 13.9 | Ovary, etc. | 212 | 14.0 |
| Lung | 86 | 10.4 | Lymphoid neoplasms | 108 | 10.8 | Lung | 143 | 12.2 | Corpus uteri | 202 | 13.0 |
| Corpus uteri | 69 | 7.8 | Corpus uteri | 90 | 8.8 | Corpus uteri | 141 | 11.3 | Lung | 178 | 12.2 |
| Leukaemias | 55 | 6.1 | Cervix uteri | 79 | 7.3 | Cervix uteri | 104 | 8.5 | Thyroid | 115 | 7.8 |
| Thyroid | 54 | 5.4 | Thyroid | 79 | 6.9 | Thyroid | 96 | 7.5 | Cervix uteri | 99 | 6.7 |
| Lymphomas | 49 | 5.7 | Myeloid neoplasms | 49 | 4.9 | Myeloid neoplasms | 53 | 4.2 | Myeloid neoplasms | 81 | 5.8 |
| Skin, incl. melanoma | 43 | 5.4 | Stomach | 42 | 3.8 | Liver | 47 | 4.3 | Liver | 61 | 4.3 |
| All | 1,340 | 150.3 | All | 1,742 | 165.6 | All | 2,197 | 177.4 | All | 2,858 | 193.1 |

Table 8.2(e) TEN MOST FREQUENT CANCERS IN INDIAN MALES BY FIVE-YEAR PERIOD, 1973-2012

| 1973-1977 | | | 1978-1982 | | | 1983-1987 | | | 1988-1992 | | |
|-------------|------------|--------------|-------------|------------|--------------|-------------|------------|--------------|-------------|------------|--------------|
| SITE | NO. | ASR | SITE | NO. | ASR | SITE | NO. | ASR | SITE | NO. | ASR |
| Stomach | 73 | 22.6 | Lung | 74 | 21.9 | Lung | 92 | 21.2 | Lung | 83 | 14.5 |
| Lung | 65 | 19.6 | Stomach | 56 | 15.7 | Colo-rectum | 76 | 16.3 | Colo-rectum | 73 | 13.7 |
| Colo-rectum | 48 | 16.7 | Liver | 54 | 13.9 | Stomach | 70 | 15.6 | Stomach | 57 | 10.1 |
| Liver | 44 | 14.1 | Colo-rectum | 43 | 13.7 | Prostate | 41 | 10.0 | Prostate | 43 | 8.1 |
| Mouth | 26 | 10.3 | Oesophagus | 30 | 8.1 | Liver | 40 | 9.2 | Liver | 39 | 6.3 |
| Oesophagus | 23 | 6.9 | Larynx | 28 | 7.9 | Larynx | 39 | 9.0 | Lymphomas | 31 | 5.8 |
| Larynx | 21 | 7.1 | Leukaemias | 27 | 6.5 | Mouth | 26 | 5.3 | Oesophagus | 31 | 5.6 |
| Tongue | 20 | 5.3 | Prostate | 26 | 9.3 | Lymphomas | 24 | 5.2 | Larynx | 29 | 5.0 |
| Leukaemias | 17 | 3.7 | Lymphomas | 25 | 7.6 | Tongue | 23 | 4.3 | Bladder | 23 | 4.4 |
| Prostate | 16 | 7.0 | Bladder | 20 | 5.7 | Bladder | 21 | 5.1 | Mouth | 22 | 3.7 |
| All | 498 | 156.8 | All | 537 | 154.7 | All | 622 | 138.2 | All | 624 | 112.4 |

| 1993-1997 | | | 1998-2002 | | | 2003-2007 | | | 2008-2012 | | |
|-------------|------------|--------------|--------------------|------------|--------------|----------------------|------------|--------------|----------------------|--------------|--------------|
| SITE | NO. | ASR | SITE | NO. | ASR | SITE | NO. | ASR | SITE | NO. | ASR |
| Lung | 74 | 10.7 | Colo-rectum | 121 | 16.7 | Colo-rectum | 130 | 17.8 | Colo-rectum | 187 | 20.9 |
| Colo-rectum | 70 | 10.2 | Lung | 94 | 12.8 | Lung | 125 | 17.4 | Prostate | 158 | 20.3 |
| Prostate | 69 | 9.8 | Prostate | 86 | 11.6 | Prostate | 117 | 15.9 | Lung | 150 | 17.5 |
| Stomach | 57 | 8.6 | Stomach | 62 | 8.1 | Lymphoid neoplasms | 86 | 12.2 | Lymphoid neoplasms | 144 | 16.4 |
| Liver | 49 | 7.5 | Liver | 60 | 8.1 | Stomach | 70 | 9.4 | Liver | 81 | 9.2 |
| Larynx | 37 | 5.6 | Lymphoid neoplasms | 59 | 8.8 | Liver | 69 | 9.3 | Stomach | 75 | 8.3 |
| Lymphomas | 35 | 5.5 | Bladder | 35 | 4.5 | Bladder | 40 | 5.4 | Kidney & Oth.Urinary | 46 | 5.2 |
| Leukaemias | 33 | 5.7 | Oesophagus | 25 | 3.3 | Kidney & Oth.Urinary | 37 | 5.2 | Myeloid neoplasms | 43 | 4.6 |
| Bladder | 33 | 5.1 | Myeloid neoplasms | 23 | 3.3 | Myeloid neoplasms | 34 | 4.4 | Bladder | 41 | 5.0 |
| Mouth | 24 | 3.7 | Pancreas | 21 | 3.1 | Pancreas | 31 | 4.0 | Pancreas | 33 | 3.5 |
| All | 696 | 106.1 | All | 825 | 113.7 | All | 990 | 135.8 | All | 1,258 | 143.6 |

Table 8.2(f) TEN MOST FREQUENT CANCERS IN INDIAN FEMALES BY FIVE-YEAR PERIOD, 1973-2012

| 1973-1977 | | | 1978-1982 | | | 1983-1987 | | | 1988-1992 | | |
|--------------|------------|--------------|----------------------|------------|--------------|--------------|------------|--------------|----------------------|------------|--------------|
| SITE | NO. | ASR | SITE | NO. | ASR | SITE | NO. | ASR | SITE | NO. | ASR |
| Breast | 41 | 27.3 | Cervix uteri | 54 | 28.7 | Breast | 88 | 32.9 | Breast | 118 | 34.4 |
| Cervix uteri | 37 | 26.2 | Breast | 53 | 29.2 | Cervix uteri | 36 | 12.0 | Colo-rectum | 35 | 12.7 |
| Colo-rectum | 12 | 9.6 | Colo-rectum | 36 | 26.7 | Ovary, etc. | 29 | 9.4 | Cervix uteri | 32 | 8.7 |
| Stomach | 12 | 9.3 | Stomach | 21 | 16.0 | Colo-rectum | 28 | 15.7 | Ovary, etc. | 28 | 7.6 |
| Ovary, etc. | 12 | 7.8 | Mouth | 13 | 9.6 | Stomach | 17 | 9.0 | Stomach | 23 | 7.7 |
| Corpus uteri | 11 | 7.1 | Ovary, etc. | 12 | 4.2 | Thyroid | 17 | 6.4 | Corpus uteri | 20 | 6.6 |
| Lung | 9 | 8.1 | Skin, incl. melanoma | 9 | 4.9 | Leukaemias | 13 | 4.4 | Leukaemias | 17 | 5.5 |
| Oesophagus | 9 | 7.2 | Lymphomas | 9 | 3.2 | Lymphomas | 11 | 4.0 | Thyroid | 17 | 3.7 |
| Liver | 9 | 4.8 | Lung | 8 | 6.0 | Mouth | 10 | 5.8 | Mouth | 13 | 4.5 |
| Thyroid | 9 | 4.3 | Corpus uteri | 6 | 3.8 | Lung | 10 | 5.6 | Skin, incl. melanoma | 12 | 4.5 |
| All | 221 | 153.9 | All | 298 | 174.8 | All | 345 | 144.7 | All | 427 | 134.5 |

| 1993-1997 | | | 1998-2002 | | | 2003-2007 | | | 2008-2012 | | |
|----------------------|------------|--------------|--------------------|------------|--------------|----------------------|------------|--------------|--------------------|--------------|--------------|
| SITE | NO. | ASR | SITE | NO. | ASR | SITE | NO. | ASR | SITE | NO. | ASR |
| Breast | 185 | 39.1 | Breast | 288 | 48.8 | Breast | 374 | 50.1 | Breast | 537 | 58.0 |
| Colo-rectum | 59 | 15.0 | Colo-rectum | 73 | 14.3 | Corpus uteri | 80 | 11.7 | Corpus uteri | 132 | 15.3 |
| Ovary, etc. | 50 | 10.4 | Ovary, etc. | 58 | 9.0 | Ovary, etc. | 77 | 10.2 | Colo-rectum | 115 | 13.7 |
| Cervix uteri | 38 | 8.5 | Corpus uteri | 49 | 8.4 | Colo-rectum | 76 | 11.1 | Ovary, etc. | 96 | 11.0 |
| Corpus uteri | 35 | 7.6 | Thyroid | 46 | 7.0 | Lymphoid neoplasms | 58 | 9.0 | Lymphoid neoplasms | 79 | 9.4 |
| Stomach | 25 | 7.2 | Lymphoid neoplasms | 45 | 8.6 | Thyroid | 39 | 4.8 | Thyroid | 59 | 6.0 |
| Thyroid | 22 | 3.5 | Cervix uteri | 38 | 6.7 | Stomach | 31 | 4.9 | Lung | 49 | 5.9 |
| Mouth | 19 | 5.5 | Lung | 34 | 7.1 | Lung | 28 | 4.3 | Myeloid neoplasms | 44 | 4.8 |
| Lung | 17 | 5.7 | Stomach | 34 | 6.1 | Cervix uteri | 24 | 3.6 | Stomach | 34 | 3.9 |
| Skin, incl. melanoma | 17 | 4.7 | Myeloid neoplasms | 20 | 3.5 | Kidney & Oth.Urinary | 22 | 3.3 | Pancreas | 29 | 3.6 |
| All | 602 | 141.6 | All | 843 | 151.8 | All | 994 | 141.3 | All | 1,448 | 164.7 |

9. SUBSITE DISTRIBUTION 1973-2012

Table 9.1 shows the subsite distribution according to ICD-9, stratified by gender, for the period 1973-2012. The subcategory “other” (fourth digit “8”) refers to “a malignant neoplasm that overlaps the boundaries of two or more subsites and whose point of origin cannot be determined”.

Any interpretation of the data must take into consideration the proportion of cases categorized as “NOS” (“not otherwise specified”) indicated by fourth digit “9”. Where this proportion is high, the distribution of the remaining specified subsites should not be taken as representative.

Table 9.1 SUBSITE DISTRIBUTION BY GENDER, 1973-2012

| ICD9 | SITE | Male | % | Female | % | All | % |
|------------|---|------------|--------------|------------|--------------|--------------|--------------|
| 140 | LIP, VERMILION | 24 | 100.0 | 16 | 100.0 | 40 | 100.0 |
| 140.0 | Upper lip, vermilion border | 3 | 12.5 | 2 | 12.5 | 5 | 12.5 |
| 140.1 | Lower lip, vermilion border | 7 | 29.2 | 4 | 25.0 | 11 | 27.5 |
| 140.3 | Upper lip, inner aspect | 1 | 4.2 | 4 | 25.0 | 5 | 12.5 |
| 140.4 | Lower lip, inner aspect | 2 | 8.3 | 3 | 18.8 | 5 | 12.5 |
| 140.5 | Lip, unspecified, inner aspect | 0 | 0.0 | 1 | 6.3 | 1 | 2.5 |
| 140.6 | Commissure of lip | 1 | 4.2 | 0 | 0.0 | 1 | 2.5 |
| 140.8 | Other sites of lip | 1 | 4.2 | 0 | 0.0 | 1 | 2.5 |
| 140.9 | Lip, unspecified, vermilion border | 9 | 37.5 | 2 | 12.5 | 11 | 27.5 |
| 141 | TONGUE | 909 | 100.0 | 423 | 100.0 | 1,332 | 100.0 |
| 141.0 | Base of tongue | 220 | 24.2 | 45 | 10.6 | 265 | 19.9 |
| 141.1 | Dorsal surface of tongue | 5 | 0.6 | 9 | 2.1 | 14 | 1.1 |
| 141.2 | Tip and lateral border of tongue | 41 | 4.5 | 28 | 6.6 | 69 | 5.2 |
| | Ventral surface of tongue | 13 | 1.4 | 6 | 1.4 | 19 | 1.4 |
| | Anterior two-thirds of tongue, part unspecified | 27 | 3.0 | 16 | 3.8 | 43 | 3.2 |
| 141.6 | Lingual tonsil | 4 | 0.4 | 0 | 0.0 | 4 | 0.3 |
| 141.8 | Other sites of tongue | 10 | 1.1 | 2 | 0.5 | 12 | 0.9 |
| 141.9 | Tongue, unspecified | 589 | 64.8 | 317 | 74.9 | 906 | 68.0 |
| 142 | SALIVARY GLAND | 422 | 100.0 | 397 | 100.0 | 819 | 100.0 |
| 142.0 | Parotid gland | 287 | 68.0 | 272 | 68.5 | 559 | 68.3 |
| 142.1 | Submandibular gland | 89 | 21.1 | 79 | 19.9 | 168 | 20.5 |
| 142.2 | Sublingual gland | 9 | 2.1 | 10 | 2.5 | 19 | 2.3 |
| 142.8 | Other major salivary glands | 1 | 0.2 | 1 | 0.3 | 2 | 0.2 |
| 142.9 | Salivary gland, unspecified | 36 | 8.5 | 35 | 8.8 | 71 | 8.7 |
| 143 | GUM | 63 | 100.0 | 61 | 100.0 | 124 | 100.0 |
| 143.0 | Upper gum | 9 | 14.3 | 16 | 26.2 | 25 | 20.2 |
| 143.1 | Lower gum | 35 | 55.6 | 19 | 31.1 | 54 | 43.5 |
| 143.9 | Gum, unspecified | 19 | 30.2 | 26 | 42.6 | 45 | 36.3 |
| 144 | FLOOR OF MOUTH | 174 | 100.0 | 40 | 100.0 | 214 | 100.0 |
| 144.0 | Anterior portion of floor of mouth | 2 | 1.1 | 0 | 0.0 | 2 | 0.9 |
| 144.1 | Lateral portion of floor of mouth | 1 | 0.6 | 2 | 5.0 | 3 | 1.4 |
| 144.8 | Other sites of floor of mouth | 1 | 0.6 | 0 | 0.0 | 1 | 0.5 |

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|------------|--|--------------|--------------|--------------|--------------|---------------|--------------|
| 144.9 | Floor of mouth, part unspecified | 170 | 97.7 | 38 | 95.0 | 208 | 97.2 |
| 145 | MOUTH, OTHER PARTS | 609 | 100.0 | 328 | 100.0 | 937 | 100.0 |
| 145.0 | Cheek mucosa | 204 | 33.5 | 143 | 43.6 | 347 | 37.0 |
| 145.1 | Vestibule of mouth | 4 | 0.7 | 2 | 0.6 | 6 | 0.6 |
| 145.2 | Hard palate | 71 | 11.7 | 42 | 12.8 | 113 | 12.1 |
| 145.3 | Soft palate | 108 | 17.7 | 23 | 7.0 | 131 | 14.0 |
| 145.4 | Uvula | 7 | 1.1 | 3 | 0.9 | 10 | 1.1 |
| 145.5 | Palate, unspecified | 103 | 16.9 | 52 | 15.9 | 155 | 16.5 |
| 145.6 | Retromolar area | 59 | 9.7 | 35 | 10.7 | 94 | 10.0 |
| 145.8 | Other specified parts of mouth | 4 | 0.7 | 1 | 0.3 | 5 | 0.5 |
| 145.9 | Mouth, unspecified | 49 | 8.0 | 27 | 8.2 | 76 | 8.1 |
| 146 | OROPHARYNX | 552 | 100.0 | 162 | 100.0 | 714 | 100.0 |
| 146.0 | Tonsil | 394 | 71.4 | 130 | 80.2 | 524 | 73.4 |
| 146.1 | Tonsillar fossa | 14 | 2.5 | 3 | 1.9 | 17 | 2.4 |
| 146.2 | Tonsillar pillars (anterior) (posterior) | 13 | 2.4 | 2 | 1.2 | 15 | 2.1 |
| 146.3 | Vallecula epiglottica | 12 | 2.2 | 2 | 1.2 | 14 | 2.0 |
| 146.4 | Anterior aspect of epiglottis | 3 | 0.5 | 0 | 0.0 | 3 | 0.4 |
| 146.5 | Junctional region of oropharynx | 1 | 0.2 | 0 | 0.0 | 1 | 0.1 |
| 146.6 | Lateral wall of oropharynx | 3 | 0.5 | 1 | 0.6 | 4 | 0.6 |
| 146.7 | Posterior wall of oropharynx | 9 | 1.6 | 1 | 0.6 | 10 | 1.4 |
| 146.8 | Other specified sites of oropharynx | 2 | 0.4 | 3 | 1.9 | 5 | 0.7 |
| 146.9 | Oropharynx, unspecified | 101 | 18.3 | 20 | 12.3 | 121 | 16.9 |
| 147 | NASOPHARYNX | 7,902 | 100.0 | 2,975 | 100.0 | 10,877 | 100.0 |
| 147.0 | Superior wall of nasopharynx | 12 | 0.2 | 6 | 0.2 | 18 | 0.2 |
| 147.1 | Posterior wall of nasopharynx | 27 | 0.3 | 4 | 0.1 | 31 | 0.3 |
| 147.2 | Lateral wall of nasopharynx | 49 | 0.6 | 18 | 0.6 | 67 | 0.6 |
| 147.3 | Anterior wall of nasopharynx | 7 | 0.1 | 3 | 0.1 | 10 | 0.1 |
| 147.8 | Other specified sites of nasopharynx | 4 | 0.1 | 5 | 0.2 | 9 | 0.1 |
| 147.9 | Nasopharynx, unspecified | 7,803 | 98.7 | 2,939 | 98.8 | 10,742 | 98.8 |
| 148 | HYPOPHARYNX | 639 | 100.0 | 79 | 100.0 | 718 | 100.0 |
| 148.0 | Postcricoid region of hypopharynx | 31 | 4.9 | 18 | 22.8 | 49 | 6.8 |
| 148.1 | Pyriform sinus | 397 | 62.1 | 29 | 36.7 | 426 | 59.3 |
| 148.2 | Aryepiglottic fold, hypopharyngeal aspect | 5 | 0.8 | 1 | 1.3 | 6 | 0.8 |
| 148.3 | Posterior hypopharyngeal wall | 4 | 0.6 | 2 | 2.5 | 6 | 0.8 |
| 148.8 | Other specified sites of hypopharynx | 3 | 0.5 | 3 | 3.8 | 6 | 0.8 |
| 148.9 | Hypopharynx, unspecified | 199 | 31.1 | 26 | 32.9 | 225 | 31.3 |
| 149 | PHARYNX | 69 | 100.0 | 18 | 100.0 | 87 | 100.0 |
| 149.0 | Pharynx, unspecified | 67 | 97.1 | 17 | 94.4 | 84 | 96.6 |
| 149.8 | Other sites within the lip and oral cavity | 1 | 1.4 | 1 | 5.6 | 2 | 2.3 |
| 149.9 | Ill-defined sites within the lip and oral cavity | 1 | 1.4 | 0 | 0.0 | 1 | 1.1 |
| 150 | OESOPHAGUS | 3,249 | 100.0 | 998 | 100.0 | 4,247 | 100.0 |
| 150.0 | Cervical esophagus | 35 | 1.1 | 12 | 1.2 | 47 | 1.1 |
| 150.1 | Thoracic esophagus | 44 | 1.4 | 10 | 1.0 | 54 | 1.3 |
| 150.2 | Abdominal esophagus | 4 | 0.1 | 1 | 0.1 | 5 | 0.1 |
| 150.3 | Upper third of esophagus | 263 | 8.1 | 115 | 11.5 | 378 | 8.9 |

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|------------|--|---------------|--------------|---------------|--------------|---------------|--------------|
| 150.4 | Middle third of esophagus | 863 | 26.6 | 243 | 24.3 | 1,106 | 26.0 |
| 150.5 | Lower third of esophagus | 585 | 18.0 | 121 | 12.1 | 706 | 16.6 |
| 150.8 | Other specified part of esophagus | 29 | 0.9 | 7 | 0.7 | 36 | 0.8 |
| 150.9 | Esophagus, unspecified | 1,426 | 43.9 | 489 | 49.0 | 1,915 | 45.1 |
| 151 | STOMACH | 10,872 | 100.0 | 6,691 | 100.0 | 17,563 | 100.0 |
| 151.0 | Cardia | 1,232 | 11.3 | 435 | 6.5 | 1,667 | 9.5 |
| 151.1 | Pylorus | 407 | 3.7 | 241 | 3.6 | 648 | 3.7 |
| 151.2 | Pyloric antrum | 1,132 | 10.4 | 790 | 11.8 | 1,922 | 10.9 |
| 151.3 | Fundus of stomach | 73 | 0.7 | 64 | 1.0 | 137 | 0.8 |
| 151.4 | Body of stomach | 275 | 2.5 | 193 | 2.9 | 468 | 2.7 |
| 151.5 | Lesser curvature of stomach, unspecified | 314 | 2.9 | 212 | 3.2 | 526 | 3.0 |
| 151.6 | Greater curvature of stomach, unspecified | 117 | 1.1 | 95 | 1.4 | 212 | 1.2 |
| 151.8 | Other specified sites of stomach | 182 | 1.7 | 105 | 1.6 | 287 | 1.6 |
| 151.9 | Stomach, unspecified | 7,140 | 65.7 | 4,556 | 68.1 | 11,696 | 66.6 |
| 152 | SMALL INTESTINES | 424 | 100.0 | 354 | 100.0 | 778 | 100.0 |
| 152.0 | Duodenum | 196 | 46.2 | 178 | 50.3 | 374 | 48.1 |
| 152.1 | Jejunum | 70 | 16.5 | 61 | 17.2 | 131 | 16.8 |
| 152.2 | Ileum | 44 | 10.4 | 20 | 5.6 | 64 | 8.2 |
| 152.3 | Meckel's diverticulum | 4 | 0.9 | 1 | 0.3 | 5 | 0.6 |
| 152.8 | Other specified sites of small intestine | 6 | 1.4 | 1 | 0.3 | 7 | 0.9 |
| 152.9 | Small intestine, unspecified | 104 | 24.5 | 93 | 26.3 | 197 | 25.3 |
| 153 | COLON | 11,320 | 100.0 | 11,401 | 100.0 | 22,721 | 100.0 |
| 153.0 | Hepatic flexure | 498 | 4.4 | 461 | 4.0 | 959 | 4.2 |
| 153.1 | Transverse colon | 929 | 8.2 | 1,071 | 9.4 | 2,000 | 8.8 |
| 153.2 | Descending colon | 848 | 7.5 | 767 | 6.7 | 1,615 | 7.1 |
| 153.3 | Sigmoid colon | 4,457 | 39.4 | 4,157 | 36.5 | 8,614 | 37.9 |
| 153.4 | Cecum | 873 | 7.7 | 1,069 | 9.4 | 1,942 | 8.5 |
| 153.5 | Appendix vermiformis | 169 | 1.5 | 229 | 2.0 | 398 | 1.8 |
| 153.6 | Ascending colon | 831 | 7.3 | 959 | 8.4 | 1,790 | 7.9 |
| 153.7 | Splenic flexure | 467 | 4.1 | 347 | 3.0 | 814 | 3.6 |
| 153.8 | Other specified sites of large intestine | 656 | 5.8 | 637 | 5.6 | 1,293 | 5.7 |
| 153.9 | Colon, unspecified | 1,592 | 14.1 | 1,704 | 14.9 | 3,296 | 14.5 |
| 154 | RECTUM & ANUS | 8,743 | 100.0 | 6,212 | 100.0 | 14,955 | 100.0 |
| 154.0 | Rectosigmoid junction | 2,073 | 23.7 | 1,583 | 25.5 | 3,656 | 24.4 |
| 154.1 | Rectum | 6,387 | 73.1 | 4,386 | 70.6 | 10,773 | 72.0 |
| 154.2 | Anal canal | 157 | 1.8 | 133 | 2.1 | 290 | 1.9 |
| 154.3 | Anus, unspecified | 60 | 0.7 | 62 | 1.0 | 122 | 0.8 |
| 154.8 | Other sites of rectum, rectosigmoid junction, and anus | 66 | 0.8 | 48 | 0.8 | 114 | 0.8 |
| 155 | LIVER | 11,025 | 100.0 | 3,428 | 100.0 | 14,453 | 100.0 |
| 155.0 | Liver, primary | 10,018 | 90.9 | 2,762 | 80.6 | 12,780 | 88.4 |
| 155.1 | Intrahepatic bile ducts | 505 | 4.6 | 455 | 13.3 | 960 | 6.6 |
| 155.2 | Liver, not specified as primary or secondary | 502 | 4.6 | 211 | 6.2 | 713 | 4.9 |
| 156 | GALL BLADDER & EXTRAHEPATIC DUCTS | 1,041 | 100.0 | 1,270 | 100.0 | 2,311 | 100.0 |
| 156.0 | Gallbladder | 383 | 36.8 | 675 | 53.1 | 1,058 | 45.8 |

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|------------|--|---------------|--------------|---------------|--------------|---------------|--------------|
| 156.1 | Extrahepatic bile ducts | 285 | 27.4 | 258 | 20.3 | 543 | 23.5 |
| 156.2 | Ampulla of vater | 339 | 32.6 | 301 | 23.7 | 640 | 27.7 |
| 156.8 | Other specified sites of gallbladder and extrahepatic bile ducts | 7 | 0.7 | 5 | 0.4 | 12 | 0.5 |
| 156.9 | Biliary tract, part unspecified | 27 | 2.6 | 31 | 2.4 | 58 | 2.5 |
| 157 | PANCREAS | 2,775 | 100.0 | 2,304 | 100.0 | 5,079 | 100.0 |
| 157.0 | Head of pancreas | 907 | 32.7 | 776 | 33.7 | 1,683 | 33.1 |
| 157.1 | Body of pancreas | 179 | 6.5 | 134 | 5.8 | 313 | 6.2 |
| 157.2 | Tail of pancreas | 201 | 7.2 | 151 | 6.6 | 352 | 6.9 |
| 157.3 | Pancreatic duct | 7 | 0.3 | 6 | 0.3 | 13 | 0.3 |
| 157.4 | Islets of langerhans | 7 | 0.3 | 5 | 0.2 | 12 | 0.2 |
| 157.8 | Other specified sites of pancreas | 132 | 4.8 | 102 | 4.4 | 234 | 4.6 |
| 157.9 | Pancreas, part unspecified | 1,342 | 48.4 | 1,130 | 49.0 | 2,472 | 48.7 |
| 158 | RETROPERITONEUM & PERITONEUM | 150 | 100.0 | 275 | 100.0 | 425 | 100.0 |
| 158.0 | Retroperitoneum | 111 | 74.0 | 148 | 53.8 | 259 | 60.9 |
| 158.8 | Specified parts of peritoneum | 16 | 10.7 | 23 | 8.4 | 39 | 9.2 |
| 158.9 | Peritoneum, unspecified | 23 | 15.3 | 104 | 37.8 | 127 | 29.9 |
| 160 | NASAL CAVITY, MIDDLE EAR, & SINUSES | 498 | 100.0 | 272 | 100.0 | 770 | 100.0 |
| 160.0 | Nasal cavities | 242 | 48.6 | 113 | 41.5 | 355 | 46.1 |
| 160.1 | Auditory tube, middle ear, and mastoid air cells | 25 | 5.0 | 16 | 5.9 | 41 | 5.3 |
| 160.2 | Maxillary sinus | 178 | 35.7 | 116 | 42.6 | 294 | 38.2 |
| 160.3 | Ethmoidal sinus | 32 | 6.4 | 18 | 6.6 | 50 | 6.5 |
| 160.4 | Frontal sinus | 1 | 0.2 | 1 | 0.4 | 2 | 0.3 |
| 160.5 | Sphenoidal sinus | 8 | 1.6 | 5 | 1.8 | 13 | 1.7 |
| 160.8 | Other accessory sinuses | 3 | 0.6 | 2 | 0.7 | 5 | 0.6 |
| 160.9 | Accessory sinus, unspecified | 9 | 1.8 | 1 | 0.4 | 10 | 1.3 |
| 161 | LARYNX | 2,476 | 100.0 | 246 | 100.0 | 2,722 | 100.0 |
| 161.0 | Glottis | 1,163 | 47.0 | 88 | 35.8 | 1,251 | 46.0 |
| 161.1 | Supraglottis | 460 | 18.6 | 64 | 26.0 | 524 | 19.3 |
| 161.2 | Subglottis | 37 | 1.5 | 5 | 2.0 | 42 | 1.5 |
| 161.3 | Laryngeal cartilages | 14 | 0.6 | 5 | 2.0 | 19 | 0.7 |
| 161.8 | Other specified sites of larynx | 56 | 2.3 | 4 | 1.6 | 60 | 2.2 |
| 161.9 | Larynx, unspecified | 746 | 30.1 | 80 | 32.5 | 826 | 30.3 |
| 162 | LUNG | 25,009 | 100.0 | 11,005 | 100.0 | 36,014 | 100.0 |
| 162.0 | Trachea | 32 | 0.1 | 14 | 0.1 | 46 | 0.1 |
| 162.2 | Main bronchus | 473 | 1.9 | 194 | 1.8 | 667 | 1.9 |
| 162.3 | Upper lobe, bronchus or lung | 4,132 | 16.5 | 1,800 | 16.4 | 5,932 | 16.5 |
| 162.4 | Middle lobe, bronchus or lung | 361 | 1.4 | 280 | 2.5 | 641 | 1.8 |
| 162.5 | Lower lobe, bronchus or lung | 2,175 | 8.7 | 1,180 | 10.7 | 3,355 | 9.3 |
| 162.8 | Other parts of bronchus or lung | 163 | 0.7 | 71 | 0.6 | 234 | 0.6 |
| 162.9 | Bronchus and lung, unspecified | 17,673 | 70.7 | 7,466 | 67.8 | 25,139 | 69.8 |
| 163 | PLEURA | 162 | 100.0 | 44 | 100.0 | 206 | 100.0 |
| 163.0 | Parietal pleura | 1 | 0.6 | 0 | 0.0 | 1 | 0.5 |
| 163.9 | Pleura, unspecified | 161 | 99.4 | 44 | 100.0 | 205 | 99.5 |

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| 164 | THYMUS, HEART, & MEDIASTINUM | 412 | 100.0 | 284 | 100.0 | 696 | 100.0 |
| 164.0 | Thymus | 249 | 60.4 | 222 | 78.2 | 471 | 67.7 |
| 164.1 | Heart | 6 | 1.5 | 2 | 0.7 | 8 | 1.1 |
| 164.2 | Anterior mediastinum | 56 | 13.6 | 29 | 10.2 | 85 | 12.2 |
| 164.3 | Posterior mediastinum | 6 | 1.5 | 1 | 0.4 | 7 | 1.0 |
| 164.8 | Other parts of mediastinum | 0 | 0.0 | 2 | 0.7 | 2 | 0.3 |
| 164.9 | Mediastinum, part unspecified | 95 | 23.1 | 28 | 9.9 | 123 | 17.7 |
| 170 | BONE | 488 | 100.0 | 403 | 100.0 | 891 | 100.0 |
| 170.0 | Bones of skull and face, except mandible | 26 | 5.3 | 33 | 8.2 | 59 | 6.6 |
| 170.1 | Mandible | 27 | 5.5 | 19 | 4.7 | 46 | 5.2 |
| 170.2 | Vertebral column, excluding sacrum and coccyx | 22 | 4.5 | 16 | 4.0 | 38 | 4.3 |
| 170.3 | Ribs, sternum, and clavicle | 19 | 3.9 | 18 | 4.5 | 37 | 4.2 |
| 170.4 | Scapula and long bones of upper limb | 60 | 12.3 | 41 | 10.2 | 101 | 11.3 |
| 170.5 | Short bones of upper limb | 7 | 1.4 | 5 | 1.2 | 12 | 1.3 |
| 170.6 | Pelvic bones, sacrum, and coccyx | 57 | 11.7 | 40 | 9.9 | 97 | 10.9 |
| 170.7 | Long bones of lower limb | 219 | 44.9 | 186 | 46.2 | 405 | 45.5 |
| 170.8 | Short bones of lower limb | 21 | 4.3 | 10 | 2.5 | 31 | 3.5 |
| 170.9 | Bone and articular cartilage, site unspecified | 30 | 6.1 | 35 | 8.7 | 65 | 7.3 |
| 171 | CONNECTIVE TISSUES | 999 | 100.0 | 779 | 100.0 | 1778 | 100.0 |
| 171.0 | Connective and other soft tissue of head, face, and neck | 107 | 10.7 | 57 | 7.3 | 164 | 9.2 |
| 171.2 | Connective and other soft tissue of upper limb, including shoulder | 132 | 13.2 | 95 | 12.2 | 227 | 12.8 |
| 171.3 | Connective and other soft tissue of lower limb, including hip | 332 | 33.2 | 271 | 34.8 | 603 | 33.9 |
| 171.4 | Connective and other soft tissue of thorax | 76 | 7.6 | 52 | 6.7 | 128 | 7.2 |
| 171.5 | Connective and other soft tissue of abdomen | 58 | 5.8 | 59 | 7.6 | 117 | 6.6 |
| 171.6 | Connective and other soft tissue of pelvis | 87 | 8.7 | 81 | 10.4 | 168 | 9.4 |
| 171.7 | Connective and other soft tissue of trunk, unspecified | 76 | 7.6 | 48 | 6.2 | 124 | 7.0 |
| 171.8 | Other specified sites of connective and other soft tissue | 7 | 0.7 | 7 | 0.9 | 14 | 0.8 |
| 171.9 | Connective and other soft tissue, site unspecified | 124 | 12.4 | 109 | 14.0 | 233 | 13.1 |
| 172 | MELANOMA OF SKIN | 292 | 100.0 | 281 | 100.0 | 573 | 100.0 |
| 172.0 | Malignant melanoma of skin of lip | 2 | 0.7 | 0 | 0.0 | 2 | 0.3 |
| 172.1 | Malignant melanoma of skin of eyelid, including canthus | 1 | 0.3 | 3 | 1.1 | 4 | 0.7 |
| 172.2 | Malignant melanoma of skin of ear and external auditory canal | 3 | 1.0 | 2 | 0.7 | 5 | 0.9 |
| 172.3 | Malignant melanoma of skin of other and unspecified parts of face | 13 | 4.5 | 15 | 5.3 | 28 | 4.9 |
| 172.4 | Malignant melanoma of skin of scalp and neck | 9 | 3.1 | 11 | 3.9 | 20 | 3.5 |
| 172.5 | Malignant melanoma of skin of trunk, except scrotum | 46 | 15.8 | 36 | 12.8 | 82 | 14.3 |

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| 172.6 | Malignant melanoma of skin of upper limb, including shoulder | 43 | 14.7 | 43 | 15.3 | 86 | 15.0 |
| 172.7 | Malignant melanoma of skin of lower limb, including hip | 122 | 41.8 | 133 | 47.3 | 255 | 44.5 |
| 172.8 | Malignant melanoma of other specified sites of skin | 4 | 1.4 | 4 | 1.4 | 8 | 1.4 |
| 172.9 | Melanoma of skin, site unspecified | 49 | 16.8 | 34 | 12.1 | 83 | 14.5 |
| 173 | SKIN, NON-MELANOMA | 5,293 | 100.0 | 4,885 | 100.0 | 10,178 | 100.0 |
| 173.0 | Skin of lip | 150 | 2.8 | 169 | 3.5 | 319 | 3.1 |
| 173.1 | Skin of eyelid, including canthus | 338 | 6.4 | 348 | 7.1 | 686 | 6.7 |
| 173.2 | Skin of ear and external auditory canal | 312 | 5.9 | 174 | 3.6 | 486 | 4.8 |
| 173.3 | Skin of other and unspecified parts of face | 1,988 | 37.6 | 2,500 | 51.2 | 4,488 | 44.1 |
| 173.4 | Scalp and skin of neck | 348 | 6.6 | 344 | 7.0 | 692 | 6.8 |
| 173.5 | Skin of trunk, except scrotum | 575 | 10.9 | 308 | 6.3 | 883 | 8.7 |
| 173.6 | Skin of upper limb, including shoulder | 460 | 8.7 | 251 | 5.1 | 711 | 7.0 |
| 173.7 | Skin of lower limb, including hip | 520 | 9.8 | 316 | 6.5 | 836 | 8.2 |
| 173.8 | Other specified sites of skin | 236 | 4.5 | 119 | 2.4 | 355 | 3.5 |
| 173.9 | Skin, site unspecified | 366 | 6.9 | 356 | 7.3 | 722 | 7.1 |
| 174 | FEMALE BREAST | | | 30,934 | 100.0 | 30,934 | 100.0 |
| 174.0 | Nipple and areola of female breast | | | 117 | 0.4 | 117 | 0.4 |
| 174.1 | Central portion of female breast | | | 1,079 | 3.5 | 1,079 | 3.5 |
| 174.2 | Upper-inner quadrant of female breast | | | 1,272 | 4.1 | 1,272 | 4.1 |
| 174.3 | Lower-inner quadrant of female breast | | | 722 | 2.3 | 722 | 2.3 |
| 174.4 | Upper-outer quadrant of female breast | | | 3,754 | 12.1 | 3,754 | 12.1 |
| 174.5 | Lower-outer quadrant of female breast | | | 825 | 2.7 | 825 | 2.7 |
| 174.6 | Axillary tail of female breast | | | 25 | 0.1 | 25 | 0.1 |
| 174.8 | Other specified sites of female breast | | | 1,783 | 5.8 | 1,783 | 5.8 |
| 174.9 | Breast (female), unspecified | | | 21,357 | 69.0 | 21,357 | 69.0 |
| 175 | MALE BREAST | 104 | 100.0 | | | 104 | 100.0 |
| 175.0 | Nipple and areola of male breast | 2 | 1.9 | | | 2 | 1.9 |
| 175.9 | Other and unspecified sites of male breast | 102 | 98.1 | | | 102 | 98.1 |
| 180 | CERVIX UTERI | | | 7,425 | 100.0 | 7,425 | 100.0 |
| 180.0 | Endocervix | | | 127 | 1.7 | 127 | 1.7 |
| 180.1 | Exocervix | | | 12 | 0.2 | 12 | 0.2 |
| 180.8 | Other specified sites of cervix | | | 10 | 0.1 | 10 | 0.1 |
| 180.9 | Cervix uteri, unspecified | | | 7,276 | 98.0 | 7,276 | 98.0 |
| 181 | CHORIOEPITHELIOMA | | | 153 | 100.0 | 153 | 100.0 |
| 181.9 | Placenta | | | 153 | 100.0 | 153 | 100.0 |
| 182 | CORPUS UTERI | | | 5,771 | 100.0 | 5,771 | 100.0 |
| 182.0 | Corpus uteri, except isthmus | | | 5,763 | 99.9 | 5,763 | 99.9 |
| 182.1 | Isthmus | | | 2 | 0.0 | 2 | 0.0 |
| 182.8 | Other specified sites of body of uterus | | | 6 | 0.1 | 6 | 0.1 |
| 183 | OVARY, ETC. | | | 6,767 | 100.0 | 6,767 | 100.0 |
| 183.0 | Ovary | | | 6,647 | 98.2 | 6,647 | 98.2 |

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|-------|--|-------|-------|-------|-------|-------|-------|
| 183.2 | Fallopian tube | 85 | 1.3 | 85 | 1.3 | | |
| 183.3 | Broad ligament of uterus | 10 | 0.1 | 10 | 0.1 | | |
| 183.4 | Parametrium | 1 | 0.0 | 1 | 0.0 | | |
| 183.8 | Other specified sites of uterine adnexa | 17 | 0.3 | 17 | 0.3 | | |
| 183.9 | Uterine adnexa, unspecified | 7 | 0.1 | 7 | 0.1 | | |
| 184 | OTHER FEMALE GENITALS | 565 | 100.0 | 565 | 100.0 | | |
| 184.0 | Vagina | 217 | 38.4 | 217 | 38.4 | | |
| 184.1 | Labia majora | 22 | 3.9 | 22 | 3.9 | | |
| 184.2 | Labia minora | 7 | 1.2 | 7 | 1.2 | | |
| 184.3 | Clitoris | 6 | 1.1 | 6 | 1.1 | | |
| 184.4 | Vulva, unspecified | 307 | 54.3 | 307 | 54.3 | | |
| 184.8 | Other specified sites of female genital organs | 1 | 0.2 | 1 | 0.2 | | |
| 184.9 | Female genital organ, site unspecified | 5 | 0.9 | 5 | 0.9 | | |
| 185 | PROSTATE | 9,053 | 100.0 | 9,053 | 100.0 | | |
| 185.9 | NOS | 9,053 | 100.0 | 9,053 | 100.0 | | |
| 186 | TESTIS | 695 | 100.0 | 695 | 100.0 | | |
| 186.0 | Undescended testis | 13 | 1.9 | 13 | 1.9 | | |
| 186.9 | Other and unspecified testis | 682 | 98.1 | 682 | 98.1 | | |
| 187 | PENIS & SCROTUM | 490 | 100.0 | 490 | 100.0 | | |
| 187.1 | Prepuce | 27 | 5.5 | 27 | 5.5 | | |
| 187.2 | Glans penis | 36 | 7.3 | 36 | 7.3 | | |
| 187.3 | Body of penis | 3 | 0.6 | 3 | 0.6 | | |
| 187.4 | Penis, part unspecified | 249 | 50.8 | 249 | 50.8 | | |
| 187.5 | Epididymis | 5 | 1.0 | 5 | 1.0 | | |
| 187.6 | Spermatic cord | 10 | 2.0 | 10 | 2.0 | | |
| 187.7 | Scrotum | 148 | 30.2 | 148 | 30.2 | | |
| 187.8 | Other specified sites of male genital organs | 9 | 1.8 | 9 | 1.8 | | |
| 187.9 | Male genital organ, site unspecified | 3 | 0.6 | 3 | 0.6 | | |
| 188 | BLADDER | 3,665 | 100.0 | 1,147 | 100.0 | 4,812 | 100.0 |
| 188.0 | Trigone of urinary bladder | 18 | 0.5 | 8 | 0.7 | 26 | 0.5 |
| 188.1 | Dome of urinary bladder | 34 | 0.9 | 12 | 1.0 | 46 | 1.0 |
| 188.2 | Lateral wall of urinary bladder | 280 | 7.6 | 73 | 6.4 | 353 | 7.3 |
| 188.3 | Anterior wall of urinary bladder | 14 | 0.4 | 2 | 0.2 | 16 | 0.3 |
| 188.4 | Posterior wall of urinary bladder | 42 | 1.1 | 21 | 1.8 | 63 | 1.3 |
| 188.5 | Bladder neck | 25 | 0.7 | 5 | 0.4 | 30 | 0.6 |
| 188.6 | Ureteric orifice | 48 | 1.3 | 17 | 1.5 | 65 | 1.4 |
| 188.7 | Urachus | 12 | 0.3 | 6 | 0.5 | 18 | 0.4 |
| 188.8 | Other specified sites of bladder | 104 | 2.8 | 37 | 3.2 | 141 | 2.9 |
| 188.9 | Bladder, part unspecified | 3,088 | 84.3 | 966 | 84.2 | 4,054 | 84.2 |
| 189 | KIDNEY & OTHER URINARY ORGANS | 3,073 | 100.0 | 1,676 | 100.0 | 4,749 | 100.0 |
| 189.0 | Kidney, except pelvis | 2,579 | 83.9 | 1,345 | 80.3 | 3,924 | 82.6 |
| 189.1 | Renal pelvis | 268 | 8.7 | 154 | 9.2 | 422 | 8.9 |
| 189.2 | Ureter | 173 | 5.6 | 119 | 7.1 | 292 | 6.1 |
| 189.3 | Urethra | 31 | 1.0 | 38 | 2.3 | 69 | 1.5 |
| 189.8 | Other specified sites of urinary organs | 6 | 0.2 | 5 | 0.3 | 11 | 0.2 |

| | | | | | | | |
|------------|--|--------------|--------------|--------------|--------------|--------------|--------------|
| 189.9 | Urinary organ, site unspecified | 16 | 0.5 | 15 | 0.9 | 31 | 0.7 |
| 190 | EYE | 115 | 100.0 | 100 | 100.0 | 215 | 100.0 |
| 190.0 | Eyeball, except conjunctiva, cornea, retina, and choroid | 11 | 9.6 | 11 | 11.0 | 22 | 10.2 |
| 190.1 | Orbit | 12 | 10.4 | 6 | 6.0 | 18 | 8.4 |
| 190.2 | Lacrimal gland | 5 | 4.3 | 7 | 7.0 | 12 | 5.6 |
| 190.3 | Conjunctiva | 16 | 13.9 | 9 | 9.0 | 25 | 11.6 |
| 190.4 | Cornea | 2 | 1.7 | 0 | 0.0 | 2 | 0.9 |
| 190.5 | Retina | 47 | 40.9 | 51 | 51.0 | 98 | 45.6 |
| 190.6 | Choroid | 6 | 5.2 | 5 | 5.0 | 11 | 5.1 |
| 190.7 | Lacrimal duct | 0 | 0.0 | 1 | 1.0 | 1 | 0.5 |
| 190.9 | Eye, part unspecified | 16 | 13.9 | 10 | 10.0 | 26 | 12.1 |
| 191 | BRAIN | 1,313 | 100.0 | 1061 | 100.0 | 2,374 | 100.0 |
| 191.0 | Cerebrum, except lobes and ventricles | 68 | 5.2 | 64 | 6.0 | 132 | 5.6 |
| 191.1 | Frontal lobe | 181 | 13.8 | 154 | 14.5 | 335 | 14.1 |
| 191.2 | Temporal lobe | 117 | 8.9 | 81 | 7.6 | 198 | 8.3 |
| 191.3 | Parietal lobe | 95 | 7.2 | 70 | 6.6 | 165 | 7.0 |
| 191.4 | Occipital lobe | 20 | 1.5 | 18 | 1.7 | 38 | 1.6 |
| 191.5 | Ventricles | 52 | 4.0 | 43 | 4.1 | 95 | 4.0 |
| 191.6 | Cerebellum nos | 144 | 11.0 | 116 | 10.9 | 260 | 11.0 |
| 191.7 | Brain stem | 44 | 3.4 | 61 | 5.7 | 105 | 4.4 |
| 191.8 | Other parts of brain | 77 | 5.9 | 53 | 5.0 | 130 | 5.5 |
| 191.9 | Brain, unspecified | 515 | 39.2 | 401 | 37.8 | 916 | 38.6 |
| 192 | NERVOUS SYSTEM | 145 | 100.0 | 173 | 100.0 | 318 | 100.0 |
| 192.0 | Cranial nerves | 9 | 6.2 | 11 | 6.4 | 20 | 6.3 |
| 192.1 | Cerebral meninges | 79 | 54.5 | 118 | 68.2 | 197 | 61.9 |
| 192.2 | Spinal cord | 45 | 31.0 | 24 | 13.9 | 69 | 21.7 |
| 192.3 | Spinal meninges | 2 | 1.4 | 6 | 3.5 | 8 | 2.5 |
| 192.8 | Other specified sites of nervous system | 2 | 1.4 | 0 | 0.0 | 2 | 0.6 |
| 192.9 | Nervous system, part unspecified | 8 | 5.5 | 14 | 8.1 | 22 | 6.9 |
| 193 | THYROID | 1,217 | 100.0 | 3,977 | 100.0 | 5,194 | 100.0 |
| 193.9 | The thyroid gland, unspecified | 1,217 | 100.0 | 3,977 | 100.0 | 5,194 | 100.0 |
| 194 | ENDOCRINE GLANDS & RELATED STRUCTURES | 305 | 100.0 | 226 | 100.0 | 531 | 100.0 |
| 194.0 | Adrenal gland | 112 | 36.7 | 100 | 44.2 | 212 | 39.9 |
| 194.1 | Parathyroid gland | 2 | 0.7 | 5 | 2.2 | 7 | 1.3 |
| 194.3 | Pituitary gland and craniopharyngeal duct | 83 | 27.2 | 62 | 27.4 | 145 | 27.3 |
| 194.4 | Pineal gland | 76 | 24.9 | 22 | 9.7 | 98 | 18.5 |
| 194.5 | Carotid body | 11 | 3.6 | 15 | 6.6 | 26 | 4.9 |
| 194.6 | Aortic body and other paraganglia | 18 | 5.9 | 22 | 9.7 | 40 | 7.5 |
| 194.8 | Other endocrine glands and related structures, other | 1 | 0.3 | 0 | 0.0 | 1 | 0.2 |
| 194.9 | Endocrine gland, site unspecified | 2 | 0.7 | 0 | 0.0 | 2 | 0.4 |

10. MULTIPLE PRIMARY CANCERS 1973-2012

The Registry's criteria for registering multiple primary cancers include the following:

- (a) histological confirmation of all primary sites;
- (b) exclusion of probable metastasis from the first primary site;
- (c) exclusion of cancers occurring in the same site (first three digits) but different subsite (4th digit) and cancers of multi-centric origin in the same organ or bilaterally paired organs.
- (d) exclusion of cancers occurring in certain sites that are grouped together as a single site in the context of recognizing multiple primaries as recommended in ICD-O.

A total of 11,002 multiple primary cancers were registered among the resident population for the period 1973 to 2012: 10,494 patients with two primaries and 508 with three or four primaries. Table 10.1 lists the number of multiple cancers by site and order of occurrence. Table 10.2 presents the site distribution of second and subsequent cancers in relation to the first primary. Table 10.3 shows the top ranked multiple primary site(s) by first primary site.

Table 10.1 MULTIPLE CANCERS¹: SITE DISTRIBUTION BY ORDER OF OCCURRENCES, 1973-2012

| SITE | ICD9 | As first primary | As second primary | As third or fourth primary | Total number of occurrences |
|---------------------|-------|------------------|-------------------|----------------------------|-----------------------------|
| Colon | 153 | 1,143 | 1,095 | 52 | 2,290 |
| Breast | 174 | 1,339 | 815 | 21 | 2,175 |
| Lung | 162 | 398 | 1,446 | 66 | 1,910 |
| Skin, excl melanoma | 173 | 930 | 631 | 50 | 1,611 |
| Rectum | 154 | 745 | 683 | 22 | 1,450 |
| Stomach | 151 | 525 | 750 | 37 | 1,312 |
| Prostate | 185 | 524 | 558 | 32 | 1,114 |
| Corpus uteri | 182 | 424 | 460 | 18 | 902 |
| Bladder | 188 | 423 | 352 | 10 | 785 |
| Ovary | 183 | 396 | 360 | 14 | 770 |
| Nasopharynx | 147 | 544 | 173 | 9 | 726 |
| Cervix | 180 | 536 | 179 | 4 | 719 |
| Lymphomas | 200-2 | 346 | 336 | 23 | 705 |
| Kidney | 189 | 292 | 305 | 20 | 617 |
| Thyroid | 193 | 337 | 215 | 12 | 564 |
| Liver | 155 | 121 | 341 | 15 | 477 |
| Larynx | 161 | 288 | 139 | 7 | 434 |
| Leukaemias | 204-8 | 175 | 233 | 15 | 423 |
| Oesophagus | 150 | 109 | 234 | 16 | 359 |
| Pancreas | 157 | 33 | 178 | 9 | 220 |
| Tongue | 141 | 89 | 105 | 9 | 203 |
| Mouth | 143-5 | 92 | 73 | 6 | 171 |
| Connective tissue | 171 | 85 | 80 | 3 | 168 |
| Gallbladder,etc | 156 | 38 | 82 | 4 | 124 |
| Small intestine | 152 | 33 | 80 | 5 | 118 |
| Salivary gland | 142 | 57 | 44 | 6 | 107 |
| Vagina and vulva | 184 | 44 | 57 | 4 | 105 |
| Oropharynx | 146 | 55 | 46 | 3 | 104 |
| Hypopharynx | 148 | 43 | 42 | 1 | 86 |
| Nasal cavity | 160 | 30 | 52 | 3 | 85 |
| Other & unspecified | | 300 | 350 | 12 | 662 |
| Total: | | 10,494 | 10,494 | 508 | 21,496 |

¹ Listed in order of frequency.

| First primary | | Second or subsequent primary | | | | | | | | | | | | | | |
|---------------------|-------|------------------------------|-----|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| SITE | ICD-9 | 141 | 142 | 143-5 | 146 | 147 | 148 | 150 | 151 | 152 | 153 | 154 | 155 | 156 | 157 | 160 |
| Tongue | 141 | | 0 | 2 | 3 | 2 | 1 | 16 | 9 | 2 | 5 | 6 | 1 | 0 | 2 | 0 |
| Salivary gland | 142 | 3 | | 1 | 3 | 4 | 0 | 1 | 6 | 0 | 4 | 2 | 0 | 0 | 0 | 1 |
| Mouth | 143-5 | 9 | 0 | 1 | 3 | 0 | 0 | 12 | 8 | 0 | 6 | 6 | 1 | 1 | 1 | 2 |
| Oropharynx | 146 | 5 | 0 | 2 | | 5 | 2 | 9 | 1 | 0 | 1 | 2 | 4 | 0 | 0 | 0 |
| Nasopharynx | 147 | 39 | 7 | 14 | 8 | | 4 | 4 | 20 | 2 | 41 | 34 | 17 | 6 | 5 | 24 |
| Hypopharynx | 148 | 1 | 0 | 2 | 2 | 0 | | 7 | 2 | 0 | 3 | 3 | 1 | 0 | 0 | 0 |
| Oesophagus | 150 | 1 | 0 | 7 | 1 | 1 | 8 | | 30 | 1 | 4 | 10 | 3 | 0 | 1 | 1 |
| Stomach | 151 | 0 | 2 | 5 | 2 | 11 | 5 | 20 | | 8 | 114 | 59 | 23 | 1 | 9 | 1 |
| Small intestine | 152 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 4 | | 7 | 3 | 1 | 0 | 1 | 0 |
| Colon | 153 | 7 | 3 | 4 | 4 | 21 | 1 | 28 | 139 | 12 | | 90 | 51 | 14 | 24 | 3 |
| Rectum | 154 | 4 | 0 | 3 | 3 | 11 | 4 | 16 | 84 | 11 | 97 | | 28 | 7 | 8 | 2 |
| Liver | 155 | 2 | 1 | 0 | 0 | 4 | 0 | 6 | 11 | 1 | 10 | 8 | | 1 | 2 | 0 |
| Gallbladder,etc | 156 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 2 | 0 | 10 | 4 | 3 | | 3 | 0 |
| Pancreas | 157 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 2 | 4 | 6 | 1 | 1 | | 0 |
| Nasal cavity | 160 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 | |
| Larynx | 161 | 1 | 1 | 1 | 3 | 4 | 1 | 27 | 16 | 0 | 32 | 22 | 11 | 0 | 2 | 2 |
| Lung | 162 | 9 | 1 | 3 | 4 | 13 | 5 | 19 | 44 | 5 | 48 | 29 | 8 | 2 | 4 | 3 |
| Connective tissue | 171 | 2 | 0 | 0 | 0 | 4 | 0 | 3 | 12 | 0 | 7 | 7 | 3 | 0 | 1 | 1 |
| Skin | 173 | 7 | 8 | 8 | 1 | 7 | 4 | 18 | 89 | 5 | 124 | 65 | 40 | 9 | 19 | 5 |
| Breast | 174 | 5 | 12 | 9 | 0 | 21 | 0 | 17 | 89 | 8 | 188 | 84 | 23 | 18 | 29 | 2 |
| Cervix | 180 | 1 | 1 | 2 | 2 | 9 | 2 | 5 | 34 | 6 | 60 | 46 | 8 | 3 | 8 | 2 |
| Corpus uteri | 182 | 1 | 1 | 0 | 1 | 3 | 0 | 1 | 15 | 4 | 51 | 33 | 8 | 5 | 11 | 1 |
| Ovary | 183 | 0 | 1 | 0 | 0 | 4 | 0 | 2 | 11 | 1 | 50 | 28 | 5 | 1 | 8 | 0 |
| Vagina and vulva | 184 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 6 | 3 | 2 | 0 | 0 | 0 |
| Prostate | 185 | 0 | 1 | 5 | 2 | 14 | 1 | 7 | 47 | 1 | 94 | 47 | 31 | 5 | 11 | 1 |
| Bladder | 188 | 2 | 2 | 0 | 0 | 6 | 0 | 10 | 26 | 1 | 51 | 28 | 21 | 4 | 6 | 2 |
| Kidney | 189 | 1 | 0 | 3 | 1 | 2 | 1 | 2 | 21 | 3 | 28 | 17 | 13 | 5 | 7 | 0 |
| Thyroid | 193 | 3 | 5 | 0 | 0 | 13 | 2 | 2 | 11 | 3 | 27 | 20 | 6 | 1 | 5 | 0 |
| Lymphomas | 200-2 | 5 | 0 | 3 | 1 | 12 | 1 | 5 | 25 | 8 | 22 | 23 | 16 | 1 | 9 | 0 |
| Leukaemias | 204-8 | 2 | 0 | 2 | 0 | 3 | 1 | 2 | 9 | 0 | 20 | 6 | 11 | 1 | 3 | 1 |
| Other & unspecified | | 3 | 2 | 2 | 3 | 6 | 0 | 9 | 17 | 1 | 30 | 12 | 15 | 0 | 8 | 1 |

| First primary | Second or subsequent primary | | | | | | | | | | | | | | | |
|---------------------|------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|-------|-------|
| SITE | 161 | 162 | 171 | 173 | 174 | 180 | 182 | 183 | 184 | 185 | 188 | 189 | 193 | 200-2 | 204-8 | OTHER |
| Tongue | 7 | 13 | 0 | 5 | 2 | 1 | 1 | 1 | 0 | 4 | 1 | 3 | 0 | 1 | 0 | 4 |
| Salivary gland | 1 | 5 | 0 | 6 | 9 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 5 | 1 | 4 |
| Mouth | 5 | 21 | 0 | 7 | 1 | 2 | 1 | 0 | 0 | 1 | 2 | 0 | 1 | 1 | 1 | 5 |
| Oropharynx | 2 | 8 | 0 | 4 | 2 | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 1 | 2 | 1 | 2 |
| Nasopharynx | 13 | 83 | 8 | 53 | 27 | 9 | 12 | 6 | 0 | 37 | 6 | 9 | 12 | 26 | 15 | 28 |
| Hypopharynx | 1 | 13 | 0 | 4 | 1 | 0 | 0 | 0 | 0 | 2 | 1 | 2 | 1 | 0 | 0 | 1 |
| Oesophagus | 6 | 18 | 0 | 5 | 3 | 0 | 0 | 0 | 0 | 3 | 3 | 2 | 1 | 3 | 0 | 3 |
| Stomach | 9 | 81 | 5 | 41 | 29 | 11 | 2 | 5 | 1 | 37 | 10 | 17 | 6 | 14 | 6 | 16 |
| Small intestine | 0 | 6 | 0 | 2 | 0 | 0 | 0 | 4 | 1 | 3 | 0 | 0 | 0 | 1 | 0 | 1 |
| Colon | 11 | 152 | 4 | 100 | 102 | 26 | 40 | 36 | 2 | 119 | 43 | 55 | 31 | 36 | 28 | 21 |
| Rectum | 18 | 115 | 3 | 53 | 72 | 11 | 25 | 10 | 3 | 59 | 31 | 36 | 12 | 19 | 14 | 27 |
| Liver | 1 | 22 | 1 | 7 | 8 | 2 | 2 | 0 | 0 | 9 | 7 | 5 | 3 | 9 | 3 | 4 |
| Gallbladder,etc | 0 | 6 | 0 | 2 | 1 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| Pancreas | 0 | 2 | 0 | 1 | 5 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 1 | 2 | 1 |
| Nasal cavity | 0 | 5 | 0 | 4 | 3 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 2 | 1 | 2 | 1 |
| Larynx | | 92 | 4 | 21 | 1 | 0 | 0 | 0 | 0 | 25 | 9 | 3 | 6 | 10 | 4 | 9 |
| Lung | 16 | | 7 | 30 | 26 | 5 | 8 | 7 | 0 | 35 | 20 | 17 | 15 | 13 | 10 | 5 |
| Connective tissue | 1 | 14 | | 5 | 12 | 0 | 0 | 1 | 0 | 2 | 1 | 1 | 3 | 5 | 1 | 3 |
| Skin | 19 | 180 | 5 | | 66 | 13 | 11 | 8 | 3 | 84 | 42 | 20 | 19 | 34 | 17 | 44 |
| Breast | 1 | 155 | 15 | 95 | | 62 | 194 | 127 | 13 | 0 | 24 | 32 | 43 | 57 | 41 | 35 |
| Cervix | 3 | 96 | 6 | 21 | 83 | | 29 | 31 | 28 | 0 | 18 | 10 | 9 | 13 | 6 | 21 |
| Corpus uteri | 2 | 35 | 3 | 11 | 107 | 8 | | 106 | 3 | 0 | 8 | 10 | 7 | 10 | 5 | 5 |
| Ovary | 0 | 25 | 0 | 4 | 90 | 11 | 110 | | 4 | 0 | 8 | 10 | 11 | 6 | 9 | 9 |
| Vagina and vulva | 1 | 4 | 0 | 4 | 5 | 5 | 2 | 2 | | 0 | 1 | 2 | 2 | 0 | 0 | 1 |
| Prostate | 10 | 91 | 4 | 50 | 0 | 0 | 0 | 0 | 0 | | 37 | 22 | 5 | 28 | 15 | 24 |
| Bladder | 2 | 82 | 4 | 27 | 12 | 0 | 2 | 1 | 0 | 86 | | 29 | 7 | 11 | 8 | 11 |
| Kidney | 2 | 29 | 3 | 23 | 14 | 0 | 2 | 4 | 2 | 39 | 54 | | 6 | 4 | 5 | 13 |
| Thyroid | 5 | 36 | 6 | 16 | 89 | 3 | 24 | 10 | 0 | 11 | 6 | 12 | | 9 | 14 | 17 |
| Lymphomas | 2 | 50 | 2 | 34 | 27 | 5 | 4 | 6 | 0 | 16 | 9 | 9 | 8 | | 18 | 16 |
| Leukaemias | 4 | 27 | 0 | 21 | 11 | 3 | 2 | 3 | 0 | 5 | 7 | 3 | 3 | 11 | | 13 |
| Other & unspecified | 4 | 46 | 3 | 25 | 28 | 2 | 5 | 5 | 1 | 9 | 10 | 13 | 10 | 11 | 15 | 16 |

11 HISTOLOGIC TYPES BY SITE, 2003-2012

Table 11.1 shows the numbers of cancers by histologic type as notified, for the period 2003-2012. Some of the categories listed in this table include combinations of histological variants or subtypes. The category “other & unspecified” includes microscopically confirmed cancers of uncertain or undetermined histogenesis.

Two points should be taken into consideration in the interpretation of the figures: the proportion of cases histologically confirmed compared to the total number of cases diagnosed according to site, and variations in diagnostic criteria and terminology among pathologists. Notwithstanding these considerations, the available distributional data are useful as an initial guide on histologic types for each major site.

Apart from true increases in the number of histology types across the past 2 calendar periods, other factors that could have contributed include:

- i) Improvements in diagnostic technology
- ii) Pathologists histotyping to finer levels of detail
- iii) Training of registry coordinators by subject expert in 2008
- iv) Changes in SEER multiple primary and histology ruling

Table 11.1 HISTOLOGIC TYPE BY SITE, 2003-2012

| LIP | | | | Total |
|----------------------------------|------------------|------------------|------------------|--------------------|
| | 2003-2007 | 2008-2012 | 2008-2012 | (2003-2012) |
| HISTOLOGY | NO. | NO. | % | NO. |
| Squamous Cell Carcinoma | 5 | 3 | 37.5 | 8 |
| Basaloid Squamous Cell Carcinoma | 1 | 0 | 0 | 1 |
| Adenocarcinoma, NOS | 2 | 0 | 0 | 2 |
| Adenoid Cystic Carcinoma | 1 | 2 | 25 | 3 |
| Mucoepidermoid Carcinoma | 1 | 3 | 37.5 | 4 |
| Total with histology | 10 | 8 | 100 | 18 |
| All cases | 10 | 8 | 100 | 18 |

| TONGUE | | | | Total |
|--|------------------|------------------|------------------|--------------------|
| | 2003-2007 | 2008-2012 | 2008-2012 | (2003-2012) |
| HISTOLOGY | NO. | NO. | % | NO. |
| Squamous Cell Carcinoma | 212 | 279 | 90.9 | 491 |
| Adenosquamous Carcinoma | 0 | 1 | 0.3 | 1 |
| Adenocarcinoma, NOS | 1 | 0 | 0 | 1 |
| Adenoid Cystic Carcinoma | 4 | 2 | 0.7 | 6 |
| Mucoepidermoid Carcinoma | 3 | 1 | 0.3 | 4 |
| Carcinoma, NOS | 4 | 9 | 2.9 | 13 |
| Teratoma, malignant, NOS | 0 | 1 | 0.3 | 1 |
| Neoplasm, malignant, NOS | 0 | 1 | 0.3 | 1 |
| Total with histology | 224 | 294 | 95.8 | 518 |
| Clinically malignant tumor (No microscopic confirmation) | 4 | 0 | 0 | 4 |
| Haematolymphoid Neoplasms | 13 | 13 | 4.2 | 26 |
| All cases | 241 | 307 | 100 | 548 |
| Haematolymphoid Neoplasms | | | | |
| Diffuse Large B-Cell Lymphoma | 10 | 13 | 4.2 | 23 |
| Follicular Lymphoma | 2 | 0 | 0 | 2 |
| Peripheral T-Cell Lymphoma, NOS / Anaplastic Large Cell Lymphoma | 1 | 0 | 0 | 1 |

| SALIVARY GLANDS | | | | Total |
|--|------------|------------|-------------|-------------|
| | 2003-2007 | 2008-2012 | 2008-2012 | (2003-2012) |
| HISTOLOGY | NO. | NO. | % | NO. |
| Acinar Cell Carcinoma | 55 | 76 | 35.3 | 131 |
| Adenoid Cystic Carcinoma | 21 | 30 | 14 | 51 |
| Adenocarcinoma, NOS | 15 | 22 | 10.2 | 37 |
| Lymphoepithelial Carcinoma | 11 | 15 | 7 | 26 |
| Carcinoma, NOS | 5 | 13 | 6 | 18 |
| Squamous Cell Carcinoma | 9 | 11 | 5.1 | 20 |
| Basal Cell Adenocarcinoma | 2 | 8 | 3.7 | 10 |
| Carcinoma in pleomorphic adenoma | 5 | 6 | 2.8 | 11 |
| Salivary Duct Carcinoma | 2 | 5 | 2.3 | 7 |
| Epithelial-Myoepithelial Carcinoma | 3 | 2 | 0.9 | 5 |
| Cystadenocarcinoma | 1 | 1 | 0.5 | 2 |
| Malignant Myoepithelioma | 1 | 1 | 0.5 | 2 |
| Basaloid Carcinoma | 1 | 1 | 0.5 | 2 |
| Adenosquamous Carcinoma | 0 | 1 | 0.5 | 1 |
| Spindle Cell Carcinoma, NOS | 0 | 1 | 0.5 | 1 |
| Sarcoma | 0 | 1 | 0.5 | 1 |
| Desmoplastic Small Round Cell Tumor | 1 | 0 | 0 | 1 |
| Primitivel Neuroectodermal Tumor | 1 | 0 | 0 | 1 |
| Mixed Tumor, malignant, NOS | 0 | 1 | 0.5 | 1 |
| Tumor Cells, malignant | 1 | 1 | 0.5 | 2 |
| Total with histology | 134 | 196 | 91.2 | 330 |
| Clinically malignant tumour (No microscopic confirmation) | 0 | 1 | 0.5 | 1 |
| Haematolymphoid Neoplasms | 8 | 18 | 8.4 | 26 |
| All cases | 142 | 215 | 100 | 357 |
| Haematolymphoid Neoplasms | | | | |
| Diffuse Large B-Cell Lymphoma | 4 | 7 | 3.3 | 11 |
| Extranodal marginal zone lymphoma (MALT Lymphoma) | 3 | 6 | 2.8 | 9 |
| Follicular Lymphoma | 1 | 4 | 1.9 | 5 |
| Classical Hodgkin Lymphoma | 0 | 1 | 0.5 | 1 |

| MOUTH | | | | Total (2003-2012) NO. |
|--|------------------|------------------|----------------|-----------------------------|
| HISTOLOGY | 2003-2007 NO. | 2008-2012 NO. | 2008-2012 % | |
| Squamous Cell Carcinoma | 148 | 148 | 64.1 | 296 |
| Mucoepidermoid Carcinoma | 14 | 22 | 3.5 | 36 |
| Adenocarcinoma | 8 | 8 | 3.5 | 16 |
| Adenoid Cystic Carcinoma | 6 | 11 | 2.6 | 17 |
| Acinar Cell Carcinoma | 0 | 6 | 2.6 | 6 |
| Carcinoma, NOS | 7 | 2 | 0.4 | 9 |
| Carcinoma in pleomorphic adenoma | 0 | 1 | 0.4 | 1 |
| Malignant Myoepithelioma | 0 | 1 | 0.4 | 1 |
| Sarcomatoid Carcinoma | 0 | 1 | 0.4 | 1 |
| Epithelioid Sarcoma | 0 | 1 | 0.4 | 1 |
| Sarcoma | 1 | 1 | 0.4 | 2 |
| Malignant Melanoma, NOS | 2 | 3 | 1.3 | 5 |
| Ameloblastoma, malignant | 2 | 3 | 1.3 | 5 |
| Odontogenic Tumor, malignant | 1 | 1 | 6.1 | 2 |
| Odontogenic Tumor, NOS | 0 | 14 | 6.1 | 14 |
| Neoplasm, malignant, NOS | 0 | 1 | 0 | 1 |
| Tumor Cells, malignant | 1 | 0 | 0 | 1 |
| Total with histology | 190 | 224 | 97 | 414 |
| Clinically malignant tumour (No microscopic confirmation) | 1 | 1 | 0.9 | 2 |
| Haematolymphoid Neoplasms | 5 | 6 | 2.6 | 11 |
| All cases | 196 | 231 | 100 | 427 |
| Haematolymphoid Neoplasms | | | | |
| Diffuse Large B-Cell Lymphoma | 2 | 4 | 1.7 | 6 |
| Plasmablastic Lymphoma | 0 | 1 | 0.4 | 1 |
| Langerhans Cell Histiocytosis | 0 | 1 | 0.4 | 1 |
| Small Lymphocytic Lymphoma | 1 | 0 | 0 | 1 |
| Extranodal NK/T Cell Lymphoma, nasal type | 2 | 0 | 0 | 2 |

| PHARYNX (Including Oropharynx and Hypopharynx) | 2003-2007 | 2008-2012 | 2008-2012 | Total (2003-2012) |
|--|------------|------------|-------------|----------------------|
| HISTOLOGY | NO. | NO. | % | NO. |
| Squamous Cell Carcinoma | 226 | 284 | 70.1 | 510 |
| Carcinoma, NOS | 12 | 21 | 5.2 | 33 |
| Mucoepidermoid Carcinoma | 1 | 2 | 0.5 | 3 |
| Adenosquamous Carcinoma | 0 | 1 | 0.2 | 1 |
| Lymphoepithelial Carcinoma | 0 | 1 | 0.2 | 1 |
| Malignant Myoepithelioma | 0 | 1 | 0.2 | 1 |
| Adenocarcinoma, NOS | 1 | 1 | 0.2 | 2 |
| Tumor Cells, malignant | 0 | 1 | 0.2 | 1 |
| Adenoid Cystic Carcinoma | 1 | 0 | 0 | 1 |
| Sarcomatoid Carcinoma | 2 | 0 | 0 | 2 |
| Hemangiopericytoma, malignant | 1 | 0 | 0 | 1 |
| Malignant Melanoma, NOS | 1 | 0 | 0 | 1 |
| Total with histology | 245 | 312 | 77 | 557 |
| Clinically malignant tumour (No microscopic confirmation) | 4 | 9 | 2.2 | 13 |
| Haematolymphoid Neoplasms | 74 | 84 | 20.7 | 158 |
| All cases | 323 | 405 | 100 | 728 |
| Haematolymphoid Neoplasms | | | | |
| Diffuse Large B-Cell Lymphoma | 51 | 67 | 16.5 | 118 |
| Follicular Lymphoma | 12 | 5 | 1.2 | 17 |
| Mantle Cell Lymphoma | 0 | 3 | 0.7 | 3 |
| Peripheral T-Cell Lymphoma, NOS | 1 | 3 | 0.7 | 4 |
| Malignant Lymphoma, NOS | 1 | 1 | 0.2 | 2 |
| Lymphoplasmacytic Lymphoma | 0 | 1 | 0.2 | 1 |
| Burkitt Lymphoma | 0 | 1 | 0.2 | 1 |
| Extranodal marginal zone lymphoma (MALT Lymphoma) | 3 | 1 | 0.2 | 4 |
| Angioimmunoblastic T-Cell Lymphoma | 0 | 1 | 0.2 | 1 |
| Systemic EBV positive T-Cell | 0 | 1 | 0.2 | 1 |
| Lymphoproliferative disease of childhood | | | | |
| Extranodal NK/T Cell Lymphoma, nasal type | 2 | 0 | 0 | 2 |
| Nodular Sclerosis Classical Hodgkin Lymphoma | 1 | 0 | 0 | 1 |
| Anaplastic Large Cell Lymphoma, ALK positive | 1 | 0 | 0 | 1 |
| T Lymphoblastic Leukemia / Lymphoma | 1 | 0 | 0 | 1 |
| Follicular Dendritic Cell Sarcoma | 1 | 0 | 0 | 1 |

| NASOPHARYNX | | | | Total (2003-2012) NO. |
|--|------------------|------------------|----------------|-----------------------------|
| HISTOLOGY | 2003-2007 NO. | 2008-2012 NO. | 2008-2012 % | |
| Carcinoma, undifferentiated | 1,355 | 1,229 | 79.4 | 2,584 |
| Squamous Cell Carcinoma | 79 | 131 | 8.5 | 210 |
| Carcinoma, NOS | 151 | 128 | 8.3 | 279 |
| Adenoid Cystic Carcinoma | 2 | 5 | 0.3 | 7 |
| Papillary Carcinoma, NOS | 0 | 4 | 0.3 | 4 |
| Mucoepidermoid Carcinoma | 0 | 2 | 0.1 | 2 |
| Non-Small Cell Carcinoma | 1 | 2 | 0.1 | 3 |
| Rhabdomyosarcoma | 1 | 2 | 0.1 | 3 |
| Neuroendocrine Carcinoma | 2 | 1 | 0.1 | 3 |
| Neoplasm, malignant, NOS | 2 | 1 | 0.1 | 3 |
| Adenosquamous Carcinoma | 1 | 0 | 0 | 1 |
| Adenocarcinoma, NOS | 5 | 0 | 0 | 5 |
| Carcinosarcoma | 3 | 0 | 0 | 3 |
| Teratoma, Malignant | 1 | 0 | 0 | 1 |
| Total with histology | 1,603 | 1,505 | 97.3 | 3,108 |
| Clinically malignant tumour (No microscopic confirmation) | 14 | 9 | 0.6 | 23 |
| Haematolymphoid Neoplasms | 22 | 33 | 2.1 | 55 |
| All cases | 1,639 | 1,547 | 100 | 3,186 |
| Haematolymphoid Neoplasms | | | | |
| Diffuse Large B-Cell Lymphoma | 14 | 16 | 1 | 30 |
| Extranodal marginal zone lymphoma (MALT Lymphoma) | 1 | 6 | 0.4 | 7 |
| Peripheral T-Cell Lymphoma, NOS | 2 | 3 | 0.2 | 5 |
| Extranodal NK/T Cell Lymphoma, nasal type | 3 | 3 | 0.2 | 6 |
| Follicular Lymphoma | 0 | 2 | 0.1 | 2 |
| Nodular Sclerosis Classical Hodgkin Lymphoma | 0 | 1 | 0.1 | 1 |
| Plasmablastic Lymphoma | 0 | 1 | 0.1 | 1 |
| Follicular Dendritic Cell Sarcoma | 0 | 1 | 0.1 | 1 |
| Mantle Cell Lymphoma | 1 | 0 | 0 | 1 |
| Burkitt Lymphoma | 1 | 0 | 0 | 1 |

| OESOPHAGUS | | | | Total (2003-2012) |
|--|------------|------------|-------------|----------------------|
| | 2003-2007 | 2008-2012 | 2008-2012 | |
| HISTOLOGY | NO. | NO. | % | NO. |
| Squamous Cell Carcinoma | 320 | 350 | 68.1 | 670 |
| Adenocarcinoma | 44 | 80 | 15.6 | 124 |
| Carcinoma, NOS | 15 | 17 | 3.3 | 32 |
| Basaloid Squamous Cell Carcinoma | 6 | 11 | 2.1 | 17 |
| Small Cell Carcinoma | 3 | 8 | 1.6 | 11 |
| Spindle Cell Carcinoma, NOS | 1 | 7 | 1.4 | 8 |
| Neuroendocrine Carcinoma | 3 | 5 | 1 | 8 |
| Gastrointestinal Stromal Tumour | 3 | 4 | 0.8 | 7 |
| Malignant Melanoma, NOS | 1 | 3 | 0.6 | 4 |
| Adenosquamous Carcinoma | 2 | 2 | 0.4 | 4 |
| Neoplasm, malignant, NOS | 0 | 2 | 0.4 | 2 |
| Total with histology | 398 | 489 | 95.1 | 887 |
| Clinically malignant tumour (No microscopic confirmation) | 24 | 25 | 4.9 | 49 |
| All cases | 422 | 514 | 100 | 936 |

| STOMACH | | | | Total (2003-2012) |
|--|-----------|-----------|-----------|----------------------|
| | 2003-2007 | 2008-2012 | 2008-2012 | |
| HISTOLOGY | NO. | NO. | % | NO. |
| Adenocarcinoma and subtypes | | | | |
| Adenocarcinoma, NOS | 1,159 | 1,186 | 44.9 | 2,345 |
| Signet Ring Cell Carcinoma | 431 | 432 | 16.4 | 863 |
| Adenocarcinoma, Intestinal type | 263 | 263 | 10 | 526 |
| Carcinoma, Diffuse type | 102 | 115 | 4.4 | 217 |
| Mucinous Adenocarcinoma | 33 | 34 | 1.3 | 67 |
| Adenocarcinoma with mixed subtypes | 2 | 62 | 2.3 | 64 |
| Adenocarcinoma in villous adenoma | 0 | 7 | 0.3 | 7 |
| Adenocarcinoma with neuroendocrine differentiation | 2 | 5 | 0.2 | 7 |
| Hepatoid Adenocarcinoma | 1 | 1 | 0 | 2 |
| Clear Cell Adenocarcinoma | 0 | 1 | 0 | 1 |
| Carcinoma, special subtype variants | | | | |
| Adenosquamous Carcinoma | 4 | 2 | 0.1 | 6 |
| Lymphoepithelial Carcinoma | 1 | 3 | 0.1 | 4 |
| Carcinosarcoma | 1 | 1 | 0 | 2 |
| Other neoplasms | | | | |
| Squamous Cell Carcinoma | 8 | 8 | 0.3 | 16 |
| Carcinoma, NOS | 37 | 46 | 1.7 | 83 |
| Gastrointestinal Stromal Tumour | 120 | 221 | 8.4 | 341 |
| Neuroendocrine Carcinoma | 22 | 44 | 1.7 | 66 |

| | | | | |
|--|--------------|--------------|-------------|--------------|
| Leiomyosarcoma | 2 | 0 | 0 | 2 |
| Smooth Muscle Tumor of uncertain malignant potential | 0 | 1 | 0 | 1 |
| Malignant Melanoma, NOS | 1 | 1 | 0 | 2 |
| Neoplasm, malignant, NOS | 6 | 2 | 0.1 | 8 |
| Total with histology | 2,195 | 2,435 | 92.2 | 4,630 |
| Clinically malignant tumour (No microscopic confirmation) | 71 | 76 | 2.9 | 147 |
| Haematolymphoid Neoplasms | 104 | 130 | 4.9 | 234 |
| All cases | 2,370 | 2,641 | 100 | 5,011 |
| Haematolymphoid Neoplasms | | | | |
| Diffuse Large B-Cell Lymphoma | 60 | 72 | 2.7 | 132 |
| Extranodal marginal zone lymphoma (MALT Lymphoma) | 36 | 49 | 1.9 | 85 |
| Peripheral T-Cell Lymphoma, NOS | 1 | 3 | 0.1 | 4 |
| Burkitt Lymphoma | 2 | 2 | 0.1 | 4 |
| Follicular Lymphoma | 0 | 2 | 0.1 | 2 |
| Anaplastic Large Cell Lymphoma, ALK positive | 0 | 1 | 0 | 1 |
| Histiocytic sarcoma | 0 | 1 | 0 | 1 |
| Malignant Lymphoma, NOS | 3 | 0 | 0 | 3 |
| Mantle Cell Lymphoma | 1 | 0 | 0 | 1 |
| Extranodal NK/T Cell Lymphoma, nasal type | 1 | 0 | 0 | 1 |

| SMALL INTESTINES | | | | Total |
|--|------------|------------|-------------|-------------|
| | 2003-2007 | 2008-2012 | 2008-2012 | (2003-2012) |
| HISTOLOGY | NO. | NO. | % | NO. |
| Gastrointestinal Stromal Tumour | 58 | 89 | 31.2 | 147 |
| Adenocarcinoma, NOS | 61 | 87 | 30.5 | 148 |
| Neuroendocrine Carcinoma | 21 | 35 | 12.3 | 56 |
| Carcinoma, NOS | 6 | 6 | 2.1 | 12 |
| Adenocarcinoma in adenomatous polyp | 1 | 2 | 0.7 | 3 |
| Signet Ring Cell Carcinoma | 1 | 1 | 0.4 | 2 |
| Leiomyosarcoma | 2 | 1 | 0.4 | 3 |
| Giant Cell Sarcoma | 0 | 1 | 0.4 | 1 |
| Epithelioid Sarcoma | 0 | 1 | 0.4 | 1 |
| Liposarcoma, well differentiated | 0 | 1 | 0.4 | 1 |
| Angiosarcoma | 1 | 1 | 0.4 | 2 |
| Squamous Cell Carcinoma | 1 | 0 | 0 | 1 |
| Sarcoma | 1 | 0 | 0 | 1 |
| Total with histology | 153 | 225 | 78.9 | 378 |
| Clinically malignant tumour (No microscopic confirmation) | 4 | 10 | 3.5 | 14 |
| Haematolymphoid Neoplasms | 37 | 50 | 17.5 | 87 |
| All cases | 194 | 285 | 100 | 479 |
| Haematolymphoid Neoplasms | | | | |
| Diffuse Large B-Cell Lymphoma | 24 | 25 | 8.8 | 49 |
| Follicular Lymphoma | 2 | 8 | 2.8 | 10 |
| Enteropathy-Associated T-Cell Lymphoma | 1 | 7 | 2.5 | 8 |
| Extranodal marginal zone lymphoma (MALT Lymphoma) | 1 | 5 | 1.8 | 6 |
| Burkitt Lymphoma | 4 | 2 | 0.7 | 6 |
| Peripheral T-Cell Lymphoma, NOS | 1 | 2 | 0.7 | 3 |
| Histiocytic Sarcoma | 0 | 1 | 0.4 | 1 |
| Malignant Lymphoma, NOS | 1 | 0 | 0 | 1 |
| Small Lymphocytic Lymphoma | 1 | 0 | 0 | 1 |
| Extranodal NK/T Cell Lymphoma, nasal type | 2 | 0 | 0 | 2 |

| COLON | | | | Total (2003-2012) |
|--|--------------|--------------|------------|----------------------|
| | 2003-2007 | 2008-2012 | 2008-2012 | |
| HISTOLOGY | NO. | NO. | % | NO. |
| Adenocarcinoma and subtypes | | | | |
| Adenocarcinoma, NOS | 3,575 | 4,336 | 78.4 | 7,911 |
| Mucinous Adenocarcinoma | 330 | 432 | 7.8 | 762 |
| Adenocarcinoma in adenomatous polyp | 213 | 321 | 5.8 | 534 |
| Signet Ring Cell Carcinoma | 58 | 58 | 1 | 116 |
| Adenocarcinoma in adenomatous polyposis coli | 0 | 3 | 0.1 | 3 |
| Other neoplasms | | | | |
| Neuroendocrine Carcinoma | 45 | 73 | 1.3 | 118 |
| Neoplasm, malignant, NOS | 3 | 16 | 0.3 | 19 |
| Gastrointestinal Stromal Tumour | 2 | 4 | 0.1 | 6 |
| Sarcoma | 3 | 1 | 0 | 4 |
| Squamous Cell Carcinoma | 2 | 1 | 0 | 3 |
| Medullary Carcinoma | 1 | 1 | 0 | 2 |
| Total with histology | 4,232 | 5,246 | 94.8 | 9,478 |
| Clinically malignant tumour (No microscopic confirmation) | 211 | 245 | 4.4 | 456 |
| Haematolymphoid Neoplasms | 23 | 41 | 0.7 | 64 |
| All cases | 4,466 | 5,532 | 100 | 9,998 |
| Haematolymphoid Neoplasms | | | | |
| Diffuse Large B-Cell Lymphoma | 16 | 24 | 0.4 | 40 |
| Burkitt Lymphoma | 0 | 7 | 0.1 | 7 |
| Extranodal marginal zone lymphoma (MALT Lymphoma) | 1 | 4 | 0.1 | 5 |
| Follicular Lymphoma | 2 | 2 | 0.04 | 4 |
| Peripheral T-Cell Lymphoma, NOS | 3 | 0 | 0.00 | 3 |
| Enteropathy-Associated T-Cell Lymphoma | 1 | 1 | 0.02 | 2 |
| Extranodal NK/T Cell Lymphoma, nasal type | 0 | 1 | 0.02 | 1 |
| Mantle Cell Lymphoma | 0 | 1 | 0.02 | 1 |
| Mixed cellularity classical Hodgkin Lymphoma | 0 | 1 | 0.02 | 1 |

| RECTUM and ANUS | | | | Total (2003-2012) |
|--|--------------|--------------|------------|----------------------|
| | 2003-2007 | 2008-2012 | 2008-2012 | |
| HISTOLOGY | NO. | NO. | % | NO. |
| Adenocarcinoma and subtypes | | | | |
| Adenocarcinoma, NOS | 2,358 | 2,651 | 79.9 | 5,009 |
| Adenocarcinoma in adenomatous polyp | 130 | 153 | 4.6 | 283 |
| Mucinous Adenocarcinoma | 111 | 144 | 4.3 | 255 |
| Signet Ring Cell Carcinoma | 32 | 27 | 0.8 | 59 |
| Other neoplasms | | | | |
| Neuroendocrine Carcinoma | 100 | 153 | 4.6 | 253 |
| Squamous Cell Carcinoma | 20 | 38 | 1.1 | 58 |
| Gastrointestinal Stromal Tumour | 8 | 23 | 0.7 | 31 |
| Carcinoma, NOS | 14 | 20 | 0.6 | 34 |
| Neoplasm, malignant, NOS | 3 | 9 | 0.3 | 12 |
| Basaloid Carcinoma | 8 | 6 | 0.2 | 14 |
| Malignant Melanoma, NOS | 8 | 5 | 0.2 | 13 |
| Leiomyosarcoma | 0 | 3 | 0.1 | 3 |
| Cloacogenic Carcinoma | 2 | 1 | 0 | 3 |
| Carcinosarcoma | 1 | 1 | 0 | 2 |
| Paget's Disease, Extramammary | 0 | 1 | 0 | 1 |
| Total with histology | 2,795 | 3,235 | 97.5 | 6,030 |
| Clinically malignant tumour (No microscopic confirmation) | 59 | 79 | 2.4 | 138 |
| Haematolymphoid Neoplasms | 9 | 3 | 0.1 | 12 |
| All cases | 2,863 | 3,317 | 100 | 6,180 |
| Haematolymphoid Neoplasms | | | | |
| Diffuse Large B-Cell Lymphoma | 7 | 3 | 0.1 | 10 |
| Mantle Cell Lymphoma | 1 | 0 | 0 | 1 |
| Extranodal marginal zone lymphoma (MALT Lymphoma) | 1 | 0 | 0 | 1 |

| LIVER (including Intrahepatic Ducts) | | | | Total (2003-2012) NO. |
|--|------------------|------------------|----------------|-----------------------------|
| HISTOLOGY | 2003-2007 NO. | 2008-2012 NO. | 2008-2012 % | |
| Hepatocellular Carcinoma, NOS | 705 | 891 | 31.3 | 1,596 |
| Adenocarcinoma, NOS | 64 | 106 | 3.7 | 170 |
| Cholangiocarcinoma | 46 | 73 | 2.6 | 119 |
| Carcinoma, NOS | 26 | 29 | 1.0 | 55 |
| Combined Hepatocellular carcinoma and Cholangiocarcinoma | 9 | 18 | 0.6 | 27 |
| Hepatoblastoma | 8 | 11 | 0.4 | 19 |
| Angiosarcoma | 6 | 8 | 0.3 | 14 |
| Sarcomatoid Carcinoma | 1 | 3 | 0.1 | 4 |
| Epithelioid Hemangioendothelioma, malignant | 2 | 2 | 0.1 | 4 |
| Embryonal Sarcoma | 1 | 1 | 0 | 2 |
| Leiomyosarcoma | 0 | 1 | 0 | 1 |
| Carcinosarcoma | 1 | 1 | 0 | 2 |
| Sarcoma | 0 | 1 | 0 | 1 |
| Bile Duct Cystadenocarcinoma | 1 | 0 | 0 | 1 |
| Neuroendocrine Carcinoma | 2 | 0 | 0 | 2 |
| Solitary Fibrous Tumor, malignant | 0 | 1 | 0 | 1 |
| Smooth Muscle Tumor of uncertain malignant potential | 0 | 3 | 0.1 | 3 |
| Neoplasm, malignant, NOS | 5 | 9 | 0.3 | 14 |
| Total with histology | 877 | 1,158 | 40.7 | 2,035 |
| Clinically malignant tumour (No microscopic confirmation) | 1,486 | 1,679 | 59 | 3,165 |
| Haematolymphoid Neoplasms | 9 | 10 | 0.4 | 19 |
| All cases | 2,372 | 2,847 | 100 | 5,219 |
| Haematolymphoid Neoplasms | | | | |
| Diffuse Large B-Cell Lymphoma | 7 | 5 | 0.2 | 12 |
| Follicular Lymphoma | 0 | 1 | 0 | 1 |
| Peripheral T-Cell Lymphoma, NOS | 1 | 1 | 0 | 2 |
| Anaplastic Large Cell Lymphoma, ALK positive | 0 | 1 | 0 | 1 |
| Langerhans Cell Histiocytosis, NOS | 0 | 1 | 0 | 1 |
| Follicular Dendritic Cell Sarcoma | 0 | 1 | 0 | 1 |
| Extranodal marginal zone lymphoma (MALT Lymphoma) | 1 | 0 | 0 | 1 |

