

**SINGAPORE
CANCER
REGISTRY
REPORT NO. 7**

Trends In Cancer Incidence In Singapore 1968 - 2007

**Trends In Cancer Incidence
In Singapore
1968 – 2007**

National Registry of Diseases Office

SINGAPORE CANCER REGISTRY



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.

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ACKNOWLEDGEMENTS

We wish to express our grateful thanks to:

The medical profession in Singapore, in the public and private sectors, for cancer notifications.

The Chief Executive Officers and Chairs of Medical Boards for access to hospital records.

The Department of Statistics and Ministry of Home Affairs for population statistics and for mortality records respectively.

The Directors of Departments of Pathology in the public and private sectors for access to pathology records.

The Ministry of Health, Health Promotion Board and National University of Singapore for logistics and financial support.

Dr Wong Chia Siong for contributing to the report writing.

Prof Chia Kee Seng for his comments and guidance.

This undertaking would not have been possible without their sustained and generous support.

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1. INTRODUCTION

The Singapore Cancer Registry (SCR) has been collecting and reporting cancer statistics in Singapore since 1968. There were 6 previous SCR publications [1-6] 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 1968 and 2007.

In this report, we have chosen to use population denominators from the Ministry of Health, which were in turn obtained from the Department of Statistics, Singapore to calculate incidence rates. The figures are accurate as at 26/9/2008. 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 UICC "World Population" [10].

All records in the SCR go through the processes of registration, verification, matching and classification before they are finalised. The data contained in this document are the 1968-2007 statistics finalised in the SCR as of 9th April 2009.

There were changes to the histological coding systems used by the SCR between 1968 and 2007. The International Classification of Diseases, 9th Revision (ICD-9) [11] and the Manual of Tumor 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. In the most recent five year period of 2003-2007, SCR adopted the new 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 1998-2007 in this monograph are adopted from the WHO classification of tumours of haematopoietic and lymphoid tissues 4th edition, and we are moving ahead in line with both the Surveillance, Epidemiology and End Results (SEER) Registry and the North American Association of Central Cancer Registries (NAACCR), which have both resolved to use the WHO classification as the coding standard beginning on January 1, 2010.

The pathologic report diagnoses of the earlier period 1998-2002 were reviewed and reclassified according to the WHO Classification 4th Edition (2008) [15] if this was not utilised as the classification in the submission of the pathologic diagnoses to the Singapore Cancer Registry (SCR). This revision and update was possible because all diagnoses of malignant lymphomas or leukaemias of lymphoid origin were notified to the Singapore Cancer Registry with not only the morphologic diagnosis but with information on immunophenotype and in some, genetic features of the neoplasms, thereby providing information of the lineage or subtype of the malignant neoplasms. This more accurately defines the entities where possible.

Because of this change, statistics on lymphomas and leukaemias (combined myeloid and lymphoid) are presented until the year 1997, after which the statistics on the new classification separating the myeloid and lymphoid neoplasms will be shown.

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 metres, comprising of 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. In 2007, 195 rainy days were recorded.

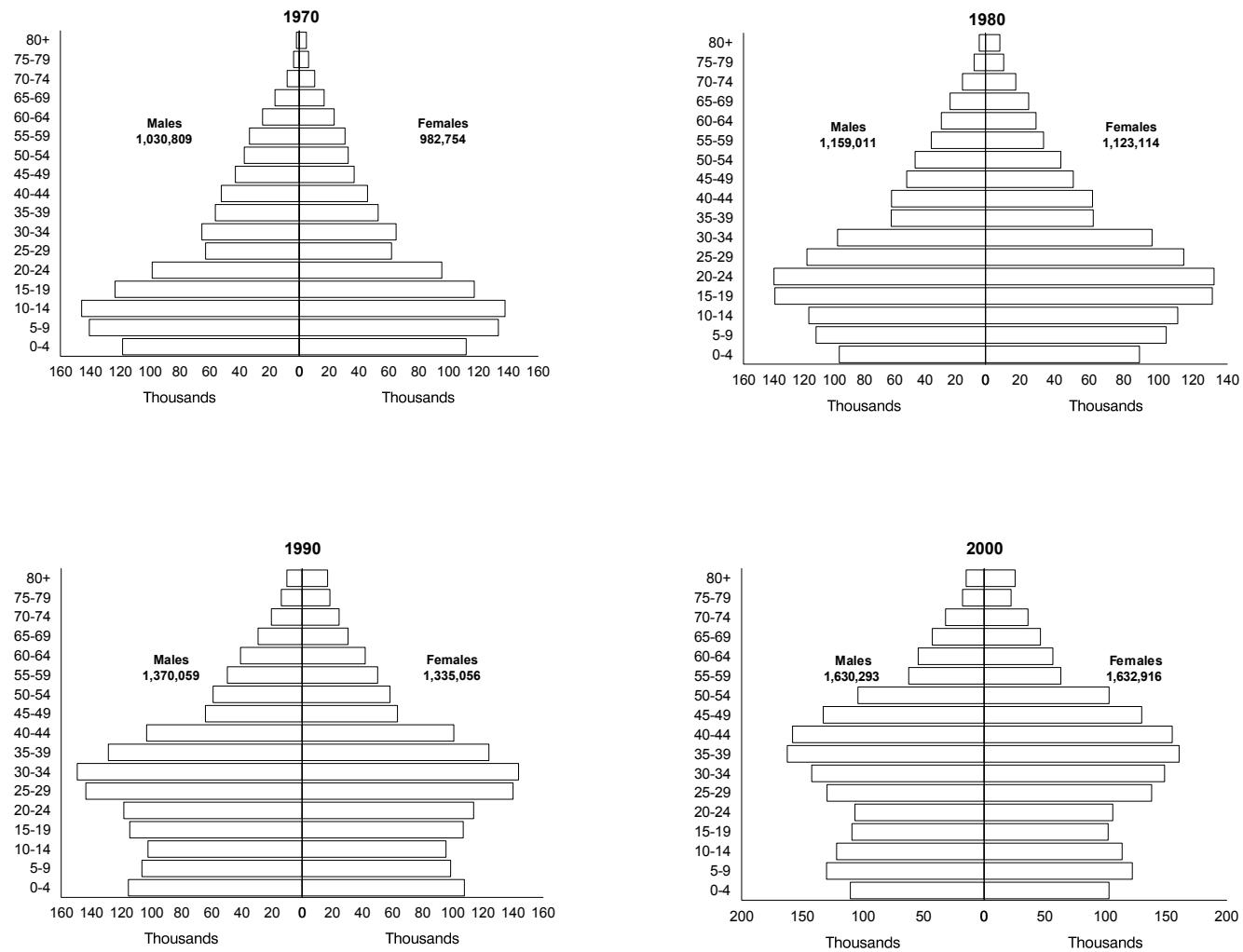
2.2 POPULATION GROWTH

Within this monograph, “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 1970, 1980, 1990 and 2000 censuses are displayed in Figure 2.1. The historical population sizes and growth rates in the census years of 1970, 1980, 1990 and 2000 are shown in Table 2.1. Between 2003 and 2007, the growth rate for the total population (using the mid year population estimates) increased from 0.2% to 5.5% while the growth rate for the Singapore resident population remained steady around 1.6% [18].

Figure 2.1

Population Pyramids for the resident population: 1970, 1980, 1990 and 2000

**Table 2.1**

Population sizes and growth rates for the resident population: 1970, 1980, 1990 and 2000

Census year	Resident population (in thousands)	Growth rate (%)
1970	2013.6	NA
1980	2282.1	1.3
1990	2735.9	1.7
2000	3273.4	1.8

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 and 2000 [7-9, 17] are shown in Table 2.2. As of end June 2008, there were 2,721,800 Chinese, 495,100 Malay and 323,400 Indian Singapore residents. Ethnicity of Singapore residents is recorded based on father's ethnic group and there are few interethnic marriages (16.7% of all registered marriages in 2008) [18].

Table 2.2

Ethnic distribution of Singapore residents: 1970, 1980, 1990 and 2000

	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

Within each ethnic group, there are further subdivisions. Based on the census conducted in 2000, the major dialect groups in Chinese resident population are Hokkien (41.4%), Teochew (21.0%), Cantonese (15.4%), Hakka (7.9%), Hainanese (6.7%) and Others (7.9%). The Malay resident population comprises of Malays (68.3%), Javanese (17.6%), Boyanese (11.4%) and Others (2.7%). The Indian resident population is made up of Tamils (58.3%), Malayalis (8.4%), Sikhs (5.1%), Hindustanis (2.0%) and Others (26.2%) [9].

2.4 GENDER DISTRIBUTION

The male to female ratio amongst Singapore residents has been declining over time. The ratios in 1970, 1980, 1990 and 2000 were 1.049, 1.032, 1.026 and 0.998 respectively. As of end 2008, there were 18,030,000 male and 1,839,700 female Singapore residents [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 18.8% in 2000.

2.6 HEALTHCARE SYSTEM

Singapore has a comprehensive healthcare system. There are some 2000 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 7 public hospitals and 6 national specialty centres for cancer, cardiac, eye, skin, neuroscience and dental care. 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. On the other hand, 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 BreastScreen Singapore and Workplace Health Promotion Programme come under HPB [20].

3. CANCER MORTALITY

Table 3.1 shows the trends of cancer deaths among the total population from 1968-2007. 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 14.8% in 1968-1973. The crude annual cancer death rate declined slightly over the last two periods and stood at 103.9 per 100,000 in 2003-2007.

Table 3.1 CANCER DEATHS AMONG TOTAL POPULATION, 1968-2007

Period	Population-at-risk ^a	Mean annual number of cancer deaths ^a	Crude annual cancer death rate (per 100,000 mid-term population)	Proportion of cancer deaths among deaths from all causes
1968-1972	2,074,507 (1970 Census)	1,622.2	78.2	14.8
1973-1977	2,262,000 (1975 Estimate)	2,086.4	92.2	17.8
1978-1982	2,413,945 (1980 Census)	2,543.8	105.4	20.2
1983-1987	2,736,000 (1985 Estimate)	2,909.0	106.3	22.1
1988-1992	3,047,100 (1990 Census)	3,312.6	108.7	23.7
1993-1997	3,524,500 (1995 Estimate)	3,859.6	109.5	25.4
1998-2002	4,027,900 (2000 Census)	4,233.0	105.1	27.1
2003-2007	4,265,800 (2005 Estimate)	4,432.0	103.9	27.1

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

Table 3.2 shows the number of cancer deaths as well as the crude and age-standardized rates for selected cancer sites among the resident population in 2003-2007. Lung cancer is the most frequent cancer site for 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 that of liver cancer. Among female residents, breast, lung and colon cancers are the three most frequent cancer sites for 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.