| GALL BLADDER and Extrahepatic BILE DUCTS | | | | Total (2003-2012) NO. |
|--|------------------|------------------|----------------|-----------------------------|
| HISTOLOGY | 2003-2007 NO. | 2008-2012 NO. | 2008-2012 % | |
| Adenocarcinoma and subtypes | | | | |
| Adenocarcinoma, NOS | 253 | 337 | 59.6 | 590 |
| Extrahepatic Bile Duct Carcinoma | 9 | 23 | 4.1 | 32 |
| Mucinous Adenocarcinoma | 10 | 17 | 3 | 27 |
| Papillary Adenocarcinoma | 9 | 15 | 2.7 | 24 |
| Infiltrating Duct Carcinoma | 3 | 8 | 1.4 | 11 |
| Signet Ring Cell Carcinoma | 2 | 7 | 1.2 | 9 |
| Mixed Adenoneuroendocrine Carcinoma | 0 | 4 | 0.7 | 4 |
| Other neoplasms | | | | |
| Carcinoma, NOS | 11 | 24 | 4.2 | 35 |
| Neuroendocrine Carcinoma | 4 | 8 | 1.4 | 12 |
| Neoplasm, malignant, NOS | 2 | 8 | 1.4 | 10 |
| Adenosquamous Carcinoma | 5 | 6 | 1.1 | 11 |
| Squamous Cell Carcinoma | 5 | 3 | 0.5 | 8 |
| Spindle Cell Carcinoma | 4 | 1 | 0.2 | 5 |
| Total with histology | 317 | 461 | 81.6 | 778 |
| Clinically malignant tumour (No microscopic confirmation) | 79 | 103 | 18.2 | 182 |
| Haematolymphoid Neoplasms | 1 | 1 | 0.2 | 2 |
| All cases | 397 | 565 | 100 | 962 |
| Haematolymphoid Neoplasms | | | | |
| Histiocytic Sarcoma | 0 | 1 | 0.2 | 1 |
| Malignant Lymphoma, NOS | 1 | 0 | 0 | 1 |

| PANCREAS | | | | Total (2003- 2012) NO. |
|--|----------------------|----------------------|--------------------|---------------------------------|
| | 2003- 2007 NO. | 2008- 2012 NO. | 2008- 2012 % | |
| HISTOLOGY | | | | |
| Adenocarcinoma | 557 | 878 | 61.8 | 1,435 |
| Neuroendocrine Carcinoma | 30 | 67 | 4.7 | 97 |
| Carcinoma, NOS | 42 | 57 | 4.0 | 99 |
| Neoplasm, malignant, NOS | 13 | 28 | 2.0 | 41 |
| Solid Pseudopapillary Carcinoma | 8 | 15 | 1.1 | 23 |
| Adenosquamous Carcinoma | 4 | 12 | 0.8 | 16 |
| Intraductal papillary mucinous neoplasm with an associated invasive carcinoma | 10 | 6 | 0.4 | 16 |
| Signet Ring Cell Carcinoma | 3 | 3 | 0.2 | 6 |
| Acinar Cell Carcinoma | 3 | 3 | 0.2 | 6 |
| Small Cell Carcinoma | 2 | 3 | 0.2 | 5 |
| Spindle Cell Carcinoma, NOS | 2 | 2 | 0.1 | 4 |
| Mixed Islet Cell and Exocrine Adenocarcinoma | 2 | 1 | 0.1 | 3 |
| Squamous Cell Carcinoma | 2 | 1 | 0.1 | 3 |
| Carcinosarcoma | 2 | 1 | 0.1 | 3 |
| Total with histology | 680 | 1,077 | 75.8 | 1,757 |
| Clinically malignant tumour (No microscopic confirmation) | 376 | 338 | 23.8 | 714 |
| Haematolymphoid Neoplasms | 1 | 6 | 0.4 | 7 |
| All cases | 1,057 | 1,421 | 100 | 2,478 |
| Haematolymphoid Neoplasms | | | | |
| Diffuse Large B-Cell Lymphoma | 1 | 4 | 0.3 | 5 |
| Burkitt Lymphoma | 0 | 1 | 0.1 | 1 |
| Follicular Lymphoma | 0 | 1 | 0.1 | 1 |

| RETROPERITONEUM | | | | Total (2003-2012) |
|--|-----------|-----------|-------------|----------------------|
| | 2003-2007 | 2008-2012 | 2008-2012 | |
| HISTOLOGY | NO. | NO. | % | NO. |
| Liposarcoma | 14 | 25 | 38.5 | 39 |
| Leiomyosarcoma | 12 | 14 | 21.5 | 26 |
| Sarcoma | 2 | 9 | 13.8 | 11 |
| Neuroblastoma | 4 | 2 | 3.1 | 6 |
| Extra-Adrenal Paraganglioma, malignant | 3 | 2 | 3.1 | 5 |
| Synovial Sarcoma | 1 | 2 | 3.1 | 3 |
| Malignant Peripheral Nerve Sheath Tumour | 2 | 1 | 1.5 | 3 |
| Solitary Fibrous Tumour, malignant | 0 | 2 | 3.1 | 2 |
| Malignant Fibrous Histiocytoma | 1 | 1 | 1.5 | 2 |
| Angiosarcoma | 0 | 1 | 1.5 | 1 |
| Embryonal Rhabdomyosarcoma | 1 | 0 | 0 | 1 |
| Total with histology | 40 | 59 | 90.8 | 99 |
| Clinically malignant tumour (No microscopic confirmation) | 4 | 2 | 3.1 | 6 |
| Haematolymphoid Neoplasms | 1 | 4 | 6.2 | 5 |
| All cases | 45 | 65 | 100 | 110 |
| Haematolymphoid Neoplasms | | | | |
| Diffuse Large B-Cell Lymphoma | 0 | 3 | 4.6 | 3 |
| Burkitt Lymphoma | 0 | 1 | 1.5 | 1 |
| Follicular Dendritic Cell Sarcoma | 1 | 0 | 0 | 1 |

| PERITONEUM | | | | Total (2003-2012) |
|--|-----------|-----------|-------------|----------------------|
| | 2003-2007 | 2008-2012 | 2008-2012 | |
| HISTOLOGY | NO. | NO. | % | NO. |
| Primary Serous Papillary Carcinoma of peritoneum | 7 | 34 | 50.7 | 41 |
| Mesothelioma, malignant | 9 | 13 | 19.4 | 22 |
| Serous Adenocarcinoma | 9 | 4 | 6 | 13 |
| Adenocarcinoma, NOS | 0 | 5 | 7.5 | 5 |
| Mucinous Cystadenocarcinoma | 1 | 0 | 0 | 1 |
| Gastrointestinal Stromal Tumour | 1 | 4 | 6 | 5 |
| Neoplasm, malignant, NOS | 1 | 2 | 3 | 3 |
| Total with histology | 28 | 62 | 92.5 | 90 |
| Clinically malignant tumour (No microscopic confirmation) | 4 | 4 | 6 | 8 |
| Haematolymphoid Neoplasms | 0 | 1 | 1.5 | 1 |
| All cases | 32 | 67 | 100 | 99 |
| Haematolymphoid Neoplasms | | | | |
| Diffuse Large B-Cell Lymphoma | 0 | 1 | 1.5 | 1 |

| NASAL CAVITIES AND SINUSES | | | | Total |
|--|------------|------------|-------------|-------------|
| | 2003-2007 | 2008-2012 | 2008-2012 | (2003-2012) |
| HISTOLOGY | NO. | NO. | % | NO. |
| Squamous Cell Carcinoma, NOS | 52 | 62 | 31 | 114 |
| Olfactory Neuroblastoma | 16 | 18 | 9 | 34 |
| Carcinoma, NOS | 15 | 11 | 5.5 | 26 |
| Adenocarcinoma, NOS | 7 | 7 | 3.5 | 14 |
| Adenoid Cystic Carcinoma | 6 | 6 | 3 | 12 |
| Neuroendocrine Carcinoma | 1 | 6 | 3 | 7 |
| Malignant Melanoma, NOS | 1 | 5 | 2.5 | 6 |
| Papillary Squamous Cell Carcinoma | 0 | 4 | 2 | 4 |
| Adenocarcinoma, Subtypes | 3 | 4 | 2 | 7 |
| Sarcoma, NOS | 5 | 4 | 2 | 9 |
| Small Cell Carcinoma | 3 | 3 | 1.5 | 6 |
| Transitional Cell Carcinoma, NOS | 2 | 2 | 1 | 4 |
| Rhabdomyosarcoma | 4 | 2 | 1 | 6 |
| Carcinosarcoma | 1 | 2 | 1 | 3 |
| Hemangiopericytoma, malignant | 5 | 2 | 1 | 7 |
| Malignant Peripheral Nerve Sheath Tumor | 1 | 2 | 1 | 3 |
| Lymphoepithelial Carcinoma | 1 | 1 | 0.5 | 2 |
| Schneiderian Carcinoma | 4 | 1 | 0.5 | 5 |
| Epithelial-Myoepithelial Carcinoma | 0 | 1 | 0.5 | 1 |
| Fibrosarcoma | 1 | 1 | 0.5 | 2 |
| Myxosarcoma | 1 | 1 | 0.5 | 2 |
| Teratocarcinoma | 0 | 1 | 0.5 | 1 |
| Acinar Cell Carcinoma | 2 | 0 | 0 | 2 |
| Adenosquamous Carcinoma | 1 | 0 | 0 | 1 |
| Sarcomatoid Carcinoma | 1 | 0 | 0 | 1 |
| Total with histology | 133 | 146 | 73 | 279 |
| Clinically malignant tumour (No microscopic confirmation) | 0 | 1 | 0.5 | 1 |
| Haematolymphoid Neoplasms | 39 | 53 | 26.5 | 92 |
| All cases | 172 | 200 | 100 | 372 |
| Haematolymphoid Neoplasms | | | | |
| Extranodal NK/T Cell Lymphoma, nasal type | 16 | 26 | 13.0 | 42 |
| Diffuse Large B-Cell Lymphoma | 18 | 21 | 10.5 | 39 |
| Extraosseous Plasmacytoma | 1 | 3 | 1.5 | 4 |
| Burkitt Lymphoma | 0 | 1 | 0.5 | 1 |
| Follicular Lymphoma | 3 | 1 | 0.5 | 4 |
| Peripheral T-Cell Lymphoma, NOS | 1 | 1 | 0.5 | 2 |

| LARYNX | | | | Total (2003-2012) |
|--|------------|------------|------------|----------------------|
| | 2003-2007 | 2008-2012 | 2008-2012 | |
| HISTOLOGY | NO. | NO. | % | NO. |
| Squamous Cell Carcinoma | 363 | 359 | 94 | 722 |
| Carcinoma, NOS | 6 | 6 | 1.6 | 12 |
| Neuroendocrine Carcinoma | 1 | 2 | 0.5 | 3 |
| Neoplasm, malignant, NOS | 0 | 1 | 0.3 | 1 |
| Lymphoepithelial Carcinoma | 1 | 0 | 0 | 1 |
| Sarcoma | 1 | 0 | 0 | 1 |
| Total with histology | 372 | 368 | 96.3 | 740 |
| Clinically malignant tumour (No microscopic confirmation) | 14 | 11 | 2.9 | 25 |
| Haematolymphoid Neoplasms | 0 | 3 | 0.8 | 3 |
| All cases | 386 | 382 | 100 | 768 |
| Haematolymphoid Neoplasms | | | | |
| Diffuse Large B-Cell Lymphoma | 0 | 1 | 0.3 | 1 |
| Extranodal marginal zone lymphoma (MALT Lymphoma) | 0 | 1 | 0.3 | 1 |
| Extranodal NK/T Cell Lymphoma, nasal type | 0 | 1 | 0.3 | 1 |

| LUNG | | | | Total (2003-2012) |
|--|------------------|------------------|----------------|----------------------|
| HISTOLOGY | 2003-2007 NO. | 2008-2012 NO. | 2008-2012 % | NO. |
| Adenocarcinoma | | | | |
| Adenocarcinoma, NOS | 2,104 | 2,791 | 42.6 | 4,895 |
| Bronchiolo-Alveolar Adenocarcinoma, NOS | 99 | 102 | 1.6 | 201 |
| Broncholo-Alveolar Carcinoma, mucinous | 6 | 7 | 0.1 | 13 |
| Bronchiolo-Alveolar Carcinoma, non-mucinous | 1 | 10 | 0.2 | 11 |
| Bronchiolo-Alveolar Carcinoma, mixed mucinous and non-mucinous | 21 | 42 | 0.6 | 63 |
| Acinar Cell Carcinoma | 21 | 127 | 1.9 | 148 |
| Papillary Adenocarcinoma | 37 | 46 | 0.7 | 83 |
| Signet Ring Cell Carcinoma | 4 | 9 | 0.1 | 13 |
| Clear Cell Adenocarcinoma | 5 | 10 | 0.2 | 15 |
| Adenocarcinoma with mixed subtypes | 3 | 139 | 2.1 | 142 |
| Squamous Cell Carcinoma | | | | |
| Squamous Cell Carcinoma, NOS | 853 | 928 | 14.2 | 1,781 |
| Squamous Cell Carcinoma, Keratinizing, NOS | 33 | 17 | 0.3 | 50 |
| Squamous Cell Carcinoma, Large Cell, non-keratinizing, NOS | 14 | 10 | 0.2 | 24 |
| Squamous Cell Carcinoma, Clear Cell type | 7 | 4 | 0.1 | 11 |
| Squamous Cell Carcinoma, Spindle Cell | 0 | 1 | 0 | 1 |
| Papillary Squamous Cell Carcinoma | 7 | 4 | 0.1 | 11 |
| Basaloid Squamous Cell Carcinoma | 2 | 2 | 0 | 4 |
| | 3 | 2 | 0 | 5 |
| Neuroendocrine tumours | | | | |
| Small Cell Carcinoma | 478 | 451 | 6.9 | 929 |
| Neuroendocrine Carcinoma | 36 | 43 | 0.7 | 79 |
| Combined Small Cell Carcinoma | 10 | 20 | 0.3 | 30 |
| Carcinoid Tumor, NOS | 15 | 17 | 0.3 | 32 |
| Atypical Carcinoid Tumor | 1 | 2 | 0 | 3 |
| Large Cell carcinoma | | | | |
| Large Cell Carcinoma, NOS | 117 | 30 | 0.5 | 147 |
| Other carcinoma | | | | |
| Non-Small Cell Carcinoma | 814 | 479 | 7.3 | 1,293 |
| Carcinoma, NOS | 101 | 103 | 1.6 | 204 |
| Adenosquamous Carcinoma | 33 | 39 | 0.6 | 72 |
| Lymphoepithelial Carcinoma | 11 | 28 | 0.4 | 39 |
| Carcinoma, undifferentiated | 17 | 11 | 0.2 | 28 |
| Salivary gland-type tumours | | | | |
| Mucoepidermoid Carcinoma | 9 | 4 | 0.1 | 13 |
| Adenoid Cystic Carcinoma | 5 | 6 | 0.1 | 11 |
| Mesenchymal tumours | | | | |
| Carcinosarcoma | 27 | 61 | 0.9 | 88 |

| | | | | |
|--|--------------|--------------|-------------|---------------|
| Undifferentiated Sarcoma | 6 | 6 | 0.1 | 12 |
| Sarcoma, NOS | 3 | 5 | 0.1 | 8 |
| Pleuropulmonary Blastoma | 0 | 2 | 0 | 2 |
| Leiomyosarcoma | 3 | 2 | 0 | 5 |
| Epithelioid Hemangioendothelioma, NOS | 0 | 1 | 0 | 1 |
| Epithelioid Leiomyosarcoma | 0 | 1 | 0 | 1 |
| Solitary Fibrous Tumour, malignant | 2 | 1 | 0 | 3 |
| Malignant Myoepithelioma | 1 | 0 | 0 | 1 |
| Smooth Muscle Tumour of uncertain malignant potential | 1 | 3 | 0 | 4 |
| Tumours of ectopic origin | | | | |
| Malignant Melanoma, NOS | 0 | 1 | 0 | 1 |
| Lymphangiomyomatosis | 3 | 1 | 0 | 4 |
| Other neoplasms | | | | |
| Neoplasm, malignant, NOS | 19 | 34 | 0.5 | 53 |
| Total with histology | 4,926 | 5,600 | 85.6 | 10,526 |
| Clinically malignant tumour (No microscopic confirmation) | 837 | 923 | 14.1 | 1,760 |
| Haematolymphoid Neoplasms | 22 | 22 | 0.3 | 44 |
| All cases | 5,785 | 6,545 | 100 | 12,330 |
| Haematolymphoid Neoplasms | | | | |
| Extranodal marginal zone lymphoma (MALT Lymphoma) | 7 | 9 | 0.1 | 16 |
| Diffuse Large B-Cell Lymphoma | 11 | 8 | 0.1 | 19 |
| Nodular Sclerosis Classical Hodgkin Lymphoma | 0 | 2 | 0.03 | 2 |
| Anaplastic Large Cell Lymphoma, ALK positive | 0 | 2 | 0.03 | 2 |
| Burkitt Lymphoma | 0 | 1 | 0.02 | 1 |
| Malignant Lymphoma, NOS | 2 | 0 | 0 | 2 |
| Small Lymphocytic Lymphoma | 1 | 0 | 0 | 1 |
| Extranodal NK/T Cell Lymphoma, nasal type | 1 | 0 | 0 | 1 |

| PLEURA | | | | Total (2003-2012) |
|--|------------------|------------------|------------------|--------------------------|
| | 2003-2007 | 2008-2012 | 2008-2012 | |
| HISTOLOGY | NO. | NO. | % | NO. |
| Mesothelioma, malignant | 34 | 42 | 50 | 76 |
| Epithelioid Mesothelioma, malignant | 4 | 24 | 28.6 | 28 |
| Fibrous Mesothelioma, malignant | 1 | 7 | 8.3 | 8 |
| Mesothelioma, Biphasic, malignant | 3 | 5 | 6 | 8 |
| Sarcoma | 1 | 0 | 0 | 1 |
| Total with histology | 43 | 78 | 92.9 | 121 |
| Clinically malignant tumour (No microscopic confirmation) | 4 | 4 | 4.8 | 8 |
| Haematolymphoid Neoplasms | 0 | 2 | 2.4 | 2 |
| All cases | 47 | 84 | 100 | 131 |
| Haematolymphoid Neoplasms | | | | |
| Diffuse Large B-Cell Lymphoma | 0 | 2 | 2.4 | 2 |

| THYMUS and MEDIASTINUM | | | | Total (2003-2012) |
|--|------------------|------------------|----------------|----------------------|
| HISTOLOGY | 2003-2007 NO. | 2008-2012 NO. | 2008-2012 % | NO. |
| Thymoma | | | | |
| Type A Thymoma | 6 | 12 | 4.1 | 18 |
| Type AB Thymoma | 14 | 48 | 16.3 | 62 |
| Type B1 Thymoma | 9 | 19 | 6.5 | 28 |
| Type B2 Thymoma | 24 | 44 | 15 | 68 |
| Type B3 Thymoma | 17 | 31 | 10.5 | 48 |
| Thymoma, NOS | 18 | 13 | 4.4 | 31 |
| Thymic carcinoma | | | | |
| Thymic Carcinoma, NOS | 12 | 25 | 8.5 | 37 |
| Neuroendocrine Carcinoma | 3 | 9 | 3.1 | 12 |
| Squamous Cell Carcinoma | 7 | 5 | 1.7 | 12 |
| Lymphoepithelial Carcinoma | 1 | 0 | 0 | 1 |
| Germ cell tumours of mediastinum | | | | |
| Germinoma | 17 | 29 | 9.9 | 46 |
| Soft tissue tumours of the mediastinum | | | | |
| Liposarcoma | 2 | 2 | 0.7 | 4 |
| Pseudosarcomatous Carcinoma | 1 | 1 | 0.3 | 2 |
| Rhabdomyosarcoma | 2 | 0 | 0 | 2 |
| Malignant Peripheral Nerve Sheath Tumor | 1 | 0 | 0 | 1 |
| Sarcoma, NOS | 3 | 3 | 1 | 6 |
| Vascular neoplasms | | | | |
| Angiosarcoma | 1 | 1 | 0.3 | 2 |
| Neurogenic tumours | | | | |
| Neuroblastoma | 2 | 2 | 0.7 | 4 |
| Primitive Neuroectodermal Tumour | 0 | 1 | 0.3 | 1 |
| Paraganglioma, NOS | 1 | 0 | 0 | 1 |
| Total with histology | 141 | 245 | 83.3 | 386 |
| Clinically malignant tumour (No microscopic confirmation) | 12 | 5 | 1.7 | 17 |
| Haematolymphoid Neoplasms | 33 | 44 | 15 | 77 |
| All cases | 186 | 294 | 100 | 480 |
| Haematolymphoid Neoplasms | | | | |
| Primary mediastinal (thymic) Large B-Cell Lymphoma | 30 | 19 | 6.5 | 49 |
| Diffuse Large B-Cell Lymphoma | 1 | 12 | 4.1 | 13 |
| Classical Hodgkin Lymphoma | 0 | 5 | 1.7 | 5 |
| T Lymphoblastic Leukemia / Lymphoma | 0 | 5 | 1.7 | 5 |
| Extranodal marginal zone lymphoma (MALT Lymphoma) | 2 | 2 | 0.7 | 4 |
| B-Cell, unclassifiable with features Intermediate between Diffuse Large B-Cell Lymphoma and Classical Hodgkin Lymphoma | 0 | 1 | 0.3 | 1 |

| BONE | | | | Total (2003-2012) |
|--|------------|------------|------------|----------------------|
| | 2003-2007 | 2008-2012 | 2008-2012 | |
| HISTOLOGY | NO. | NO. | % | NO. |
| Osteosarcoma | 46 | 52 | 9.6 | 98 |
| Giant Cell Tumour of bone, malignant | 35 | 44 | 8.1 | 79 |
| Chondrosarcoma | 23 | 27 | 5 | 50 |
| Chordoma, NOS | 8 | 13 | 2.4 | 21 |
| Other Sarcomas | 7 | 8 | 1.5 | 15 |
| Ewing Sarcoma | 7 | 6 | 1.1 | 13 |
| Malignant Tumour, Giant Cell type | 0 | 1 | 0.2 | 1 |
| Total with histology | 126 | 151 | 27.8 | 277 |
| Clinically malignant tumour (No microscopic confirmation) | 2 | 5 | 0.9 | 7 |
| Haematolymphoid Neoplasms | 280 | 388 | 71.3 | 668 |
| All cases | 408 | 544 | 100 | 952 |
| Haematolymphoid Neoplasms | | | | |
| Plasma Cell Myeloma | 272 | 355 | 65.3 | 627 |
| Solitary Plasmacytoma of Bone | 0 | 4 | 0.7 | 4 |
| Langerhans Cell Histiocytosis, NOS | 3 | 17 | 3.1 | 20 |
| Diffuse Large B-Cell Lymphoma | 5 | 9 | 1.7 | 14 |
| Anaplastic Large Cell Lymphoma, ALK positive | 0 | 1 | 0.2 | 1 |
| Malignant Lymphoma, Non-Hodgkin, NOS | 0 | 1 | 0.2 | 1 |
| Classical Hodgkin Lymphoma | 0 | 1 | 0.2 | 1 |

| CONNECTIVE TISSUES | | | | Total (2003-2012) |
|---|------------------|------------------|----------------|----------------------|
| HISTOLOGY | 2003-2007 NO. | 2008-2012 NO. | 2008-2012 % | NO. |
| Adipocytic tumours | | | | |
| Liposarcoma, NOS | 6 | 14 | 3.3 | 20 |
| Liposarcoma, well differentiated | 34 | 36 | 8.4 | 70 |
| Dedifferentiated Liposarcoma | 7 | 7 | 1.6 | 14 |
| Myxoid Liposarcoma | 18 | 16 | 3.7 | 34 |
| Pleomorphic Liposarcoma | 4 | 2 | 0.5 | 6 |
| Fibroblastic / Myofibroblastic tumours | | | | |
| Myxofibrosarcoma | 18 | 34 | 7.9 | 52 |
| Solitary Fibrous Tumor, malignant | 0 | 2 | 0.5 | 2 |
| Fibrosarcoma | 2 | 1 | 0.2 | 3 |
| Infantile Fibrosarcoma | 1 | 0 | 0 | 1 |
| Dermatofibrosarcoma | 0 | 5 | 1.2 | 5 |
| Smooth-muscle tumours | | | | |
| Leiomyosarcoma | 27 | 28 | 6.5 | 55 |
| Pericytic (perivascular) tumours | | | | |
| Glomus Tumour, malignant | 1 | 0 | 0 | 1 |
| Skeletal- muscle tumours | | | | |
| Rhabdomyosarcoma | 4 | 3 | 0.7 | 7 |
| Embryonal Rhabdomyosarcoma | 2 | 2 | 0.5 | 4 |
| Alveolar Rhabdomyosarcoma | 0 | 7 | 1.6 | 7 |
| Pleomorphic Rhabdomyosarcoma, Adult type | 0 | 4 | 0.9 | 4 |
| Vascular tumours | | | | |
| Angiosarcoma | 11 | 30 | 7 | 41 |
| Kaposi Sarcoma | 8 | 8 | 1.9 | 16 |
| Gastrointestinal stromal tumours | | | | |
| Gastrointestinal Stromal Tumour | 0 | 4 | 0.9 | 4 |
| Nerve sheath tumours | | | | |
| Malignant Peripheral Nerve Sheath Tumour | 26 | 26 | 6 | 52 |
| Granular Cell Tumour, malignant | 0 | 1 | 0.2 | 1 |
| Neural origin | | | | |
| Ganglioneuroblastoma | 1 | 7 | 1.6 | 8 |
| Neuroblastoma | 5 | 2 | 0.5 | 7 |
| Pleomorphic sarcoma | | | | |
| Malignant Fibrous Histiocytoma | 23 | 25 | 5.8 | 48 |
| Sarcoma, NOS | 36 | 64 | 14.9 | 100 |
| Other sarcomas | | | | |
| Synovial Sarcoma | 23 | 24 | 5.6 | 47 |
| Epithelioid Sarcoma | 7 | 7 | 1.6 | 14 |
| Ewing Sarcoma / Primitive Neuroectodermal Tumor | 13 | 9 | 2.1 | 22 |
| Extraskeletal chondrosarcoma | | | | |
| Myxoid Chondrosarcoma | 2 | 5 | 1.2 | 7 |

| | | | | |
|--|------------|------------|-------------|------------|
| Chondrosarcoma, NOS | 4 | 1 | 0.2 | 5 |
| Mesenchymal Chondrosarcoma | 2 | 0 | 0 | 2 |
| Other tumours | | | | |
| Malignant Myoepithelioma | 1 | 2 | 0.5 | 3 |
| Alveolar Soft Part Sarcoma | 2 | 3 | 0.7 | 5 |
| Clear Cell Sarcoma of Soft Tissue | 2 | 1 | 0.2 | 3 |
| Neoplasm, malignant, NOS | 3 | 5 | 1.2 | 8 |
| Total with histology | 293 | 385 | 89.5 | 678 |
| Clinically malignant tumour (No microscopic confirmation) | 14 | 18 | 4.2 | 32 |
| Haematolymphoid Neoplasms | 15 | 27 | 6.3 | 42 |
| All cases | 322 | 430 | 100 | 752 |
| Haematolymphoid Neoplasms | | | | |
| Diffuse Large B-Cell Lymphoma | 6 | 10 | 2.3 | 16 |
| Histiocytic Sarcoma | 0 | 4 | 0.9 | 4 |
| Langerhans Cell Histiocytosis, NOS | 2 | 1 | 0.2 | 3 |
| Follicular Dendritic Cell Sarcoma | 0 | 3 | 0.7 | 3 |
| Interdigitating Dendritic Cell Sarcoma | 1 | 0 | 0 | 1 |
| Burkitt Lymphoma | 0 | 1 | 0.2 | 1 |
| Extranodal marginal zone lymphoma (MALT Lymphoma) | 0 | 1 | 0.2 | 1 |
| Extraosseous Plasmacytoma | 3 | 1 | 0.2 | 4 |
| Fibroblastic Reticular Cell Tumour | 1 | 0 | 0 | 1 |
| Follicular Lymphoma | 0 | 1 | 0.2 | 1 |
| Peripheral T-Cell Lymphoma, NOS | 1 | 2 | 0.5 | 3 |
| Polymorphic PTLD | 1 | 1 | 0.2 | 2 |
| Subcutaneous Panniculitis-Like T-Cell Lymphoma | 0 | 1 | 0.2 | 1 |
| Malignant Lymphoma, NOS | 0 | 1 | 0.2 | 1 |

| MELANOMA OF SKIN | | | | Total |
|--|------------|------------|------------|-------------|
| | 2003-2007 | 2008-2012 | 2008-2012 | (2003-2012) |
| HISTOLOGY | NO. | NO. | % | NO. |
| Malignant Melanoma, NOS | 61 | 64 | 48.1 | 125 |
| Acral Lentiginous Melanoma, malignant, | 19 | 22 | 16.5 | 41 |
| Nodular Melanoma | 8 | 27 | 20.3 | 35 |
| Superficial Spreading Melanoma | 14 | 12 | 9 | 26 |
| Lentigo Maligna Melanoma | 1 | 3 | 2.3 | 4 |
| Blue Nevus, malignant | 0 | 2 | 1.5 | 2 |
| Amelanotic Melanoma | 1 | 1 | 0.8 | 2 |
| Spindle Cell Melanoma, NOS | 1 | 1 | 0.8 | 2 |
| Malignant Melanoma, Regressing | 0 | 1 | 0.8 | 1 |
| Balloon Cell Melanoma | 1 | 0 | 0 | 1 |
| Epithelioid Cell Melanoma | 1 | 0 | 0 | 1 |
| Total with histology | 107 | 133 | 100 | 240 |
| All cases | 107 | 133 | 100 | 240 |

| SKIN, NON-MELANOMA | | | | Total (2003-2012) |
|--|------------------|------------------|----------------|----------------------|
| HISTOLOGY | 2003-2007 NO. | 2008-2012 NO. | 2008-2012 % | NO. |
| Basal Cell Carcinoma, NOS | 1,003 | 1,017 | 36.3 | 2,020 |
| Basal Cell Carcinoma, Nodular | 76 | 704 | 25.1 | 780 |
| Basosquamous Carcinoma | 26 | 23 | 0.8 | 49 |
| Adenoid Basal Carcinoma | 3 | 8 | 0.3 | 11 |
| Trichilemmocarcinoma | 7 | 7 | 0.3 | 14 |
| Metatypical Carcinoma | 0 | 1 | 0 | 1 |
| Pilomatrix Carcinoma | 1 | 1 | 0 | 2 |
| Squamous Cell Carcinoma | 463 | 635 | 22.7 | ,098 |
| Squamous Cell Carcinoma, Clear Cell type | 2 | 2 | 0.1 | 4 |
| Verrucous Carcinoma | 4 | 7 | 0.3 | 11 |
| Adenosquamous Carcinoma | 0 | 1 | 0 | 1 |
| Paget's Disease, Extramammary | 10 | 20 | 0.7 | 30 |
| Sebaceous Carcinoma | 18 | 29 | 1 | 47 |
| Eccrine Poroma, malignant | 12 | 22 | 0.8 | 34 |
| Skin Appendage Carcinoma | 6 | 12 | 0.4 | 18 |
| Sweat Gland Adenocarcinoma | 2 | 4 | 0.1 | 6 |
| Nodular Hidradenoma, malignant | 2 | 2 | 0.1 | 4 |
| Eccrine Adenocarcinoma | 1 | 2 | 0.1 | 3 |
| Malignant Eccrine Spiradenoma | 0 | 2 | 0.1 | 2 |
| Sclerosing Sweat Duct Carcinoma | 2 | 1 | 0 | 3 |
| Ceruminous Adenocarcinoma | 1 | 0 | 0 | 1 |
| Adenocarcinoma, NOS | 5 | 7 | 0.3 | 12 |
| Mucinous Adenocarcinoma | 3 | 10 | 0.4 | 13 |
| Adenoid Cystic Carcinoma | 2 | 10 | 0.4 | 12 |
| Papillary Syringadenocarcinoma | 1 | 0 | 0 | 1 |
| Apocrine Adenocarcinoma | 1 | 2 | 0.1 | 3 |
| Merkel Cell Carcinoma | 6 | 1 | 0 | 7 |
| Clear Cell Adenocarcinoma | 0 | 1 | 0 | 1 |
| Adenocarcinoma with neuroendocrine differentiation | 0 | 1 | 0 | 1 |
| Adenocarcinoma with mixed subtypes | 0 | 1 | 0 | 1 |
| Carcinoma, NOS | 5 | 8 | 0.3 | 13 |
| Dermatofibrosarcoma | 48 | 75 | 2.7 | 123 |
| Kaposi Sarcoma | 4 | 18 | 0.6 | 22 |
| Angiosarcoma | 13 | 9 | 0.3 | 22 |
| Malignant Fibrous Histiocytoma | 0 | 2 | 0.1 | 2 |
| Pseudosarcomatous Carcinoma | 0 | 1 | 0 | 1 |
| Neoplasm, malignant, NOS | 0 | 1 | 0 | 1 |
| Total with histology | 1,727 | 2,647 | 94.5 | 4,374 |
| Clinically malignant tumour (No microscopic confirmation) | 8 | 17 | 0.6 | 25 |
| Haematolymphoid Neoplasms | 130 | 136 | 4.9 | 265 |
| All cases | 1,865 | 2,800 | 100 | 4,665 |

| Haematolymphoid Neoplasms | | | | |
|--|----|----|-----|-----|
| Mycosis Fungoides | 78 | 68 | 2.4 | 146 |
| Primary Cutaneous Anaplastic Large Cell Lymphoma | 10 | 13 | 0.5 | 23 |
| Extranodal marginal zone lymphoma (MALT Lymphoma) | 10 | 12 | 0.4 | 22 |
| Primary cutaneous CD4 /CD 8 positive T-cell Lymphoma | 7 | 11 | 0.4 | 18 |
| Peripheral T-Cell Lymphoma, NOS | 4 | 9 | 0.3 | 13 |
| Subcutaneous Panniculitis-like T-Cell Lymphoma | 3 | 5 | 0.2 | 8 |
| Follicular Lymphoma | 1 | 5 | 0.2 | 6 |
| Diffuse Large B-Cell Lymphoma | 7 | 4 | 0.1 | 11 |
| Langerhans Cell Histiocytosis | 3 | 4 | 0.1 | 7 |
| Sezary Syndrome | 1 | 1 | 0 | 2 |
| Primary cutaneous follicle centre Lymphoma | 0 | 1 | 0 | 1 |
| Anaplastic Large Cell Lymphoma, ALK positive | 1 | 1 | 0 | 2 |
| Extranodal NK/T Cell Lymphoma, nasal type | 4 | 1 | 0 | 5 |
| Malignant Lymphoma, Non-Hodgkin, NOS | 0 | 1 | 0 | 1 |
| Cutaneous Mastocytosis | 1 | 0 | 0 | 1 |

| FEMALE BREAST | | | | Total (2003-2012) |
|--|------------------|------------------|----------------|----------------------|
| HISTOLOGY | 2003-2007 NO. | 2008-2012 NO. | 2008-2012 % | NO. |
| Epithelial tumours | | | | |
| Invasive Duct Carcinoma, NOS | 5,348 | 6,287 | 73.7 | 11,635 |
| Infiltrating Duct mixed with other types of Carcinoma | 195 | 491 | 5.8 | 686 |
| Invasive Lobular Carcinoma | 261 | 364 | 4.3 | 625 |
| Mucinous Adenocarcinoma | 183 | 252 | 3 | 435 |
| Infiltrating Duct and Lobular Carcinoma | 179 | 191 | 2.2 | 370 |
| Adenocarcinoma, NOS | 110 | 138 | 1.6 | 248 |
| Papillary Carcinoma | 49 | 94 | 1.1 | 143 |
| Metaplastic Carcinoma | 25 | 72 | 0.8 | 97 |
| Infiltrating Lobular mixed with other types of Carcinoma | 16 | 59 | 0.7 | 75 |
| Tubular Adenocarcinoma | 46 | 50 | 0.6 | 96 |
| Intracystic Carcinoma | 23 | 45 | 0.5 | 68 |
| Cribiform Carcinoma | 18 | 17 | 0.2 | 35 |
| Medullary Carcinoma | 52 | 14 | 0.2 | 66 |
| Invasive Micropapillary Carcinoma | 0 | 13 | 0.2 | 13 |
| Apocrine Adenocarcinoma | 2 | 12 | 0.1 | 14 |
| Comedocarcinoma, NOS | 8 | 5 | 0.1 | 13 |
| Adenocarcinoma with neuroendocrine differentiation | 3 | 3 | 0 | 6 |
| Carcinoma, undifferentiated | 2 | 2 | 0 | 4 |
| Carcinoma, uncommon subtypes | | | | |
| Adenoid Cystic Carcinoma | 4 | 11 | 0.1 | 15 |
| Secretory Carcinoma | 2 | 1 | 0 | 3 |
| Glycogen-Rich Carcinoma | 2 | 0 | 0 | 2 |
| Fibroepithelial tumours | | | | |
| Phyllodes Tumor, malignant | 41 | 47 | 0.6 | 88 |
| Phyllodes Tumor, Borderline | 101 | 152 | 1.8 | 253 |
| Neuroendocrine tumours | | | | |
| Neuroendocrine Carcinoma | 6 | 12 | 0.1 | 18 |
| Small Cell Carcinoma | 0 | 2 | 0 | 2 |
| Mesenchymal tumours | | | | |
| Angiosarcoma | 2 | 1 | 0 | 3 |
| Leiomyosarcoma | 1 | 0 | 0 | 1 |
| Osteosarcoma | 1 | 2 | 0 | 3 |
| Malignant Fibrous Histiocytoma | 1 | 2 | 0 | 3 |
| Myxosarcoma | 1 | 0 | 0 | 1 |
| Sarcoma, NOS | 7 | 10 | 0.1 | 17 |
| Mammary Paget's tumour | | | | |
| Paget Disease, Mammary | 68 | 103 | 1.2 | 171 |
| Other neoplasms | | | | |
| Neoplasm, malignant, NOS | 6 | 7 | 0.1 | 13 |
| Total with histology | 6,763 | 8,459 | 99.2 | 15,222 |

| | | | | |
|---|--------------|--------------|------------|---------------|
| Clinically malignant tumour (No microscopic confirmation) | 72 | 50 | 0.6 | 122 |
| Haematolymphoid Neoplasms | 18 | 20 | 0.2 | 38 |
| All cases | 6,853 | 8,529 | 100 | 15,382 |
| Haematolymphoid Neoplasms | | | | |
| Diffuse Large B-Cell Lymphoma | 14 | 16 | 0.2 | 30 |
| Extranodal marginal zone lymphoma (MALT Lymphoma) | 3 | 3 | 0 | 6 |
| Follicular Lymphoma | 0 | 1 | 0 | 1 |
| Small Lymphocytic Lymphoma | 1 | 0 | 0 | 1 |

| MALE BREAST | | | | |
|---|-----------|-----------|------------|-------------------|
| | 2003-2007 | 2008-2012 | 2008-2012 | Total (2003-2012) |
| HISTOLOGY | NO. | NO. | % | NO. |
| Infiltrating Duct Carcinoma | 12 | 19 | 63.3 | 31 |
| Infiltrating Duct mixed with other types of Carcinoma | 2 | 2 | 6.7 | 4 |
| Tubular Adenocarcinoma | 1 | 0 | 0 | 1 |
| Papillary Carcinoma | 1 | 4 | 13.3 | 5 |
| Other Carcinoma subtypes | 1 | 3 | 10 | 4 |
| Total with histology | 17 | 28 | 93.3 | 45 |
| Clinically malignant tumour (No microscopic confirmation) | 0 | 2 | 6.7 | 2 |
| All cases | 17 | 30 | 100 | 47 |

| CERVIX UTERI | | | | Total (2003-2012) |
|--|------------------|------------------|----------------|----------------------|
| HISTOLOGY | 2003-2007 NO. | 2008-2012 NO. | 2008-2012 % | NO. |
| Epithelial tumours | | | | |
| Squamous Cell Carcinoma | | | | |
| Squamous Cell Carcinoma, NOS | 721 | 562 | 60.8 | 1,283 |
| Papillary Squamous Cell Carcinoma | 8 | 24 | 2.6 | 32 |
| Lymphoepithelial Carcinoma | 3 | 3 | 0.3 | 6 |
| Glandular tumours | | | | |
| Adenocarcinoma, NOS | 115 | 132 | 14.3 | 247 |
| Mucinous Adenocarcinoma | 24 | 36 | 3.9 | 60 |
| Adenocarcinoma, endocervical type | 4 | 31 | 3.4 | 35 |
| Endometrioid Adenocarcinoma | 22 | 10 | 1.1 | 32 |
| Serous Adenocarcinoma | 4 | 5 | 0.5 | 9 |
| Papillary Adenocarcinoma | 10 | 2 | 0.2 | 12 |
| Clear Cell Adenocarcinoma | 5 | 7 | 0.8 | 12 |
| Mixed Cell Adenocarcinoma | 1 | 8 | 0.9 | 9 |
| Other Epithelial tumours | | | | |
| Adenosquamous Carcinoma | 46 | 30 | 3.2 | 76 |
| Adenoid Cystic Carcinoma | 0 | 1 | 0.1 | 1 |
| Adenoid Basal Carcinoma | 0 | 1 | 0.1 | 1 |
| Carcinoma, NOS | 15 | 14 | 1.5 | 29 |
| Neuroendocrine tumour | | | | |
| Neuroendocrine Carcinoma | 12 | 27 | 2.9 | 39 |
| Mesenchymal tumours | | | | |
| Leiomyosarcoma | 2 | 1 | 0.1 | 3 |
| Endometrial Stromal Sarcoma | 0 | 1 | 0.1 | 1 |
| Mixed Epithelial - Mesenchymal tumours | | | | |
| Adenosarcoma | 10 | 7 | 0.8 | 17 |
| Malignant Mullerian Mixed Tumour / Carcinosarcoma | 3 | 3 | 0.3 | 6 |
| Sarcoma, NOS | 0 | 2 | 0.2 | 2 |
| Other neoplasms | | | | |
| Malignant Melanoma, NOS | 2 | 2 | 0.2 | 4 |
| Neoplasm, malignant, NOS | 0 | 1 | 0.1 | 1 |
| Total with histology | 1,007 | 910 | 98.5 | 1,917 |
| Clinically malignant tumour (No microscopic confirmation) | 5 | 12 | 1.3 | 17 |
| Haematolymphoid Neoplasms | 0 | 2 | 0.2 | 2 |
| All cases | 1,012 | 924 | 100 | 1,936 |
| Haematolymphoid Neoplasms | | | | |
| Diffuse Large B-Cell Lymphoma | 0 | 1 | 0.1 | 1 |
| Myeloid Sarcoma | 0 | 1 | 0.1 | 1 |

| PLACENTA | | | | Total (2003-2012) NO. |
|--|------------------|------------------|----------------|-----------------------------|
| | 2003-2007 NO. | 2008-2012 NO. | 2008-2012 % | |
| HISTOLOGY | | | | |
| Choriocarcinoma | 10 | 9 | 39.1 | 19 |
| Invasive Hydatidiform Mole | 1 | 10 | 43.5 | 11 |
| Placental Trophoblastic Tumour | 1 | 2 | 8.7 | 3 |
| Total with histology | 12 | 21 | 91.3 | 33 |
| Clinically malignant tumour (No microscopic confirmation) | 1 | 2 | 8.7 | 3 |
| All cases | 13 | 23 | 100 | 36 |

| CORPUS UTERI | | | | Total (2003-2012) NO. |
|--|------------------|------------------|----------------|-----------------------------|
| | 2003-2007 NO. | 2008-2012 NO. | 2008-2012 % | |
| HISTOLOGY | | | | |
| Endometrioid Adenocarcinoma | 944 | 1,297 | 72.7 | 2,241 |
| Malignant Mullerian Mixed Tumor / Carcinosarcoma | 87 | 102 | 5.7 | 189 |
| Serous Adenocarcinoma | 58 | 84 | 4.7 | 142 |
| Leiomyosarcoma | 41 | 58 | 3.2 | 99 |
| Adenocarcinoma, NOS | 70 | 51 | 2.9 | 121 |
| Mixed Cell Adenocarcinoma | 6 | 51 | 2.9 | 57 |
| Endometrial Stromal Sarcoma | 35 | 38 | 2.1 | 73 |
| Clear Cell Adenocarcinoma | 22 | 30 | 1.7 | 52 |
| Adenosarcoma | 11 | 15 | 0.8 | 26 |
| Smooth Muscle Tumor of uncertain malignant potential | 14 | 12 | 0.7 | 26 |
| Carcinoma, NOS | 7 | 9 | 0.5 | 16 |
| Mucinous Adenocarcinoma | 26 | 5 | 0.3 | 31 |
| Neuroendocrine Carcinoma | 4 | 5 | 0.3 | 9 |
| Squamous Cell Carcinoma | 6 | 4 | 0.2 | 10 |
| Sarcoma | 5 | 3 | 0.2 | 8 |
| Neoplasm, malignant, NOS | 1 | 3 | 0.2 | 4 |
| Transitional Cell Carcinoma, NOS | 0 | 1 | 0.1 | 1 |
| Liposarcoma | 0 | 1 | 0.1 | 1 |
| Total with histology | 1,337 | 1,769 | 99.1 | 3,106 |
| Clinically malignant tumour (No microscopic confirmation) | 14 | 15 | 0.8 | 29 |
| Haematolymphoid Neoplasms | 0 | 1 | 0.1 | 1 |
| All cases | 1,351 | 1,785 | 100 | 3,136 |
| Haematolymphoid Neoplasms | | | | |
| Diffuse Large B-Cell Lymphoma | 0 | 1 | 0.1 | 1 |

| OYARY and UTERINE ADNEXA | | | | Total (2003-2012) |
|---|------------------|------------------|----------------|----------------------|
| HISTOLOGY | 2003-2007 NO. | 2008-2012 NO. | 2008-2012 % | NO. |
| Serous tumours | | | | |
| Serous Carcinoma | 302 | 401 | 24.9 | 703 |
| Serous Tumour, NOS of low malignant potential | 60 | 53 | 3.3 | 113 |
| Serous Adenofibroma of borderline malignancy | 4 | 6 | 0.4 | 10 |
| Mucinous tumours | | | | |
| Mucinous Adenocarcinoma | 105 | 98 | 6.1 | 203 |
| Mucinous Cystic Tumor of borderline malignancy | 193 | 212 | 13.2 | 405 |
| Mucinous Adenofibroma of borderline malignancy | 2 | 2 | 0.1 | 4 |
| Endometrioid tumours | | | | |
| Endometrioid Adenocarcinoma | 157 | 195 | 12.1 | 352 |
| Endometrioid Adenofibroma, malignant | 2 | 3 | 0.2 | 5 |
| Clear Cell tumours | | | | |
| Clear Cell Adenocarcinoma | 176 | 224 | 13.9 | 400 |
| Mesonephroma, malignant | 0 | 1 | 0.1 | 1 |
| Brenner tumour | | | | |
| Brenner Tumour, malignant | 2 | 0 | 0 | 2 |
| Other Epithelial tumours | | | | |
| Adenocarcinoma, NOS | 88 | 126 | 7.8 | 214 |
| Papillary Adenocarcinoma | 7 | 4 | 0.2 | 11 |
| Transitional Cell Carcinoma, NOS | 3 | 7 | 0.4 | 10 |
| Squamous Cell Carcinoma | 6 | 7 | 0.4 | 13 |
| Carcinoma, NOS | 24 | 15 | 0.9 | 39 |
| Sex cord- stromal tumours | | | | |
| Steroid Cell Tumor, malignant | 1 | 1 | 0.1 | 2 |
| Granulosa Cell Tumor, malignant | 28 | 48 | 3 | 76 |
| Granulosa Cell-Theca Cell Tumor | 0 | 1 | 0.1 | 1 |
| Mixed sex cord- stromal tumours | | | | |
| Sertoli-Leydig Cell Tumor | 8 | 12 | 0.7 | 20 |
| Sex Cord Tumor with annular tubules | 1 | 0 | 0 | 1 |
| Sex Cord-Stromal Tumor, NOS | 1 | 4 | 0.2 | 5 |
| Germ cell tumours | | | | |
| Teratoma, malignant | 36 | 28 | 1.7 | 64 |
| Yolk Sac Tumor | 13 | 12 | 0.7 | 25 |
| Dysgerminoma | 4 | 6 | 0.4 | 10 |
| Mixed Germ Cell Tumor | 4 | 3 | 0.2 | 7 |
| Teratoma, NOS | 7 | 3 | 0.2 | 10 |
| Monodermal teratoma & somatic -type tmours | | | | |
| Struma Ovarii, malignant | 0 | 1 | 0.1 | 1 |

| | | | | |
|--|--------------|--------------|------------|--------------|
| Neuroendocrine tumours | | | | |
| Neuroendocrine Carcinoma | 6 | 11 | 0.7 | 17 |
| Strumal Carcinoid | 0 | 1 | 0.1 | 1 |
| Sebaceous tumours | | | | |
| Sebaceous Carcinoma | 0 | 1 | 0.1 | 1 |
| Mesenchymal tumours | | | | |
| Leiomyosarcoma | 5 | 2 | 0.1 | 7 |
| Endometrial Stromal Sarcoma | 3 | 1 | 0.1 | 4 |
| Fibrosarcoma | 1 | 1 | 0.1 | 2 |
| Sarcoma | 2 | 2 | 0.1 | 4 |
| Other neoplasms | | | | |
| Malignant Mullerian Mixed Tumor / Carcinosarcoma | 18 | 34 | 2.1 | 52 |
| Primitive Neuroectodermal Tumor | 1 | 0 | 0 | 1 |
| Smooth Muscle Tumor of uncertain malignant potential | 1 | 0 | 0 | 1 |
| Neoplasm, malignant, NOS | 2 | 8 | 0.5 | 10 |
| Total with histology | 1,273 | 1,534 | 95.2 | 2,807 |
| Clinically malignant tumour (No microscopic confirmation) | 67 | 73 | 4.5 | 140 |
| Haematolymphoid Neoplasms | 1 | 5 | 0.3 | 6 |
| All cases | 1,341 | 1,612 | 100 | 2,953 |
| Haematolymphoid Neoplasms | | | | |
| Diffuse Large B-Cell Lymphoma | 1 | 3 | 0.2 | 4 |
| B Lymphoblastic Leukemia / Lymphoma, NOS | 0 | 1 | 0.1 | 1 |
| Plasmablastic Lymphoma | 0 | 1 | 0.1 | 1 |

| VAGINA and VULVA | | | | Total (2003-2012) |
|--|------------------|------------------|----------------|----------------------|
| HISTOLOGY | 2003-2007 NO. | 2008-2012 NO. | 2008-2012 % | NO. |
| Epithelial tumours | | | | |
| Squamous Cell Carcinoma | | | | |
| Squamous Cell Carcinoma, NOS | 59 | 63 | 48.5 | 122 |
| Basaloid Squamous Cell Carcinoma | 1 | 1 | 0.8 | 2 |
| Basosquamous Carcinoma | 1 | 1 | 0.8 | 2 |
| Verrucous Carcinoma | 0 | 1 | 0.8 | 1 |
| Basaloid Carcinoma | 1 | 0 | 0 | 1 |
| Basal Cell Carcinoma, NOS | 5 | 6 | 4.6 | 11 |
| Basal Cell Carcinoma, Nodular | 1 | 1 | 0.8 | 2 |
| Multifocal Superficial Basal Cell Carcinoma | 1 | 0 | 0 | 1 |
| Glandular tumours | | | | |
| Adenocarcinoma, NOS | 4 | 4 | 3.1 | 8 |
| Endometrioid Adenocarcinoma, NOS | 0 | 2 | 1.5 | 2 |
| Clear Cell Adenocarcinoma | 2 | 0 | 0 | 2 |
| Paget's Disease, Extramammary | 17 | 27 | 20.8 | 44 |
| Mucinous Adenocarcinoma | 0 | 1 | 0.8 | 1 |
| Other Epithelial tumours | | | | |
| Sebaceous Carcinoma | 0 | 1 | 0.8 | 1 |
| Carcinoma, NOS | 1 | 1 | 0.8 | 2 |
| Neuroendocrine tumours | | | | |
| Neuroendocrine Carcinoma | 1 | 1 | 0.8 | 2 |
| Mesenchymal tumours | | | | |
| Embryonal Rhabdomyosarcoma | 1 | 3 | 2.3 | 4 |
| Angiosarcoma | 1 | 0 | 0 | 1 |
| Dermatofibrosarcoma | 1 | 1 | 0.8 | 2 |
| Sarcoma, NOS | 1 | 2 | 1.5 | 3 |
| Other neoplasms | | | | |
| Malignant Mullerian Mixed Tumor / Carcinosarcoma | 0 | 3 | 2.3 | 3 |
| Malignant Myoepithelioma | 0 | 1 | 0.8 | 1 |
| Malignant Melanoma, NOS | 9 | 6 | 4.6 | 15 |
| Total with histology | 107 | 126 | 96.9 | 233 |
| Clinically malignant tumour (No microscopic confirmation) | 3 | 4 | 3.1 | 7 |
| All cases | 110 | 130 | 100 | 240 |

| PROSTATE | | | | Total (2003-2012) |
|--|--------------|--------------|-------------|----------------------|
| | 2003-2007 | 2008-2012 | 2008-2012 | |
| HISTOLOGY | NO. | NO. | % | NO. |
| Adenocarcinoma, NOS | 2,077 | 3,154 | 94.9 | 5,231 |
| Ductal Adenocarcinoma | 14 | 31 | 0.9 | 45 |
| Basal Cell Carcinoma | 0 | 1 | 0 | 1 |
| Carcinoma, NOS | 18 | 16 | 0.5 | 34 |
| Neuroendocrine Carcinoma | 5 | 0 | 0 | 5 |
| Leiomyosarcoma | 0 | 1 | 0 | 1 |
| Embryonal Rhabdomyosarcoma | 0 | 1 | 0 | 1 |
| Primitive Neuroectodermal Tumor | 1 | 0 | 0 | 1 |
| Neoplasm, malignant, NOS | 1 | 5 | 0.2 | 6 |
| Total with histology | 2,116 | 3,209 | 96.5 | 5,325 |
| Clinically malignant tumour (No microscopic confirmation) | 85 | 115 | 3.5 | 200 |
| Haematolymphoid Neoplasms | 1 | 0 | 0 | 1 |
| All cases | 2,202 | 3,324 | 100 | 5,526 |
| Haematolymphoid Neoplasms | | | | |
| Diffuse Large B-Cell Lymphoma | 1 | 0 | 0 | 1 |

| TESTIS | | | | Total (2003-2012) |
|--|------------|------------|-------------|----------------------|
| | 2003-2007 | 2008-2012 | 2008-2012 | |
| HISTOLOGY | NO. | NO. | % | NO. |
| Seminoma | 70 | 103 | 55.1 | 173 |
| Mixed Germ Cell Tumor | 21 | 33 | 17.6 | 54 |
| Embryonal Carcinoma | 15 | 17 | 9.1 | 32 |
| Teratoma, malignant | 3 | 5 | 2.7 | 8 |
| Choriocarcinoma combined with other germ cell elements | 1 | 3 | 1.6 | 4 |
| Leydig Cell Tumor, malignant | 3 | 2 | 1.1 | 5 |
| Neuroendocrine Carcinoma | 0 | 1 | 0.5 | 1 |
| Leiomyosarcoma | 0 | 1 | 0.5 | 1 |
| Rhabdomyosarcoma | 3 | 1 | 0.5 | 4 |
| Liposarcoma, well differentiated | 2 | 1 | 0.5 | 3 |
| Sarcoma | 0 | 1 | 0.5 | 1 |
| Mucinous Cystadenocarcinoma | 1 | 0 | 0 | 1 |
| Total with histology | 119 | 168 | 89.8 | 287 |
| Clinically malignant tumour (No microscopic confirmation) | 1 | 1 | 0.5 | 2 |
| Haematolymphoid Neoplasms | 19 | 18 | 9.6 | 37 |
| All cases | 139 | 187 | 100 | 326 |
| Haematolymphoid Neoplasms | | | | |
| Diffuse Large B-Cell Lymphoma | 14 | 18 | | 32 |
| Burkitt Lymphoma | 1 | 0 | | 1 |
| Follicular Lymphoma | 1 | 0 | | 1 |
| Extranodal NK/T Cell Lymphoma, nasal type | 3 | 0 | | 3 |

| PENIS and Scrotum | | | | Total (2003-2012) |
|--|-----------|-----------|-----------|----------------------|
| | 2003-2007 | 2008-2012 | 2008-2012 | |
| HISTOLOGY | NO. | NO. | % | NO. |
| Squamous Cell Carcinoma | 51 | 51 | 46.4 | 102 |
| Paget's Disease, Extramammary | 31 | 43 | 39.1 | 74 |
| Adenocarcinoma, NOS | 4 | 0 | 0 | 4 |
| Adenosquamous Carcinoma | 1 | 0 | 0 | 1 |
| Basal Cell Carcinoma, NOS | 3 | 6 | 5.5 | 9 |
| Carcinoma, NOS | 0 | 1 | 0.9 | 1 |
| Liposarcoma | 2 | 6 | 5.5 | 8 |
| Total with histology | 92 | 107 | 97.3 | 199 |
| Clinically malignant tumour (No microscopic confirmation) | 2 | 1 | 0.9 | 3 |
| Haematolymphoid Neoplasms | 1 | 2 | 1.8 | 3 |
| All cases | 95 | 110 | 100 | 205 |
| Haematolymphoid Neoplasms | | | | |
| Diffuse Large B-Cell Lymphoma | 1 | 2 | 1.8 | 3 |

| BLADDER | | | | Total (2003-2012) |
|--|-----------|-----------|-----------|----------------------|
| | 2003-2007 | 2008-2012 | 2008-2012 | |
| HISTOLOGY | NO. | NO. | % | NO. |
| Papillary Urothelial Carcinoma | 510 | 500 | 54.8 | 1,010 |
| Urothelial Carcinoma, NOS | 272 | 254 | 27.8 | 526 |
| Papillary Urothelial neoplasm of low malignant potential | 44 | 59 | 6.5 | 103 |
| Adenocarcinoma and other subtypes | 17 | 23 | 2.5 | 40 |
| Squamous Cell Carcinoma | 8 | 14 | 1.5 | 22 |
| Carcinoma, NOS | 5 | 10 | 1.1 | 15 |
| Neoplasm, malignant, NOS | 5 | 10 | 1.1 | 15 |
| Sarcomatoid Carcinoma | 4 | 5 | 0.5 | 9 |
| Neuroendocrine Carcinoma | 0 | 3 | 0.3 | 7 |
| Sarcoma | 4 | 3 | 0.3 | 4 |
| Small Cell Carcinoma | 2 | 2 | 0.2 | 3 |
| Primitive Neuroectodermal Tumor | 0 | 1 | 0.1 | 1 |
| Yolk Sac Tumor | 0 | 1 | 0.1 | 1 |
| Total with histology | 871 | 885 | 96.9 | 1,756 |
| Clinically malignant tumour (No microscopic confirmation) | 22 | 24 | 2.6 | 46 |
| Haematolymphoid Neoplasms | 0 | 4 | 0.4 | 4 |
| All cases | 893 | 913 | 100 | 1,806 |
| Haematolymphoid Neoplasms | | | | |
| Diffuse Large B-Cell Lymphoma | 0 | 1 | 0.1 | 1 |
| Burkitt Lymphoma | 0 | 1 | 0.1 | 1 |
| Extranodal marginal zone lymphoma (MALT Lymphoma) | 0 | 1 | 0.1 | 1 |
| Malignant Lymphoma, NOS | 0 | 1 | 0.1 | 1 |

| KIDNEY and other urinary organs | | | | Total |
|--|------------|--------------|-------------|--------------|
| | 2003-2007 | 2008-2012 | 2008-2012 | (2003-2012) |
| HISTOLOGY | NO. | NO. | % | NO. |
| Renal Cell Carcinoma, NOS | 558 | 517 | 33.9 | 1,075 |
| Clear Cell Renal Cell Carcinoma | 43 | 397 | 26 | 440 |
| Urothelial Carcinoma, NOS | 75 | 105 | 6.9 | 180 |
| Papillary Urothelial Carcinoma | 65 | 101 | 6.6 | 166 |
| Papillary Renal Cell Carcinoma | 23 | 68 | 4.5 | 91 |
| Chromophobe Cell Renal Cell Carcinoma | 11 | 36 | 2.4 | 47 |
| Carcinoma, NOS | 28 | 30 | 2 | 58 |
| Sarcomatoid Renal Cell Carcinoma | 15 | 29 | 1.9 | 44 |
| Squamous Cell Carcinoma | 4 | 8 | 0.5 | 12 |
| Acquired cystic disease-associated Renal Cell Carcinoma | 2 | 7 | 0.5 | 9 |
| Neoplasm, malignant, NOS | 2 | 6 | 0.4 | 8 |
| Giant Cell and Spindle Cell Carcinoma | 0 | 5 | 0.3 | 5 |
| Nephroblastoma, NOS | 8 | 4 | 0.3 | 12 |
| Clear Cell Sarcoma of kidney | 0 | 3 | 0.2 | 3 |
| Neuroendocrine Carcinoma | 0 | 2 | 0.1 | 2 |
| Malignant Cystic Nephroma | 1 | 1 | 0.1 | 2 |
| Mesoblastic Nephroma | 0 | 1 | 0.1 | 1 |
| Malignant Melanoma, NOS | 0 | 1 | 0.1 | 1 |
| Tumor Cells, malignant | 0 | 1 | 0.1 | 1 |
| Collecting Duct Carcinoma | 2 | 0 | 0 | 2 |
| Primitive Neuroectodermal Tumor | 2 | 0 | 0 | 2 |
| Sarcoma | 4 | 7 | 0.5 | 11 |
| Total with histology | 843 | 1,329 | 87.1 | 2,172 |
| Clinically malignant tumour (No microscopic confirmation) | 140 | 189 | 12.4 | 329 |
| Haematolymphoid Neoplasms | 4 | 8 | 0.5 | 12 |
| All cases | 987 | 1,526 | 100 | 2,513 |
| Haematolymphoid Neoplasms | | | | |
| Diffuse Large B-Cell Lymphoma | 4 | 3 | 0.2 | 7 |
| Follicular Lymphoma | 0 | 2 | 0.1 | 2 |
| Extranodal marginal zone lymphoma (MALT Lymphoma) | 0 | 2 | 0.1 | 2 |
| Plasmablastic Lymphoma | 0 | 1 | 0.1 | 1 |

| | | | | Total (2003-2012) |
|--|-----------|-----------|------------|----------------------|
| EYE | 2003-2007 | 2008-2012 | 2008-2012 | |
| HISTOLOGY | NO. | NO. | % | NO. |
| Retinoblastoma | 15 | 18 | 18.2 | 33 |
| Malignant Melanoma, NOS | 9 | 10 | 10.1 | 19 |
| Squamous Cell Carcinoma | 4 | 2 | 2 | 6 |
| Papillary Squamous Cell Carcinoma | 1 | 0 | 0 | 1 |
| Basaloid Carcinoma | 1 | 0 | 0 | 1 |
| Adenocarcinoma, NOS | 1 | 1 | 1 | 2 |
| Adenocarcinoma with neuroendocrine differentiation | 1 | 0 | 0 | 1 |
| Adenoid Cystic Carcinoma | 1 | 2 | 2 | 3 |
| Carcinoma, NOS | 1 | 0 | 0 | 1 |
| Rhabdomyosarcoma | 1 | 1 | 1 | 2 |
| Liposarcoma, well differentiated | 0 | 1 | 1 | 1 |
| Total with histology | 35 | 35 | 35.4 | 70 |
| Clinically malignant tumour (No microscopic confirmation) | 0 | 3 | 3 | 3 |
| Haematolymphoid Neoplasms | 28 | 61 | 61.6 | 89 |
| All cases | 63 | 99 | 100 | 162 |
| Haematolymphoid Neoplasms | | | | |
| Extranodal marginal zone lymphoma (MALT Lymphoma) | 23 | 47 | 47.5 | 70 |
| Diffuse Large B-Cell Lymphoma | 2 | 8 | 8.1 | 10 |
| Follicular Lymphoma | 2 | 4 | 4 | 6 |
| Malignant Lymphoma, Non-Hodgkin, NOS | 0 | 1 | 1 | 1 |
| Mantle Cell Lymphoma | 0 | 1 | 1 | 1 |
| Small Lymphocytic Lymphoma | 1 | 0 | 0 | 1 |

| | | | | Total (2003-2012) |
|--|-----------|-----------|-----------|----------------------|
| BRAIN and CENTRAL NERVOUS SYSTEM | 2003-2007 | 2008-2012 | 2008-2012 | |
| HISTOLOGY | NO. | NO. | % | NO. |
| Astrocytic and Oligodendroglial tumours | | | | |
| Glioblastoma, NOS | 140 | 183 | 23.3 | 323 |
| Pilocytic Astrocytoma | 31 | 31 | 3.9 | 62 |
| Astrocytoma | | | | |
| Astrocytoma, NOS | 19 | 28 | 3.6 | 47 |
| Astrocytoma, Anaplastic | 24 | 27 | 3.4 | 51 |
| Anaplastic Oligoastrocytoma | 16 | 27 | 3.4 | 43 |
| Oligodendroglioma, NOS | 13 | 19 | 2.4 | 32 |
| Oligodendroglioma, Anaplastic | 26 | 15 | 1.9 | 41 |
| Gliosarcoma | 7 | 11 | 1.4 | 18 |
| Subependymal Giant Cell Astrocytoma | 2 | 3 | 0.4 | 5 |
| Desmoplastic Infantile Astrocytoma | 1 | 2 | 0.3 | 3 |

| | | | | |
|--|----|----|-----|----|
| Fibrillary Astrocytoma | 3 | 2 | 0.3 | 5 |
| Astroblastoma | 1 | 1 | 0.1 | 2 |
| Angiocentric Glioma | 0 | 1 | 0.1 | 1 |
| Gliomatosis Cerebri | 0 | 1 | 0.1 | 1 |
| Protoplasmic Astrocytoma | 1 | 0 | 0.0 | 1 |
| Gemistocytic Astrocytoma | 2 | 0 | 0.0 | 2 |
| Pleomorphic Xanthoastrocytoma | 4 | 0 | 0.0 | 4 |
| Oligodendroblastoma | 1 | 0 | 0.0 | 1 |
| Ependymal and Choroid Plexus tumours | | | | |
| Ependymoma, NOS | 24 | 38 | 4.8 | 62 |
| Malignant Glioma, NOS | 16 | 36 | 4.6 | 52 |
| Subependymoma | 2 | 4 | 0.5 | 6 |
| Atypical Choroid Plexus Papilloma | 0 | 2 | 0.3 | 2 |
| Choroid Plexus Carcinoma | 0 | 1 | 0.1 | 1 |
| Neuronal and mixed Neuronal-glial tumours | | | | |
| Central Neurocytoma | 8 | 7 | 0.9 | 15 |
| Ganglioglioma, Anaplastic | 5 | 6 | 0.8 | 11 |
| Embryonal tumours | | | | |
| Medulloblastoma, NOS | 22 | 18 | 2.3 | 40 |
| Atypical Teratoid / Rhabdoid Tumour | 0 | 3 | 0.4 | 3 |
| CNS PNET | | | | |
| Primitive Neuroectodermal Tumour | 8 | 5 | 0.6 | 13 |
| Neuroepithelioma, NOS | 0 | 1 | 0.1 | 1 |
| Neuroblastoma | 1 | 0 | 0.0 | 1 |
| Germ cell tumours | | | | |
| Germinoma | 12 | 10 | 1.3 | 22 |
| Mixed Germ Cell Tumour | 2 | 3 | 0.4 | 5 |
| Teratoma, malignant, NOS | 0 | 2 | 0.3 | 2 |
| Meningioma | | | | |
| Meningioma, malignant | 21 | 11 | 1.4 | 32 |
| Mesenchymal Non-Meningothelial tumours | | | | |
| Hemangioblastoma | 12 | 24 | 3.1 | 36 |
| Hemangiopericytoma, malignant | 4 | 3 | 0.4 | 7 |
| Sarcoma | 3 | 3 | 0.4 | 6 |
| Neoplasm,uncertain whether benign or Malignant | 0 | 15 | 1.8 | 14 |
| Neoplasm, malignant, NOS | 2 | 6 | 0.8 | 8 |
| Tumours of the Pineal region | | | | |
| Germinoma | 7 | 12 | 1.5 | 19 |
| Pinealoma | 4 | 6 | 0.8 | 10 |
| Germ Cell Tumour | 3 | 2 | 0.3 | 5 |
| Glioblastoma, NOS | 0 | 2 | 0.3 | 2 |
| Primitive Neuroectodermal Tumour | 0 | 1 | 0.1 | 1 |
| Carcinoma, NOS | 1 | 0 | 0.0 | 1 |
| Neoplasm, malignant, NOS | 0 | 1 | 0.1 | 1 |
| Tumours of the Sellar region | | | | |
| Craniopharyngioma | 16 | 33 | 4.2 | 49 |

| | | | | |
|--|------------|------------|--------------|--------------|
| Germinoma | 2 | 4 | 0.5 | 6 |
| Total with histology | 466 | 613 | 78.0 | 1,079 |
| Clinically malignant tumour (No microscopic confirmation) | 72 | 87 | 11.1 | 159 |
| Haematolymphoid Neoplasms | 59 | 86 | 10.9 | 145 |
| All cases | 597 | 786 | 100.0 | 1,383 |
| Haematolymphoid Neoplasms | | | | |
| Diffuse Large B-Cell Lymphoma | 52 | 79 | 10.1 | 131 |
| Other Mature B Cell Lymphoma | 1 | 3 | 0.4 | 4 |
| Malignant Lymphoma, Non-Hodgkin, NOS | 1 | 0 | 0.0 | 1 |
| Precursor Cell Lymphoblastic Lymphoma, NOS | 1 | 0 | 0.0 | 1 |
| Mature T-Cell Lymphoma | 2 | 0 | 0.0 | 2 |
| Malignant Lymphoma, NOS | 2 | 3 | 0.4 | 5 |
| Myeloid Sarcoma | 0 | 1 | 0.1 | 1 |

| BRAIN and CENTRAL NERVOUS SYSTEM - BENIGN neoplasms | 2003-2007# | 2008-2012 | 2008-2012 | Total (2008-2012) |
|--|-------------------|------------------|------------------|--------------------------|
| HISTOLOGY | NO. | % | NO. | |
| Mesenchymal Non-Meningothelial Tumours | | | | |
| Neoplasm, Benign | 4 | 0.3 | 4 | |
| Choroid Plexus Papilloma, NOS | 3 | 0.2 | 3 | |
| Dermoid Cyst, NOS | 3 | 0.2 | 3 | |
| Hemangioma, NOS | 2 | 0.2 | 2 | |
| Cavernous Hemangioma | 2 | 0.2 | 2 | |
| Dysembryoplastic Neuroepithelial Tumour | 2 | 0.2 | 2 | |
| Angiolipoma, NOS | 1 | 0.1 | 1 | |
| Soft Tissue Tumour, Benign | 1 | 0.1 | 1 | |
| Tumour Cells, Benign | 1 | 0.1 | 1 | |
| Meningioma | | | | |
| Meningioma, NOS | 485 | 39.7 | 485 | |
| Atypical Meningioma | 63 | 5.2 | 63 | |
| Transitional Meningioma | 58 | 4.7 | 58 | |
| Meningothelial Meningioma | 48 | 3.9 | 48 | |
| Fibrous Meningioma | 30 | 2.5 | 30 | |
| Psammomatous Meningioma | 20 | 1.6 | 20 | |
| Angiomatous Meningioma | 11 | 0.9 | 11 | |
| Tumours of the Pituitary gland | | | | |
| Pituitary Adenoma, NOS | 265 | 21.7 | 265 | |
| Adenoma, NOS | 11 | 0.9 | 11 | |
| Prolactinoma | 9 | 0.7 | 9 | |
| Neoplasm, Benign | 1 | 0.1 | 1 | |
| Papillary Adenoma, NOS | 1 | 0.1 | 1 | |
| Tumours of the Cranial Nerves | | | | |
| Neurilemoma, NOS | 198 | 16.2 | 198 | |
| Neuroma, NOS | 2 | 0.2 | 2 | |
| Neurofibroma, NOS | 1 | 0.1 | 1 | |
| Plexiform Neurofibroma | 1 | 0.1 | 1 | |
| All Cases | 1,223 | 100 | 1,223 | |

| THYROID | | | | Total (2003-2012) |
|--|------------|--------------|-------------|----------------------|
| | 2003-2007 | 2008-2012 | 2008-2012 | |
| HISTOLOGY | NO. | NO. | % | NO. |
| Papillary Carcinoma | 685 | 1,035 | 78.5 | 1,720 |
| Follicular Carcinoma | 115 | 162 | 12.3 | 277 |
| Medullary Carcinoma | 18 | 33 | 2.5 | 51 |
| Carcinoma, Anaplastic, NOS | 15 | 22 | 1.7 | 37 |
| Carcinoma, NOS | 8 | 14 | 1.1 | 22 |
| Oncocytic Carcinoma | 12 | 10 | 0.8 | 22 |
| Neoplasm, malignant, NOS | 2 | 3 | 0.2 | 5 |
| Mixed Medullary-Papillary Carcinoma | 2 | 2 | 0.2 | 4 |
| Squamous Cell Carcinoma | 2 | 1 | 0.1 | 3 |
| Mixed Medullary-Follicular Carcinoma | 1 | 0 | 0 | 1 |
| Total with histology | 860 | 1,282 | 97.2 | 2,142 |
| Clinically malignant tumour (No microscopic confirmation) | 7 | 13 | 1 | 20 |
| Haematolymphoid Neoplasms | 28 | 24 | 1.8 | 52 |
| All cases | 895 | 1,319 | 100 | 2,214 |
| Haematolymphoid Neoplasms | | | | |
| Diffuse Large B-Cell Lymphoma | 18 | 11 | 0.8 | 29 |
| Extranodal marginal zone lymphoma (MALT Lymphoma) | 9 | 11 | 0.8 | 20 |
| Follicular Lymphoma | 1 | 1 | 0.1 | 2 |
| Indeterminate Dendritic Cell Sarcoma | 0 | 1 | 0.1 | 1 |

| Other Endocrine Glands and Related Structures | | | | Total (2003-2012) |
|--|-----------|-----------|-----------|----------------------|
| | 2003-2007 | 2008-2012 | 2008-2012 | |
| HISTOLOGY | NO. | NO. | % | NO. |
| Adrenal Gland | | | | |
| Neuroblastoma | 9 | 18 | 30.5 | 27 |
| Adrenal Cortical Carcinoma | 7 | 17 | 28.8 | 24 |
| Pheochromocytoma, malignant | 5 | 5 | 8.5 | 10 |
| Ganglioneuroblastoma | 0 | 1 | 1.7 | 1 |
| Adenocarcinoma with neuroendocrine differentiation | 0 | 1 | 1.7 | 1 |
| Gastrointestinal Stromal Tumor, NOS | 1 | 1 | 1.7 | 2 |
| Carcinoma, NOS | 2 | 0 | 0.0 | 2 |
| Neuroendocrine Carcinoma | 1 | 0 | 0.0 | 1 |
| Teratoma, malignant, NOS | 1 | 0 | 0.0 | 1 |
| Neoplasm, malignant, NOS | 1 | 2 | 3.4 | 3 |
| Clinically malignant tumor (NO microscopic confirmation) | 12 | 1 | 1.7 | 13 |
| Parathyroid Gland | | | | |
| Carcinoma, NOS | 2 | 2 | 3.4 | 4 |
| Paraganglionic System | | | | |

| | | | | |
|---|-----------|-----------|------------|------------|
| Clinically malignant tumour (NO microscopic confirmation) | 1 | 3 | 5.1 | 4 |
| Paraganglioma, malignant | 0 | 2 | 3.4 | 2 |
| Haematolymphoid Neoplasms | 3 | 6 | 10.2 | 9 |
| All cases | 45 | 59 | 100 | 210 |
| Haematolymphoid Neoplasms | | | | |
| Diffuse Large B-Cell Lymphoma | 1 | 5 | 8.5 | 6 |
| Small Lymphocytic Lymphoma | 0 | 1 | 1.7 | 1 |
| Malignant Lymphoma, NOS | 1 | 0 | 0.0 | 1 |

12 COMMENTARY ON SELECTED SITES (2008-2012)

In this chapter, all charts have been updated to correspond to the appendices found in this volume. The international comparisons are taken from Cancer Incidence in Five Continents, Volume X¹, which uses age-standardized incidence rates from 2003-2007 across all registries. Instances where cities are missing for certain cancer sites are where age-standardized incidence rates are not available. All age-standardized rates (ASR) in this chapter exclude haematolymphoid neoplasms.

12.1 Tongue (ICD-9: 141 / ICD-O-3: C01-C02)

Compared to the past five years, the rates of tongue cancer among males and females have seen a slight increase. The risk for Indian males relative to Chinese males decreased from 2.0 in 2003-2007 to 1.2 in 2008-2012. The risk for Malay and Indian females relative to Chinese females also decreased significantly compared to the past five years. The small number of cases among Indians and Malays should be borne in mind when interpreting the data. Squamous cell carcinomas accounted for the majority of the reported cases.

| INCIDENCE DATA (2008-2012) | | | Males | |
|-------------------------------|-----|----------------|------------------|--------------------------|
| | No. | % ^a | ASR ^b | RR (95% CI) ^c |
| All residents | 191 | 0.7 | 1.6 | - |
| Chinese | 160 | 0.7 | 1.7 | 1.0 |
| Malays | 6 | 0.3 | 0.4 | 0.3 (0.1-0.6) |
| Indians | 19 | 1.5 | 2.0 | 1.2 (0.7-1.9) |
| INCIDENCE DATA (2008-2012) | | | Females | |
| | No. | % ^a | ASR ^b | RR (95% CI) ^c |
| All residents | 102 | 0.4 | 0.8 | - |
| Chinese | 75 | 0.3 | 0.7 | 1.0 |
| Malays | 15 | 0.5 | 1.0 | 1.4 (0.8-2.5) |
| Indians | 10 | 0.7 | 1.2 | 1.5 (0.8-3.0) |
| INCIDENCE DATA (2008-2012) | | | Total | |
| | No. | % ^a | ASR ^b | RR (95% CI) ^c |
| All residents | 293 | 0.5 | 1.1 | - |
| Chinese | 235 | 0.5 | 1.2 | 1.0 |
| Malays | 21 | 0.4 | 0.7 | 0.7 (0.4-1.0) |
| Indians | 29 | 1.1 | 1.6 | 1.3 (0.9-2.0) |

^a percentage of all cancers in this sex-ethnic group

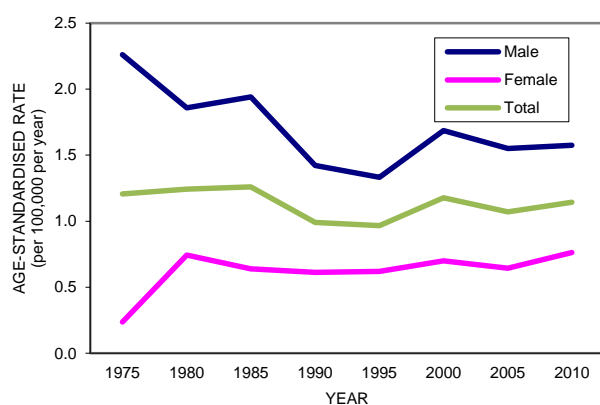
^b age-standardized (to 'World' population) rate per 100,000/year

^c age-adjusted relative risk and 95% confidence interval for Malays and Indians (Chinese as reference group)

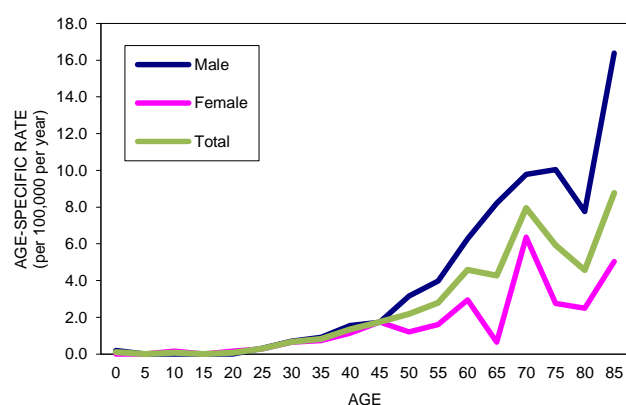
† The above footnotes are applicable to the ASR tables of all cancer sites.

| SUBSITES 2008-2012 | | | |
|--------------------|---|------------|------------|
| ICD9 | SUBSITE | Male | Female |
| 141.0 | Base of tongue | 59 | 11 |
| 141.1 | Dorsal surface of tongue | 4 | 5 |
| 141.2 | Tip and lateral border of tongue | 25 | 18 |
| 141.3 | Ventral surface of tongue | 6 | 4 |
| 141.4 | Anterior two-thirds of tongue, part unspecified | 18 | 7 |
| 141.6 | Lingual tonsil | 3 | 0 |
| 141.8 | Other sites of tongue | 6 | 1 |
| 141.9 | Tongue, unspecified | 70 | 56 |
| All cases | | 191 | 102 |

| HISTOLOGY 2008-2012 | | NO. | % |
|---|--|------------|--------------|
| Squamous Cell Carcinoma | | 279 | 90.9 |
| Adenosquamous Carcinoma | | 1 | 0.3 |
| Adenocarcinoma, NOS | | 0 | 0.0 |
| Adenoid Cystic Carcinoma | | 2 | 0.7 |
| Mucoepidermoid Carcinoma | | 1 | 0.3 |
| Carcinoma, NOS | | 9 | 2.9 |
| Teratoma, malignant, NOS | | 1 | 0.3 |
| Neoplasm, malignant, NOS | | 1 | 0.3 |
| Total with histology | | 294 | 95.8 |
| Clinically malignant tumour (No microscopic confirmation) | | 0 | 0.0 |
| Haematolymphoid Neoplasms | | 13 | 4.2 |
| All cases | | 307 | 100.0 |



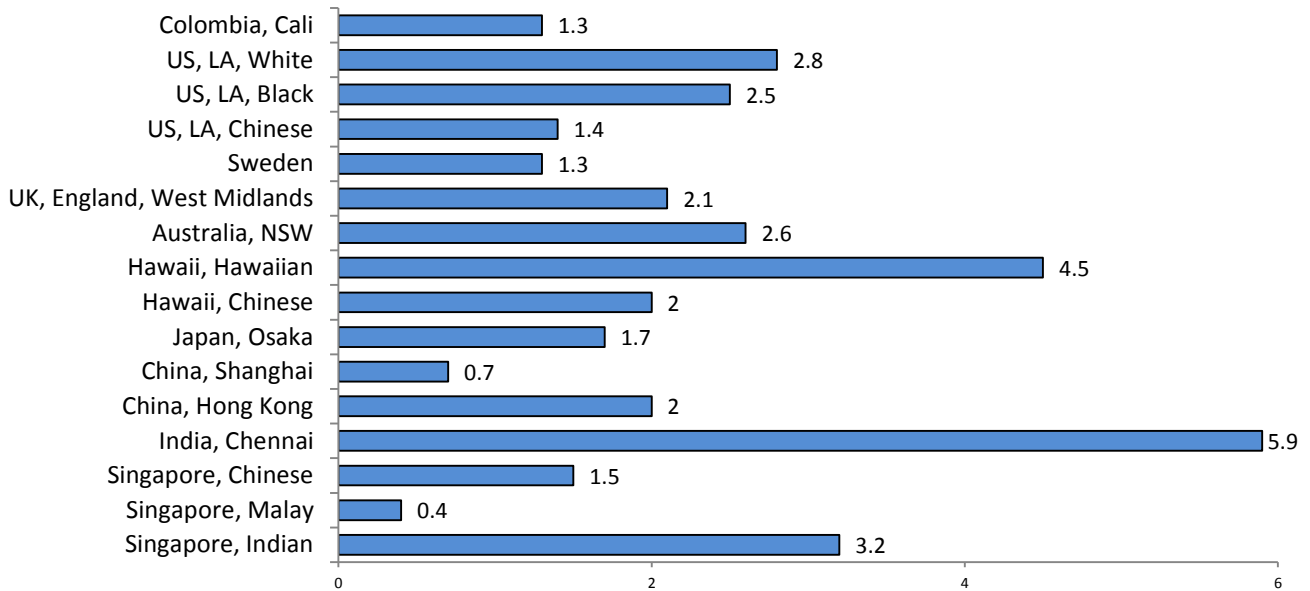
**TONGUE: AGE-STANDARDIZED
INCIDENCE BY SEX, 1973-2012**



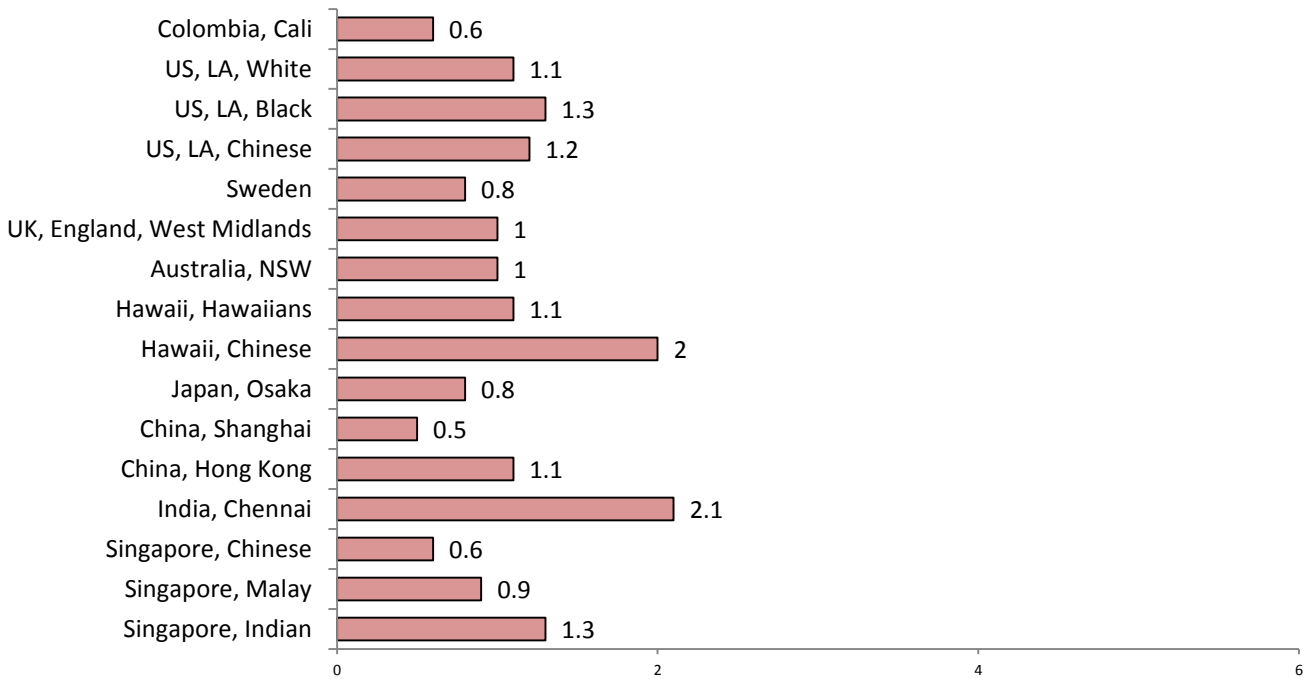
**TONGUE: AGE-SPECIFIC INCIDENCE
BY SEX, 2008-2012**

TONGUE: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 2003-2007
(per 100,000 per year)

MALE



FEMALE



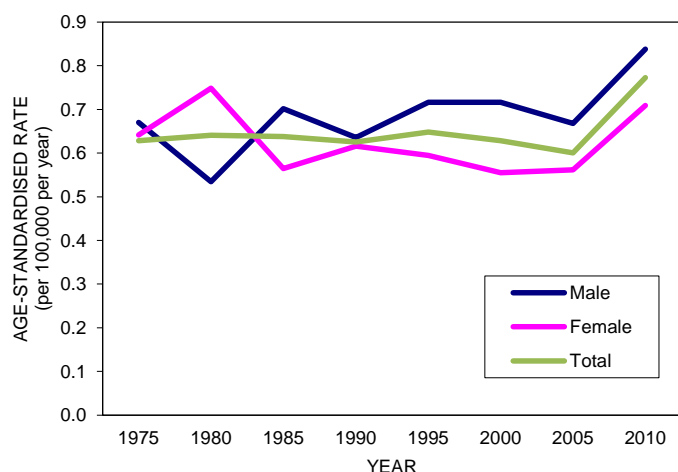
12.2 Major Salivary Glands (ICD-9: 142 / ICD-O-3: C07-C08)

The number of cases of this cancer remains small, with the overall age-standardized rates fluctuating between 0.5 and 0.8 per 100,000 over the 40-year period. Most of tumours in the last five years occurred in the parotid and submandibular glands. Adenoid cystic, acinar cell, and adenocarcinoma are the main histologic types of salivary gland malignancies.

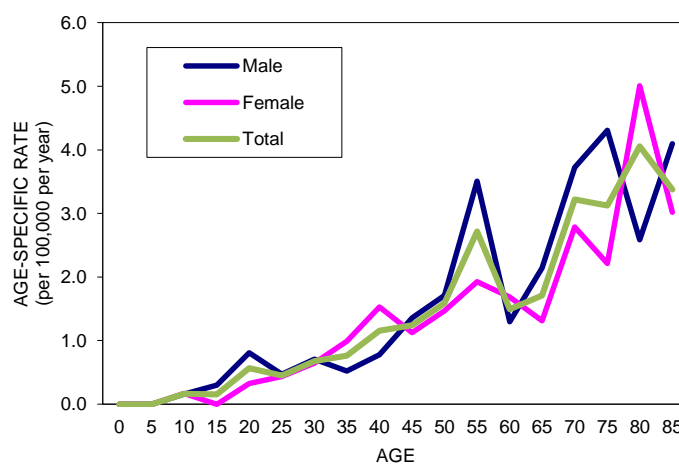
| INCIDENCE DATA | | | Males | |
|----------------|-----|-----|---------|---------------|
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 102 | 0.4 | 0.8 | - |
| Chinese | 85 | 0.4 | 0.9 | 1.0 |
| Malays | 10 | 0.4 | 0.8 | 0.8 (0.4-1.5) |
| Indians | 4 | 0.3 | 0.4 | 0.4 (0.2-1.2) |
| INCIDENCE DATA | | | Females | |
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 95 | 0.3 | 0.7 | - |
| Chinese | 83 | 0.3 | 0.8 | 1.0 |
| Malays | 5 | 0.2 | 0.3 | 0.4 (0.2-1.0) |
| Indians | 5 | 0.3 | 0.5 | 0.7 (0.3-1.6) |
| INCIDENCE DATA | | | Total | |
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 197 | 0.3 | 0.8 | - |
| Chinese | 168 | 0.4 | 0.8 | 1.0 |
| Malays | 15 | 0.3 | 0.6 | 0.6 (0.4-1.0) |
| Indians | 9 | 0.3 | 0.5 | 0.5 (0.3-1.1) |

| SUBSITES 2008-2012 | | | |
|--------------------|-----------------------------|------|--------|
| ICD9 | SUBSITE | Male | Female |
| 142.0 | Parotid gland | 70 | 69 |
| ss142.1 | Submandibular gland | 24 | 18 |
| 142.2 | Sublingual gland | 2 | 2 |
| 142.9 | Salivary gland, unspecified | 6 | 6 |
| All cases | | 102 | 95 |

| HISTOLOGY 2008-2012 | NO. | % |
|---|------------|--------------|
| Acinar Cell Carcinoma | 76 | 35.3 |
| Adenoid Cystic Carcinoma | 30 | 14.0 |
| Adenocarcinoma, NOS | 22 | 10.2 |
| Lymphoepithelial Carcinoma | 15 | 7.0 |
| Carcinoma, NOS | 13 | 6.0 |
| Squamous Cell Carcinoma | 11 | 5.1 |
| Basal Cell Adenocarcinoma | 8 | 3.7 |
| Carcinoma in pleomorphic adenoma | 6 | 2.8 |
| Salivary Duct Carcinoma | 5 | 2.3 |
| Epithelial-Myoepithelial Carcinoma | 2 | 0.9 |
| Cystadenocarcinoma | 1 | 0.5 |
| Malignant Myoepithelioma | 1 | 0.5 |
| Basaloid Carcinoma | 1 | 0.5 |
| Adenosquamous Carcinoma | 1 | 0.5 |
| Spindle Cell Carcinoma, NOS | 1 | 0.5 |
| Sarcoma | 1 | 0.5 |
| Desmoplastic Small Round Cell Tumour | 0 | 0.0 |
| Primitive Neuroectodermal Tumour | 0 | 0.0 |
| Mixed Tumour, malignant, NOS | 1 | 0.5 |
| Tumour Cells, malignant | 1 | 0.5 |
| Total with histology | 196 | 91.2 |
| Clinically malignant tumour (No microscopic confirmation) | 1 | 0.5 |
| Haematolymphoid Neoplasms | 18 | 8.4 |
| All cases | 215 | 100.0 |



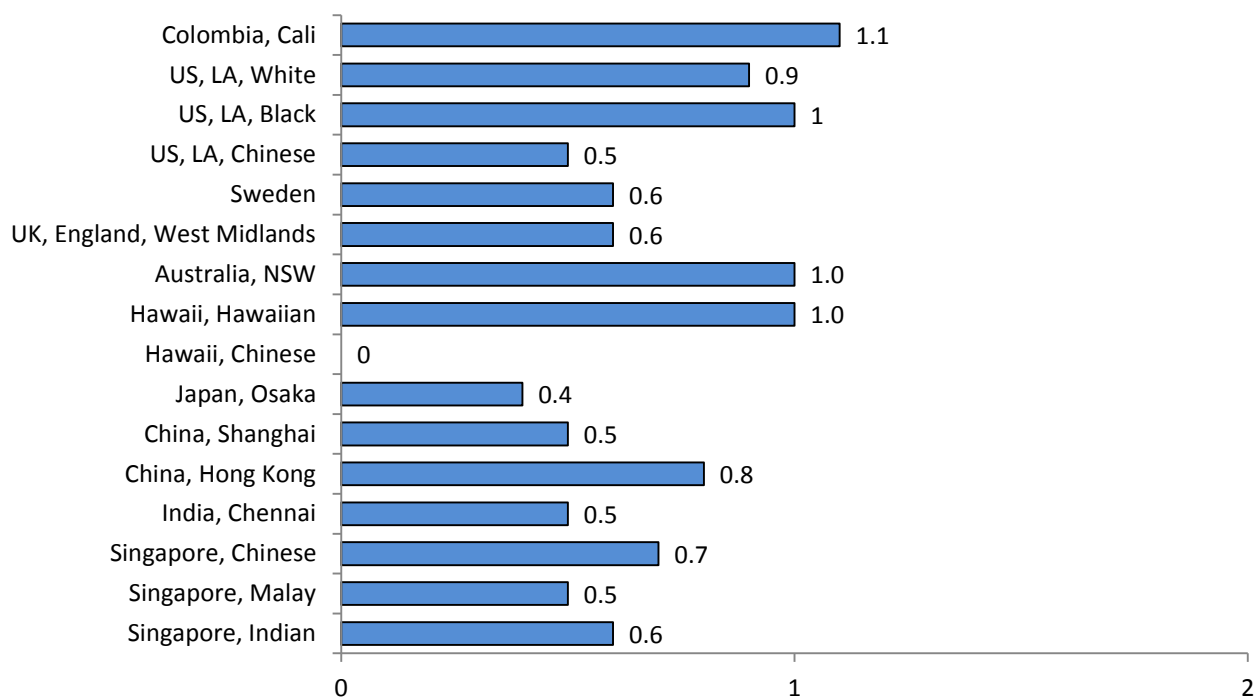
SALIVARY GLAND: AGE-STANDARDIZED INCIDENCE BY SEX, 1973-2012



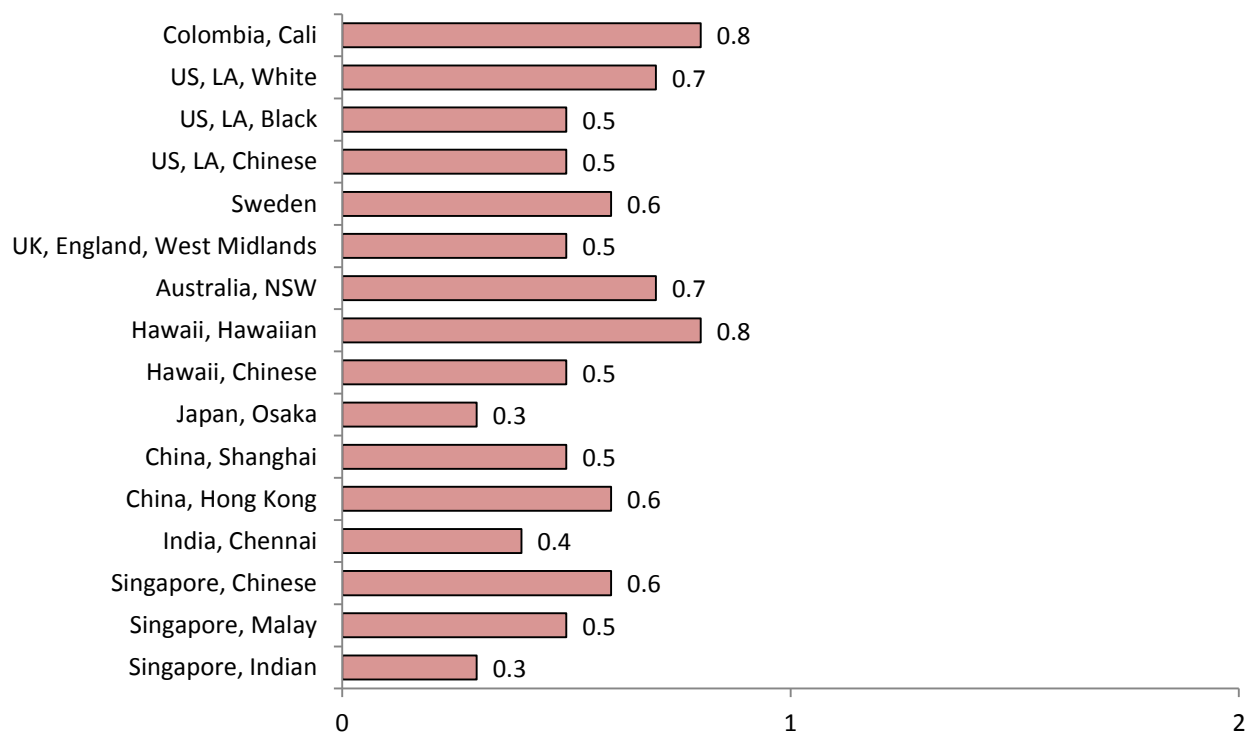
SALIVARY GLAND: AGE-SPECIFIC INCIDENCE BY SEX, 2008-2012

SALIVARY GLAND: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 2003-2007
(per 100,000 per year)

MALE



FEMALE



12.3 Mouth (ICD-9: 143-5 / ICD-O-3: C03-C06)

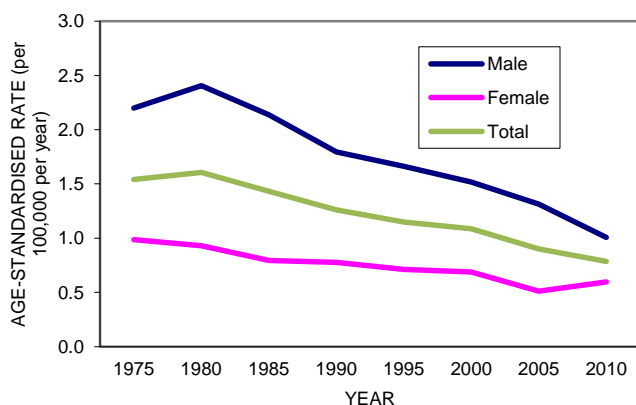
The incidence rates of mouth cancer among Indians in Singapore remains markedly higher than the other ethnic groups, especially for females; but lower than that in India. The trend in all residents has been a gradual decline over the 40-year period, from 2.2 per 100,000 in 1973-1977 to 1.0 per 100,000 per year in 2008-2012 for males, and from 1.0 in 1973-1977 to 0.6 per 100,000 per year in 2008-2012 for females. The male: female ratio of case numbers is approximately 1.5:1. The age incidence curve shows an increase in risk with age, most marked after the fourth decade of life.

| INCIDENCE DATA | | | Males | |
|----------------|-----|-----|---------|---------------|
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 124 | 0.4 | 1.0 | - |
| Chinese | 102 | 0.4 | 1.0 | 1.0 |
| Malays | 3 | 0.1 | 0.2 | 0.2 (0.1-0.7) |
| Indians | 19 | 1.5 | 1.9 | 1.9 (1.2-3.2) |
| INCIDENCE DATA | | | Females | |
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 83 | 0.3 | 0.6 | - |
| Chinese | 58 | 0.2 | 0.5 | 1.0 |
| Malays | 6 | 0.2 | 0.4 | 0.8 (0.3-1.9) |
| Indians | 16 | 1.1 | 2.0 | 3.5 (2.0-6.2) |
| INCIDENCE DATA | | | Total | |
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 207 | 0.4 | 0.8 | - |
| Chinese | 160 | 0.3 | 0.8 | 1.0 |
| Malays | 9 | 0.2 | 0.3 | 0.4 (0.2-0.8) |
| Indians | 35 | 1.3 | 2.0 | 2.5 (1.8-3.7) |

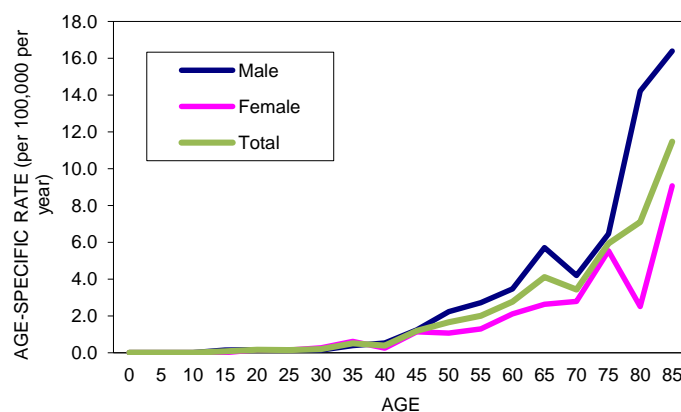
| SUBSITES 2008-2012 | | | |
|--------------------|------------------------------------|------|--------|
| ICD9 | SUBSITE | Male | Female |
| 143.0 | Upper gum | 1 | 10 |
| 143.1 | Lower gum | 13 | 6 |
| 143.9 | Gum, unspecified | 6 | 3 |
| 144.0 | Anterior portion of floor of mouth | 1 | 0 |
| 144.8 | Other sites of floor of mouth | 1 | 0 |
| 144.9 | Floor of mouth, part unspecified | 23 | 8 |
| 145.0 | Cheek mucosa | 26 | 24 |
| 145.1 | Vestibule of mouth | 1 | 0 |
| 145.2 | Hard palate | 12 | 11 |
| 145.3 | Soft palate | 11 | 3 |
| 145.5 | Palate, unspecified | 7 | 4 |
| 145.6 | Retromolar area | 13 | 8 |

| | | | |
|------------------|--------------------|------------|-----------|
| 145.9 | Mouth, unspecified | 9 | 6 |
| All cases | | 124 | 83 |

| HISTOLOGY 2008-2012 | NO. | % |
|---|------------|--------------|
| Squamous Cell Carcinoma | 148 | 64.1 |
| Mucoepidermoid Carcinoma | 22 | 3.5 |
| Adenocarcinoma | 8 | 3.5 |
| Adenoid Cystic Carcinoma | 11 | 2.6 |
| Acinar Cell Carcinoma | 6 | 2.6 |
| Carcinoma, NOS | 2 | 0.4 |
| Carcinoma in pleomorphic adenoma | 1 | 0.4 |
| Malignant Myoepithelioma | 1 | 0.4 |
| Sarcomatoid Carcinoma | 1 | 0.4 |
| Epithelioid Sarcoma | 1 | 0.4 |
| Sarcoma | 1 | 0.4 |
| Malignant Melanoma, NOS | 3 | 1.3 |
| Ameloblastoma, malignant | 3 | 1.3 |
| Odontogenic Tumour, malignant | 1 | 6.1 |
| Odontogenic Tumour, NOS | 14 | 6.1 |
| Neoplasm, malignant, NOS | 1 | 0.0 |
| Total with histology | 224 | 97.0 |
| Clinically malignant tumour (No microscopic confirmation) | 1 | 0.9 |
| Haematolymphoid Neoplasms | 6 | 2.6 |
| All cases | 231 | 100.0 |

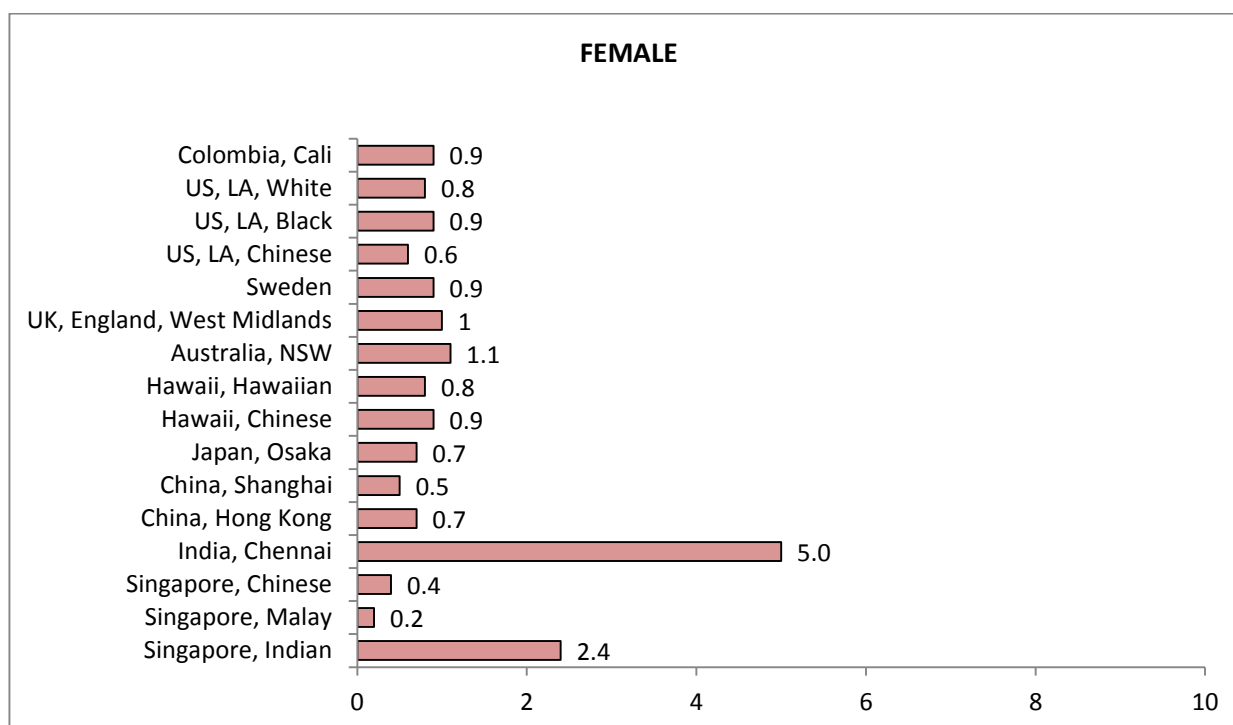
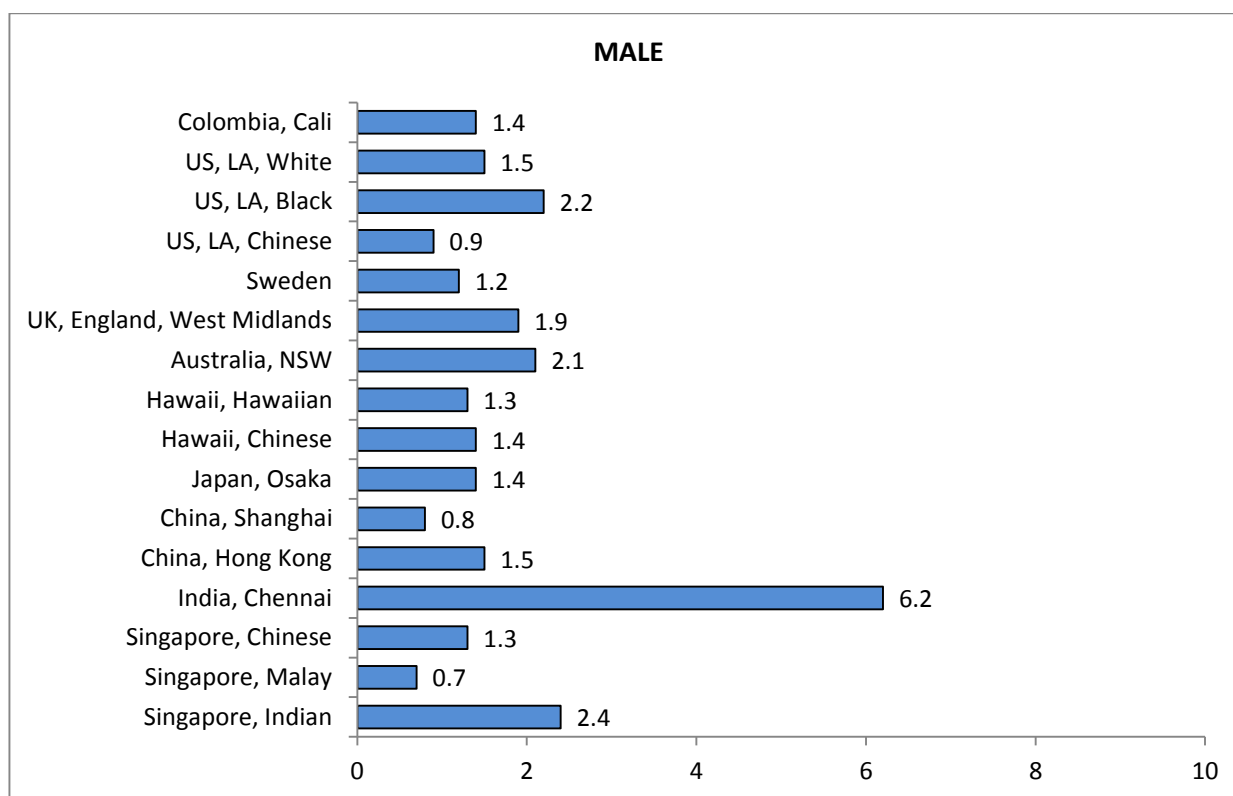


**MOUTH: AGE-STANDARDIZED
INCIDENCE BY SEX, 1973-2012**



**MOUTH: AGE-SPECIFIC INCIDENCE
BY SEX, 2008-2012**

MOUTH: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 2003-2007
(per 100,000 per year)



12.4 Pharynx (ICD-9: 146, 148-9 / ICD-O-3: C10, C12-14)

There were 321 cases of pharyngeal cancer, which include the oropharynx and hypopharynx (excluding haematolymphoid neoplasms). The male to female ratio of pharyngeal cancer is approximately 4.4:1. The Malays are at significantly lower risk of developing this cancer in contrast to both Chinese and Indians.

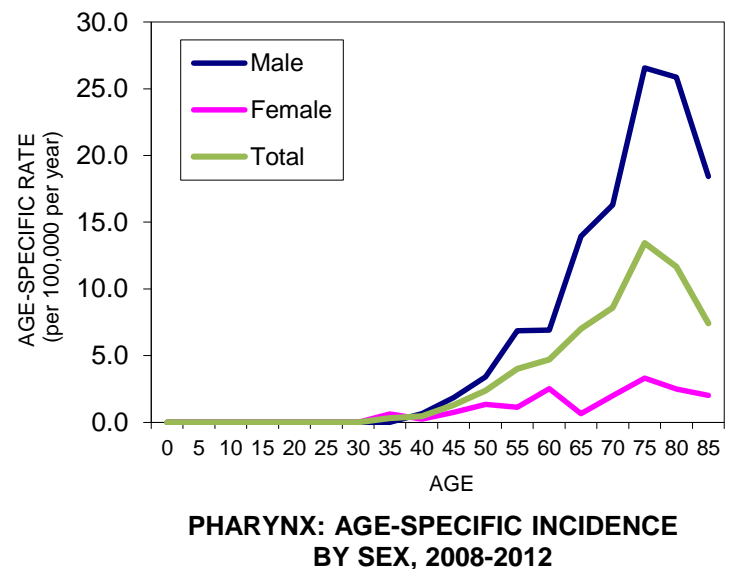
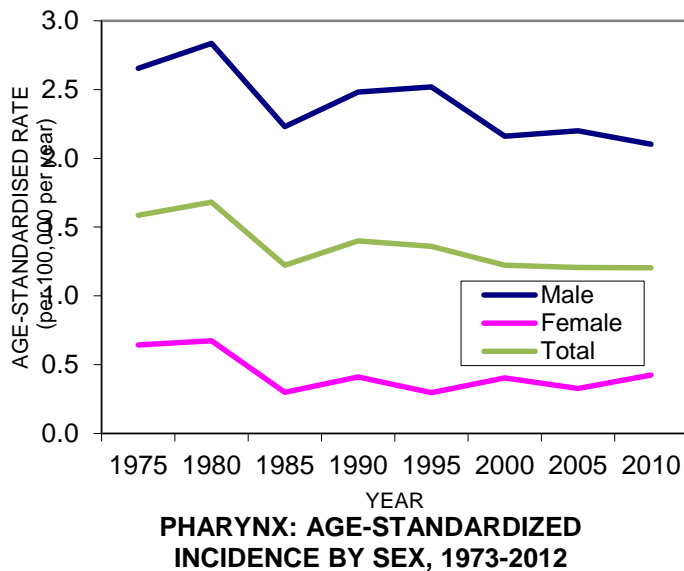
Squamous cell carcinomas comprise the main histologic type of pharyngeal cancers in 2008-2012. Beyond 55 years of age, the age-specific incidence of pharyngeal cancer for males increases sharply, peaking at approximately 75-80 years, after which the incidence rate starts to decline. There is a net increase in age-specific incidence rates for females, though the rate of increase is much slower than that of the males.

| INCIDENCE DATA (2008-2012) | | Males | | |
|-----------------------------------|------------|----------------|------------|--------------------|
| | No. | % | ASR | RR (95% CI) |
| All residents | 261 | 0.9 | 2.1 | - |
| Chinese | 229 | 1.0 | 2.3 | 1.0 |
| Malays | 4 | 0.2 | 0.3 | 0.1 (0.1-0.4) |
| Indians | 21 | 1.7 | 2.4 | 1.0 (0.7-1.6) |
| INCIDENCE DATA (2008-2012) | | Females | | |
| | No. | % | ASR | RR (95% CI) |
| All residents | 60 | 0.2 | 0.4 | - |
| Chinese | 52 | 0.2 | 0.5 | 1.0 |
| Malays | 2 | 0.1 | 0.1 | 0.3 (0.1-1.2) |
| Indians | 6 | 0.4 | 0.8 | 1.4 (0.6-3.3) |
| INCIDENCE DATA (2008-2012) | | Total | | |
| | No. | % | ASR | RR (95% CI) |
| All residents | 321 | 0.6 | 1.2 | - |
| Chinese | 281 | 0.6 | 1.3 | 1.0 |
| Malays | 6 | 0.1 | 0.2 | 0.2 (0.1-0.4) |
| Indians | 27 | 1.0 | 1.6 | 1.2 (0.8-1.7) |

| SUBSITES 2008-2012 | | Male | Female |
|---------------------------|-------------------------------------|-------------|---------------|
| ICD9 | SUBSITE | | |
| 146.0 | Tonsil | 81 | 35 |
| 146.1 | Tonsillar fossa | 3 | 3 |
| 146.2 | Tonsillar pillars | 7 | 1 |
| 146.3 | Vallecula | 2 | 1 |
| 146.4 | Anterior aspect of epiglottis | 3 | 0 |
| 146.6 | Lateral wall of oropharynx | 0 | 1 |
| 146.7 | Posterior wall of oropharynx | 1 | 0 |
| 146.8 | Other specified sites of oropharynx | 1 | 1 |
| 146.9 | Oropharynx, unspecified | 37 | 3 |

| | | | |
|------------------|---|------------|-----------|
| 148.0 | Postcricoid region | 3 | 3 |
| 148.1 | Pyriiform sinus | 55 | 3 |
| 148.2 | Aryepiglottic fold, hypopharyngeal aspect | 3 | 0 |
| 148.3 | Posterior hypopharyngeal wall | 2 | 1 |
| 148.9 | Hypopharynx, unspecified | 58 | 6 |
| 149.0 | Pharynx, unspecified | 5 | 2 |
| All cases | | 261 | 60 |

| HISTOLOGY | NO. | % |
|--|------------|-------------|
| Squamous Cell Carcinoma | 284 | 70.1 |
| Carcinoma, NOS | 21 | 5.2 |
| Mucoepidermoid Carcinoma | 2 | 0.5 |
| Adenosquamous Carcinoma | 1 | 0.2 |
| Lymphoepithelial Carcinoma | 1 | 0.2 |
| Malignant Myoepithelioma | 1 | 0.2 |
| Adenocarcinoma, NOS | 1 | 0.2 |
| Tumour Cells, malignant | 1 | 0.2 |
| Total with histology | 312 | 77 |
| Clinically malignant tumour (No microscopic confirmation) | 9 | 2.2 |
| Haematolymphoid Neoplasms | 84 | 20.7 |
| All cases | 405 | 100 |



12.5 Nasopharynx (ICD-9: 147 / ICD-O-3: C11)

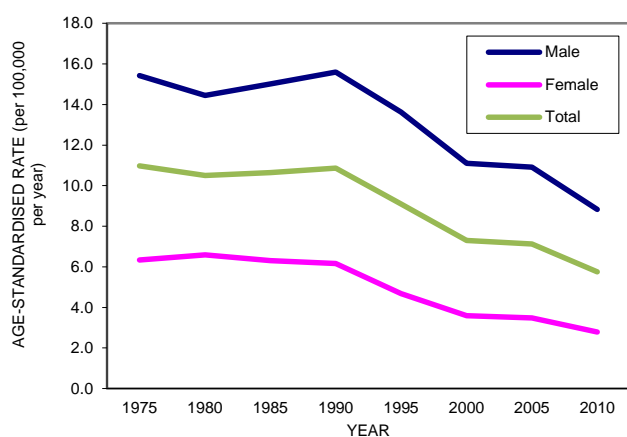
Of the 1,514 incident cases of this disease, 90.8% occurred in Chinese. Age-standardized incidence rates were stable between 1973 and 1992 but subsequently showed a consistent decline. Among Chinese men, the age-standardized incidence rate fell significantly from 18.8 per 100,000 in 1988-1992 to 10.3 per 100,000 in 2008-2012. This cancer has fallen from the sixth most common cancer among Chinese men in 2003-2007 to the eighth most common cancer, constituting 4.4% of all cancers among Chinese men, in 2008-2012. Compared to their Chinese counterparts, the rates are low among Malay and Indian males, with relative risk of 60% and 10% that of Chinese respectively.

Among both males and females, the age-specific incidence rates for nasopharyngeal cancer begin to rise in the third decade of life and peak at 55 years. The male to female ratio remains similar as in previous years, at 3.1:1.

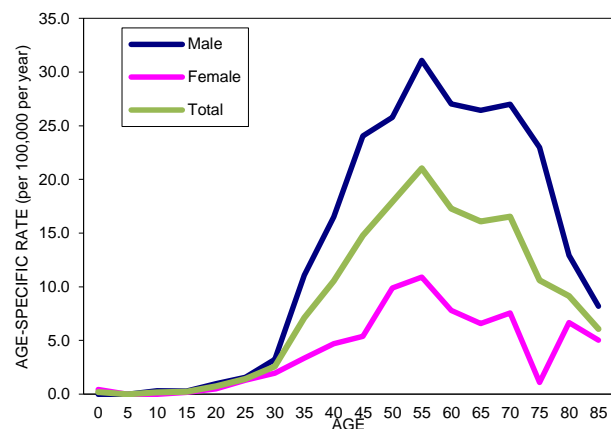
| INCIDENCE DATA | | | Males | |
|----------------|-------|-----|---------|---------------|
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 1,144 | 4.1 | 8.8 | - |
| Chinese | 1,036 | 4.4 | 10.3 | 1.0 |
| Malays | 85 | 3.6 | 6.0 | 0.6 (0.4-0.7) |
| Indians | 12 | 1.0 | 1.1 | 0.1 (0.1-0.2) |
| INCIDENCE DATA | | | Females | |
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 370 | 1.3 | 2.8 | - |
| Chinese | 338 | 1.4 | 3.3 | 1.0 |
| Malays | 25 | 0.9 | 1.5 | 0.5 (0.3-0.8) |
| Indians | 3 | 0.2 | 0.3 | 0.1 (0.0-0.3) |
| INCIDENCE DATA | | | Total | |
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 1,514 | 2.7 | 5.8 | - |
| Chinese | 1,374 | 2.9 | 6.7 | 1.0 |
| Malays | 110 | 2.1 | 3.7 | 0.5 (0.4-0.7) |
| Indians | 15 | 0.6 | 0.7 | 0.1 (0.1-0.2) |

| SUBSITES 2008-2012 | | | |
|--------------------|--------------------------------------|-------|--------|
| ICD9 | SUBSITE | Male | Female |
| 147.0 | Superior wall of nasopharynx | 4 | 3 |
| 147.1 | Posterior wall of nasopharynx | 16 | 1 |
| 147.2 | Lateral wall of nasopharynx | 35 | 11 |
| 147.3 | Anterior wall of nasopharynx | 0 | 2 |
| 147.8 | Other specified sites of nasopharynx | 4 | 4 |
| 147.9 | Nasopharynx, unspecified | 1,085 | 349 |
| All cases | | 1,144 | 370 |

| HISTOLOGY 2008-2012 | NO. | % |
|---|--------------|--------------|
| Carcinoma, undifferentiated | 1,229 | 79.4 |
| Squamous Cell Carcinoma | 131 | 8.5 |
| Carcinoma, NOS | 128 | 8.3 |
| Adenoid Cystic Carcinoma | 5 | 0.3 |
| Papillary Carcinoma, NOS | 4 | 0.3 |
| Mucoepidermoid Carcinoma | 2 | 0.1 |
| Non-Small Cell Carcinoma | 2 | 0.1 |
| Rhabdomyosarcoma | 2 | 0.1 |
| Neuroendocrine Carcinoma | 1 | 0.1 |
| Neoplasm, malignant, NOS | 1 | 0.1 |
| Total with histology | 1,505 | 97.3 |
| Clinically malignant tumour (No microscopic confirmation) | 9 | 0.6 |
| Haematolymphoid Neoplasms | 33 | 2.1 |
| All cases | 1,547 | 100.0 |

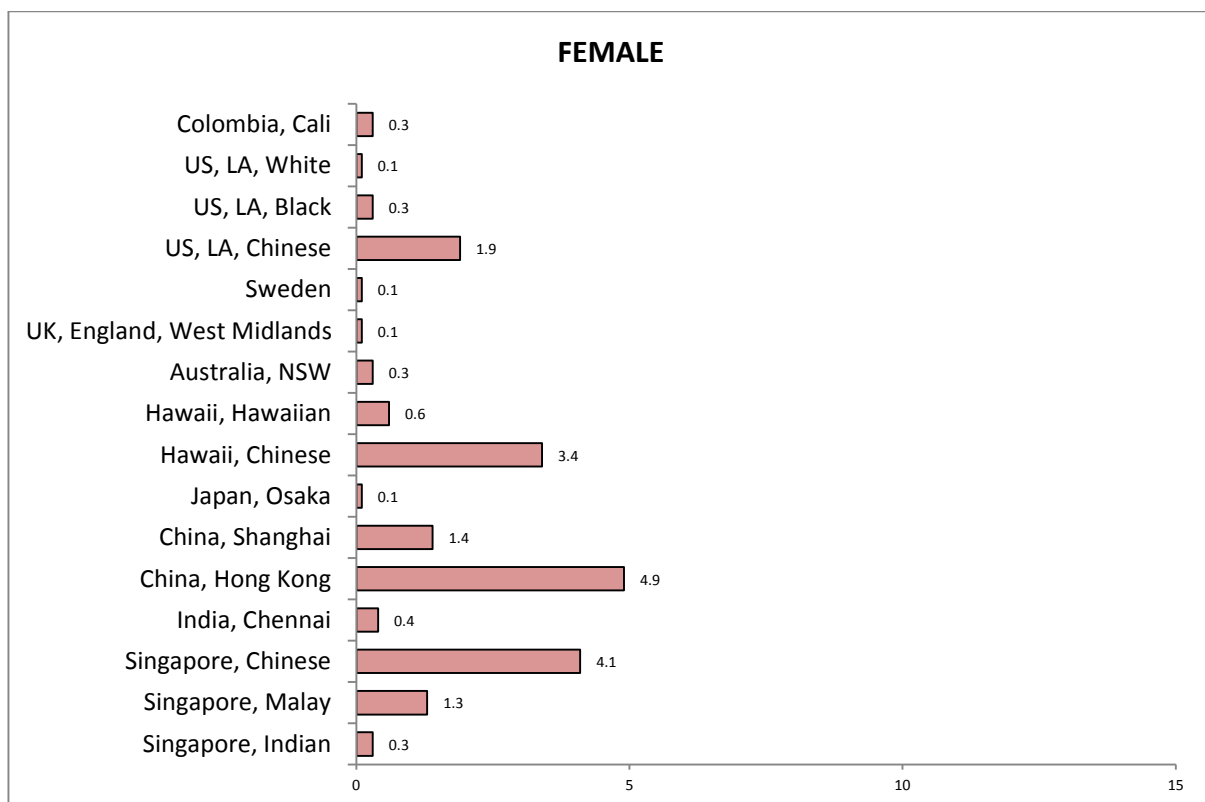
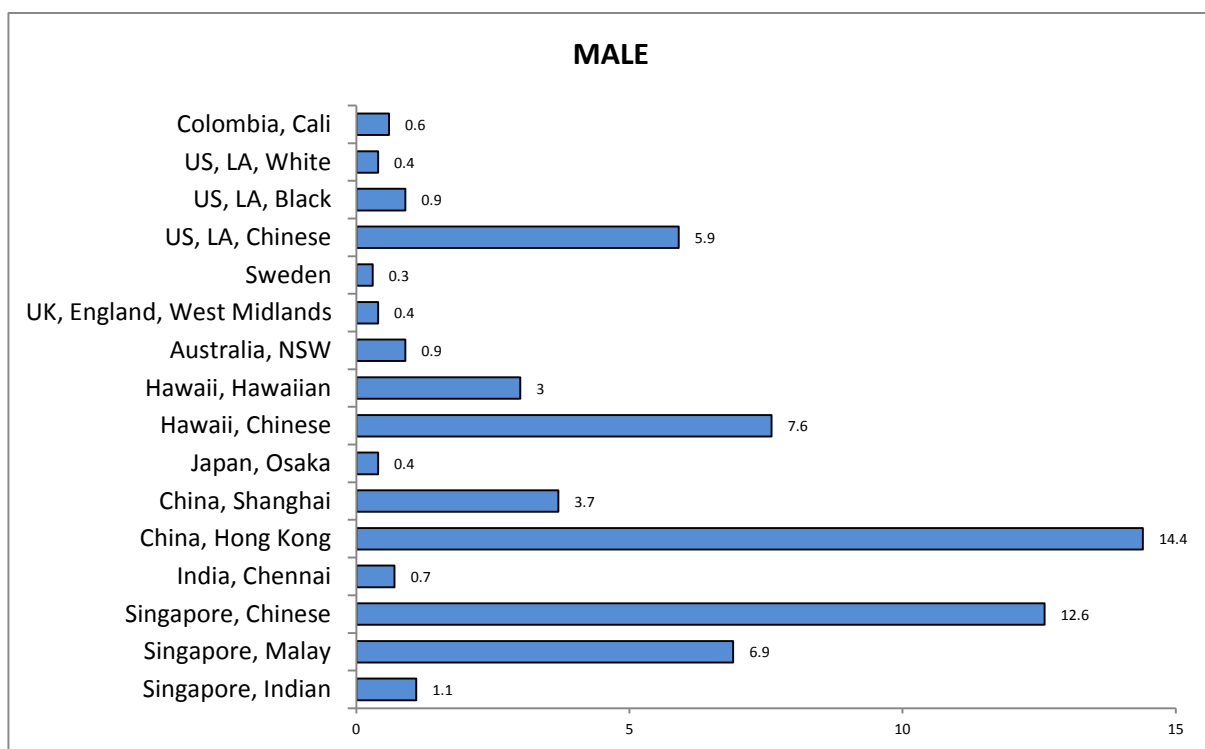


NASOPHARYNX: AGE-STANDARDIZED INCIDENCE BY SEX, 1973-2012



NASOPHARYNX: AGE-SPECIFIC INCIDENCE BY SEX, 2008-2012

NASOPHARYNX: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 2003-2007
(per 100,000 per year)



12.6 Oesophagus (ICD-9: 150 / ICD-O-3: C15)

Since 1973, rates of oesophageal cancer in Singapore have been on the decline and this trend has continued in 2008-2012. The annual incidence rates (per 100,000) for Chinese males and females were 3.8 and 0.6 respectively in 2008-2012 compared with 17.7 and 4.8 respectively in 1973-1977. The age-incidence curves for 2008-2012 show a steep rise after the age of 40 for males and after the age of 50 for females.

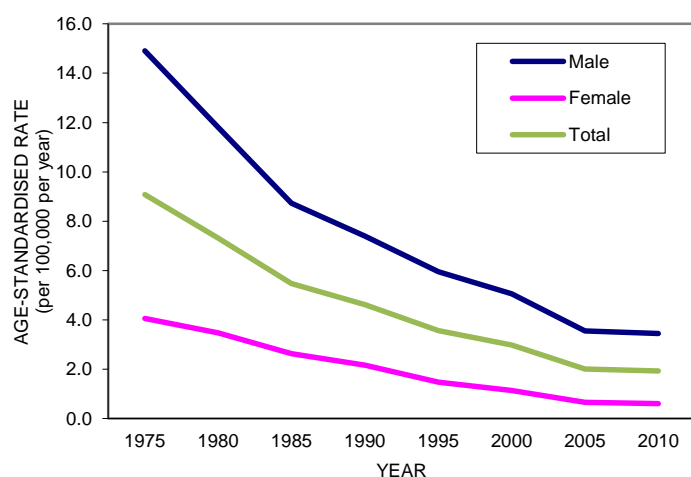
Among the ethnic groups, risks among Malay and Indian men remain generally lower than that for Chinese men. There is a suggestion of a higher risk in Indian women compared to Chinese and Malay women, but the number of cases among Indian women is small.

| INCIDENCE DATA | | | Males | |
|----------------|-----|-----|---------|---------------|
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 417 | 1.5 | 3.4 | - |
| Chinese | 369 | 1.6 | 3.8 | 1.0 |
| Malays | 23 | 1.0 | 1.9 | 0.5 (0.3-0.8) |
| Indians | 23 | 1.8 | 2.6 | 0.7 (0.5-1.1) |
| INCIDENCE DATA | | | Females | |
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 97 | 0.3 | 0.6 | - |
| Chinese | 80 | 0.3 | 0.6 | 1.0 |
| Malays | 3 | 0.1 | 0.2 | 0.4 (0.1-1.1) |
| Indians | 13 | 0.9 | 1.7 | 2.7 (1.5-4.9) |
| INCIDENCE DATA | | | Total | |
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 514 | 0.9 | 1.9 | - |
| Chinese | 449 | 0.9 | 2.1 | 1.0 |
| Malays | 26 | 0.5 | 1.0 | 0.5 (0.3-0.7) |
| Indians | 36 | 1.3 | 2.2 | 1.0 (0.7-1.4) |

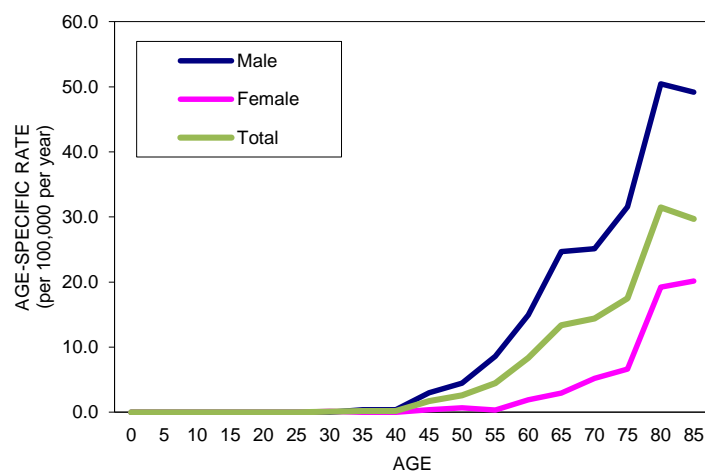
| SUBSITES 2008-2012 | | | |
|--------------------|-----------------------------------|------|--------|
| ICD9 | SUBSITE | Male | Female |
| 150.0 | Cervical esophagus | 11 | 3 |
| 150.1 | Thoracic esophagus | 22 | 6 |
| 150.3 | Upper third of esophagus | 32 | 9 |
| 150.4 | Middle third of esophagus | 112 | 28 |
| 150.5 | Lower third of esophagus | 126 | 23 |
| 150.8 | Other specified part of esophagus | 22 | 5 |
| 150.9 | Esophagus, unspecified | 92 | 23 |
| All cases | | 417 | 97 |

| HISTOLOGY 2008-2012 | NO. | % |
|---------------------|-----|---|
|---------------------|-----|---|

| | | |
|---|------------|--------------|
| Squamous Cell Carcinoma | 350 | 68.1 |
| Adenocarcinoma | 80 | 15.6 |
| Carcinoma, NOS | 17 | 3.3 |
| Basaloid Squamous Cell Carcinoma | 11 | 2.1 |
| Small Cell Carcinoma | 8 | 1.6 |
| Spindle Cell Carcinoma, NOS | 7 | 1.4 |
| Neuroendocrine Carcinoma | 5 | 1.0 |
| Gastrointestinal Stromal Tumour | 4 | 0.8 |
| Malignant Melanoma, NOS | 3 | 0.6 |
| Adenosquamous Carcinoma | 2 | 0.4 |
| Neoplasm, malignant, NOS | 2 | 0.4 |
| Total with histology | 489 | 95.1 |
| Clinically malignant tumour (No microscopic confirmation) | 25 | 4.9 |
| All cases | 514 | 100.0 |

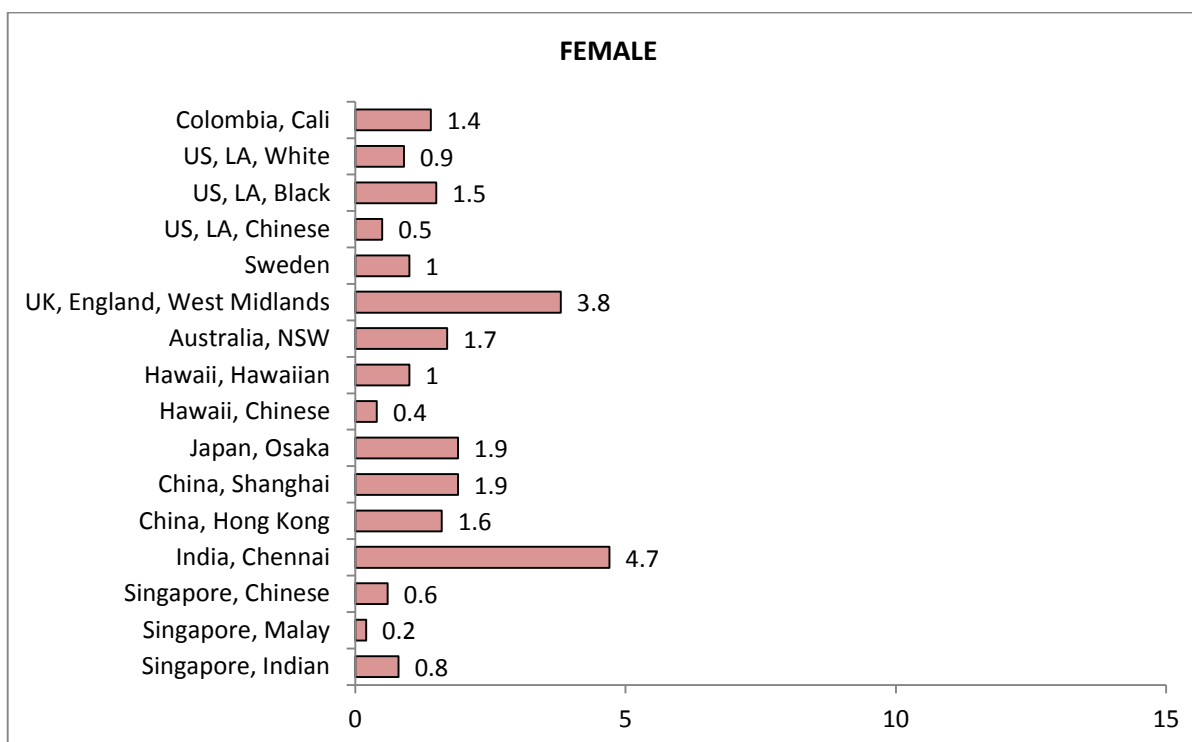
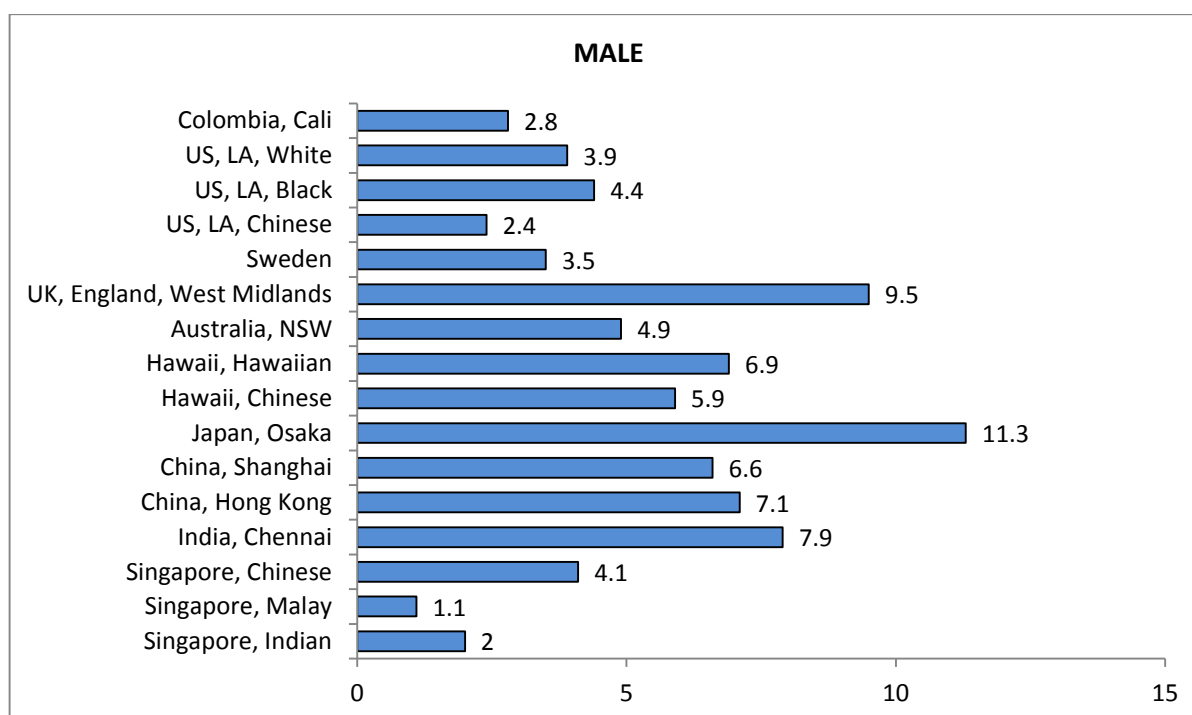


**OESOPHAGUS: AGE-STANDARDIZED
INCIDENCE BY SEX, 1973-2012**



**OESOPHAGUS: AGE-SPECIFIC
INCIDENCE BY SEX, 2008-2012**

OESOPHAGUS: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 2003-2007
(per 100,000 per year)



12.7 Stomach (ICD-9: 151 / ICD-O-3: C16)

The steady decline in incidence of stomach cancer has continued, the age-standardized incidence rates (per 100,000) for males and females were 11.9 and 7.1 respectively in 2008-2012, compared with 36.5 and 16.6 respectively in 1973-1977. It now ranks the 7th and 8th most frequent cancers among males and females respectively for the period 2008-2012. The age-specific incidence rises sharply from the end of the fifth decade, and the male: female ratio is 1.3:5.

Chinese account for 90.0% of all cases diagnosed in 2008-2012. Age-adjusted risks for Malays and Indians are all significantly lower than for Chinese males and females. Adenocarcinomas accounted for a majority of all incident cases of stomach cancer.

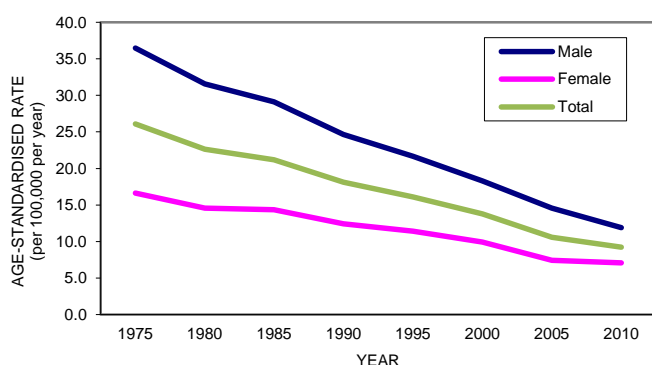
On an international scale, Singapore's incidence rates for stomach cancer among Chinese remain between those of Hong Kong and Shanghai, and are about half those of Japan.

| INCIDENCE DATA (2008-2012) | | | Males | |
|-------------------------------|-------|-----|---------|---------------|
| | No. | % | ASR | RR (95% CI) |
| All residents | 1,442 | 5.2 | 11.9 | - |
| Chinese | 1,294 | 5.5 | 13.3 | 1.0 |
| Malays | 57 | 2.4 | 4.5 | 0.4 (0.3-0.5) |
| Indians | 75 | 6.0 | 8.3 | 0.6 (0.5-0.8) |
| INCIDENCE DATA (2008-2012) | | | Females | |
| | No. | % | ASR | RR (95% CI) |
| All residents | 1,069 | 3.7 | 7.1 | - |
| Chinese | 967 | 4.0 | 7.7 | 1.0 |
| Malays | 57 | 2.0 | 4.0 | 0.5 (0.4-0.7) |
| Indians | 34 | 2.3 | 3.9 | 0.5 (0.4-0.7) |
| INCIDENCE DATA (2008-2012) | | | Total | |
| | No. | % | ASR | RR (95% CI) |
| All residents | 2,511 | 4.4 | 9.2 | - |
| Chinese | 2,261 | 4.8 | 10.2 | 1.0 |
| Malays | 114 | 2.2 | 4.3 | 0.4 (0.3-0.5) |
| Indians | 109 | 4.0 | 6.1 | 0.6 (0.5-0.7) |

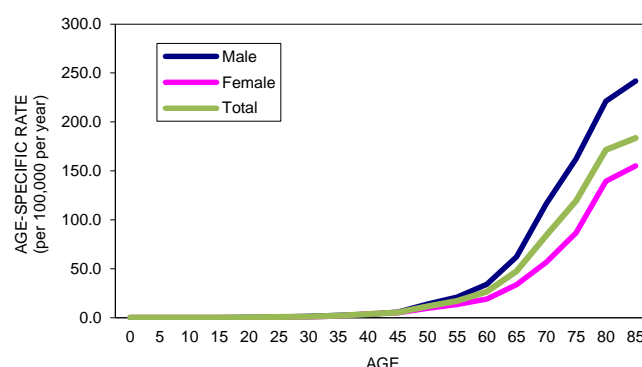
| SUBSITES 2008-2012 | | | |
|--------------------|-------------------|------|--------|
| ICD9 | SUBSITE | Male | Female |
| 151.0 | Cardia | 224 | 86 |
| 151.1 | Pylorus | 71 | 46 |
| 151.2 | Pyloric antrum | 380 | 307 |
| 151.3 | Fundus of stomach | 27 | 33 |
| 151.4 | Body of stomach | 82 | 81 |

| | | | |
|------------------|---|--------------|--------------|
| 151.5 | Lesser curvature of stomach, unspecified | 152 | 105 |
| 151.6 | Greater curvature of stomach, unspecified | 65 | 52 |
| 151.8 | Other specified sites of stomach | 75 | 57 |
| 151.9 | Stomach, unspecified | 366 | 302 |
| All cases | | 1,442 | 1,069 |

| HISTOLOGY 2008-2012 | NO. | % |
|---|--------------|--------------|
| Adenocarcinoma and subtypes | | |
| Adenocarcinoma, NOS | 1,186 | 44.9 |
| Signet Ring Cell Carcinoma | 432 | 16.4 |
| Adenocarcinoma, Intestinal type | 263 | 10.0 |
| Carcinoma, Diffuse type | 115 | 4.4 |
| Mucinous Adenocarcinoma | 34 | 1.3 |
| Adenocarcinoma with mixed subtypes | 62 | 2.3 |
| Adenocarcinoma in villous adenoma | 7 | 0.3 |
| Adenocarcinoma with neuroendocrine differentiation | 5 | 0.2 |
| Hepatoid Adenocarcinoma | 1 | 0.0 |
| Clear Cell Adenocarcinoma | 1 | 0.0 |
| Carcinoma, special subtype variants | | |
| Lymphoepithelial Carcinoma | 3 | 0.1 |
| Adenosquamous Carcinoma | 2 | 0.1 |
| Carcinosarcoma | 1 | 0.0 |
| Other neoplasms | | |
| Squamous Cell Carcinoma | 8 | 0.3 |
| Carcinoma, NOS | 46 | 1.7 |
| Gastrointestinal Stromal Tumour | 221 | 8.4 |
| Neuroendocrine Carcinoma | 44 | 1.7 |
| Leiomyosarcoma | 0 | 0.0 |
| Smooth Muscle Tumour of uncertain malignant potential | 1 | 0.0 |
| Malignant Melanoma, NOS | 1 | 0.0 |
| Neoplasm, malignant, NOS | 2 | 0.1 |
| Total with histology | 2,435 | 92.2 |
| Clinically malignant tumour (No microscopic confirmation) | 76 | 2.9 |
| Haematolymphoid Neoplasms | 130 | 4.9 |
| All cases | 2,641 | 100.0 |

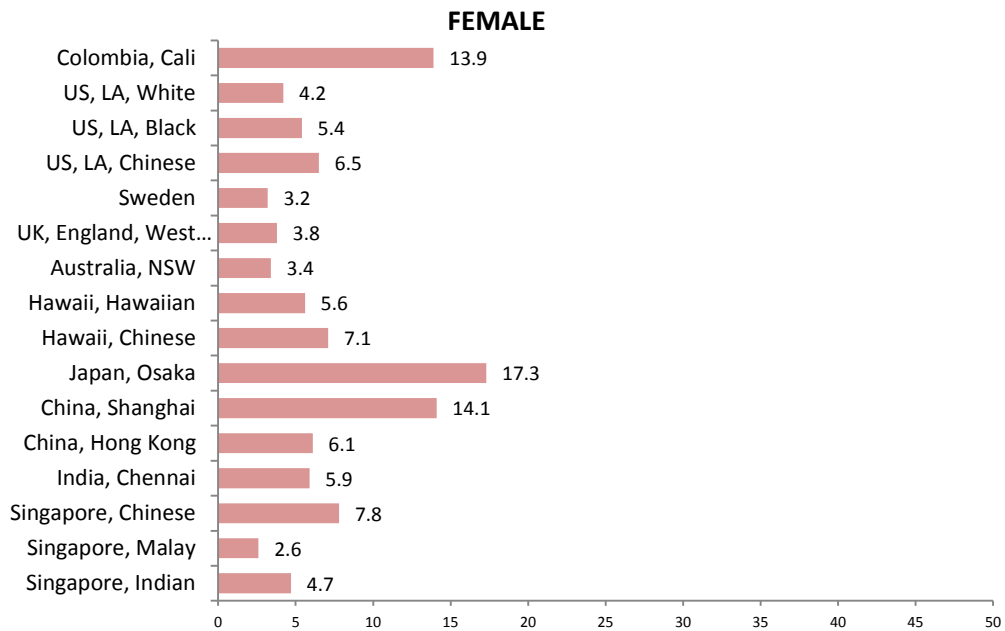
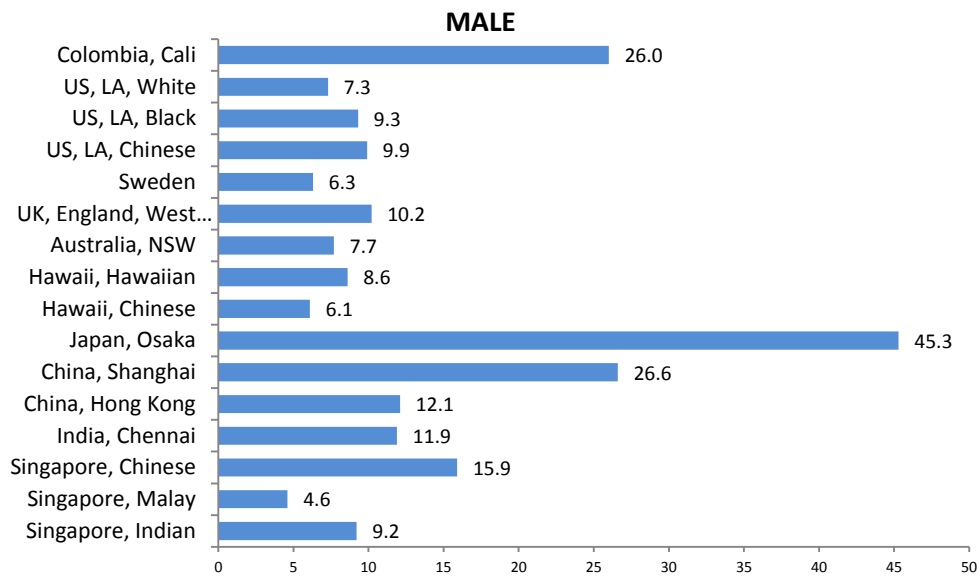


**STOMACH: AGE-STANDARDIZED
INCIDENCE BY SEX, 1973-2012**



**STOMACH: AGE-SPECIFIC
INCIDENCE BY SEX, 2008-2012**

STOMACH: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 2003-2007
(per 100,000 per year)



12.8 Colorectal (ICD-9: 153-154 / ICD-O-3: C18-21)

Colorectal cancer has been the second most common cancer for males in Singapore since 1983, and in 2003-2007, it overtook lung cancer to become the leading cancer and remains as such in 2008-2012. It was constantly the second most common cancer in females from 1973-2012. It accounts for 17.5% of cancers in males and 13.6% in females, and is the most frequent cancer when both genders are combined (8,805 cases in 2008-2012 compared to 6,523 cases of lung cancer in the same period).

The age-standardized incidence rate in Singapore Chinese is one of the highest among ethnic Chinese populations around the world and has exceeded those of whites in the US. They are also inching towards the rates in Australia, New South Wales, a region with the one of the highest ASRs in the world. Colorectal cancer incidence has been declining in the United States, and to a lesser extent in Europe.^{1, 2}

12.8.1 Colon (ICD-9: 153 / ICD-O-3: C18)

The age-standardized incidence rates for colon cancer for both males and females have climbed consistently since 1973. However, the rates appeared to have plateaued since 1998-2002, with rates of 23.2 per 100,000 for males and 18.3 per 100,000 for females in 2008-2012. Among both males and females, the age-specific incidence rates for colon cancer begin to increase sharply in the fifth decade of life. In total, colon cancer makes up 62.4% of cases of colorectal cancer; and 58.2% and 67.5% in males and females respectively.

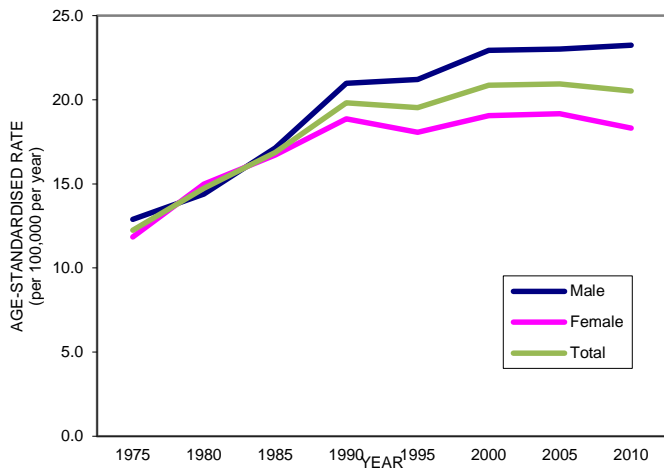
The male to female ratio for incident cases of colon cancer is almost equal at 1.05:1. Among the ethnic groups, the Chinese are at the highest risk of developing cancer of the colon, while the Indians are at the lowest risk. Adenocarcinomas were the predominant histological type among incident cases of colon cancer.

| INCIDENCE DATA | | | Males | |
|----------------|-------|------|---------|---------------|
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 2,821 | 10.2 | 23.2 | - |
| Chinese | 2,499 | 10.7 | 25.5 | 1.0 |
| Malays | 182 | 7.7 | 14.6 | 0.6 (0.5-0.7) |
| Indians | 102 | 8.1 | 11.6 | 0.4 (0.4-0.5) |
| INCIDENCE DATA | | | Females | |
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 2,670 | 9.2 | 18.3 | - |
| Chinese | 2,349 | 9.7 | 19.5 | 1.0 |
| Malays | 206 | 7.2 | 14.3 | 0.7 (0.6-0.8) |
| Indians | 72 | 5.0 | 8.5 | 0.4 (0.3-0.5) |

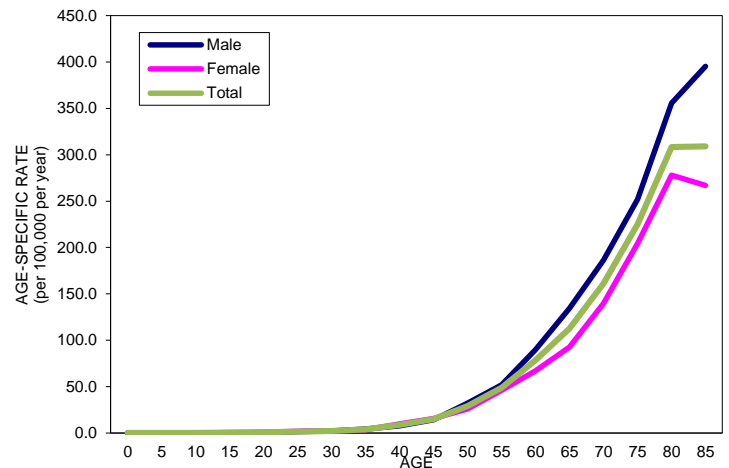
| INCIDENCE DATA | | | Total | |
|----------------|-------|------|-------|---------------|
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 5,491 | 9.7 | 20.5 | - |
| Chinese | 4,848 | 10.2 | 22.1 | 1.0 |
| Malays | 388 | 7.4 | 14.5 | 0.7 (0.6-0.7) |
| Indians | 174 | 6.4 | 10.1 | 0.4 (0.4-0.5) |

| SUBSITES 2008-2012 | | | |
|--------------------|--|-------|--------|
| ICD9 | SUBSITE | Male | Female |
| 153.0 | Hepatic flexure | 144 | 143 |
| 153.1 | Transverse colon | 228 | 262 |
| 153.2 | Descending colon | 232 | 194 |
| 153.3 | Sigmoid colon | 1,315 | 1,093 |
| 153.4 | Cecum | 206 | 285 |
| 153.5 | Appendix vermiformis | 54 | 68 |
| 153.6 | Ascending colon | 269 | 289 |
| 153.7 | Splenic flexure | 136 | 96 |
| 153.8 | Other specified sites of large intestine | 141 | 129 |
| 153.9 | Colon, unspecified | 96 | 111 |
| All cases | | 2,821 | 2,670 |

| HISTOLOGY 2008-2012 | NO. | % |
|---|--------------|--------------|
| Adenocarcinoma and subtypes | | |
| Adenocarcinoma, NOS | 4,336 | 78.4 |
| Mucinous Adenocarcinoma | 432 | 7.8 |
| Adenocarcinoma in adenomatous polyp | 321 | 5.8 |
| Signet Ring Cell Carcinoma | 58 | 1.0 |
| Adenocarcinoma in adenomatous polyposis coli | 3 | 0.1 |
| Other neoplasms | | |
| Neuroendocrine Carcinoma | 73 | 1.3 |
| Neoplasm, malignant, NOS | 16 | 0.3 |
| Gastrointestinal Stromal Tumour | 4 | 0.1 |
| Squamous Cell Carcinoma | 1 | 0.0 |
| Medullary Carcinoma | 1 | 0.0 |
| Sarcoma | 1 | 0.0 |
| Total with histology | 5,246 | 94.8 |
| Clinically malignant tumour (No microscopic confirmation) | 245 | 4.4 |
| Haematolymphoid Neoplasms | 41 | 0.7 |
| All cases | 5,532 | 100.0 |

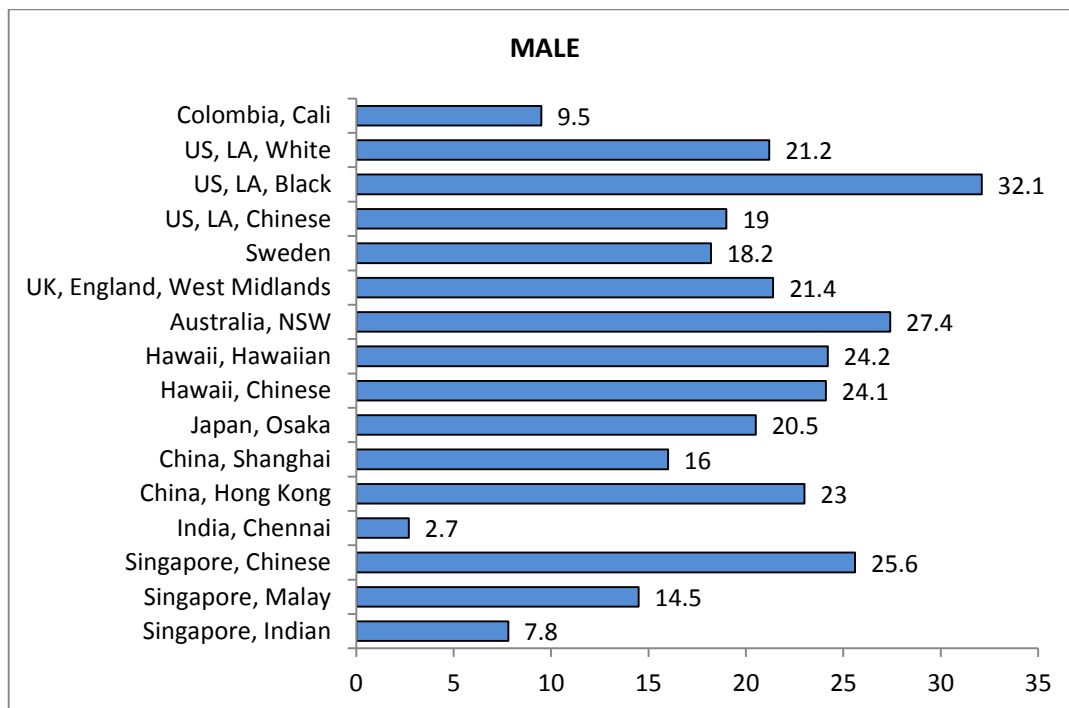


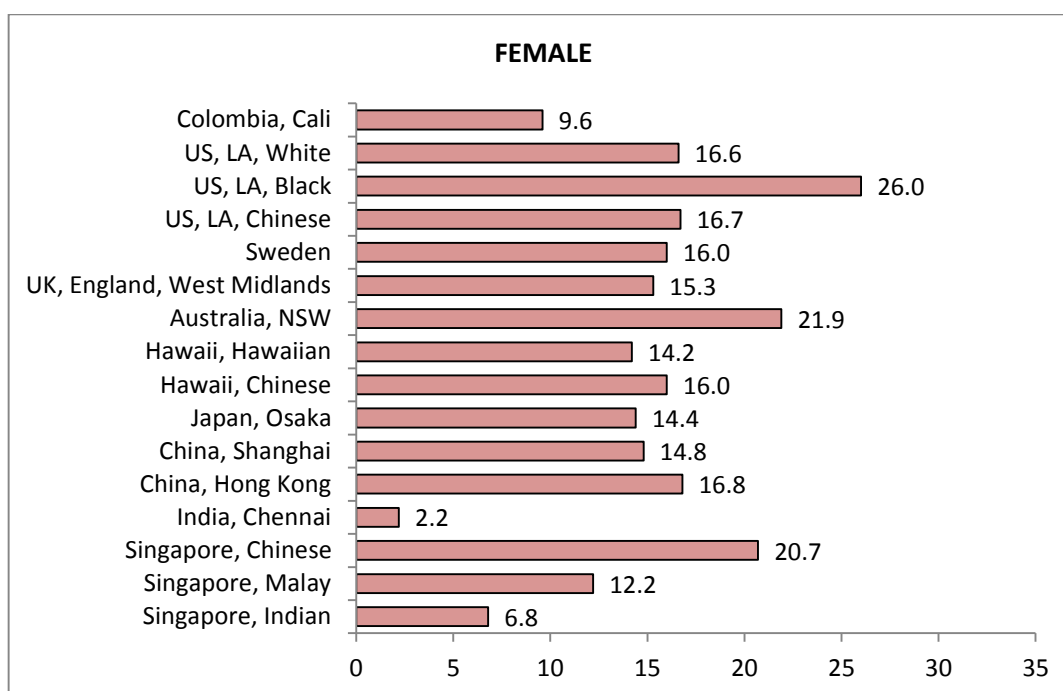
COLON: AGE-STANDARDIZED INCIDENCE BY SEX, 1973-2012



COLON: AGE-SPECIFIC INCIDENCE BY SEX, 2008-2012

COLON: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 2003-2007 (per 100,000 per year)





12.8.2 Rectum and anus (ICD-9: 154 / ICD-O-3: C19-C21)

Cancers of the rectum, rectosigmoid junction and anus (ICD-9 154) constituted 41.8% and 32.5% of cancers of the large bowel among males and females respectively, in 2008-2012. Overall, they make up 37.6% of all cases of colorectal cancer. The rates in 2008-2012 show a 5.7% decrease over the previous 5-year period for males, and a 9.2% decrease for females.

The age-adjusted relative risk among ethnic groups for rectal cancer is similar to colon cancer, with rates for Indians being half that of Chinese, and Malays being intermediate between the two.

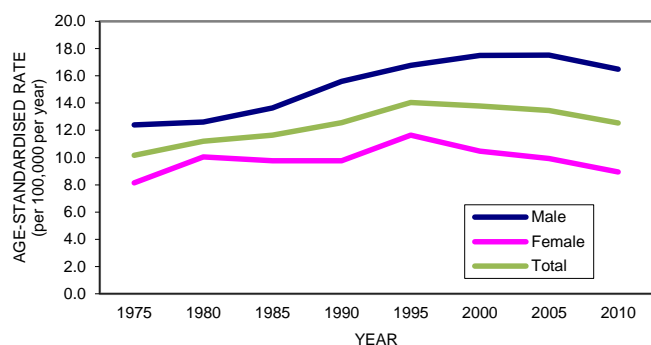
As it can be difficult to determine the exact anatomical origin of tumours arising near the rectosigmoid junction, it should be noted that data on large bowel cancers, particularly for international comparisons, may be affected by the degree to which 'sigmoid colon' (ICD-9 1533 / ICD-O-2 C18.7) and 'rectosigmoid junction' (ICD-9 1540 / ICD-O-2 C19.9) are differentiated in the notification process.

| INCIDENCE DATA | | | Males | |
|----------------|-------|-----|---------|---------------|
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 2,027 | 7.3 | 16.5 | - |
| Chinese | 1,733 | 7.4 | 17.5 | 1.0 |
| Malays | 172 | 7.3 | 13.8 | 0.8 (0.7-0.9) |
| Indians | 85 | 6.8 | 9.3 | 0.5 (0.4-0.7) |
| INCIDENCE DATA | | | Females | |

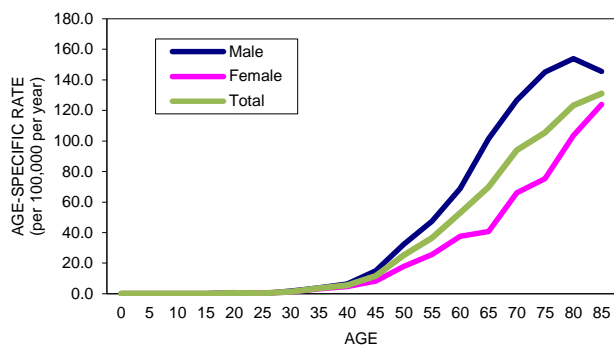
| (2008-2012) | No. | % | ASR | RR (95% CI) |
|-----------------------|-------|-----|------|---------------|
| All residents | 1,287 | 4.4 | 9.0 | - |
| Chinese | 1,119 | 4.6 | 9.5 | 1.0 |
| Malays | 103 | 3.6 | 7.1 | 0.7 (0.6-0.9) |
| Indians | 43 | 3.0 | 5.1 | 0.5 (0.4-0.7) |
| INCIDENCE DATA | | | | |
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 3,314 | 5.8 | 12.5 | - |
| Chinese | 2,852 | 6.0 | 13.3 | 1.0 |
| Malays | 275 | 5.3 | 10.3 | 0.8 (0.7-0.9) |
| Indians | 128 | 4.7 | 7.2 | 0.5 (0.5-0.7) |

| SUBSITES 2008-2012 | | | |
|---------------------------|--|--------------|--------------|
| ICD9 | SUBSITE | Male | Female |
| 154.0 | Rectosigmoid junction | 569 | 404 |
| 154.1 | Rectum | 1,374 | 831 |
| 154.2 | Anal canal | 36 | 24 |
| 154.3 | Anus, unspecified | 19 | 9 |
| 154.8 | Other sites of rectum, rectosigmoid junction, and anus | 29 | 19 |
| All cases | | 2,027 | 1,287 |

| HISTOLOGY 2008-2012 | NO. | % |
|---|--------------|--------------|
| Adenocarcinoma and subtypes | | |
| Adenocarcinoma, NOS | 2,651 | 79.9 |
| Adenocarcinoma in adenomatous polyp | 153 | 4.6 |
| Mucinous Adenocarcinoma | 144 | 4.3 |
| Signet Ring Cell Carcinoma | 27 | 0.8 |
| Other neoplasms | | |
| Neuroendocrine Carcinoma | 153 | 4.6 |
| Squamous Cell Carcinoma | 38 | 1.1 |
| Gastrointestinal Stromal Tumour | 23 | 0.7 |
| Carcinoma, NOS | 20 | 0.6 |
| Neoplasm, malignant, NOS | 9 | 0.3 |
| Basaloid Carcinoma | 6 | 0.2 |
| Malignant Melanoma, NOS | 5 | 0.2 |
| Leiomyosarcoma | 3 | 0.1 |
| Cloacogenic Carcinoma | 1 | 0.0 |
| Carcinosarcoma | 1 | 0.0 |
| Paget's Disease, Extramammary | 1 | 0.0 |
| Total with histology | 3,235 | 97.5 |
| Clinically malignant tumour (No microscopic confirmation) | 79 | 2.4 |
| Haematolymphoid Neoplasms | 3 | 0.1 |
| All cases | 3,317 | 100.0 |

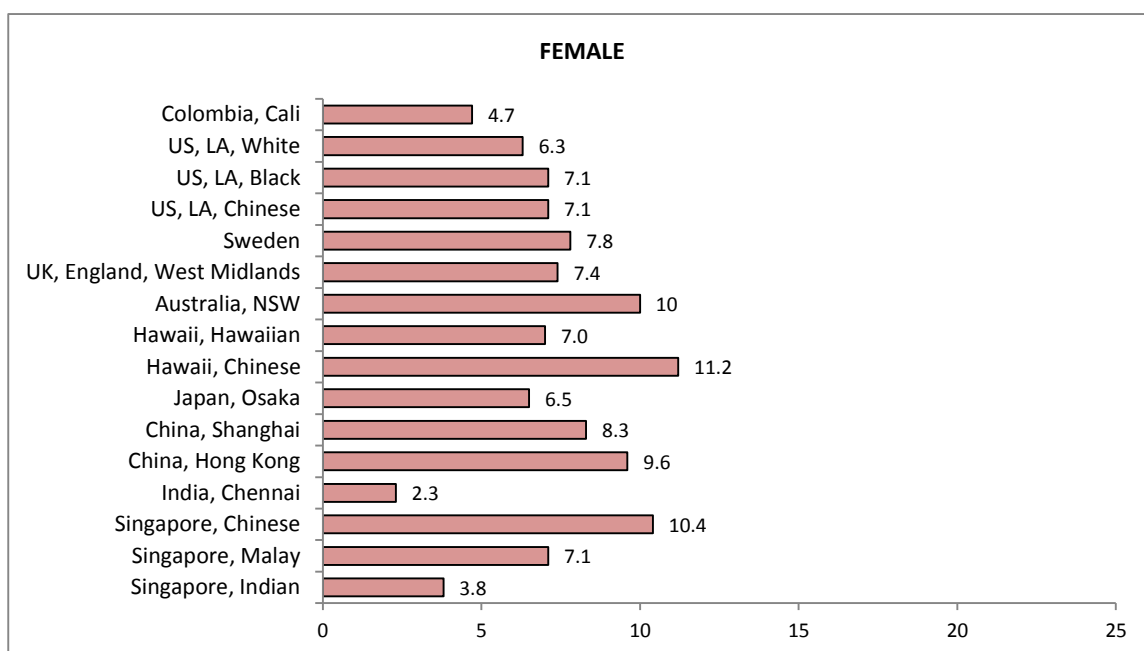
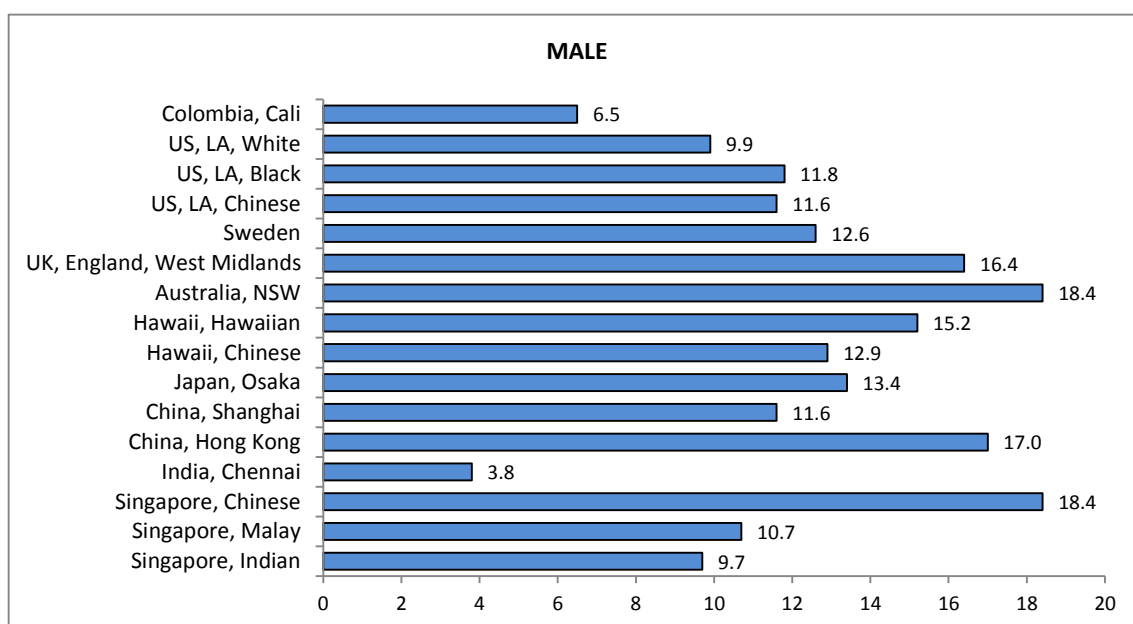


RECTUM: AGE-STANDARDIZED INCIDENCE BY SEX, 1973-2012



RECTUM: AGE-SPECIFIC INCIDENCE BY SEX, 2008-2012

RECTUM: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 2003-2007 (per 100,000 per year)



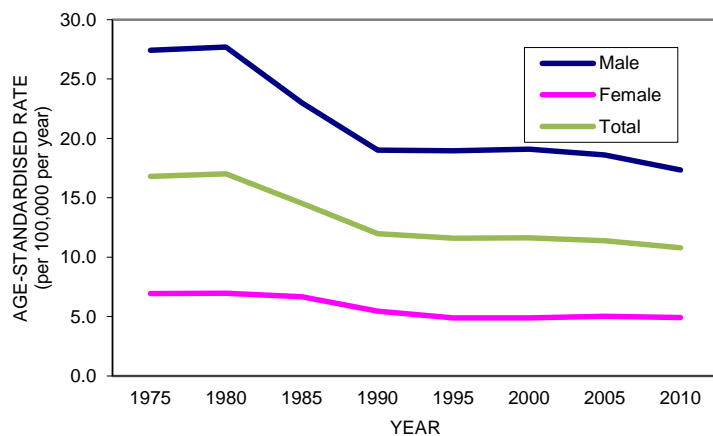
12.9 Liver and intrahepatic bile ducts (ICD-9: 155 / ICD-O-3: C22)

Among males, liver cancer is the fourth most frequent cancer and constituted 7.6% of cancers diagnosed in males in 2008-2012. Overall, liver cancer incidence rates appear to have remained stable in both men and women over the past 20 years. Age-specific rates begin to rise during the fourth decade of life for men and about 15-20 years later for women. The male to female ratio is 2.9:1. The Chinese are at a greater risk of liver cancer than Malays or Indians; especially when compared to the latter. Liver cancer rates in Singapore, while still considerably higher than in Sweden, UK, and Australia, are lower than those in Japan, Hong Kong and Shanghai.

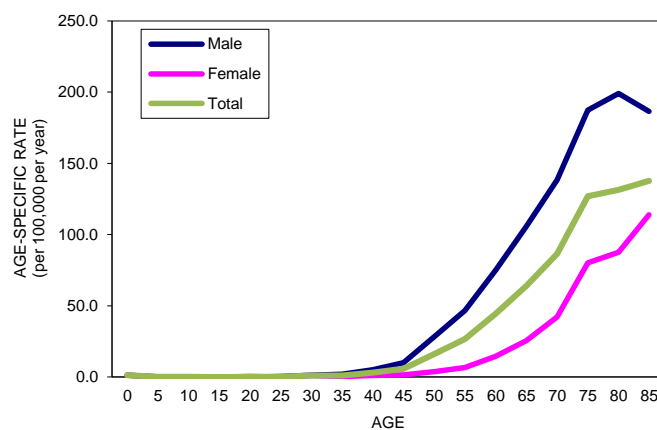
| INCIDENCE DATA | | | Males | |
|----------------|-------|-----|---------|---------------|
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 2,109 | 7.6 | 17.3 | - |
| Chinese | 1,811 | 7.8 | 18.4 | 1.0 |
| Malays | 186 | 7.9 | 14.9 | 0.8 (0.7-0.9) |
| Indians | 81 | 6.4 | 9.2 | 0.5 (0.4-0.6) |
| INCIDENCE DATA | | | Females | |
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 728 | 2.5 | 4.9 | - |
| Chinese | 633 | 2.6 | 5.1 | 1.0 |
| Malays | 61 | 2.1 | 4.3 | 0.9 (0.7-1.1) |
| Indians | 23 | 1.6 | 2.7 | 0.6 (0.4-0.8) |
| INCIDENCE DATA | | | Total | |
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 2,837 | 5.0 | 10.8 | - |
| Chinese | 2,444 | 5.1 | 11.4 | 1.0 |
| Malays | 247 | 4.7 | 9.3 | 0.8 (0.7-0.9) |
| Indians | 104 | 3.8 | 5.9 | 0.5 (0.4-0.7) |

| SUBSITES 2008-2012 | | | |
|--------------------|--|-------|--------|
| ICD9 | SUBSITE | Male | Female |
| 155.0 | Liver, primary | 1,951 | 591 |
| 155.1 | Intrahepatic bile ducts | 154 | 136 |
| 155.2 | Liver, not specified as primary or secondary | 4 | 1 |
| All cases | | 2,109 | 728 |

| HISTOLOGY 2008-2012 | NO. | % |
|---|--------------|--------------|
| Hepatocellular Carcinoma, NOS | 891 | 31.3 |
| Adenocarcinoma, NOS | 106 | 3.7 |
| Cholangiocarcinoma | 73 | 2.6 |
| Carcinoma, NOS | 29 | 1.0 |
| Combined Hepatocellular carcinoma and Cholangiocarcinoma | 18 | 0.6 |
| Hepatoblastoma | 11 | 0.4 |
| Angiosarcoma | 8 | 0.3 |
| Sarcomatoid Carcinoma | 3 | 0.1 |
| Epithelioid Hemangioendothelioma, malignant | 2 | 0.1 |
| Embryonal Sarcoma | 1 | 0.0 |
| Leiomyosarcoma | 1 | 0.0 |
| Carcinosarcoma | 1 | 0.0 |
| Sarcoma | 1 | 0.0 |
| Solitary Fibrous Tumour, malignant | 1 | 0.0 |
| Smooth Muscle Tumour of uncertain malignant potential | 3 | 0.1 |
| Neoplasm, malignant, NOS | 9 | 0.3 |
| Total with histology | 1,158 | 40.7 |
| Clinically malignant tumour (No microscopic confirmation) | 1,679 | 59.0 |
| Haematolymphoid Neoplasms | 10 | 0.4 |
| All cases | 2,847 | 100.0 |

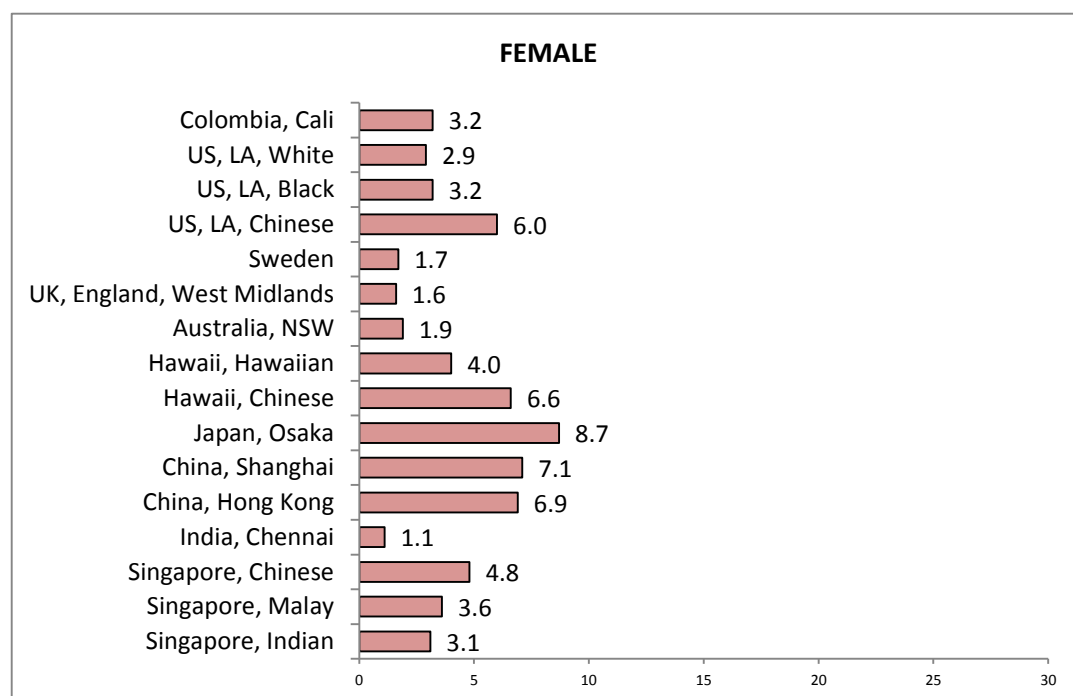
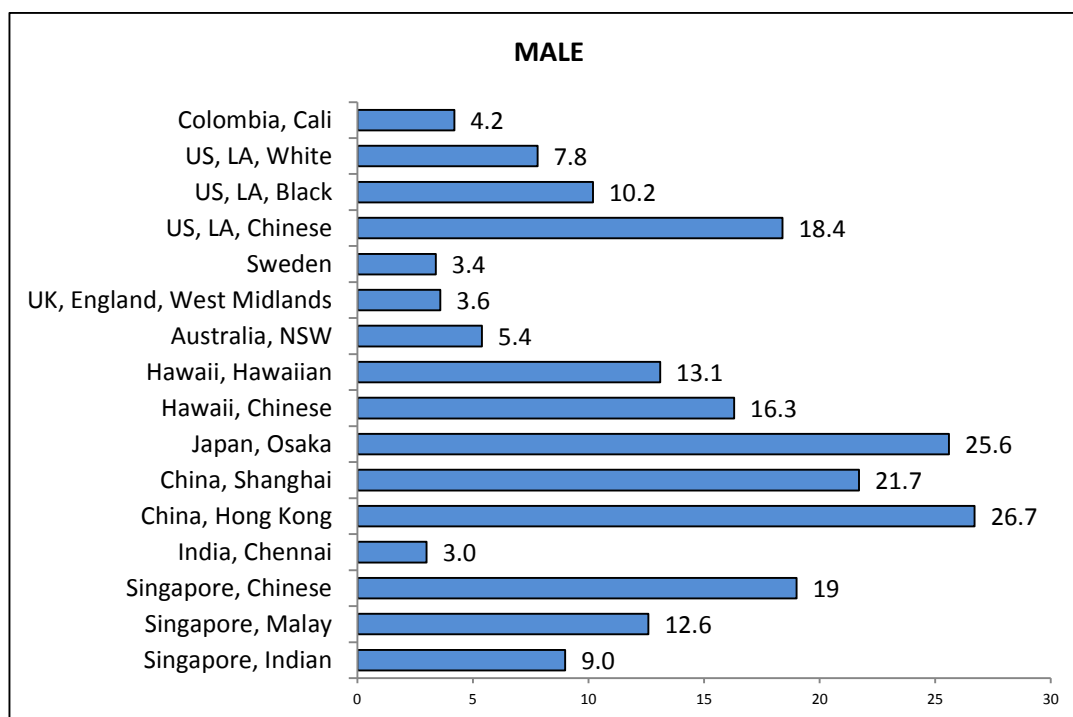


**LIVER: AGE-STANDARDIZED
INCIDENCE BY SEX, 1973-2012**



**LIVER: AGE-SPECIFIC INCIDENCE BY
SEX, 2008-2012**

LIVER: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 2003-2007
(per 100,000 per year)



12.10 Gall bladder and extrahepatic bile ducts (ICD-9: 156 / ICD-O-3: C23-C24)

Gall bladder cancer is an uncommon cancer, constituting 1.0% of all cancers in 2008-2012. Of the 564 cases diagnosed in 2008-2012, 53.7% occurred in females, giving a female to male ratio of approximately 1.2:1. In 2008-2012 periods, the age-standardized rates for both males and females are similar at 2.1 per 100,000. Adenocarcinoma accounted for the majority of all specified histological types. Among the three major ethnic groups, the age-standardized incidence rate among the Indians is the lowest.