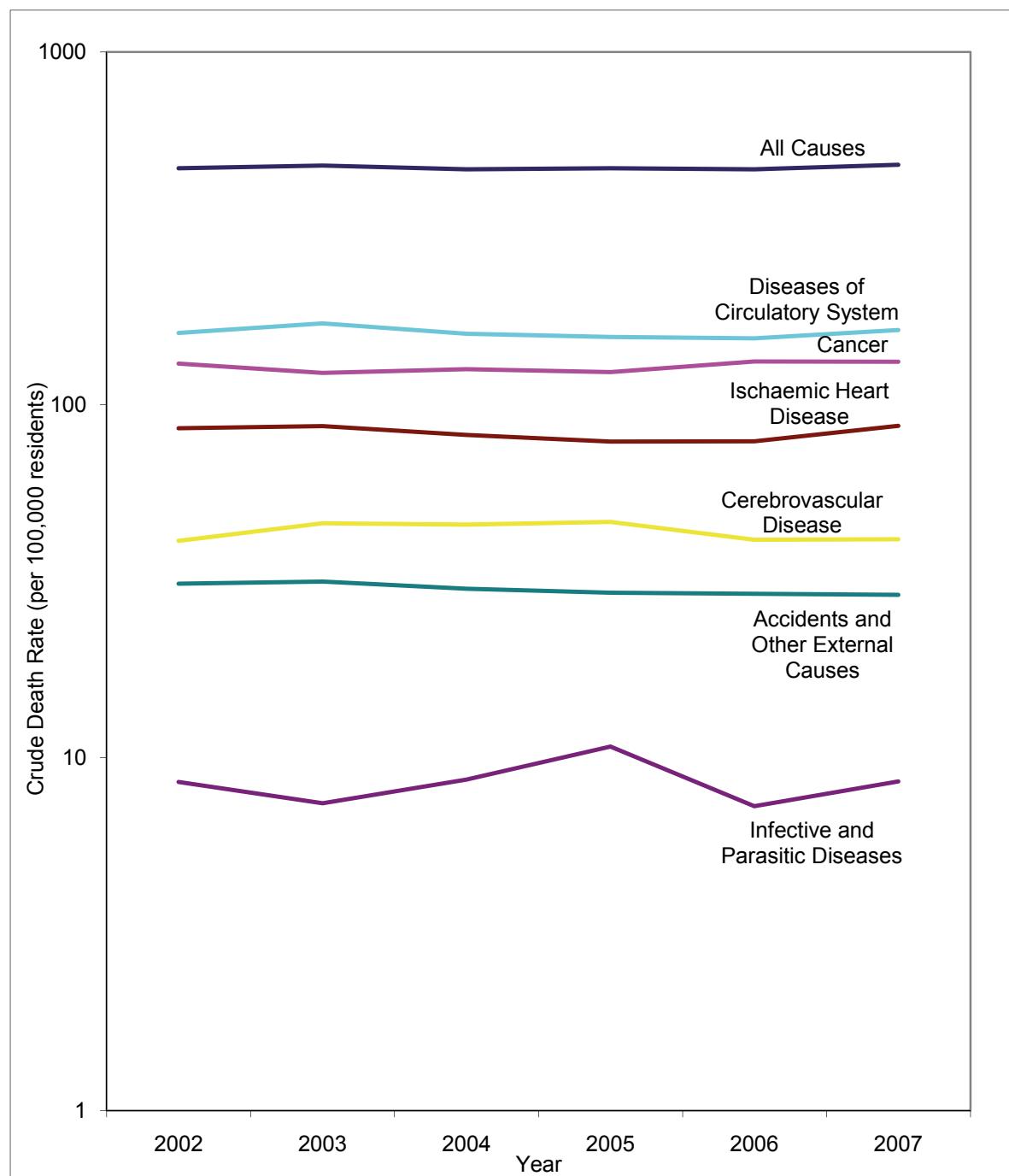
Table 3.2. CANCER DEATHS^a AMONG RESIDENT POPULATION 2003- 2007 : NUMBERS AND MORTALITY RATES FOR SELECTED CANCER SITES AND FOR ALL CANCERS

MALES	ICD9	NUMBER	%^b	CR^c	ASR^d
Lung	162	3,372	28.6	39.1	36.1
Liver	155	1,507	12.8	17.5	15.8
Colon	153	1,154	9.8	13.4	12.1
Stomach	151	927	7.9	10.8	9.8
Rectum	154	551	4.7	6.4	5.8
Pancreas	157	533	4.5	6.2	5.6
Nasopharynx	147	542	4.6	6.3	5.1
Prostate	185	437	3.7	5.1	4.7
Oesophagus	150	325	2.8	3.8	3.5
Lymphomas	200-2	309	2.6	3.6	3.3
Leukaemias	204-8	263	2.2	3.1	2.9
Kidney & urinary tract	189	220	1.9	2.6	2.2
Bladder	188	163	1.4	1.9	1.7
Brain, nervous system	191-2	152	1.3	1.8	1.6
Larynx	161	143	1.2	1.7	1.5
All cancer deaths		11,694	99.3	135.8	123.2

FEMALES	ICD9	NUMBER	%^b	CR^c	ASR^d
Female Breast	174	1,566	16.8	17.9	13.6
Lung	162	1,561	16.8	17.9	13.1
Colon	153	1,108	11.9	12.7	9.0
Stomach	151	624	6.7	7.1	5.1
Liver	155	518	5.6	5.9	4.3
Ovary & uterine adnexa	183	471	5.1	5.4	4.1
Pancreas	157	451	4.9	5.2	3.9
Cervix uteri	180	382	4.1	4.4	3.4
Rectum	154	377	4.1	4.3	3.1
Lymphomas	200-2	227	2.4	2.6	2.0
Leukaemias	204-8	203	2.2	2.3	2.0
Nasopharynx	147	157	1.7	1.8	1.4
Gall bladder & extrahepatic ducts	156	136	1.5	1.6	1.1
Corpus uteri	182	117	1.3	1.3	1.1
Kidney & urinary tract	189	122	1.3	1.4	1.0
All cancer deaths		9,191	98.9	105.1	78.2

^a Derived from data provided by the Singapore Immigration and Registration Department.^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).

Figure 3.1. DEATHS AMONG RESIDENT POPULATION 2002-2007: CRUDE MORTALITY RATES FOR SELECTED CAUSES



4. THE SINGAPORE CANCER REGISTRY

4.1. 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 to be 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 perform the cancer registration process.

The Singapore Cancer Registry began 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 four disease specific registries, namely those of stroke, acute myocardial infarction, end-stage renal failure and cancer and 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.

4.2. 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.

4.3. Registry structure and methods

4.3.1. 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. Reminders are sent out to the attending clinicians if cancer notifications are delayed.

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

Recently, cancer notification has become compulsory following the enactment of the National Registry of Diseases Act in 2007. Doctors can notify both histologically confirmed as well as clinically diagnosed cancers to SCR through hand delivery (including courier), registered mail or electronic notification.

4.4. Data processing and coding

a) Identification Key

The primary identification key for our Singapore residents is the National Registration Identity Card (NRIC) number. For non-residents, their passport numbers or foreign identification (FIN) numbers are used. These are unique numbers assigned 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 hardcopy medical casenotes and electronic medical records to ensure completion of notifications and to verify discrepancies in information.

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 for the period 2003-2007. This differs from the last report when we used ICD-O-2 [13] classification for the period 1998-2002.

d) Multiple primary registrations

In the Singapore Cancer Registry, a second or third primary is only registered when all the primary sites are confirmed histologically. Notably, an exception is made for primary in liver from the period 2003-2007. If the possibility of metastasis is excluded and the alpha-feto protein level is greatly raised above the normal range (e.g. > 1000ug/L), the diagnosis of a second / third primary in the liver is accepted even in the absence of proven histology. We register the second / third primary with a new registration number for each new site as indicated by the 3-digit ICD-O-3 code. Hence, there are no new registrations for second primary cancers occurring in different subsites (4th digit of ICD-O-3 code) within the same site or occurring in the other site of paired organs. We also assign new registration numbers for a tumour in the same 3-digit site as a previous tumour but with a different histologic group as defined by IARC [14]

e) Histological typing

The Singapore Cancer Registry adopted the International Classification of Diseases for Oncology, 3rd Edition (ICD-O-3) [14] for classification of morphology for the period 2003-2007. The Manual of Tumor 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.

f) Special considerations

1. Some neoplasms of questionable malignancy (5th digit code '1') that cannot be assigned to ICD-9 140-208 and are included in the Singapore Cancer Registry incidence data are:
 - I. Carcinoid of Appendix (235.2)
 - II. Craniopharyngioma (237.0)
 - III. Cystosarcoma phyllodes (238.3)
 - IV. Glioma, benign (225.0)
 - V. Ependymoma, benign (225.0)
 - VI. Mesothelioma (239.9)
 - VII. Osteoclastoma (238.0)
 - VIII. Papilloma of bladder, NOS (223.3)
 - IX. Thymoma (212.6)
 - X. Mucoepidermoid tumour of salivary gland (235.0)
 - XI. Granulosa cell tumour of ovary (236.2)
 - XII. Myeloproliferative disease (238.7)
 - XIII. Lymphoproliferative disease (238.7)
2. The following are also included in the Singapore Cancer Registry incidence data: they were considered borderline in ICD-O-2 prior to 2003 but are considered malignant in ICD-O-3 from 2003 onwards.
 - I. Polycythemia vera (238.4)
 - II. Myelosclerosis with myeloid metaplasia (238.7)
 - III. Idiopathic thrombocythemia (238.7)
 - IV. Myelodysplastic syndrome (238.7)
3. While cases of carcinoma-in-situ are registered, they are not used in calculation of incidence data. If these cases turn invasive subsequently, they are registered in the year of turning into invasive carcinoma.

g) Follow-up

We update our records with date and cause of death information.

h) Data storage

Most of the data management has shifted to an electronic platform. In 2004, the National Disease Registries System (NDRS) 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 and the registry. Registry coordinators from the cancer registry visited the medical record offices of the hospitals to collect additional information and enter them into their laptops.

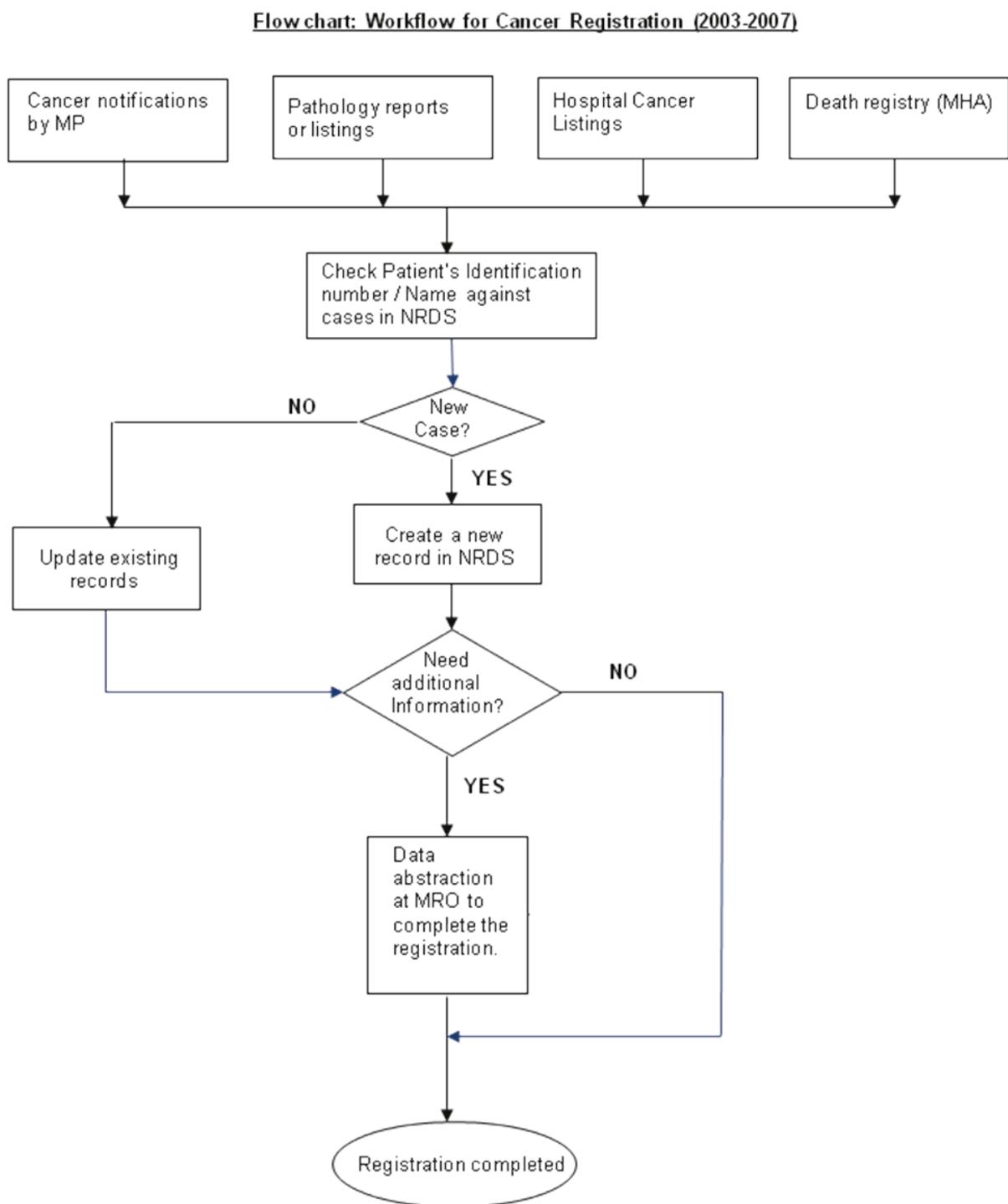
Information submitted by the medical practitioners who continued to notify cancer cases using hard copy notification forms was entered into the NRDS. The hard copy forms were subsequently scanned and stored in an electronic repository.

i) Data requests

The data in the Singapore Cancer Registry is a resource for epidemiological studies, public health research and policy making. Data 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 is 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 4.1



4.5 Denominators For Cancer Statistics

In the previous six reports, we had used 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. 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 total population for the 5-year periods from 1968 to 1982.

Department of Statistics (DOS) releases mid-year population estimates annually and these population denominators are widely used in official publications in Singapore. In this report, we used the population denominators obtained from DOS (termed as “DOS population denominators” in this publication) in the calculation of incidence rates from 1983 to 2007. 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.

Comparison of DOS and SCR population denominators

Generally, the two sets of denominators are fairly similar in the earlier periods (e.g. 1983-1997) but the differences increased in the more recent periods. We assessed the impact of shift from SCR to DOS population denominators by comparing the difference in incidence rates calculated from both sets of population denominators in the resident population in the 2003-2007 period. These incidence rates are shown in Appendix E.

We note that the impact of this shift in population denominators on age-standardized rates for common cancers and “all cancers” as a single category is small. For example, the age-standardized rates for “all cancers”, lung, colon and prostate cancers in all males calculated using the DOS population denominators are 230.02, 40.83, 22.99 and 23.89 while similar rates calculated using the

SCR population denominators are 226.45, 40.09, 22.77 and 23.61. The age-standardized rates for "all cancers", breast, colon and lung cancers for all females calculated using DOS denominators and the SCR population denominators are 203.39, 58.46, 19.07 and 16.01, and 201.02, 56.44, 19.33 and 16.18 respectively. With the exception of female breast cancer, the difference in the age standardized incidence rates for individual cancers calculated using the two set of population denominators did not exceed 1 per 100000 per year in both males and females.

There are greater differences in the age specific rates calculated from these two sets of denominators as compared to the age standardized rates. The differences can be seen in both common and rare individual cancers and these differences tend to be larger in the older age groups.

5. CANCER INCIDENCE 2003-2007: ALL RESIDENTS

There were 45,140 incident cases of cancer diagnosed among Singapore residents in 2003-2007. While there were more female cases and the female crude rate was higher, the age-standardized rate was greater in males.

Table 5.1 TOTAL NUMBER OF INCIDENT CANCERS BY GENDER AND FIVE-YEAR PERIOD, 1968-2007

PERIOD	GENDER	NUMBER	%	CR	ASR
1968-1972	Male	6,986	57.9	135.4	227.3
	Female	5,086	42.1	103.4	154.1
1973-1977	Male	8,563	58.1	158.1	246.3
	Female	6,187	41.9	118.9	161.1
1978-1982	Male	10,136	55.9	175.1	250.3
	Female	7,997	44.1	142.6	175.8
1983-1987	Male	11,681	53.8	185.8	243.3
	Female	10,051	46.2	164.3	183.5
1988-1992	Male	13,635	51.7	197.7	236.2
	Female	12,739	48.3	189.3	191.5
1993-1997	Male	16,191	50.8	213.8	236.7
	Female	15,704	49.2	209.5	195.6
1998-2002	Male	18,949	49.0	231.5	233.3
	Female	19,727	51.0	240.3	203.0
2003-2007	Male	21,940	48.6	254.7	230.0
	Female	23,200	51.4	265.3	203.4

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 2003-2007 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 2003-2007 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 2003-2007 are given in Appendices B1 (males) and B2 (females); the corresponding incidence rates are given in Appendices C1 and C2.

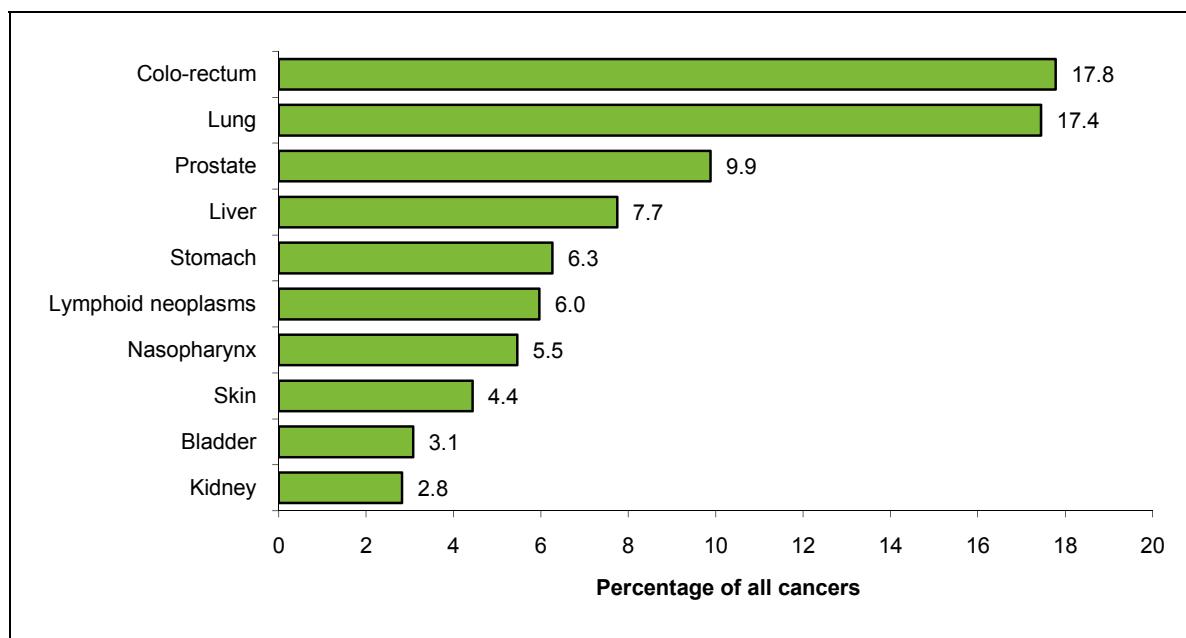
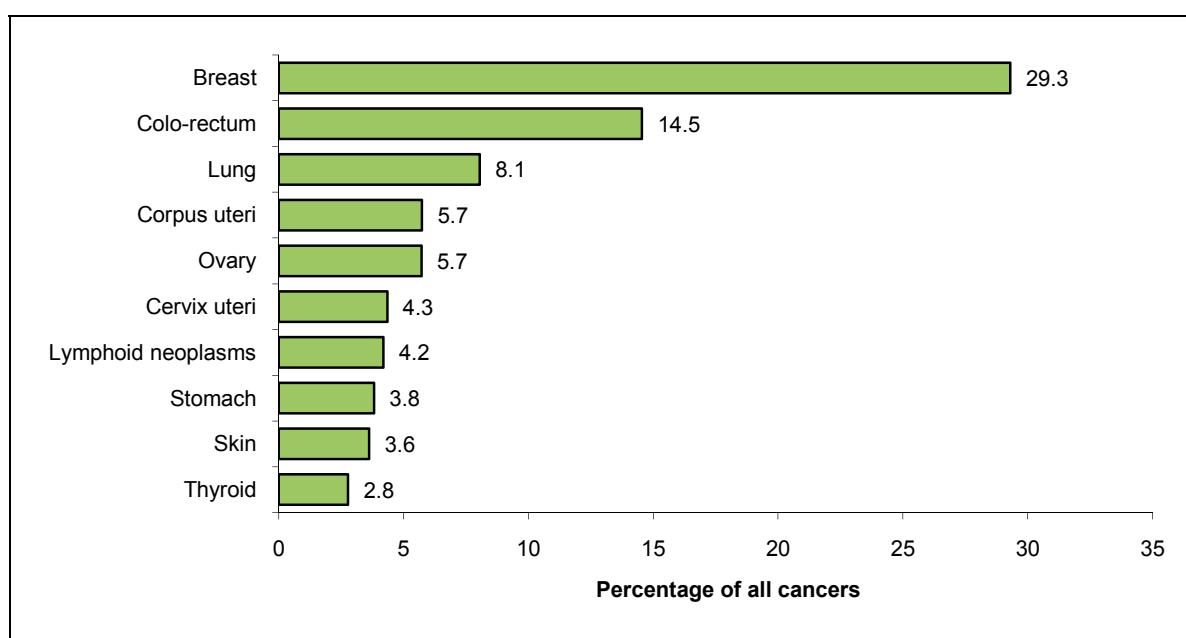
Figure 5.1(a) TEN MOST FREQUENT CANCERS IN MALES, 2003-2007**Figure 5.1(b) TEN MOST FREQUENT CANCERS IN FEMALES, 2003-2007**