The incidence among Singapore Chinese remains lower than that in Japan, China and Hong Kong.

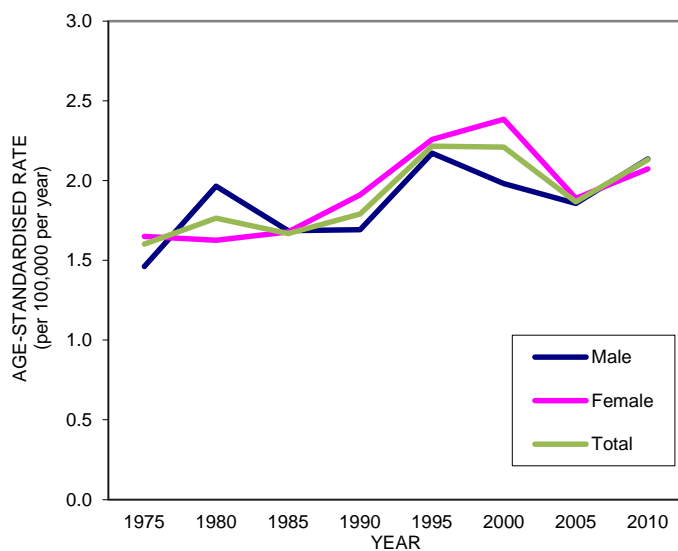
| INCIDENCE DATA (2008-2012) | | | Males | |
|-------------------------------|-----|-----|-------|---------------|
| | No. | % | ASR | RR (95% CI) |
| All residents | 261 | 0.9 | 2.1 | - |
| Chinese | 225 | 1.0 | 2.3 | 1.0 |
| Malays | 22 | 0.9 | 1.7 | 0.8 (0.5-1.2) |
| Indians | 10 | 0.8 | 1.0 | 0.5 (0.3-0.9) |

| INCIDENCE DATA (2008-2012) | | | Females | |
|-------------------------------|-----|-----|---------|---------------|
| | No. | % | ASR | RR (95% CI) |
| All residents | 303 | 1.0 | 2.1 | - |
| Chinese | 257 | 1.1 | 2.1 | 1.0 |
| Malays | 30 | 1.0 | 2.4 | 1.0 (0.7-1.5) |
| Indians | 12 | 0.8 | 1.5 | 0.7 (0.4-1.3) |

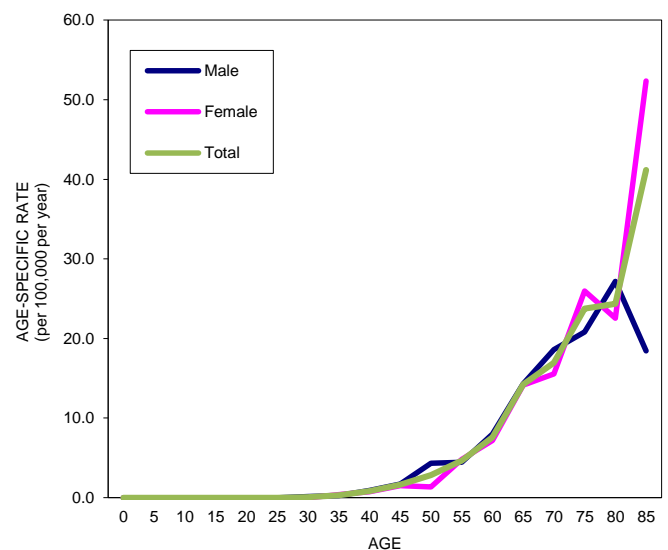
| INCIDENCE DATA (2008-2012) | | | Total | |
|-------------------------------|-----|-----|-------|---------------|
| | No. | % | ASR | RR (95% CI) |
| All residents | 564 | 1.0 | 2.1 | - |
| Chinese | 482 | 1.0 | 2.2 | 1.0 |
| Malays | 52 | 1.0 | 2.1 | 0.9 (0.7-1.2) |
| Indians | 22 | 0.8 | 1.3 | 0.6 (0.4-0.9) |

| SUBSITES 2008-2012 | | | |
|--------------------|--|------|--------|
| ICD9 | SUBSITE | Male | Female |
| 156.0 | Gallbladder | 82 | 157 |
| 156.1 | Extrahepatic bile ducts | 86 | 72 |
| 156.2 | Ampulla of vater | 84 | 63 |
| 156.8 | Other specified sites of gallbladder and extrahepatic bile ducts | 3 | 2 |
| 156.9 | Biliary tract, part unspecified | 6 | 9 |
| All cases | | 261 | 303 |

| HISTOLOGY 2008-2012 | NO. | % |
|---|------------|--------------|
| Adenocarcinoma and subtypes | | |
| Adenocarcinoma, NOS | 337 | 59.6 |
| Extrahepatic Bile Duct Carcinoma | 23 | 4.1 |
| Mucinous Adenocarcinoma | 17 | 3.0 |
| Papillary Adenocarcinoma | 15 | 2.7 |
| Infiltrating Duct Carcinoma | 8 | 1.4 |
| Signet Ring Cell Carcinoma | 7 | 1.2 |
| Mixed Adenoneuroendocrine Carcinoma | 4 | 0.7 |
| Other neoplasms | | |
| Carcinoma, NOS | 24 | 4.2 |
| Neuroendocrine Carcinoma | 8 | 1.4 |
| Neoplasm, malignant, NOS | 8 | 1.4 |
| Adenosquamous Carcinoma | 6 | 1.1 |
| Squamous Cell Carcinoma | 3 | 0.5 |
| Spindle Cell Carcinoma | 1 | 0.2 |
| Total with histology | 461 | 81.6 |
| Clinically malignant tumour (No microscopic confirmation) | 103 | 18.2 |
| Haematolymphoid Neoplasms | 1 | 0.2 |
| All cases | 565 | 100.0 |

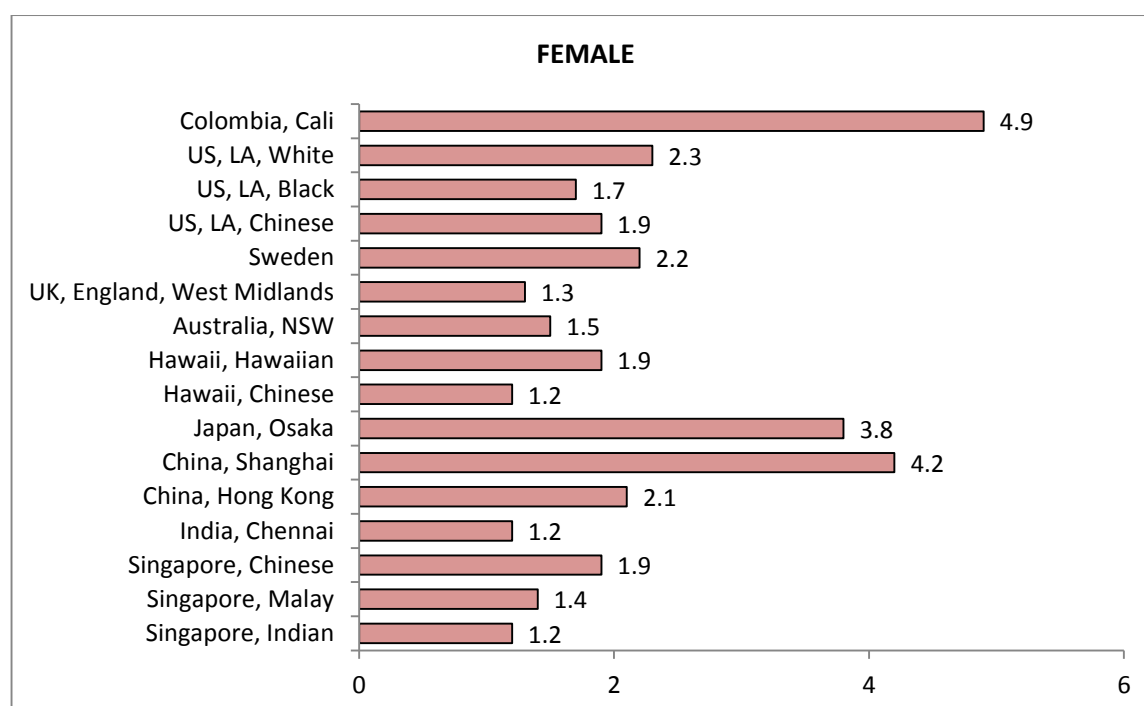
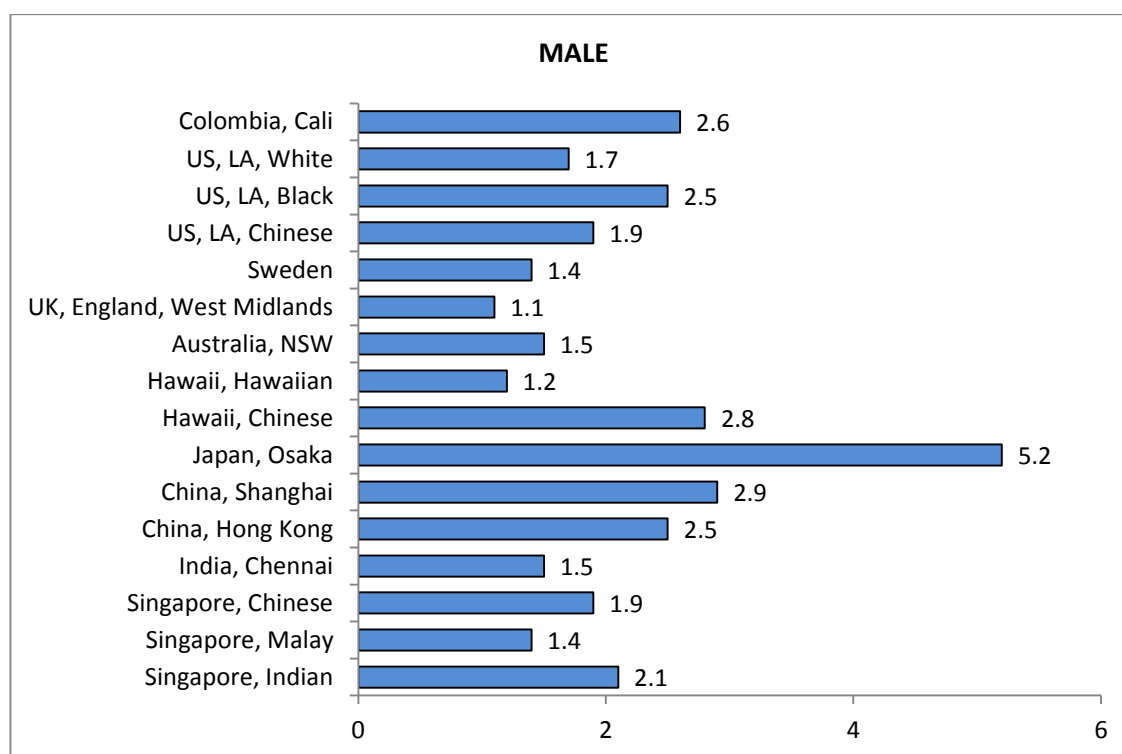


GALL BLADDER: AGE-STANDARDIZED INCIDENCE BY SEX, 1973-2012



GALL BLADDER: AGE-SPECIFIC INCIDENCE BY SEX, 2008-2012

GALL BLADDER: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 2003-2007
(per 100,000 per year)



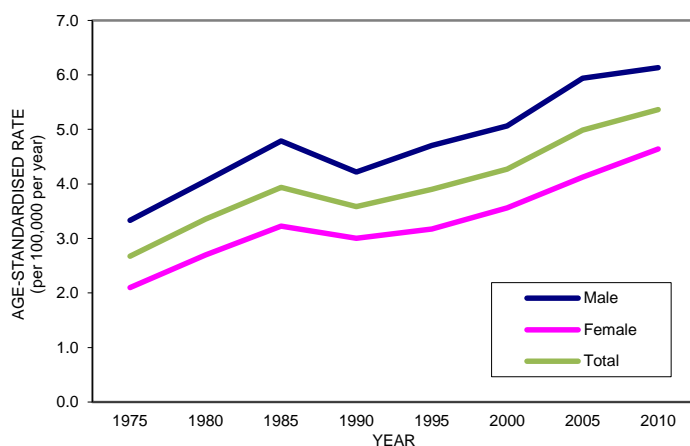
12.11 Pancreas (ICD-9: 157 / ICD-O-3: C25)

In 2008-2012, pancreatic cancer constituted 2.5% of all cancers diagnosed in males and females. The age-standardized incidence rates have increased in parallel for both sexes over the last 40 years, and in 2008-2012 increased by 5.2% in males and 15.0% in females over the previous 5 year period. Indians and Malays have 70% and 60% lower risk of pancreatic cancer compared to their Chinese counterparts respectively. Adenocarcinomas comprise the majority of the histologically specified cases of pancreatic cancer.

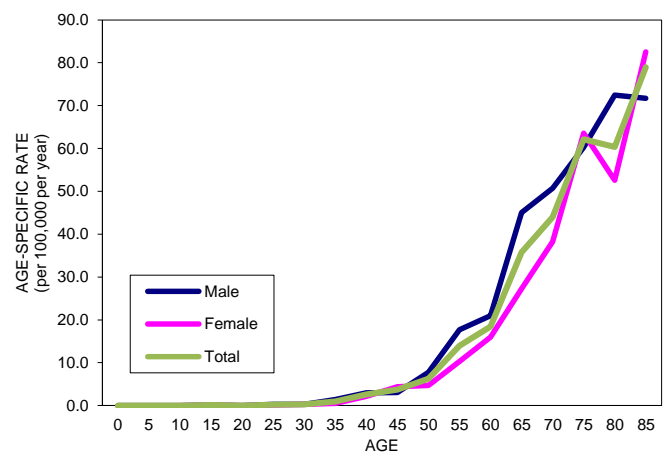
| INCIDENCE DATA | | | Males | |
|----------------|-------|-----|---------|---------------|
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 741 | 2.7 | 6.1 | - |
| Chinese | 649 | 2.8 | 6.7 | 1.0 |
| Malays | 54 | 2.3 | 4.4 | 0.7 (0.5-0.9) |
| Indians | 33 | 2.6 | 3.5 | 0.6 (0.4-0.8) |
| INCIDENCE DATA | | | Females | |
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 674 | 2.3 | 4.6 | - |
| Chinese | 591 | 2.5 | 4.9 | 1.0 |
| Malays | 48 | 1.7 | 3.4 | 0.7 (0.5-0.9) |
| Indians | 29 | 2.0 | 3.6 | 0.7 (0.5-1.0) |
| INCIDENCE DATA | | | Total | |
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 1,415 | 2.5 | 5.4 | - |
| Chinese | 1,240 | 2.6 | 5.8 | 1.0 |
| Malays | 102 | 2.0 | 3.9 | 0.7 (0.5-0.8) |
| Indians | 62 | 2.3 | 3.5 | 0.6 (0.5-0.8) |

| SUBSITES 2008-2012 | | | |
|--------------------|-----------------------------------|------|--------|
| ICD9 | SUBSITE | Male | Female |
| 157.0 | Head of pancreas | 312 | 295 |
| 157.1 | Body of pancreas | 107 | 73 |
| 157.2 | Tail of pancreas | 106 | 71 |
| 157.3 | Pancreatic duct | 0 | 2 |
| 157.4 | Islets of langerhans | 2 | 1 |
| 157.8 | Other specified sites of pancreas | 82 | 71 |
| 157.9 | Pancreas, part unspecified | 132 | 161 |
| All cases | | 741 | 674 |

| HISTOLOGY 2008-2012 | NO. | % |
|---|--------------|--------------|
| Adenocarcinoma | 878 | 61.8 |
| Neuroendocrine Carcinoma | 67 | 4.7 |
| Carcinoma, NOS | 57 | 4.0 |
| Neoplasm, malignant, NOS | 28 | 2.0 |
| Solid Pseudopapillary Carcinoma | 15 | 1.1 |
| Adenosquamous Carcinoma | 12 | 0.8 |
| Intraductal papillary mucinous neoplasm with an associated invasive carcinoma | 6 | 0.4 |
| Signet Ring Cell Carcinoma | 3 | 0.2 |
| Acinar Cell Carcinoma | 3 | 0.2 |
| Small Cell Carcinoma | 3 | 0.2 |
| Spindle Cell Carcinoma, NOS | 2 | 0.1 |
| Mixed Islet Cell and Exocrine Adenocarcinoma | 1 | 0.1 |
| Squamous Cell Carcinoma | 1 | 0.1 |
| Carcinosarcoma | 1 | 0.1 |
| Total with histology | 1,077 | 75.8 |
| Clinically malignant tumour (No microscopic confirmation) | 338 | 23.8 |
| Haematolymphoid Neoplasms | 6 | 0.4 |
| All cases | 1,421 | 100.0 |

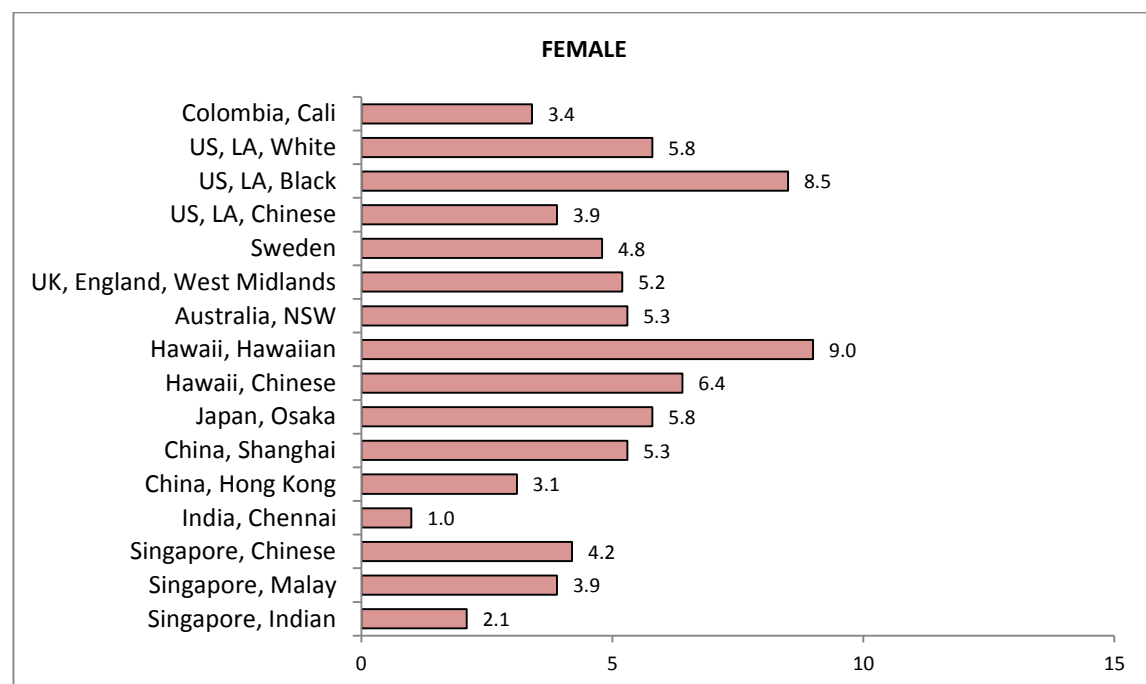
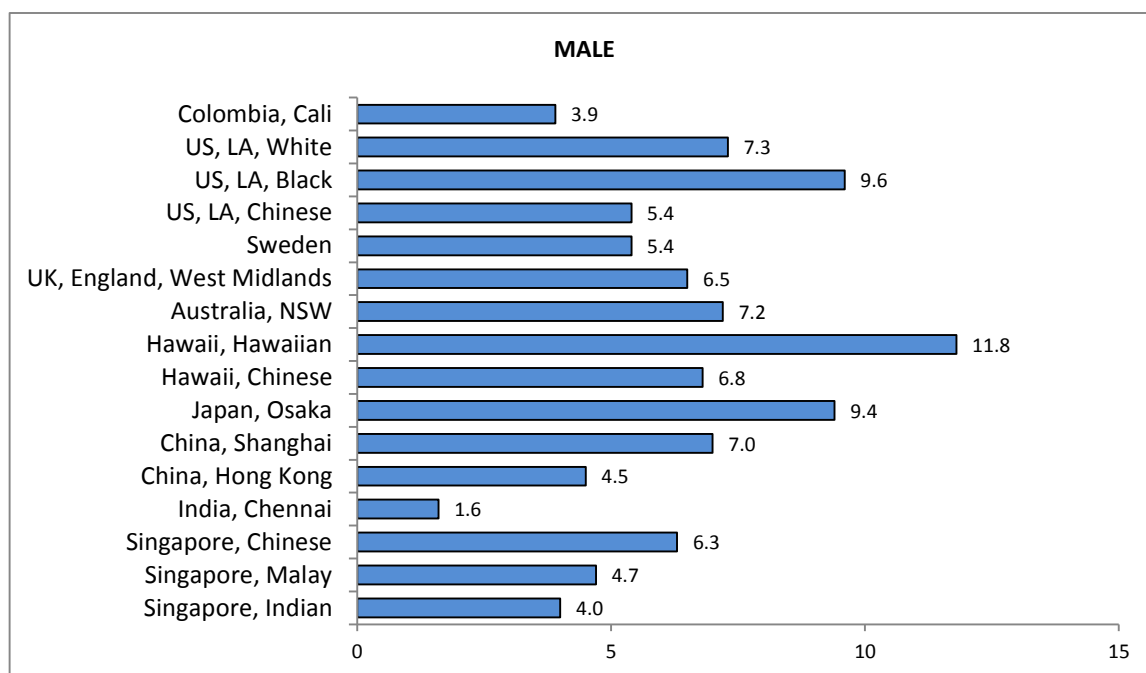


**PANCREAS: AGE-STANDARDIZED
INCIDENCE BY SEX, 1973-2012**



**PANCREAS: AGE-SPECIFIC
INCIDENCE BY SEX, 2008-2012**

PANCREAS: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 2003-2007
(per 100,000 per year)



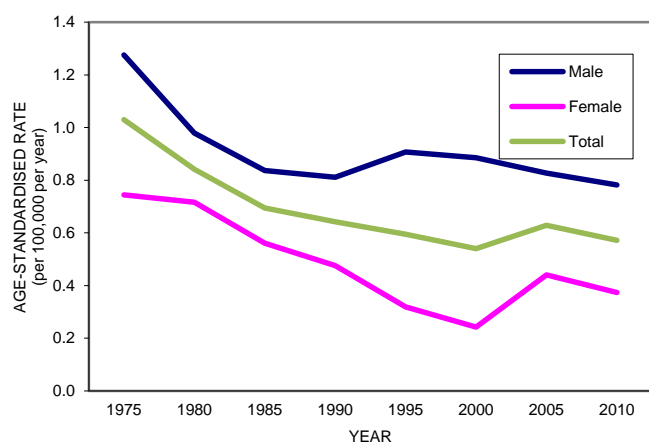
12.12 Nasal cavities and sinuses (ICD-9: 160 / ICD-O-3: C30-C31)

This cancer is relatively uncommon in Singapore, with only 147 cases, constituting 0.3% of all cancers, in 2008-2012. The age-standardized incidence rate for males and females show a net downward trend from 1973-1977. The male to female ratio of this cancer is 1.9:1. The Chinese are at highest risk of being diagnosed with nasal cancer, compared to their Malay and Indian counterparts. The incidence rates in local Chinese males and Chinese females are comparable to other ethnic Chinese males and females globally.

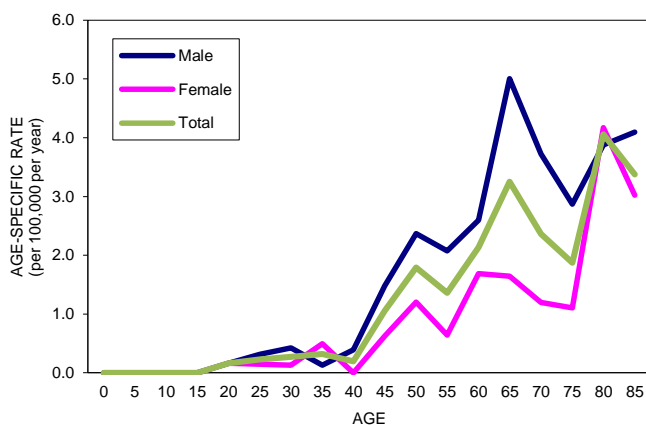
| INCIDENCE DATA | | | Males | |
|----------------|-----|-----|---------|---------------|
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 96 | 0.3 | 0.8 | - |
| Chinese | 85 | 0.4 | 0.9 | 1.0 |
| Malays | 5 | 0.2 | 0.3 | 0.4 (0.2-1.1) |
| Indians | 6 | 0.5 | 0.5 | 0.7 (0.3-1.7) |
| INCIDENCE DATA | | | Females | |
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 51 | 0.2 | 0.4 | - |
| Chinese | 45 | 0.2 | 0.4 | 1.0 |
| Malays | 5 | 0.2 | 0.4 | 0.8 (0.3-2.1) |
| Indians | 1 | 0.1 | 0.1 | 0.3 (0.0-2.0) |
| INCIDENCE DATA | | | Total | |
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 147 | 0.3 | 0.6 | - |
| Chinese | 130 | 0.3 | 0.6 | 1.0 |
| Malays | 10 | 0.2 | 0.3 | 0.6 (0.3-1.1) |
| Indians | 7 | 0.3 | 0.4 | 0.6 (0.3-1.3) |

| SUBSITES 2008-2012 | | | |
|--------------------|--|------|--------|
| ICD9 | SUBSITE | Male | Female |
| 160.0 | Nasal cavities | 61 | 30 |
| 160.1 | Auditory tube, middle ear, and mastoid air cells | 0 | 2 |
| 160.2 | Maxillary sinus | 29 | 16 |
| 160.3 | Ethmoidal sinus | 4 | 1 |
| 160.4 | Frontal sinus | 1 | 0 |
| 160.5 | Sphenoidal sinus | 0 | 2 |
| 160.8 | Other accessory sinuses | 1 | 0 |
| All cases | | 96 | 51 |

| HISTOLOGY 2008-2012 | NO. | % |
|---|------------|--------------|
| Squamous Cell Carcinoma, NOS | 62 | 31.0 |
| Olfactory Neuroblastoma | 18 | 9.0 |
| Carcinoma, NOS | 11 | 5.5 |
| Adenocarcinoma, NOS | 7 | 3.5 |
| Adenoid Cystic Carcinoma | 6 | 3.0 |
| Neuroendocrine Carcinoma | 6 | 3.0 |
| Malignant Melanoma, NOS | 5 | 2.5 |
| Papillary Squamous Cell Carcinoma | 4 | 2.0 |
| Adenocarcinoma, Subtypes | 4 | 2.0 |
| Sarcoma, NOS | 4 | 2.0 |
| Small Cell Carcinoma | 3 | 1.5 |
| Transitional Cell Carcinoma, NOS | 2 | 1.0 |
| Rhabdomyosarcoma | 2 | 1.0 |
| Carcinosarcoma | 2 | 1.0 |
| Hemangiopericytoma, malignant | 2 | 1.0 |
| Malignant Peripheral Nerve Sheath Tumour | 2 | 1.0 |
| Lymphoepithelial Carcinoma | 1 | 0.5 |
| Schneiderian Carcinoma | 1 | 0.5 |
| Epithelial-Myoepithelial Carcinoma | 1 | 0.5 |
| Fibrosarcoma | 1 | 0.5 |
| Myxosarcoma | 1 | 0.5 |
| Teratocarcinoma | 1 | 0.5 |
| Total with histology | 146 | 73.0 |
| Clinically malignant tumour (No microscopic confirmation) | 1 | 0.5 |
| Haematolymphoid Neoplasms | 53 | 26.5 |
| All cases | 200 | 100.0 |

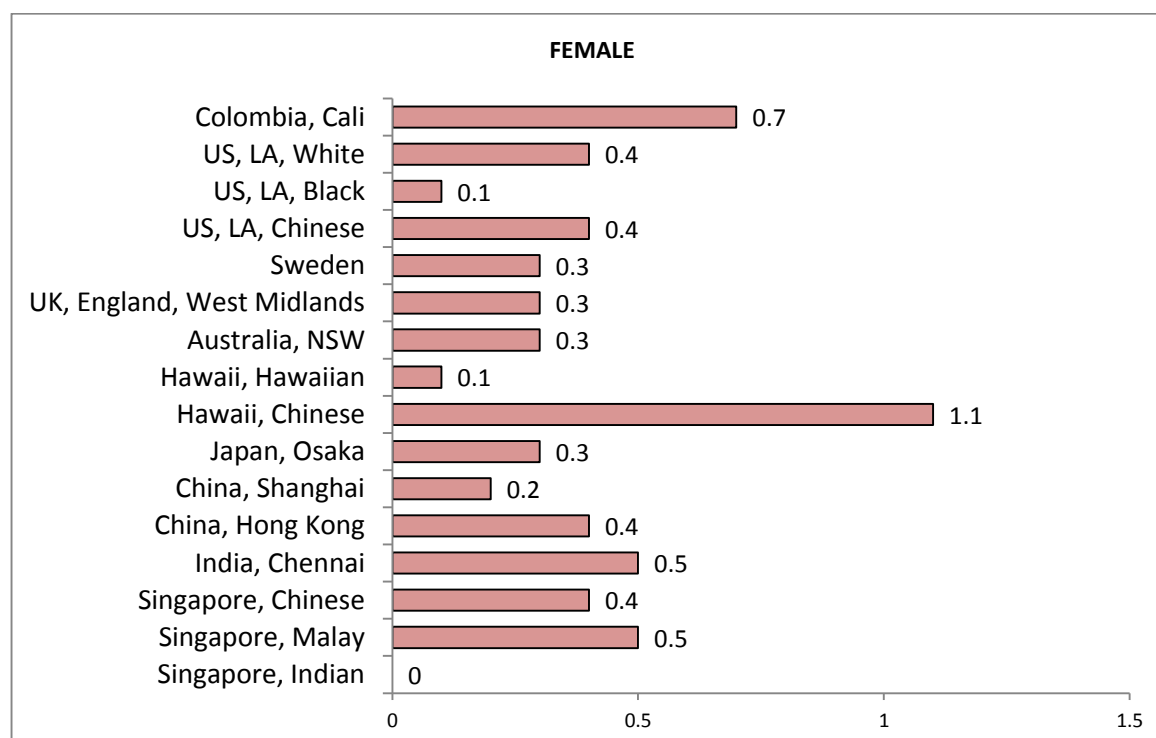
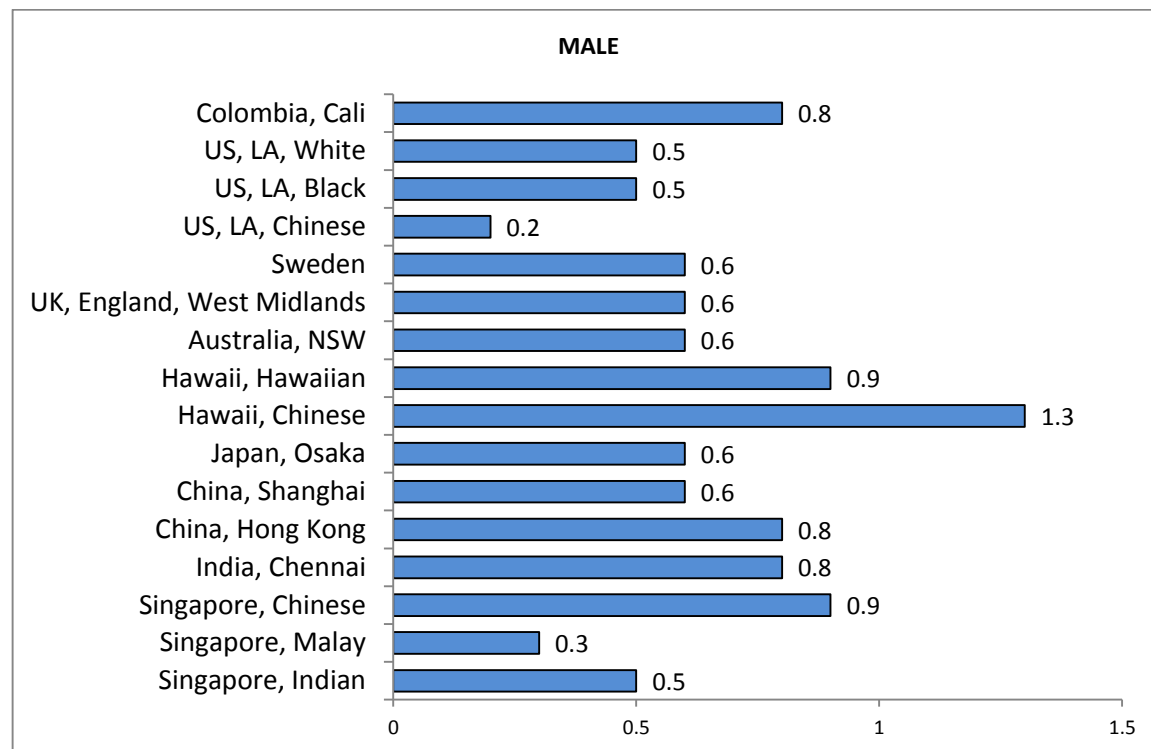


NASAL CAVITIES: AGE-STANDARDIZED BY SEX, 1973-2012



NASAL CAVITIES: AGE-SPECIFIC INCIDENCE BY SEX, 2008-2012

NASAL CAVITIES: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 2003-2007
(per 100,000 per year)



12.13 Larynx (ICD-9: 161 / ICD-O-3: C32)

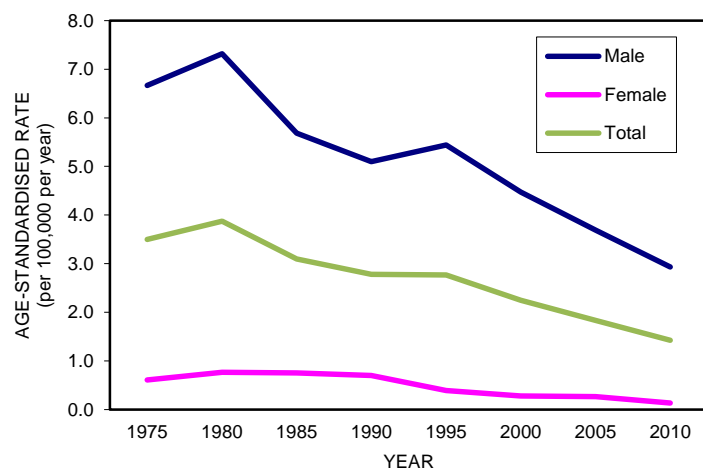
Cancer of the larynx exhibits a marked male predominance, consistent with the global pattern. In 2008-2012, the male to female ratio was 17.0:1. There has been an overall decline in incidence rates among males from 6.7 per 100,000 in 1973-1977 to 2.9 per 100,000 in 2008-2012. Malays are at lower risk of being diagnosed with laryngeal cancer, compared to the Chinese and Indians. The number of cases of larynx cancer among females remains small, with 20 cases of laryngeal cancer among the Chinese, none among Malays, and 1 among Indians in 2008-2012. Squamous cell carcinomas make up a majority of laryngeal cancers with specified histology.

Rates in Singapore Chinese males are among the highest among Chinese males globally, whereas rates in Chinese females are similar to their counterparts around the world.

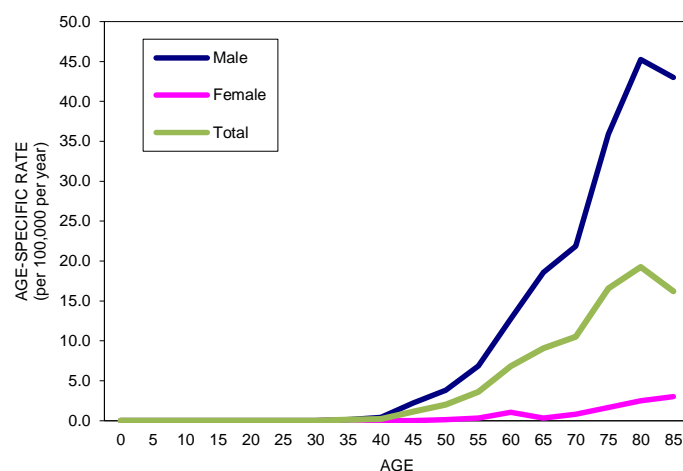
| INCIDENCE DATA | | | Males | |
|----------------|-----|-----|---------|---------------|
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 358 | 1.3 | 2.9 | - |
| Chinese | 300 | 1.3 | 3.0 | 1.0 |
| Malays | 22 | 0.9 | 1.9 | 0.6 (0.4-0.9) |
| Indians | 29 | 2.3 | 3.5 | 1.1 (0.7-1.6) |
| INCIDENCE DATA | | | Females | |
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 21 | 0.1 | 0.1 | - |
| Chinese | 20 | 0.1 | 0.2 | 1.0 |
| Malays | 0 | 0.0 | 0.0 | - |
| Indians | 1 | 0.1 | 0.2 | 0.7 (0.1-5.5) |
| INCIDENCE DATA | | | Total | |
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 379 | 0.7 | 1.4 | - |
| Chinese | 320 | 0.7 | 1.5 | 1.0 |
| Malays | 22 | 0.4 | 0.9 | 0.6 (0.4-0.9) |
| Indians | 30 | 1.1 | 1.8 | 1.2 (0.8-1.7) |

| SUBSITES 2008-2012 | | | |
|--------------------|---------------------------------|------|--------|
| ICD9 | SUBSITE | Male | Female |
| 161.0 | Glottis | 222 | 8 |
| 161.1 | Supraglottis | 74 | 8 |
| 161.2 | Subglottis | 8 | 1 |
| 161.8 | Other specified sites of larynx | 15 | 1 |
| 161.9 | Larynx, unspecified | 39 | 3 |
| All cases | | 358 | 21 |

| HISTOLOGY 2008-2012 | NO. | % |
|---|------------|--------------|
| Squamous Cell Carcinoma | 359 | 94.0 |
| Carcinoma, NOS | 6 | 1.6 |
| Neuroendocrine Carcinoma | 2 | 0.5 |
| Neoplasm, malignant, NOS | 1 | 0.3 |
| Total with histology | 368 | 96.3 |
| Clinically malignant tumour (No microscopic confirmation) | 11 | 2.9 |
| Haematolymphoid Neoplasms | 3 | 0.8 |
| All cases | 382 | 100.0 |

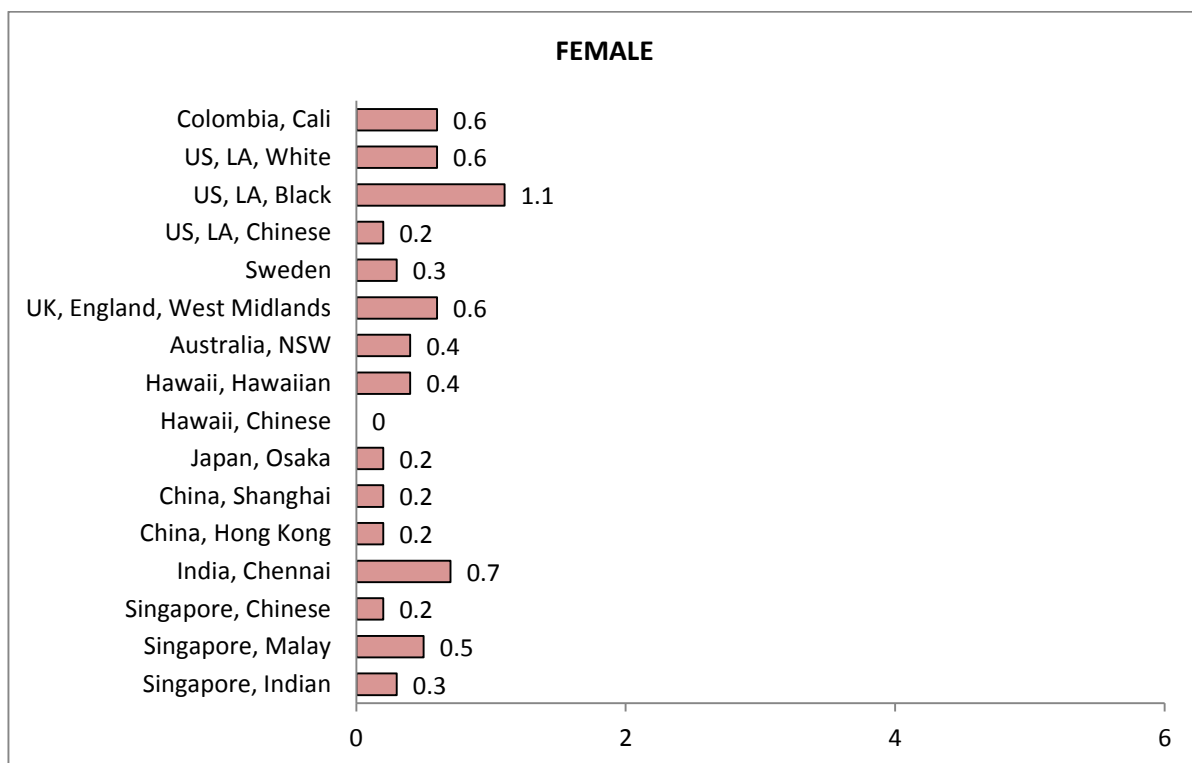
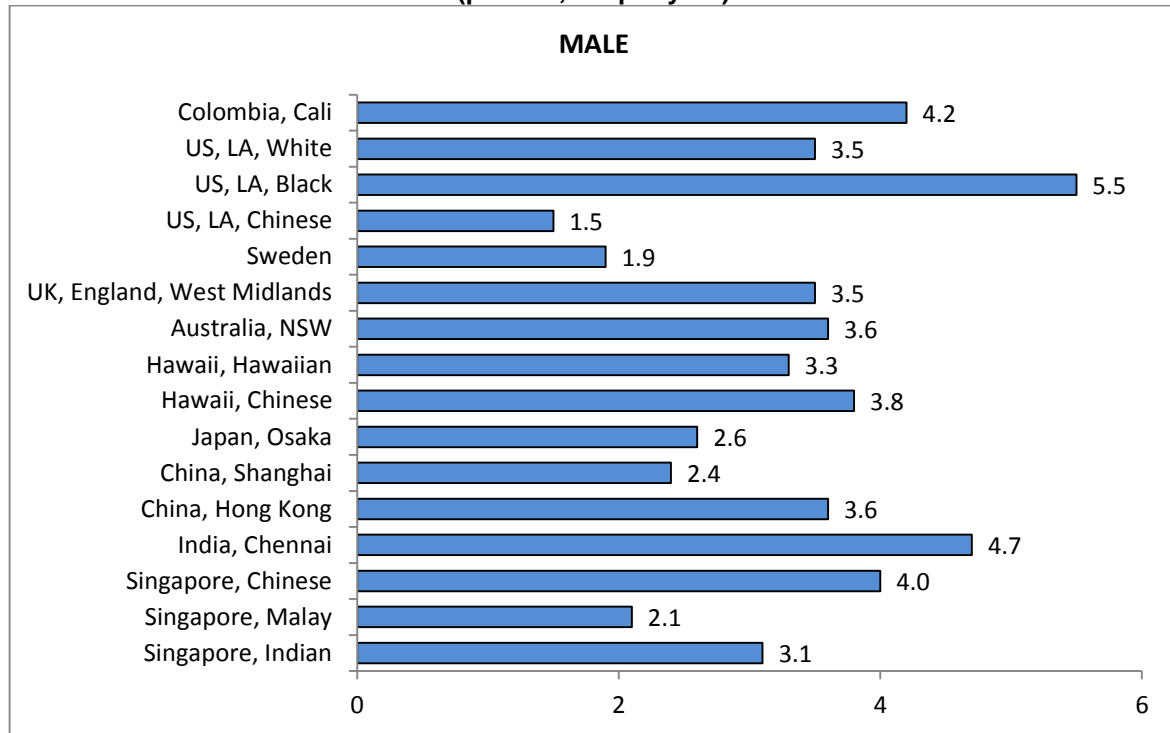


**LARYNX: AGE-STANDARDIZED
INCIDENCE BY SEX, 1973-2012**



**LARYNX: AGE-SPECIFIC INCIDENCE
BY SEX, 2008-2012**

LARYNX: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 2003-2007
(per 100,000 per year)



12.14 Lung (ICD-9: 162 / ICD-O-3: C33-C34)

The global risk for lung cancer varies widely. Indians in Singapore and India are among those at lowest risk. Our data show that Indian men and women have 40% the risk of their Chinese counterparts, with the risk for Malays (90%) being intermediate. The male to female ratio of incident cases of lung cancer is 1.9:1. Adenocarcinomas account for the majority of histologically specified cases of lung cancer. The age-standardized incidence rates for Singapore Chinese males are high among the countries compared.

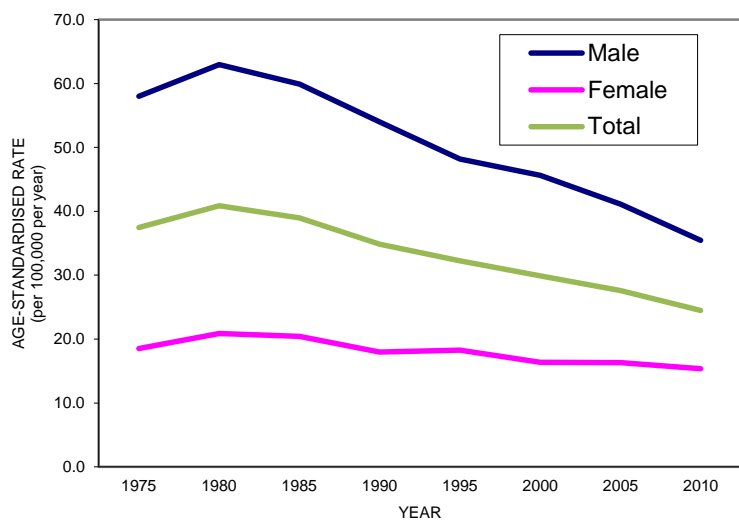
There has been little change in the age-standardized lung cancer rate over the last decade – the downward slope among males persisting, and female rates remaining fairly constant. Rates in 2008-2012 were 39.0% lower than those in 1973-1977 for males, and 16.8% lower for females. Since the period 1973-1977, lung cancer was the most frequently diagnosed cancer among males, but was supplanted by colorectal cancer in the period 2003-2007, and has remained the second most frequent cancer since then. Among females, it has been the third most frequent cancer since 1978-1982. Among the cancers, lung cancer has the highest fatality rate, and accounted for the most number of cancer deaths (22.7% of all deaths), more than twice the number of deaths from liver cancer, which accounted for the second highest number of fatalities (Table 5.3).

| INCIDENCE DATA | | | Males | |
|----------------|-------|------|---------|---------------|
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 4,274 | 15.4 | 35.4 | - |
| Chinese | 3,631 | 15.5 | 37.2 | 1.0 |
| Malays | 439 | 18.7 | 35.3 | 1.0 (0.9-1.1) |
| Indians | 150 | 11.9 | 17.5 | 0.5 (0.4-0.5) |
| INCIDENCE DATA | | | Females | |
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 2,249 | 7.7 | 15.4 | - |
| Chinese | 1,994 | 8.3 | 16.4 | 1.0 |
| Malays | 178 | 6.2 | 12.2 | 0.8 (0.6-0.9) |
| Indians | 49 | 3.4 | 5.9 | 0.4 (0.3-0.5) |
| INCIDENCE DATA | | | Total | |
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 6,523 | 11.5 | 24.5 | - |
| Chinese | 5,625 | 11.9 | 25.7 | 1.0 |
| Malays | 617 | 11.8 | 22.9 | 0.9 (0.8-1.0) |
| Indians | 199 | 7.4 | 11.6 | 0.4 (0.4-0.5) |

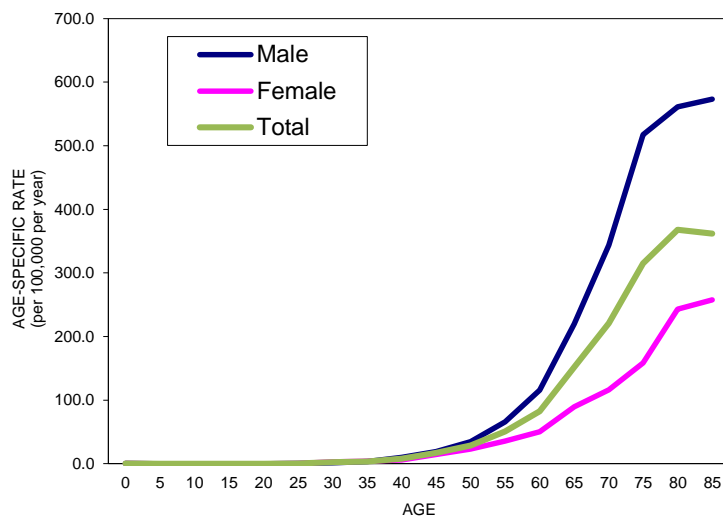
| SUBSITES 2008-2012 | | | |
|---------------------------|---------------------------------|--------------|---------------|
| ICD9 | SUBSITE | Male | Female |
| 162.0 | Trachea | 2 | 2 |
| 162.2 | Main bronchus | 275 | 106 |
| 162.3 | Upper lobe, bronchus or lung | 2,000 | 919 |
| 162.4 | Middle lobe, bronchus or lung | 156 | 150 |
| 162.5 | Lower lobe, bronchus or lung | 1,020 | 616 |
| 162.8 | Other parts of bronchus or lung | 91 | 38 |
| 162.9 | Bronchus and lung, unspecified | 730 | 418 |
| All cases | | 4,274 | 2,249 |

| HISTOLOGY 2008-2012 | | NO. | % |
|--|--|------------|----------|
| Adenocarcinoma | | | |
| Adenocarcinoma, NOS | | 2,791 | 42.6 |
| Bronchiolo-Alveolar Adenocarcinoma, NOS | | 102 | 1.6 |
| Broncholo-Alveolar Carcinoma, mucinous | | 7 | 0.1 |
| Bronchiolo-Alveolar Carcinoma, non-mucinous | | 10 | 0.2 |
| Bronchiolo-Alveolar Carcinoma, mixed mucinous and non-mucinous | | 42 | 0.6 |
| Acinar Cell Carcinoma | | 127 | 1.9 |
| Papillary Adenocarcinoma | | 46 | 0.7 |
| Signet Ring Cell Carcinoma | | 9 | 0.1 |
| Clear Cell Adenocarcinoma | | 10 | 0.2 |
| Adenocarcinoma with mixed subtypes | | 139 | 2.1 |
| Squamous Cell Carcinoma | | | |
| Squamous Cell Carcinoma, NOS | | 928 | 14.2 |
| Squamous Cell Carcinoma, Keratinizing, NOS | | 17 | 0.3 |
| Squamous Cell Carcinoma, Large Cell, non-keratinizing, NOS | | 10 | 0.2 |
| Squamous Cell Carcinoma, Clear Cell type | | 1 | 0.0 |
| Squamous Cell Carcinoma, Spindle Cell | | 4 | 0.1 |
| Papillary Squamous Cell Carcinoma | | 2 | 0.0 |
| Basaloid Squamous Cell Carcinoma | | 2 | 0.0 |
| Basaloid Carcinoma | | 2 | 0.0 |
| Neuroendocrine tumours | | | |
| Small Cell Carcinoma | | 451 | 6.9 |
| Neuroendocrine Carcinoma | | 43 | 0.7 |
| Combined Small Cell Carcinoma | | 20 | 0.3 |
| Carcinoid Tumour, NOS | | 17 | 0.3 |
| Atypical Carcinoid Tumour | | 2 | 0.0 |
| Large Cell carcinoma | | | |
| Large Cell Carcinoma, NOS | | 30 | 0.5 |
| Other carcinoma | | | |
| Non-Small Cell Carcinoma | | 479 | 7.3 |
| Carcinoma, NOS | | 103 | 1.6 |
| Adenosquamous Carcinoma | | 39 | 0.6 |
| Carcinoma, undifferentiated | | 11 | 0.2 |

| HISTOLOGY 2008-2012 | NO. | % |
|---|--------------|--------------|
| Salivary gland-type tumours | | |
| Mucoepidermoid Carcinoma | 4 | 0.1 |
| Adenoid Cystic Carcinoma | 6 | 0.1 |
| Mesenchymal tumours | | |
| Carcinosarcoma | 61 | 0.9 |
| Undifferentiated Sarcoma | 6 | 0.1 |
| Sarcoma, NOS | 5 | 0.1 |
| Pleuropulmonary Blastoma | 2 | 0.0 |
| Leiomyosarcoma | 2 | 0.0 |
| Epithelioid Hemangioendothelioma, NOS | 1 | 0.0 |
| Epithelioid Leiomyosarcoma | 1 | 0.0 |
| Solitary Fibrous Tumour, malignant | 1 | 0.0 |
| Smooth Muscle Tumour of uncertain malignant potential | 3 | 0.0 |
| Tumours of ectopic origin | | |
| Malignant Melanoma, NOS | 1 | 0.0 |
| Lymphangiomyomatosis | 1 | 0.0 |
| Other tumours | | |
| Neoplasm, malignant, NOS | 34 | 0.5 |
| Total with histology | 5,600 | 85.6 |
| Clinically malignant tumour (No microscopic confirmation) | 923 | 14.1 |
| Haematolymphoid Neoplasms | 22 | 0.3 |
| All cases | 6,545 | 100.0 |

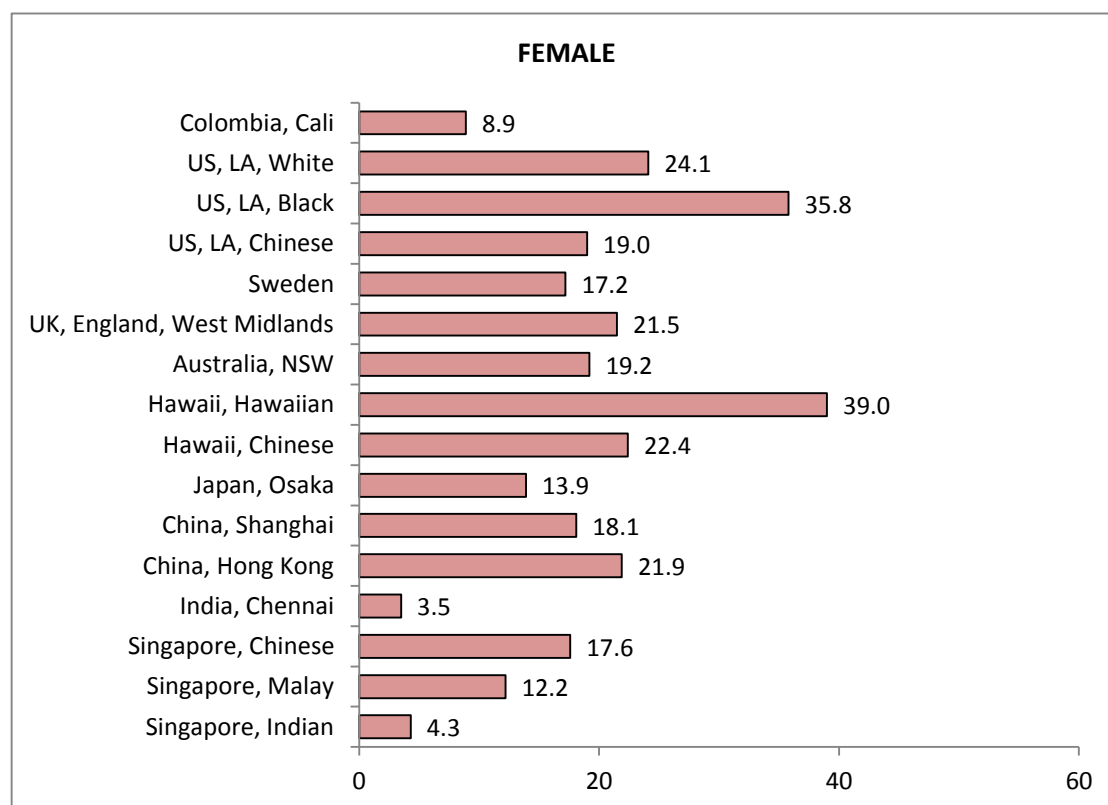
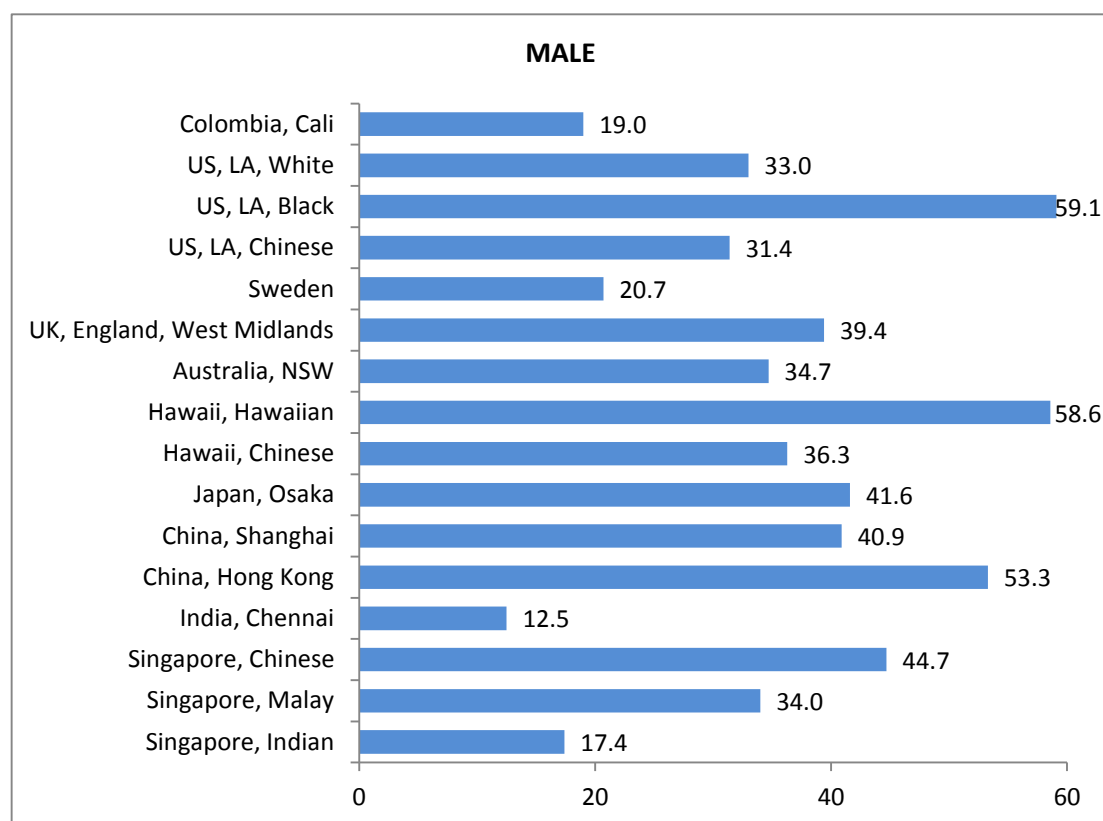


**LUNG: AGE-STANDARDIZED
INCIDENCE BY SEX, 1973-2012**



**LUNG: AGE-SPECIFIC INCIDENCE
BY SEX, 2008-2012**

LUNG: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 2003-2007
(per 100,000 per year)



12.15 Bone (ICD-9: 170 / ICD-O-3: C40-C41)

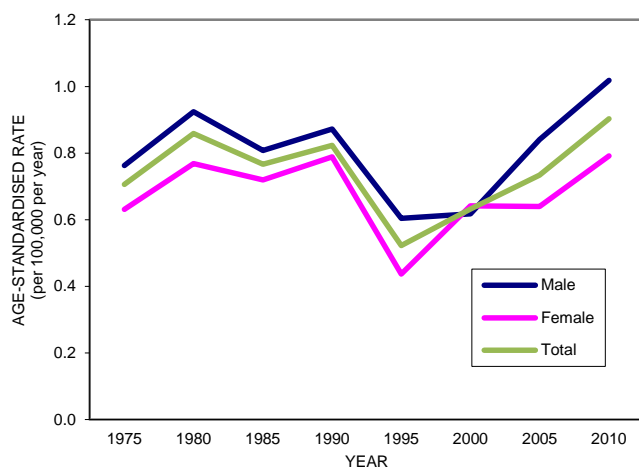
Bone cancers remain relatively uncommon, with 172 cases registered in 2008-2012. The male to female ratio of incident cases is approximately 1.2:1. Comparisons between ethnic group and five year periods are limited by the small number of cases. The incidence of bone cancer appears to first peak during adolescence between 10-15 years of age, then a second time late in life, between 70-80 years of age.

The main histological types were osteosarcomas, giant cell tumours, and chondrosarcomas.

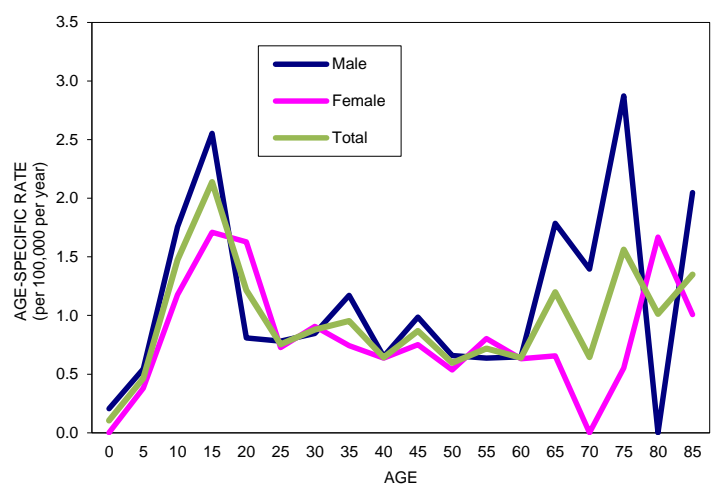
| INCIDENCE DATA | | | Males | |
|----------------|-----|-----|---------|---------------|
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 95 | 0.3 | 1.0 | - |
| Chinese | 77 | 0.3 | 1.1 | 1.0 |
| Malays | 9 | 0.4 | 0.7 | 0.6 (0.3-1.2) |
| Indians | 7 | 0.6 | 0.8 | 0.7 (0.3-1.6) |
| INCIDENCE DATA | | | Females | |
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 77 | 0.3 | 0.8 | - |
| Chinese | 62 | 0.3 | 0.9 | 1.0 |
| Malays | 9 | 0.3 | 0.7 | 0.8 (0.4-1.5) |
| Indians | 4 | 0.3 | 0.5 | 0.5 (0.2-1.5) |
| INCIDENCE DATA | | | Total | |
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 172 | 0.3 | 0.9 | - |
| Chinese | 139 | 0.3 | 1.0 | 1.0 |
| Malays | 18 | 0.3 | 0.7 | 0.7 (0.4-1.1) |
| Indians | 11 | 0.4 | 0.7 | 0.7 (0.4-1.2) |

| SUBSITES 2008-2012 | | | |
|--------------------|--|------|--------|
| ICD9 | SUBSITE | Male | Female |
| 170.0 | Bones of skull and face, except mandible | 8 | 9 |
| 170.1 | Mandible | 11 | 6 |
| 170.2 | Vertebral column, excluding sacrum and coccyx | 5 | 4 |
| 170.3 | Ribs, sternum, and clavicle | 1 | 4 |
| 170.4 | Scapula and long bones of upper limb | 9 | 8 |
| 170.5 | Short bones of upper limb | 4 | 2 |
| 170.6 | Pelvic bones, sacrum, and coccyx | 9 | 5 |
| 170.7 | Long bones of lower limb | 41 | 36 |
| 170.8 | Short bones of lower limb | 4 | 1 |
| 170.9 | Bone and articular cartilage, site unspecified | 3 | 2 |
| All cases | | 95 | 77 |

| HISTOLOGY 2008-2012 | NO. | % |
|---|------------|--------------|
| Osteosarcoma | 52 | 9.6 |
| Giant Cell Tumour of bone, malignant | 44 | 8.1 |
| Chondrosarcoma | 27 | 5.0 |
| Chordoma, NOS | 13 | 2.4 |
| Ewing Sarcoma | 6 | 1.1 |
| Other Sarcomas | 8 | 1.5 |
| Chordoma, NOS | 1 | 0.2 |
| Malignant Tumour, Giant Cell type | 1 | 0.2 |
| Total with histology | 151 | 27.8 |
| Clinically malignant tumour (No microscopic confirmation) | 5 | 0.9 |
| Haematolymphoid Neoplasms | 388 | 71.3 |
| All cases | 544 | 100.0 |

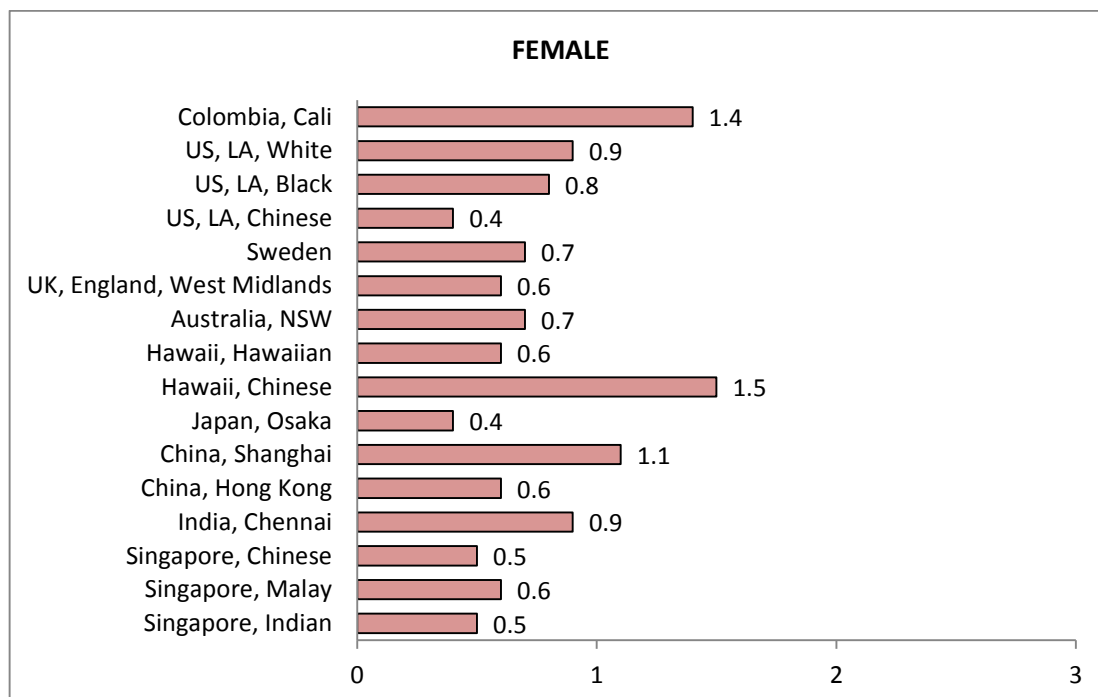
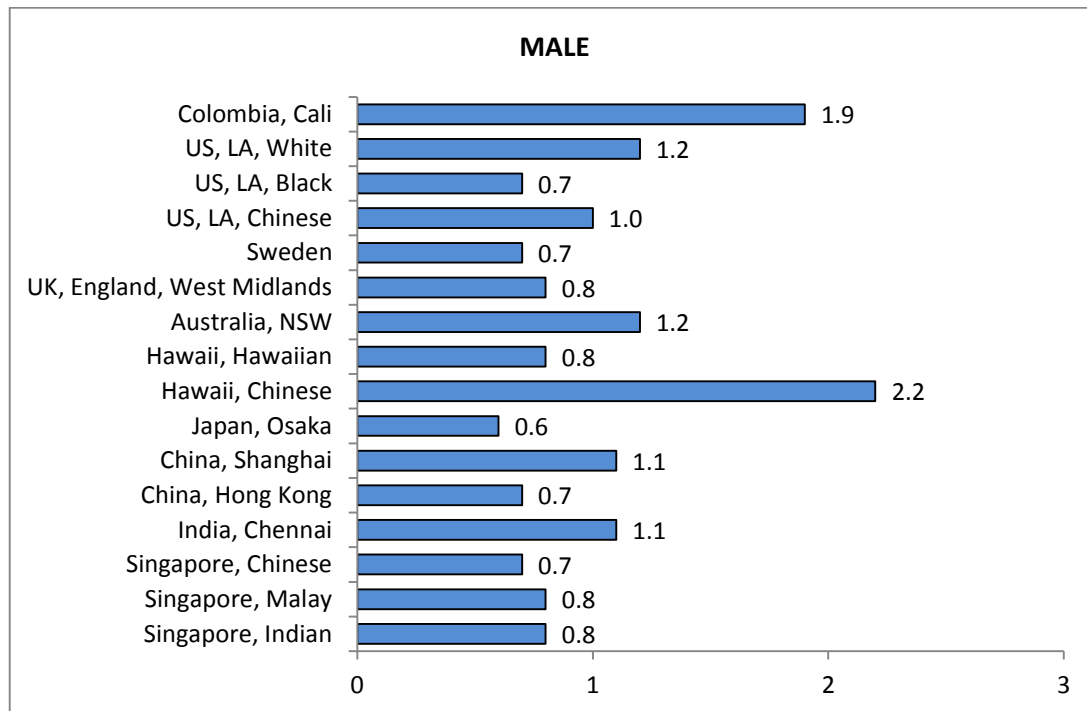


**BONE: AGE-STANDARDIZED INCIDENCE
BY SEX, 1973-2012**



**BONE: AGE-SPECIFIC INCIDENCE BY SEX,
2008-2012**

BONE: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 2003-2007
(per 100,000 per year)



12.16 Connective and other soft tissue (ICD-9: 171 / ICD-O-3: C49)

The data presented here refer to all soft tissue tumours registered under ICD-9 171. They do not include connective tissue tumours occurring in individual organs or in the retroperitoneum and mediastinum. The latter are described under their respective sites.

The age-standardized rate for this cancer has been on a gradual upward trend for both males and females in the last decade, from 1.4 per 100,000 in 1998-2002 to 2.3 per 100,000 in 2008-2012 for males and from 1.0 per 100,000 in 1998-2002 to 1.8 per 100,000 in 2008-2012 for females. There are no significant inter-ethnic differences.

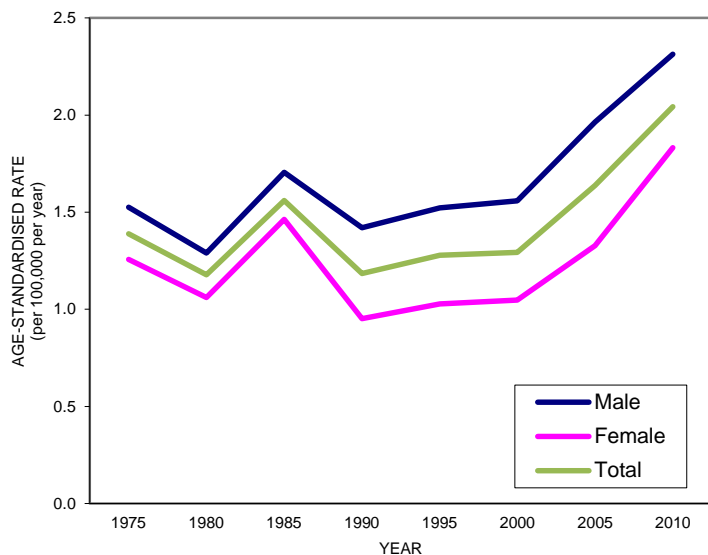
There were 452 such tumours reported in 2008-2012 and the most common histological types were the sarcomas and liposarcomas.

| INCIDENCE DATA | | | Males | |
|----------------|-----|-----|---------|---------------|
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 245 | 0.9 | 2.3 | - |
| Chinese | 194 | 0.8 | 2.4 | 1.0 |
| Malays | 29 | 1.2 | 2.4 | 1.0 (0.7-1.5) |
| Indians | 18 | 1.4 | 2.2 | 0.9 (0.5-1.4) |
| INCIDENCE DATA | | | Females | |
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 207 | 0.7 | 1.8 | - |
| Chinese | 168 | 0.7 | 1.9 | 1.0 |
| Malays | 23 | 0.8 | 1.6 | 0.9 (0.6-1.4) |
| Indians | 13 | 0.9 | 1.6 | 0.8 (0.4-1.4) |
| INCIDENCE DATA | | | Total | |
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 452 | 0.8 | 2.0 | - |
| Chinese | 362 | 0.8 | 2.1 | 1.0 |
| Malays | 52 | 1.0 | 2.0 | 0.9 (0.7-1.3) |
| Indians | 31 | 1.1 | 1.9 | 0.8 (0.6-1.2) |

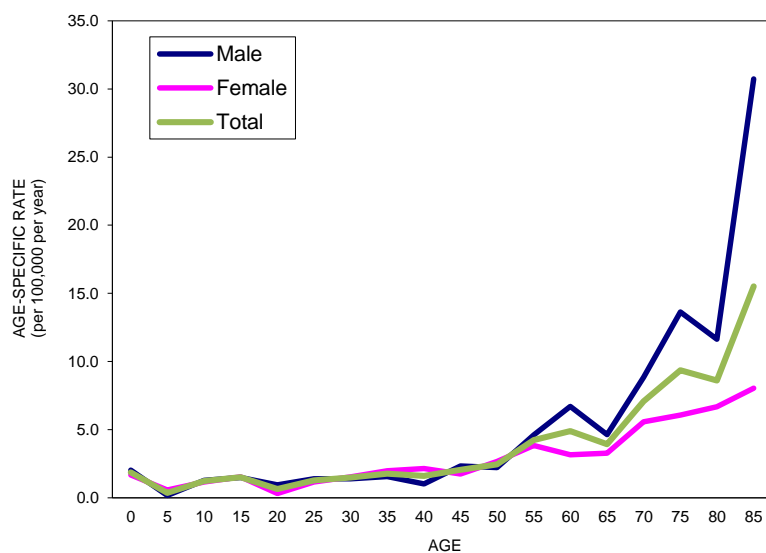
| SUBSITES 2008-2012 | | | |
|--------------------|---|------|--------|
| ICD9 | SUBSITE | Male | Female |
| 171.0 | Head, face, and neck | 29 | 12 |
| 171.2 | Upper limb, including shoulder | 48 | 30 |
| 171.3 | Lower limb, including hip | 82 | 84 |
| 171.4 | Thorax | 19 | 12 |
| 171.5 | Abdomen | 17 | 19 |
| 171.6 | Pelvis | 21 | 29 |
| 171.7 | Trunk, unspecified | 16 | 12 |
| 171.8 | Other specified sites of connective and other soft tissue | 1 | 2 |
| 171.9 | Connective and other soft tissue, site unspecified | 12 | 7 |
| All cases | | 245 | 207 |

| HISTOLOGY 2008-2012 | NO. | % |
|--|------------|----------|
| Adipocytic tumours | | |
| Liposarcoma, NOS | 14 | 3.3 |
| Liposarcoma, well differentiated | 36 | 8.4 |
| Dedifferentiated Liposarcoma | 7 | 1.6 |
| Myxoid Liposarcoma | 16 | 3.7 |
| Pleomorphic Liposarcoma | 2 | 0.5 |
| Fibroblastic / Myofibroblastic tumours | | |
| Myxofibrosarcoma | 34 | 7.9 |
| Solitary Fibrous Tumour, malignant | 2 | 0.5 |
| Fibrosarcoma | 1 | 0.2 |
| Infantile Fibrosarcoma | 0 | 0.0 |
| Dermatofibrosarcoma | 5 | 1.2 |
| Smooth-muscle tumours | | |
| Leiomyosarcoma | 28 | 6.5 |
| Skeletal- muscle tumours | | |
| Rhabdomyosarcoma | 3 | 0.7 |
| Embryonal Rhabdomyosarcoma | 2 | 0.5 |
| Alveolar Rhabdomyosarcoma | 7 | 1.6 |
| Pleomorphic Rhabdomyosarcoma, Adult type | 4 | 0.9 |
| Vascular tumours | | |
| Angiosarcoma | 30 | 7.0 |
| Kaposi Sarcoma | 8 | 1.9 |
| Gastrointestinal stromal tumours | | |
| Gastrointestinal Stromal Tumour | 4 | 0.9 |
| Nerve sheath tumours | | |
| Malignant Peripheral Nerve Sheath Tumour | 26 | 6.0 |
| Granular Cell Tumour, malignant | 1 | 0.2 |
| Neural origin | | |
| Ganglioneuroblastoma | 7 | 1.6 |
| Neuroblastoma | 2 | 0.5 |
| Pleomorphic sarcoma | | |
| Malignant Fibrous Histiocytoma | 25 | 5.8 |
| Sarcoma, NOS | 64 | 14.9 |
| Other sarcomas | | |
| Synovial Sarcoma | 24 | 5.6 |
| Epithelioid Sarcoma | 7 | 1.6 |
| Ewing Sarcoma / Primitive Neuroectodermal Tumour | 9 | 2.1 |
| Extraskeletal chondrosarcoma | | |
| Myxoid Chondrosarcoma | 5 | 1.2 |
| Chondrosarcoma, NOS | 1 | 0.2 |
| Other neoplasms | | |
| Malignant Myoepithelioma | 2 | 0.5 |
| Alveolar Soft Part Sarcoma | 3 | 0.7 |
| Clear Cell Sarcoma of Soft Tissue | 1 | 0.2 |
| Neoplasm, malignant, NOS | 5 | 1.2 |

| | | |
|---|------------|--------------|
| Total with histology | 385 | 89.5 |
| Clinically malignant tumour (No microscopic confirmation) | 18 | 4.2 |
| Haematolymphoid Neoplasms | 27 | 6.3 |
| All cases | 430 | 100.0 |



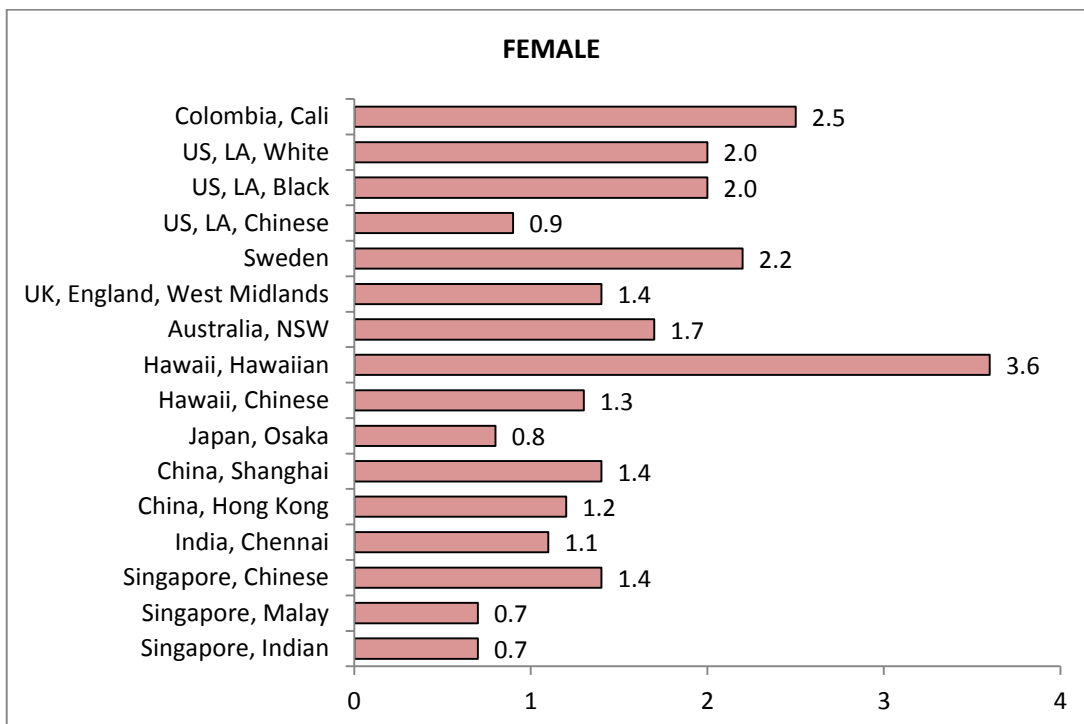
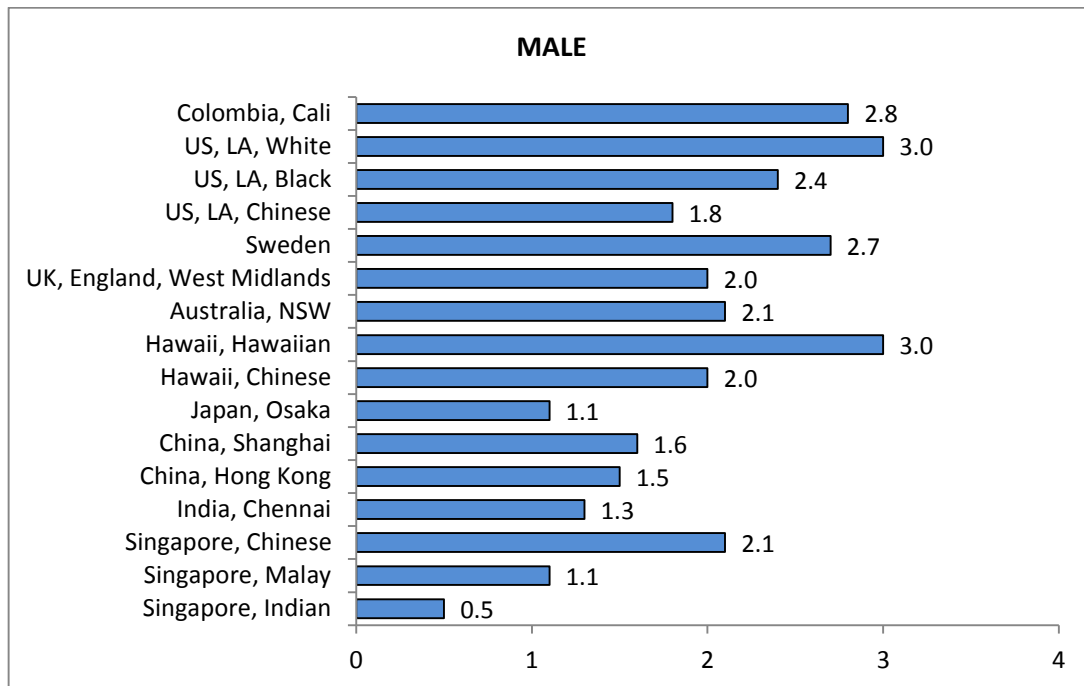
**CONNECTIVE TISSUE: AGE-STANDARDIZED
INCIDENCE BY SEX, 1973-2012**



**CONNECTIVE TISSUE: AGE-SPECIFIC
INCIDENCE BY SEX, 2008-2012**

CONNECTIVE TISSUE: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES

2003-2007
(per 100,000 per year)



12.17 Melanoma of skin (ICD-9: 172 / ICD-O-3: C44 with M8720-8790)

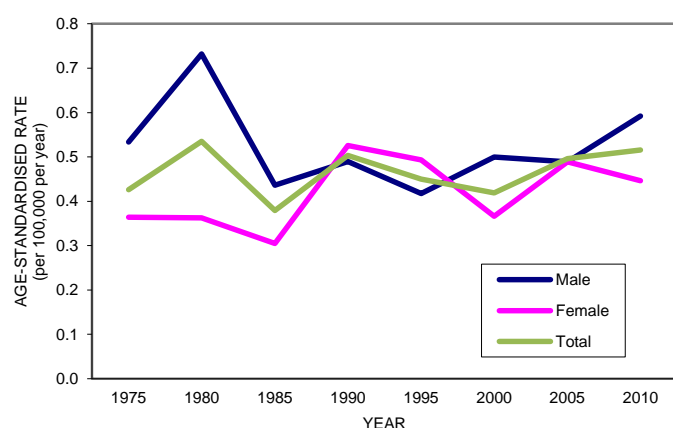
In contrast to its high incidence in Caucasian populations, melanoma of the skin is a rare cancer in Singapore. Only 133 cases were diagnosed locally in 2008-2012 and it is difficult to comment on time trends due to the small number of cases. Nevertheless, on the whole, the Chinese are at higher risk of being diagnosed with melanoma of skin. Melanoma of skin is also more likely to occur in late adulthood, particularly after the age of 60.

The most common subsite encountered in this period was the lower limb. In the ICD-O-2 coding system, melanoma of the skin is combined with other skin cancers under the topographical code C44, whereas in ICD-9 it is coded separately (ICD-9 172). This should be noted when comparing the incidence of skin cancers over time.