Table 5.2 HIGHEST RANKING CANCERS, 2003-2007, ALL RESIDENTS

MALES					
RANK	SITE	NO.	CR	ASR	
1	Colo-rectum	3,902	45.3	40.5	
2	Lung	3,828	44.4	40.8	
3	Prostate	2,169	25.2	23.9	
4	Liver	1,700	19.7	17.8	
5	Stomach	1,375	16.0	14.5	
6	Lymphoid neoplasms	1,309	15.2	14.4	
7	Nasopharynx	1,198	13.9	10.8	
8	Skin, including melanoma	973	11.3	10.1	
9	Bladder	675	7.8	7.1	
10	Kidney & Oth.Urinary	620	7.2	6.2	
		4,191			
All		21,940	254.7	230.0	

FEMALES					
RANK	SITE	NO.	CR	ASR	
1	Breast	6,798	77.8	58.5	
2	Colo-rectum	3,375	38.6	29.0	
3	Lung	1,868	21.4	16.0	
4	Corpus uteri	1,332	15.2	11.7	
5	Ovary, etc.	1,327	15.2	12.0	
6	Cervix uteri	1,009	11.5	8.8	
7	Lymphoid neoplasms	973	11.1	10.0	
8	Stomach	885	10.1	7.4	
9	Skin, including melanoma	840	9.6	7.0	
10	Thyroid	645	7.4	5.8	
		4,148			
All		23,200	265.3	203.4	

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

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

6. ETHNIC GROUP VARIATIONS

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) FOR ALL CANCERS BY ETHNIC GROUP, GENDER AND FIVE YEAR PERIOD, 1968- 2007

PERIOD	GENDER	ETHNIC GROUP		
		CHINESE	MALAY	INDIAN
1968-1972	Male	258.5	95.8	125.4
	Female	158.6	97.7	182.9
1973-1977	Male	276.9	116.5	156.8
	Female	167.8	97.2	153.9
1978-1982	Male	283.1	119.3	153.9
	Female	183.2	114.7	174.8
1983-1987	Male	274.8	132.2	138.6
	Female	193.8	118.4	142.6
1988-1992	Male	267.5	146.4	111.3
	Female	202.0	136.4	134.2
1993-1997	Male	267.4	154.8	105.6
	Female	204.6	151.2	140.1
1998-2002	Male	259.1	171.9	112.4
	Female	211.7	164.7	148.4
2003-2007	Male	247.5	167.4	131.2
	Female	212.2	175.8	138.9

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 2003-2007 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, 2003-2007 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 2003-2007. In both males and females, Malays and Indians remain at significantly lower risk of cancer than the Chinese. The relative risk of cancer among Indian men is only 53.0% that of Chinese men, and for Malays the corresponding figure is 67.6%. These differences are especially marked for cancers of the nasopharynx, lung (Indians), oesophagus, stomach, colon, rectum, liver and skin. The relative protective effect estimates of stomach, liver, larynx, lung and skin cancers have risen by more than 30% (ie. narrowing the difference compared to Chinese males) in Indian males compared to the

previous 5 year period and this same narrowing can also be seen among Malay females with cervical cancer.

The opposite effect can be observed among Malay males with tongue cancer, Indian females with lung cancer and Malay females with cancer of the mouth, where the protective effect difference has widened compared to the previous 5 year period. Of note, ethnicity has previously conferred a protective effect but now confers a risk effect instead in Indian males and Malay females with tongue cancer.