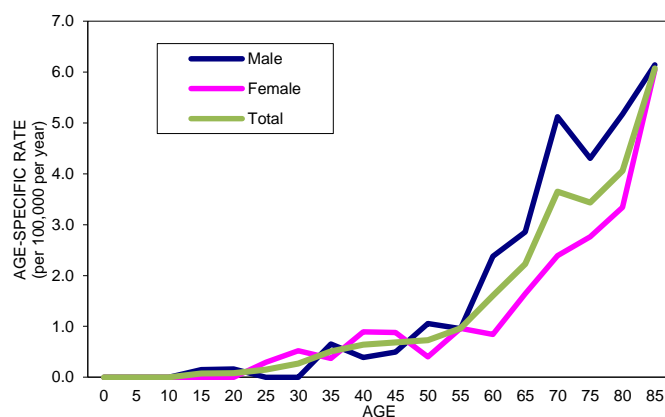
| INCIDENCE DATA (2008-2012) | | | Males | |
|-------------------------------|-----|-----|---------|---------------|
| | No. | % | ASR | RR (95% CI) |
| All residents | 71 | 0.3 | 0.6 | - |
| Chinese | 47 | 0.2 | 0.5 | 1.0 |
| Malays | 5 | 0.2 | 0.3 | 0.8 (0.3-2.0) |
| Indians | 2 | 0.2 | 0.2 | 0.4 (0.1-1.8) |
| INCIDENCE DATA (2008-2012) | | | Females | |
| | No. | % | ASR | RR (95% CI) |
| All residents | 62 | 0.2 | 0.4 | - |
| Chinese | 50 | 0.2 | 0.5 | 1.0 |
| Malays | 5 | 0.2 | 0.3 | 0.8 (0.3-1.9) |
| Indians | 0 | 0.0 | 0.0 | - |
| INCIDENCE DATA (2008-2012) | | | Total | |
| | No. | % | ASR | RR (95% CI) |
| All residents | 133 | 0.2 | 0.5 | - |
| Chinese | 97 | 0.2 | 0.5 | 1.0 |
| Malays | 10 | 0.2 | 0.3 | 0.8 (0.4-1.5) |
| Indians | 2 | 0.1 | 0.1 | 0.2 (0.1-0.9) |

| SUBSITES 2008-2012 | | | |
|--------------------|---|------|--------|
| ICD9 | SUBSITE | Male | Female |
| 172.2 | Ear and external auditory canal | 1 | 0 |
| 172.3 | Other and unspecified parts of face | 3 | 4 |
| 172.4 | Scalp and neck | 2 | 3 |
| 172.5 | Trunk, except scrotum | 14 | 10 |
| 172.6 | Upper limb, including shoulder | 11 | 9 |
| 172.7 | Lower limb, including hip | 36 | 31 |
| 172.8 | Malignant melanoma of other specified sites of skin | 0 | 1 |
| 172.9 | Melanoma of skin, site unspecified | 4 | 4 |
| All cases | | 71 | 62 |

| HISTOLOGY 2008-2012 | NO. | % |
|--|------------|--------------|
| Malignant Melanoma, NOS | 64 | 48.1 |
| Acral Lentiginous Melanoma, malignant, | 22 | 16.5 |
| Nodular Melanoma | 27 | 20.3 |
| Superficial Spreading Melanoma | 12 | 9.0 |
| Lentigo Maligna Melanoma | 3 | 2.3 |
| Blue Nevus, malignant | 2 | 1.5 |
| Amelanotic Melanoma | 1 | 0.8 |
| Spindle Cell Melanoma, NOS | 1 | 0.8 |
| Malignant Melanoma, Regressing | 1 | 0.8 |
| Total with histology | 133 | 100.0 |
| All cases | 133 | 100.0 |

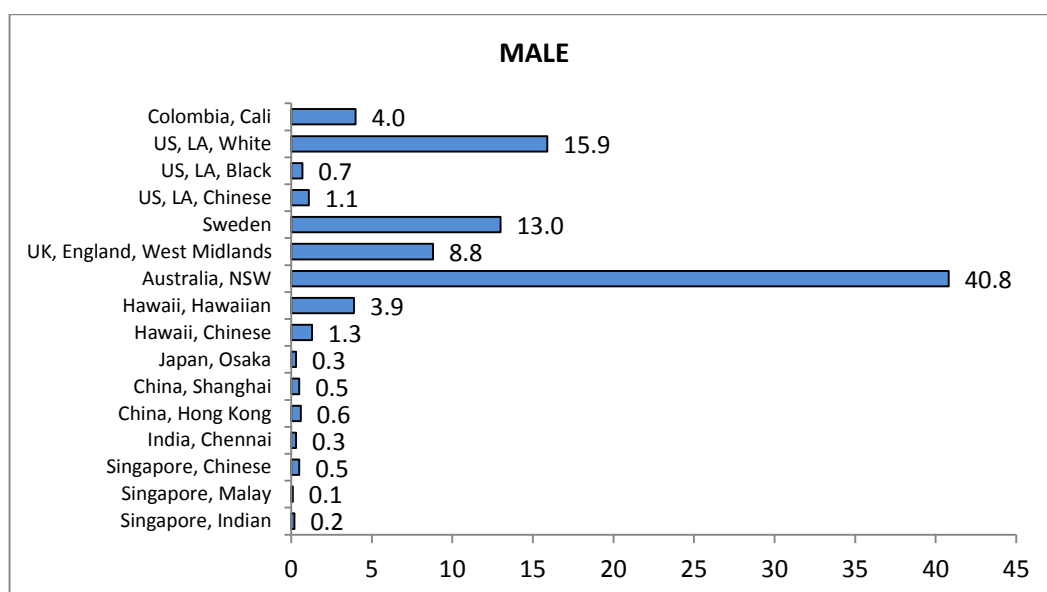


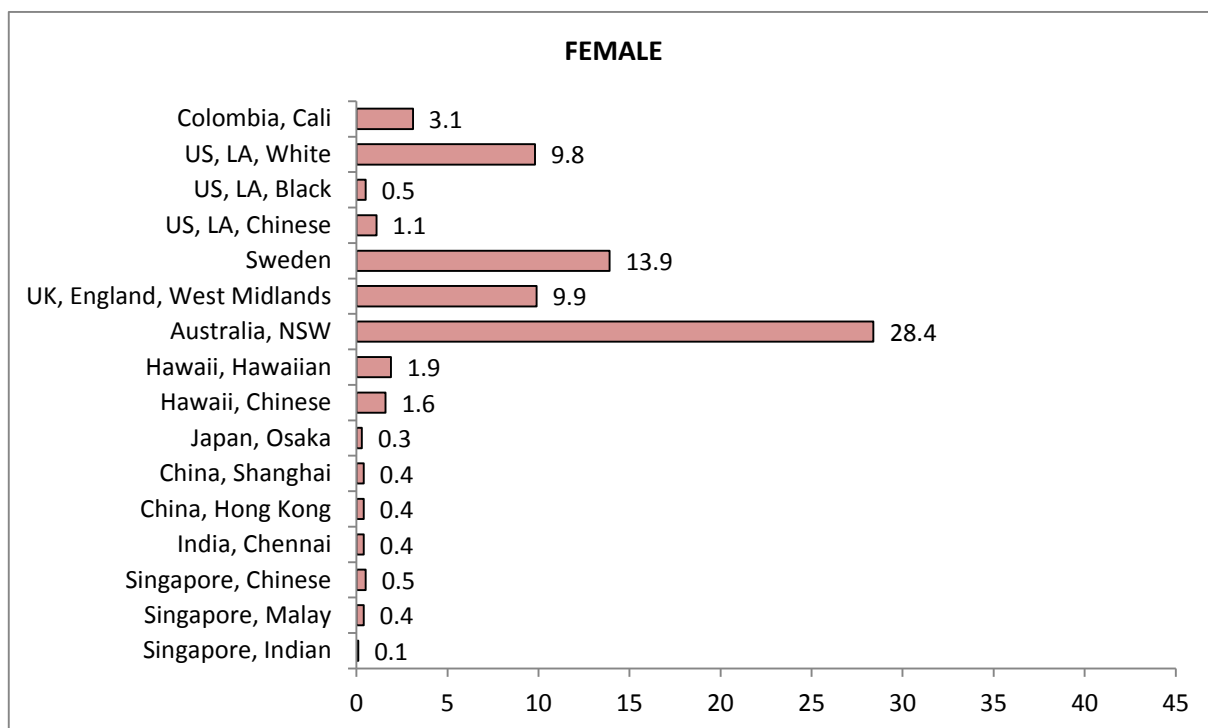
SKIN, MELANOMA: AGE-STANDARDIZED INCIDENCE BY SEX, 1973-2012



SKIN, MELANOMA: AGE-SPECIFIC INCIDENCE BY SEX, 2008-2012

SKIN, MELANOMA: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 2003-2007 (per 100,000 per year)





12.18 Skin, Non- Melanoma (ICD-9: 173 / ICD-O-3: C44 excluding M8720-8790)

There were a total of 2,664 incident cases of non-melanoma skin cancer from 2008-2012, with a male to female ratio of 1.2:1. Basal cell carcinoma (BCC) remained the predominant histological type, followed by squamous cell carcinoma (SCC). The ratio of BCC: SCC is 2.7:1, which is fairly similar to Australia's ratio of 2.5:1. Of the cancers with specified subsite, the largest proportion occurred on the head and neck.

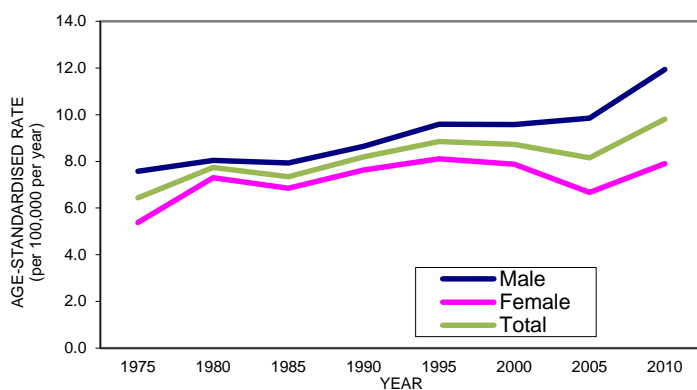
There has been a general rising trend in the incidence of this cancer in both men and women over the last 40 years. The Chinese have a significantly higher risk of developing non-melanoma skin cancer compared to their Malay and Indian counterparts.

| INCIDENCE DATA (2008-2012) | | | Males | |
|-------------------------------|-------|-----|---------|---------------|
| | No. | % | ASR | RR (95% CI) |
| All residents | 1,453 | 5.2 | 11.9 | - |
| Chinese | 1,154 | 4.9 | 11.9 | 1.0 |
| Malays | 60 | 2.6 | 4.4 | 0.4 (0.3-0.5) |
| Indians | 19 | 1.5 | 2.2 | 0.2 (0.1-0.3) |
| INCIDENCE DATA (2008-2012) | | | Females | |
| | No. | % | ASR | RR (95% CI) |
| All residents | 1,211 | 4.2 | 7.9 | - |
| Chinese | 1,061 | 4.4 | 8.3 | 1.0 |
| Malays | 51 | 1.8 | 3.6 | 0.4 (0.3-0.6) |
| Indians | 22 | 1.5 | 2.6 | 0.3 (0.2-0.5) |
| INCIDENCE DATA (2008-2012) | | | Total | |
| | No. | % | ASR | RR (95% CI) |
| All residents | 2,664 | 4.7 | 9.8 | - |
| Chinese | 2,215 | 4.7 | 9.9 | 1.0 |
| Malays | 111 | 2.1 | 4.0 | 0.4 (0.3-0.5) |
| Indians | 41 | 1.5 | 2.3 | 0.2 (0.2-0.3) |

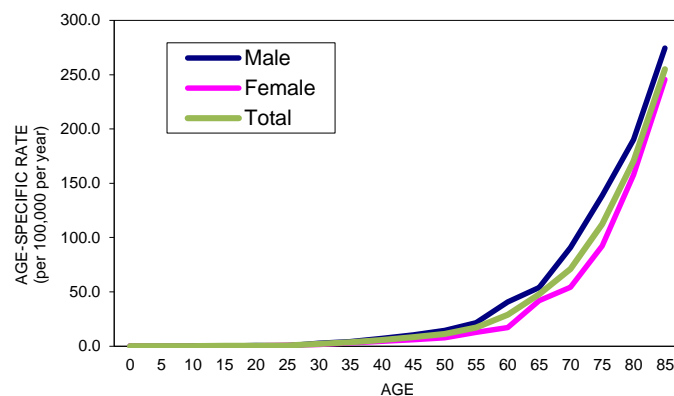
| SUBSITES 2008-2012 | | | |
|--------------------|---|------|--------|
| ICD9 | SUBSITE | Male | Female |
| 173.0 | Other skin of lip | 38 | 34 |
| 173.1 | Other skin of eyelid, including canthus | 83 | 77 |
| 173.2 | Other skin of ear and external auditory canal | 82 | 29 |
| 173.3 | Other skin of other and unspecified parts of face | 580 | 623 |
| 173.4 | Other scalp and skin of neck | 111 | 88 |
| 173.5 | Other skin of trunk, except scrotum | 169 | 94 |
| 173.6 | Other skin of upper limb, including shoulder | 156 | 96 |
| 173.7 | Other skin of lower limb, including hip | 109 | 65 |
| 173.8 | Other specified sites of skin | 63 | 34 |

| | | | |
|------------------|------------------------------|--------------|--------------|
| 173.9 | Other skin, site unspecified | 62 | 71 |
| All cases | | 1,453 | 1,211 |

| HISTOLOGY 2008-2012 | NO. | % |
|---|--------------|------------|
| Basal Cell Carcinoma, NOS | 1,017 | 36.3 |
| Basal Cell Carcinoma, Nodular | 704 | 25.1 |
| Squamous Cell Carcinoma | 635 | 22.7 |
| Dermatofibrosarcoma | 75 | 2.7 |
| Sebaceous Carcinoma | 29 | 1.0 |
| Basosquamous Carcinoma | 23 | 0.8 |
| Eccrine Poroma, malignant | 22 | 0.8 |
| Paget's Disease, Extramammary | 20 | 0.7 |
| Kaposi Sarcoma | 18 | 0.6 |
| Skin Appendage Carcinoma | 12 | 0.4 |
| Mucinous Adenocarcinoma | 10 | 0.4 |
| Adenoid Cystic Carcinoma | 10 | 0.4 |
| Angiosarcoma | 9 | 0.3 |
| Adenoid Basal Carcinoma | 8 | 0.3 |
| Carcinoma, NOS | 8 | 0.3 |
| Trichilemmocarcinoma | 7 | 0.3 |
| Verrucous Carcinoma | 7 | 0.3 |
| Adenocarcinoma, NOS | 7 | 0.3 |
| Sweat Gland Adenocarcinoma | 4 | 0.1 |
| Squamous Cell Carcinoma, Clear Cell type | 2 | 0.1 |
| Eccrine Adenocarcinoma | 2 | 0.1 |
| Malignant Eccrine Spiradenoma | 2 | 0.1 |
| Nodular Hidradenoma, malignant | 2 | 0.1 |
| Apocrine Adenocarcinoma | 2 | 0.1 |
| Malignant Fibrous Histiocytoma | 2 | 0.1 |
| Metatypical Carcinoma | 1 | 0.0 |
| Pilomatrix Carcinoma | 1 | 0.0 |
| Adenosquamous Carcinoma | 1 | 0.0 |
| Sclerosing Sweat Duct Carcinoma | 1 | 0.0 |
| Clear Cell Adenocarcinoma | 1 | 0.0 |
| Adenocarcinoma with mixed subtypes | 1 | 0.0 |
| Adenocarcinoma with neuroendocrine differentiation | 1 | 0.0 |
| Merkel Cell Carcinoma | 1 | 0.0 |
| Pseudosarcomatous Carcinoma | 1 | 0 |
| Neoplasm, malignant, NOS | 1 | 0 |
| Total with histology | 2,647 | 94.5 |
| Clinically malignant tumour (No microscopic confirmation) | 17 | 0.6 |
| Haematolymphoid Neoplasms | 136 | 4.9 |
| All cases | 2,800 | 100 |

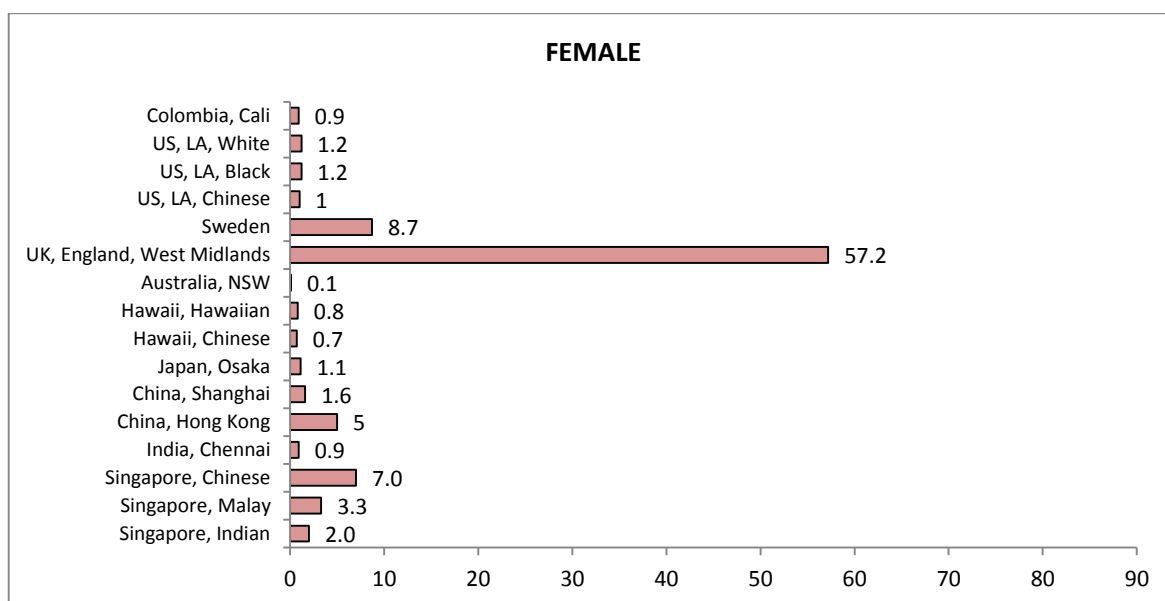
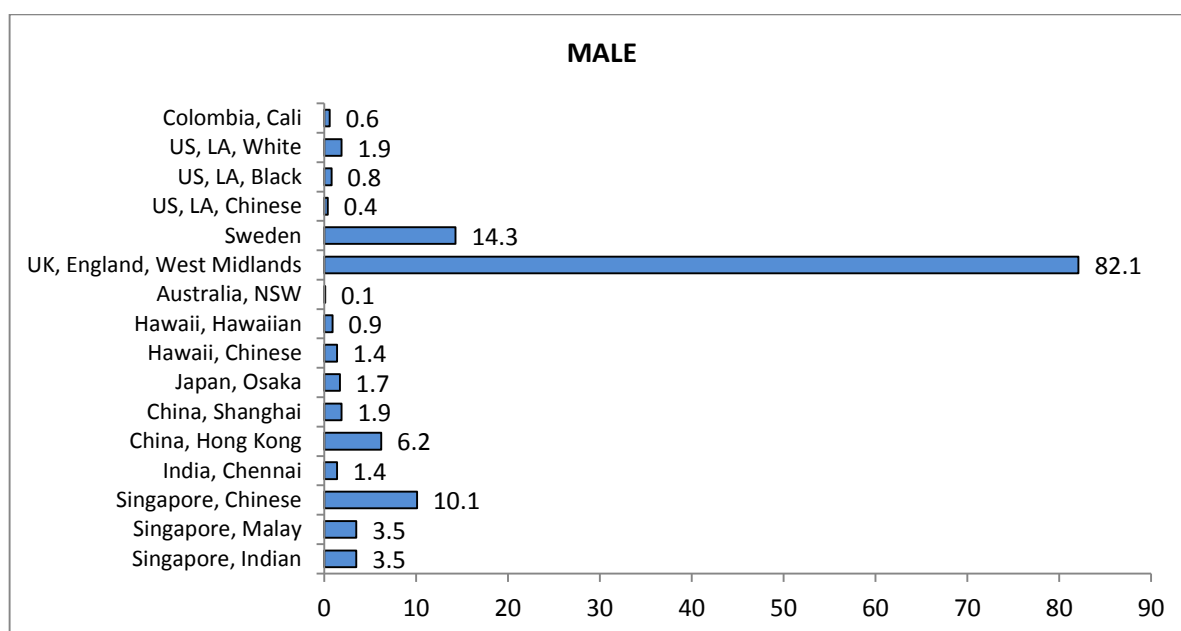


SKIN, OTHERS: AGE-STANDARDIZED INCIDENCE BY SEX, 1973-2012



SKIN, OTHERS: AGE-SPECIFIC INCIDENCE BY SEX, 2008-2012

SKIN, OTHERS: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 2003-2007 (per 100,000 per year)



12.19 Female breast (ICD-9: 174 / ICD-O-3: C50)

Female breast cancer has remained by far the most frequently-diagnosed cancer among women in Singapore. Its incidence rate is more than twice of that of the second most common incident cancer among females, colorectal cancer (27.3 per 100,000 per year). The previously observed upward trend in age-standardised incidence has continued, the incidence rate in 2008-2012 is 62.7 per 100,000 per year, which is an increase of almost three-fold from 22.0 per 100,000 in 1973-1977 and is 6.6% higher than in 2003-2007. Indians had the largest increase since the last five-year period (2003-2007). The incidence of invasive breast cancer is almost 6 times that of in-situ breast cancer.

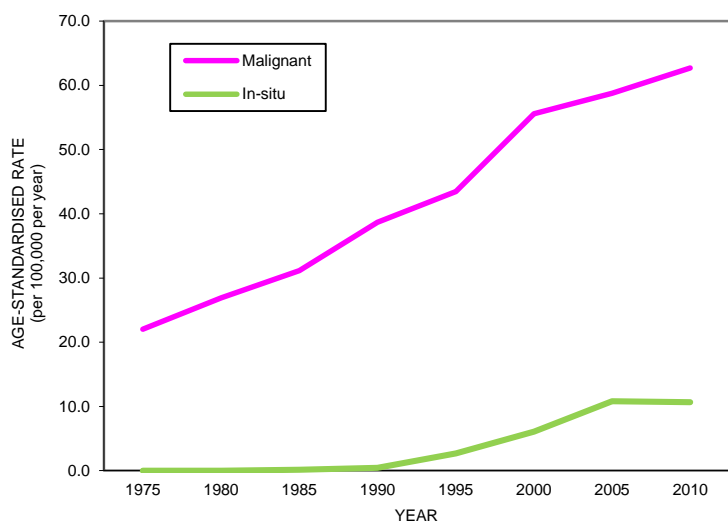
The age pattern for 2008-2012 suggests that the age-specific incidence rate increased sharply from age 30 onwards, peaking in the 6th decade of life, before gradually declining from age 70 onwards. In comparison, the increase in incidence with age for in-situ cancer was not as pronounced as invasive cancer, with high rates that were fairly similar for the 45-65 year age range.

Among ethnic groups, Malay and Indian women have risks that are lower than that of Chinese women by about 10%. Internationally, rates of breast cancer in Singapore remain lower than women in the United States and Europe; but are higher than those in China, Japan, and India.

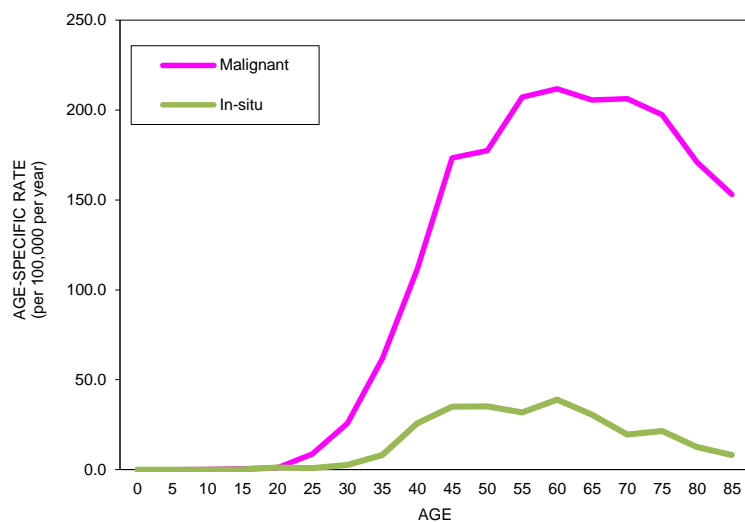
| INCIDENCE DATA (2008-2012) | | | Females | |
|-------------------------------|-------|------|---------|---------------|
| | No. | % | ASR | RR (95% CI) |
| All residents | 8,509 | 29.3 | 62.7 | - |
| Chinese | 6,852 | 28.4 | 63.9 | 1.0 |
| Malays | 908 | 31.8 | 58.1 | 0.9 (0.9-1.0) |
| Indians | 537 | 37.1 | 58.0 | 0.9 (0.8-1.0) |

| SUBSITES 2008-2012 | | |
|--------------------|------------------------------|--------|
| ICD9 | SUBSITE | Female |
| 174.0 | Nipple and areola | 23 |
| 174.1 | Central portion | 650 |
| 174.2 | Upper-inner quadrant | 790 |
| 174.3 | Lower-inner quadrant | 414 |
| 174.4 | Upper-outer quadrant | 2,119 |
| 174.5 | Lower-outer quadrant | 487 |
| 174.6 | Axillary tail | 11 |
| 174.8 | Other specified sites | 1,434 |
| 174.9 | Breast (female), unspecified | 2,581 |
| All cases | | 8,509 |

| HISTOLOGY 2008-2012 | NO. | % |
|---|--------------|--------------|
| Epithelial tumours | | |
| Invasive Duct Carcinoma, NOS | 6,287 | 73.7 |
| Infiltrating Duct mixed with other types of Carcinoma | 491 | 5.8 |
| Invasive Lobular Carcinoma | 364 | 4.3 |
| Mucinous Adenocarcinoma | 252 | 3.0 |
| Infiltrating Duct and Lobular Carcinoma | 191 | 2.2 |
| Adenocarcinoma, NOS | 138 | 1.6 |
| Papillary Carcinoma | 94 | 1.1 |
| Metaplastic Carcinoma | 72 | 0.8 |
| Infiltrating Lobular mixed with other types of Carcinoma | 59 | 0.7 |
| Tubular Adenocarcinoma | 50 | 0.6 |
| Intracystic Carcinoma | 45 | 0.5 |
| Cribiform Carcinoma | 17 | 0.2 |
| Medullary Carcinoma | 14 | 0.2 |
| Invasive Micropapillary Carcinoma | 13 | 0.2 |
| Apocrine Adenocarcinoma | 12 | 0.1 |
| Comedocarcinoma, NOS | 5 | 0.1 |
| Adenocarcinoma with neuroendocrine differentiation | 3 | 0.0 |
| Carcinoma, undifferentiated | 2 | 0.0 |
| Carcinoma, uncommon subtypes | | |
| Adenoid Cystic Carcinoma | 11 | 0.1 |
| Secretory Carcinoma | 1 | 0.0 |
| Glycogen-Rich Carcinoma | 0 | 0.0 |
| Fibroepithelial tumours | | |
| Phyllodes Tumour, Borderline | 152 | 1.8 |
| Phyllodes Tumour, malignant | 47 | 0.6 |
| Neuroendocrine tumours | | |
| Neuroendocrine Carcinoma | 12 | 0.1 |
| Small Cell Carcinoma | 2 | 0.0 |
| Mesenchymal tumours | | |
| Sarcoma, NOS | 10 | 0.1 |
| Osteosarcoma | 2 | 0.0 |
| Malignant Fibrous Histiocytoma | 2 | 0.0 |
| Angiosarcoma | 1 | 0.0 |
| Leiomyosarcoma | 0 | 0.0 |
| Myxosarcoma | 0 | 0.0 |
| Mammary Paget's tumour | | |
| Paget Disease, Mammary | 103 | 1.2 |
| Other neoplasms | | |
| Neoplasm, malignant, NOS | 7 | 0.1 |
| Total with histology | 8,459 | 99.2 |
| Clinically malignant tumour (No microscopic confirmation) | 50 | 0.6 |
| Haematolymphoid Neoplasms | 20 | 0.2 |
| All cases | 8,529 | 100.0 |

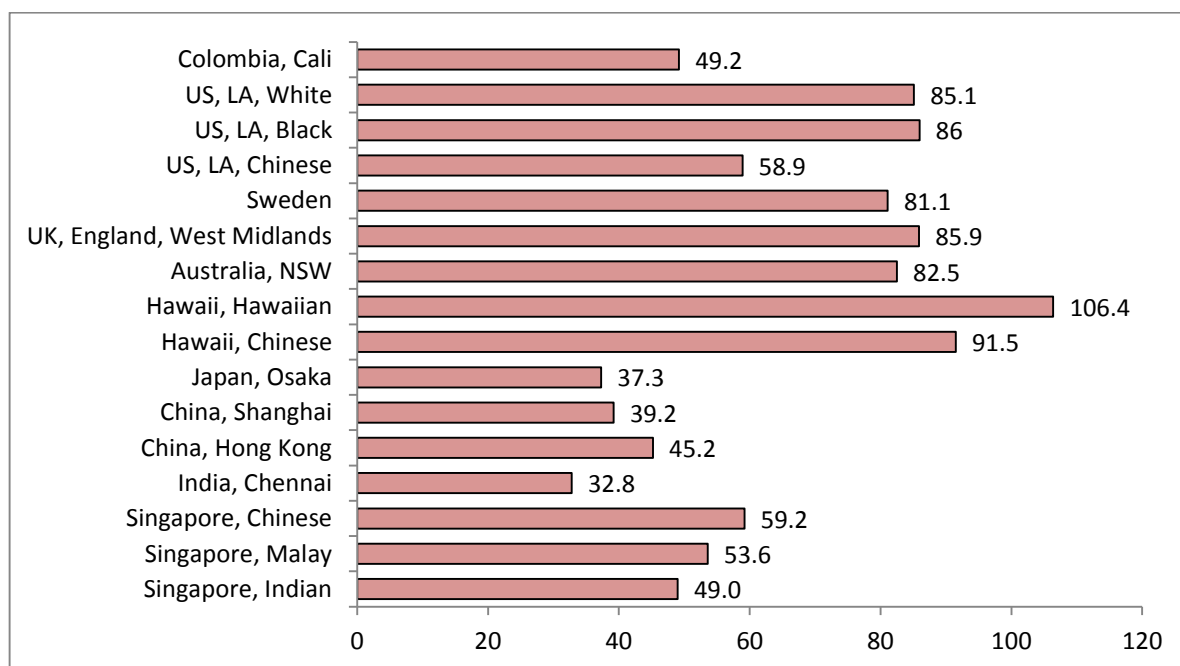


FEMALE BREAST: AGE-STANDARDIZED INCIDENCE, 1973-2012



FEMALE BREAST: AGE-SPECIFIC INCIDENCE, 2008-2012

FEMALE BREAST: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 2003-2007 (per 100,000 per year)



12.20 Cervix uteri (ICD-9: 180 / ICD-O-3: C53)

The incidence rate for cervical cancer has consistently declined over the last forty years. The age-standardized rate dropped from 17.5 per 100,000 in 1973-1977 to 6.8 per 100,000 per year in 2008-2012. The incidence rate of in-situ cancers has decreased from 14.6 per 100,000 in 1998-2002 to 12.7 per 100,000 in 2008-2012 (1.4 times to 1.9 times the incidence of invasive cancer, in the respective time periods).

Cervical cancer has fallen in ranking from the third most common cancer in 1973-1977 to the sixth most common cancer in 2003-2007, and to the tenth most common cancer among women in 2008-2012. This cancer constitutes 3.2% of all female cancers diagnosed in 2008-2012. The incidence of cervical cancer in Indian women was substantially lower compared to the Chinese and Malay women.

While the incidence of invasive cancer increases with age, the incidence of in-situ cancer peaks at age 35-39. The rates of cervical cancer are the highest in Singapore Chinese women compared to Chinese women in China and Hawaii.

| INCIDENCE DATA (2008-2012) | Females | | | RR (95% CI) |
|-------------------------------|---------|-----|-----|---------------|
| | No. | % | ASR | |
| All residents | 922 | 3.2 | 6.8 | - |
| Chinese | 772 | 3.2 | 7.1 | 1.0 |
| Malays | 99 | 3.5 | 6.7 | 0.9 (0.8-1.1) |
| Indians | 22 | 1.5 | 2.7 | 0.3 (0.2-0.5) |

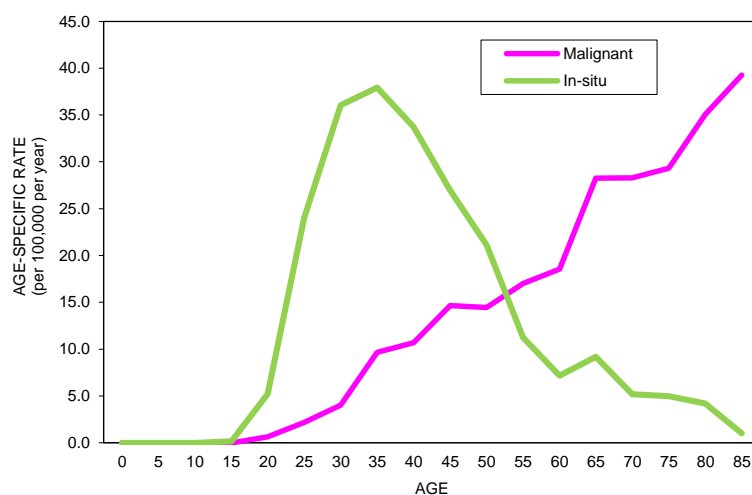
| SUBSITES 2008-2012 | | |
|--------------------|---------------------------------|--------|
| ICD9 | SUBSITE | Female |
| 180.0 | Endocervix | 68 |
| 180.1 | Exocervix | 7 |
| 180.8 | Other specified sites of cervix | 4 |
| 180.9 | Cervix uteri, unspecified | 843 |
| All cases | | 922 |

| HISTOLOGY 2008-2012 | | NO. | % |
|--------------------------------|-----------------------------------|-----|------|
| Epithelial tumours | | | |
| Squamous Cell Carcinoma | | | |
| | Squamous Cell Carcinoma, NOS | 562 | 60.8 |
| | Papillary Squamous Cell Carcinoma | 24 | 2.6 |
| | Lymphoepithelial Carcinoma | 3 | 0.3 |
| Glandular tumours | | | |
| | Adenocarcinoma, NOS | 132 | 14.3 |
| | Mucinous Adenocarcinoma | 36 | 3.9 |
| | Adenocarcinoma, endocervical type | 31 | 3.4 |
| | Endometrioid Adenocarcinoma | 10 | 1.1 |
| | Serous Adenocarcinoma | 5 | 0.5 |

| | | |
|---|------------|--------------|
| Papillary Adenocarcinoma | 2 | 0.2 |
| Clear Cell Adenocarcinoma | 7 | 0.8 |
| Mixed Cell Adenocarcinoma | 8 | 0.9 |
| Other Epithelial tumours | | |
| Adenosquamous Carcinoma | 30 | 3.2 |
| Adenoid Cystic Carcinoma | 1 | 0.1 |
| Adenoid Basal Carcinoma | 1 | 0.1 |
| Carcinoma, NOS | 14 | 1.5 |
| Neuroendocrine tumour | | |
| Neuroendocrine Carcinoma | 27 | 2.9 |
| Mesenchymal tumours | | |
| Leiomyosarcoma | 1 | 0.1 |
| Endometrial Stromal Sarcoma | 1 | 0.1 |
| Mixed Epithelial - Mesenchymal tumours | | |
| Malignant Mullerian Mixed Tumour / Carcinosarcoma | 3 | 0.0 |
| Adenosarcoma | 7 | 0.8 |
| Sarcoma, NOS | 2 | 0.2 |
| Other neoplasms | | |
| Malignant Melanoma, NOS | 2 | 0.2 |
| Neoplasm, malignant, NOS | 1 | 0.1 |
| Total with histology | 910 | 98.5 |
| Clinically malignant tumour (No microscopic confirmation) | 12 | 1.3 |
| Haematolymphoid Neoplasms | 2 | 0.2 |
| All cases | 924 | 100.0 |

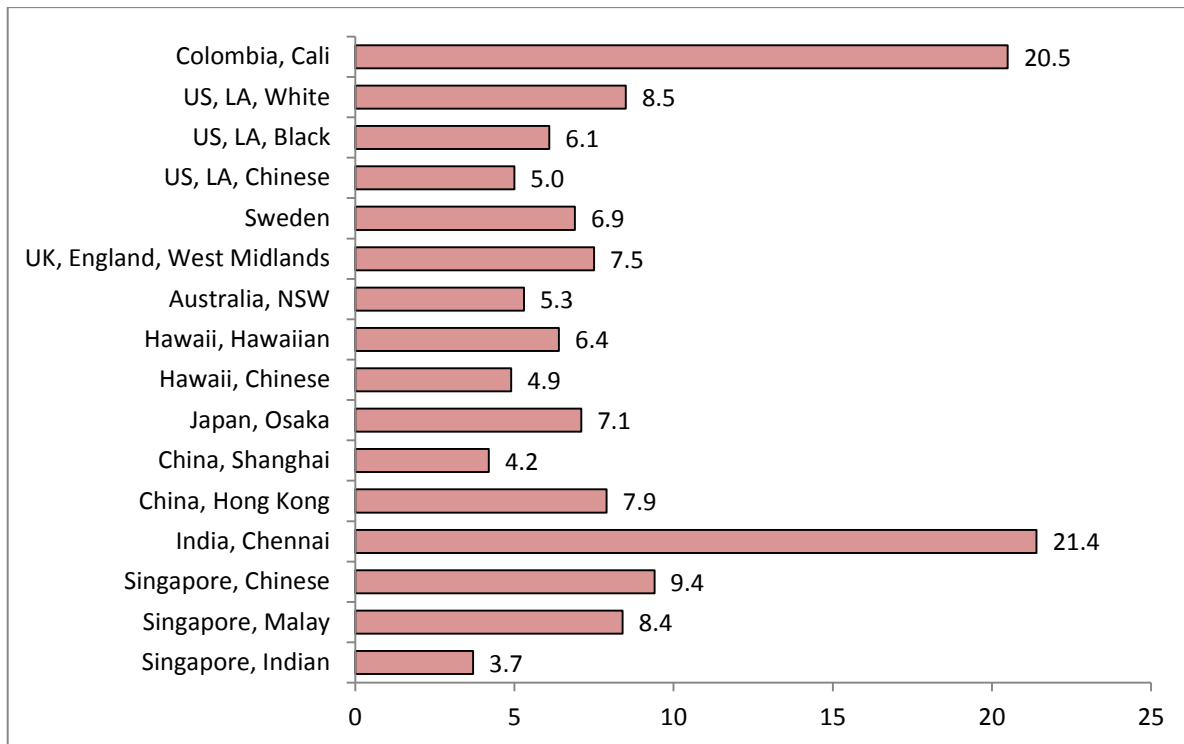


**CERVIX: AGE-STANDARDIZED
INCIDENCE, 1973-2012**



**CERVIX: AGE-SPECIFIC INCIDENCE,
2008-2012**

CERVIX: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 2003-2007
(per 100,000 per year)



12.21 Corpus uteri (ICD-9: 182 / ICD-O-3: C54)

The incidence rate of uterine cancer has been increasing steadily over the last forty years, from 4.1 per 100,000 in 1973-1977 to 13.1 per 100,000 in 2008-2012. It is the 4th most common cancer in Singaporean women in 2008-2012, up from 7th place in 1998-2002. The peak incidence appears to be between 50 and 70 years of age. The majority of uterine cancers originated from the endometrium, and among the histological subtypes, endometrioid adenocarcinoma was the most common.

Differences in risk between ethnic groups are small. This cancer ranks 4th among Chinese women, but among Indian and Malay women it is the 2nd and 5th most frequent cancer, respectively. It constitutes between 5.9% and 9.1% of all female cancers in the three ethnic groups.

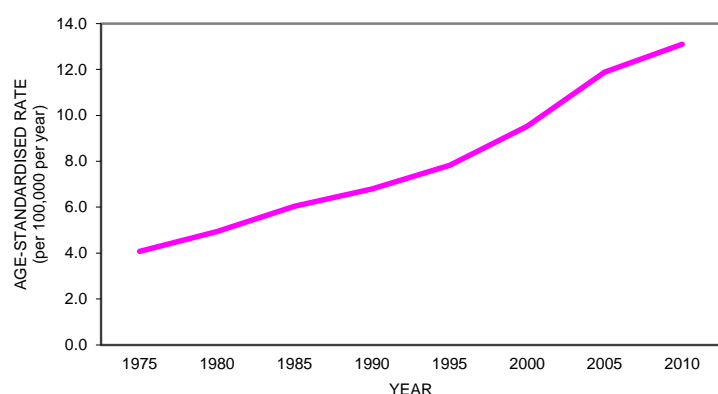
As a whole, the rates of uterine cancer among Singapore females are lower than that of Sweden, UK, and ethnic Chinese in Hawaii, but higher than that of India, China, and Japan.

| INCIDENCE DATA (2008-2012) | | Females | | |
|-------------------------------|-------|---------|------|---------------|
| | No. | % | ASR | RR (95% CI) |
| All residents | 1,784 | 6.1 | 13.1 | - |
| Chinese | 1,414 | 5.9 | 13.1 | 1.0 |
| Malays | 202 | 7.1 | 13.0 | 1.0 (0.9-1.2) |
| Indians | 132 | 9.1 | 15.3 | 1.1 (0.9-1.3) |

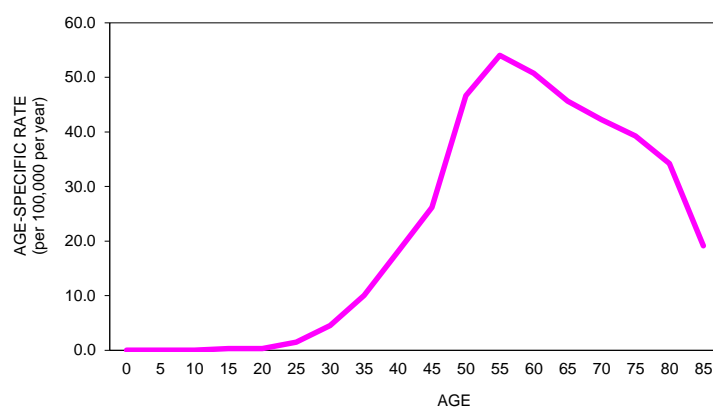
| SUBSITES 2008-2012 | | |
|--------------------|---|--------|
| ICD9 | SUBSITE | Female |
| 182.0 | Corpus uteri, except isthmus | 1,781 |
| 182.1 | Isthmus | 1 |
| 182.8 | Other specified sites of body of uterus | 2 |
| All cases | | 1,784 |

| HISTOLOGY 2008-2012 | NO. | % |
|---|-------|------|
| Endometrioid Adenocarcinoma | 1,297 | 72.7 |
| Malignant Mullerian Mixed Tumour / Carcinosarcoma | 102 | 5.7 |
| Serous Adenocarcinoma | 84 | 4.7 |
| Leiomyosarcoma | 58 | 3.2 |
| Adenocarcinoma, NOS | 51 | 2.9 |
| Mixed Cell Adenocarcinoma | 51 | 2.9 |
| Endometrial Stromal Sarcoma | 38 | 2.1 |
| Clear Cell Adenocarcinoma | 30 | 1.7 |
| Adenosarcoma | 15 | 0.8 |
| Smooth Muscle Tumour of uncertain malignant potential | 12 | 0.7 |
| Carcinoma, NOS | 9 | 0.5 |
| Mucinous Adenocarcinoma | 5 | 0.3 |
| Neuroendocrine Carcinoma | 5 | 0.3 |

| | | |
|---|--------------|--------------|
| Squamous Cell Carcinoma | 4 | 0.2 |
| Sarcoma | 3 | 0.2 |
| Neoplasm, malignant, NOS | 3 | 0.2 |
| Transitional Cell Carcinoma, NOS | 1 | 0.1 |
| Liposarcoma | 1 | 0.1 |
| Total with histology | 1,769 | 99.1 |
| Clinically malignant tumour (No microscopic confirmation) | 15 | 0.8 |
| Haematolymphoid Neoplasms | 1 | 0.1 |
| All cases | 1,785 | 100.0 |

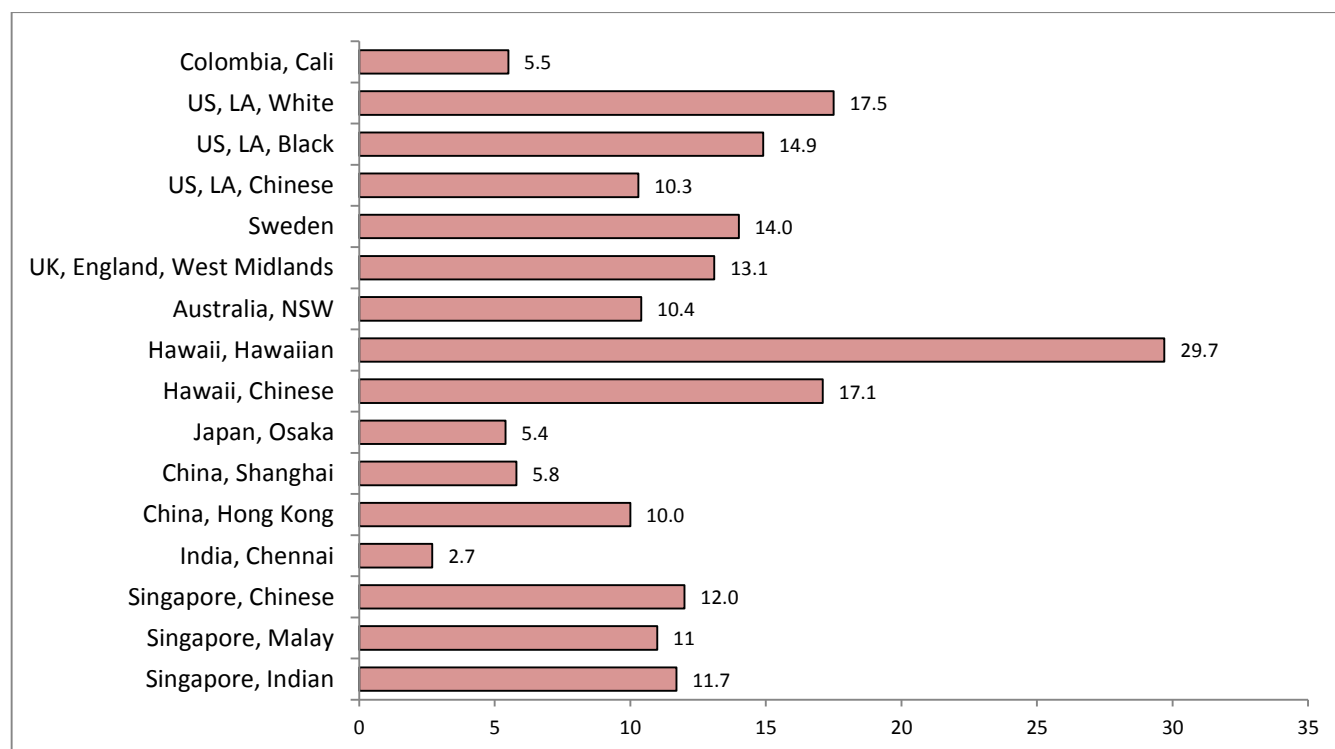


**UTERUS: AGE-STANDARDIZED
INCIDENCE, 1973-2012**



**UTERUS: AGE-SPECIFIC INCIDENCE,
2008-2012**

**UTERUS: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 2003-2007
(per 100,000 per year)**



12.22 Ovary and uterine adnexa (ICD-9: 183 / ICD-O-3: C56-C57)

Ovarian cancer was the 5th most frequent cancer among Singapore women and accounts for 5.5% of all female cancers diagnosed in 2008-2012. A steady increase has been observed over the last four decades, from 6.2 per 100,000 in 1973-1977 to 12.5 per 100,000 in 2008-2012. The incidence rate of this cancer rose sharply after the age of 35-40. Incidence rates for cancer of the ovary in Singapore are higher than those of Australia, Japan, China, and India, but lower than that of the UK.

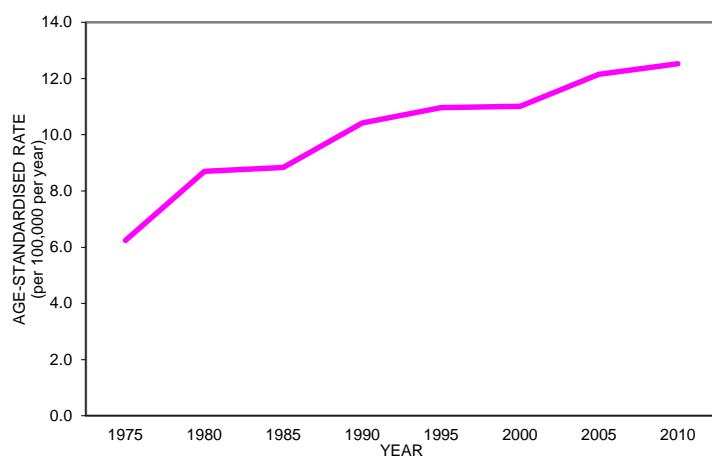
An interesting feature is that this is one of the few cancers for which Malays have a higher risk than Chinese. The risk for ovarian cancer among Malay women has been, on average, 10-20% higher than for Chinese over the period 1973-2012.

| INCIDENCE DATA (2008-2012) | | Females | | |
|-------------------------------|-------|---------|------|---------------|
| | No. | % | ASR | RR (95% CI) |
| All residents | 1,607 | 5.5 | 12.5 | - |
| Chinese | 1,264 | 5.2 | 12.5 | 1.0 |
| Malays | 212 | 7.4 | 14.0 | 1.1 (1.0-1.3) |
| Indians | 96 | 6.6 | 11.0 | 0.8 (0.7-1.0) |

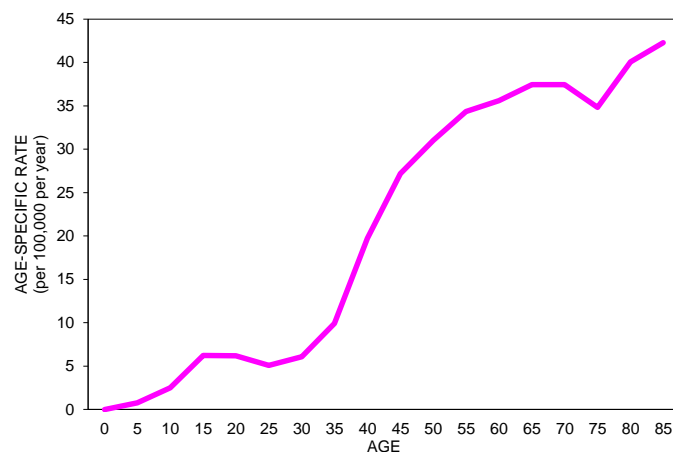
| SUBSITES 2008-2012 | | |
|--------------------|-----------------------------|--------|
| ICD9 | SUBSITE | Female |
| 183.0 | Ovary | 1,588 |
| 183.2 | Fallopian tube | 14 |
| 183.3 | Broad ligament of uterus | 2 |
| 183.4 | Parametrium | 1 |
| 183.9 | Uterine adnexa, unspecified | 2 |
| All cases | | 1,607 |

| HISTOLOGY 2008-2012 | | NO. | % |
|-----------------------------|---|-----|------|
| Serous tumours | | | |
| | Serous Carcinoma | 401 | 24.9 |
| | Serous Tumour, NOS of low malignant potential | 53 | 3.3 |
| | Serous Adenofibroma of borderline malignancy | 6 | 0.4 |
| Mucinous tumours | | | |
| | Mucinous Adenocarcinoma | 98 | 6.1 |
| | Mucinous Cystic Tumour of borderline malignancy | 212 | 13.2 |
| | Mucinous Adenofibroma of borderline malignancy | 2 | 0.1 |
| Endometrioid tumours | | | |
| | Endometrioid Adenocarcinoma | 195 | 12.1 |
| | Endometrioid Adenofibroma, malignant | 3 | 0.2 |

| | | |
|---|--------------|--------------|
| Clear Cell tumours | | |
| Clear Cell Adenocarcinoma | 224 | 13.9 |
| Mesonephroma, malignant | 1 | 0.1 |
| Other Epithelial tumours | | |
| Adenocarcinoma, NOS | 126 | 7.8 |
| Papillary Adenocarcinoma | 4 | 0.2 |
| Transitional Cell Carcinoma, NOS | 7 | 0.4 |
| Squamous Cell Carcinoma | 7 | 0.4 |
| Carcinoma, NOS | 15 | 0.9 |
| Sex cord- stromal tumours | | |
| Steroid Cell Tumour, malignant | 1 | 0.1 |
| Granulosa Cell Tumour, malignant | 48 | 3.0 |
| Granulosa Cell-Theca Cell Tumour | 1 | 0.1 |
| Mixed sex cord- stromal tumours | | |
| Sertoli-Leydig Cell Tumour | 12 | 0.7 |
| Sex Cord-Stromal Tumour, NOS | 4 | 0.2 |
| Germ cell tumours | | |
| Teratoma, malignant | 28 | 1.7 |
| Yolk Sac Tumour | 12 | 0.7 |
| Dysgerminoma | 6 | 0.4 |
| Mixed Germ Cell Tumour | 3 | 0.2 |
| Teratoma, NOS | 3 | 0.2 |
| Monodermal teratoma & somatic -type tmours | | |
| Struma Ovarii, malignant | 1 | 0.1 |
| Neuroendocrine tumours | | |
| Neuroendocrine Carcinoma | 11 | 0.7 |
| Strumal Carcinoid | 1 | 0.1 |
| Sebaceous tumours | | |
| Sebaceous Carcinoma | 1 | 0.1 |
| Mesenchymal tumours | | |
| Leiomyosarcoma | 2 | 0.1 |
| Endometrial Stromal Sarcoma | 1 | 0.1 |
| Fibrosarcoma | 1 | 0.1 |
| Sarcoma | 2 | 0.1 |
| Other neoplasms | | |
| Malignant Mullerian Mixed Tumour / Carcinosarcoma | 34 | 2.1 |
| Primitive Neuroectodermal Tumour | 0 | 0.0 |
| Smooth Muscle Tumour of uncertain malignant potential | 0 | 0.0 |
| Neoplasm, malignant, NOS | 8 | 0.5 |
| Total with histology | 1,534 | 95.2 |
| Clinically malignant tumour (No microscopic confirmation) | 73 | 4.5 |
| Haematolymphoid Neoplasms | 5 | 0.3 |
| All cases | 1,612 | 100.0 |

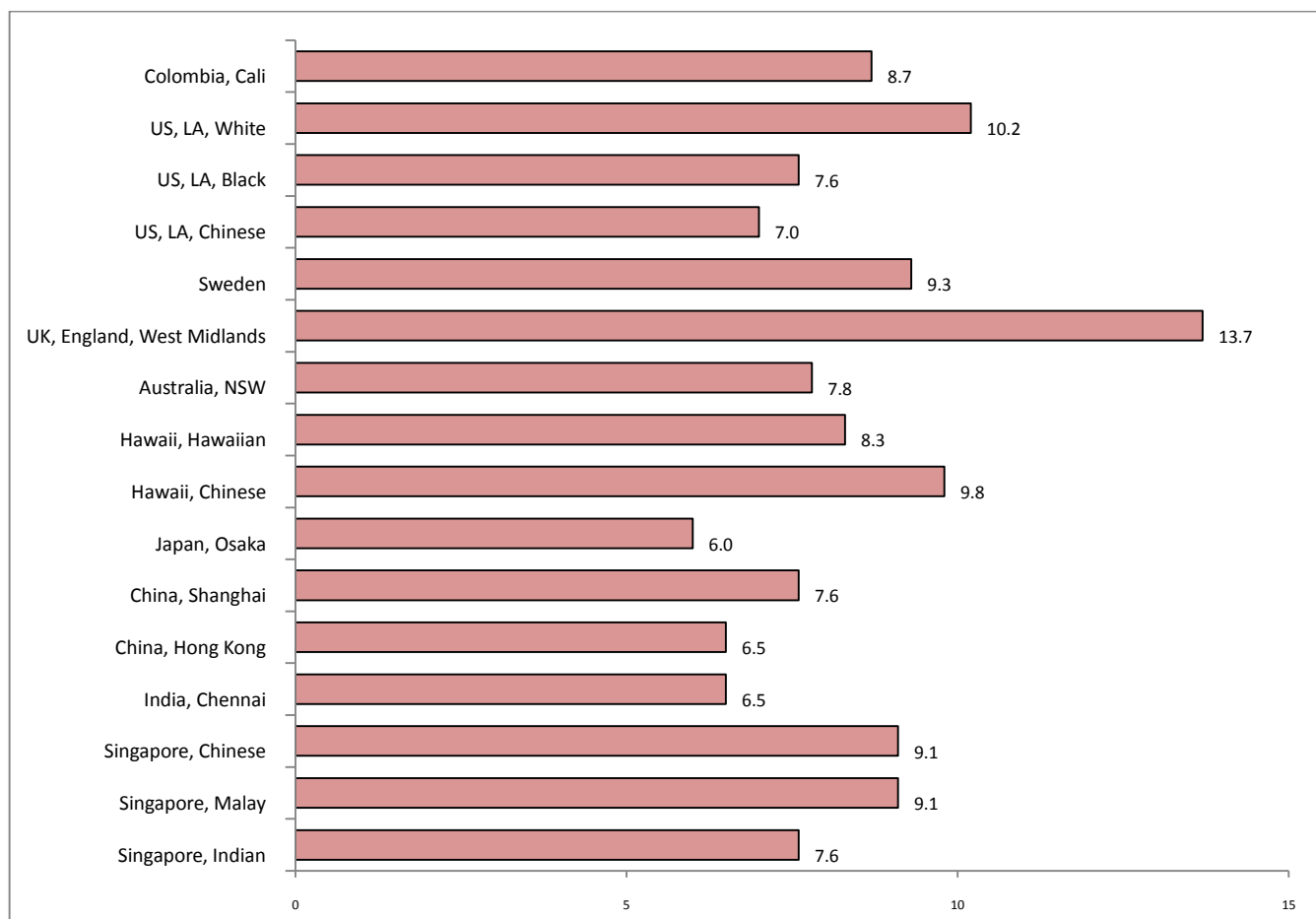


OVARY: AGE-STANDARDIZED INCIDENCE, 1973-2012



OVARY: AGE-SPECIFIC INCIDENCE, 2008-2012

OVARY: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 2003-2007 (per 100,000 per year)



12.23 Prostate (ICD-9: 185 / ICD-O-3: C61)

Prostate cancer was the third most frequent cancer among Singapore males and accounted for 12.0% of all male cancers diagnosed in 2008-2012. This site also has the second-highest upward average annual percentage change among males over the past 10 years. The incidence has been on an upward trend over the last 40 years, from 5.2 per 100,000 in 1973-1977 to 9.7 per 100,000 in 1988-1992 before accelerating to reach 28.5 per 100,000 in 2008-2012. The mortality of prostate cancer has remained fairly stable over the period 1998-2012, with age-standardized mortality rates between 4.8 and 5.9 per 100,000. The age-specific incidence rate rose sharply after 50 years of age, peaking at about 80 years.

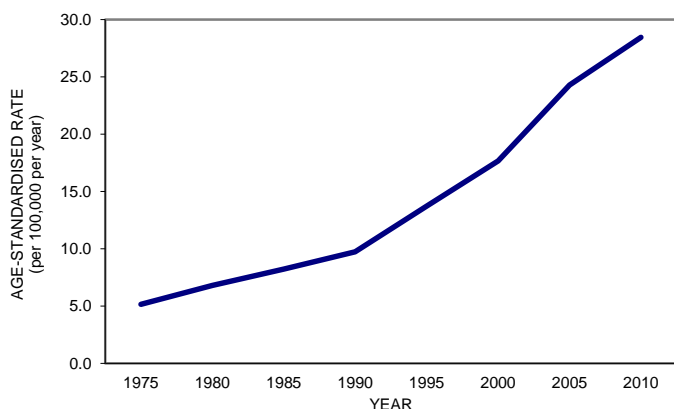
Malay and Indian men appear to have a lower risk of this disease relative to Chinese. However, the increase in rates over time is observed in all ethnic groups. Prostate cancer was the 4th most frequent cancer among Malay men and the 2nd most frequent cancer among Indian men in 2008-2012.

Singapore males had higher rates of prostate cancer than males in China, Japan, and India, but these rates are still much lower than those in the US, UK, and Australia.

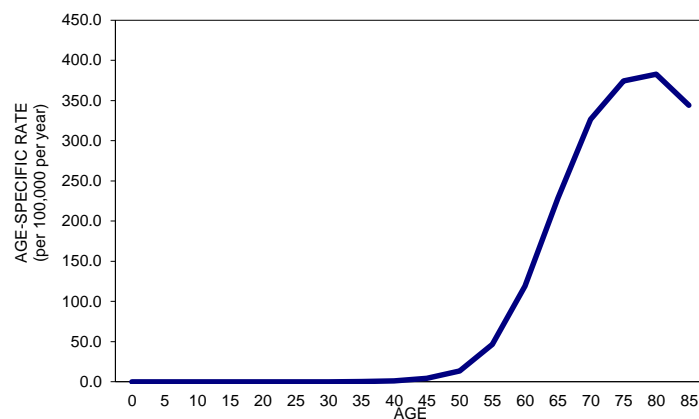
| INCIDENCE DATA (2008-2012) | | | Males | |
|-------------------------------|-------|------|-------|---------------|
| | No. | % | ASR | RR (95% CI) |
| All residents | 3,324 | 12.0 | 28.5 | - |
| Chinese | 2,857 | 12.2 | 29.9 | 1.0 |
| Malays | 218 | 9.3 | 19.5 | 0.6 (0.6-0.7) |
| Indians | 158 | 12.6 | 20.3 | 0.7 (0.6-0.8) |

| SUBSITES 2008-2012 | | |
|--------------------|------------------|--------------|
| ICD9 | SUBSITE | Male |
| 185 | Prostate | 3,324 |
| | All cases | 3,324 |

| HISTOLOGY 2008-2012 | NO. | % |
|---|--------------|--------------|
| Adenocarcinoma, NOS | 3,154 | 94.9 |
| Ductal Adenocarcinoma | 31 | 0.9 |
| Basal Cell Carcinoma | 1 | 0.0 |
| Carcinoma, NOS | 16 | 0.5 |
| Neuroendocrine Carcinoma | 0 | 0.0 |
| Leiomyosarcoma | 1 | 0.0 |
| Embryonal Rhabdomyosarcoma | 1 | 0.0 |
| Primitive Neuroectodermal Tumour | 0 | 0.0 |
| Neoplasm, malignant, NOS | 5 | 0.2 |
| Total with histology | 3,209 | 96.5 |
| Clinically malignant tumour (No microscopic confirmation) | 115 | 3.5 |
| All cases | 3,324 | 100.0 |

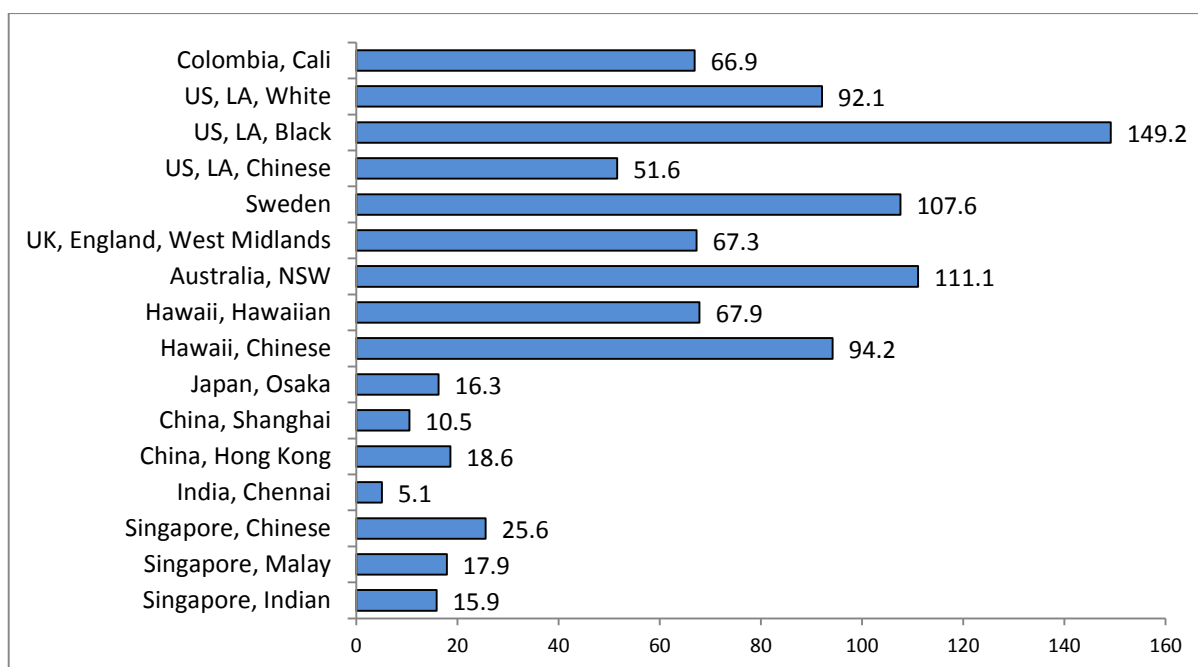


PROSTATE: AGE-STANDARDIZED INCIDENCE, 1973-2012



PROSTATE: AGE-SPECIFIC INCIDENCE, 2008-2012

PROSTATE: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 2003-2007 (per 100,000 per year)



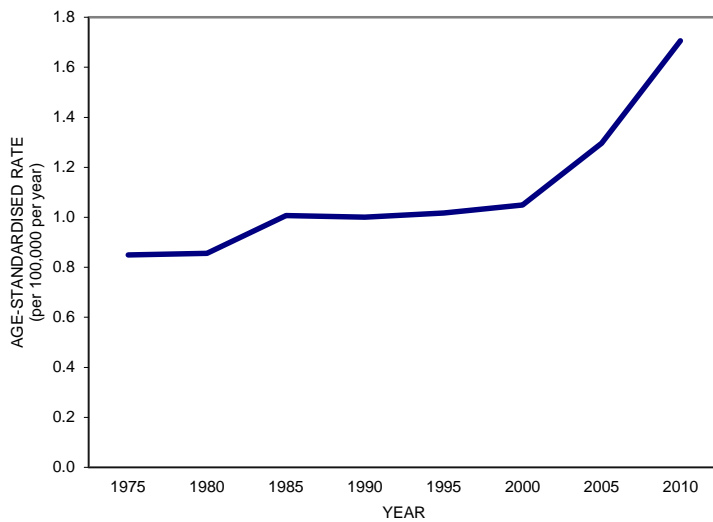
12.24 Testis (ICD-9: 186 / ICD-O-3: C62)

The incidence of testicular cancer was low and remained fairly constant at 0.8-1.0 per 100,000 from 1973-2002. However, over the last 10 years, there has been an upward trend from 1.0 per 100,000 in 1998-2002 to 1.3 per 100,000 in 2003-2007 to 1.7 per 100,000 in 2008-2012. There were 169 cases in 2008-2012, of which the majority were seminomas and mixed germ cell tumours. Of the three ethnic groups, Malay males have the highest age-standardized incidence rate and appear to be most at risk for testicular cancer. Incidence rates of testicular cancer in Singapore are low compared to the US, UK, and Australia.

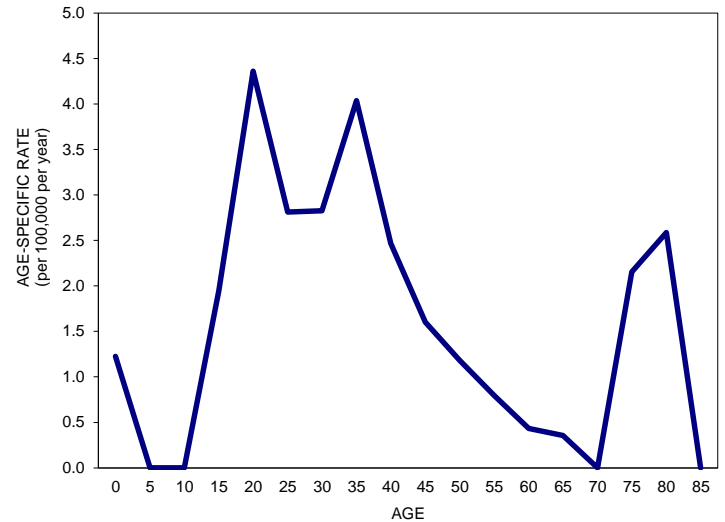
| INCIDENCE DATA (2008-2012) | | | Males | |
|-------------------------------|-----|-----|-------|---------------|
| | No. | % | ASR | RR (95% CI) |
| All residents | 169 | 0.6 | 1.7 | - |
| Chinese | 107 | 0.5 | 1.4 | 1.0 |
| Malays | 36 | 1.5 | 2.8 | 1.8 (1.3-2.7) |
| Indians | 13 | 1.0 | 1.5 | 0.9 (0.5-1.5) |

| SUBSITES 2008-2012 | | | |
|--------------------|------------------------------|------------|----------|
| ICD9 | SUBSITE | Male | Female |
| 186.0 | Undescended testis | 1 | 0 |
| 186.9 | Other and unspecified testis | 168 | 0 |
| All cases | | 169 | 0 |

| HISTOLOGY 2008-2012 | NO. | % |
|---|------------|--------------|
| Seminoma | 103 | 55.1 |
| Mixed Germ Cell Tumour | 33 | 17.6 |
| Embryonal Carcinoma | 17 | 9.1 |
| Teratoma, malignant | 5 | 2.7 |
| Choriocarcinoma combined with other germ cell elements | 3 | 1.6 |
| Leydig Cell Tumour, malignant | 2 | 1.1 |
| Neuroendocrine Carcinoma | 1 | 0.5 |
| Leiomyosarcoma | 1 | 0.5 |
| Rhabdomyosarcoma | 1 | 0.5 |
| Liposarcoma, well differentiated | 1 | 0.5 |
| Sarcoma | 1 | 0.5 |
| Total with histology | 168 | 89.8 |
| Clinically malignant tumour (No microscopic confirmation) | 1 | 0.5 |
| Haematolymphoid Neoplasms | 18 | 9.6 |
| All cases | 187 | 100.0 |

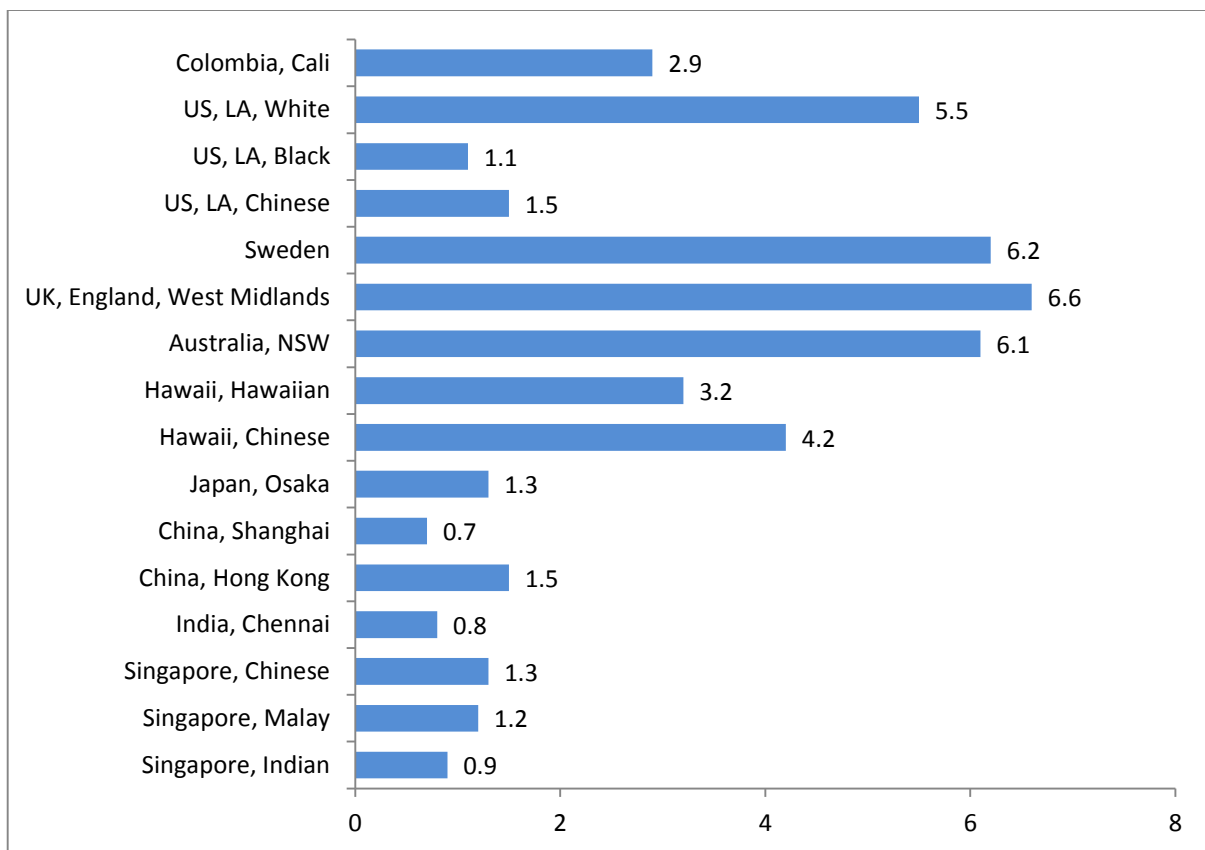


TESTIS: AGE-STANDARDIZED INCIDENCE, 1973-2012



TESTIS: AGE-SPECIFIC INCIDENCE, 2008-2012

TESTIS: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 2003-2007 (per 100,000 per year)



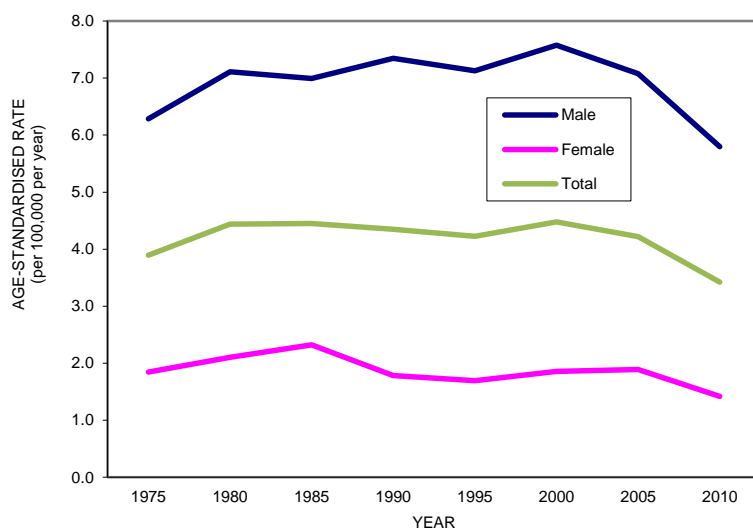
12.25 Bladder (ICD-9: 188 / ICD-O-3: C67)

In Singapore, cancer of the bladder occurs less frequently among females, with a male to female ratio of 3.4:1. Rates have been fairly stable throughout the period 1973-2012, with a suggestion of a slight decrease in rates among both males and females from the previous 5-year period. The age-specific incidence of bladder cancer appeared to rise sharply after approximately 55 years of age.

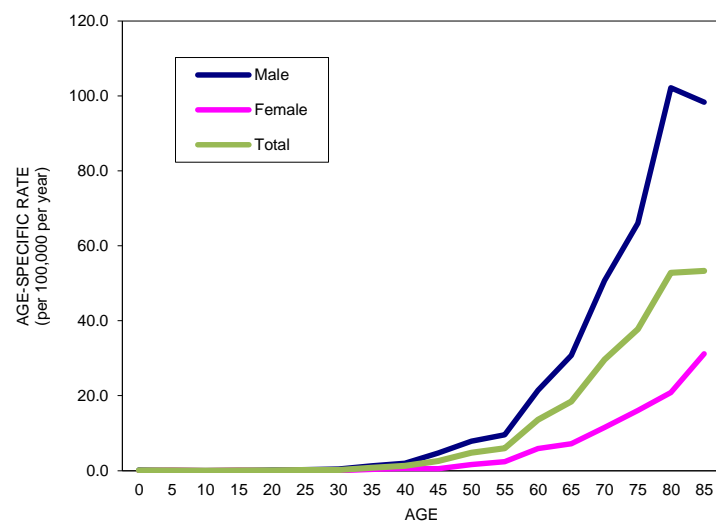
In males, Indians had a slightly lower risk compared with Chinese, while ethnic comparisons are difficult for females because of the small number of cases. Bladder cancer was the 8th most frequent cancer among Malay males and the 9th most frequent cancer among Indian males in the period 2008-2012.

| INCIDENCE DATA | | | Males | |
|--------------------|-----------------------------------|-----|---------|---------------|
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 703 | 2.5 | 5.8 | - |
| Chinese | 559 | 2.4 | 5.7 | 1.0 |
| Malays | 82 | 3.5 | 6.9 | 1.2 (0.9-1.5) |
| Indians | 41 | 3.3 | 5.0 | 0.8 (0.6-1.1) |
| INCIDENCE DATA | | | Females | |
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 206 | 0.7 | 1.4 | - |
| Chinese | 178 | 0.7 | 1.5 | 1.0 |
| Malays | 12 | 0.4 | 0.9 | 0.6 (0.3-1.1) |
| Indians | 10 | 0.7 | 1.2 | 0.8 (0.4-1.6) |
| INCIDENCE DATA | | | Total | |
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 909 | 1.6 | 3.4 | - |
| Chinese | 737 | 1.6 | 3.4 | 1.0 |
| Malays | 94 | 1.8 | 3.6 | 1.0 (0.8-1.3) |
| Indians | 51 | 1.9 | 3.1 | 0.9 (0.7-1.2) |
| SUBSITES 2008-2012 | | | | |
| ICD9 | SUBSITE | | Male | Female |
| 188.0 | Trigone of urinary bladder | | 9 | 5 |
| 188.1 | Dome of urinary bladder | | 16 | 5 |
| 188.2 | Lateral wall of urinary bladder | | 143 | 40 |
| 188.3 | Anterior wall of urinary bladder | | 8 | 2 |
| 188.4 | Posterior wall of urinary bladder | | 26 | 13 |
| 188.5 | Bladder neck | | 12 | 4 |
| 188.6 | Ureteric orifice | | 17 | 5 |
| 188.7 | Urachus | | 6 | 2 |
| 188.8 | Other specified sites of bladder | | 48 | 16 |
| 188.9 | Bladder, part unspecified | | 418 | 114 |
| All cases | | | 703 | 206 |

| HISTOLOGY 2008-2012 | NO. | % |
|---|------------|--------------|
| Papillary Urothelial Carcinoma | 500 | 54.8 |
| Urothelial Carcinoma, NOS | 254 | 27.8 |
| Papillary Urothelial neoplasm of low malignant potential | 59 | 6.5 |
| Adenocarcinoma and other subtypes | 23 | 2.5 |
| Squamous Cell Carcinoma | 14 | 1.5 |
| Carcinoma, NOS | 10 | 1.1 |
| Neoplasm, malignant, NOS | 10 | 1.1 |
| Sarcomatoid Carcinoma | 5 | 0.5 |
| Neuroendocrine Carcinoma | 3 | 0.3 |
| Sarcoma | 3 | 0.3 |
| Small Cell Carcinoma | 2 | 0.2 |
| Primitive Neuroectodermal Tumour | 1 | 0.1 |
| Yolk Sac Tumour | 1 | 0.1 |
| Total with histology | 885 | 96.9 |
| Clinically malignant tumour (No microscopic confirmation) | 24 | 2.6 |
| Haematolymphoid Neoplasms | 4 | 0.4 |
| All cases | 913 | 100.0 |

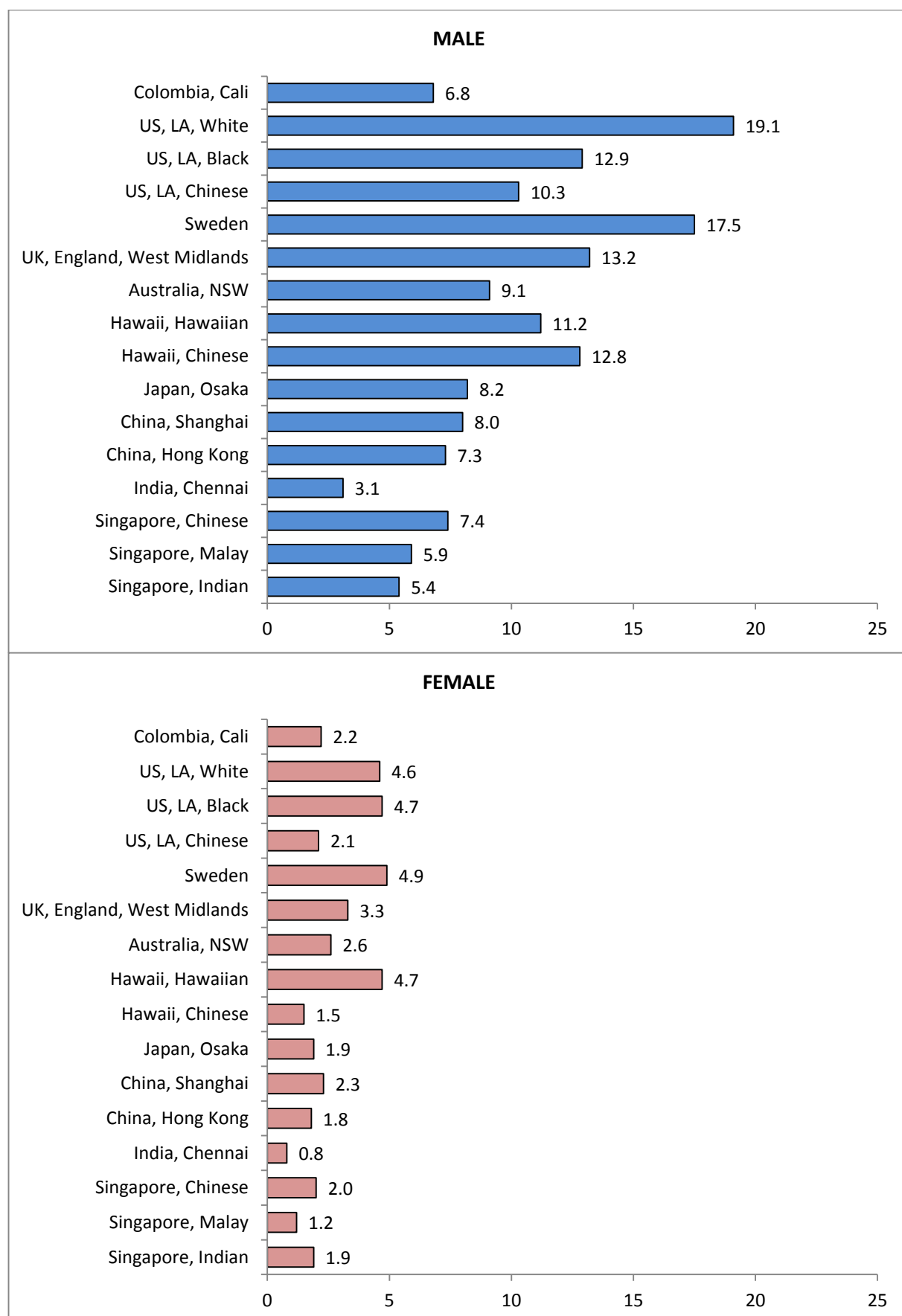


BLADDER: AGE-STANDARDIZED INCIDENCE BY SEX, 1973-2012



BLADDER: AGE-SPECIFIC INCIDENCE BY SEX, 2008-2012

BLADDER: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 2003-2007
(per 100,000 per year)



12.26 Kidney and other urinary organs (ICD-9: 189 / ICD-O-3: C64-66, C68)

There were a total of 1,519 cases of kidney cancer in 2008-2012. Kidney cancer was about twice as common in males compared to females. Among the three ethnic groups, the Chinese have the highest risk of being diagnosed with kidney cancer.

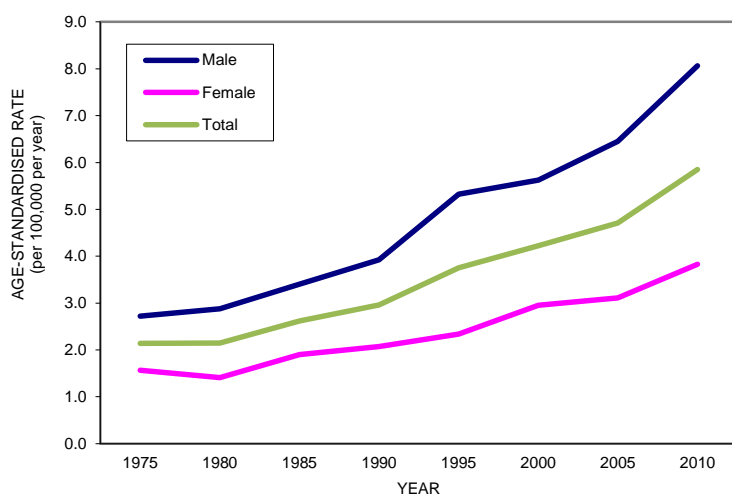
Increasing detection of incidental tumours and growing obesity rates are possible factors associated with the increase in renal cell carcinoma. Kidney cancer had the highest upward average annual percentage change (AAPC) among males in all cancer sites.

The upward trend in incidence has continued in both males and females, with a three-fold increase in rates among males from 2.7 per 100,000 in 1973-1977 to 8.1 per 100,000 in 2008-2012, and rates among females approximately doubling from 1.6 per 100,000 in 1973-1977 to 3.8 per 100,000 in 2008-2012.

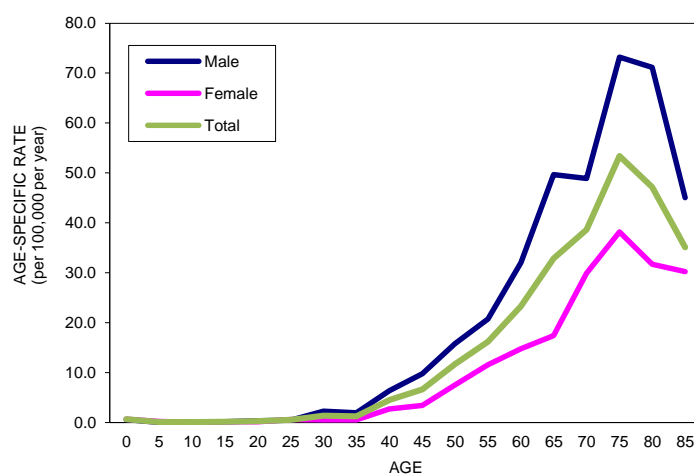
| INCIDENCE DATA (2008-2012) | | | Males | |
|-------------------------------|-------|-----|---------|---------------|
| | No. | % | ASR | RR (95% CI) |
| All residents | 990 | 3.6 | 8.1 | - |
| Chinese | 855 | 3.7 | 8.7 | 1.0 |
| Malays | 67 | 2.8 | 5.4 | 0.6 (0.5-0.8) |
| Indians | 46 | 3.7 | 5.2 | 0.6 (0.4-0.8) |
| INCIDENCE DATA (2008-2012) | | | Females | |
| | No. | % | ASR | RR (95% CI) |
| All residents | 529 | 1.8 | 3.8 | - |
| Chinese | 450 | 1.9 | 4.0 | 1.0 |
| Malays | 42 | 1.5 | 2.7 | 0.7 (0.5-1.0) |
| Indians | 26 | 1.8 | 3.3 | 0.8 (0.5-1.1) |
| INCIDENCE DATA (2008-2012) | | | Total | |
| | No. | % | ASR | RR (95% CI) |
| All residents | 1,519 | 2.7 | 5.9 | - |
| Chinese | 1,305 | 2.7 | 6.2 | 1.0 |
| Malays | 109 | 2.1 | 4.0 | 0.6 (0.5-0.8) |
| Indians | 72 | 2.7 | 4.2 | 0.7 (0.5-0.8) |

| SUBSITES 2008-2012 | | | |
|--------------------|---|------|--------|
| ICD9 | SUBSITE | Male | Female |
| 189.0 | Kidney, except pelvis | 851 | 433 |
| 189.1 | Renal pelvis | 66 | 44 |
| 189.2 | Ureter | 66 | 42 |
| 189.3 | Urethra | 4 | 5 |
| 189.8 | Other specified sites of urinary organs | 1 | 1 |
| 189.9 | Urinary organ, site unspecified | 2 | 4 |
| All cases | | 990 | 529 |

| HISTOLOGY 2008-2012 | NO. | % |
|---|--------------|--------------|
| Renal Cell Carcinoma, NOS | 517 | 33.9 |
| Clear Cell Renal Cell Carcinoma | 397 | 26.0 |
| Urothelial Carcinoma, NOS | 105 | 6.9 |
| Papillary Urothelial Carcinoma | 101 | 6.6 |
| Papillary Renal Cell Carcinoma | 68 | 4.5 |
| Chromophobe Cell Renal Cell Carcinoma | 36 | 2.4 |
| Carcinoma, NOS | 30 | 2.0 |
| Sarcomatoid Renal Cell Carcinoma | 29 | 1.9 |
| Squamous Cell Carcinoma | 8 | 0.5 |
| Acquired cystic disease-associated Renal Cell Carcinoma | 7 | 0.5 |
| Neoplasm, malignant, NOS | 6 | 0.4 |
| Giant Cell and Spindle Cell Carcinoma | 5 | 0.3 |
| Nephroblastoma, NOS | 4 | 0.3 |
| Clear Cell Sarcoma of Kidney | 3 | 0.2 |
| Neuroendocrine Carcinoma | 2 | 0.1 |
| Malignant Cystic Nephroma | 1 | 0.1 |
| Mesoblastic Nephroma | 1 | 0.1 |
| Malignant Melanoma, NOS | 1 | 0.1 |
| Tumour Cells, malignant | 1 | 0.1 |
| Sarcoma | 7 | 0.5 |
| Total with histology | 1,329 | 87.1 |
| Clinically malignant tumour (No microscopic confirmation) | 189 | 12.4 |
| Haematolymphoid Neoplasms | 8 | 0.5 |
| All cases | 1,526 | 100.0 |

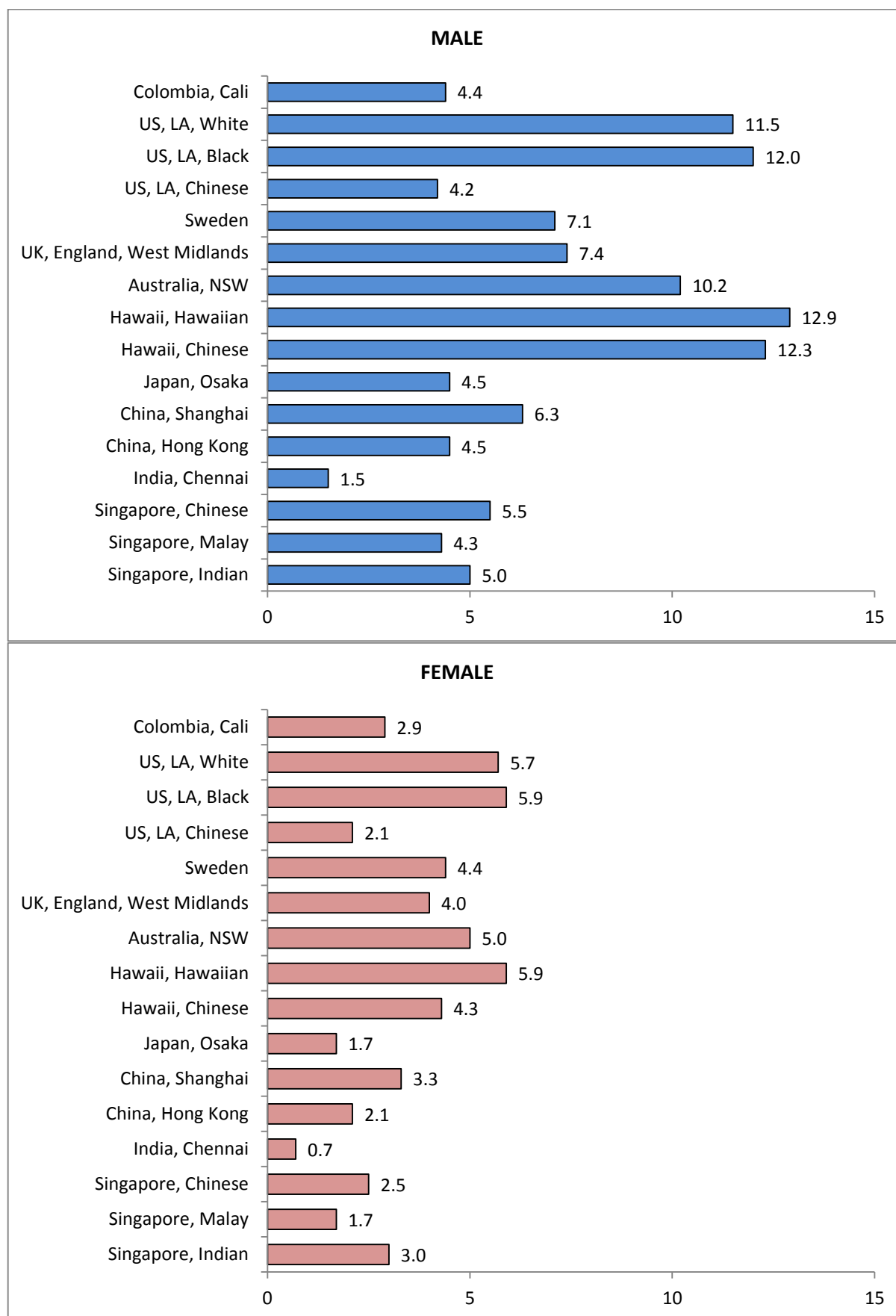


**KIDNEY: AGE-STANDARDIZED
INCIDENCE BY SEX, 1973-2012**



**KIDNEY: AGE-SPECIFIC INCIDENCE
BY SEX, 2008-2012**

KIDNEY: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 2003-2007



12.27 Eye (ICD-9:190 / ICD-O-3: C69)

The incidence of eye cancers in Singapore was low, with only a small number of cases from 2008-2012. The female to male ratio is approximately 1.4:1. Among the males, the Chinese appear to be at highest risk of developing malignant neoplasms of the eye; whereas among the females, the ethnic group that is most at risk is the Indians. However, these numbers should be interpreted with caution due to the small number of cases and corresponding large confidence intervals.

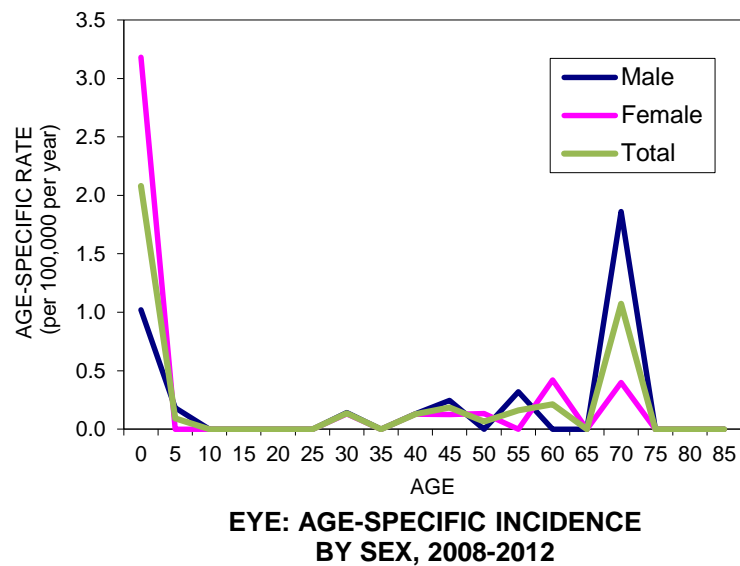
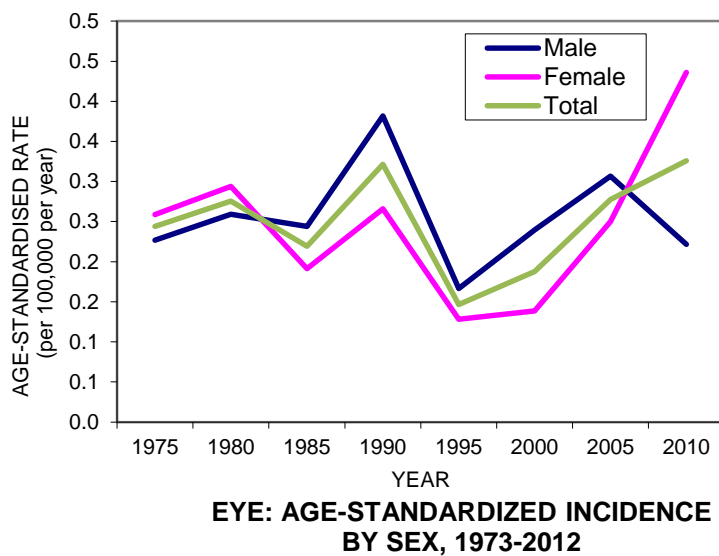
| INCIDENCE DATA (2008-2012) | | | | |
|-----------------------------------|-----|-----|--------------|---------------|
| | No. | % | Males | |
| | | | ASR | RR (95% CI) |
| All residents | 16 | 0.1 | 0.2 | - |
| Chinese | 13 | 0.1 | 0.3 | 1.0 |
| Malays | 1 | 0.0 | 0.1 | 0.4 (0.1-3.3) |
| Indians | 1 | 0.1 | 0.1 | 0.6 (0.1-4.6) |

| INCIDENCE DATA (2008-2012) | | | | |
|-----------------------------------|-----|-----|----------------|---------------|
| | No. | % | Females | |
| | | | ASR | RR (95% CI) |
| All residents | 22 | 0.1 | 0.4 | - |
| Chinese | 17 | 0.1 | 0.5 | 1.0 |
| Malays | 0 | 0.0 | 0.0 | 0.0 (0.0-0.0) |
| Indians | 4 | 0.3 | 0.8 | 1.5 (0.5-4.6) |

| INCIDENCE DATA (2008-2012) | | | | |
|-----------------------------------|-----|-----|--------------|---------------|
| | No. | % | Total | |
| | | | ASR | RR (95% CI) |
| All residents | 38 | 0.1 | 0.3 | - |
| Chinese | 30 | 0.1 | 0.4 | 1.0 |
| Malays | 1 | 0.0 | 0.0 | 0.2 (0.0-1.2) |
| Indians | 5 | 0.2 | 0.5 | 1.2 (0.5-3.0) |

| SUBSITES 2008-2012 | | | |
|---------------------------|--|-----------|-----------|
| ICD9 | SUBSITE | Male | Female |
| 190.0 | Eyeball, except conjunctiva, cornea, retina, and choroid | 2 | 1 |
| 190.1 | Orbit | 3 | 1 |
| 190.2 | Lacrimal gland | 1 | 1 |
| 190.3 | Conjunctiva | 1 | 1 |
| 190.5 | Retina | 6 | 14 |
| 190.6 | Choroid | 3 | 4 |
| All cases | | 16 | 22 |

| HISTOLOGY | NO. | % |
|--|-----------|-------------|
| Retinoblastoma | 18 | 18.2 |
| Malignant Melanoma, NOS | 10 | 10.1 |
| Squamous Cell Carcinoma | 2 | 2 |
| Papillary Squamous Cell Carcinoma | 0 | 0 |
| Basaloid Carcinoma | 0 | 0 |
| Adenocarcinoma, NOS | 1 | 1 |
| Adenocarcinoma with neuroendocrine differentiation | 0 | 0 |
| Adenoid Cystic Carcinoma | 2 | 2 |
| Carcinoma, NOS | 0 | 0 |
| Rhabdomyosarcoma | 1 | 1 |
| Liposarcoma, well differentiated | 1 | 1 |
| Total with histology | 35 | 35.4 |
| Clinically malignant tumour (No microscopic confirmation) | 3 | 3 |
| Haematolymphoid Neoplasms | 61 | 61.6 |
| All cases | 99 | 100 |



12.28 Brain and Central Nervous System (ICD-9: 191-2 / ICD-O-3: C70-72)

Cancers of the brain and central nervous system (CNS) continued to be relatively uncommon in Singapore, with 697 such cases in 2008-2012, comprising 1.2% of all incident cases of cancer. The incidence rates for all three major ethnic groups were lower than most other parts of the world. There was an upward trend in incidence rates of this cancer over the last 10 years for both males and females, from 2.4 per 100,000 in 1998-2002 to 3.2 per 100,000 in 2003-2007 to 3.7 per 100,000 in 2008-2012 for males; and from 2.0 per 100,000 in 1998-2002 to 2.7 per 100,000 in 2003-2007 to 3.1 per 100,000 in 2008-2012 for females. However, the gender ratio of incident cases remained at close to 1:1 throughout the years. There was no significant ethnic differences in risk.

Histologically, the majority of primary brain tumours are astrocytic neoplasms (glioblastomas and astrocytomas). Compared to other sites examined, the number of benign neoplasms is significant (1,223 cases), almost twice the number of malignant ones (refer to histology tables in Chapter 11).

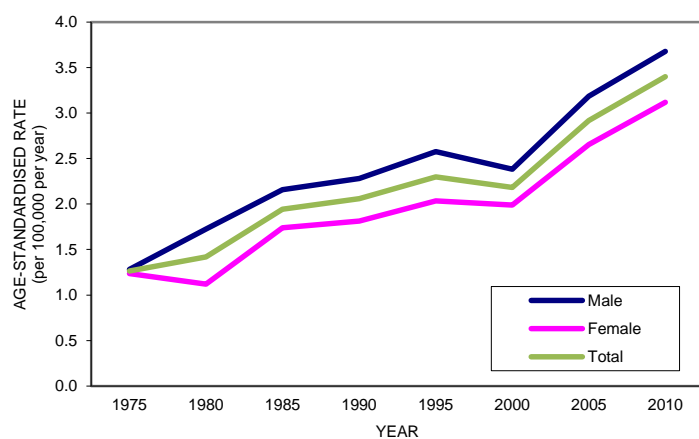
| INCIDENCE DATA | | | Males | |
|----------------|-----|-----|---------|---------------|
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 363 | 1.3 | 3.7 | - |
| Chinese | 282 | 1.2 | 3.8 | 1.0 |
| Malays | 45 | 1.9 | 3.5 | 1.0 (0.7-1.4) |
| Indians | 24 | 1.9 | 2.9 | 0.7 (0.5-1.1) |
| INCIDENCE DATA | | | Females | |
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 334 | 1.1 | 3.1 | - |
| Chinese | 258 | 1.1 | 3.2 | 1.0 |
| Malays | 40 | 1.4 | 3.2 | 1.0 (0.7-1.4) |
| Indians | 21 | 1.5 | 2.3 | 0.8 (0.5-1.3) |
| INCIDENCE DATA | | | Total | |
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 697 | 1.2 | 3.4 | - |
| Chinese | 540 | 1.1 | 3.5 | 1.0 |
| Malays | 85 | 1.6 | 3.3 | 1.0 (0.8-1.3) |
| Indians | 45 | 1.7 | 2.6 | 0.8 (0.6-1.1) |

| SUBSITES 2008-2012 | | | |
|--------------------|---------------------------------------|------|--------|
| ICD9 | SUBSITE | Male | Female |
| 191.0 | Cerebrum, except lobes and ventricles | 21 | 22 |
| 191.1 | Frontal lobe | 63 | 49 |
| 191.2 | Temporal lobe | 33 | 27 |
| 191.3 | Parietal lobe | 30 | 23 |
| 191.4 | Occipital lobe | 5 | 10 |

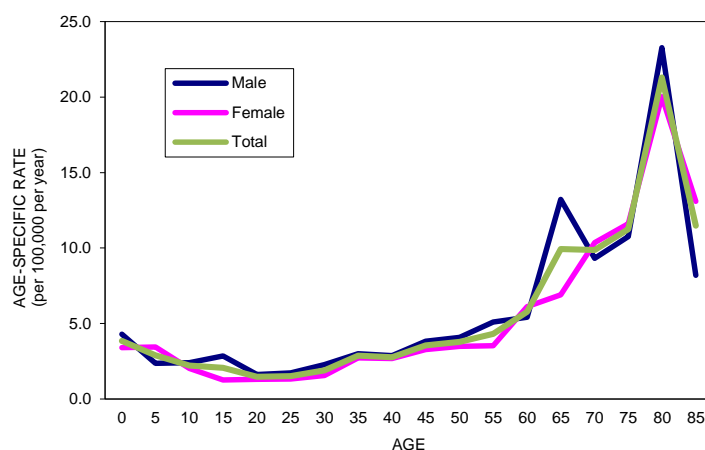
| | | | |
|------------------|---|------------|------------|
| 191.5 | Ventricles | 21 | 12 |
| 191.6 | Cerebellum NOS | 23 | 22 |
| 191.7 | Brain stem | 19 | 17 |
| 191.8 | Other parts of brain | 30 | 22 |
| 191.9 | Brain, unspecified | 62 | 54 |
| 192.0 | Cranial nerves | 4 | 3 |
| 192.1 | Cerebral meninges | 35 | 59 |
| 192.2 | Spinal cord | 15 | 10 |
| 192.3 | Spinal meninges | 1 | 3 |
| 192.8 | Other specified sites of nervous system | 1 | 0 |
| 192.9 | Nervous system, part unspecified | 0 | 1 |
| All cases | | 363 | 334 |

| HISTOLOGY 2008-2012 | NO. | % |
|--|------------|----------|
| Astrocytic and Oligodendroglial tumours | | |
| Glioblastoma, NOS | 183 | 23.3 |
| Pilocytic Astrocytoma | 31 | 3.9 |
| Astrocytoma | | |
| Astrocytoma, NOS | 28 | 3.6 |
| Astrocytoma, Anaplastic | 27 | 3.4 |
| Anaplastic Oligoastrocytoma | 27 | 3.4 |
| Oligodendroglioma, NOS | 19 | 2.4 |
| Oligodendroglioma, Anaplastic | 15 | 1.9 |
| Gliosarcoma | 11 | 1.4 |
| Subependymal Giant Cell Astrocytoma | 3 | 0.4 |
| Desmoplastic Infantile Astrocytoma | 2 | 0.3 |
| Fibrillary Astrocytoma | 2 | 0.3 |
| Astroblastoma | 1 | 0.1 |
| Angiocentric Glioma | 1 | 0.1 |
| Gliomatosis Cerebri | 1 | 0.1 |
| Protoplasmic Astrocytoma | 0 | 0.0 |
| Gemistocytic Astrocytoma | 0 | 0.0 |
| Pleomorphic Xanthoastrocytoma | 0 | 0.0 |
| Oligodendroblastoma | 0 | 0.0 |
| Ependymal and Choroid Plexus tumours | | |
| Ependymoma, NOS | 38 | 4.8 |
| Malignant Glioma, NOS | 36 | 4.6 |
| Subependymoma | 4 | 0.5 |
| Atypical Choroid Plexus Papilloma | 2 | 0.3 |
| Choroid Plexus Carcinoma | 1 | 0.1 |
| Neuronal and mixed Neuronal-glial tumours | | |
| Central Neurocytoma | 7 | 0.9 |
| Ganglioglioma, Anaplastic | 6 | 0.8 |
| Embryonal tumours | | |
| Medulloblastoma, NOS | 18 | 2.3 |
| Atypical Teratoid / Rhabdoid Tumour | 3 | 0.4 |
| CNS PNET | | |
| Primitive Neuroectodermal Tumour | 5 | 0.6 |
| Neuroepithelioma, NOS | 1 | 0.1 |

| | | |
|---|------------|------------|
| Neuroblastoma | 0 | 0.0 |
| Germ cell tumours | | |
| Germinoma | 10 | 1.3 |
| Teratoma, malignant, NOS | 2 | 0.3 |
| Mixed Germ Cell Tumour | 3 | 0.4 |
| Meningioma | | |
| Meningioma, malignant | 11 | 1.4 |
| Mesenchymal Non-Meningothelial tumours | | |
| Hemangioblastoma | 24 | 3.1 |
| Hemangiopericytoma, malignant | 3 | 0.4 |
| Sarcoma | 3 | 0.4 |
| Tumour Cells, malignant | 3 | 0.4 |
| Neoplasm, malignant, NOS | 9 | 1.1 |
| Neoplasm,uncertain whether benign or Malignant | 15 | 1.9 |
| Tumours of the Pineal region | | |
| Germinoma | 12 | 1.5 |
| Germ Cell Tumour | 2 | 0.3 |
| Pinealoma | 6 | 0.8 |
| Glioblastoma, NOS | 2 | 0.3 |
| Primitive Neuroectodermal Tumour | 1 | 0.1 |
| Carcinoma, NOS | 0 | 0.0 |
| Neoplasm, malignant, NOS | 1 | 0.1 |
| Tumours of the Sellar region | | |
| Craniopharyngioma | 33 | 4.2 |
| Germinoma | 4 | 0.5 |
| Total with histology | 613 | 78.0 |
| Clinically malignant tumour (No microscopic confirmation) | 87 | 11.1 |
| Haematolymphoid Neoplasms | 86 | 10.9 |
| All cases | 786 | 100 |

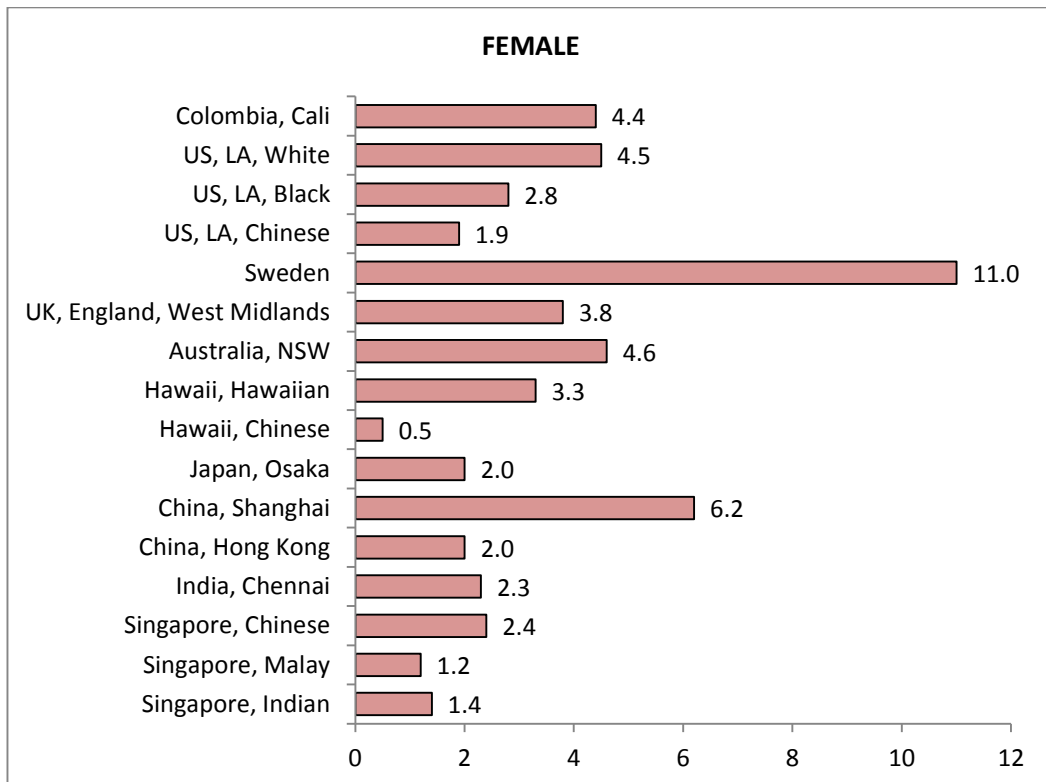
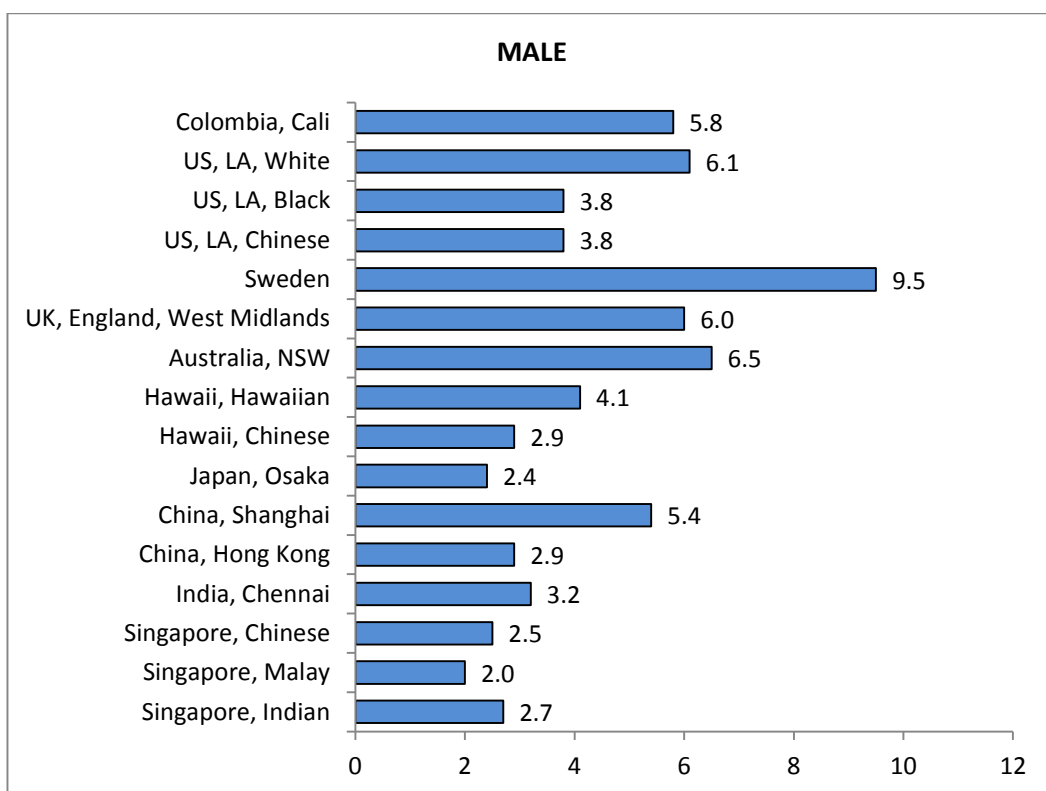


BRAIN AND CNS: AGE-STANDARDIZED BY SEX, 1973-2012



BRAIN AND CNS: AGE-SPECIFIC INCIDENCE BY SEX, 2008-2012

BRAIN AND CNS: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 2003-2007
(per 100,000 per year)



12.29 Thyroid (ICD-9: 193 / ICD-O-3: C73)

Thyroid cancer occurs more frequently in females; with the female-to-male ratio for incident cases for 2008-2012 standing at approximately 3.2:1. Papillary carcinomas, including the follicular variant, account for the majority of cases, followed by follicular carcinomas.

Rates appear to be fairly stable since 1983 for males, but there was an upward trend among females over the 40 year period. Thyroid cancer increased in rank from the 10th most common cancer among females in 2003-2007 to the 9th most common cancer among females in 2008-2012. The age-standardized rate for females was 7.8 per 100,000 in 2008-2012 compared with 3.8 per 100,000 in 1973-1977.

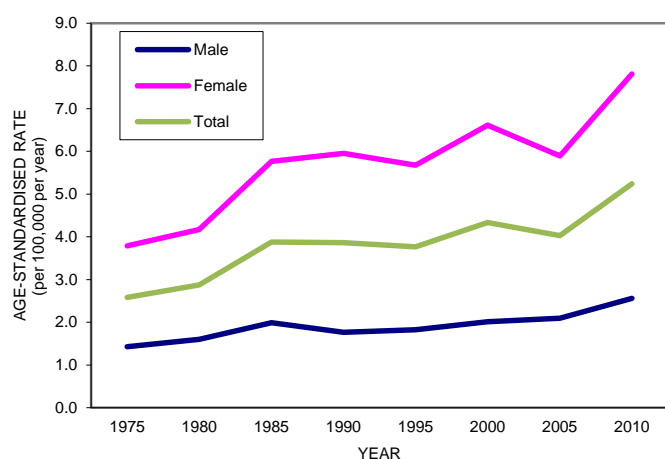
In contrast to many other cancers, the age-specific incidence was observed to rise at a younger age, particularly in females.

| INCIDENCE DATA | | | Males | |
|----------------|-------|-----|---------|---------------|
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 311 | 1.1 | 2.6 | - |
| Chinese | 230 | 1.0 | 2.4 | 1.0 |
| Malays | 48 | 2.0 | 3.8 | 1.5 (1.1-2.0) |
| Indians | 20 | 1.6 | 1.9 | 0.8 (0.5-1.3) |
| INCIDENCE DATA | | | Females | |
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 984 | 3.4 | 7.8 | - |
| Chinese | 775 | 3.2 | 8.0 | 1.0 |
| Malays | 115 | 4.0 | 7.8 | 1.0 (0.8-1.2) |
| Indians | 59 | 4.1 | 6.0 | 0.8 (0.6-1.0) |
| INCIDENCE DATA | | | Total | |
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 1,295 | 2.3 | 5.2 | - |
| Chinese | 1,005 | 2.1 | 5.3 | 1.0 |
| Malays | 163 | 3.1 | 5.8 | 1.1 (0.9-1.3) |
| Indians | 79 | 2.9 | 3.8 | 0.7 (0.6-0.9) |

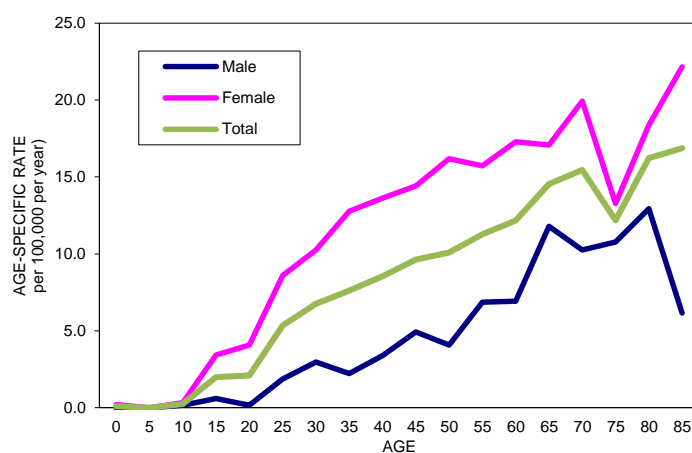
| SUBSITES 2008-2012 | | | |
|--------------------|-----------|------|--------|
| ICD9 | SUBSITE | Male | Female |
| 193 | Thyroid | 311 | 984 |
| | All cases | 311 | 984 |

| HISTOLOGY 2008-2012 | NO. | % |
|---------------------|-----|---|
|---------------------|-----|---|

| | | |
|---|--------------|--------------|
| Papillary Carcinoma | 1,035 | 78.5 |
| Follicular Carcinoma | 162 | 12.3 |
| Medullary Carcinoma | 33 | 2.5 |
| Carcinoma, Anaplastic, NOS | 22 | 1.7 |
| Carcinoma, NOS | 14 | 1.1 |
| Oncocytic Carcinoma | 10 | 0.8 |
| Neoplasm, malignant, NOS | 3 | 0.2 |
| Mixed Medullary-Papillary Carcinoma | 2 | 0.2 |
| Squamous Cell Carcinoma | 1 | 0.1 |
| Total with histology | 1,282 | 97.2 |
| Clinically malignant tumour (No microscopic confirmation) | 13 | 1.0 |
| Haematolymphoid Neoplasms | 24 | 1.8 |
| All cases | 1,319 | 100.0 |

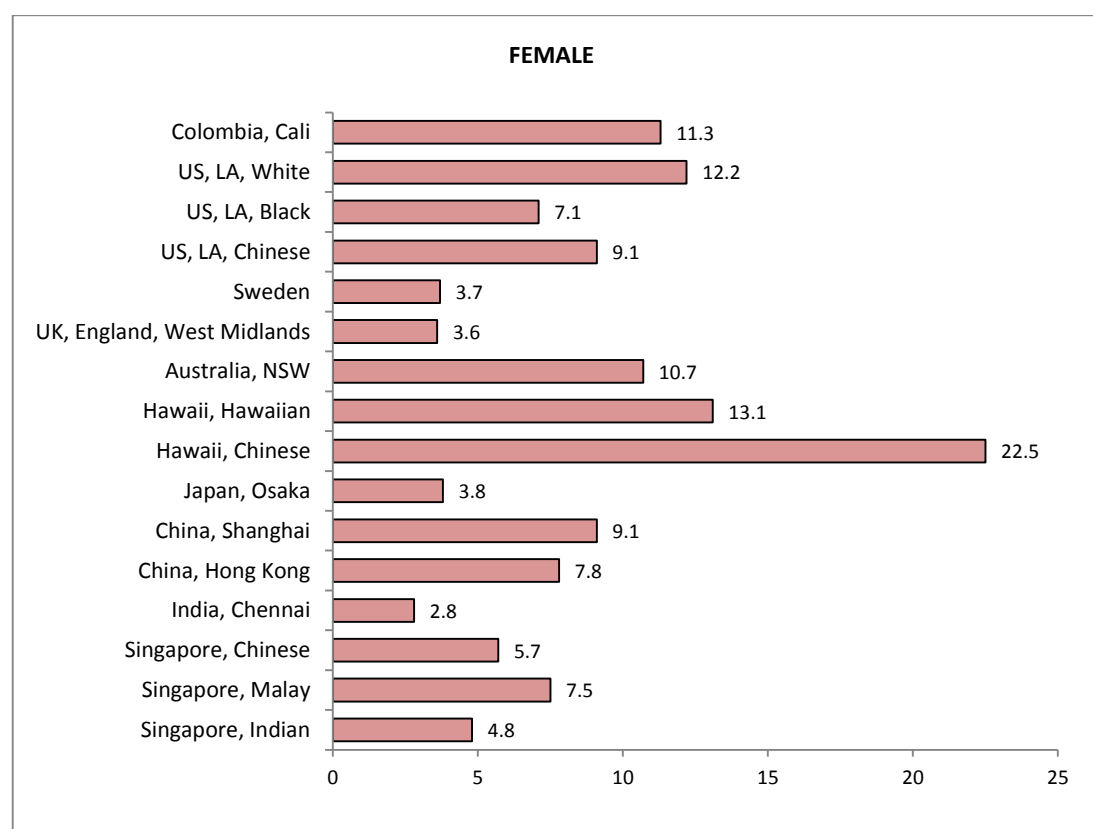
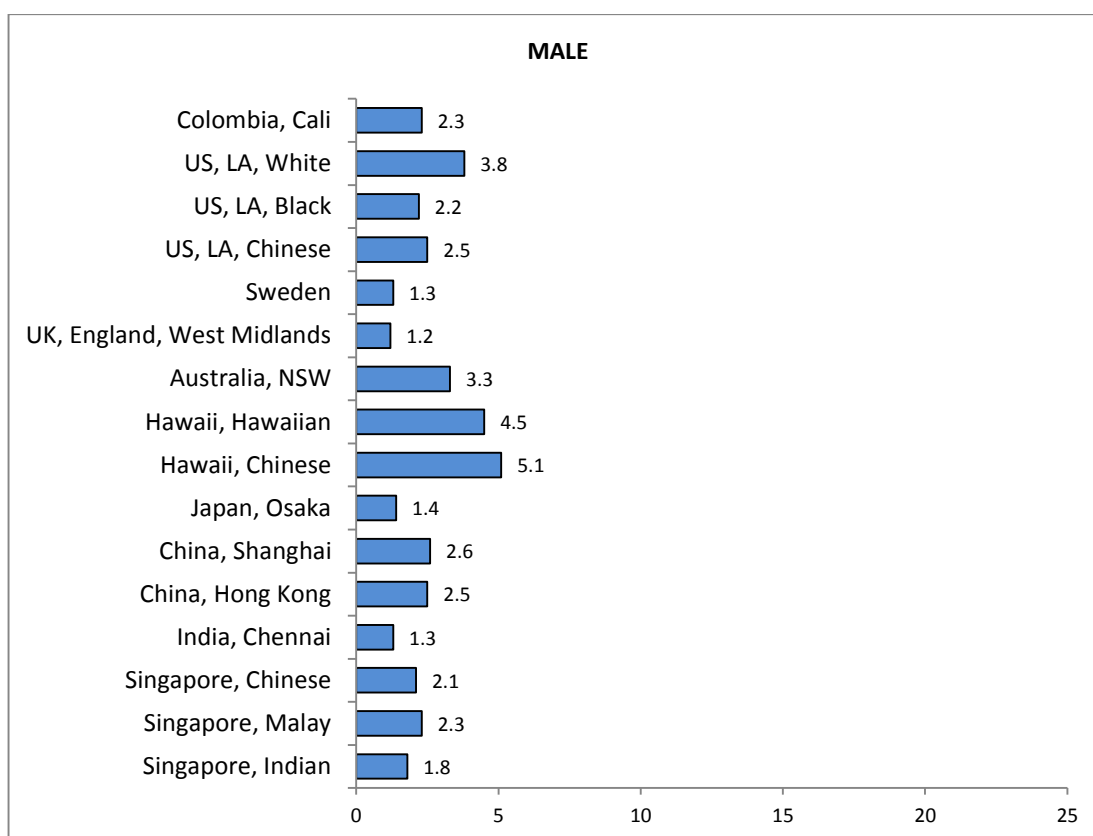


**THYROID: AGE-STANDARDIZED
INCIDENCE BY SEX, 1973-2012**



**THYROID: AGE-SPECIFIC
INCIDENCE BY SEX, 2008-2012**

THYROID: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 2003-2007
(per 100,000 per year)



12.30 Lymphoid Neoplasms

Classifications

The World Health Organisation (WHO) classification of Tumours of the Haematopoietic and Lymphoid tissues 4th edition (2008)¹⁵ formed the basis of the classification of malignancies of the haematopoietic and lymphoid tissues for the period 2003-2007 and beyond. It also formed the basis of a reclassification of the malignant lymphoid tissues for the period 1998-2002.

The major neoplastic groupings of the lymphoid neoplasms are as follows:

Non-Hodgkin Lymphomas

- Precursor Lymphoid neoplasms
- Mature B-cell neoplasms
- Mature T-cell and NK-cell neoplasms
- Immunodeficiency associated lymphoproliferative disorders
- Histiocytic and Dendritic cell neoplasms

Hodgkin Lymphomas

There were 3,046 incident cases of lymphoid neoplasms in 2008-2012, compared to 2,336 cases in 2003-2007. These comprised 5.4% of the 56,773 incident cases of cancer reported to the cancer registry, registering an increase compared to 5.0% in 2003-2007. These included all cases of Hodgkin's Lymphoma (HL), Non-Hodgkin Lymphoma (NHL) as well as Lymphoid Leukaemia. There was a rise in incidence of lymphoid neoplasms in the past three 5-year time periods from 1998-2012, similar to that observed in other parts of Asia^{2,3}, with age-standardised rate for males and females increasing from 12.9 and 8.1 per 100,000 respectively in 1998-2002, to 16.7 and 10.3 per 100,000 respectively in 2008-2012.

In 2008-2012, NHL constituted 91.2% of cases of lymphoid neoplasms, HL made up 6.9% and 1.9% were not otherwise specified (NOS). The percentage of HL among all lymphoid neoplasms remained stable for the past three 5-year periods at about 7.0%. There has been an increase in NHL and Leukaemia cases registered in the past three 5-year time periods, from 1,623 cases registered in 1998-2002 to 2,176 in 2003-2007 and 2,836 in 2008-2012. These numbers include 61 cases in 2003-2007 and 21 cases in 2008-2012 that were registered as malignant lymphoma NOS, as there was no notification of the data to the cancer registry as to whether they were Hodgkin lymphoma or non-Hodgkin lymphoma.

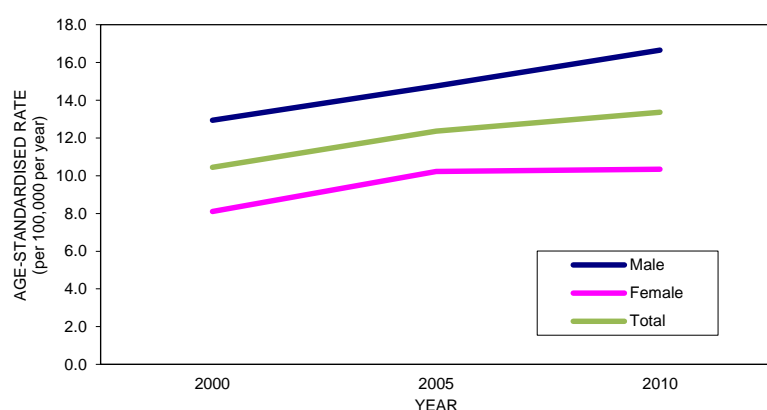
Lymphoid neoplasms rose from the 6th most common cancer in males in 2003-2007 to the 5th in 2008-2012 and was the 7th most common cancer in females for the time periods 2003-2007 and 2008-2012.

Of the three ethnic groups, the Malays have a significantly higher incidence rate of lymphoid neoplasms than the Chinese and Indians. Lymphoid neoplasms was the 3rd most common cancer among Malay males compared to 5th among Chinese males and 4th among Indian males; and 3rd most common cancer among Malay females compared to 8th among Chinese females and 5th among Indian females in 2008-2012.

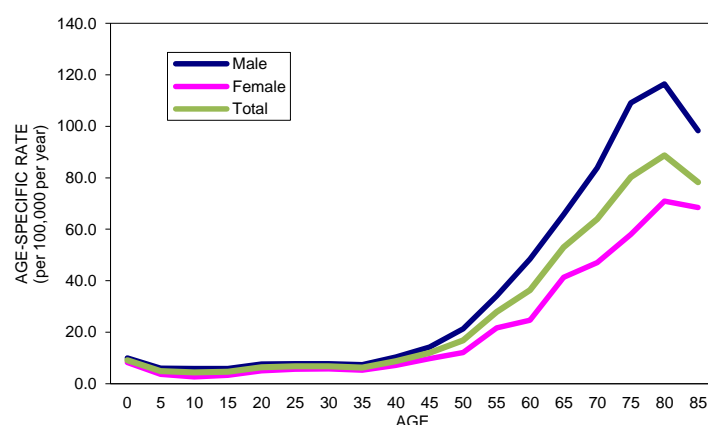
| INCIDENCE DATA | | | Males | |
|----------------|-------|------|-------|---------------|
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 1,816 | 6.6 | 16.7 | - |
| Chinese | 1,330 | 5.7 | 15.6 | 1.0 |
| Malays | 291 | 12.4 | 23.3 | 1.5 (1.3-1.7) |
| Indians | 144 | 11.4 | 16.4 | 1.1 (0.9-1.3) |

| INCIDENCE DATA | | | Females | |
|----------------|-------|-----|---------|---------------|
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 1,230 | 4.2 | 10.3 | - |
| Chinese | 908 | 3.8 | 9.6 | 1.0 |
| Malays | 215 | 7.5 | 15.4 | 1.7 (1.5-2.0) |
| Indians | 79 | 5.5 | 9.4 | 1.0 (0.8-1.3) |

| INCIDENCE DATA | | | Total | |
|----------------|-------|-----|-------|---------------|
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 3,046 | 5.4 | 13.4 | - |
| Chinese | 2,238 | 4.7 | 12.5 | 1.0 |
| Malays | 506 | 9.7 | 19.1 | 1.6 (1.4-1.8) |
| Indians | 223 | 8.2 | 12.9 | 1.1 (0.9-1.2) |



LYMPHOID NEOPLASMS: AGE-STANDARDIZED INCIDENCE BY SEX, 1998-2012



LYMPHOID NEOPLASMS: AGE-SPECIFIC INCIDENCE, 2008-2012

SUMMARY HISTOLOGY TABLE OF LYMPHOID NEOPLASMS (2003-2007 AND 2008-2012)

| LYMPHOID NEOPLASMS | 2003-2007 | | 2008-2012 | | 2003-2012 |
|---|------------------|-------------|------------------|-------------|------------------|
| HISTOLOGY | NO. | % | NO. | % | Total |
| Hodgkin Lymphoma | 160 | 6.8 | 210 | 6.9 | 370 |
| Precursor Lymphoid Neoplasms | 267 | 11.4 | 251 | 8.2 | 518 |
| Mature B-Cell Neoplasms | 1,542 | 66 | 2,165 | 71.1 | 3,707 |
| Mature T-Cell and NK-Cell Neoplasms | 270 | 11.6 | 318 | 10.4 | 588 |
| Histiocytic and Dendritic Cell Neoplasms | 20 | 0.9 | 38 | 1.2 | 58 |
| Post-Transplant Lymphoproliferative Disorders (PTLD) | 5 | 0.2 | 7 | 0.2 | 12 |
| Total Non-Hodgkin Lymphoma | 2,104 | 90.1 | 2,779 | 91.2 | 4,883 |
| Malignant Lymphoma, NOS / Other Lymphoid Neoplasms | 72 | 3.1 | 57 | 1.9 | 129 |
| TOTAL LYMPHOID NEOPLASMS | 2,336 | 100 | 3,046 | 100 | 5,382 |

| MALIGNANT LYMPHOMA NOS / OTHER LYMPHOID NEOPLASMS | 2003-2007 | 2008-2012 | 2008-2012 % | 2003-2012 |
|--|------------------|------------------|--------------------|------------------|
| Malignant Lymphoma, NOS | 61 | 21 | 36.8 | 82 |
| Lymphoproliferative Disorders* | | | | |
| Monoclonal Gammopathy of Undetermined Significance | 7 | 27 | 47.4 | 34 |
| Immunoglobulin deposition disease | 2 | 6 | 10.5 | 8 |
| Lymphoproliferative Disorder, NOS | 2 | 3 | 5.3 | 5 |
| TOTAL | 72 | 57 | 100.0 | 129 |
| * These have been assigned to the list without a definite diagnosis of a malignant neoplasm. | | | | |

12.30.1 Non-Hodgkin Lymphoma

Distribution of Non-Hodgkin Lymphomas by Histologic type (2003-2007 and 2008-2012)

There were 2,104 and 2,779 cases of NHL registered during the five year periods of 2003-2007 and 2008-2012 respectively.

The two major types of NHL with immunophenotypic characterisation are the B-cell and T-cell lymphoid neoplasms. The B-cell malignant lymphoid neoplasms, which includes Mature B-cell neoplasms and Precursor B lymphoid neoplasm / leukaemia, numbered 1,809 in 2003-2007 and 2,416 in 2008-2012, an increase of 33.6%. The number of T-cell malignant neoplasms were 270 (12.8% of all NHL) and 318 (11.4%) in the two periods 2003-2007 and 2008-2012 respectively. In 2008-2012, 76.1% of cases notified as Precursor lymphoblastic lymphoma / leukaemia fell into the category of NOS, an improvement from 91.4% in 2003-2007.

Mature B-cell lymphomas was the commonest lymphoma among NHL, accounting for more than 70% of the total NHL cases in both 2003-2007 (73.3%) and 2008-2012 (77.9%). Diffuse large B-cell lymphoma was the most common subtype of the mature B-cell lymphomas, accounting for 28.9% of cases in 2003-2007 and 42.6% in 2008-2012. The next most common subtype after diffuse large B cell lymphoma was the plasma cell neoplasms of which plasma cell myeloma formed the largest number, with figures derived from bone marrow diagnosed plasma cell myelomas.

Follicular cell lymphoma has seen an increase from 10.9% of mature B cell lymphomas to 11.9%. The fourth most common B cell lymphoma is the extranodal marginal zone lymphoma, which made up 6.6% of mature B-cell lymphomas in 2003-2007 and increased to 7.6% in 2008-2012.

Despite the small numbers registered for mantle cell lymphoma, there is a four-fold increase in cases from 2003-2007 to 2008-2012. This probably can be accounted for by the increase in the number of antibodies available for immunohistochemical and molecular genetic characterization.

Mature T-cell and NK-cell lymphomas accounted for 12.8% and 11.4% of NHL in 2003-2007 and in 2008-2012, respectively, of which Peripheral T-cell Lymphoma, NOS (23.3%), and Mycosis fungoides (21.4%) were the most common subtypes. The next most common T-cell lymphoma after mycosis fungoides is the extranodal NK/T-cell lymphoma, which is established as being more prevalent among Chinese of East Asian descent. Angioimmunoblastic T cell lymphoma has also seen a relative increase in incidence between the two five year periods (2003-2007 and 2008-2012), probably due to an increased number of immunohistochemical tests available for diagnosis.

NON-HODGKIN LYMPHOMA

| Non-Hodgkin Lymphoma (NHL) | 2003-2007 | | 2008-2012 | | 2003-2012 |
|--|--------------|--------------|--------------|--------------|--------------|
| HISTOLOGY | NO. | % | NO. | % | Total |
| Precursor Lymphoid Neoplasms | 267 | 12.7 | 251 | 9.0 | 518 |
| Mature B-Cell Neoplasms | 1,542 | 73.3 | 2,165 | 77.9 | 3,707 |
| Mature T-Cell and NK-Cell Neoplasms | 270 | 12.8 | 318 | 11.4 | 588 |
| Histiocytic and Dendritic Cell Neoplasms | 20 | 1.0 | 38 | 1.4 | 58 |
| Post-Transplant Lymphoproliferative Disorders (PTLD) | 5 | 0.2 | 7 | 0.3 | 12 |
| TOTAL NHL | 2,104 | 100.0 | 2,779 | 100.0 | 4,883 |

| PRECURSOR LYMPHOID NEOPLASM | 2003-2007 | 2008-2012 | 2008-2012 % | 2003-2012 |
|---|------------|------------|--------------|------------|
| B Lymphoblastic Leukaemia / Lymphoma, NOS | 244 | 191 | 76.1 | 435 |
| B Lymphoblastic Leukemia/Lymphoma with T(9;22)(Q34;Q11.2); BCR_ABL1 | 1 | 18 | 7.2 | 19 |
| B Lymphoblastic leukemia/Lymphoma with t(12;21)(p13;q22); TEL-AML1 (ETV6-RUNX1) | 0 | 1 | 0.4 | 1 |
| B Lymphoblastic Leukemia/Lymphoma with Hyperdiploidy | 0 | 2 | 0.8 | 2 |
| B Lymphoblastic Leukemia/Lymphoma with T(5;14)(Q31;Q32); IL3-IGH | 0 | 1 | 0.4 | 1 |
| T Lymphoblastic Leukemia/Lymphoma | 22 | 38 | 15.1 | 60 |
| Total | 267 | 251 | 100.0 | 518 |

NON-HODGKIN LYMPHOMA

| MATURE B-CELL NEOPLASMS | 2003-2007 | 2008-2012 | 2008-2012 % | 2003-2012 |
|--|--------------|--------------|----------------|--------------|
| Diffuse Large B-Cell Lymphoma | 675 | 923 | 42.6 | 1,598 |
| Plasma Cell Myeloma | 272 | 355 | 16.4 | 627 |
| Follicular Lymphoma | 169 | 258 | 11.9 | 427 |
| Extranodal Marginal zone Lymphoma (MALT Lymphoma) | 102 | 164 | 7.6 | 266 |
| Chronic Lymphocytic Leukemia / Small Lymphocytic Lymphoma | 121 | 141 | 6.5 | 262 |
| Burkitt Lymphoma | 50 | 58 | 2.7 | 108 |
| Marginal zone Lymphoma (nodal) | 46 | 59 | 2.7 | 105 |
| Mantle Cell Lymphoma | 13 | 51 | 2.4 | 64 |
| Primary mediastinal (thymic) Large B-Cell Lymphoma | 36 | 21 | 1.0 | 57 |
| Splenic marginal zone Lymphoma | 11 | 38 | 1.8 | 49 |
| Splenic B-Cell Lymphoma/Leukemia, Unclassifiable | 12 | 18 | 0.8 | 30 |
| Lymphoplasmacytic Lymphoma | 11 | 18 | 0.8 | 29 |
| Waldenstrom Macroglobulinemia | 4 | 19 | 0.9 | 23 |
| Hairy Cell Leukemia | 4 | 9 | 0.4 | 13 |
| Extraosseous Plasmacytoma | 7 | 5 | 0.2 | 12 |
| Plasma Cell Leukemia | 6 | 6 | 0.3 | 12 |
| Plasmablastic Lymphoma | 0 | 8 | 0.4 | 8 |
| B-Cell Lymphoma, unclassifiable, with features intermediate between Diffuse Large B-Cell Lymphoma and Classical Hodgkin Lymphoma | 2 | 6 | 0.3 | 8 |
| Solitary Plasmacytoma Of Bone | 0 | 4 | 0.2 | 4 |
| B-Cell Prolymphocytic Leukemia | 1 | 1 | 0.0 | 2 |
| Primary Cutaneous Follicle Center Lymphoma | 0 | 1 | 0.0 | 1 |
| T-Cell / Histiocyte Rich Large B-Cell Lymphoma | 0 | 1 | 0.0 | 1 |
| Lymphoid Leukemia, NOS | 0 | 1 | 0.0 | 1 |
| Total | 1,542 | 2,165 | 100.0 | 3,707 |

NON-HODGKIN LYMPHOMA

| MATURE T-CELL & NK-CELL NEOPLASMS | 2003-2007 | 2008-2012 | 2008-2012 % | 2003-2012 |
|---|------------|------------|----------------|------------|
| Peripheral T-Cell Lymphoma, NOS | 66 | 74 | 23.3 | 140 |
| Mycosis Fungoides | 78 | 68 | 21.4 | 146 |
| Extranodal NK/T-Cell Lymphoma, nasal- type | 39 | 44 | 13.8 | 83 |
| Angioimmunoblastic T-Cell Lymphoma | 24 | 41 | 12.9 | 65 |
| Anaplastic Large Cell Lymphoma, ALK positive | 32 | 27 | 8.5 | 59 |
| Primary cutaneous Anaplastic Large Cell Lymphoma | 10 | 13 | 4.1 | 23 |
| Primary cutaneous CD4 positive small/medium T-Cell Lymphoma | 7 | 11 | 3.5 | 18 |
| Enteropathy-associated T-Cell Lymphoma | 2 | 9 | 2.8 | 11 |
| Subcutaneous Panniculitis-Like T-Cell Lymphoma | 3 | 7 | 2.2 | 10 |
| T-Cell Large Granular Lymphocytic Leukemia | 1 | 7 | 2.2 | 8 |
| Adult T-Cell Leukemia/Lymphoma | 4 | 6 | 1.9 | 10 |
| Systemic EBV positive T-Cell lymphoproliferative disease of Childhood | 0 | 4 | 1.3 | 4 |
| Hepatosplenic T-Cell Lymphoma | 0 | 3 | 0.9 | 3 |
| Aggressive NK-Cell Leukemia | 2 | 2 | 0.6 | 4 |
| Sezary Syndrome | 1 | 1 | 0.3 | 2 |
| T-Cell Prolymphocytic Leukemia | 1 | 1 | 0.3 | 2 |
| Total | 270 | 318 | 100.0 | 588 |

NON-HODGKIN LYMPHOMA

| HISTIOCYTIC AND DENDRITIC CELL NEOPLASMS | 2003-2007 | 2008-2012 | 2008-2012 % | 2003-2012 |
|--|-----------|-----------|--------------|-----------|
| Langerhans cell Histiocytosis | 15 | 25 | 65.8 | 40 |
| Histiocytic Sarcoma | 0 | 7 | 18.4 | 7 |
| Follicular Dendritic Cell Sarcoma | 3 | 5 | 13.2 | 8 |
| Interdigitating Dendritic Cell Tumour | 1 | 1 | 2.6 | 2 |
| Fibroblastic Reticular Cell Tumour | 1 | 0 | 0.0 | 1 |
| Total | 20 | 38 | 100.0 | 58 |

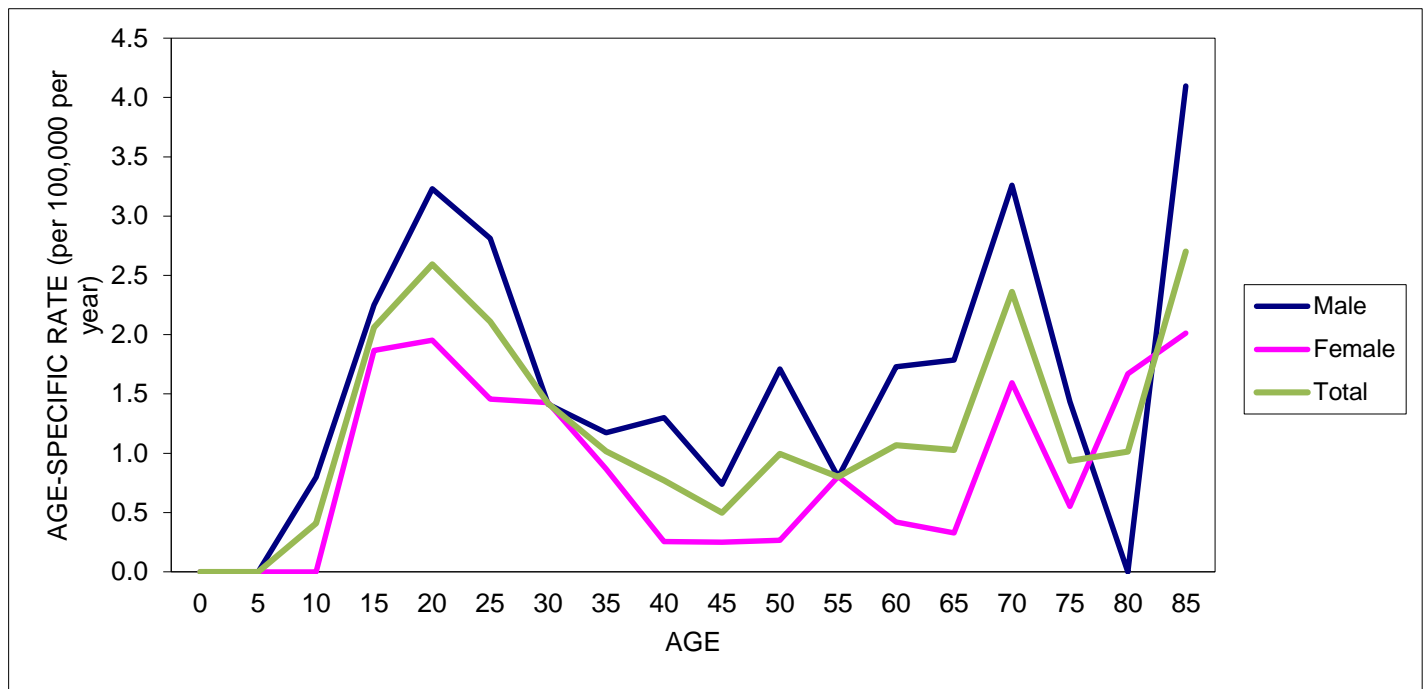
| POST TRANSPLANT LYMPHOPROLIFERATIVE DISORDER (PTLD) | 2003-2007 | 2008-2012 | 2008-2012 % | 2003-2012 |
|---|-----------|-----------|--------------|-----------|
| Plasmacytic Hyperplasia | 2 | 0 | 0.0 | 2 |
| Polymorphic PTLD | 3 | 6 | 85.7 | 9 |
| Monomorphic PTLD (B cell) | 0 | 1 | 14.3 | 1 |
| Total | 5 | 7 | 100.0 | 12 |

12.30.2 Hodgkin Lymphoma (HL)

The number of cases of HL constituted 6.8% and 6.9% of malignant lymphomas for 2003-2007 and 2008-2012 respectively, with a slight increase in HL cases from 160 in 2003-2007 to 210 in 2008-2012. The overall age-standardized rates were similar in both 2003-2007 and 2008-2012, at 0.9 per 100,000 and 1.1 per 100,000 respectively. The age-specific incidence rates of HL show two major peaks in childhood & young adults and in the elderly above the age of 50.

The commonest subtype of HL is Nodular Sclerosis accounting for 68.1% and 60.5% in 2003-2007 and 2008-2012 respectively.

| INCIDENCE DATA (2008-2012) | | | Males | |
|-------------------------------|-----|-----|---------|---------------|
| | No. | % | ASR | RR (95% CI) |
| All residents | 135 | 0.5 | 1.4 | - |
| Chinese | 80 | 0.3 | 1.1 | 1.0 |
| Malays | 28 | 1.2 | 2.0 | 1.9 (1.3-3.0) |
| Indians | 22 | 1.7 | 2.5 | 2.3 (1.4-3.6) |
| INCIDENCE DATA (2008-2012) | | | Females | |
| | No. | % | ASR | RR (95% CI) |
| All residents | 75 | 0.3 | 0.7 | - |
| Chinese | 47 | 0.2 | 0.6 | 1.0 |
| Malays | 18 | 0.6 | 1.2 | 2.2 (1.3-3.8) |
| Indians | 10 | 0.7 | 1.1 | 1.9 (0.9-3.7) |
| INCIDENCE DATA (2008-2012) | | | Total | |
| | No. | % | ASR | RR (95% CI) |
| All residents | 210 | 0.4 | 1.1 | - |
| Chinese | 127 | 0.3 | 0.8 | 1.0 |
| Malays | 46 | 0.9 | 1.6 | 2.0 (1.4-2.9) |
| Indians | 32 | 1.2 | 1.8 | 2.1 (1.4-3.2) |



HODGKIN LYMPHOMA: AGE-SPECIFIC INCIDENCE, 2008-2012

| HODGKIN LYMPHOMA | 2003-2007 | 2008-2012 | 2008-2012 % | 2003-2012 total |
|---|------------|------------|--------------|-----------------|
| Nodular sclerosis classical Hodgkin Lymphoma | 109 | 127 | 60.5 | 236 |
| Classical Hodgkin Lymphoma | 15 | 28 | 13.3 | 43 |
| Mixed cellularity classical Hodgkin Lymphoma | 18 | 38 | 18.1 | 56 |
| Nodular lymphocyte predominant Hodgkin Lymphoma | 8 | 13 | 6.2 | 21 |
| Lymphocyte-rich classical Hodgkin Lymphoma | 10 | 4 | 1.9 | 14 |
| Total | 160 | 210 | 100.0 | 370 |

12.31 Myeloid neoplasms

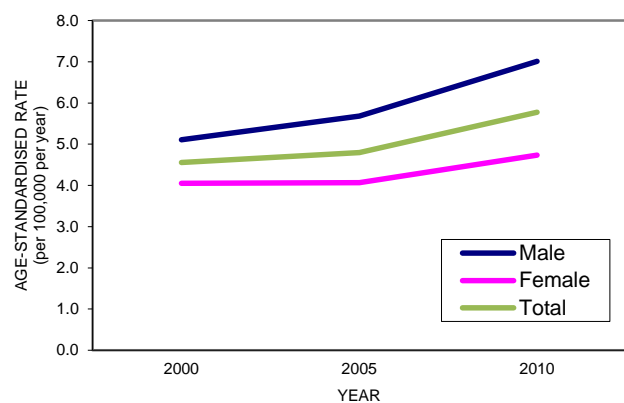
Over the past three 5-year periods, there has been a significant improvement in the subgrouping notification of Acute Myeloid Leukaemia (AML) categorized as AML, NOS, decreasing from 93.1% (339 of 364 cases) in 1998-2002 to 57.1% (242 of 424 cases) in 2003-2007 to 21.7% (112 of 515 cases) in 2008-2012, reflecting the improvement in notification of the cases of AML with the institution of immunophenotyping and cytogenetic studies. With such a significant improvement in subgrouping classification, comparison of the other subgroupings of myeloid neoplasms cannot be fairly performed for these three 5-year periods.

The periods 2003-2007 and 2008-2012 have seen an increase in the notification of myeloid neoplasms due to improved techniques for subtyping, through clinical immunophenotyping and genetic molecular studies.

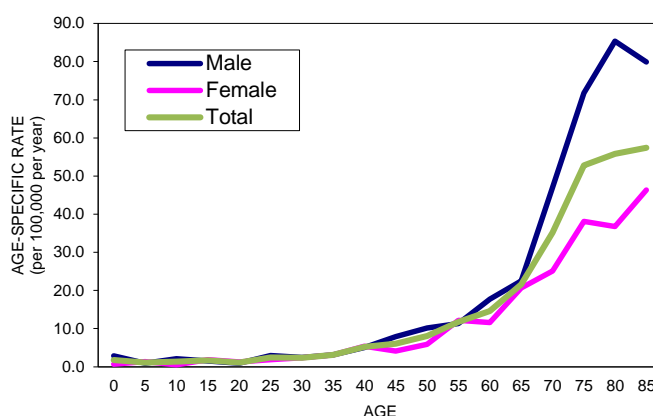
In 2008-2012, the commonest myeloid neoplasm is AML accounting for 35.9% of 1,434 cases of Myeloid neoplasm, followed by Myeloproliferative diseases, accounting for 27.0% with 387 cases.

The incidence rates for myeloid neoplasms show an increase from 2003-2007 to 2008-2012, increasing from 5.7 per 100,000 to 7.0 per 100,000 for males and from 4.1 per 100,000 to 4.7 per 100,000 for females. Myeloid neoplasms are the 10th most common cancer among males in 2008-2012.

| INCIDENCE DATA | | | Males | |
|----------------|-------|-----|---------|---------------|
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 810 | 2.9 | 7.0 | - |
| Chinese | 645 | 2.8 | 7.1 | 1.0 |
| Malays | 101 | 4.3 | 8.2 | 1.1 (0.9-1.4) |
| Indians | 43 | 3.4 | 4.6 | 0.7 (0.5-0.9) |
| INCIDENCE DATA | | | Females | |
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 624 | 2.1 | 4.7 | - |
| Chinese | 483 | 2.0 | 4.6 | 1.0 |
| Malays | 81 | 2.8 | 5.8 | 1.3 (1.0-1.6) |
| Indians | 44 | 3.0 | 4.8 | 1.1 (0.8-1.5) |
| INCIDENCE DATA | | | Total | |
| (2008-2012) | No. | % | ASR | RR (95% CI) |
| All residents | 1,434 | 2.5 | 5.8 | - |
| Chinese | 1,128 | 2.4 | 5.7 | 1.0 |
| Malays | 182 | 3.5 | 7.0 | 1.2 (1.0-1.4) |
| Indians | 87 | 3.2 | 4.7 | 0.9 (0.7-1.1) |



MYELOID NEOPLASMS: AGE-STANDARDIZED INCIDENCE BY SEX, 1998-2012



MYELOID NEOPLASMS: AGE-SPECIFIC INCIDENCE, 2008-2012

MYELOID NEOPLASMS

| MYELOID NEOPLASM | 2003-2007 | 2008-2012 | 2008-2012 % | 2003-2012 |
|---|------------|-------------|--------------|-------------|
| Acute Myeloid Leukemia (AML)and Related Precursor Neoplasms | 410 | 509 | 36.3 | 919 |
| Myeloproliferative Neoplasms | 232 | 387 | 27.6 | 619 |
| Myelodysplastic/Myeloproliferative Neoplasms | 125 | 149 | 10.6 | 274 |
| Myelodysplastic syndrome (MDS) | 141 | 352 | 25.1 | 493 |
| Myeloid Leukemia, NOS | 14 | 6 | 0.4 | 20 |
| TOTAL | 922 | 1403 | 100.0 | 2325 |

| Acute Leukaemias of Ambiguous Lineage | 2003-2007 | 2008-2012 | 2008-2012 % | 2003-2012 |
|--|-----------|-----------|--------------|-----------|
| Acute undifferentiated Leukemia | 37 | 15 | 48.4 | 52 |
| Leukemia, NOS | 3 | 7 | 22.6 | 10 |
| Mixed Phenotype Acute Leukemia, T/Myeloid, NOS | 3 | 6 | 19.4 | 9 |
| Mixed Phenotype Acute Leukemia with t(9;22)(q34;q11.2); BCR-ABL1 | 0 | 1 | 3.2 | 1 |
| Mixed Phenotype Acute Leukemia with t(v;11q23);MLL rearranged | 0 | 1 | 3.2 | 1 |
| Mixed Phenotype Acute Leukemia, B/Myeloid, NOS | 0 | 1 | 3.2 | 1 |
| | 43 | 31 | 100.0 | 74 |

MYELOID NEOPLASMS

| Acute Myeloid Leukemia (AML) and Related Precursor Neoplasms | 2003-2007 | 2008-2012 | 2008-2012 % | 2003-2012 |
|--|------------------|------------------|--------------------|------------------|
| Acute Myeloid Leukemia, NOS | 242 | 112 | 22.0 | 354 |
| Acute Myeloid Leukemia with maturation | 46 | 86 | 16.9 | 132 |
| Acute Myeloid Leukemia without maturation | 30 | 61 | 12.0 | 91 |
| Acute Monoblastic and Monocytic Leukemia | 21 | 48 | 9.4 | 69 |
| Acute Myelomonocytic Leukemia | 9 | 47 | 9.2 | 56 |
| AML with Myelodysplasia-related changes | 5 | 47 | 9.2 | 52 |
| Acute Promyelocytic Leukemia, t(15;17)(q22;q12), PML-RARA | 11 | 46 | 9.0 | 57 |
| Acute Erythroid Leukemia | 6 | 16 | 3.1 | 22 |
| AML with t(8;21)(q22;q22); RUNX1-RUNX1T1 | 1 | 11 | 2.2 | 12 |
| Acute Megakaryoblastic Leukemia | 7 | 8 | 1.6 | 15 |
| Therapy-related Myeloid neoplasms | 0 | 8 | 1.6 | 8 |
| Myeloid Sarcoma | 5 | 7 | 1.4 | 12 |
| Acute Panmyelosis with Myelofibrosis | 5 | 4 | 0.8 | 9 |
| AML with t(9;11)(p22;q23); MLLT3-MLL | 1 | 3 | 0.6 | 4 |
| Acute Myeloid Leukemia with inv(16)(p13.1q22) or t(16;16)(p13.1;q22); CBFB-MYH11 | 2 | 2 | 0.4 | 4 |
| Acute Myeloid Leukemia with t(6;9)(p23;q34)DEK-NUP214 | 0 | 1 | 0.2 | 1 |
| Acute Basophilic Leukemia | 0 | 1 | 0.2 | 1 |
| Acute Myeloid Leukemia, minimal differentiation | 16 | 1 | 0.2 | 17 |
| Blastic Plasmacytoid Dendritic Cell Neoplasm | 3 | 0 | 0.0 | 3 |
| | 410 | 509 | 100.0 | 919 |

| Myeloproliferative Neoplasms | 2003-2007 | 2008-2012 | 2008-2012 % | 2003-2012 |
|---|------------------|------------------|--------------------|------------------|
| Chronic Myeloid Leukemia, NOS | 128 | 123 | 31.8 | 251 |
| Polycythemia Vera | 35 | 98 | 25.3 | 133 |
| Essential Thrombocythemia | 50 | 66 | 17.1 | 116 |
| Chronic Myelogenous Leukemia, BCR/ABL1 positive | 5 | 53 | 13.7 | 58 |
| Primary Myelofibrosis | 11 | 40 | 10.3 | 51 |
| Chronic Eosinophilic Leukemia, NOS | 1 | 6 | 1.6 | 7 |
| Chronic Neutrophilic Leukemia | 0 | 1 | 0.3 | 1 |
| Cutaneous Mastocytosis (solitary mastocytoma of skin) | 2 | 0 | 0.0 | 2 |
| | 232 | 387 | 100.0 | 619 |

MYELOID NEOPLASMS

| Myelodysplastic/Myeloproliferative Neoplasms | 2003-2007 | 2008-2012 | 2008-2012 % | 2003-2012 |
|---|------------------|------------------|--------------------|------------------|
| Myelodysplastic / Myeloproliferative Neoplasm, unclassifiable | 104 | 116 | 77.9 | 220 |
| Chronic Myelomonocytic Leukemia | 20 | 31 | 20.8 | 51 |
| Atypical Chronic Myeloid Leukemia, BCR/ABL-1 NEGATIVE | 0 | 1 | 0.7 | 1 |
| Juvenile Myelomonocytic Leukemia | 1 | 1 | 0.7 | 2 |
| | 125 | 149 | 100.0 | 274 |

| Myelodysplastic syndrome (MDS) | 2003-2007 | 2008-2012 | 2008-2012 % | 2003-2012 |
|--|------------------|------------------|--------------------|------------------|
| Myelodysplastic Syndrome, unclassifiable | 113 | 195 | 55.4 | 308 |
| Refractory Anemia with excess blasts | 12 | 63 | 17.9 | 75 |
| Refractory Cytopenia with multilineage dysplasia | 2 | 60 | 17.0 | 62 |
| Refractory Anemia | 10 | 14 | 4.0 | 24 |
| Refractory Anemia with ring sideroblasts | 4 | 11 | 3.1 | 15 |
| Myelodysplastic Syndrome associated with isolated del (5q) | 0 | 8 | 2.3 | 8 |
| Refractory Thrombocytopenia | 0 | 1 | 0.3 | 1 |
| | 141 | 352 | 100.0 | 493 |

13. CHILDHOOD CANCERS 2008-2012

The cancers that occur in children (0-14 years of age) are classified according to the International Classification of Childhood Cancer (ICCC) [22]. This classification, which divides neoplasms into 12 major histological groups, emphasizes the fact that cancers in children, unlike those in adults, are more related by histologic type than by anatomical site.

Using this classification, there were 280 cases of cancer among male children, and 219 among female children. For both genders, the most common cancer in children was leukemia, followed by tumours of the central nervous system. Lymphomas and germ cell tumours were the third most common cancer in male and female children respectively.

This is similar to the pattern observed in Europe, North America, Australia and Japan; but in other parts of Asia and in Africa and Latin America, lymphomas outnumber the brain and spinal tumours [23].

Table 13.1(a) FIVE MOST FREQUENT CANCERS IN CHILDHOOD (MALES), 2008-2012

| MALES | | | | | |
|--------------|------------------------|------------|--------------|-------------|--------------|
| RANK | ICCC SITE GROUP | NO. | % | CR | ASR |
| 1 | Leukemias | 110 | 39.3 | 6.6 | 7.1 |
| 2 | CNS tumours | 46 | 16.4 | 2.8 | 3.0 |
| 3 | Lymphomas | 37 | 13.2 | 2.2 | 2.1 |
| 4 | Germ cell tumours | 24 | 8.6 | 1.4 | 1.5 |
| 5 | Neuroblastoma | 19 | 6.8 | 1.1 | 1.4 |
| | Others | 44 | 15.7 | | |
| | TOTAL | 280 | 100.0 | 16.8 | 17.85 |

Table 13.1(b) FIVE MOST FREQUENT CANCERS IN CHILDHOOD (FEMALES), 2008-2012

| FEMALES | | | | | |
|----------------|------------------------|------------|--------------|-------------|-------------|
| RANK | ICCC SITE GROUP | NO. | % | CR | ASR |
| 1 | Leukemias | 66 | 30.3 | 4.1 | 4.6 |
| 2 | CNS tumours | 45 | 20.6 | 2.8 | 3.1 |
| 3 | Germ cell tumours | 20 | 9.2 | 1.3 | 1.1 |
| 4 | Lymphomas | 18 | 8.3 | 1.1 | 1.2 |
| 5 | Soft tissue tumours | 16 | 7.3 | 1.0 | 1.0 |
| | Others | 54 | 24.8 | | |
| | TOTAL | 218 | 100.0 | 13.7 | 14.7 |

Figure 13.1(a) FIVE MOST FREQUENT CANCERS IN CHILDHOOD (MALES), 2008-2012

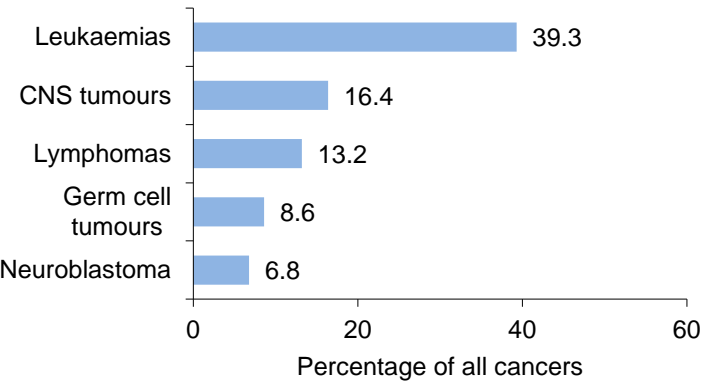


Figure 13.1(b) FIVE MOST FREQUENT CANCERS IN CHILDHOOD (FEMALES), 2008-2012

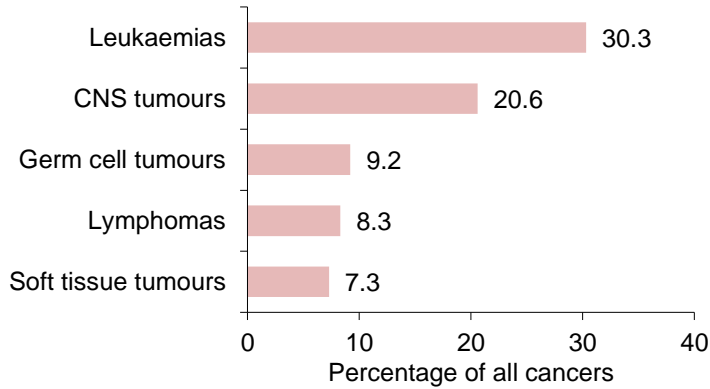


Figure 13.2(a) TRENDS IN SELECTED CANCERS IN MALE CHILDREN (0-14 YEARS), 1973-2012

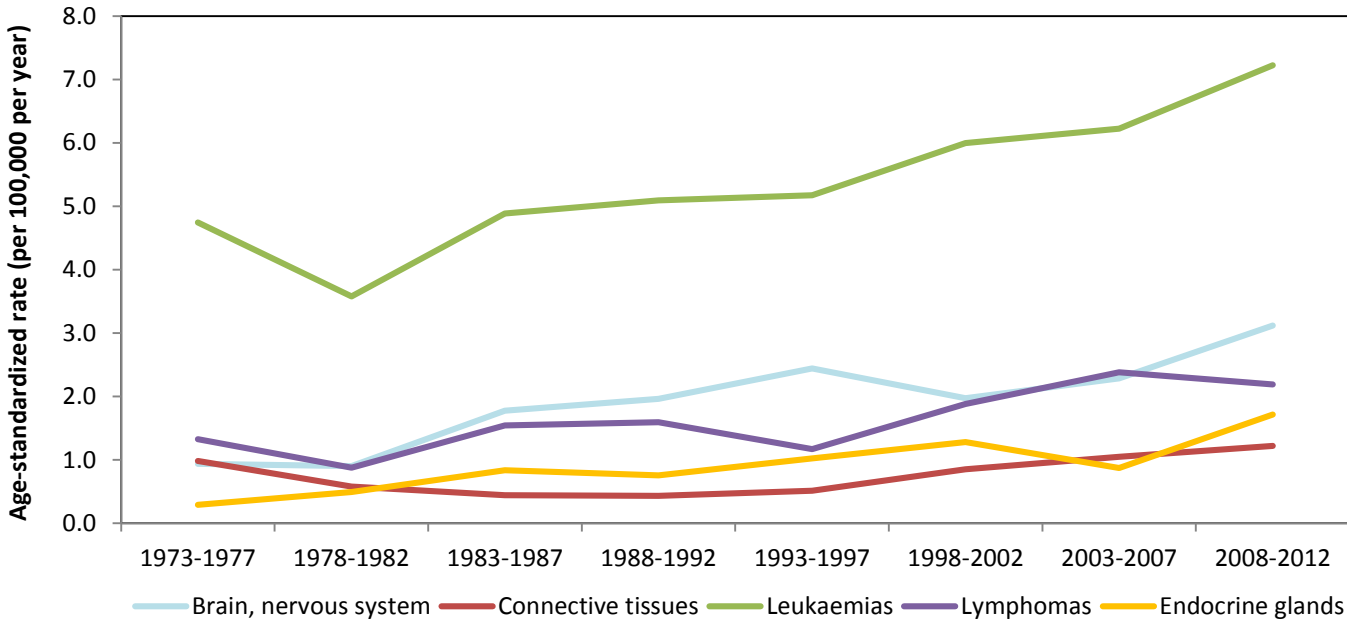


Figure 13.2(b) TRENDS IN SELECTED CANCERS IN FEMALE CHILDREN (0-14 YEARS), 1973-2012

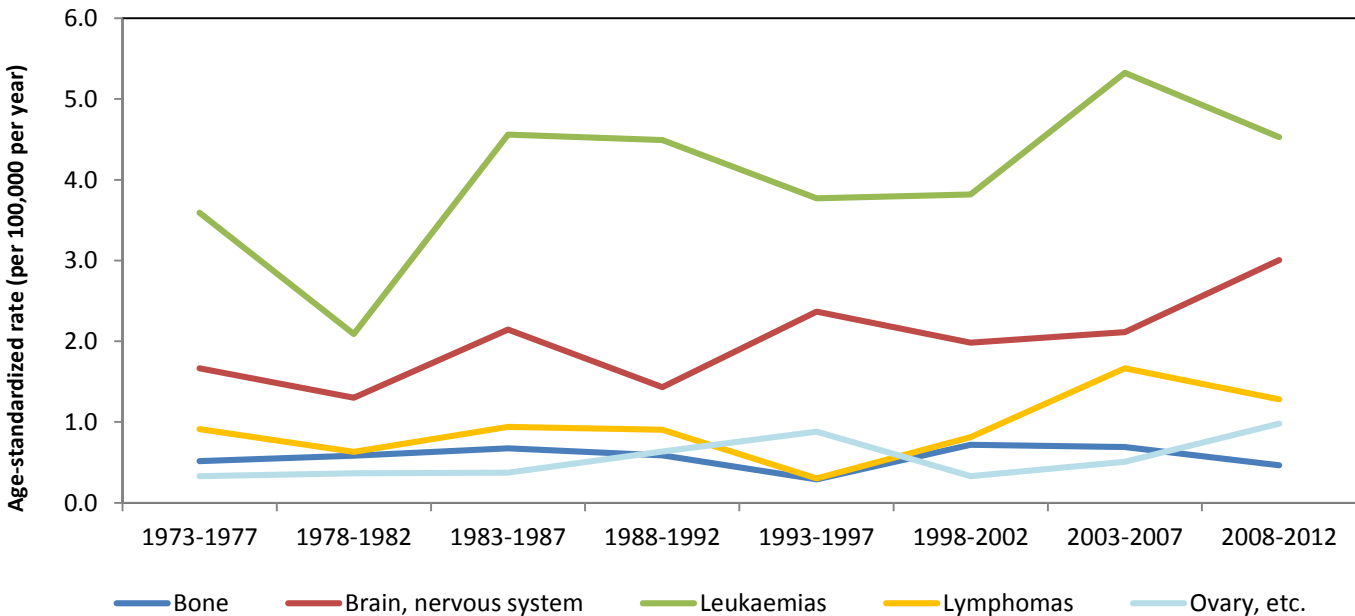


Table 13.2 NUMBER OF CASES OF CHILDHOOD CANCER BY INTERNATIONAL CLASSIFICATION OF CHILDHOOD CANCER (ICCC-3) GROUP AND AGE GROUP, 2008-2012

| ICCC group | ICCC description | Age groups | | | | TOTAL |
|-------------|---|------------|-----|-----|-------|-------|
| | | <1 | 1-4 | 5-9 | 10-14 | |
| I | Leukemias, myeloproliferative diseases, and myelodysplastic diseases | | | | | |
| (a) | Lymphoid leukemias | 3 | 66 | 39 | 24 | 132 |
| (b) | Acute myeloid leukemias | 1 | 7 | 6 | 11 | 25 |
| (c) | Chronic myeloproliferative diseases | 0 | 0 | 5 | 2 | 7 |
| (d) | Myelodysplastic syndrome and myeloproliferative other diseases | 1 | 4 | 0 | 1 | 6 |
| (e) | Unspecified and other specified leukemias | 0 | 3 | 1 | 2 | 6 |
| | | 5 | 80 | 51 | 40 | 176 |
| II | CNS and miscellaneous intracranial and intraspinal neoplasms | | | | | |
| (a) | Ependymomas and choroid plexus tumour | 1 | 6 | 0 | 2 | 9 |
| (b) | Astrocytomas | 3 | 4 | 12 | 10 | 29 |
| (c) | Intracranial and intraspinal embryonal tumours | 1 | 10 | 7 | 6 | 24 |
| (d) | Other gliomas | 0 | 5 | 4 | 3 | 12 |
| (e) | Other specified intracranial and intraspinal neoplasms | 2 | 7 | 5 | 0 | 14 |
| (f) | Unspecified intracranial and intraspinal neoplasms | 1 | 1 | 1 | 0 | 3 |
| | | 8 | 33 | 29 | 21 | 91 |
| III | Lymphomas and reticuloendothelial neoplasms | | | | | |
| (a) | Hodgkin lymphomas | 0 | 0 | 0 | 5 | 5 |
| (b) | Non-Hodgkin lymphomas (except Burkitt lymphoma) | 0 | 3 | 9 | 18 | 30 |
| (c) | Burkitt lymphoma | 0 | 4 | 0 | 3 | 7 |
| (d) | Miscellaneous lymphoreticular neoplasms | 2 | 7 | 2 | 2 | 13 |
| | | 2 | 14 | 11 | 28 | 55 |
| IV | Germ cell tumours, trophoblastic tumours, and neoplasms of gonads | | | | | |
| (a) | Intracranial and intraspinal germ cell tumours | 2 | 1 | 6 | 10 | 19 |
| (b) | Malignant extracranial and extragonadal germ cell tumours | 1 | 0 | 0 | 3 | 4 |
| (c) | Malignant gonadal germ cell tumours | 4 | 1 | 4 | 11 | 20 |
| | | 7 | 2 | 10 | 24 | 43 |
| V | Neuroblastoma and other peripheral nervous cell tumours | | | | | |
| (a) | Neuroblastoma and ganglioneuroblastoma | 4 | 24 | 3 | 1 | 32 |
| VI | Retinoblastoma | | | | | |
| V | Retinoblastoma | 4 | 13 | 1 | 0 | 18 |
| VII | Renal tumours | | | | | |
| (a) | Nephroblastoma and other non-epithelial renal tumours | 0 | 5 | 1 | 1 | 7 |
| VIII | Hepatic tumours | | | | | |
| (a) | Hepatoblastoma | 8 | 3 | 0 | 0 | 11 |
| (b) | Hepatic carcinomas | 0 | 0 | 1 | 1 | 2 |
| | | 8 | 3 | 1 | 1 | 13 |
| IX | Malignant bone tumours | | | | | |
| (a) | Osteosarcomas | 0 | 0 | 5 | 14 | 19 |
| (b) | Chondrosarcomas | 0 | 0 | 0 | 1 | 1 |
| (c) | Ewing tumour and related sarcomas of bone | 0 | 1 | 0 | 0 | 1 |
| (d) | Other specified malignant bone tumours | 0 | 0 | 1 | 1 | 2 |
| | | 0 | 1 | 6 | 16 | 23 |
| X | Soft tissue and other extraosseous sarcomas | | | | | |
| (a) | Rhabdomyosarcomas | 2 | 8 | 2 | 6 | 18 |
| (b) | Fibrosarcomas, peripheral nerve sheath tumours, and other fibrous neoplasms | 0 | 0 | 0 | 1 | 1 |
| (d) | Other specified soft tissue sarcomas | 0 | 0 | 0 | 4 | 4 |
| (e) | Unspecified soft tissue sarcomas | 0 | 0 | 0 | 1 | 1 |
| | | 2 | 8 | 2 | 12 | 24 |

| | | | | | | |
|--------------|--|-----------|------------|------------|------------|------------|
| XI | Other malignant epithelial neoplasms | | | | | |
| (a) | Thyroid carcinomas | 0 | 1 | 0 | 3 | 4 |
| (b) | Nasopharyngeal carcinomas | 0 | 0 | 0 | 2 | 2 |
| (c) | Salivary gland carcinomas | 0 | 0 | 0 | 2 | 2 |
| (d) | Carcinomas of other sites | 1 | 0 | 0 | 3 | 4 |
| | | 1 | 1 | 0 | 10 | 12 |
| XII | Other and unspecified malignant neoplasms | | | | | |
| (a) | Lung-pleuropulmonary blastomas | 0 | 2 | 0 | 0 | 2 |
| (b) | Peritoneum – Epitheloid Mesothelioma | 0 | 0 | 1 | 0 | 1 |
| (c) | Other unspecified malignant tumours | 0 | 0 | 0 | 1 | 1 |
| | | 0 | 2 | 1 | 1 | 4 |
| Total | | 41 | 186 | 116 | 155 | 498 |

Mortality

The commonest types of childhood cancer leading to death are brain and nervous system cancers (36.1% and 33.3% of cancer deaths respectively in male and female children), and leukaemias (33.3% and 25.9% respectively in male and female children).

Table 13.3 NUMBERS AND MORTALITY RATES (ALL CHILDHOOD CANCER DEATHS) IN RESIDENT POPULATION, 2008-2012

| MALES | | | | | |
|--------------|-----------------------|------------|---------------|------------|------------|
| RANK | SITE | NO. | % | CR | ASR |
| 1 | Brain, nervous system | 13 | 36.1 | 0.8 | 0.8 |
| 2 | Leukaemias | 12 | 33.3 | 0.7 | 0.6 |
| 3 | Other endocrine | 7 | 19.4 | 0.4 | 0.5 |
| 4 | Lymphomas | 2 | 5.6 | 0.1 | 0.1 |
| 5 | Liver | 2 | 5.6 | 0.1 | 0.1 |
| | All | 36 | 100.00 | 2.2 | 2.1 |

| FEMALES | | | | | |
|----------------|-----------------------|------------|---------------|------------|------------|
| RANK | SITE | NO. | % | CR | ASR |
| 1 | Brain, nervous system | 9 | 33.3 | 0.6 | 0.6 |
| 2 | Leukaemias | 7 | 25.9 | 0.4 | 0.4 |
| 3 | Bone | 4 | 14.8 | 0.3 | 0.2 |
| 4 | Other endocrine | 3 | 11.1 | 0.2 | 0.2 |
| 5 | Lymphomas | 2 | 7.4 | 0.1 | 0.1 |
| 6 | Eye | 1 | 3.7 | 0.1 | 0.1 |
| 7 | Nasopharynx | 1 | 3.7 | 0.1 | 0.1 |
| | All | 27 | 100.00 | 1.7 | 1.6 |

14. CANCER REGISTRATIONS AMONG NON-RESIDENTS

This chapter presents data on cancer registrations among non-residents for the period 1973-2012. There were 73,273 non-resident cancers from 1973-2012, comprising 22.4% of all registered cases. In 2008-2012 alone, non-resident cancers numbered 21,516 and comprised 27.5% of all cases, slightly higher than the 24.2% in the preceding five-year period. The ratio of males to females has generally been close to unity in more recent years.

Table 14.1 NUMBER (AND % OF ALL REGISTRATIONS) OF NON-RESIDENT CANCERS REGISTERED BY TIME PERIOD, 1973 – 2012

| Period | Males | % | Females | % | Total | % |
|--------------|---------------|-------------|---------------|-------------|---------------|-------------|
| 1973-1977 | 1,241 | 12.7 | 1,008 | 14.0 | 2,249 | 13.2 |
| 1978-1982 | 2,452 | 19.5 | 1,968 | 19.7 | 4,420 | 19.6 |
| 1983-1987 | 3,206 | 21.5 | 2,801 | 21.8 | 6,007 | 21.6 |
| 1988-1992 | 3,167 | 18.8 | 3,219 | 20.2 | 6,386 | 19.5 |
| 1993-1997 | 4,344 | 21.1 | 4,484 | 22.2 | 8,828 | 21.7 |
| 1998-2002 | 4,577 | 19.4 | 4,683 | 19.1 | 9,260 | 19.3 |
| 2003-2007 | 7,018 | 23.9 | 7,589 | 24.4 | 14,607 | 24.2 |
| 2008-2012 | 10,656 | 27.8 | 10,860 | 27.2 | 21,516 | 27.5 |
| Total | 36,661 | 22.1 | 36,612 | 22.6 | 73,273 | 22.4 |

¹percentage of total resident and non-resident registrations

The sources of information and basis of diagnosis for all non-residents in 2008-2012 are given in Table 14.2. Similar data for 1968-2007 are presented in the previous publication [6].

Table 14.3 describes the ten most frequent cancers registered by five-year period since 1973. Among males, cancers of the lung have remained the most frequent, with colorectal cancer in second place. Cancers of the skin are more prominent among non-residents compared to residents, comprising about 10% of cases over the last decade in men, and 5-6% in women. Among women, one-third of all registrations over the last 35 years have been breast or cervical cancer. Bladder cancer and stomach cancer have fallen out of the top-ten ranked cancer sites among males and females respectively, in the recent 2008-2012 period.