Fig. 6.1(a) TEN MOST FREQUENT CANCERS IN CHINESE MALES, 2003-2007

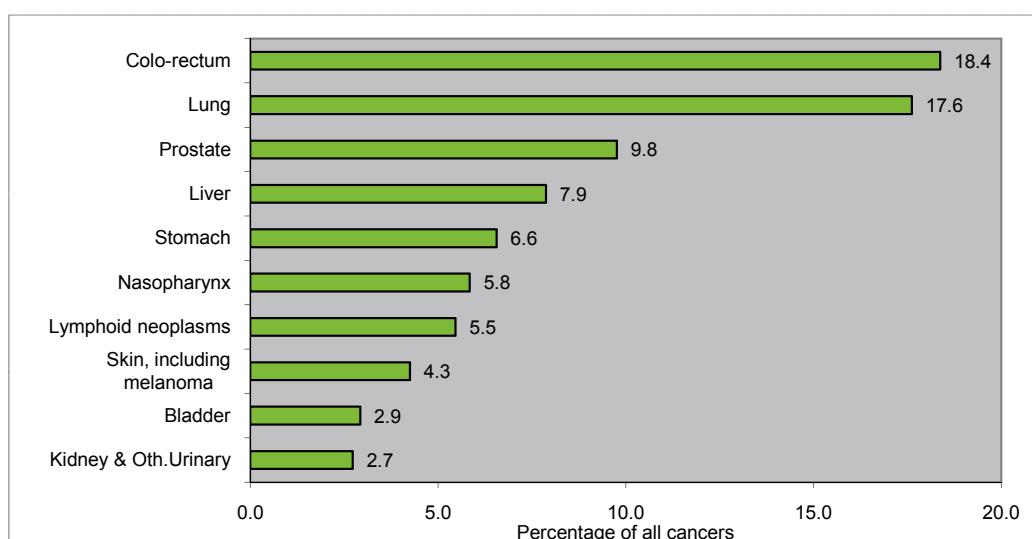


Fig. 6.1(b) TEN MOST FREQUENT CANCERS IN CHINESE FEMALES, 2003-2007

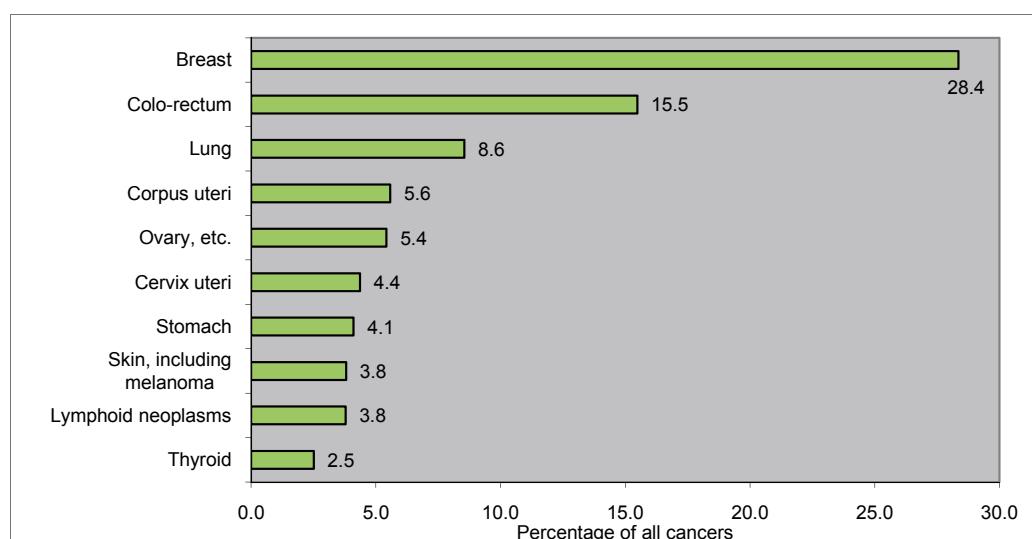


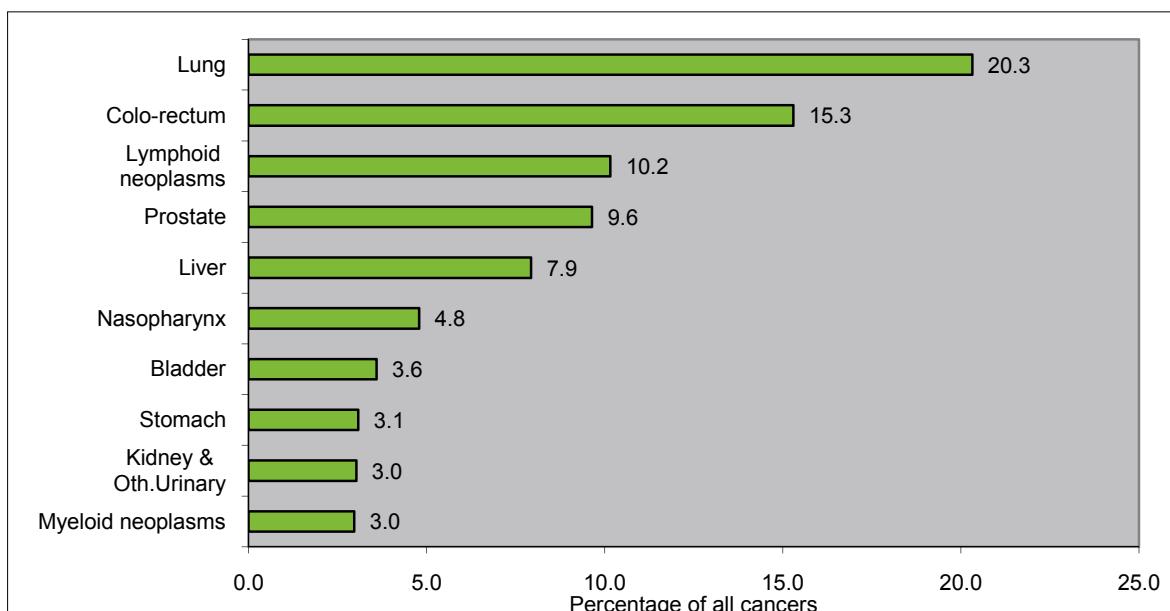
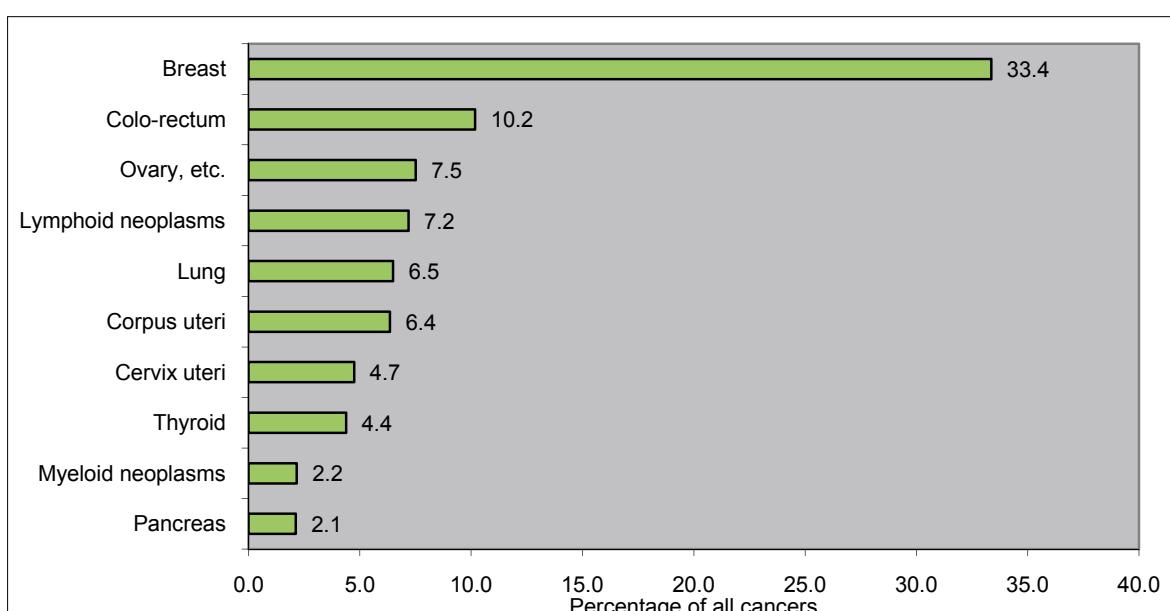
Fig. 6.1(c) TEN MOST FREQUENT CANCERS IN MALAY MALES, 2003-2007**Fig. 6.1(d) TEN MOST FREQUENT CANCERS IN MALAY FEMALES, 2003-2007**

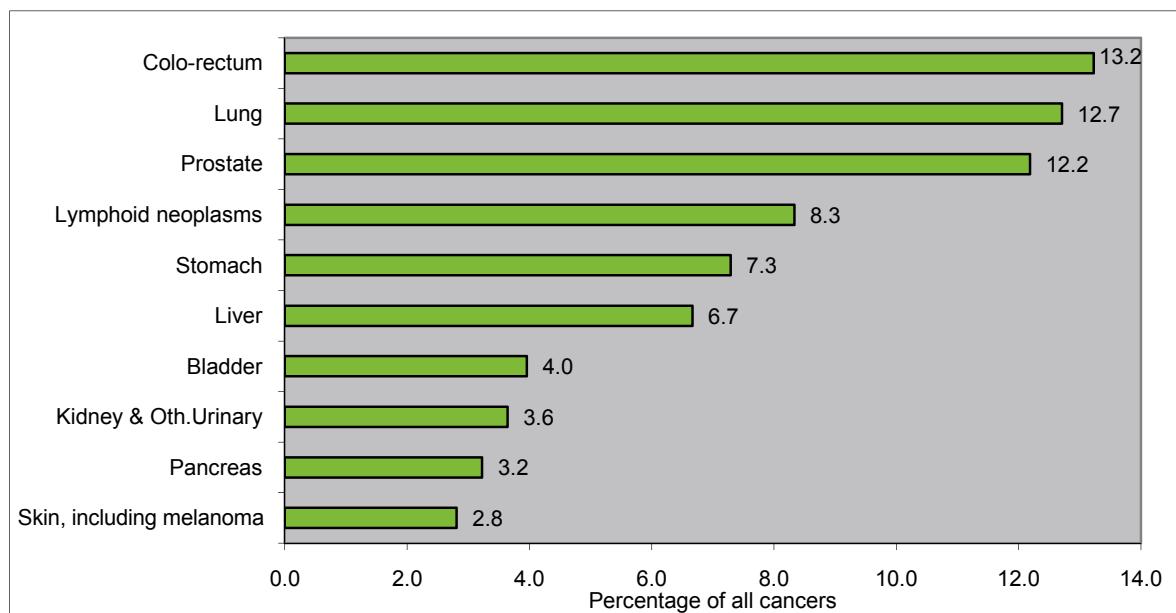
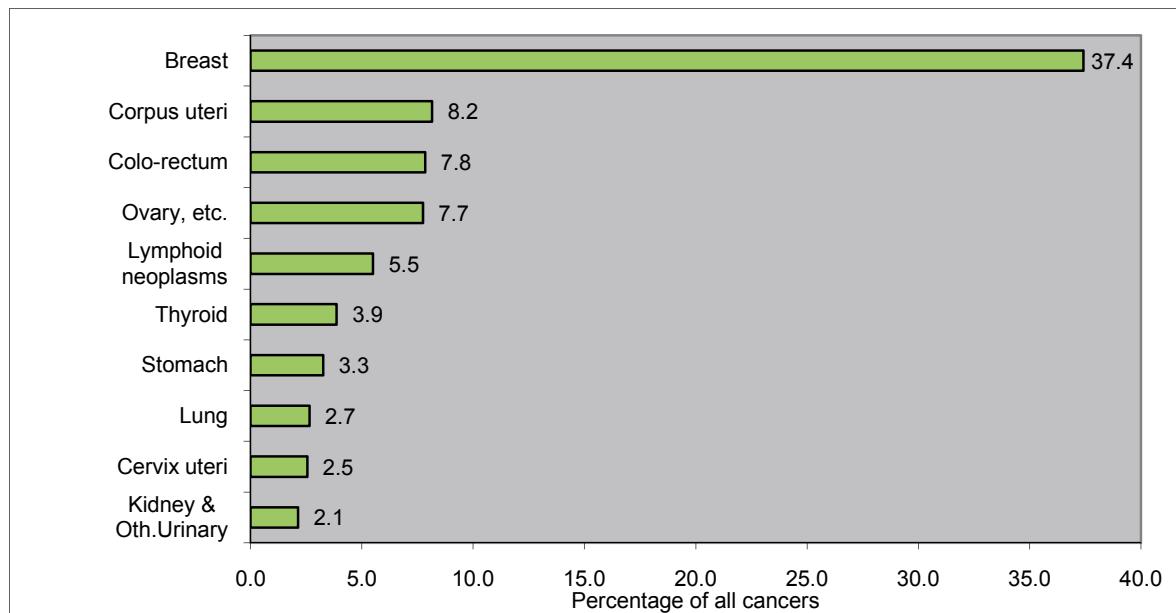
Fig. 6.1(e) TEN MOST FREQUENT CANCERS IN INDIAN MALES, 2003-2007**Fig. 6.1(f) TEN MOST FREQUENT CANCERS IN INDIAN FEMALES, 2003-2007**

TABLE 6.2(a) HIGHEST RANKING CANCERS AMONG CHINESE RESIDENTS, 2003-2007

MALES			NO.	CR	ASR
RANK	SITE				
1	Colo-rectum		3,457	53.2	44.7
2	Lung		3,315	51.1	44.3
3	Prostate		1,837	28.3	25.2
4	Liver		1,482	22.8	19.4
5	Stomach		1,235	19.0	16.3
6	Nasopharynx		1,100	16.9	12.5
7	Lymphoid neoplasms		1,029	15.8	14.5
8	Skin, including melanoma		800	12.3	10.5
9	Bladder		552	8.5	7.3
10	Kidney & Oth.Urinary		514	7.9	6.4
	Others		3,491		
	All		18,812	289.7	247.5

FEMALES			NO.	CR	ASR
RANK	SITE				
1	Breast		5,594	84.1	59.9
2	Colo-rectum		3,056	46.0	31.5
3	Lung		1,687	25.4	17.4
4	Corpus uteri		1,101	16.6	12.0
5	Ovary, etc.		1,071	16.1	12.2
6	Cervix uteri		861	12.9	9.3
7	Stomach		811	12.2	8.1
8	Skin, including melanoma		751	11.3	7.5
9	Lymphoid neoplasms		747	11.2	9.6
10	Thyroid		496	7.5	5.6
	Others		3,555		
	All		19,730	296.7	212.2

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

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

TABLE 6.2(b) HIGHEST RANKING CANCERS AMONG MALAY RESIDENTS, 2003-2007

MALES			NO.	CR	ASR
RANK	SITE				
1	Lung		356	29.6	34.7
2	Colo-rectum		268	22.3	26.0
3	Lymphoid neoplasms		178	14.8	16.9
4	Prostate		169	14.1	17.7
5	Liver		139	11.6	13.2
6	Nasopharynx		84	7.0	6.8
7	Bladder		63	5.2	6.0
8	Stomach		54	4.5	5.3
9	Kidney & Oth.Urinary		53	4.4	4.9
10	Myeloid neoplasms		52	4.3	4.7
	Others		336		
	All		1,752	145.8	167.4

FEMALES			NO.	CR	ASR
RANK	SITE				
1	Breast		724	60.3	54.5
2	Colo-rectum		221	18.4	20.0
3	Ovary, etc.		163	13.6	12.7
4	Lymphoid neoplasms		156	13.0	13.6
5	Lung		141	11.7	12.0
6	Corpus uteri		138	11.5	11.1
7	Cervix uteri		103	8.6	8.4
8	Thyroid		95	7.9	7.4
9	Myeloid neoplasms		47	3.9	3.9
10	Pancreas		46	3.8	4.1
	Others		336		
	All		2,170	180.7	175.8

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

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

TABLE 6.2(c) HIGHEST RANKING CANCERS AMONG INDIAN RESIDENTS, 2003-2007

MALES					
RANK	SITE	NO.	CR	ASR	
1	Colo-rectum	127	17.0	17.1	
2	Lung	122	16.3	16.9	
3	Prostate	117	15.6	15.9	
4	Lymphoid neoplasms	80	10.7	11.4	
5	Stomach	70	9.4	9.4	
6	Liver	64	8.5	8.8	
7	Bladder	38	5.1	5.1	
8	Kidney & Oth.Urinary	35	4.7	4.8	
9	Pancreas	31	4.1	4.1	
10	Myeloid neoplasms	27	3.6	3.5	
	Others	249			
	All	960	128.2	131.2	

FEMALES					
RANK	SITE	NO.	CR	ASR	
1	Breast	367	51.9	48.6	
2	Corpus uteri	80	11.3	11.6	
3	Colo-rectum	77	10.9	11.1	
4	Ovary, etc.	76	10.8	9.9	
5	Lymphoid neoplasms	54	7.6	8.5	
6	Thyroid	38	5.4	4.8	
7	Stomach	32	4.5	4.9	
8	Lung	26	3.7	4.1	
9	Cervix uteri	25	3.5	3.8	
10	Kidney & Oth.Urinary	21	3.0	3.2	
	Others	185			
	All	981	138.8	138.9	

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, 2003-2007 (CHINESE AS REFERENCE GROUP)

MALES Site	ASR among Chinese ^b	Malay		Indian	
		RR ^c	95% CI ^d	RR ^c	95% CI ^d
Tongue	1.5	0.30	0.12-0.73	1.96	1.26-3.07
Mouth	1.3	0.51	0.24-1.11	1.75	1.05-2.93
Nasopharynx	12.5	0.53	0.42-0.66	0.07	0.04-0.15
Oesophagus	4.1	0.25	0.13-0.47	0.54	0.33-0.89
Stomach	16.3	0.32	0.25-0.42	0.55	0.44-0.71
Colo-rectum	44.7	0.58	0.52-0.66	0.38	0.32-0.45
Liver	19.4	0.71	0.60-0.85	0.45	0.35-0.58
Larynx	3.9	0.61	0.40-0.92	0.75	0.49-1.16
Lung	44.3	0.81	0.72-0.90	0.37	0.31-0.44
Skin, including melanoma	10.5	0.34	0.24-0.47	0.33	0.23-0.49
Prostate	25.2	0.71	0.61-0.83	0.65	0.54-0.79
Bladder	7.3	0.85	0.65-1.10	0.68	0.49-0.95
Lymphoid neoplasms	14.5	1.13	0.96-1.32	0.75	0.60-0.94
Myeloid neoplasms	4.6	1.03	0.77-1.38	0.76	0.51-1.12
Pancreas	6.3	0.71	0.52-0.96	0.65	0.45-0.94
All	247.5	0.68	0.65-0.72	0.51	0.48-0.55

FEMALES Site	ASR among Chinese ^b	Malay		Indian	
		RR ^c	95% CI ^d	RR ^c	95% CI ^d
Tongue	0.5	1.98	1.05-3.73	2.63	1.29-5.37
Mouth	0.4	0.39	0.09-1.59	4.83	2.64-8.86
Nasopharynx	4.1	0.31	0.19-0.50	0.06	0.02-0.24
Stomach	8.1	0.37	0.26-0.51	0.60	0.42-0.86
Colo-rectum	31.5	0.61	0.53-0.69	0.38	0.30-0.47
Liver	4.9	0.79	0.58-1.07	0.66	0.42-1.03
Lung	17.4	0.71	0.60-0.84	0.24	0.16-0.35
Skin, including melanoma	7.5	0.49	0.36-0.67	0.32	0.19-0.53
Breast	59.9	0.91	0.84-0.98	0.78	0.70-0.87
Cervix uteri	9.3	0.86	0.70-1.06	0.36	0.24-0.53
Corpus uteri	12.0	0.90	0.76-1.08	0.88	0.70-1.11
Thyroid	5.6	1.28	1.03-1.60	0.83	0.60-1.16
Lymphoid neoplasms	9.6	1.44	1.21-1.71	0.87	0.66-1.14
Myeloid neoplasms	3.6	1.14	0.84-1.56	0.63	0.37-1.06
Ovary, etc.	12.2	1.05	0.89-1.23	0.83	0.65-1.04
All	212.2	0.83	0.79-0.87	0.65	0.61-0.69

^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 AND CHILDHOOD CANCERS

The relative frequencies of the ten most frequent cancers for males and females in each of the four broad age-groups for the period 2003-2007 are shown in Figures 7.1(a) and (b). The time trends for the five most frequent cancers in each age group are described for the period 1968-2007 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 children (0-14 years), the main cancers in both sexes remain the leukaemias (comprising greater than 40% of all cancers in both males and females), malignancies of the brain and nervous system and lymphomas.

In young adults (15-34 years), cancers of the nasopharynx have fallen slightly compared to the previous 10-year period. The other relatively frequent cancers in males are lymphoid neoplasms, testicular and colorectal 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 nasopharynx 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. Prostate cancer has shown a steady increase in incidence and accounts for approximately 13.2% of all male cancers in this age group.

Table 7.1 shows the cancers that occur in children (0-14 years) from 2003 to 2007 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, leukaemias rank first as the most frequent cancers in children, with brain and spinal tumours, and lymphomas in second and third place, respectively. This is similar to the pattern observed in Europe, North America, Australia and Japan; in other parts of Asia and in Africa and Latin America, lymphomas outnumber the brain and spinal tumours [23].