TABLE 14.2 SOURCES OF CASES, TYPES OF NOTIFICATIONS AND MOST VALID BASIS OF DIAGNOSIS FOR NON-RESIDENT REGISTRATIONS, 2008-2012

| Source and type of notification | No. | % | % |
|--|---------------|--------------|--------------|
| Cases notified by medical practitioners: | 5,000 | | 23.2 |
| - spontaneously | 4,779 | 22.2 | |
| - on request | 221 | 1.0 | |
| Cases registered by staff on the basis of: | 16,516 | | 76.8 |
| - pathology reports | 15,049 | 69.9 | |
| - hospital records | 1,382 | 6.4 | |
| - death records | 85 | 0.4 | |
| Total | 21,516 | 100.0 | 100.0 |
| Most valid basis of diagnosis | No. | % | % |
| Microscopic confirmation: | 20,531 | | 95.4 |
| - histology of primary | 17,363 | 80.7 | |
| - histology of metastasis | 1,318 | 6.1 | |
| - cytology | 1,850 | 8.6 | |
| Other basis of diagnosis: | 985 | | 4.6 |
| - clinical investigation | 657 | 3.1 | |
| - clinical only | 250 | 1.2 | |
| - death certificate only | 78 | 0.4 | |
| Total | 21,516 | 100.0 | 100.0 |

Table 14.3(a) TEN MOST FREQUENT CANCERS REGISTERED AMONG NON-RESIDENT MALES, 1973-2012

| 1973-1977 | | | 1978-1982 | | | 1983-1987 | | | 1988-1992 | | |
|---------------------|--------------|--------------|---------------------|--------------|-------------|---------------------|--------------|-------------|---------------------|--------------|--------------|
| SITE | NO. | % | SITE | NO. | % | SITE | NO. | % | SITE | NO. | % |
| Lung | 174 | 14.0 | Lung | 436 | 17.8 | Lung | 608 | 19.0 | Lung | 565 | 17.8 |
| Nasopharynx | 169 | 13.6 | Nasopharynx | 295 | 12.0 | Colo-rectum | 394 | 12.3 | Colo-rectum | 434 | 13.7 |
| Skin, inc. melanoma | 158 | 12.7 | Colo-rectum | 271 | 11.1 | Nasopharynx | 328 | 10.2 | Stomach | 289 | 9.1 |
| Stomach | 127 | 10.2 | Stomach | 245 | 10.0 | Stomach | 288 | 9.0 | Nasopharynx | 287 | 9.1 |
| Colo-rectum | 124 | 10.0 | Skin, inc. melanoma | 189 | 7.7 | Skin, inc. melanoma | 244 | 7.6 | Skin, inc. melanoma | 270 | 8.5 |
| Liver | 90 | 7.3 | Liver | 167 | 6.8 | Liver | 173 | 5.4 | Lymphomas | 160 | 5.1 |
| Leukaemias | 52 | 4.2 | Lymphomas | 95 | 3.9 | Lymphomas | 148 | 4.6 | Liver | 131 | 4.1 |
| Larynx | 40 | 3.2 | Leukaemias | 86 | 3.5 | Bladder | 102 | 3.2 | Prostate | 120 | 3.8 |
| Oesophagus | 37 | 3.0 | Bladder | 71 | 2.9 | Leukaemias | 95 | 3.0 | Bladder | 95 | 3.0 |
| Lymphomas | 36 | 2.9 | Oesophagus | 69 | 2.8 | Prostate | 94 | 2.9 | Leukaemias | 94 | 3.0 |
| Others | 234 | 18.9 | Others | 528 | 21.5 | Others | 732 | 22.8 | Others | 722 | 22.8 |
| All | 1,241 | 100.0 | All | 2,452 | 100. | All | 3,206 | 100. | All | 3,167 | 100.0 |

| 1993-1997 | | | 1998-2002 | | | 2003-2007 | | | 2008-2012 | | |
|---------------------|--------------|--------------|---------------------|--------------|-------------|----------------------|--------------|-------------|----------------------|---------------|--------------|
| SITE | NO.O. | % | SITE | NO. | % | SITE | NO. | % | SITE | NO. | % |
| Lung | 740 | 17.0 | Lung | 597 | 13.0 | Lung | 902 | 12.9 | Lung | 1,242 | 11.7 |
| Colo-rectum | 547 | 12.6 | Colo-rectum | 567 | 12.4 | Colo-rectum | 849 | 12.1 | Colo-rectum | 1,141 | 10.7 |
| Skin, inc. melanoma | 402 | 9.3 | Skin, inc. melanoma | 508 | 11.1 | Prostate | 674 | 9.6 | Prostate | 1,101 | 10.3 |
| Stomach | 298 | 6.9 | Liver | 385 | 8.4 | Skin, inc. melanoma | 610 | 8.7 | Skin, inc. melanoma | 1,064 | 10.0 |
| Liver | 290 | 6.7 | Nasopharynx | 312 | 6.8 | Liver | 532 | 7.6 | Liver | 823 | 7.7 |
| Nasopharynx | 282 | 6.5 | Prostate | 280 | 6.1 | Lymphomas | 427 | 6.1 | Lymphomas | 772 | 7.2 |
| Prostate | 282 | 6.5 | Stomach | 255 | 5.6 | Nasopharynx | 406 | 5.8 | Leukaemias | 604 | 5.7 |
| Lymphomas | 236 | 5.4 | Lymphomas | 245 | 5.4 | Leukaemias | 338 | 4.8 | Stomach | 452 | 4.2 |
| Leukaemias | 162 | 3.7 | Leukaemias | 241 | 5.3 | Stomach | 311 | 4.4 | Kidney & Oth.Urinary | 412 | 3.9 |
| Bladder | 130 | 3.0 | Bladder | 133 | 2.9 | Kidney & Oth.Urinary | 242 | 3.4 | Nasopharynx | 399 | 3.7 |
| Others | 975 | 22.4 | Others | 105 | 23.0 | Others | 172 | 24.6 | Others | 2,646 | 24.8 |
| All | 4,344 | 100.0 | All | 4,577 | 100. | All | 7,018 | 100. | All | 10,656 | 100.0 |

Table 14.3(b) TEN MOST FREQUENT CANCERS REGISTERED AMONG NON-RESIDENT FEMALES, 1973-2012

| 1973-1977 | | | 1978-1982 | | | 1983-1987 | | | 1988-1992 | | |
|---------------------|--------------|--------------|---------------------|--------------|--------------|---------------------|--------------|--------------|---------------------|--------------|--------------|
| SITE | NO. | ASR | SITE | NO. | ASR | SITE | NO. | ASR | SITE | NO. | ASR |
| Breast | 177 | 17.6 | Cervix uteri | 316 | 16.1 | Breast | 523 | 18.7 | Breast | 677 | 21.0 |
| Cervix uteri | 148 | 14.7 | Breast | 304 | 15.4 | Cervix uteri | 446 | 15.9 | Cervix uteri | 478 | 14.8 |
| Colo-rectum | 103 | 10.2 | Colo-rectum | 215 | 10.9 | Colo-rectum | 356 | 12.7 | Colo-rectum | 324 | 10.1 |
| Skin, inc. melanoma | 69 | 6.8 | Lung | 145 | 7.4 | Lung | 190 | 6.8 | Lung | 224 | 7.0 |
| Stomach | 67 | 6.6 | Stomach | 129 | 6.6 | Stomach | 154 | 5.5 | Ovary, etc. | 171 | 5.3 |
| Nasopharynx | 61 | 6.1 | Nasopharynx | 97 | 4.9 | Skin, inc. melanoma | 138 | 4.9 | Stomach | 165 | 5.1 |
| Lung | 54 | 5.4 | Skin, inc. melanoma | 91 | 4.6 | Nasopharynx | 127 | 4.5 | Skin, inc. melanoma | 149 | 4.6 |
| Corpus uteri | 38 | 3.8 | Ovary, etc. | 85 | 4.3 | Ovary, etc. | 110 | 3.9 | Corpus uteri | 112 | 3.5 |
| Ovary, etc. | 38 | 3.8 | Thyroid | 67 | 3.4 | Thyroid | 95 | 3.4 | Nasopharynx | 103 | 3.2 |
| Thyroid | 33 | 3.3 | Leukaemias | 53 | 2.7 | Corpus uteri | 79 | 2.8 | Lymphomas | 101 | 3.1 |
| Others | 220 | 21.8 | Others | 466 | 23.7 | Others | 583 | 20.8 | Others | 715 | 22.2 |
| All | 1,008 | 100.0 | All | 1,968 | 100.0 | All | 2,801 | 100.0 | All | 3,219 | 100.0 |

| 1993-1997 | | | 1998-2002 | | | 2003-2007 | | | 2008-2012 | | |
|---------------------|--------------|--------------|---------------------|--------------|--------------|---------------------|--------------|--------------|---------------------|---------------|--------------|
| SITE | NO. | ASR | SITE | NO. | ASR | SITE | NO. | ASR | SITE | NO. | ASR |
| Breast | 1,106 | 24.7 | Breast | 1,297 | 27.7 | Breast | 2,325 | 30.6 | Breast | 3,360 | 30.9 |
| Cervix uteri | 586 | 13.1 | Cervix uteri | 424 | 9.1 | Colo-rectum | 668 | 8.8 | Colo-rectum | 855 | 7.9 |
| Colo-rectum | 435 | 9.7 | Colo-rectum | 421 | 9.0 | Cervix uteri | 560 | 7.4 | Lung | 712 | 6.6 |
| Lung | 289 | 6.4 | Lung | 303 | 6.5 | Lung | 497 | 6.5 | Cervix uteri | 633 | 5.8 |
| Ovary, etc. | 254 | 5.7 | Skin, inc. melanoma | 286 | 6.1 | Ovary, etc. | 421 | 5.5 | Skin, inc. melanoma | 582 | 5.4 |
| Skin, inc. melanoma | 231 | 5.2 | Ovary, etc. | 246 | 5.3 | Skin, inc. melanoma | 379 | 5.0 | Ovary, etc. | 528 | 4.9 |
| Corpus uteri | 184 | 4.1 | Corpus uteri | 197 | 4.2 | Corpus uteri | 336 | 4.4 | Thyroid | 510 | 4.7 |
| Stomach | 172 | 3.8 | Thyroid | 193 | 4.1 | Lymphomas | 307 | 4.0 | Lymphomas | 491 | 4.5 |
| Lymphomas | 168 | 3.7 | Lymphomas | 181 | 3.9 | Thyroid | 296 | 3.9 | Corpus uteri | 453 | 4.2 |
| Thyroid | 145 | 3.2 | Stomach | 139 | 3.0 | Leukaemias | 241 | 3.2 | Leukaemias | 377 | 3.5 |
| Others | 914 | 20.4 | Others | 996 | 21.3 | Others | 1,559 | 20.5 | Others | 2,359 | 21.7 |
| All | 4,484 | 100.0 | All | 4,683 | 100.0 | All | 7,589 | 100.0 | All | 10,860 | 100.0 |

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APPENDICES

APPENDIX A1

Sources of cases, types of notifications and most valid basis of diagnosis, 2008-2012

| Source and type of notification | No. | % | % |
|--|---------------|--------------|--------------|
| Cases notified by medical practitioners: | 16,761 | | 29.5 |
| - spontaneously | 16,558 | 29.2 | |
| - on request | 203 | 0.4 | |
| Cases registered by staff on the basis of: | 40,012 | | 70.5 |
| - pathology reports | 35,763 | 63.0 | |
| - hospital records | 3,646 | 6.4 | |
| - death records | 603 | 1.1 | |
| Total | 56,773 | 100.0 | 100.0 |
| Most valid basis of diagnosis | No. | % | % |
| Microscopic confirmation: | 52,116 | | 91.8 |
| - histology of primary | 46,110 | 81.2 | |
| - histology of metastasis | 2,117 | 3.7 | |
| - cytology | 3,889 | 6.9 | |
| Other basis of diagnosis: | 4,657 | | 8.2 |
| - clinical investigation | 3,640 | 6.4 | |
| - clinical only | 396 | 0.7 | |
| - death certificate only | 621 | 1.09 | |
| Total | 56,773 | 100.0 | 100.0 |

APPENDIX A2 MOST VALID BASIS OF DIAGNOSIS FOR SELECTED SITES IN MALES, 2008-2012

| Site | ICD9 | Death Certificate Only | % DCO | Clinical Only | Clinical Investigation | Specific Tumour Markers | Cytology | Metastasis | Primary Tumour | Microscopic Verification | % MV | Total |
|---------------------|-------|------------------------|-------|---------------|------------------------|-------------------------|----------|------------|----------------|--------------------------|-------|-------|
| Tongue | 141 | - | - | - | - | - | 11 | - | 180 | 191 | 100.0 | 191 |
| Salivary gland | 142 | - | - | - | - | - | 8 | 6 | 88 | 102 | 100.0 | 102 |
| Mouth | 143-5 | 1 | 0.8 | - | - | - | 1 | 1 | 121 | 123 | 99.2 | 124 |
| Oropharynx | 146 | - | - | 1 | 2 | - | 8 | 4 | 120 | 132 | 97.8 | 135 |
| Nasopharynx | 147 | 2 | 0.2 | 1 | 3 | - | 12 | 18 | 1,108 | 1,138 | 99.5 | 1,144 |
| Hypopharynx | 148 | 2 | 1.7 | - | 3 | - | 9 | 3 | 104 | 116 | 95.9 | 121 |
| Oesophagus | 150 | 6 | 1.4 | 4 | 3 | - | 5 | 4 | 395 | 404 | 96.9 | 417 |
| Stomach | 151 | 6 | 0.4 | 3 | 25 | - | 13 | 11 | 1,384 | 1,408 | 97.6 | 1,442 |
| Colon | 153 | 18 | 0.6 | 11 | 68 | 1 | 4 | 32 | 2,687 | 2,723 | 96.5 | 2,821 |
| Rectum | 154 | 4 | 0.2 | 5 | 21 | - | 3 | 5 | 1,989 | 1,997 | 98.5 | 2,027 |
| Liver | 155 | 111 | 5.3 | 95 | 1,001 | 23 | 38 | 65 | 776 | 879 | 41.7 | 2,109 |
| Gall bladder, etc. | 156 | 3 | 1.1 | - | 28 | - | 26 | 33 | 171 | 230 | 88.1 | 261 |
| Pancreas | 157 | 24 | 3.2 | 9 | 118 | 3 | 216 | 152 | 219 | 587 | 79.2 | 741 |
| Nose, sinuses, etc. | 160 | 1 | 1.0 | - | - | - | - | - | 95 | 95 | 99.0 | 96 |
| Larynx | 161 | 1 | 0.3 | 2 | 6 | - | 4 | - | 345 | 349 | 97.5 | 358 |
| Bronchus, trachea | 162 | 88 | 2.1 | 51 | 441 | - | 787 | 491 | 2,416 | 3,694 | 86.4 | 4,274 |
| Bone | 170 | - | - | - | 3 | - | - | - | 92 | 92 | 96.8 | 95 |
| Connective tissues | 171 | - | - | 3 | 7 | - | 1 | 7 | 227 | 235 | 95.9 | 245 |
| Melanoma of skin | 172 | - | - | - | - | - | - | 3 | 68 | 71 | 100.0 | 71 |

| | | | | | | | | | | | | |
|--------------------------|-------|------------|------------|------------|--------------|-----------|--------------|--------------|---------------|---------------|-------------|---------------|
| Skin, others | 173 | 1 | 0.1 | 2 | 5 | - | - | 1 | 1,444 | 1,445 | 99.4 | 1,453 |
| Prostate | 185 | 7 | 0.2 | 11 | 95 | 3 | 6 | 59 | 3,143 | 3,208 | 96.5 | 3,324 |
| Testis | 186 | - | - | - | 1 | - | 2 | 3 | 163 | 168 | 99.4 | 169 |
| Penis | 187 | - | - | - | - | - | - | - | 108 | 108 | 100.0 | 108 |
| Bladder | 188 | 1 | 0.1 | 2 | 5 | - | 19 | 4 | 672 | 695 | 98.9 | 703 |
| Kidney & Oth.Urinary | 189 | 13 | 1.3 | 10 | 87 | - | 11 | 70 | 799 | 880 | 88.9 | 990 |
| Eye | 190 | - | - | - | 1 | - | - | - | 15 | 15 | 93.8 | 16 |
| Brain, nervous system | 191-2 | 9 | 2.5 | 4 | 43 | - | 19 | 1 | 287 | 307 | 84.6 | 363 |
| Thyroid | 193 | - | - | - | 3 | - | 29 | 6 | 273 | 308 | 99.0 | 311 |
| Lymphoid neoplasms | | - | - | - | - | - | - | - | - | - | - | - |
| Myeloid neoplasms | | - | - | - | - | - | - | - | - | - | - | - |
| Other and unspecified | | 16 | 4.4 | 12 | 99 | 1 | 51 | 164 | 22 | 237 | 64.9 | 365 |
| All | | 315 | 1.1 | 230 | 2,184 | 31 | 2,233 | 1,237 | 21,463 | 24,933 | 90.0 | 27,693 |

**APPENDIX A3 MOST VALID BASIS OF DIAGNOSIS FOR SELECTED SITES IN FEMALES,
2008-2012**

| Site | ICD9 | Death Certificate Only | DCO (%) | Clinical Only | Clinical Investi gation | Specific Tumour Markers | | Cytology | Metastasis | Primary Tumour | Microscopic Verification | % MV | Total |
|-----------------------|------|------------------------------|------------|------------------|-------------------------------|-------------------------------|----|----------|------------|-------------------|-----------------------------|-------|--------|
| Tongue | | 141 | - | - | - | - | - | - | - | 102 | 102 | 100.0 | 102 |
| Salivary gland | | 142 | 1 | - | - | - | - | 3 | 1 | 90 | 94 | 98.9 | 95 |
| Mouth | | 143-5 | - | - | - | - | - | 1 | - | 82 | 83 | 100.0 | 83 |
| Oropharynx | | 146 | - | - | - | - | - | 2 | 2 | 41 | 45 | 100.0 | 45 |
| Nasopharynx | | 147 | 1 | 0.3 | - | 1 | - | 2 | 5 | 361 | 368 | 99.5 | 370 |
| Hypopharynx | | 148 | - | - | - | 1 | - | - | 1 | 11 | 12 | 92.3 | 13 |
| Oesophagus | | 150 | 1 | 1.0 | 2 | 6 | - | 2 | 1 | 85 | 88 | 90.7 | 97 |
| Stomach | | 151 | 13 | 1.2 | 6 | 24 | - | 6 | 16 | 1,004 | 1,026 | 96.0 | 1,069 |
| Colon | | 153 | 36 | 1.3 | 9 | 102 | - | 3 | 33 | 2,487 | 2,523 | 94.5 | 2,670 |
| Rectum | | 154 | 8 | 0.6 | 7 | 33 | - | 2 | 8 | 1,229 | 1,239 | 96.3 | 1,287 |
| Liver | | 155 | 62 | 8.5 | 31 | 356 | 9 | 26 | 33 | 211 | 270 | 37.1 | 728 |
| Gall bladder, etc. | | 156 | 4 | 1.3 | 7 | 60 | 2 | 27 | 43 | 160 | 230 | 75.9 | 303 |
| Pancreas | | 157 | 22 | 3.3 | 16 | 146 | 1 | 186 | 107 | 196 | 489 | 72.6 | 674 |
| Nose, sinuses, etc. | | 160 | - | - | - | - | - | 1 | - | 50 | 51 | 100.0 | 51 |
| Larynx | | 161 | - | - | 1 | 1 | - | 2 | - | 17 | 19 | 90.5 | 21 |
| Bronchus, trachea | | 162 | 62 | 2.8 | 31 | 251 | - | 441 | 287 | 1,177 | 1,905 | 84.7 | 2,249 |
| Bone | | 170 | - | - | - | 2 | - | 1 | - | 74 | 75 | 97.4 | 77 |
| Connective tissues | | 171 | 1 | 0.5 | 1 | 3 | - | 1 | 2 | 199 | 202 | 97.6 | 207 |
| Melanoma of skin | | 172 | - | - | - | - | - | - | 2 | 60 | 62 | 100.0 | 62 |
| Skin, others | | 173 | 3 | 0.2 | 5 | 1 | - | - | - | 1,202 | 1,202 | 99.3 | 1,211 |
| Female Breast | | 174 | 13 | 0.2 | 13 | 24 | - | 27 | 48 | 8,384 | 8,459 | 99.4 | 8,509 |
| Cervix uteri | | 180 | 3 | 0.3 | 3 | 6 | - | 6 | 3 | 901 | 910 | 98.7 | 922 |
| Chorioepithelioma | | 181 | - | - | - | 2 | - | - | - | 21 | 21 | 91.3 | 23 |
| Corpus uteri | | 182 | 4 | 0.2 | 2 | 7 | - | 2 | 14 | 1,755 | 1,771 | 99.3 | 1,784 |
| Ovary, etc. | | 183 | 15 | 0.9 | 8 | 49 | 1 | 77 | 48 | 1,409 | 1,534 | 95.5 | 1,607 |
| Other fem. genital | | 184 | 1 | 0.8 | - | 2 | - | - | - | 127 | 127 | 97.7 | 130 |
| Bladder | | 188 | 3 | 1.5 | - | 8 | - | 8 | 1 | 186 | 195 | 94.7 | 206 |
| Kidney & Oth.Urinary | | 189 | 13 | 2.5 | 8 | 59 | - | 9 | 19 | 421 | 449 | 84.9 | 529 |
| Eye | | 190 | - | - | - | 2 | - | - | - | 20 | 20 | 90.9 | 22 |
| Brain, nervous system | | 191-2 | 11 | 3.3 | 6 | 52 | - | 11 | - | 254 | 265 | 79.3 | 334 |
| Thyroid | | 193 | 1 | 0.1 | 2 | 7 | - | 37 | 9 | 928 | 974 | 99.0 | 984 |
| Lymphoid neoplasms | | | - | - | - | - | - | - | - | - | - | - | - |
| Myeloid neoplasms | | | - | - | - | - | - | - | - | - | - | - | - |
| Other and unspecified | | | 24 | 6.3 | 5 | 107 | - | 78 | 142 | 24 | 244 | 64.2 | 380 |
| All | | | 306 | 1.1 | 166 | 1,412 | 13 | 1,656 | 880 | 24,647 | 27,183 | 93.5 | 29,080 |

| SINGAPORE : ALL RESIDENTS 2008-2012, MALES | | | | | | | | | | | | | | | | | | | Appendix B1 | |
|--|--------------|------------|-----------|------------|------------|------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|------------|
| NUMBER OF CASES BY AGE GROUP (YEARS) | | | | | | | | | | | | | | | | | | | | |
| SITE | All | 0- | 5- | 10- | 15- | 20- | 25- | 30- | 35- | 40- | 45- | 50- | 55- | 60- | 65- | 70- | 75- | 80- | 85+ | ICD-9 |
| Lip, Vermilion | 2 | - | - | - | - | - | - | - | - | - | - | - | 1 | 1 | - | - | - | - | - | 140 |
| Tongue | 191 | 1 | - | - | - | - | 2 | 5 | 7 | 12 | 14 | 24 | 25 | 29 | 23 | 21 | 14 | 6 | 8 | 141 |
| Salivary gland | 102 | - | - | 1 | 2 | 5 | 3 | 5 | 4 | 6 | 11 | 13 | 22 | 6 | 6 | 8 | 6 | 2 | 2 | 142 |
| Mouth | 124 | - | - | - | 1 | 1 | 1 | 1 | 3 | 4 | 10 | 17 | 17 | 16 | 16 | 9 | 9 | 11 | 8 | 143-5 |
| Oropharynx | 135 | - | - | - | - | - | - | - | - | 5 | 10 | 21 | 25 | 17 | 19 | 14 | 15 | 7 | 2 | 146 |
| Nasopharynx | 1,144 | - | - | 2 | 2 | 6 | 10 | 23 | 85 | 127 | 195 | 196 | 195 | 125 | 74 | 58 | 32 | 10 | 4 | 147 |
| Hypopharynx | 121 | - | - | - | - | - | - | - | - | - | 5 | 5 | 18 | 14 | 19 | 21 | 20 | 12 | 7 | 148 |
| Oesophagus | 417 | - | - | - | - | - | - | - | 3 | 3 | 24 | 34 | 54 | 69 | 69 | 54 | 44 | 39 | 24 | 150 |
| Stomach | 1,442 | - | - | - | 1 | 3 | 4 | 10 | 18 | 27 | 46 | 105 | 131 | 158 | 174 | 250 | 226 | 171 | 118 | 151 |
| Small intestines | 136 | - | - | - | - | 1 | 1 | 1 | 7 | 7 | 9 | 11 | 23 | 21 | 16 | 17 | 11 | 5 | 6 | 152 |
| Colon | 2,821 | - | - | 1 | 2 | 4 | 9 | 15 | 32 | 60 | 116 | 245 | 326 | 416 | 376 | 400 | 351 | 275 | 193 | 153 |
| Rectum | 2,027 | - | - | - | - | 4 | 1 | 12 | 30 | 49 | 121 | 246 | 298 | 318 | 284 | 272 | 202 | 119 | 71 | 154 |
| Liver | 2,109 | 6 | 1 | 1 | - | - | 3 | 9 | 15 | 39 | 81 | 215 | 293 | 347 | 296 | 297 | 261 | 154 | 91 | 155 |
| Gall bladder, etc. | 261 | - | - | - | - | - | - | 1 | 2 | 7 | 14 | 33 | 28 | 37 | 40 | 40 | 29 | 21 | 9 | 156 |
| Pancreas | 741 | - | - | - | 1 | - | 2 | 2 | 11 | 23 | 25 | 59 | 111 | 97 | 126 | 109 | 84 | 56 | 35 | 157 |
| Retroperitoneum & Peritoneum | 32 | 1 | - | - | - | - | - | 3 | - | - | 3 | 3 | 5 | 2 | 5 | 3 | 4 | 1 | 2 | 158 |
| Nose, sinuses, etc. | 96 | - | - | - | - | 1 | 2 | 3 | 1 | 3 | 12 | 18 | 13 | 12 | 14 | 8 | 4 | 3 | 2 | 160 |
| Larynx | 358 | - | - | - | - | - | - | - | 1 | 3 | 18 | 29 | 43 | 59 | 52 | 47 | 50 | 35 | 21 | 161 |
| Bronchus, trachea | 4274 | 1 | - | 1 | 1 | 1 | 3 | 11 | 27 | 76 | 156 | 263 | 412 | 534 | 615 | 738 | 721 | 434 | 280 | 162 |
| Pleura | 64 | - | - | - | - | - | - | - | - | 1 | 3 | 2 | 4 | 7 | 11 | 14 | 16 | 5 | 1 | 163 |
| Thymus, heart | 148 | 1 | 1 | 4 | 6 | 11 | 6 | 9 | 19 | 7 | 15 | 15 | 17 | 7 | 12 | 9 | 5 | 4 | - | 164 |
| Bone | 95 | 1 | 3 | 11 | 17 | 5 | 5 | 6 | 9 | 5 | 8 | 5 | 4 | 3 | 5 | 3 | 4 | - | 1 | 170 |
| Connective tissues | 245 | 10 | 1 | 8 | 10 | 6 | 9 | 10 | 12 | 8 | 19 | 17 | 29 | 31 | 13 | 19 | 19 | 9 | 15 | 171 |
| Melanoma of skin | 71 | - | - | - | 1 | 1 | - | - | 5 | 3 | 4 | 8 | 6 | 11 | 8 | 11 | 6 | 4 | 3 | 172 |
| Skin, others | 1453 | - | - | 2 | 1 | 3 | 3 | 18 | 32 | 54 | 85 | 111 | 136 | 188 | 151 | 195 | 193 | 147 | 134 | 173 |
| Male Breast | 30 | - | - | - | - | - | - | - | 1 | 4 | 3 | 3 | 2 | 3 | 1 | 4 | 4 | 3 | 2 | 175 |
| Prostate | 3324 | - | - | - | 1 | - | - | - | 2 | 10 | 37 | 104 | 292 | 550 | 640 | 702 | 522 | 296 | 168 | 185 |
| Testis | 169 | 6 | - | - | 13 | 27 | 18 | 20 | 31 | 19 | 13 | 9 | 5 | 2 | 1 | - | 3 | 2 | - | 186 |
| Penis | 108 | - | - | - | - | - | - | - | 3 | 2 | 3 | 5 | 14 | 18 | 26 | 16 | 8 | 8 | 5 | 187 |
| Bladder | 703 | 1 | - | - | - | 1 | 2 | 3 | 10 | 15 | 38 | 60 | 60 | 99 | 86 | 109 | 92 | 79 | 48 | 188 |
| Kidney & Oth.Urinary | 990 | 3 | - | 1 | 1 | 2 | 3 | 16 | 15 | 49 | 79 | 120 | 130 | 148 | 139 | 105 | 102 | 55 | 22 | 189 |
| Eye | 16 | 5 | 1 | - | - | - | - | 1 | - | 1 | 2 | - | 2 | - | - | 4 | - | - | - | 190 |
| Brain, nervous system | 363 | 21 | 13 | 15 | 19 | 10 | 11 | 16 | 23 | 22 | 31 | 31 | 32 | 25 | 37 | 20 | 15 | 18 | 4 | 191-2 |
| Thyroid | 311 | - | - | 1 | 4 | 1 | 12 | 21 | 17 | 26 | 40 | 31 | 43 | 32 | 33 | 22 | 15 | 10 | 3 | 193 |
| Other endocrine | 79 | 14 | 8 | 3 | 6 | 7 | 2 | 5 | 3 | 6 | 5 | 5 | 4 | 5 | - | 2 | 3 | 1 | - | 194 |
| Lymphoid neoplasms | 1816 | 49 | 33 | 37 | 39 | 47 | 50 | 55 | 57 | 80 | 115 | 162 | 214 | 224 | 184 | 180 | 152 | 90 | 48 | |
| Myeloid neoplasms | 810 | 14 | 5 | 13 | 10 | 6 | 19 | 17 | 24 | 39 | 64 | 77 | 71 | 82 | 63 | 101 | 100 | 66 | 39 | |
| Other and unspecified | 365 | - | - | - | 1 | - | - | 2 | 5 | 8 | 13 | 32 | 30 | 37 | 43 | 55 | 64 | 44 | 31 | OTH |
| All | 27693 | 134 | 66 | 101 | 139 | 153 | 181 | 300 | 514 | 810 | 1,447 | 2,334 | 3,135 | 3,750 | 3,677 | 3,937 | 3,406 | 2,202 | 1,407 | ALL |

| SINGAPORE : ALL RESIDENTS 2008-2012, FEMALES | | | | | NUMBER OF CASES BY AGE GROUP (YEARS) | | | | | | | | | | | | | | | | Appendix B2 | |
|--|-------|----|----|-----|--------------------------------------|-----|-----|-----|-----|-----|-----|-------|-------|-------|-------|-----|-----|-----|-----|-------|-------------|--|
| SITE | All | 0- | 5- | 10- | 15- | 20- | 25- | 30- | 35- | 40- | 45- | 50- | 55- | 60- | 65- | 70- | 75- | 80- | 85+ | ICD-9 | | |
| Lip, Vermilion | 6 | - | - | - | - | - | - | - | - | - | - | 2 | - | 1 | 1 | 1 | - | - | 1 | 140 | | |
| Tongue | 102 | - | - | - | 1 | - | 1 | 2 | 5 | 6 | 9 | 14 | 9 | 10 | 14 | 2 | 16 | 5 | 3 | 5 | 141 | |
| Salivary gland | 95 | - | - | - | 1 | - | 2 | 3 | 5 | 8 | 12 | 9 | 11 | 12 | 8 | 4 | 7 | 4 | 6 | 3 | 142 | |
| Mouth | 83 | - | - | - | - | - | 1 | 1 | 2 | 5 | 2 | 9 | 8 | 8 | 10 | 8 | 7 | 10 | 3 | 9 | 143-5 | |
| Oropharynx | 45 | - | - | - | - | - | - | - | - | 4 | 2 | 4 | 9 | 6 | 10 | 1 | 3 | 4 | 2 | - | 146 | |
| Nasopharynx | 370 | 2 | - | - | - | 1 | 3 | 9 | 15 | 27 | 37 | 43 | 74 | 68 | 37 | 20 | 19 | 2 | 8 | 5 | 147 | |
| Hypopharynx | 13 | - | - | - | - | - | - | - | - | 1 | - | 2 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 148 | |
| Oesophagus | 97 | - | - | - | - | - | - | - | 1 | - | - | 3 | 5 | 2 | 9 | 9 | 13 | 12 | 23 | 20 | 150 | |
| Stomach | 1,069 | - | 1 | - | - | 1 | 1 | 5 | 5 | 15 | 32 | 41 | 71 | 84 | 90 | 103 | 142 | 157 | 167 | 154 | 151 | |
| Small intestines | 99 | - | - | - | - | - | - | - | - | 3 | 2 | 10 | 8 | 12 | 12 | 13 | 9 | 11 | 10 | 9 | 152 | |
| Colon | 2,670 | - | - | - | 1 | 3 | 5 | 13 | 16 | 29 | 76 | 126 | 196 | 286 | 319 | 282 | 350 | 370 | 333 | 265 | 153 | |
| Rectum | 1,287 | - | - | - | - | - | 2 | 3 | 9 | 26 | 37 | 65 | 134 | 160 | 178 | 124 | 166 | 136 | 124 | 123 | 154 | |
| Liver | 728 | 6 | - | - | 1 | - | 2 | - | 8 | 3 | 8 | 13 | 29 | 42 | 69 | 78 | 106 | 145 | 105 | 113 | 155 | |
| Gall bladder, etc. | 303 | - | - | - | - | - | - | - | - | 3 | 6 | 12 | 10 | 30 | 34 | 43 | 39 | 47 | 27 | 52 | 156 | |
| Pancreas | 674 | - | - | - | - | 1 | - | 1 | 2 | 4 | 17 | 35 | 35 | 64 | 76 | 83 | 96 | 115 | 63 | 82 | 157 | |
| Retroperitoneum & Peritoneum | 95 | 1 | 1 | - | - | - | - | 2 | 1 | 2 | 6 | 9 | 8 | 13 | 15 | 17 | 7 | 6 | 6 | 1 | 158 | |
| Nose, sinuses, etc. | 51 | - | - | - | - | - | 1 | 1 | 1 | 4 | - | 5 | 9 | 4 | 8 | 5 | 3 | 2 | 5 | 3 | 160 | |
| Larynx | 21 | - | - | - | - | - | - | - | - | 1 | - | - | 1 | 2 | 5 | 1 | 2 | 3 | 3 | 3 | 161 | |
| Bronchus, trachea | 2,249 | 1 | - | - | - | - | 1 | 2 | 22 | 31 | 47 | 115 | 171 | 222 | 238 | 273 | 292 | 287 | 291 | 256 | 162 | |
| Pleura | 18 | - | - | - | - | - | - | - | - | - | - | - | 2 | 4 | 3 | 3 | 3 | 1 | 2 | - | 163 | |
| Thymus, heart | 102 | - | - | - | - | 1 | 1 | 2 | 5 | 6 | 10 | 15 | 14 | 11 | 14 | 8 | 5 | 6 | 3 | 1 | 164 | |
| Bone | 77 | - | 2 | - | 7 | 11 | 10 | 5 | 7 | 6 | 5 | 6 | 4 | 5 | 3 | 2 | - | 1 | 2 | 1 | 170 | |
| Connective tissues | 207 | 8 | 3 | - | 7 | 10 | 2 | 8 | 12 | 16 | 17 | 14 | 20 | 24 | 15 | 10 | 14 | 11 | 8 | 8 | 171 | |
| Melanoma of skin | 62 | - | - | - | - | - | - | 2 | 4 | 3 | 7 | 7 | 3 | 6 | 4 | 5 | 6 | 5 | 4 | 6 | 172 | |
| Skin, others | 1,211 | 1 | - | - | - | 3 | 2 | 6 | 11 | 23 | 35 | 47 | 57 | 80 | 82 | 128 | 136 | 167 | 189 | 244 | 173 | |
| Female Breast | 8,509 | - | - | - | 1 | 3 | 6 | 60 | 199 | 498 | 875 | 1,383 | 1,328 | 1,292 | 1,006 | 626 | 518 | 357 | 205 | 152 | 174 | |
| Cervix uteri | 922 | - | - | - | - | - | 4 | 15 | 31 | 78 | 84 | 117 | 108 | 106 | 88 | 86 | 71 | 53 | 42 | 39 | 180 | |
| Chorioepithelioma | 23 | - | - | - | - | - | 3 | 3 | 3 | 1 | 7 | 4 | 2 | - | - | - | - | - | - | - | 181 | |
| Corpus uteri | 1,784 | - | - | - | - | 2 | 2 | 10 | 35 | 81 | 142 | 209 | 349 | 337 | 241 | 139 | 106 | 71 | 41 | 19 | 182 | |
| Ovary, etc. | 1,607 | - | 4 | - | 15 | 40 | 38 | 35 | 47 | 80 | 155 | 217 | 232 | 214 | 169 | 114 | 94 | 63 | 48 | 42 | 183 | |
| Other fem. genital | 130 | 3 | - | - | - | - | - | - | 2 | 5 | 5 | 7 | 9 | 19 | 12 | 14 | 12 | 18 | 7 | 17 | 184 | |
| Bladder | 206 | - | 1 | - | - | 1 | - | 1 | - | 3 | 5 | 4 | 12 | 15 | 28 | 22 | 29 | 29 | 25 | 31 | 188 | |
| Kidney & Oth.Urinary | 529 | 3 | 1 | - | - | 1 | 1 | 4 | 4 | 4 | 21 | 27 | 56 | 72 | 70 | 53 | 75 | 69 | 38 | 30 | 189 | |
| Eye | 22 | 15 | - | - | - | - | - | - | 1 | - | 1 | 1 | 1 | - | 2 | - | 1 | - | - | - | 190 | |
| Brain, nervous system | 334 | 16 | 18 | - | 12 | 8 | 8 | 9 | 12 | 22 | 21 | 26 | 26 | 22 | 29 | 21 | 26 | 21 | 24 | 13 | 191-2 | |
| Thyroid | 984 | 1 | - | - | 2 | 22 | 25 | 59 | 79 | 103 | 107 | 115 | 121 | 98 | 82 | 52 | 50 | 24 | 22 | 22 | 193 | |
| Other endocrine | 62 | 11 | - | - | 2 | 2 | 3 | 5 | 2 | 1 | 4 | 8 | 4 | 7 | 5 | - | 6 | 2 | - | - | 194 | |
| Lymphoid neoplasms | 1,230 | 39 | 19 | - | 16 | 21 | 31 | 39 | 44 | 42 | 56 | 78 | 91 | 135 | 117 | 126 | 118 | 105 | 85 | 68 | | |
| Myeloid neoplasms | 624 | 3 | 7 | - | 3 | 12 | 8 | 13 | 18 | 25 | 42 | 33 | 44 | 76 | 55 | 63 | 63 | 69 | 44 | 46 | | |

| | | | | | | | | | | | | | | | | | | | | |
|-----------------------|---------------|------------|-----------|-----------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|------------|
| Other and unspecified | 380 | 1 | - | - | - | 1 | 2 | 5 | 5 | 8 | 15 | 23 | 14 | 29 | 34 | 56 | 57 | 64 | 66 | OTH |
| All | 29,080 | 111 | 57 | 69 | 143 | 164 | 320 | 613 | 1,174 | 1,900 | 2,848 | 3,297 | 3,563 | 3,188 | 2,574 | 2,669 | 2,447 | 2,033 | 1,910 | ALL |

| SINGAPORE : CHINESE RESIDENTS 2008-2012, MALES | | | | | | | | | | NUMBER OF CASES BY AGE GROUP (YEARS) | | | | | | | | | | Appendix B3 | |
|--|--------|----|----|-----|-----|-----|-----|-----|-----|--------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------------|--|
| SITE | All | 0- | 5- | 10- | 15- | 20- | 25- | 30- | 35- | 40- | 45- | 50- | 55- | 60- | 65- | 70- | 75- | 80- | 85+ | ICD-9 | |
| Lip, Vermilion | 2 | - | - | - | - | - | - | - | - | - | - | - | 1 | 1 | - | - | - | - | - | 140 | |
| Tongue | 160 | 1 | - | - | - | - | 2 | 3 | 7 | 10 | 13 | 16 | 23 | 24 | 20 | 18 | 13 | 3 | 7 | 141 | |
| Salivary gland | 85 | - | - | 1 | 1 | 4 | 2 | 3 | 3 | 6 | 10 | 13 | 20 | 6 | 4 | 5 | 5 | 1 | 1 | 142 | |
| Mouth | 102 | - | - | - | 1 | - | 1 | - | 1 | 2 | 8 | 13 | 15 | 13 | 15 | 9 | 7 | 10 | 7 | 143-5 | |
| Oropharynx | 113 | - | - | - | - | - | - | - | - | 3 | 9 | 17 | 19 | 12 | 19 | 12 | 15 | 5 | 2 | 146 | |
| Nasopharynx | 1,036 | - | - | 1 | 2 | 6 | 8 | 20 | 79 | 117 | 174 | 171 | 181 | 113 | 67 | 55 | 28 | 10 | 4 | 147 | |
| Hypopharynx | 111 | - | - | - | - | - | - | - | - | - | 4 | 5 | 17 | 11 | 18 | 20 | 19 | 10 | 7 | 148 | |
| Oesophagus | 369 | - | - | - | - | - | - | - | 3 | 3 | 21 | 28 | 45 | 61 | 63 | 49 | 41 | 33 | 22 | 150 | |
| Stomach | 1,294 | - | - | - | 1 | 2 | 4 | 9 | 16 | 21 | 39 | 85 | 106 | 142 | 161 | 230 | 211 | 156 | 111 | 151 | |
| Small intestines | 111 | - | - | - | - | 1 | 1 | 1 | 3 | 4 | 7 | 9 | 20 | 16 | 14 | 15 | 11 | 4 | 5 | 152 | |
| Colon | 2,499 | - | - | - | 2 | 4 | 6 | 13 | 26 | 50 | 92 | 209 | 284 | 370 | 340 | 366 | 317 | 247 | 173 | 153 | |
| Rectum | 1,733 | - | - | - | - | 3 | - | 9 | 26 | 35 | 102 | 205 | 254 | 264 | 258 | 232 | 178 | 105 | 62 | 154 | |
| Liver | 1811 | 3 | 1 | - | - | - | 3 | 8 | 11 | 29 | 64 | 176 | 248 | 299 | 264 | 263 | 220 | 138 | 84 | 155 | |
| Gall bladder, etc. | 225 | - | - | - | - | - | - | 1 | 2 | 5 | 10 | 27 | 23 | 34 | 38 | 34 | 27 | 17 | 7 | 156 | |
| Pancreas | 649 | - | - | - | 1 | - | 2 | 2 | 9 | 15 | 22 | 51 | 92 | 81 | 119 | 99 | 74 | 53 | 29 | 157 | |
| Retroperitoneum & Peritoneum | 26 | - | - | - | - | - | - | 2 | - | - | 2 | 3 | 4 | 2 | 5 | 3 | 3 | - | 2 | 158 | |
| Nose, sinuses, etc. | 85 | - | - | - | - | 1 | 2 | 3 | - | 1 | 8 | 17 | 12 | 11 | 14 | 8 | 4 | 2 | 2 | 160 | |
| Larynx | 300 | - | - | - | - | - | - | - | 1 | 2 | 16 | 25 | 38 | 40 | 46 | 39 | 45 | 29 | 19 | 161 | |
| Bronchus, trachea | 3,631 | - | - | 1 | 1 | 1 | 1 | 8 | 20 | 54 | 113 | 203 | 343 | 452 | 545 | 641 | 636 | 369 | 243 | 162 | |
| Pleura | 54 | - | - | - | - | - | - | - | - | 1 | 3 | 2 | 3 | 4 | 9 | 13 | 14 | 4 | 1 | 163 | |
| Thymus, heart | 111 | - | 1 | 3 | 3 | 8 | 3 | 4 | 14 | 6 | 11 | 11 | 15 | 6 | 11 | 8 | 4 | 3 | - | 164 | |
| Bone | 77 | - | 2 | 9 | 14 | 5 | 4 | 5 | 7 | 3 | 6 | 5 | 3 | 2 | 4 | 3 | 4 | - | 1 | 170 | |
| Connective tissues | 194 | 7 | 1 | 5 | 9 | 5 | 6 | 8 | 10 | 7 | 15 | 11 | 26 | 25 | 10 | 14 | 15 | 7 | 13 | 171 | |
| Melanoma of skin | 47 | - | - | - | 1 | 1 | - | - | 3 | - | 2 | 4 | 2 | 9 | 3 | 10 | 6 | 3 | 3 | 172 | |
| Skin, others | 1,154 | - | - | 2 | 1 | 3 | 2 | 11 | 23 | 22 | 46 | 73 | 102 | 142 | 127 | 174 | 170 | 130 | 126 | 173 | |
| Male Breast | 25 | - | - | - | - | - | - | - | 1 | 3 | 2 | 2 | 2 | 3 | 1 | 3 | 4 | 3 | 1 | 175 | |
| Prostate | 2,857 | - | - | - | - | - | - | - | 2 | 8 | 32 | 91 | 254 | 468 | 566 | 614 | 431 | 255 | 136 | 185 | |
| Testis | 107 | 2 | - | - | 7 | 13 | 9 | 13 | 23 | 13 | 7 | 8 | 5 | 2 | 1 | - | 3 | 1 | - | 186 | |
| Penis | 101 | - | - | - | - | - | - | - | 2 | 1 | 1 | 4 | 14 | 17 | 25 | 16 | 8 | 8 | 5 | 187 | |
| Bladder | 559 | 1 | - | - | - | 1 | 1 | 2 | 8 | 11 | 25 | 44 | 50 | 83 | 65 | 86 | 74 | 63 | 45 | 188 | |
| Kidney & Oth. Urinary | 855 | 2 | - | 1 | 1 | 2 | 3 | 13 | 13 | 40 | 63 | 99 | 117 | 129 | 120 | 93 | 90 | 47 | 22 | 189 | |
| Eye | 13 | 5 | 1 | - | - | - | - | 1 | - | - | 1 | - | 2 | - | - | 3 | - | - | - | 190 | |
| Brain, nervous system | 282 | 17 | 5 | 10 | 14 | 7 | 11 | 12 | 18 | 18 | 21 | 22 | 24 | 21 | 34 | 19 | 11 | 15 | 3 | 191-2 | |
| Thyroid | 230 | - | - | 1 | 2 | 1 | 11 | 12 | 12 | 18 | 30 | 24 | 34 | 27 | 24 | 16 | 11 | 5 | 2 | 193 | |
| Other endocrine | 62 | 10 | 5 | 2 | 5 | 4 | 1 | 4 | 3 | 6 | 4 | 5 | 2 | 5 | - | 2 | 3 | 1 | - | 194 | |
| Lymphoid neoplasms | 1330 | 36 | 17 | 25 | 26 | 26 | 35 | 35 | 37 | 54 | 80 | 120 | 162 | 167 | 153 | 132 | 116 | 73 | 36 | | |
| Myeloid neoplasms | 645 | 8 | 4 | 13 | 7 | 5 | 14 | 10 | 21 | 24 | 44 | 64 | 57 | 67 | 48 | 86 | 91 | 54 | 28 | | |
| Other and unspecified | 308 | - | - | - | - | - | - | 1 | 4 | 5 | 9 | 26 | 26 | 28 | 42 | 48 | 57 | 37 | 25 | OTH | |
| All | 23,353 | 92 | 37 | 74 | 99 | 103 | 132 | 213 | 408 | 597 | 1,116 | 1,888 | 2,645 | 3,157 | 3,253 | 3,438 | 2,966 | 1,901 | 1,234 | ALL | |

| SINGAPORE : CHINESE RESIDENTS 2008-2012, FEMALES | | | | | | | | | | | | NUMBER OF CASES BY AGE GROUP (YEARS) | | | | | | | | | | Appendix B4 | |
|--|--------|----|----|-----|-----|-----|-----|-----|-----|-------|-------|--------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|--|-------------|--|
| SITE | All | 0- | 5- | 10- | 15- | 20- | 25- | 30- | 35- | 40- | 45- | 50- | 55- | 60- | 65- | 70- | 75- | 80- | 85+ | ICD-9 | | | |
| Lip, Vermilion | 5 | - | - | - | - | - | - | - | - | - | - | 2 | - | - | 1 | 1 | - | - | 1 | 140 | | | |
| Tongue | 75 | - | - | - | - | 1 | 1 | 4 | 5 | 4 | 11 | 5 | 9 | 11 | 1 | 11 | 4 | 3 | 5 | 141 | | | |
| Salivary gland | 83 | - | - | 1 | - | 1 | 3 | 3 | 8 | 11 | 6 | 9 | 11 | 6 | 4 | 7 | 4 | 6 | 3 | 142 | | | |
| Mouth | 58 | - | - | - | - | 1 | 1 | 1 | 3 | 1 | 9 | 6 | 6 | 4 | 7 | 4 | 6 | 2 | 7 | 143-5 | | | |
| Oropharynx | 42 | - | - | - | - | - | - | - | 3 | 2 | 4 | 9 | 6 | 10 | 1 | 3 | 4 | - | - | 146 | | | |
| Nasopharynx | 338 | 2 | - | - | 1 | 1 | 8 | 15 | 25 | 35 | 37 | 68 | 58 | 35 | 19 | 19 | 2 | 8 | 5 | 147 | | | |
| Hypopharynx | 8 | - | - | - | - | - | - | - | 1 | - | 1 | 1 | 1 | 1 | - | - | 2 | 1 | - | 148 | | | |
| Oesophagus | 80 | - | - | - | - | - | - | - | - | - | 2 | 5 | 2 | 5 | 5 | 9 | 10 | 22 | 20 | 150 | | | |
| Stomach | 967 | - | 1 | - | - | 1 | 3 | 3 | 11 | 24 | 35 | 66 | 74 | 83 | 93 | 129 | 144 | 153 | 147 | 151 | | | |
| Small intestines | 74 | - | - | - | - | - | - | - | 3 | 1 | 7 | 7 | 9 | 9 | 9 | 6 | 7 | 9 | 7 | 152 | | | |
| Colon | 2,349 | - | - | 1 | 2 | 4 | 9 | 13 | 22 | 61 | 103 | 168 | 246 | 280 | 243 | 311 | 329 | 307 | 250 | 153 | | | |
| Rectum | 1,119 | - | - | - | - | 1 | 3 | 9 | 22 | 33 | 55 | 106 | 139 | 149 | 109 | 147 | 117 | 116 | 113 | 154 | | | |
| Liver | 633 | 5 | - | 1 | - | 1 | - | 6 | 3 | 6 | 8 | 23 | 40 | 53 | 73 | 92 | 125 | 92 | 105 | 155 | | | |
| Gall bladder, etc. | 257 | - | - | - | - | - | - | - | 3 | 5 | 11 | 9 | 23 | 27 | 33 | 31 | 42 | 23 | 50 | 156 | | | |
| Pancreas | 591 | - | - | - | 1 | - | 1 | 2 | 3 | 14 | 31 | 28 | 53 | 67 | 73 | 84 | 105 | 57 | 72 | 157 | | | |
| Retroperitoneum & Peritoneum | 75 | 1 | 1 | - | - | - | 1 | 1 | 1 | 5 | 8 | 6 | 11 | 13 | 12 | 6 | 4 | 4 | 1 | 158 | | | |
| Nose, sinuses, etc. | 45 | - | - | - | - | 1 | - | 1 | 4 | - | 3 | 9 | 4 | 7 | 4 | 2 | 2 | 5 | 3 | 160 | | | |
| Larynx | 20 | - | - | - | - | - | - | - | 1 | - | - | 1 | 2 | 5 | 1 | 2 | 3 | 3 | 2 | 161 | | | |
| Bronchus, trachea | 1,994 | - | - | - | - | - | - | 15 | 25 | 38 | 93 | 142 | 184 | 210 | 249 | 262 | 264 | 270 | 242 | 162 | | | |
| Pleura | 15 | - | - | - | - | - | - | - | - | - | - | 2 | 3 | 3 | 2 | 3 | - | 2 | - | 163 | | | |
| Thymus, heart | 87 | - | - | - | 1 | 1 | 2 | 5 | 2 | 7 | 13 | 13 | 10 | 12 | 7 | 5 | 6 | 3 | - | 164 | | | |
| Bone | 62 | - | 2 | 6 | 7 | 9 | 4 | 6 | 5 | 5 | 5 | 3 | 4 | 3 | - | - | - | 2 | 1 | 170 | | | |
| Connective tissues | 168 | 6 | 3 | 5 | 7 | 1 | 6 | 9 | 10 | 11 | 13 | 20 | 20 | 13 | 8 | 14 | 9 | 6 | 7 | 171 | | | |
| Melanoma of skin | 50 | - | - | - | - | - | 2 | 3 | 2 | 6 | 5 | 1 | 5 | 4 | 4 | 5 | 5 | 2 | 6 | 172 | | | |
| Skin, others | 1061 | 1 | - | - | 3 | 1 | 5 | 8 | 16 | 21 | 34 | 45 | 72 | 65 | 116 | 119 | 147 | 175 | 233 | 173 | | | |
| Female Breast | 6,852 | - | - | 1 | 3 | 5 | 44 | 159 | 389 | 671 | 1,083 | 1,045 | 1,049 | 827 | 537 | 444 | 287 | 172 | 136 | 174 | | | |
| Cervix uteri | 772 | - | - | - | - | 4 | 10 | 24 | 62 | 72 | 86 | 91 | 93 | 69 | 76 | 63 | 48 | 38 | 36 | 180 | | | |
| Chorioepithelioma | 16 | - | - | - | - | 2 | 3 | 1 | 1 | 5 | 3 | 1 | - | - | - | - | - | - | - | 181 | | | |
| Corpus uteri | 1,414 | - | - | - | 2 | 2 | 8 | 21 | 59 | 120 | 157 | 276 | 287 | 191 | 106 | 92 | 43 | 35 | 15 | 182 | | | |
| Ovary, etc. | 1,264 | - | 3 | 11 | 25 | 28 | 28 | 36 | 61 | 115 | 165 | 178 | 180 | 145 | 89 | 77 | 47 | 37 | 39 | 183 | | | |
| Other fem. genital | 106 | 2 | - | - | - | - | - | 1 | 4 | 4 | 5 | 7 | 15 | 8 | 14 | 12 | 13 | 6 | 15 | 184 | | | |
| Bladder | 178 | - | 1 | - | - | - | 1 | - | 2 | 3 | 2 | 11 | 11 | 25 | 21 | 22 | 26 | 23 | 30 | 188 | | | |
| Kidney & Oth.Urinary | 450 | 2 | 1 | - | 1 | 1 | 4 | 4 | 4 | 20 | 20 | 42 | 59 | 58 | 47 | 64 | 63 | 33 | 27 | 189 | | | |
| Eye | 17 | 10 | - | - | - | - | - | 1 | - | 1 | 1 | 1 | - | 2 | - | 1 | - | - | - | 190 | | | |
| Brain, nervous system | 258 | 11 | 14 | 7 | 7 | 8 | 6 | 12 | 12 | 15 | 21 | 22 | 16 | 25 | 16 | 21 | 18 | 15 | 12 | 191-2 | | | |
| Thyroid | 775 | 1 | - | 2 | 19 | 15 | 44 | 57 | 84 | 76 | 87 | 98 | 82 | 66 | 46 | 44 | 20 | 17 | 17 | 193 | | | |
| Other endocrine | 47 | 7 | - | 2 | 2 | 2 | 4 | 1 | - | 2 | 7 | 3 | 7 | 4 | - | 4 | 2 | - | - | 194 | | | |
| Lymphoid neoplasms | 908 | 25 | 12 | 10 | 16 | 17 | 34 | 33 | 30 | 34 | 41 | 60 | 100 | 85 | 101 | 96 | 77 | 74 | 63 | | | | |
| Myeloid neoplasms | 483 | 2 | 4 | 2 | 9 | 6 | 10 | 11 | 18 | 29 | 25 | 33 | 54 | 45 | 50 | 49 | 57 | 38 | 41 | | | | |
| Other and unspecified | 313 | - | - | - | - | - | - | 4 | 3 | 5 | 10 | 17 | 7 | 24 | 28 | 48 | 50 | 55 | 62 | OTH | | | |
| All | 24,109 | 75 | 42 | 49 | 106 | 114 | 245 | 469 | 907 | 1,462 | 2207 | 2,639 | 2,952 | 2,649 | 2,205 | 2,309 | 2,092 | 1,814 | 1,773 | ALL | | | |

| SINGAPORE : MALAY RESIDENTS 2008-2012, MALES | | | | | | | | | | NUMBER OF CASES BY AGE GROUP (YEARS) | | | | | | | | | | | Appendix B5 |
|--|------|----|----|-----|-----|-----|-----|-----|-----|--------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|-------------|
| SITE | All | 0- | 5- | 10- | 15- | 20- | 25- | 30- | 35- | 40- | 45- | 50- | 55- | 60- | 65- | 70- | 75- | 80- | 85+ | ICD-9 | |
| Lip, Vermilion | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 140 | |
| Tongue | 6 | - | - | - | - | - | - | - | - | - | - | 4 | - | - | - | 1 | - | 1 | - | 141 | |
| Salivary gland | 10 | - | - | - | - | - | 1 | 2 | - | - | - | - | 2 | - | 1 | 2 | 1 | 1 | - | 142 | |
| Mouth | 3 | - | - | - | - | - | - | 1 | 1 | - | - | - | - | - | - | - | 1 | - | - | 143-5 | |
| Oropharynx | 3 | - | - | - | - | - | - | - | - | - | - | 1 | 1 | 1 | - | - | - | - | - | 146 | |
| Nasopharynx | 85 | - | - | 1 | - | - | 1 | 2 | 4 | 7 | 16 | 21 | 9 | 12 | 6 | 3 | 3 | - | - | 147 | |
| Hypopharynx | 1 | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | - | 148 | |
| Oesophagus | 23 | - | - | - | - | - | - | - | - | - | 1 | 3 | 2 | 4 | 3 | 4 | 1 | 5 | - | 150 | |
| Stomach | 57 | - | - | - | - | - | - | 1 | - | - | 4 | 10 | 6 | 7 | 7 | 8 | 6 | 6 | 2 | 151 | |
| Small intestines | 9 | - | - | - | - | - | - | - | 2 | - | 1 | - | 2 | 3 | 1 | - | - | - | - | 152 | |
| Colon | 182 | - | - | 1 | - | - | 2 | 1 | 3 | 6 | 14 | 18 | 26 | 26 | 21 | 15 | 21 | 14 | 14 | 153 | |
| Rectum | 172 | - | - | - | - | 1 | 1 | 1 | 2 | 6 | 14 | 22 | 24 | 32 | 17 | 26 | 13 | 8 | 5 | 154 | |
| Liver | 186 | 1 | - | - | - | - | - | - | 2 | 8 | 13 | 23 | 26 | 32 | 21 | 21 | 27 | 8 | 4 | 155 | |
| Gall bladder, etc. | 22 | - | - | - | - | - | - | - | - | 1 | 3 | 2 | 3 | 3 | 2 | 4 | 1 | 3 | - | 156 | |
| Pancreas | 54 | - | - | - | - | - | - | - | 1 | 7 | 1 | 5 | 10 | 9 | 5 | 6 | 5 | - | 5 | 157 | |
| Retroperitoneum & Peritoneum | 5 | 1 | - | - | - | - | - | 1 | - | - | - | - | 1 | - | - | - | 1 | 1 | - | 158 | |
| Nose, sinuses, etc. | 5 | - | - | - | - | - | - | - | - | 2 | 1 | 1 | 1 | - | - | - | - | - | - | 160 | |
| Larynx | 22 | - | - | - | - | - | - | - | - | - | 2 | 2 | 1 | 6 | 3 | 4 | 2 | 1 | 1 | 161 | |
| Bronchus, trachea | 439 | 1 | - | - | - | - | 2 | 1 | 7 | 14 | 34 | 45 | 45 | 55 | 48 | 60 | 58 | 47 | 22 | 162 | |
| Pleura | 4 | - | - | - | - | - | - | - | - | - | - | - | 1 | 2 | - | 1 | - | - | - | 163 | |
| Thymus, heart | 23 | 1 | - | 1 | 3 | 3 | 3 | 1 | 3 | 1 | 3 | 2 | 1 | - | - | - | - | 1 | - | 164 | |
| Bone | 9 | - | 1 | 2 | 1 | - | - | 1 | 1 | - | 1 | - | 1 | 1 | - | - | - | - | - | 170 | |
| Connective tissues | 29 | 2 | - | 2 | 1 | - | 3 | 2 | - | - | 3 | 2 | 2 | 5 | 1 | 2 | 2 | 2 | - | 171 | |
| Melanoma of skin | 5 | - | - | - | - | - | - | - | 1 | - | - | - | 2 | 1 | - | - | - | 1 | - | 172 | |
| Skin, others | 60 | - | - | - | - | - | 1 | - | - | 3 | 3 | 5 | 8 | 12 | - | 5 | 9 | 11 | 3 | 173 | |
| Male Breast | 2 | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | 1 | - | - | - | 175 | |
| Prostate | 218 | - | - | - | - | - | - | - | - | - | 2 | 2 | 14 | 39 | 36 | 38 | 49 | 25 | 13 | 185 | |
| Testis | 36 | 2 | - | - | 6 | 8 | 8 | 2 | 6 | 2 | 1 | - | - | - | - | - | - | 1 | - | 186 | |
| Penis | 2 | - | - | - | - | - | - | - | - | - | 1 | 1 | - | - | - | - | - | - | - | 187 | |
| Bladder | 82 | - | - | - | - | - | 1 | 1 | 1 | 3 | 4 | 8 | 5 | 6 | 13 | 14 | 12 | 11 | 3 | 188 | |
| Kidney & Oth.Urinary | 67 | - | - | - | - | - | - | 3 | - | 4 | 7 | 14 | 3 | 11 | 9 | 9 | 4 | 3 | - | 189 | |
| Eye | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | 190 | |
| Brain, nervous system | 45 | 1 | 5 | 2 | 4 | 2 | - | 3 | 3 | - | 5 | 5 | 4 | 2 | 2 | - | 3 | 3 | 1 | 191-2 | |
| Thyroid | 48 | - | - | - | 2 | - | - | 5 | - | 3 | 5 | 2 | 7 | 4 | 6 | 5 | 4 | 4 | 1 | 193 | |
| Other endocrine | 9 | 1 | 2 | 1 | 1 | 2 | - | - | - | - | 1 | - | 1 | - | - | - | - | - | - | 194 | |
| Lymphoid neoplasms | 291 | 4 | 8 | 3 | 11 | 14 | 7 | 14 | 8 | 12 | 25 | 24 | 31 | 32 | 22 | 32 | 23 | 12 | 9 | | |
| Myeloid neoplasms | 101 | 4 | 1 | - | 3 | 1 | 4 | 3 | - | 10 | 14 | 12 | 6 | 8 | 11 | 8 | 4 | 5 | 7 | | |
| Other and unspecified | 36 | - | - | - | 1 | - | - | 1 | - | 2 | 2 | 4 | 4 | 5 | - | 5 | 4 | 5 | 3 | OTH | |
| All | 2352 | 18 | 17 | 13 | 33 | 31 | 34 | 46 | 45 | 91 | 183 | 238 | 249 | 318 | 235 | 275 | 254 | 179 | 93 | ALL | |

| SINGAPORE : MALAY RESIDENTS 2008-2012, FEMALES | | | | | | | | | | | | | | | | | | | Appendix B6 | |
|--|-------|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------------|-------|
| NUMBER OF CASES BY AGE GROUP (YEARS) | | | | | | | | | | | | | | | | | | | | |
| SITE | All | 0- | 5- | 10- | 15- | 20- | 25- | 30- | 35- | 40- | 45- | 50- | 55- | 60- | 65- | 70- | 75- | 80- | 85+ | ICD-9 |
| Lip, Vermilion | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 140 |
| Tongue | 15 | - | - | 1 | - | - | 1 | - | 1 | 2 | 1 | 4 | - | 2 | - | 2 | 1 | - | - | 141 |
| Salivary gland | 5 | - | - | - | - | 1 | - | - | - | 1 | - | 2 | - | 1 | - | - | - | - | - | 142 |
| Mouth | 6 | - | - | - | - | - | - | 1 | 1 | - | - | 1 | 1 | - | - | - | 2 | - | - | 143-5 |
| Oropharynx | 2 | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | - | 1 | - | 146 |
| Nasopharynx | 25 | - | - | - | - | 1 | 1 | - | 2 | - | 6 | 4 | 9 | 1 | 1 | - | - | - | - | 147 |
| Hypopharynx | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 148 |
| Oesophagus | 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | 1 | - | 1 | - | 150 |
| Stomach | 57 | - | - | - | 1 | - | 1 | 2 | 1 | 2 | 4 | 2 | 8 | 4 | 6 | 8 | 7 | 7 | 4 | 151 |
| Small intestines | 11 | - | - | - | - | - | - | - | - | - | 3 | - | - | 1 | 2 | 2 | 2 | - | 1 | 152 |
| Colon | 206 | - | - | - | - | 1 | 1 | 2 | 1 | 8 | 12 | 22 | 29 | 25 | 24 | 26 | 30 | 17 | 8 | 153 |
| Rectum | 103 | - | - | - | - | 1 | - | - | 1 | 2 | 6 | 22 | 9 | 17 | 8 | 16 | 13 | 4 | 4 | 154 |
| Liver | 61 | - | - | - | - | - | - | 2 | - | 2 | 2 | 4 | - | 11 | 5 | 10 | 13 | 8 | 4 | 155 |
| Gall bladder, etc. | 30 | - | - | - | - | - | - | - | - | 1 | 1 | 1 | 4 | 4 | 9 | 2 | 4 | 2 | 2 | 156 |
| Pancreas | 48 | - | - | - | - | - | - | - | 1 | 3 | 1 | 6 | 8 | 6 | 7 | 5 | 6 | 2 | 3 | 157 |
| Retroperitoneum & Peritoneum | 7 | - | - | - | - | - | - | - | - | - | - | 1 | 1 | 1 | 3 | 1 | - | - | - | 158 |
| Nose, sinuses, etc. | 5 | - | - | - | - | - | 1 | - | - | - | 2 | - | - | 1 | 1 | - | - | - | - | 160 |
| Larynx | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 161 |
| Bronchus, trachea | 178 | - | - | - | - | 1 | 2 | 2 | 2 | 5 | 18 | 22 | 29 | 19 | 17 | 20 | 16 | 15 | 10 | 162 |
| Pleura | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 163 |
| Thymus, heart | 10 | - | - | - | - | - | - | - | 3 | 1 | 2 | - | 1 | 2 | - | - | - | - | 1 | 164 |
| Bone | 9 | - | - | 1 | 3 | 1 | - | 1 | - | - | - | 1 | - | - | 2 | - | - | - | - | 170 |
| Connective tissues | 23 | - | - | 2 | 3 | 1 | 2 | 3 | 3 | 4 | - | - | 2 | - | - | - | 1 | 1 | 1 | 171 |
| Melanoma of skin | 5 | - | - | - | - | - | - | - | - | - | 1 | 2 | - | - | 1 | - | - | 1 | - | 172 |
| Skin, others | 51 | - | - | - | - | - | 1 | - | 1 | 2 | 3 | 2 | 1 | 8 | 5 | 6 | 9 | 8 | 5 | 173 |
| Female Breast | 908 | - | - | - | - | 1 | 8 | 21 | 55 | 102 | 194 | 158 | 144 | 89 | 48 | 33 | 34 | 12 | 9 | 174 |
| Cervix uteri | 99 | - | - | - | - | - | 4 | 3 | 11 | 9 | 19 | 11 | 9 | 14 | 6 | 7 | 3 | 3 | - | 180 |
| Chorioepithelioma | 5 | - | - | - | - | - | - | 2 | - | 2 | - | 1 | - | - | - | - | - | - | - | 181 |
| Corpus uteri | 202 | - | - | - | - | - | - | 8 | 15 | 14 | 28 | 47 | 30 | 25 | 11 | 4 | 13 | 5 | 2 | 182 |
| Ovary, etc. | 212 | - | - | 4 | 9 | 9 | 4 | 7 | 10 | 19 | 41 | 36 | 21 | 13 | 13 | 9 | 9 | 6 | 2 | 183 |
| Other fem. genital | 15 | - | - | - | - | - | - | 1 | 1 | 1 | 2 | - | 2 | 1 | - | - | 4 | 1 | 2 | 184 |
| Bladder | 12 | - | - | - | - | - | - | - | - | 2 | - | 1 | 1 | - | 1 | 4 | 1 | 1 | 1 | 188 |
| Kidney & Oth.Urinary | 42 | - | - | - | - | - | - | - | - | 1 | 5 | 10 | 5 | 6 | 1 | 7 | 3 | 3 | 1 | 189 |
| Eye | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 190 |
| Brain, nervous system | 40 | 3 | 3 | 4 | 1 | - | - | - | 3 | 6 | 2 | 2 | 2 | 4 | 2 | 1 | 2 | 4 | 1 | 191-2 |
| Thyroid | 115 | - | - | - | 2 | 8 | 12 | 4 | 9 | 19 | 20 | 11 | 10 | 7 | 4 | 3 | 1 | 2 | 3 | 193 |
| Other endocrine | 10 | 4 | - | - | - | - | - | - | 1 | 1 | - | 1 | - | 1 | - | 2 | - | - | - | 194 |
| Lymphoid neoplasms | 215 | 7 | 6 | 5 | 4 | 7 | 1 | 3 | 7 | 12 | 28 | 17 | 29 | 25 | 14 | 15 | 24 | 8 | 3 | |
| Myeloid neoplasms | 81 | - | 2 | 1 | 1 | 2 | 1 | 1 | 3 | 6 | 3 | 6 | 16 | 7 | 8 | 8 | 7 | 4 | 5 | |
| Other and unspecified | 42 | 1 | - | - | - | 1 | 2 | 1 | 2 | - | 3 | 3 | 5 | 1 | 5 | 3 | 6 | 7 | 2 | OTH |
| All | 2,858 | 15 | 11 | 18 | 24 | 35 | 42 | 64 | 135 | 227 | 407 | 400 | 376 | 296 | 205 | 195 | 211 | 123 | 74 | ALL |

| SINGAPORE : INDIAN RESIDENTS 2008-2012, MALES | | | | | | | | | | | | | | | | | | | Appendix B7 | |
|---|-------|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|-------|
| SITE | All | 0- | 5- | 10- | 15- | 20- | 25- | 30- | 35- | 40- | 45- | 50- | 55- | 60- | 65- | 70- | 75- | 80- | 85+ | ICD-9 |
| Lip, Vermilion | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 140 |
| Tongue | 19 | - | - | - | - | - | - | 1 | - | 2 | 1 | 3 | 2 | 4 | 1 | 2 | - | 2 | 1 | 141 |
| Salivary gland | 4 | - | - | - | 1 | - | - | - | 1 | - | 1 | - | - | - | - | - | - | - | 1 | 142 |
| Mouth | 19 | - | - | - | - | 1 | - | - | 1 | 2 | 2 | 4 | 2 | 3 | 1 | - | 1 | 1 | 1 | 143-5 |
| Oropharynx | 14 | - | - | - | - | - | - | - | - | 2 | - | 3 | 3 | 3 | - | 2 | - | 1 | - | 146 |
| Nasopharynx | 12 | - | - | - | - | - | - | - | 1 | 2 | 2 | 3 | 3 | - | 1 | - | - | - | - | 147 |
| Hypopharynx | 7 | - | - | - | - | - | - | - | - | - | - | - | - | 2 | 1 | 1 | 1 | 2 | - | 148 |
| Oesophagus | 23 | - | - | - | - | - | - | - | - | - | 2 | 3 | 6 | 3 | 3 | 1 | 2 | 1 | 2 | 150 |
| Stomach | 75 | - | - | - | - | 1 | - | - | 1 | 5 | 2 | 8 | 13 | 8 | 6 | 10 | 9 | 8 | 4 | 151 |
| Small intestines | 12 | - | - | - | - | - | - | - | 2 | 3 | 1 | 1 | - | 2 | 1 | 2 | - | - | - | 152 |
| Colon | 102 | - | - | - | - | - | 1 | 1 | 3 | 2 | 9 | 13 | 12 | 16 | 12 | 11 | 8 | 8 | 6 | 153 |
| Rectum | 85 | - | - | - | - | - | - | 1 | 1 | 8 | 3 | 11 | 18 | 13 | 7 | 8 | 10 | 3 | 2 | 154 |
| Liver | 81 | 1 | - | 1 | - | - | - | - | 1 | 2 | 2 | 12 | 13 | 12 | 7 | 9 | 12 | 7 | 2 | 155 |
| Gall bladder, etc. | 10 | - | - | - | - | - | - | - | - | - | - | 3 | 2 | - | - | 1 | 1 | 1 | 2 | 156 |
| Pancreas | 33 | - | - | - | - | - | - | - | 1 | 1 | 1 | 3 | 9 | 6 | 2 | 1 | 5 | 3 | 1 | 157 |
| Retroperitoneum & Peritoneum | 1 | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | - | 158 |
| Nose, sinuses, etc. | 6 | - | - | - | - | - | - | - | 1 | - | 3 | - | - | 1 | - | - | - | 1 | - | 160 |
| Larynx | 29 | - | - | - | - | - | - | - | - | 1 | - | 2 | 4 | 10 | 3 | 3 | 2 | 3 | 1 | 161 |
| Bronchus, trachea | 150 | - | - | - | - | - | - | 2 | - | 5 | 8 | 9 | 21 | 17 | 15 | 28 | 21 | 17 | 7 | 162 |
| Pleura | 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | 2 | 1 | - | 163 |
| Thymus, heart | 9 | - | - | - | - | - | - | 2 | 1 | - | 1 | 1 | 1 | - | 1 | 1 | 1 | - | - | 164 |
| Bone | 7 | 1 | - | - | 2 | - | - | - | 1 | 2 | 1 | - | - | - | - | - | - | - | - | 170 |
| Connective tissues | 18 | 1 | - | 1 | - | - | - | - | 2 | 1 | 1 | 3 | - | 1 | 2 | 3 | 2 | - | 1 | 171 |
| Melanoma of skin | 2 | - | - | - | - | - | - | - | - | 1 | - | 1 | - | - | - | - | - | - | - | 172 |
| Skin, others | 19 | - | - | - | - | - | - | 1 | - | 2 | 1 | 1 | 2 | 2 | 2 | 3 | 5 | - | - | 173 |
| Male Breast | 3 | - | - | - | - | - | - | - | - | 1 | - | 1 | - | - | - | - | - | - | 1 | 175 |
| Prostate | 158 | - | - | - | 1 | - | - | - | - | 1 | 2 | 5 | 11 | 23 | 24 | 35 | 29 | 12 | 15 | 185 |
| Testis | 13 | - | - | - | - | 6 | 1 | 2 | 1 | - | 2 | 1 | - | - | - | - | - | - | - | 186 |
| Penis | 5 | - | - | - | - | - | - | - | 1 | 1 | 1 | - | - | 1 | 1 | - | - | - | - | 187 |
| Bladder | 41 | - | - | - | - | - | - | - | 1 | 1 | 5 | 3 | 4 | 7 | 6 | 7 | 5 | 2 | - | 188 |
| Kidney & Oth.Urinary | 46 | 1 | - | - | - | - | - | - | - | 1 | 5 | 5 | 8 | 5 | 8 | 1 | 7 | 5 | - | 189 |
| Eye | 1 | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | 190 |
| Brain, nervous system | 24 | 3 | 3 | 2 | - | - | - | 1 | 2 | 1 | 3 | 3 | 2 | 1 | 1 | 1 | 1 | - | - | 191-2 |
| Thyroid | 20 | - | - | - | - | - | - | 3 | 3 | 2 | 4 | 3 | 1 | 1 | 2 | 1 | - | - | - | 193 |
| Other endocrine | 5 | 1 | 1 | - | - | - | 1 | 1 | - | - | - | - | 1 | - | - | - | - | - | - | 194 |
| Lymphoid neoplasms | 144 | 7 | 6 | 5 | 2 | 5 | 7 | 6 | 10 | 12 | 6 | 14 | 16 | 15 | 6 | 9 | 12 | 3 | 3 | |
| Myeloid neoplasms | 43 | 1 | - | - | - | - | - | 1 | 2 | 4 | 5 | 1 | 5 | 6 | 2 | 5 | 4 | 4 | 3 | |
| Other and unspecified | 14 | - | - | - | - | - | - | - | 1 | - | 2 | - | - | 2 | 1 | 1 | 3 | 2 | 2 | OTH |
| All | 1,258 | 16 | 10 | 9 | 6 | 13 | 10 | 22 | 38 | 66 | 77 | 120 | 159 | 164 | 117 | 146 | 143 | 87 | 55 | ALL |

| SINGAPORE : INDIAN RESIDENTS 2008-2012, FEMALES | | | | | | | | | | | | | | | | | | | | Appendix B8 |
|---|------|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|
| NUMBER OF CASES BY AGE GROUP (YEARS) | | | | | | | | | | | | | | | | | | | | ICD-9 |
| SITE | All | 0- | 5- | 10- | 15- | 20- | 25- | 30- | 35- | 40- | 45- | 50- | 55- | 60- | 65- | 70- | 75- | 80- | 85+ | |
| Lip, Vermilion | 1 | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | 140 |
| Tongue | 10 | - | - | - | - | - | - | - | - | 3 | 2 | - | - | 1 | 1 | 3 | - | - | - | 141 |
| Salivary gland | 5 | - | - | - | - | - | - | - | - | - | 3 | - | 1 | 1 | - | - | - | - | - | 142 |
| Mouth | 16 | - | - | - | - | - | - | - | 1 | - | - | - | 1 | 6 | 1 | 3 | 2 | 1 | 1 | 143-5 |
| Oropharynx | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | 146 |
| Nasopharynx | 3 | - | - | - | - | - | - | - | - | 1 | - | - | 1 | 1 | - | - | - | - | - | 147 |
| Hypopharynx | 5 | - | - | - | - | - | - | - | - | - | 1 | - | - | - | 1 | 2 | - | - | 1 | 148 |
| Oesophagus | 13 | - | - | - | - | - | - | - | - | - | 1 | - | - | 4 | 3 | 3 | 2 | - | - | 150 |
| Stomach | 34 | - | - | - | - | - | - | - | 2 | 3 | 2 | 2 | 1 | 2 | 3 | 5 | 4 | 7 | 3 | 151 |
| Small intestines | 12 | - | - | - | - | - | - | - | - | 1 | - | 1 | 3 | 2 | 1 | 1 | 2 | 1 | - | 152 |
| Colon | 72 | - | - | - | 1 | - | 1 | 1 | 3 | 5 | 5 | 4 | 9 | 11 | 10 | 8 | 7 | 5 | 2 | 153 |
| Rectum | 43 | - | - | - | - | - | - | - | 2 | 1 | 4 | 3 | 10 | 7 | 5 | 3 | 4 | 1 | 3 | 154 |
| Liver | 23 | - | - | - | - | - | - | - | - | - | 1 | - | 1 | 4 | - | 4 | 7 | 4 | 2 | 155 |
| Gall bladder, etc. | 12 | - | - | - | - | - | - | - | - | - | - | - | 3 | 2 | 1 | 5 | - | 1 | - | 156 |
| Pancreas | 29 | - | - | - | - | - | - | - | - | - | 3 | 1 | 3 | 3 | 1 | 7 | 3 | 3 | 5 | 157 |
| Retroperitoneum & Peritoneum | 11 | - | - | - | - | - | 1 | - | 1 | - | 1 | 1 | 1 | 1 | 2 | - | 1 | 2 | - | 158 |
| Nose, sinuses, etc. | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | 160 |
| Larynx | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | 161 |
| Bronchus, trachea | 49 | 1 | - | - | - | - | - | 5 | 1 | 1 | 2 | 4 | 4 | 5 | 5 | 10 | 5 | 3 | 3 | 162 |
| Pleura | 3 | - | - | - | - | - | - | - | - | - | - | - | 1 | - | 1 | - | 1 | - | - | 163 |
| Thymus, heart | 3 | - | - | - | - | - | - | - | - | 2 | - | 1 | - | - | - | - | - | - | - | 164 |
| Bone | 4 | - | - | - | 1 | - | 1 | - | - | - | 1 | - | 1 | - | - | - | - | - | - | 170 |
| Connective tissues | 13 | 2 | - | - | - | - | - | - | 3 | - | 1 | - | 2 | 1 | 2 | - | 1 | 1 | - | 171 |
| Melanoma of skin | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 172 |
| Skin, others | 22 | - | - | - | - | 1 | - | - | 1 | 2 | 1 | 2 | - | 1 | 2 | 5 | 4 | 2 | 1 | 173 |
| Female Breast | 537 | - | - | - | - | - | 3 | 14 | 24 | 58 | 65 | 94 | 85 | 75 | 34 | 34 | 29 | 16 | 6 | 174 |
| Cervix uteri | 22 | - | - | - | - | - | - | - | - | 1 | 4 | 2 | 2 | 4 | 4 | - | 2 | 1 | 2 | 180 |
| Chorioepithelioma | 2 | - | - | - | - | 1 | - | - | - | - | 1 | - | - | - | - | - | - | - | - | 181 |
| Corpus uteri | 132 | - | - | - | - | - | 2 | 5 | 2 | 5 | 16 | 19 | 18 | 23 | 21 | 7 | 13 | 1 | - | 182 |
| Ovary, etc. | 96 | - | 1 | - | 5 | 1 | 3 | 2 | 4 | 11 | 9 | 12 | 11 | 10 | 10 | 7 | 4 | 5 | 1 | 183 |
| Other fem. genital | 7 | - | - | - | - | - | - | - | - | - | - | 2 | 1 | 3 | - | - | 1 | - | - | 184 |
| Bladder | 10 | - | - | - | 1 | - | - | - | - | - | 1 | - | 2 | 2 | - | 2 | 1 | 1 | - | 188 |
| Kidney & Oth.Urinary | 26 | 1 | - | - | - | - | - | - | - | - | 2 | 1 | 6 | 5 | 3 | 2 | 2 | 2 | 2 | 189 |
| Eye | 4 | 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 190 |
| Brain, nervous system | 21 | 1 | 1 | - | - | - | 1 | - | 3 | - | 1 | 2 | 3 | - | 1 | 3 | 1 | 4 | - | 191-2 |
| Thyroid | 59 | - | - | - | 1 | 1 | 2 | 7 | 7 | 6 | 5 | 9 | 6 | 4 | 2 | 2 | 2 | 3 | 2 | 193 |
| Other endocrine | 3 | - | - | - | - | 1 | - | - | - | 1 | 1 | - | - | - | - | - | - | - | - | 194 |
| Lymphoid neoplasms | 79 | 3 | 1 | 1 | 1 | 7 | 2 | 6 | 2 | 6 | 7 | 13 | 4 | 6 | 7 | 6 | 3 | 2 | 2 | |
| Myeloid neoplasms | 44 | 1 | - | - | 2 | - | 1 | 5 | 3 | 5 | 4 | 5 | 3 | 3 | 3 | 5 | 2 | 2 | - | |
| Other and unspecified | 20 | - | - | - | - | - | - | - | - | 3 | 2 | 3 | 2 | 4 | - | 4 | 1 | - | 1 | OTH |
| All | 1448 | 13 | 3 | 1 | 12 | 12 | 17 | 45 | 59 | 115 | 146 | 181 | 185 | 192 | 124 | 132 | 104 | 69 | 38 | ALL |

| SINGAPORE : ALL RESIDENTS 2008-2012, MALES | | | INCIDENCE RATES BY AGE GROUP (YEARS) | | | | | | | | | | | | | | | | | Appendix C1 | |
|--|-------|-------|--------------------------------------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|---------|---------|---------|---------|-------------|-------|
| SITE | CR | ASR | 0- | 5- | 10- | 15- | 20- | 25- | 30- | 35- | 40- | 45- | 50- | 55- | 60- | 65- | 70- | 75- | 80- | 85+ | ICD-9 |
| Lip, Vermilion | 0.0 | 0.0 | - | - | - | - | - | - | - | - | - | - | - | - | 0.2 | 0.2 | - | - | - | - | 140 |
| Tongue | 2.1 | 1.6 | 0.2 | - | - | - | - | 0.3 | 0.7 | 0.9 | 1.6 | 1.7 | 3.2 | 4.0 | 6.3 | 8.2 | 9.8 | 10.0 | 7.8 | 16.4 | 141 |
| Salivary gland | 1.1 | 0.8 | - | - | 0.2 | 0.3 | 0.8 | 0.5 | 0.7 | 0.5 | 0.8 | 1.4 | 1.7 | 3.5 | 1.3 | 2.1 | 3.7 | 4.3 | 2.6 | 4.1 | 142 |
| Mouth | 1.3 | 1.0 | - | - | - | 0.2 | 0.2 | 0.2 | 0.1 | 0.4 | 0.5 | 1.2 | 2.2 | 2.7 | 3.5 | 5.7 | 4.2 | 6.5 | 14.2 | 16.4 | 143-5 |
| Oropharynx | 1.5 | 1.1 | - | - | - | - | - | - | - | - | 0.6 | 1.2 | 2.8 | 4.0 | 3.7 | 6.8 | 6.5 | 10.8 | 9.1 | 4.1 | 146 |
| Nasopharynx | 12.4 | 8.8 | - | - | 0.3 | 0.3 | 1.0 | 1.6 | 3.3 | 11.1 | 16.5 | 24.0 | 25.8 | 31.1 | 27.0 | 26.4 | 27.0 | 23.0 | 12.9 | 8.2 | 147 |
| Hypopharynx | 1.3 | 1.0 | - | - | - | - | - | - | - | - | - | 0.6 | 0.7 | 2.9 | 3.0 | 6.8 | 9.8 | 14.4 | 15.5 | 14.3 | 148 |
| Oesophagus | 4.5 | 3.4 | - | - | - | - | - | - | - | 0.4 | 0.4 | 3.0 | 4.5 | 8.6 | 14.9 | 24.7 | 25.1 | 31.6 | 50.4 | 49.2 | 150 |
| Stomach | 15.6 | 11.9 | - | - | - | 0.2 | 0.5 | 0.6 | 1.4 | 2.3 | 3.5 | 5.7 | 13.8 | 20.9 | 34.2 | 62.2 | 116.4 | 162.2 | 221.1 | 241.7 | 151 |
| Small intestines | 1.5 | 1.1 | - | - | - | - | 0.2 | 0.2 | 0.1 | 0.9 | 0.9 | 1.1 | 1.4 | 3.7 | 4.5 | 5.7 | 7.9 | 7.9 | 6.5 | 12.3 | 152 |
| Colon | 30.5 | 23.2 | - | - | 0.2 | 0.3 | 0.6 | 1.4 | 2.1 | 4.2 | 7.8 | 14.3 | 32.2 | 52.0 | 90.0 | 134.4 | 186.2 | 251.9 | 355.6 | 395.3 | 153 |
| Rectum | 21.9 | 16.5 | - | - | - | - | 0.6 | 0.2 | 1.7 | 3.9 | 6.4 | 14.9 | 32.4 | 47.5 | 68.8 | 101.5 | 126.6 | 145.0 | 153.9 | 145.4 | 154 |
| Liver | 22.8 | 17.3 | 1.2 | 0.2 | 0.2 | - | - | 0.5 | 1.3 | 2.0 | 5.1 | 10.0 | 28.3 | 46.7 | 75.0 | 105.8 | 138.3 | 187.3 | 199.1 | 186.4 | 155 |
| Gall bladder, etc. | 2.8 | 2.1 | - | - | - | - | - | - | 0.1 | 0.3 | 0.9 | 1.7 | 4.3 | 4.5 | 8.0 | 14.3 | 18.6 | 20.8 | 27.2 | 18.4 | 156 |
| Pancreas | 8.0 | 6.1 | - | - | - | 0.2 | - | 0.3 | 0.3 | 1.4 | 3.0 | 3.1 | 7.8 | 17.7 | 21.0 | 45.0 | 50.7 | 60.3 | 72.4 | 71.7 | 157 |
| Retroperitoneum & Peritoneum | 0.3 | 0.3 | 0.2 | - | - | - | - | - | 0.4 | - | - | 0.4 | 0.4 | 0.8 | 0.4 | 1.8 | 1.4 | 2.9 | 1.3 | 4.1 | 158 |
| Nose, sinuses, etc. | 1.0 | 0.8 | - | - | - | - | 0.2 | 0.3 | 0.4 | 0.1 | 0.4 | 1.5 | 2.4 | 2.1 | 2.6 | 5.0 | 3.7 | 2.9 | 3.9 | 4.1 | 160 |
| Larynx | 3.9 | 2.9 | - | - | - | - | - | - | - | 0.1 | 0.4 | 2.2 | 3.8 | 6.9 | 12.8 | 18.6 | 21.9 | 35.9 | 45.3 | 43.0 | 161 |
| Bronchus, trachea | 46.2 | 35.4 | 0.2 | - | 0.2 | 0.2 | 0.2 | 0.5 | 1.6 | 3.5 | 9.9 | 19.2 | 34.6 | 65.7 | 115.5 | 219.8 | 343.6 | 517.5 | 561.2 | 573.5 | 162 |
| Pleura | 0.7 | 0.5 | - | - | - | - | - | - | - | - | 0.1 | 0.4 | 0.3 | 0.6 | 1.5 | 3.9 | 6.5 | 11.5 | 6.5 | 2.0 | 163 |
| Thymus, heart | 1.6 | 1.3 | 0.2 | 0.2 | 0.6 | 0.9 | 1.8 | 0.9 | 1.3 | 2.5 | 0.9 | 1.8 | 2.0 | 2.7 | 1.5 | 4.3 | 4.2 | 3.6 | 5.2 | - | 164 |
| Bone | 1.0 | 1.0 | 0.2 | 0.5 | 1.8 | 2.6 | 0.8 | 0.8 | 0.8 | 1.2 | 0.6 | 1.0 | 0.7 | 0.6 | 0.6 | 1.8 | 1.4 | 2.9 | - | 2.0 | 170 |
| Connective tissues | 2.6 | 2.3 | 2.0 | 0.2 | 1.3 | 1.5 | 1.0 | 1.4 | 1.4 | 1.6 | 1.0 | 2.3 | 2.2 | 4.6 | 6.7 | 4.6 | 8.8 | 13.6 | 11.6 | 30.7 | 171 |
| Melanoma of skin | 0.8 | 0.6 | - | - | - | 0.2 | 0.2 | - | - | 0.7 | 0.4 | 0.5 | 1.1 | 1.0 | 2.4 | 2.9 | 5.1 | 4.3 | 5.2 | 6.1 | 172 |
| Skin, others | 15.7 | 11.9 | - | - | 0.3 | 0.2 | 0.5 | 0.5 | 2.5 | 4.2 | 7.0 | 10.5 | 14.6 | 21.7 | 40.7 | 54.0 | 90.8 | 138.5 | 190.1 | 274.5 | 173 |
| Male Breast | 0.3 | 0.2 | - | - | - | - | - | - | - | 0.1 | 0.5 | 0.4 | 0.4 | 0.3 | 0.6 | 0.4 | 1.9 | 2.9 | 3.9 | 4.1 | 175 |
| Prostate | 35.9 | 28.5 | - | - | - | 0.2 | - | - | - | 0.3 | 1.3 | 4.6 | 13.7 | 46.6 | 118.9 | 228.7 | 326.8 | 374.7 | 382.8 | 344.1 | 185 |
| Testis | 1.8 | 1.7 | 1.2 | - | - | 2.0 | 4.4 | 2.8 | 2.8 | 4.0 | 2.5 | 1.6 | 1.2 | 0.8 | 0.4 | 0.4 | - | 2.2 | 2.6 | - | 186 |
| Penis | 1.2 | 0.9 | - | - | - | - | - | - | - | 0.4 | 0.3 | 0.4 | 0.7 | 2.2 | 3.9 | 9.3 | 7.4 | 5.7 | 10.3 | 10.2 | 187 |
| Bladder | 7.6 | 5.8 | 0.2 | - | - | - | 0.2 | 0.3 | 0.4 | 1.3 | 1.9 | 4.7 | 7.9 | 9.6 | 21.4 | 30.7 | 50.7 | 66.0 | 102.2 | 98.3 | 188 |
| Kidney & Oth.Urinary | 10.7 | 8.1 | 0.6 | - | 0.2 | 0.2 | 0.3 | 0.5 | 2.3 | 2.0 | 6.4 | 9.7 | 15.8 | 20.7 | 32.0 | 49.7 | 48.9 | 73.2 | 71.1 | 45.1 | 189 |
| Eye | 0.2 | 0.2 | 1.0 | 0.2 | - | - | - | - | 0.1 | - | 0.1 | 0.2 | - | 0.3 | - | - | 1.9 | - | - | - | 190 |
| Brain, nervous system | 3.9 | 3.7 | 4.3 | 2.4 | 2.4 | 2.9 | 1.6 | 1.7 | 2.3 | 3.0 | 2.9 | 3.8 | 4.1 | 5.1 | 5.4 | 13.2 | 9.3 | 10.8 | 23.3 | 8.2 | 191-2 |
| Thyroid | 3.4 | 2.6 | - | - | 0.2 | 0.6 | 0.2 | 1.9 | 3.0 | 2.2 | 3.4 | 4.9 | 4.1 | 6.9 | 6.9 | 11.8 | 10.2 | 10.8 | 12.9 | 6.1 | 193 |
| Other endocrine | 0.9 | 1.0 | 2.9 | 1.5 | 0.5 | 0.9 | 1.1 | 0.3 | 0.7 | 0.4 | 0.8 | 0.6 | 0.7 | 0.6 | 1.1 | - | 0.9 | 2.2 | 1.3 | - | 194 |
| Lymphoid neoplasms | 19.6 | 16.7 | 10.0 | 6.0 | 5.9 | 5.9 | 7.6 | 7.8 | 7.8 | 7.4 | 10.4 | 14.2 | 21.3 | 34.1 | 48.4 | 65.8 | 83.8 | 109.1 | 116.4 | 98.3 | |
| Myeloid neoplasms | 8.8 | 7.0 | 2.9 | 0.9 | 2.1 | 1.5 | 1.0 | 3.0 | 2.4 | 3.1 | 5.1 | 7.9 | 10.1 | 11.3 | 17.7 | 22.5 | 47.0 | 71.8 | 85.3 | 79.9 | |
| Other and unspecified | 3.9 | 3.0 | - | - | - | 0.2 | - | - | 0.3 | 0.7 | 1.0 | 1.6 | 4.2 | 4.8 | 8.0 | 15.4 | 25.6 | 45.9 | 56.9 | 63.5 | OTH |
| All | 299.2 | 232.6 | 27.4 | 12.0 | 16.1 | 20.9 | 24.7 | 28.3 | 42.4 | 67.0 | 105.2 | 178.4 | 307.1 | 499.8 | 811.0 | 1,314.1 | 1,833.0 | 2,444.8 | 2,847.5 | 2,881.9 | ALL |

| SINGAPORE : ALL RESIDENTS 2008-2012, FEMALES | | | | | | | | | | INCIDENCE RATES BY AGE GROUP (YEARS) | | | | | | | | | | | | Appendix C2 ICD-9 | |
|--|-------|-------|------|------|------|------|------|------|------|--------------------------------------|-------|-------|-------|-------|-------|-------|---------|---------|---------|---------|-------|-------------------|--|
| SITE | CR | ASR | 0- | 5- | 10- | 15- | 20- | 25- | 30- | 35- | 40- | 45- | 50- | 55- | 60- | 65- | 70- | 75- | 80- | 85+ | | | |
| Lip, Vermilion | 0.1 | 0.0 | - | - | - | - | - | - | - | - | - | - | 0.3 | - | 0.2 | 0.3 | 0.4 | - | - | 1.0 | 140 | | |
| Tongue | 1.1 | 0.8 | - | - | 0.2 | - | 0.2 | 0.3 | 0.6 | 0.7 | 1.1 | 1.8 | 1.2 | 1.6 | 2.9 | 0.7 | 6.4 | 2.8 | 2.5 | 5.0 | 141 | | |
| Salivary gland | 1.0 | 0.7 | - | - | 0.2 | - | 0.3 | 0.4 | 0.6 | 1.0 | 1.5 | 1.1 | 1.5 | 1.9 | 1.7 | 1.3 | 2.8 | 2.2 | 5.0 | 3.0 | 142 | | |
| Mouth | 0.9 | 0.6 | - | - | - | - | 0.2 | 0.1 | 0.3 | 0.6 | 0.3 | 1.1 | 1.1 | 1.3 | 2.1 | 2.6 | 2.8 | 5.5 | 2.5 | 9.1 | 143-5 | | |
| Oropharynx | 0.5 | 0.3 | - | - | - | - | - | - | - | 0.5 | 0.3 | 0.5 | 1.2 | 1.0 | 2.1 | 0.3 | 1.2 | 2.2 | 1.7 | - | 146 | | |
| Nasopharynx | 3.9 | 2.8 | 0.4 | - | - | 0.2 | 0.5 | 1.3 | 1.9 | 3.3 | 4.7 | 5.4 | 9.9 | 10.9 | 7.8 | 6.6 | 7.6 | 1.1 | 6.7 | 5.0 | 147 | | |
| Hypopharynx | 0.1 | 0.1 | - | - | - | - | - | - | - | 0.1 | - | 0.3 | 0.1 | 0.2 | 0.2 | 0.3 | 0.8 | 1.1 | 0.8 | 1.0 | 148 | | |
| Oesophagus | 1.0 | 0.6 | - | - | - | - | - | - | 0.1 | - | - | 0.4 | 0.7 | 0.3 | 1.9 | 3.0 | 5.2 | 6.6 | 19.2 | 20.1 | 150 | | |
| Stomach | 11.3 | 7.1 | - | 0.2 | - | 0.2 | 0.2 | 0.7 | 0.6 | 1.9 | 4.1 | 5.1 | 9.5 | 13.5 | 19.0 | 33.8 | 56.6 | 86.8 | 139.4 | 155.1 | 151 | | |
| Small intestines | 1.0 | 0.7 | - | - | - | - | - | - | - | 0.4 | 0.3 | 1.3 | 1.1 | 1.9 | 2.5 | 4.3 | 3.6 | 6.1 | 8.3 | 9.1 | 152 | | |
| Colon | 28.1 | 18.3 | - | - | 0.2 | 0.5 | 0.8 | 1.9 | 2.1 | 3.6 | 9.7 | 15.8 | 26.2 | 45.9 | 67.2 | 92.6 | 139.4 | 204.6 | 277.9 | 266.8 | 153 | | |
| Rectum | 13.5 | 9.0 | - | - | - | - | 0.3 | 0.4 | 1.2 | 3.2 | 4.7 | 8.1 | 17.9 | 25.7 | 37.5 | 40.7 | 66.1 | 75.2 | 103.5 | 123.8 | 154 | | |
| Liver | 7.7 | 4.9 | 1.3 | - | 0.2 | - | 0.3 | - | 1.0 | 0.4 | 1.0 | 1.6 | 3.9 | 6.7 | 14.5 | 25.6 | 42.2 | 80.2 | 87.6 | 113.8 | 155 | | |
| Gall bladder, etc. | 3.2 | 2.1 | - | - | - | - | - | - | - | 0.4 | 0.8 | 1.5 | 1.3 | 4.8 | 7.2 | 14.1 | 15.5 | 26.0 | 22.5 | 52.4 | 156 | | |
| Pancreas | 7.1 | 4.6 | - | - | - | 0.2 | - | 0.1 | 0.3 | 0.5 | 2.2 | 4.4 | 4.7 | 10.3 | 16.0 | 27.3 | 38.2 | 63.6 | 52.6 | 82.6 | 157 | | |
| Retroperitoneum & Peritoneum | 1.0 | 0.8 | 0.2 | 0.2 | - | - | - | 0.3 | 0.1 | 0.2 | 0.8 | 1.1 | 1.1 | 2.1 | 3.2 | 5.6 | 2.8 | 3.3 | 5.0 | 1.0 | 158 | | |
| Nose, sinuses, etc. | 0.5 | 0.4 | - | - | - | - | 0.2 | 0.1 | 0.1 | 0.5 | - | 0.6 | 1.2 | 0.6 | 1.7 | 1.6 | 1.2 | 1.1 | 4.2 | 3.0 | 160 | | |
| Larynx | 0.2 | 0.1 | - | - | - | - | - | - | - | 0.1 | - | - | 0.1 | 0.3 | 1.1 | 0.3 | 0.8 | 1.7 | 2.5 | 3.0 | 161 | | |
| Bronchus, trachea | 23.7 | 15.4 | 0.2 | - | - | - | 0.2 | 0.3 | 2.9 | 3.8 | 6.0 | 14.4 | 22.9 | 35.6 | 50.1 | 89.7 | 116.3 | 158.7 | 242.9 | 257.8 | 162 | | |
| Pleura | 0.2 | 0.1 | - | - | - | - | - | - | - | - | - | - | 0.3 | 0.6 | 0.6 | 1.0 | 1.2 | 0.6 | 1.7 | - | 163 | | |
| Thymus, heart | 1.1 | 0.8 | - | - | - | 0.2 | 0.2 | 0.3 | 0.6 | 0.7 | 1.3 | 1.9 | 1.9 | 1.8 | 2.9 | 2.6 | 2.0 | 3.3 | 2.5 | 1.0 | 164 | | |
| Bone | 0.8 | 0.8 | - | 0.4 | 1.2 | 1.7 | 1.6 | 0.7 | 0.9 | 0.7 | 0.6 | 0.8 | 0.5 | 0.8 | 0.6 | 0.7 | - | 0.6 | 1.7 | 1.0 | 170 | | |
| Connective tissues | 2.2 | 1.8 | 1.7 | 0.6 | 1.2 | 1.6 | 0.3 | 1.2 | 1.6 | 2.0 | 2.2 | 1.8 | 2.7 | 3.9 | 3.2 | 3.3 | 5.6 | 6.1 | 6.7 | 8.1 | 171 | | |
| Melanoma of skin | 0.7 | 0.4 | - | - | - | - | - | 0.3 | 0.5 | 0.4 | 0.9 | 0.9 | 0.4 | 1.0 | 0.8 | 1.6 | 2.4 | 2.8 | 3.3 | 6.0 | 172 | | |
| Skin, others | 12.7 | 7.9 | 0.2 | - | - | 0.5 | 0.3 | 0.9 | 1.4 | 2.9 | 4.5 | 5.9 | 7.6 | 12.8 | 17.3 | 42.0 | 54.2 | 92.3 | 157.8 | 245.7 | 173 | | |
| Female Breast | 89.6 | 62.7 | - | - | 0.2 | 0.5 | 1.0 | 8.7 | 25.8 | 61.7 | 111.4 | 173.3 | 177.5 | 207.3 | 211.9 | 205.6 | 206.3 | 197.4 | 171.1 | 153.0 | 174 | | |
| Cervix uteri | 9.7 | 6.8 | - | - | - | - | 0.7 | 2.2 | 4.0 | 9.7 | 10.7 | 14.7 | 14.4 | 17.0 | 18.5 | 28.2 | 28.3 | 29.3 | 35.1 | 39.3 | 180 | | |
| Chorioepithelioma | 0.2 | 0.2 | - | - | - | - | 0.5 | 0.4 | 0.4 | 0.1 | 0.9 | 0.5 | 0.3 | - | - | - | - | - | - | - | 181 | | |
| Corpus uteri | 18.8 | 13.1 | - | - | - | 0.3 | 0.3 | 1.5 | 4.5 | 10.0 | 18.1 | 26.2 | 46.7 | 54.1 | 50.8 | 45.7 | 42.2 | 39.3 | 34.2 | 19.1 | 182 | | |
| Ovary, etc. | 16.9 | 12.5 | - | 0.8 | 2.5 | 6.2 | 6.2 | 5.1 | 6.1 | 9.9 | 19.7 | 27.2 | 31.0 | 34.3 | 35.6 | 37.4 | 37.4 | 34.8 | 40.1 | 42.3 | 183 | | |
| Other fem. genital | 1.4 | 1.0 | 0.6 | - | - | - | - | - | 0.3 | 0.6 | 0.6 | 0.9 | 1.2 | 3.0 | 2.5 | 4.6 | 4.8 | 10.0 | 5.8 | 17.1 | 184 | | |
| Bladder | 2.2 | 1.4 | - | 0.2 | - | 0.2 | - | 0.1 | - | 0.4 | 0.6 | 0.5 | 1.6 | 2.4 | 5.9 | 7.2 | 11.6 | 16.0 | 20.9 | 31.2 | 188 | | |
| Kidney & Oth.Urinary | 5.6 | 3.8 | 0.6 | 0.2 | - | 0.2 | 0.2 | 0.6 | 0.5 | 0.5 | 2.7 | 3.4 | 7.5 | 11.6 | 14.7 | 17.4 | 29.9 | 38.2 | 31.7 | 30.2 | 189 | | |
| Eye | 0.2 | 0.4 | 3.2 | - | - | - | - | - | 0.1 | - | 0.1 | 0.1 | 0.1 | - | 0.4 | - | 0.4 | - | - | - | 190 | | |
| Brain, nervous system | 3.5 | 3.1 | 3.4 | 3.4 | 2.0 | 1.2 | 1.3 | 1.3 | 1.6 | 2.7 | 2.7 | 3.3 | 3.5 | 3.5 | 6.1 | 6.9 | 10.4 | 11.6 | 20.0 | 13.1 | 191-2 | | |
| Thyroid | 10.4 | 7.8 | 0.2 | - | 0.3 | 3.4 | 4.1 | 8.6 | 10.2 | 12.8 | 13.6 | 14.4 | 16.2 | 15.7 | 17.3 | 17.1 | 19.9 | 13.3 | 18.4 | 22.2 | 193 | | |
| Other endocrine | 0.7 | 0.7 | 2.3 | - | 0.3 | 0.3 | 0.5 | 0.7 | 0.3 | 0.1 | 0.5 | 1.0 | 0.5 | 1.1 | 1.1 | - | 2.4 | 1.1 | - | - | 194 | | |
| Lymphoid neoplasms | 12.9 | 10.3 | 8.3 | 3.6 | 2.7 | 3.3 | 5.0 | 5.7 | 5.7 | 5.2 | 7.1 | 9.8 | 12.2 | 21.7 | 24.6 | 41.4 | 47.0 | 58.1 | 70.9 | 68.5 | | | |
| Myeloid neoplasms | 6.6 | 4.7 | 0.6 | 1.3 | 0.5 | 1.9 | 1.3 | 1.9 | 2.3 | 3.1 | 5.3 | 4.1 | 5.9 | 12.2 | 11.6 | 20.7 | 25.1 | 38.2 | 36.7 | 46.3 | | | |
| Other and unspecified | 4.0 | 2.5 | 0.2 | - | - | - | 0.2 | 0.3 | 0.6 | 0.6 | 1.0 | 1.9 | 3.1 | 2.2 | 6.1 | 11.2 | 22.3 | 31.5 | 53.4 | 66.5 | OTH | | |
| All | 306.1 | 212.3 | 23.5 | 10.9 | 11.6 | 22.2 | 26.7 | 46.6 | 79.5 | 145.5 | 241.9 | 357.0 | 440.7 | 571.7 | 671.6 | 845.3 | 1,063.2 | 1,353.0 | 1,696.9 | 1,923.1 | ALL | | |

| SINGAPORE : CHINESE RESIDENTS 2008-2012, MALES | | | INCIDENCE RATES BY AGE GROUP (YEARS) | | | | | | | | | | | | | | | | | Appendix C3 | |
|--|-------|-------|--------------------------------------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|---------|---------|---------|---------|-------------|-------|
| SITE | CR | ASR | 0- | 5- | 10- | 15- | 20- | 25- | 30- | 35- | 40- | 45- | 50- | 55- | 60- | 65- | 70- | 75- | 80- | 85+ | ICD-9 |
| Lip, Vermilion | 0.0 | 0.0 | - | - | - | - | - | - | - | - | - | - | - | 0.2 | 0.3 | - | - | - | - | - | 140 |
| Tongue | 2.3 | 1.7 | 0.3 | - | - | - | - | 0.4 | 0.6 | 1.3 | 1.8 | 2.2 | 2.7 | 4.6 | 6.3 | 8.5 | 10.0 | 11.5 | 4.9 | 18.3 | 141 |
| Salivary gland | 1.2 | 0.9 | - | - | 0.2 | 0.2 | 0.9 | 0.4 | 0.6 | 0.5 | 1.1 | 1.7 | 2.2 | 4.0 | 1.6 | 1.7 | 2.8 | 4.4 | 1.6 | 2.6 | 142 |
| Mouth | 1.5 | 1.0 | - | - | - | 0.2 | - | 0.2 | - | 0.2 | 0.4 | 1.3 | 2.2 | 3.0 | 3.4 | 6.4 | 5.0 | 6.2 | 16.4 | 18.3 | 143-5 |
| Oropharynx | 1.7 | 1.1 | - | - | - | - | - | - | - | - | 0.5 | 1.5 | 2.9 | 3.8 | 3.2 | 8.1 | 6.7 | 13.3 | 8.2 | 5.2 | 146 |
| Nasopharynx | 15.2 | 10.3 | - | - | 0.2 | 0.4 | 1.4 | 1.7 | 3.9 | 14.3 | 21.0 | 28.9 | 29.1 | 35.8 | 29.7 | 28.4 | 30.6 | 24.8 | 16.4 | 10.5 | 147 |
| Hypopharynx | 1.6 | 1.1 | - | - | - | - | - | - | - | - | - | 0.7 | 0.9 | 3.4 | 2.9 | 7.6 | 11.1 | 16.8 | 16.4 | 18.3 | 148 |
| Oesophagus | 5.4 | 3.8 | - | - | - | - | - | - | - | 0.5 | 0.5 | 3.5 | 4.8 | 8.9 | 16.0 | 26.7 | 27.3 | 36.3 | 54.2 | 57.6 | 150 |
| Stomach | 18.9 | 13.3 | - | - | - | 0.2 | 0.5 | 0.9 | 1.8 | 2.9 | 3.8 | 6.5 | 14.5 | 21.0 | 37.3 | 68.3 | 128.0 | 186.9 | 256.2 | 290.8 | 151 |
| Small intestines | 1.6 | 1.1 | - | - | - | - | 0.2 | 0.2 | 0.2 | 0.5 | 0.7 | 1.2 | 1.5 | 4.0 | 4.2 | 5.9 | 8.3 | 9.7 | 6.6 | 13.1 | 152 |
| Colon | 36.6 | 25.5 | - | - | - | 0.4 | 0.9 | 1.3 | 2.5 | 4.7 | 9.0 | 15.3 | 35.6 | 56.2 | 97.1 | 144.2 | 203.6 | 280.8 | 405.7 | 453.3 | 153 |
| Rectum | 25.4 | 17.5 | - | - | - | - | 0.7 | - | 1.8 | 4.7 | 6.3 | 17.0 | 34.9 | 50.3 | 69.3 | 109.5 | 129.1 | 157.7 | 172.5 | 162.5 | 154 |
| Liver | 26.5 | 18.4 | 0.9 | 0.3 | - | - | - | 0.6 | 1.6 | 2.0 | 5.2 | 10.6 | 30.0 | 49.1 | 78.5 | 112.0 | 146.3 | 194.9 | 226.7 | 220.1 | 155 |
| Gall bladder, etc. | 3.3 | 2.3 | - | - | - | - | - | - | 0.2 | 0.4 | 0.9 | 1.7 | 4.6 | 4.6 | 8.9 | 16.1 | 18.9 | 23.9 | 27.9 | 18.3 | 156 |
| Pancreas | 9.5 | 6.7 | - | - | - | 0.2 | - | 0.4 | 0.4 | 1.6 | 2.7 | 3.7 | 8.7 | 18.2 | 21.3 | 50.5 | 55.1 | 65.6 | 87.1 | 76.0 | 157 |
| Retroperitoneum & Peritoneum | 0.4 | 0.3 | - | - | - | - | - | - | 0.4 | - | - | 0.3 | 0.5 | 0.8 | 0.5 | 2.1 | 1.7 | 2.7 | - | 5.2 | 158 |
| Nose, sinuses, etc. | 1.2 | 0.9 | - | - | - | - | 0.2 | 0.4 | 0.6 | - | 0.2 | 1.3 | 2.9 | 2.4 | 2.9 | 5.9 | 4.5 | 3.5 | 3.3 | 5.2 | 160 |
| Larynx | 4.4 | 3.0 | - | - | - | - | - | - | - | 0.2 | 0.4 | 2.7 | 4.3 | 7.5 | 10.5 | 19.5 | 21.7 | 39.9 | 47.6 | 49.8 | 161 |
| Bronchus, trachea | 53.2 | 37.2 | - | - | 0.2 | 0.2 | 0.2 | 0.2 | 1.6 | 3.6 | 9.7 | 18.8 | 34.5 | 67.9 | 118.7 | 231.2 | 356.7 | 563.4 | 606.1 | 636.7 | 162 |
| Pleura | 0.8 | 0.6 | - | - | - | - | - | - | - | - | 0.2 | 0.5 | 0.3 | 0.6 | 1.1 | 3.8 | 7.2 | 12.4 | 6.6 | 2.6 | 163 |
| Thymus, heart | 1.6 | 1.3 | - | 0.3 | 0.7 | 0.6 | 1.8 | 0.6 | 0.8 | 2.5 | 1.1 | 1.8 | 1.9 | 3.0 | 1.6 | 4.7 | 4.5 | 3.5 | 4.9 | - | 164 |
| Bone | 1.1 | 1.1 | - | 0.5 | 2.1 | 3.0 | 1.1 | 0.9 | 1.0 | 1.3 | 0.5 | 1.0 | 0.9 | 0.6 | 0.5 | 1.7 | 1.7 | 3.5 | - | 2.6 | 170 |
| Connective tissues | 2.8 | 2.4 | 2.1 | 0.3 | 1.2 | 1.9 | 1.1 | 1.3 | 1.6 | 1.8 | 1.3 | 2.5 | 1.9 | 5.1 | 6.6 | 4.2 | 7.8 | 13.3 | 11.5 | 34.1 | 171 |
| Melanoma of skin | 0.7 | 0.5 | - | - | - | 0.2 | 0.2 | - | - | 0.5 | - | 0.3 | 0.7 | 0.4 | 2.4 | 1.3 | 5.6 | 5.3 | 4.9 | 7.9 | 172 |
| Skin, others | 16.9 | 11.9 | - | - | 0.5 | 0.2 | 0.7 | 0.4 | 2.1 | 4.2 | 4.0 | 7.6 | 12.4 | 20.2 | 37.3 | 53.9 | 96.8 | 150.6 | 213.5 | 330.1 | 173 |
| Male Breast | 0.4 | 0.2 | - | - | - | - | - | - | - | 0.2 | 0.5 | 0.3 | 0.3 | 0.4 | 0.8 | 0.4 | 1.7 | 3.5 | 4.9 | 2.6 | 175 |
| Prostate | 41.8 | 29.9 | - | - | - | - | - | - | - | 0.4 | 1.4 | 5.3 | 15.5 | 50.3 | 122.9 | 240.1 | 341.6 | 381.8 | 418.8 | 356.3 | 185 |
| Testis | 1.6 | 1.4 | 0.6 | - | - | 1.5 | 2.9 | 1.9 | 2.5 | 4.2 | 2.3 | 1.2 | 1.4 | 1.0 | 0.5 | 0.4 | - | 2.7 | 1.6 | - | 186 |
| Penis | 1.5 | 1.1 | - | - | - | - | - | - | - | 0.4 | 0.2 | 0.2 | 0.7 | 2.8 | 4.5 | 10.6 | 8.9 | 7.1 | 13.1 | 13.1 | 187 |
| Bladder | 8.2 | 5.7 | 0.3 | - | - | - | 0.2 | 0.2 | 0.4 | 1.4 | 2.0 | 4.2 | 7.5 | 9.9 | 21.8 | 27.6 | 47.9 | 65.6 | 103.5 | 117.9 | 188 |
| Kidney & Oth.Urinary | 12.5 | 8.7 | 0.6 | - | 0.2 | 0.2 | 0.5 | 0.6 | 2.5 | 2.4 | 7.2 | 10.5 | 16.8 | 23.2 | 33.9 | 50.9 | 51.7 | 79.7 | 77.2 | 57.6 | 189 |
| Eye | 0.2 | 0.3 | 1.5 | 0.3 | - | - | - | - | 0.2 | - | - | 0.2 | - | 0.4 | - | - | 1.7 | - | - | - | 190 |
| Brain, nervous system | 4.1 | 3.8 | 5.2 | 1.4 | 2.3 | 3.0 | 1.6 | 2.4 | 2.3 | 3.3 | 3.2 | 3.5 | 3.7 | 4.8 | 5.5 | 14.4 | 10.6 | 9.7 | 24.6 | 7.9 | 191-2 |
| Thyroid | 3.4 | 2.4 | - | - | 0.2 | 0.4 | 0.2 | 2.4 | 2.3 | 2.2 | 3.2 | 5.0 | 4.1 | 6.7 | 7.1 | 10.2 | 8.9 | 9.7 | 8.2 | 5.2 | 193 |
| Other endocrine | 0.9 | 1.1 | 3.1 | 1.4 | 0.5 | 1.1 | 0.9 | 0.2 | 0.8 | 0.5 | 1.1 | 0.7 | 0.9 | 0.4 | 1.3 | - | 1.1 | 2.7 | 1.6 | - | 194 |
| Lymphoid neoplasms | 19.5 | 15.6 | 11.0 | 4.7 | 5.8 | 5.5 | 5.9 | 7.5 | 6.8 | 6.7 | 9.7 | 13.3 | 20.4 | 32.1 | 43.8 | 64.9 | 73.4 | 102.8 | 119.9 | 94.3 | |
| Myeloid neoplasms | 9.4 | 7.1 | 2.4 | 1.1 | 3.0 | 1.5 | 1.1 | 3.0 | 2.0 | 3.8 | 4.3 | 7.3 | 10.9 | 11.3 | 17.6 | 20.4 | 47.9 | 80.6 | 88.7 | 73.4 | |
| Other and unspecified | 4.5 | 3.1 | - | - | - | - | - | - | 0.2 | 0.7 | 0.9 | 1.5 | 4.4 | 5.1 | 7.4 | 17.8 | 26.7 | 50.5 | 60.8 | 65.5 | OTH |
| All | 341.9 | 244.3 | 28.1 | 10.2 | 17.1 | 21.0 | 23.2 | 28.3 | 41.6 | 73.8 | 107.3 | 185.5 | 321.3 | 523.6 | 828.8 | 1,380.0 | 1,912.9 | 2,627.6 | 3,122.4 | 3,233.3 | ALL |

| SINGAPORE : CHINESE RESIDENTS 2008-2012, FEMALES | | | | | | | | | | INCIDENCE RATES BY AGE GROUP (YEARS) | | | | | | | | | | | | Appendix C4 ICD-9 | |
|--|-------|-------|------|------|------|------|------|------|------|--------------------------------------|-------|-------|-------|-------|-------|-------|---------|---------|---------|---------|-------|----------------------|--|
| SITE | CR | ASR | 0- | 5- | 10- | 15- | 20- | 25- | 30- | 35- | 40- | 45- | 50- | 55- | 60- | 65- | 70- | 75- | 80- | 85+ | | | |
| Lip, Vermilion | 0.1 | 0.0 | - | - | - | - | - | - | - | - | - | - | 0.3 | - | - | 0.4 | 0.5 | - | - | 1.1 | 140 | | |
| Tongue | 1.1 | 0.7 | - | - | - | - | 0.2 | 0.2 | 0.7 | 0.8 | 0.7 | 1.8 | 0.9 | 1.8 | 2.8 | 0.4 | 5.3 | 2.7 | 2.9 | 5.6 | 141 | | |
| Salivary gland | 1.2 | 0.8 | - | - | 0.2 | - | 0.2 | 0.6 | 0.5 | 1.3 | 1.9 | 1.0 | 1.5 | 2.2 | 1.5 | 1.6 | 3.4 | 2.7 | 5.8 | 3.4 | 142 | | |
| Mouth | 0.8 | 0.5 | - | - | - | - | 0.2 | 0.2 | 0.2 | 0.5 | 0.2 | 1.5 | 1.0 | 1.2 | 1.0 | 2.7 | 1.9 | 4.0 | 1.9 | 7.8 | 143-5 | | |
| Oropharynx | 0.6 | 0.4 | - | - | - | - | - | - | - | 0.5 | 0.3 | 0.7 | 1.5 | 1.2 | 2.6 | 0.4 | 1.4 | 2.7 | - | - | 146 | | |
| Nasopharynx | 4.8 | 3.3 | 0.6 | - | - | 0.2 | 0.2 | 1.6 | 2.7 | 4.1 | 5.9 | 6.2 | 11.6 | 11.5 | 8.9 | 7.4 | 9.1 | 1.3 | 7.8 | 5.6 | 147 | | |
| Hypopharynx | 0.1 | 0.1 | - | - | - | - | - | - | - | 0.2 | - | 0.2 | 0.2 | 0.2 | 0.3 | - | - | 1.3 | 1.0 | - | 148 | | |
| Oesophagus | 1.1 | 0.6 | - | - | - | - | - | - | - | - | - | 0.3 | 0.9 | 0.4 | 1.3 | 2.0 | 4.3 | 6.7 | 21.4 | 22.4 | 150 | | |
| Stomach | 13.6 | 7.7 | - | 0.3 | - | - | 0.2 | 0.6 | 0.5 | 1.8 | 4.1 | 5.8 | 11.3 | 14.7 | 21.2 | 36.3 | 61.7 | 96.4 | 148.9 | 164.5 | 151 | | |
| Small intestines | 1.0 | 0.6 | - | - | - | - | - | - | - | 0.5 | 0.2 | 1.2 | 1.2 | 1.8 | 2.3 | 3.5 | 2.9 | 4.7 | 8.8 | 7.8 | 152 | | |
| Colon | 33.1 | 19.5 | - | - | 0.2 | 0.4 | 0.9 | 1.8 | 2.3 | 3.6 | 10.3 | 17.1 | 28.7 | 49.0 | 71.6 | 94.9 | 148.9 | 220.2 | 298.7 | 279.7 | 153 | | |
| Rectum | 15.8 | 9.5 | - | - | - | - | 0.2 | 0.6 | 1.6 | 3.6 | 5.6 | 9.1 | 18.1 | 27.7 | 38.1 | 42.6 | 70.4 | 78.3 | 112.9 | 126.4 | 154 | | |
| Liver | 8.9 | 5.1 | 1.6 | - | 0.2 | - | 0.2 | - | 1.1 | 0.5 | 1.0 | 1.3 | 3.9 | 8.0 | 13.5 | 28.5 | 44.0 | 83.6 | 89.5 | 117.5 | 155 | | |
| Gall bladder, etc. | 3.6 | 2.1 | - | - | - | - | - | - | - | 0.5 | 0.8 | 1.8 | 1.5 | 4.6 | 6.9 | 12.9 | 14.8 | 28.1 | 22.4 | 55.9 | 156 | | |
| Pancreas | 8.3 | 4.9 | - | - | - | 0.2 | - | 0.2 | 0.4 | 0.5 | 2.4 | 5.2 | 4.8 | 10.6 | 17.1 | 28.5 | 40.2 | 70.3 | 55.5 | 80.6 | 157 | | |
| Retroperitoneum & Peritoneum | 1.1 | 0.8 | 0.3 | 0.3 | - | - | - | 0.2 | 0.2 | 0.2 | 0.8 | 1.3 | 1.0 | 2.2 | 3.3 | 4.7 | 2.9 | 2.7 | 3.9 | 1.1 | 158 | | |
| Nose, sinuses, etc. | 0.6 | 0.4 | - | - | - | - | 0.2 | - | 0.2 | 0.7 | - | 0.5 | 1.5 | 0.8 | 1.8 | 1.6 | 1.0 | 1.3 | 4.9 | 3.4 | 160 | | |
| Larynx | 0.3 | 0.2 | - | - | - | - | - | - | - | 0.2 | - | - | 0.2 | 0.4 | 1.3 | 0.4 | 1.0 | 2.0 | 2.9 | 2.2 | 161 | | |
| Bronchus, trachea | 28.1 | 16.4 | - | - | - | - | - | - | 2.7 | 4.1 | 6.4 | 15.5 | 24.3 | 36.6 | 53.7 | 97.3 | 125.4 | 176.7 | 262.7 | 270.8 | 162 | | |
| Pleura | 0.2 | 0.1 | - | - | - | - | - | - | - | - | - | - | 0.3 | 0.6 | 0.8 | 0.8 | 1.4 | - | 1.9 | - | 163 | | |
| Thymus, heart | 1.2 | 0.8 | - | - | - | 0.2 | 0.2 | 0.4 | 0.9 | 0.3 | 1.2 | 2.2 | 2.2 | 2.0 | 3.1 | 2.7 | 2.4 | 4.0 | 2.9 | - | 164 | | |
| Bone | 0.9 | 0.9 | - | 0.6 | 1.5 | 1.5 | 2.1 | 0.8 | 1.1 | 0.8 | 0.8 | 0.8 | 0.5 | 0.8 | 0.8 | - | - | - | 1.9 | 1.1 | 170 | | |
| Connective tissues | 2.4 | 1.9 | 1.9 | 0.9 | 1.2 | 1.5 | 0.2 | 1.2 | 1.6 | 1.6 | 1.9 | 2.2 | 3.4 | 4.0 | 3.3 | 3.1 | 6.7 | 6.0 | 5.8 | 7.8 | 171 | | |
| Melanoma of skin | 0.7 | 0.5 | - | - | - | - | - | 0.4 | 0.5 | 0.3 | 1.0 | 0.8 | 0.2 | 1.0 | 1.0 | 1.6 | 2.4 | 3.3 | 1.9 | 6.7 | 172 | | |
| Skin, others | 15.0 | 8.3 | 0.3 | - | - | 0.7 | 0.2 | 1.0 | 1.4 | 2.6 | 3.6 | 5.7 | 7.7 | 14.3 | 16.6 | 45.3 | 57.0 | 98.4 | 170.3 | 260.7 | 173 | | |
| Female Breast | 96.6 | 63.9 | - | - | 0.2 | 0.7 | 1.1 | 8.9 | 28.1 | 64.1 | 113.8 | 180.1 | 178.7 | 208.8 | 211.4 | 209.8 | 212.5 | 192.1 | 167.4 | 152.2 | 174 | | |
| Cervix uteri | 10.9 | 7.1 | - | - | - | - | 0.9 | 2.0 | 4.2 | 10.2 | 12.2 | 14.3 | 15.6 | 18.5 | 17.6 | 29.7 | 30.2 | 32.1 | 37.0 | 40.3 | 180 | | |
| Chorioepithelioma | 0.2 | 0.2 | - | - | - | - | 0.5 | 0.6 | 0.2 | 0.2 | 0.8 | 0.5 | 0.2 | - | - | - | - | - | - | - | 181 | | |
| Corpus uteri | 19.9 | 13.1 | - | - | - | 0.4 | 0.5 | 1.6 | 3.7 | 9.7 | 20.3 | 26.1 | 47.2 | 57.1 | 48.8 | 41.4 | 44.0 | 28.8 | 34.1 | 16.8 | 182 | | |
| Ovary, etc. | 17.8 | 12.5 | - | 0.9 | 2.7 | 5.5 | 6.4 | 5.7 | 6.4 | 10.0 | 19.5 | 27.4 | 30.4 | 35.8 | 37.1 | 34.8 | 36.9 | 31.5 | 36.0 | 43.6 | 183 | | |
| Other fem. genital | 1.5 | 1.0 | 0.6 | - | - | - | - | - | 0.2 | 0.7 | 0.7 | 0.8 | 1.2 | 3.0 | 2.0 | 5.5 | 5.7 | 8.7 | 5.8 | 16.8 | 184 | | |
| Bladder | 2.5 | 1.5 | - | 0.3 | - | - | - | 0.2 | - | 0.3 | 0.5 | 0.3 | 1.9 | 2.2 | 6.4 | 8.2 | 10.5 | 17.4 | 22.4 | 33.6 | 188 | | |
| Kidney & Oth.Urinary | 6.3 | 4.0 | 0.6 | 0.3 | - | 0.2 | 0.2 | 0.8 | 0.7 | 0.7 | 3.4 | 3.3 | 7.2 | 11.7 | 14.8 | 18.4 | 30.6 | 42.2 | 32.1 | 30.2 | 189 | | |
| Eye | 0.2 | 0.5 | 3.2 | - | - | - | - | - | 0.2 | - | 0.2 | 0.2 | 0.2 | - | 0.5 | - | 0.5 | - | - | - | 190 | | |
| Brain, nervous system | 3.6 | 3.2 | 3.5 | 4.1 | 1.7 | 1.5 | 1.8 | 1.2 | 2.1 | 2.0 | 2.5 | 3.5 | 3.8 | 3.2 | 6.4 | 6.2 | 10.1 | 12.0 | 14.6 | 13.4 | 191-2 | | |
| Thyroid | 10.9 | 8.0 | 0.3 | - | 0.5 | 4.2 | 3.4 | 8.9 | 10.1 | 13.8 | 12.9 | 14.5 | 16.8 | 16.3 | 16.9 | 18.0 | 21.1 | 13.4 | 16.5 | 19.0 | 193 | | |
| Other endocrine | 0.7 | 0.7 | 2.2 | - | 0.5 | 0.4 | 0.5 | 0.8 | 0.2 | - | 0.3 | 1.2 | 0.5 | 1.4 | 1.0 | - | 1.9 | 1.3 | - | - | 194 | | |
| Lymphoid neoplasms | 12.8 | 9.6 | 8.0 | 3.5 | 2.5 | 3.5 | 3.9 | 6.9 | 5.8 | 4.9 | 5.8 | 6.8 | 10.3 | 19.9 | 21.7 | 39.5 | 46.0 | 51.5 | 72.0 | 70.5 | | | |
| Myeloid neoplasms | 6.8 | 4.6 | 0.6 | 1.2 | 0.5 | 2.0 | 1.4 | 2.0 | 1.9 | 3.0 | 4.9 | 4.2 | 5.6 | 10.8 | 11.5 | 19.5 | 23.5 | 38.1 | 37.0 | 45.9 | | | |
| Other and unspecified | 4.4 | 2.4 | - | - | - | - | - | - | 0.7 | 0.5 | 0.8 | 1.7 | 2.9 | 1.4 | 6.1 | 10.9 | 23.0 | 33.5 | 53.5 | 69.4 | OTH | | |
| All | 339.8 | 218.0 | 24.1 | 12.2 | 12.0 | 23.4 | 26.2 | 49.7 | 82.9 | 149.3 | 247.9 | 366.9 | 451.3 | 587.7 | 677.1 | 861.3 | 1,105.2 | 1,399.9 | 1,765.2 | 1,983.7 | ALL | | |

| SINGAPORE : MALAY RESIDENTS 2008-2012, MALES | | | INCIDENCE RATES BY AGE GROUP (YEARS) | | | | | | | | | | | | | | | | | | Appendix C5 |
|--|--------------|--------------|--------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|----------------|----------------|----------------|----------------|----------------|----------------|
| SITE | CR | ASR | 0- | 5- | 10- | 15- | 20- | 25- | 30- | 35- | 40- | 45- | 50- | 55- | 60- | 65- | 70- | 75- | 80- | 85+ | ICD-9 |
| Lip, Vermilion | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 140 |
| Tongue | 0.5 | 0.4 | - | - | - | - | - | - | - | - | - | - | 4.2 | - | - | - | 5.0 | - | 12.2 | - | 141 |
| Salivary gland | 0.8 | 0.8 | - | - | - | - | - | 1.1 | 2.7 | - | - | - | - | 3.0 | - | 4.3 | 10.0 | 7.2 | 12.2 | - | 142 |
| Mouth | 0.2 | 0.2 | - | - | - | - | - | - | 1.4 | 1.3 | - | - | - | - | - | - | - | 7.2 | - | - | 143-5 |
| Oropharynx | 0.2 | 0.2 | - | - | - | - | - | - | - | - | - | - | 1.1 | 1.5 | 2.3 | - | - | - | - | - | 146 |
| Nasopharynx | 6.8 | 6.0 | - | - | 0.9 | - | - | 1.1 | 2.7 | 5.0 | 7.5 | 14.7 | 22.2 | 13.4 | 27.6 | 25.8 | 15.0 | 21.7 | - | - | 147 |
| Hypopharynx | 0.1 | 0.1 | - | - | - | - | - | - | - | - | - | 0.9 | - | - | - | - | - | - | - | - | 148 |
| Oesophagus | 1.8 | 1.9 | - | - | - | - | - | - | - | - | - | 0.9 | 3.2 | 3.0 | 9.2 | 12.9 | 20.0 | 7.2 | 60.9 | - | 150 |
| Stomach | 4.6 | 4.5 | - | - | - | - | - | - | 1.4 | - | - | 3.7 | 10.6 | 8.9 | 16.1 | 30.1 | 40.0 | 43.5 | 73.1 | 40.9 | 151 |
| Small intestines | 0.7 | 0.7 | - | - | - | - | - | - | - | 2.5 | - | 0.9 | - | 3.0 | 6.9 | 4.3 | - | - | - | - | 152 |
| Colon | 14.5 | 14.6 | - | - | 0.9 | - | - | 2.1 | 1.4 | 3.8 | 6.4 | 12.8 | 19.1 | 38.7 | 59.7 | 90.4 | 75.1 | 152.1 | 170.6 | 286.1 | 153 |
| Rectum | 13.7 | 13.8 | - | - | - | - | 0.9 | 1.1 | 1.4 | 2.5 | 6.4 | 12.8 | 23.3 | 35.7 | 73.5 | 73.2 | 130.1 | 94.2 | 97.5 | 102.2 | 154 |
| Liver | 14.9 | 14.9 | 1.2 | - | - | - | - | - | - | 2.5 | 8.6 | 11.9 | 24.3 | 38.7 | 73.5 | 90.4 | 105.1 | 195.6 | 97.5 | 81.7 | 155 |
| Gall bladder, etc. | 1.8 | 1.7 | - | - | - | - | - | - | - | - | 1.1 | 2.7 | 2.1 | 4.5 | 6.9 | 8.6 | 20.0 | 7.2 | 36.6 | - | 156 |
| Pancreas | 4.3 | 4.4 | - | - | - | - | - | - | - | 1.3 | 7.5 | 0.9 | 5.3 | 14.9 | 20.7 | 21.5 | 30.0 | 36.2 | - | 102.2 | 157 |
| Retroperitoneum & Peritoneum | 0.4 | 0.4 | 1.2 | - | - | - | - | - | 1.4 | - | - | - | - | 1.5 | - | - | - | 7.2 | 12.2 | - | 158 |
| Nose, sinuses, etc. | 0.4 | 0.3 | - | - | - | - | - | - | - | - | 2.1 | 0.9 | 1.1 | 1.5 | - | - | - | - | - | - | 160 |
| Larynx | 1.8 | 1.9 | - | - | - | - | - | - | - | - | - | 1.8 | 2.1 | 1.5 | 13.8 | 12.9 | 20.0 | 14.5 | 12.2 | 20.4 | 161 |
| Bronchus, trachea | 35.1 | 35.3 | 1.2 | - | - | - | - | 2.1 | 1.4 | 8.8 | 15.0 | 31.1 | 47.6 | 67.0 | 126.3 | 206.6 | 300.3 | 420.2 | 572.8 | 449.6 | 162 |
| Pleura | 0.3 | 0.3 | - | - | - | - | - | - | - | - | - | - | - | 1.5 | 4.6 | - | 5.0 | - | - | - | 163 |
| Thymus, heart | 1.8 | 1.7 | 1.2 | - | 0.9 | 2.4 | 2.7 | 3.2 | 1.4 | 3.8 | 1.1 | 2.7 | 2.1 | 1.5 | - | - | - | - | 12.2 | - | 164 |
| Bone | 0.7 | 0.7 | - | 1.0 | 1.8 | 0.8 | - | - | 1.4 | 1.3 | - | 0.9 | - | 1.5 | 2.3 | - | - | - | - | - | 170 |
| Connective tissues | 2.3 | 2.4 | 2.4 | - | 1.8 | 0.8 | - | 3.2 | 2.7 | - | - | 2.7 | 2.1 | 3.0 | 11.5 | 4.3 | 10.0 | 14.5 | 24.4 | - | 171 |
| Melanoma of skin | 0.4 | 0.3 | - | - | - | - | - | - | - | 1.3 | - | - | - | 3.0 | 2.3 | - | - | - | 12.2 | - | 172 |
| Skin, others | 4.8 | 4.4 | - | - | - | - | - | 1.1 | - | - | 3.2 | 2.7 | 5.3 | 11.9 | 27.6 | - | 25.0 | 65.2 | 134.0 | 61.3 | 173 |
| Male Breast | 0.2 | 0.2 | - | - | - | - | - | - | - | - | - | 0.9 | - | - | - | - | 5.0 | - | - | - | 175 |
| Prostate | 17.4 | 19.5 | - | - | - | - | - | - | - | - | - | 1.8 | 2.1 | 20.8 | 89.6 | 154.9 | 190.2 | 355.0 | 304.7 | 265.7 | 185 |
| Testis | 2.9 | 2.8 | 2.4 | - | - | 4.8 | 7.1 | 8.6 | 2.7 | 7.6 | 2.1 | 0.9 | - | - | - | - | - | - | 12.2 | - | 186 |
| Penis | 0.2 | 0.1 | - | - | - | - | - | - | - | - | - | 0.9 | 1.1 | - | - | - | - | - | - | - | 187 |
| Bladder | 6.5 | 6.9 | - | - | - | - | - | 1.1 | 1.4 | 1.3 | 3.2 | 3.7 | 8.5 | 7.4 | 13.8 | 55.9 | 70.1 | 86.9 | 134.0 | 61.3 | 188 |
| Kidney & Oth.Urinary | 5.3 | 5.4 | - | - | - | - | - | - | 4.1 | - | 4.3 | 6.4 | 14.8 | 4.5 | 25.3 | 38.7 | 45.0 | 29.0 | 36.6 | - | 189 |
| Eye | 0.1 | 0.1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 5.0 | - | - | - | 190 |
| Brain, nervous system | 3.6 | 3.5 | 1.2 | 5.2 | 1.8 | 3.2 | 1.8 | - | 4.1 | 3.8 | - | 4.6 | 5.3 | 6.0 | 4.6 | 8.6 | - | 21.7 | 36.6 | 20.4 | 191-2 |
| Thyroid | 3.8 | 3.8 | - | - | - | 1.6 | - | - | 6.8 | - | 3.2 | 4.6 | 2.1 | 10.4 | 9.2 | 25.8 | 25.0 | 29.0 | 48.7 | 20.4 | 193 |
| Other endocrine | 0.7 | 0.8 | 1.2 | 2.1 | 0.9 | 0.8 | 1.8 | - | - | - | - | 0.9 | - | 1.5 | - | - | - | - | - | - | 194 |
| Lymphoid neoplasms | 23.2 | 23.3 | 4.9 | 8.4 | 2.7 | 8.9 | 12.4 | 7.5 | 18.9 | 10.1 | 12.8 | 22.9 | 25.4 | 46.1 | 73.5 | 94.7 | 160.1 | 166.6 | 146.2 | 183.9 | |
| Myeloid neoplasms | 8.1 | 8.2 | 4.9 | 1.0 | - | 2.4 | 0.9 | 4.3 | 4.1 | - | 10.7 | 12.8 | 12.7 | 8.9 | 18.4 | 47.3 | 40.0 | 29.0 | 60.9 | 143.1 | |
| Other and unspecified | 2.9 | 2.7 | - | - | - | 0.8 | - | - | 1.4 | - | 2.1 | 1.8 | 4.2 | 6.0 | 11.5 | - | 25.0 | 29.0 | 60.9 | 61.3 | |
| All | 187.8 | 189.3 | 21.9 | 17.8 | 11.5 | 26.6 | 27.4 | 36.4 | 62.2 | 56.8 | 97.4 | 167.6 | 251.9 | 370.6 | 730.5 | 1,011.3 | 1,376.2 | 1,840.0 | 2,181.3 | 1,900.7 | ALL |

| SINGAPORE : MALAY RESIDENTS 2008-2012, FEMALES | | | | | | | | | | | | | | | | | | | | | Appendix C6 |
|--|-------|-------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|---------|---------|---------|-------------|
| INCIDENCE RATES BY AGE GROUP (YEARS) | | | | | | | | | | | | | | | | | | | | | ICD-9 |
| SITE | CR | ASR | 0- | 5- | 10- | 15- | 20- | 25- | 30- | 35- | 40- | 45- | 50- | 55- | 60- | 65- | 70- | 75- | 80- | 85+ | |
| Lip, Vermilion | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 140 |
| Tongue | 1.2 | 1.0 | - | - | 0.9 | - | - | 1.1 | - | 1.2 | 2.0 | 0.9 | 4.2 | - | 4.2 | - | 8.2 | 5.3 | - | - | 141 |
| Salivary gland | 0.4 | 0.3 | - | - | - | - | 0.9 | - | - | - | 1.0 | - | 2.1 | - | 2.1 | - | - | - | - | - | 142 |
| Mouth | 0.5 | 0.4 | - | - | - | - | - | - | 1.3 | 1.2 | - | - | 1.1 | 1.4 | - | - | - | 10.6 | - | - | 143-5 |
| Oropharynx | 0.2 | 0.1 | - | - | - | - | - | - | - | 1.2 | - | - | - | - | - | - | - | - | 10.1 | - | 146 |
| Nasopharynx | 2.0 | 1.5 | - | - | - | - | 0.9 | 1.1 | - | 2.4 | - | 5.4 | 4.2 | 12.7 | 2.1 | 3.6 | - | - | - | - | 147 |
| Hypopharynx | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 148 |
| Oesophagus | 0.2 | 0.2 | - | - | - | - | - | - | - | - | - | - | - | - | - | 3.6 | 4.1 | - | 10.1 | - | 150 |
| Stomach | 4.5 | 4.0 | - | - | - | 0.9 | - | 1.1 | 2.5 | 1.2 | 2.0 | 3.6 | 2.1 | 11.3 | 8.4 | 21.6 | 32.9 | 37.1 | 70.6 | 72.7 | 151 |
| Small intestines | 0.9 | 0.8 | - | - | - | - | - | - | - | - | - | 2.7 | - | - | 2.1 | 7.2 | 8.2 | 10.6 | - | 18.2 | 152 |
| Colon | 16.3 | 14.3 | - | - | - | - | 0.9 | 1.1 | 2.5 | 1.2 | 8.2 | 10.9 | 23.2 | 40.9 | 52.4 | 86.3 | 106.9 | 159.2 | 171.5 | 145.5 | 153 |
| Rectum | 8.2 | 7.1 | - | - | - | - | 0.9 | - | - | 1.2 | 2.0 | 5.4 | 23.2 | 12.7 | 35.7 | 28.8 | 65.8 | 69.0 | 40.4 | 72.7 | 154 |
| Liver | 4.8 | 4.3 | - | - | - | - | - | - | 2.5 | - | 2.0 | 1.8 | 4.2 | - | 23.1 | 18.0 | 41.1 | 69.0 | 80.7 | 72.7 | 155 |
| Gall bladder, etc. | 2.4 | 2.4 | - | - | - | - | - | - | - | - | 1.0 | 0.9 | 1.1 | 5.6 | 8.4 | 32.3 | 8.2 | 21.2 | 20.2 | 36.4 | 156 |
| Pancreas | 3.8 | 3.4 | - | - | - | - | - | - | - | 1.2 | 3.1 | 0.9 | 6.3 | 11.3 | 12.6 | 25.2 | 20.5 | 31.8 | 20.2 | 54.5 | 157 |
| Retroperitoneum & Peritoneum | 0.6 | 0.6 | - | - | - | - | - | - | - | - | - | - | 1.1 | 1.4 | 2.1 | 10.8 | 4.1 | - | - | - | 158 |
| Nose, sinuses, etc. | 0.4 | 0.4 | - | - | - | - | - | 1.1 | - | - | - | 1.8 | - | - | 2.1 | 3.6 | - | - | - | - | 160 |
| Larynx | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 161 |
| Bronchus, trachea | 14.1 | 12.2 | - | - | - | - | 0.9 | 2.2 | 2.5 | 2.4 | 5.1 | 16.3 | 23.2 | 40.9 | 39.9 | 61.1 | 82.2 | 84.9 | 151.3 | 181.8 | 162 |
| Pleura | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 163 |
| Thymus, heart | 0.8 | 0.7 | - | - | - | - | - | - | - | 3.6 | 1.0 | 1.8 | - | 1.4 | 4.2 | - | - | - | - | 18.2 | 164 |
| Bone | 0.7 | 0.7 | - | - | 0.9 | 2.6 | 0.9 | - | 1.3 | - | - | - | 1.1 | - | - | 7.2 | - | - | - | - | 170 |
| Connective tissues | 1.8 | 1.6 | - | - | 1.9 | 2.6 | 0.9 | 2.2 | 3.8 | 3.6 | 4.1 | - | - | 2.8 | - | - | - | 5.3 | 10.1 | 18.2 | 171 |
| Melanoma of skin | 0.4 | 0.3 | - | - | - | - | - | - | - | - | - | 0.9 | 2.1 | - | - | 3.6 | - | - | 10.1 | - | 172 |
| Skin, others | 4.0 | 3.6 | - | - | - | - | - | 1.1 | - | 1.2 | 2.0 | 2.7 | 2.1 | 1.4 | 16.8 | 18.0 | 24.7 | 47.8 | 80.7 | 90.9 | 173 |
| Female Breast | 71.9 | 58.1 | - | - | - | - | 0.9 | 8.6 | 26.6 | 65.4 | 104.3 | 175.5 | 166.5 | 203.3 | 186.7 | 172.5 | 135.6 | 180.4 | 121.1 | 163.6 | 174 |
| Cervix uteri | 7.8 | 6.7 | - | - | - | - | - | 4.3 | 3.8 | 13.1 | 9.2 | 17.2 | 11.6 | 12.7 | 29.4 | 21.6 | 28.8 | 15.9 | 30.3 | - | 180 |
| Chorioepithelioma | 0.4 | 0.3 | - | - | - | - | - | - | 2.5 | - | 2.0 | - | 1.1 | - | - | - | - | - | - | - | 181 |
| Corpus uteri | 16.0 | 13.0 | - | - | - | - | - | - | 10.1 | 17.8 | 14.3 | 25.3 | 49.5 | 42.4 | 52.4 | 39.5 | 16.4 | 69.0 | 50.4 | 36.4 | 182 |
| Ovary, etc. | 16.8 | 14.0 | - | - | 3.8 | 7.7 | 8.3 | 4.3 | 8.9 | 11.9 | 19.4 | 37.1 | 37.9 | 29.6 | 27.3 | 46.7 | 37.0 | 47.8 | 60.5 | 36.4 | 183 |
| Other fem. genital | 1.2 | 1.0 | - | - | - | - | - | - | 1.3 | 1.2 | 1.0 | 1.8 | - | 2.8 | 2.1 | - | - | 21.2 | 10.1 | 36.4 | 184 |
| Bladder | 1.0 | 0.9 | - | - | - | - | - | - | - | - | 2.0 | - | 1.1 | 1.4 | - | 3.6 | 16.4 | 5.3 | 10.1 | 18.2 | 188 |
| Kidney & Oth.Urinary | 3.3 | 2.7 | - | - | - | - | - | - | - | - | 1.0 | 4.5 | 10.5 | 7.1 | 12.6 | 3.6 | 28.8 | 15.9 | 30.3 | 18.2 | 189 |
| Eye | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 190 |
| Brain, nervous system | 3.2 | 3.2 | 3.8 | 3.4 | 3.8 | 0.9 | - | - | - | 3.6 | 6.1 | 1.8 | 2.1 | 2.8 | 8.4 | 7.2 | 4.1 | 10.6 | 40.4 | 18.2 | 191-2 |
| Thyroid | 9.1 | 7.8 | - | - | - | 1.7 | 7.4 | 13.0 | 5.1 | 10.7 | 19.4 | 18.1 | 11.6 | 14.1 | 14.7 | 14.4 | 12.3 | 5.3 | 20.2 | 54.5 | 193 |
| Other endocrine | 0.8 | 1.0 | 5.1 | - | - | - | - | - | - | 1.2 | 1.0 | - | 1.1 | - | 2.1 | - | 8.2 | - | - | - | 194 |
| Lymphoid neoplasms | 17.0 | 15.4 | 9.0 | 6.7 | 4.7 | 3.4 | 6.4 | 1.1 | 3.8 | 8.3 | 12.3 | 25.3 | 17.9 | 40.9 | 52.4 | 50.3 | 61.6 | 127.3 | 80.7 | 54.5 | |
| Myeloid neoplasms | 6.4 | 5.8 | - | 2.2 | 0.9 | 0.9 | 1.8 | 1.1 | 1.3 | 3.6 | 6.1 | 2.7 | 6.3 | 22.6 | 14.7 | 28.8 | 32.9 | 37.1 | 40.4 | 90.9 | |
| Other and unspecified | 3.3 | 2.9 | 1.3 | - | - | - | 0.9 | 2.2 | 1.3 | 2.4 | - | 2.7 | 3.2 | 7.1 | 2.1 | 18.0 | 12.3 | 31.8 | 70.6 | 36.4 | OTH |
| All | 226.4 | 193.1 | 19.2 | 12.3 | 17.1 | 20.5 | 32.2 | 45.3 | 81.1 | 160.6 | 232.2 | 368.2 | 421.6 | 530.8 | 620.8 | 736.7 | 801.4 | 1,119.5 | 1,241.0 | 1,345.5 | ALL |

| SINGAPORE : INDIAN RESIDENTS 2008-2012, MALES | | | | | | | | | | | | | | | | | | | | | Appendix C7 |
|---|--------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|----------------|----------------|----------------|----------------|----------------|
| SITE | CR | ASR | 0- | 5- | 10- | 15- | 20- | 25- | 30- | 35- | 40- | 45- | 50- | 55- | 60- | 65- | 70- | 75- | 80- | 85+ | ICD-9 |
| Lip, Vermilion | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 140 |
| Tongue | 2.1 | 2.0 | - | - | - | - | - | - | 1.1 | - | 2.3 | 1.4 | 5.0 | 4.7 | 13.7 | 6.1 | 16.6 | - | 29.0 | 20.4 | 141 |
| Salivary gland | 0.5 | 0.4 | - | - | - | 1.8 | - | - | - | 1.0 | - | 1.4 | - | - | - | - | - | - | - | 20.4 | 142 |
| Mouth | 2.1 | 1.9 | - | - | - | - | 1.9 | - | - | 1.0 | 2.3 | 2.7 | 6.7 | 4.7 | 10.3 | 6.1 | - | 9.4 | 14.5 | 20.4 | 143-5 |
| Oropharynx | 1.6 | 1.5 | - | - | - | - | - | - | - | - | 2.3 | - | 5.0 | 7.1 | 10.3 | - | 16.6 | - | 14.5 | - | 146 |
| Nasopharynx | 1.4 | 1.1 | - | - | - | - | - | - | - | 1.0 | 2.3 | 2.7 | 5.0 | 7.1 | - | 6.1 | - | - | - | - | 147 |
| Hypopharynx | 0.8 | 0.9 | - | - | - | - | - | - | - | - | - | - | - | - | 6.9 | 6.1 | 8.3 | 9.4 | 29.0 | - | 148 |
| Oesophagus | 2.6 | 2.6 | - | - | - | - | - | - | - | - | - | 2.7 | 5.0 | 14.2 | 10.3 | 18.4 | 8.3 | 18.8 | 14.5 | 40.7 | 150 |
| Stomach | 8.5 | 8.3 | - | - | - | - | 1.9 | - | - | 1.0 | 5.8 | 2.7 | 13.4 | 30.7 | 27.5 | 36.7 | 82.8 | 84.6 | 115.8 | 81.4 | 151 |
| Small intestines | 1.4 | 1.3 | - | - | - | - | - | - | - | 2.0 | 3.5 | 1.4 | 1.7 | - | 6.9 | 6.1 | 16.6 | - | - | - | 152 |
| Colon | 11.5 | 11.6 | - | - | - | - | - | 1.6 | 1.1 | 3.1 | 2.3 | 12.2 | 21.8 | 28.3 | 54.9 | 73.5 | 91.0 | 75.2 | 115.8 | 122.1 | 153 |
| Rectum | 9.6 | 9.3 | - | - | - | - | - | - | 1.1 | 1.0 | 9.3 | 4.1 | 18.5 | 42.5 | 44.6 | 42.9 | 66.2 | 94.0 | 43.4 | 40.7 | 154 |
| Liver | 9.1 | 9.2 | 1.7 | - | 1.7 | - | - | - | - | 1.0 | 2.3 | 2.7 | 20.2 | 30.7 | 41.2 | 42.9 | 74.5 | 112.8 | 101.4 | 40.7 | 155 |
| Gall bladder, etc. | 1.1 | 1.0 | - | - | - | - | - | - | - | - | - | - | 5.0 | 4.7 | - | - | 8.3 | 9.4 | 14.5 | 40.7 | 156 |
| Pancreas | 3.7 | 3.5 | - | - | - | - | - | - | - | 1.0 | 1.2 | 1.4 | 5.0 | 21.2 | 20.6 | 12.2 | 8.3 | 47.0 | 43.4 | 20.4 | 157 |
| Retroperitoneum & Peritoneum | 0.1 | 0.1 | - | - | - | - | - | - | - | - | - | 1.4 | - | - | - | - | - | - | - | - | 158 |
| Nose, sinuses, etc. | 0.7 | 0.5 | - | - | - | - | - | - | - | 1.0 | - | 4.1 | - | - | 3.4 | - | - | - | 14.5 | - | 160 |
| Larynx | 3.3 | 3.5 | - | - | - | - | - | - | - | - | 1.2 | - | 3.4 | 9.4 | 34.3 | 18.4 | 24.8 | 18.8 | 43.4 | 20.4 | 161 |
| Bronchus, trachea | 16.9 | 17.5 | - | - | - | - | - | - | 2.2 | - | 5.8 | 10.9 | 15.1 | 49.6 | 58.4 | 91.8 | 231.7 | 197.3 | 246.2 | 142.5 | 162 |
| Pleura | 0.5 | 0.4 | - | - | - | - | - | - | - | - | - | - | - | - | - | 6.1 | - | 18.8 | 14.5 | - | 163 |
| Thymus, heart | 1.0 | 0.9 | - | - | - | - | - | - | 2.2 | 1.0 | - | 1.4 | 1.7 | 2.4 | - | 6.1 | 8.3 | 9.4 | - | - | 164 |
| Bone | 0.8 | 0.8 | 1.7 | - | - | 3.6 | - | - | - | 1.0 | 2.3 | 1.4 | - | - | - | - | - | - | - | - | 170 |
| Connective tissues | 2.0 | 2.2 | 1.7 | - | 1.7 | - | - | - | - | 2.0 | 1.2 | 1.4 | 5.0 | - | 3.4 | 12.2 | 24.8 | 18.8 | - | 20.4 | 171 |
| Melanoma of skin | 0.2 | 0.2 | - | - | - | - | - | - | - | - | 1.2 | - | 1.7 | - | - | - | - | - | - | - | 172 |
| Skin, others | 2.1 | 2.2 | - | - | - | - | - | - | 1.1 | - | 2.3 | 1.4 | 1.7 | 4.7 | 6.9 | 12.2 | 24.8 | 47.0 | - | - | 173 |
| Male Breast | 0.3 | 0.3 | - | - | - | - | - | - | - | - | 1.2 | - | 1.7 | - | - | - | - | - | - | 20.4 | 175 |
| Prostate | 17.8 | 20.3 | - | - | - | 1.8 | - | - | - | - | 1.2 | 2.7 | 8.4 | 26.0 | 79.0 | 147.0 | 289.7 | 272.5 | 173.8 | 305.3 | 185 |
| Testis | 1.5 | 1.5 | - | - | - | - | 11.4 | 1.6 | 2.2 | 1.0 | - | 2.7 | 1.7 | - | - | - | - | - | - | - | 186 |
| Penis | 0.6 | 0.5 | - | - | - | - | - | - | - | 1.0 | 1.2 | 1.4 | - | - | 3.4 | 6.1 | - | - | - | - | 187 |
| Bladder | 4.6 | 5.0 | - | - | - | - | - | - | - | 1.0 | 1.2 | 6.8 | 5.0 | 9.4 | 24.0 | 36.7 | 57.9 | 47.0 | 29.0 | - | 188 |
| Kidney & Oth.Urinary | 5.2 | 5.2 | 1.7 | - | - | - | - | - | - | - | 1.2 | 6.8 | 8.4 | 18.9 | 17.2 | 49.0 | 8.3 | 65.8 | 72.4 | - | 189 |
| Eye | 0.1 | 0.1 | - | - | - | - | - | - | - | - | 1.2 | - | - | - | - | - | - | - | - | - | 190 |
| Brain, nervous system | 2.7 | 2.9 | 5.2 | 4.5 | 3.3 | - | - | - | 1.1 | 2.0 | 1.2 | 4.1 | 5.0 | 4.7 | 3.4 | 6.1 | 8.3 | 9.4 | - | - | 191-2 |
| Thyroid | 2.3 | 1.9 | - | - | - | - | - | - | 3.3 | 3.1 | 2.3 | 5.4 | 5.0 | 2.4 | 3.4 | 12.2 | 8.3 | - | - | - | 193 |
| Other endocrine | 0.6 | 0.6 | 1.7 | 1.5 | - | - | - | 1.6 | 1.1 | - | - | - | - | 2.4 | - | - | - | - | - | - | 194 |
| Lymphoid neoplasms | 16.2 | 16.4 | 12.0 | 9.1 | 8.3 | 3.6 | 9.5 | 11.0 | 6.6 | 10.2 | 13.9 | 8.2 | 23.5 | 37.8 | 51.5 | 36.7 | 74.5 | 112.8 | 43.4 | 61.1 | |
| Myeloid neoplasms | 4.8 | 4.6 | 1.7 | - | - | - | - | - | 1.1 | 2.0 | 4.6 | 6.8 | 1.7 | 11.8 | 20.6 | 12.2 | 41.4 | 37.6 | 57.9 | 61.1 | |
| Other and unspecified | 1.6 | 1.5 | - | - | - | - | - | - | - | 1.0 | - | 2.7 | - | - | 6.9 | 6.1 | 8.3 | 28.2 | 29.0 | 40.7 | |
| All | 141.9 | 143.6 | 27.5 | 15.1 | 15.0 | 10.7 | 24.8 | 15.7 | 24.3 | 38.8 | 76.4 | 104.8 | 201.6 | 375.4 | 563.0 | 716.4 | 1,208.4 | 1,343.6 | 1,259.8 | 1,119.5 | ALL |

| SINGAPORE : INDIAN RESIDENTS 2008-2012, FEMALES | | | INCIDENCE RATES BY AGE GROUP (YEARS) | | | | | | | | | | | | | | | | | Appendix C8 | |
|---|-------|-------|--------------------------------------|-----|-----|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|---------|---------|-------------|-------|
| SITE | CR | ASR | 0- | 5- | 10- | 15- | 20- | 25- | 30- | 35- | 40- | 45- | 50- | 55- | 60- | 65- | 70- | 75- | 80- | 85+ | ICD-9 |
| Lip, Vermilion | 0.1 | 0.1 | - | - | - | - | - | - | - | - | - | - | - | - | 3.4 | - | - | - | - | - | 140 |
| Tongue | 1.2 | 1.2 | - | - | - | - | - | - | - | - | 4.7 | 3.2 | - | - | 3.4 | 5.7 | 20.1 | - | - | - | 141 |
| Salivary gland | 0.6 | 0.5 | - | - | - | - | - | - | - | - | - | 4.8 | - | 2.4 | 3.4 | - | - | - | - | - | 142 |
| Mouth | 1.9 | 2.0 | - | - | - | - | - | - | - | 1.4 | - | - | - | 2.4 | 20.1 | 5.7 | 20.1 | 19.6 | 18.2 | 34.7 | 143-5 |
| Oropharynx | 0.1 | 0.1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 18.2 | - | 146 |
| Nasopharynx | 0.4 | 0.3 | - | - | - | - | - | - | - | - | 1.6 | - | - | 2.4 | 3.4 | - | - | - | - | - | 147 |
| Hypopharynx | 0.6 | 0.7 | - | - | - | - | - | - | - | - | - | 1.6 | - | - | - | 5.7 | 13.4 | - | - | 34.7 | 148 |
| Oesophagus | 1.6 | 1.7 | - | - | - | - | - | - | - | - | - | 1.6 | - | - | 13.4 | 17.2 | 20.1 | 19.6 | - | - | 150 |
| Stomach | 4.1 | 3.9 | - | - | - | - | - | - | - | 2.7 | 4.7 | 3.2 | 3.8 | 2.4 | 6.7 | 17.2 | 33.6 | 39.2 | 127.1 | 104.1 | 151 |
| Small intestines | 1.4 | 1.3 | - | - | - | - | - | - | - | - | 1.6 | - | 1.9 | 7.3 | 6.7 | 5.7 | 6.7 | 19.6 | 18.2 | - | 152 |
| Colon | 8.7 | 8.5 | - | - | - | 1.8 | - | 1.3 | 1.2 | 4.1 | 7.8 | 8.0 | 7.5 | 21.9 | 36.9 | 57.3 | 53.7 | 68.6 | 90.8 | 69.4 | 153 |
| Rectum | 5.2 | 5.1 | - | - | - | - | - | - | - | 2.7 | 1.6 | 6.4 | 5.6 | 24.4 | 23.5 | 28.7 | 20.1 | 39.2 | 18.2 | 104.1 | 154 |
| Liver | 2.8 | 2.7 | - | - | - | - | - | - | - | - | - | 1.6 | - | 2.4 | 13.4 | - | 26.9 | 68.6 | 72.6 | 69.4 | 155 |
| Gall bladder, etc. | 1.4 | 1.5 | - | - | - | - | - | - | - | - | - | - | - | 7.3 | 6.7 | 5.7 | 33.6 | - | 18.2 | - | 156 |
| Pancreas | 3.5 | 3.6 | - | - | - | - | - | - | - | - | - | 4.8 | 1.9 | 7.3 | 10.1 | 5.7 | 47.0 | 29.4 | 54.5 | 173.6 | 157 |
| Retroperitoneum & Peritoneum | 1.3 | 1.2 | - | - | - | - | - | 1.3 | - | 1.4 | - | 1.6 | 1.9 | 2.4 | 3.4 | 11.5 | - | 9.8 | 36.3 | - | 158 |
| Nose, sinuses, etc. | 0.1 | 0.1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 6.7 | - | - | - | 160 |
| Larynx | 0.1 | 0.2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 34.7 | 161 |
| Bronchus, trachea | 5.9 | 5.9 | 1.7 | - | - | - | - | - | 5.9 | 1.4 | 1.6 | 3.2 | 7.5 | 9.7 | 16.8 | 28.7 | 67.2 | 49.0 | 54.5 | 104.1 | 162 |
| Pleura | 0.4 | 0.4 | - | - | - | - | - | - | - | - | - | - | - | 2.4 | - | 5.7 | - | 9.8 | - | - | 163 |
| Thymus, heart | 0.4 | 0.3 | - | - | - | - | - | - | - | - | 3.1 | - | 1.9 | - | - | - | - | - | - | - | 164 |
| Bone | 0.5 | 0.5 | - | - | - | 1.8 | - | 1.3 | - | - | - | 1.6 | - | 2.4 | - | - | - | - | - | - | 170 |
| Connective tissues | 1.6 | 1.6 | 3.4 | - | - | - | - | - | - | 4.1 | - | 1.6 | - | 4.9 | 3.4 | 11.5 | - | 9.8 | 18.2 | - | 171 |
| Melanoma of skin | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 172 |
| Skin, others | 2.7 | 2.6 | - | - | - | - | 1.8 | - | - | 1.4 | 3.1 | 1.6 | 3.8 | - | 3.4 | 11.5 | 33.6 | 39.2 | 36.3 | 34.7 | 173 |
| Female Breast | 64.9 | 58.0 | - | - | - | - | - | 4.0 | 16.6 | 32.9 | 90.9 | 104.6 | 177.0 | 207.1 | 251.8 | 194.9 | 228.3 | 284.2 | 290.4 | 208.3 | 174 |
| Cervix uteri | 2.7 | 2.7 | - | - | - | - | - | - | - | - | 1.6 | 6.4 | 3.8 | 4.9 | 13.4 | 22.9 | - | 19.6 | 18.2 | 69.4 | 180 |
| Chorioepithelioma | 0.2 | 0.2 | - | - | - | - | 1.8 | - | - | - | - | 1.6 | - | - | - | - | - | - | - | - | 181 |
| Corpus uteri | 15.9 | 15.3 | - | - | - | - | - | 2.7 | 5.9 | 2.7 | 7.8 | 25.7 | 35.8 | 43.9 | 77.2 | 120.4 | 47.0 | 127.4 | 18.2 | - | 182 |
| Ovary, etc. | 11.6 | 11.0 | - | 1.5 | - | 8.8 | 1.8 | 4.0 | 2.4 | 5.5 | 17.2 | 14.5 | 22.6 | 26.8 | 33.6 | 57.3 | 47.0 | 39.2 | 90.8 | 34.7 | 183 |
| Other fem. genital | 0.8 | 0.8 | - | - | - | - | - | - | - | - | - | - | 3.8 | 2.4 | 10.1 | - | - | 9.8 | - | - | 184 |
| Bladder | 1.2 | 1.2 | - | - | - | 1.8 | - | - | - | - | - | 1.6 | - | 4.9 | 6.7 | - | 13.4 | 9.8 | 18.2 | - | 188 |
| Kidney & Oth.Urinary | 3.1 | 3.3 | 1.7 | - | - | - | - | - | - | - | - | 3.2 | 1.9 | 14.6 | 16.8 | 17.2 | 13.4 | 19.6 | 36.3 | 69.4 | 189 |
| Eye | 0.5 | 0.8 | 6.8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 190 |
| Brain, nervous system | 2.5 | 2.3 | 1.7 | 1.5 | - | - | - | 1.3 | - | 4.1 | - | 1.6 | 3.8 | 7.3 | - | 5.7 | 20.1 | 9.8 | 72.6 | - | 191-2 |
| Thyroid | 7.1 | 6.0 | - | - | - | 1.8 | 1.8 | 2.7 | 8.3 | 9.6 | 9.4 | 8.0 | 16.9 | 14.6 | 13.4 | 11.5 | 13.4 | 19.6 | 54.5 | 69.4 | 193 |
| Other endocrine | 0.4 | 0.3 | - | - | - | - | 1.8 | - | - | - | 1.6 | 1.6 | - | - | - | - | - | - | - | - | 194 |
| Lymphoid neoplasms | 9.5 | 9.4 | 5.1 | 1.5 | 1.7 | 1.8 | 12.7 | 2.7 | 7.1 | 2.7 | 9.4 | 11.3 | 24.5 | 9.7 | 20.1 | 40.1 | 40.3 | 29.4 | 36.3 | 69.4 | |
| Myeloid neoplasms | 5.3 | 4.8 | 1.7 | - | - | 3.5 | - | 1.3 | 5.9 | 4.1 | 7.8 | 6.4 | 9.4 | 7.3 | 10.1 | 17.2 | 33.6 | 19.6 | 36.3 | - | |
| Other and unspecified | 2.4 | 2.3 | - | - | - | - | - | - | - | - | 4.7 | 3.2 | 5.6 | 4.9 | 13.4 | - | 26.9 | 9.8 | - | 34.7 | OTH |
| All | 174.9 | 164.7 | 22.2 | 4.6 | 1.7 | 21.1 | 21.8 | 22.9 | 53.2 | 80.8 | 180.2 | 234.9 | 340.8 | 450.7 | 644.7 | 710.8 | 886.4 | 1,019.2 | 1,252.5 | 1,319.0 | ALL |

APPENDIX D1

CUMULATIVE RATES (%) FOR AGE 0-74 YEARS BY ETHNIC GROUP, 2008-2012, MALES

| SITE | ALL | CHINESE | MALAY | INDIAN | ICD-9 |
|------------------------------|--------------|--------------|--------------|--------------|-------|
| Lip, Vermilion | 0.00 | 0.00 | 0.00 | 0.00 | 140 |
| Tongue | 0.18 | 0.19 | 0.05 | 0.25 | 141 |
| Salivary gland | 0.09 | 0.09 | 0.11 | 0.02 | 142 |
| Mouth | 0.11 | 0.11 | 0.01 | 0.18 | 143-5 |
| Oropharynx | 0.13 | 0.13 | 0.02 | 0.21 | 146 |
| Nasopharynx | 0.98 | 1.13 | 0.68 | 0.12 | 147 |
| Hypopharynx | 0.12 | 0.13 | 0.00 | 0.11 | 148 |
| Oesophagus | 0.41 | 0.44 | 0.25 | 0.29 | 150 |
| Stomach | 1.31 | 1.43 | 0.55 | 1.01 | 151 |
| Small intestines | 0.13 | 0.14 | 0.09 | 0.19 | 152 |
| Colon | 2.63 | 2.85 | 1.55 | 1.45 | 153 |
| Rectum | 2.02 | 2.12 | 1.80 | 1.15 | 154 |
| Liver | 2.07 | 2.19 | 1.78 | 1.09 | 155 |
| Gall bladder, etc. | 0.26 | 0.28 | 0.23 | 0.09 | 156 |
| Pancreas | 0.75 | 0.81 | 0.51 | 0.35 | 157 |
| Retroperitoneum & Peritoneum | 0.03 | 0.03 | 0.02 | 0.01 | 158 |
| Nose, sinuses, etc. | 0.09 | 0.11 | 0.03 | 0.04 | 160 |
| Larynx | 0.33 | 0.33 | 0.26 | 0.46 | 161 |
| Lung | 4.07 | 4.22 | 4.04 | 2.33 | 162 |
| Pleura | 0.07 | 0.07 | 0.06 | 0.03 | 163 |
| Thymus, heart | 0.13 | 0.13 | 0.11 | 0.12 | 164 |
| Bone | 0.08 | 0.08 | 0.05 | 0.05 | 170 |
| Connective tissues | 0.20 | 0.20 | 0.22 | 0.27 | 171 |
| Melanoma of skin | 0.07 | 0.06 | 0.03 | 0.01 | 172 |
| Skin, others | 1.24 | 1.20 | 0.38 | 0.28 | 173 |
| Male Breast | 0.02 | 0.02 | 0.03 | 0.01 | 175 |
| Prostate | 3.71 | 3.89 | 2.30 | 2.78 | 185 |
| Testis | 0.12 | 0.10 | 0.18 | 0.10 | 186 |
| Penis | 0.12 | 0.14 | 0.01 | 0.07 | 187 |
| Bladder | 0.65 | 0.62 | 0.83 | 0.71 | 188 |
| Kidney & Oth.Urinary | 0.95 | 1.01 | 0.72 | 0.56 | 189 |
| Eye | 0.02 | 0.02 | 0.03 | 0.01 | 190 |
| Brain, nervous system | 0.32 | 0.34 | 0.25 | 0.25 | 191-2 |
| Thyroid | 0.28 | 0.26 | 0.44 | 0.23 | 193 |
| Other endocrine | 0.06 | 0.07 | 0.05 | 0.04 | 194 |
| Lymphoid neoplasms | 1.68 | 1.56 | 2.55 | 1.58 | |
| Myeloid neoplasms | 0.69 | 0.69 | 0.84 | 0.52 | |
| Other and unspecified | 0.31 | 0.32 | 0.26 | 0.13 | |
| All | 26.44 | 27.51 | 21.33 | 17.09 | |

APPENDIX D2

CUMULATIVE RATES (%) FOR AGE 0-74 YEARS BY ETHNIC GROUP, 2008-2012, FEMALES

| SITE | ALL | CHINESE | MALAY | INDIAN | ICD-9 |
|------------------------------|--------------|--------------|--------------|--------------|-------|
| Lip, Vermilion | 0.01 | 0.01 | 0.00 | 0.02 | 140 |
| Tongue | 0.09 | 0.08 | 0.11 | 0.19 | 141 |
| Salivary gland | 0.07 | 0.08 | 0.03 | 0.05 | 142 |
| Mouth | 0.06 | 0.05 | 0.02 | 0.25 | 143-5 |
| Oropharynx | 0.04 | 0.04 | 0.01 | 0.00 | 146 |
| Nasopharynx | 0.30 | 0.35 | 0.16 | 0.04 | 147 |
| Hypopharynx | 0.01 | 0.00 | 0.00 | 0.10 | 148 |
| Oesophagus | 0.06 | 0.05 | 0.04 | 0.26 | 150 |
| Stomach | 0.73 | 0.79 | 0.44 | 0.37 | 151 |
| Small intestines | 0.08 | 0.07 | 0.10 | 0.15 | 152 |
| Colon | 2.03 | 2.15 | 1.67 | 1.01 | 153 |
| Rectum | 1.03 | 1.09 | 0.88 | 0.57 | 154 |
| Liver | 0.49 | 0.52 | 0.46 | 0.22 | 155 |
| Gall bladder, etc. | 0.23 | 0.22 | 0.29 | 0.27 | 156 |
| Pancreas | 0.52 | 0.55 | 0.41 | 0.38 | 157 |
| Retroperitoneum & Peritoneum | 0.09 | 0.09 | 0.10 | 0.12 | 158 |
| Nose, sinuses, etc. | 0.04 | 0.04 | 0.04 | 0.03 | 160 |
| Larynx | 0.01 | 0.02 | 0.00 | 0.00 | 161 |
| Lung | 1.71 | 1.83 | 1.38 | 0.72 | 162 |
| Pleura | 0.02 | 0.02 | 0.00 | 0.04 | 163 |
| Thymus, heart | 0.08 | 0.09 | 0.06 | 0.03 | 164 |
| Bone | 0.06 | 0.06 | 0.07 | 0.04 | 170 |
| Connective tissues | 0.16 | 0.17 | 0.11 | 0.14 | 171 |
| Melanoma of skin | 0.05 | 0.05 | 0.03 | 0.00 | 172 |
| Skin, others | 0.75 | 0.78 | 0.35 | 0.30 | 173 |
| Female Breast | 6.96 | 7.09 | 6.23 | 6.54 | 174 |
| Cervix uteri | 0.74 | 0.78 | 0.76 | 0.27 | 180 |
| Chorioepithelioma | 0.02 | 0.01 | 0.03 | 0.02 | 181 |
| Corpus uteri | 1.50 | 1.51 | 1.34 | 1.85 | 182 |
| Ovary, etc. | 1.30 | 1.30 | 1.40 | 1.22 | 183 |
| Other fem. genital | 0.10 | 0.10 | 0.05 | 0.08 | 184 |
| Bladder | 0.15 | 0.15 | 0.12 | 0.14 | 188 |
| Kidney & Oth.Urinary | 0.45 | 0.47 | 0.34 | 0.34 | 189 |
| Eye | 0.02 | 0.02 | 0.00 | 0.03 | 190 |
| Brain, nervous system | 0.27 | 0.27 | 0.24 | 0.24 | 191-2 |
| Thyroid | 0.77 | 0.79 | 0.71 | 0.56 | 193 |
| Other endocrine | 0.06 | 0.05 | 0.09 | 0.02 | 194 |
| Lymphoid neoplasms | 1.02 | 0.94 | 1.52 | 0.95 | |
| Myeloid neoplasms | 0.49 | 0.46 | 0.63 | 0.54 | |
| Other and unspecified | 0.25 | 0.24 | 0.27 | 0.29 | |
| All | 22.79 | 23.39 | 20.50 | 18.38 | |

APPENDIX E Comparison of age standardized incidence rate in 2003-2007 using DOS and SCR population denominators

E1) Males

| SITE | ASR (DOS) | ASR (SCR) | A-B | %A-B |
|------------------------------|-----------|-----------|-------|-------|
| Lip, Vermilion | 0.06 | 0.06 | 0.00 | -0.51 |
| Tongue | 1.55 | 1.50 | 0.04 | 3.00 |
| Salivary gland | 0.66 | 0.67 | -0.01 | -1.28 |
| Gum | 0.12 | 0.11 | 0.01 | 5.24 |
| Floor of mouth | 0.29 | 0.29 | 0.00 | 0.12 |
| Mouth, other parts | 0.92 | 0.91 | 0.01 | 1.06 |
| Mouth | 1.32 | 1.31 | 0.02 | 1.20 |
| Oropharynx | 0.84 | 0.83 | 0.01 | 1.21 |
| Nasopharynx | 10.80 | 10.34 | 0.46 | 4.41 |
| Hypopharynx | 1.16 | 1.13 | 0.02 | 2.10 |
| Oesophagus | 3.55 | 3.52 | 0.03 | 0.96 |
| Stomach | 14.49 | 14.29 | 0.21 | 1.44 |
| Small intestines | 0.86 | 0.84 | 0.02 | 2.73 |
| Colon | 22.99 | 22.77 | 0.23 | 1.00 |
| Rectum | 17.46 | 17.27 | 0.19 | 1.09 |
| Colo-rectum | 40.45 | 40.03 | 0.42 | 1.04 |
| Liver | 17.78 | 17.64 | 0.14 | 0.79 |
| Gall bladder, etc. | 1.80 | 1.78 | 0.02 | 1.39 |
| Pancreas | 5.83 | 5.77 | 0.06 | 1.04 |
| Retroperitoneum & Peritoneum | 0.28 | 0.27 | 0.01 | 2.35 |
| Nose, sinuses, etc. | 0.86 | 0.83 | 0.03 | 3.38 |
| Larynx | 3.67 | 3.67 | 0.00 | -0.11 |
| Bronchus, trachea | 40.83 | 40.09 | 0.74 | 1.85 |
| Pleura | 0.43 | 0.41 | 0.02 | 4.46 |
| Thymus, heart | 1.01 | 1.02 | -0.01 | -0.84 |
| Bone | 0.88 | 0.87 | 0.01 | 1.25 |
| Connective tissues | 1.86 | 1.80 | 0.06 | 3.12 |
| Melanoma of skin | 0.49 | 0.47 | 0.01 | 2.68 |
| Skin, others | 9.59 | 9.46 | 0.14 | 1.44 |
| Skin, including melanoma | 10.08 | 9.93 | 0.15 | 1.50 |
| Male Breast | 0.19 | 0.18 | 0.00 | 2.20 |
| Prostate | 23.89 | 23.61 | 0.28 | 1.19 |
| Testis | 1.25 | 1.23 | 0.02 | 1.49 |
| Penis | 0.94 | 0.92 | 0.02 | 2.47 |
| Bladder | 7.05 | 6.97 | 0.09 | 1.25 |
| Kidney & Oth.Urinary | 6.19 | 6.11 | 0.08 | 1.35 |
| Eye | 0.31 | 0.30 | 0.00 | 0.29 |
| Brain | 2.80 | 2.76 | 0.04 | 1.38 |
| Nervous System | 0.33 | 0.33 | 0.00 | 0.43 |
| Brain, nervous system | 3.12 | 3.09 | 0.04 | 1.28 |
| Thyroid | 2.11 | 2.06 | 0.05 | 2.42 |
| Other endocrine | 0.59 | 0.58 | 0.02 | 3.13 |
| Lymphoid neoplasms | 14.44 | 14.07 | 0.37 | 2.60 |
| Myeloid neoplasms | 4.57 | 4.46 | 0.11 | 2.50 |
| All | 230.02 | 226.45 | 3.57 | 1.58 |

E2) Females

| SITE | ASR (DOS) | ASR (SCR) | A-B | %A-B |
|------------------------------|----------------------|----------------------|------------|-------------|
| Lip, Vermilion | 0.03 | 0.03 | 0.00 | 11.83 |
| Tongue | 0.62 | 0.63 | -0.01 | -1.00 |
| Salivary gland | 0.53 | 0.54 | -0.01 | -2.14 |
| Gum | 0.11 | 0.11 | 0.00 | -2.53 |
| Floor of mouth | 0.00 | 0.00 | 0.00 | 0.00 |
| Mouth, other parts | 0.41 | 0.40 | 0.01 | 1.92 |
| Mouth | 0.51 | 0.51 | 0.00 | 0.96 |
| Oropharynx | 0.20 | 0.19 | 0.01 | 4.99 |
| Nasopharynx | 3.44 | 3.35 | 0.08 | 2.52 |
| Hypopharynx | 0.10 | 0.10 | 0.00 | 0.06 |
| Oesophagus | 0.65 | 0.67 | -0.01 | -1.91 |
| Stomach | 7.40 | 7.43 | -0.03 | -0.40 |
| Small intestines | 0.60 | 0.61 | -0.01 | -1.59 |
| Colon | 19.07 | 19.33 | -0.25 | -1.30 |
| Rectum | 9.89 | 9.99 | -0.10 | -0.98 |
| Colo-rectum | 28.97 | 29.32 | -0.35 | -1.19 |
| Liver | 4.71 | 4.79 | -0.08 | -1.76 |
| Gall bladder, etc. | 1.83 | 1.86 | -0.03 | -1.55 |
| Pancreas | 4.04 | 4.10 | -0.06 | -1.53 |
| Retroperitoneum & Peritoneum | 0.52 | 0.51 | 0.01 | 2.07 |
| Nose, sinuses, etc. | 0.46 | 0.44 | 0.02 | 3.91 |
| Larynx | 0.27 | 0.27 | 0.00 | -0.14 |
| Bronchus, trachea | 16.01 | 16.18 | -0.17 | -1.04 |
| Pleura | 0.06 | 0.07 | 0.00 | -5.11 |
| Thymus, heart | 0.54 | 0.54 | 0.00 | 0.72 |
| Bone | 0.61 | 0.61 | 0.00 | -0.08 |
| Connective tissues | 1.21 | 1.19 | 0.02 | 1.68 |
| Melanoma of skin | 0.48 | 0.48 | -0.01 | -1.14 |
| Skin, others | 6.56 | 6.54 | 0.02 | 0.32 |
| Skin, including melanoma | 7.04 | 7.02 | 0.02 | 0.22 |
| Female Breast | 58.46 | 56.44 | 2.02 | 3.59 |
| Cervix uteri | 8.84 | 8.48 | 0.36 | 4.25 |
| Chorioepithelioma | 0.09 | 0.08 | 0.01 | 9.52 |
| Corpus uteri | 11.72 | 11.57 | 0.15 | 1.30 |
| Ovary, etc. | 12.04 | 11.83 | 0.21 | 1.80 |
| Other fem. genital | 0.96 | 0.98 | -0.02 | -2.11 |
| Bladder | 1.92 | 1.95 | -0.03 | -1.44 |
| Kidney & Oth.Urinary | 3.06 | 3.02 | 0.04 | 1.25 |
| Eye | 0.25 | 0.24 | 0.01 | 3.92 |
| Brain | 2.22 | 2.19 | 0.04 | 1.61 |
| Nervous System | 0.39 | 0.40 | -0.01 | -3.50 |
| Brain, nervous system | 2.61 | 2.59 | 0.02 | 0.82 |
| Thyroid | 5.83 | 5.64 | 0.19 | 3.42 |
| Other endocrine | 0.47 | 0.46 | 0.01 | 2.26 |
| Lymphoid neoplasms | 9.97 | 9.95 | 0.02 | 0.21 |
| Myeloid neoplasms | 3.49 | 3.48 | 0.01 | 0.40 |
| All | 203.39 | 201.02 | 2.37 | 1.18 |