Figure 7.1(a) TEN MOST FREQUENT CANCERS IN MALE RESIDENTS BY BROAD AGE GROUP, 2003-2007

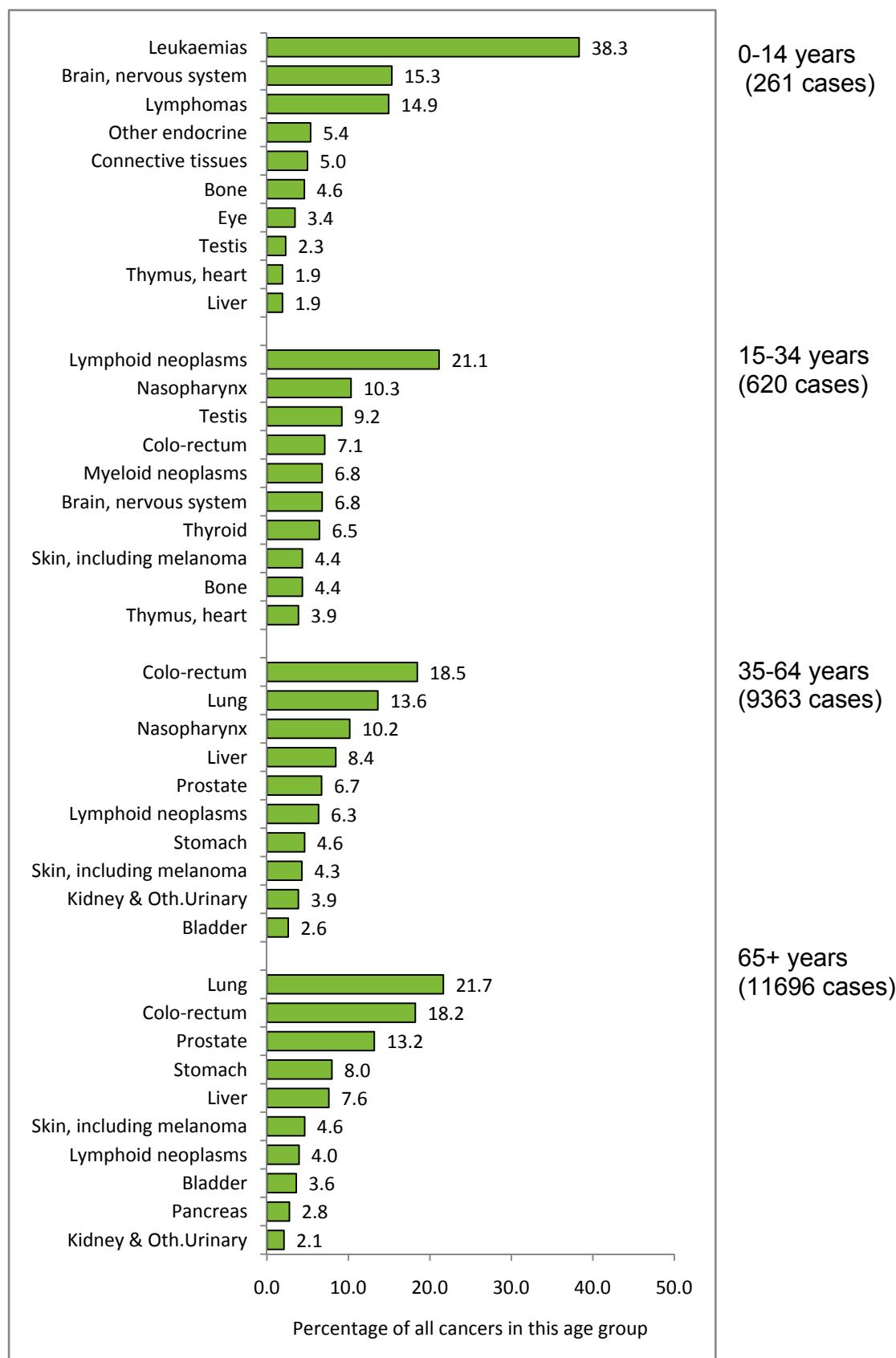


Figure 7.1(b) TEN MOST FREQUENT CANCERS IN FEMALE RESIDENTS BY BROAD AGE GROUP, 2003-2007

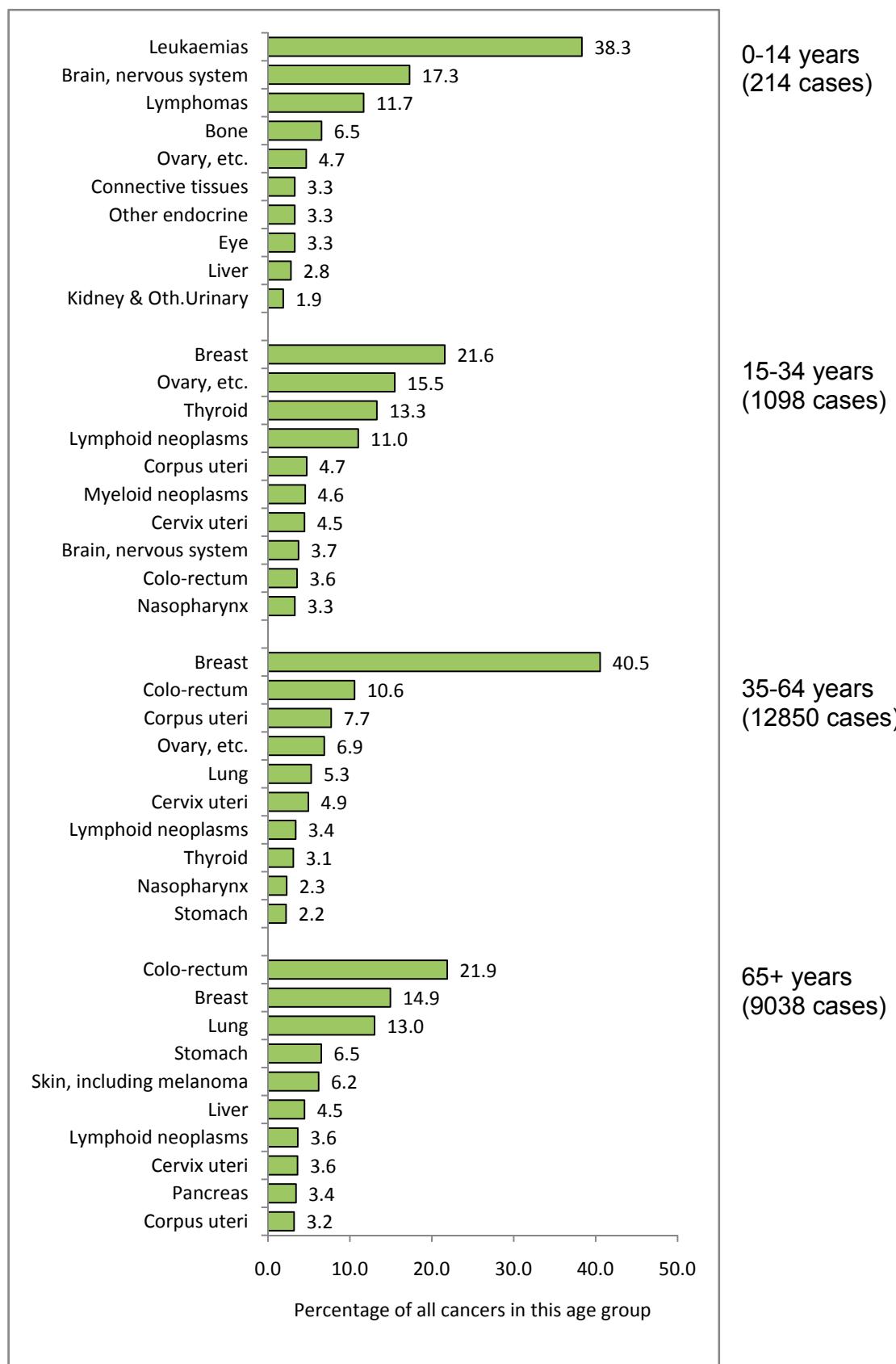
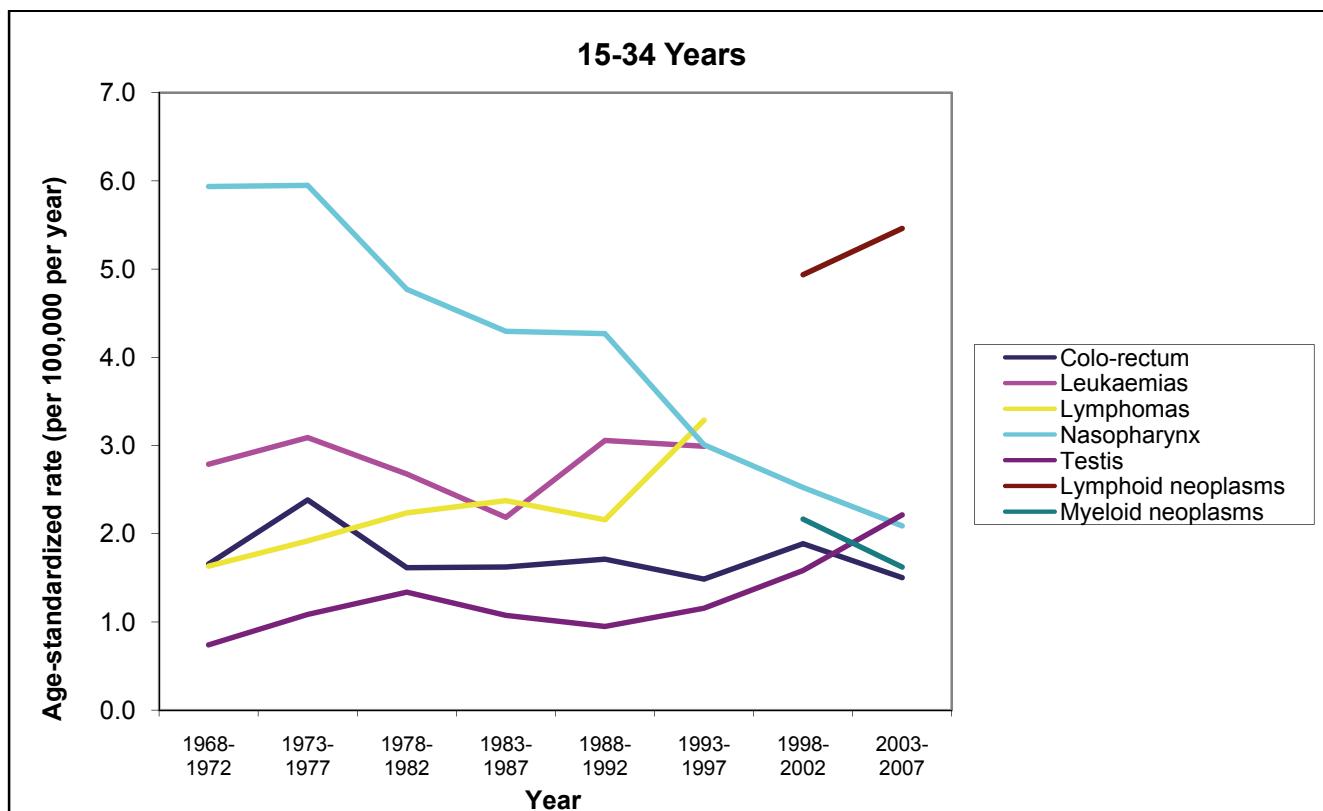
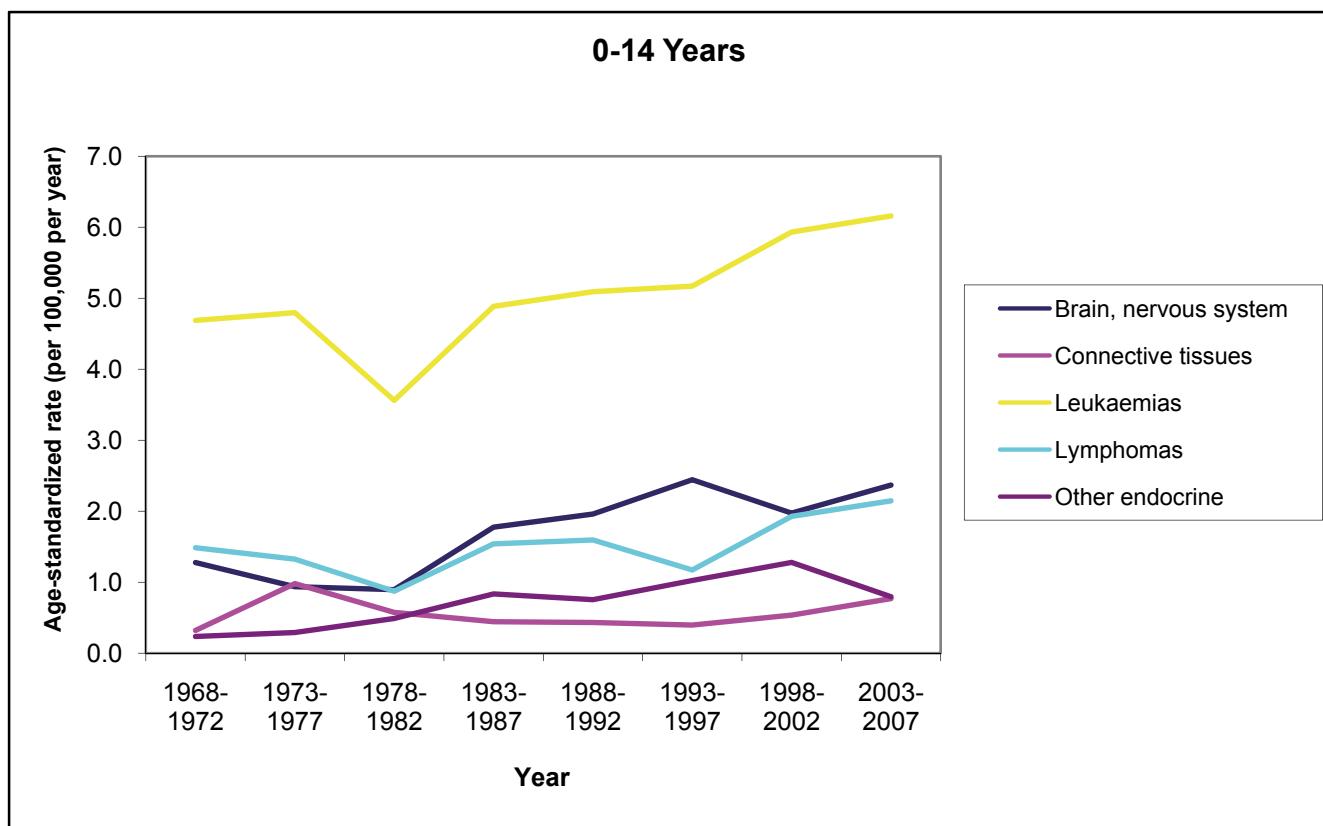


Figure 7.2(a) TRENDS IN SELECTED CANCERS IN MALE RESIDENTS BY BROAD AGE GROUP, 1968-2007



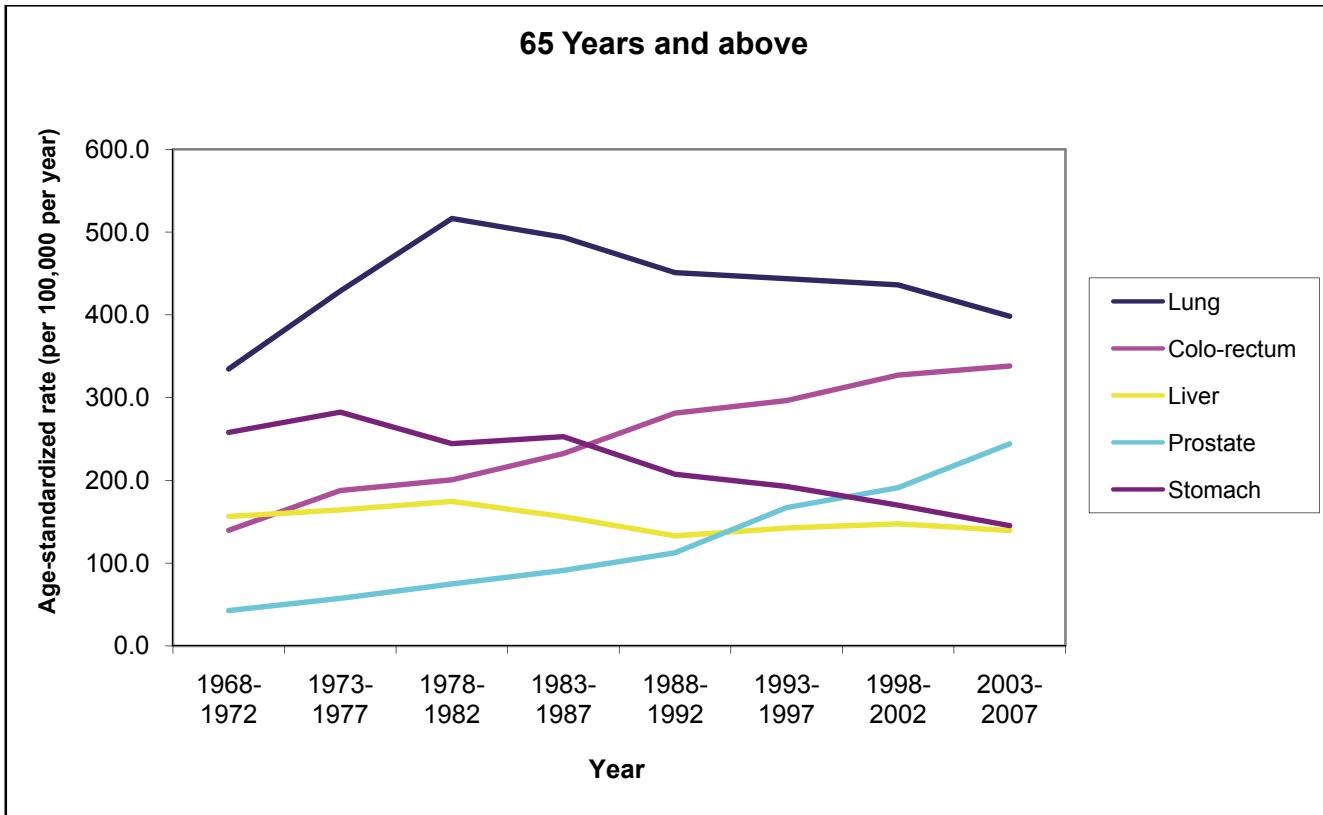
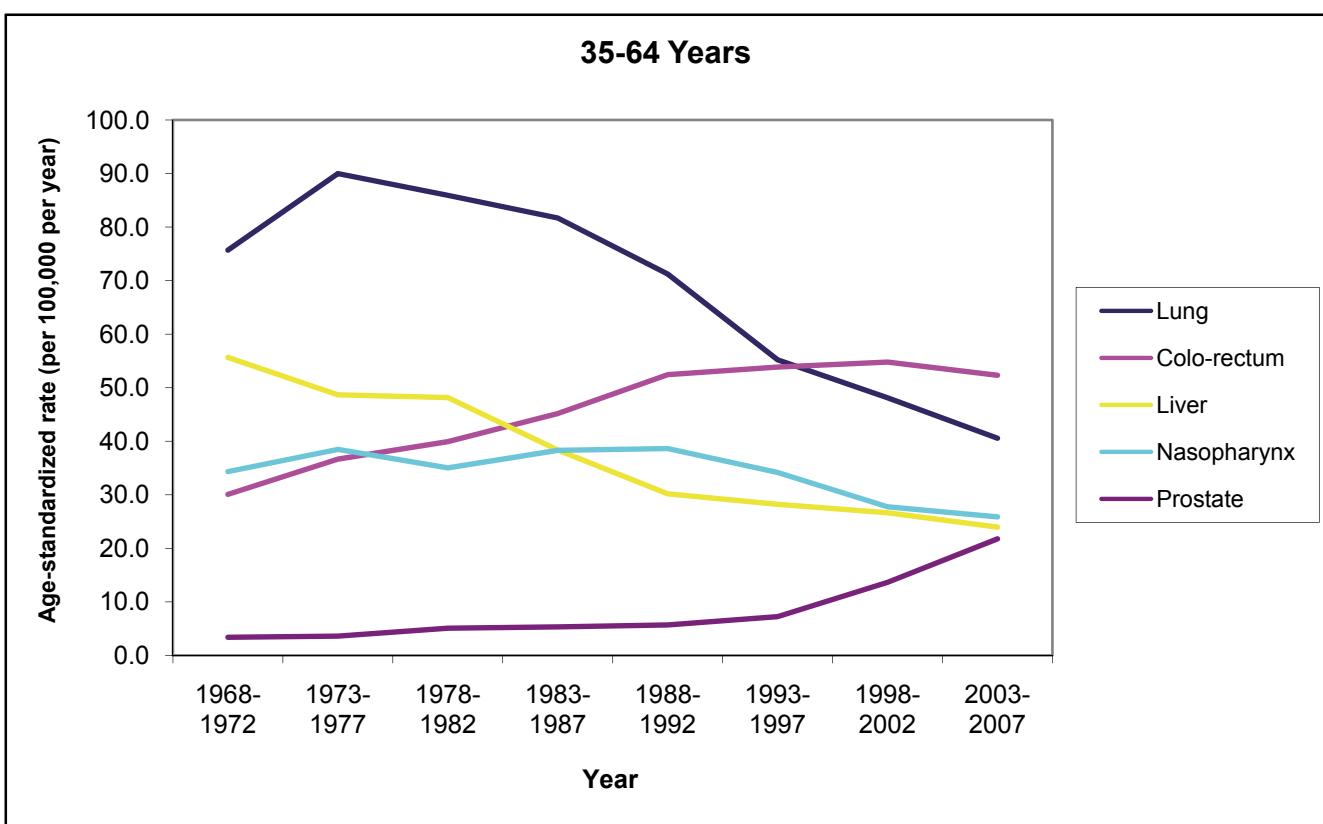
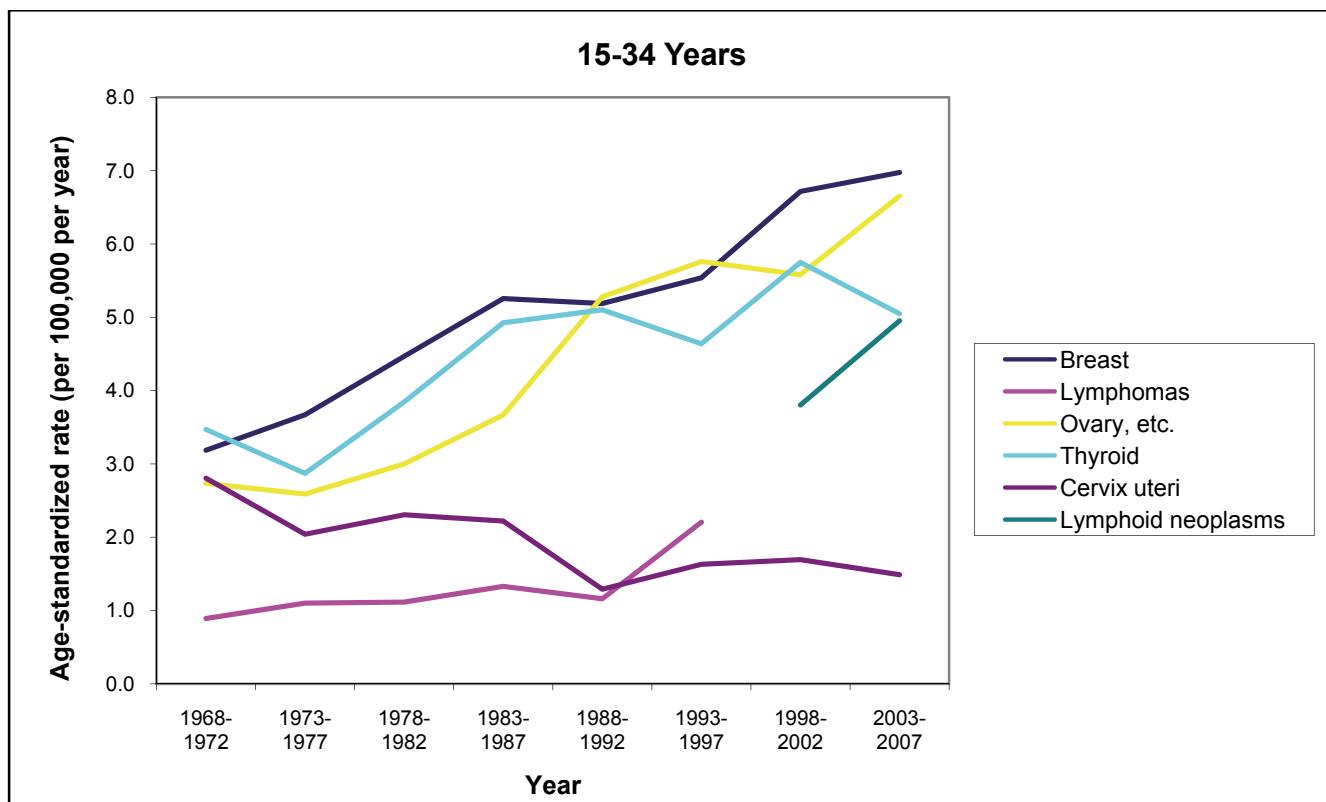
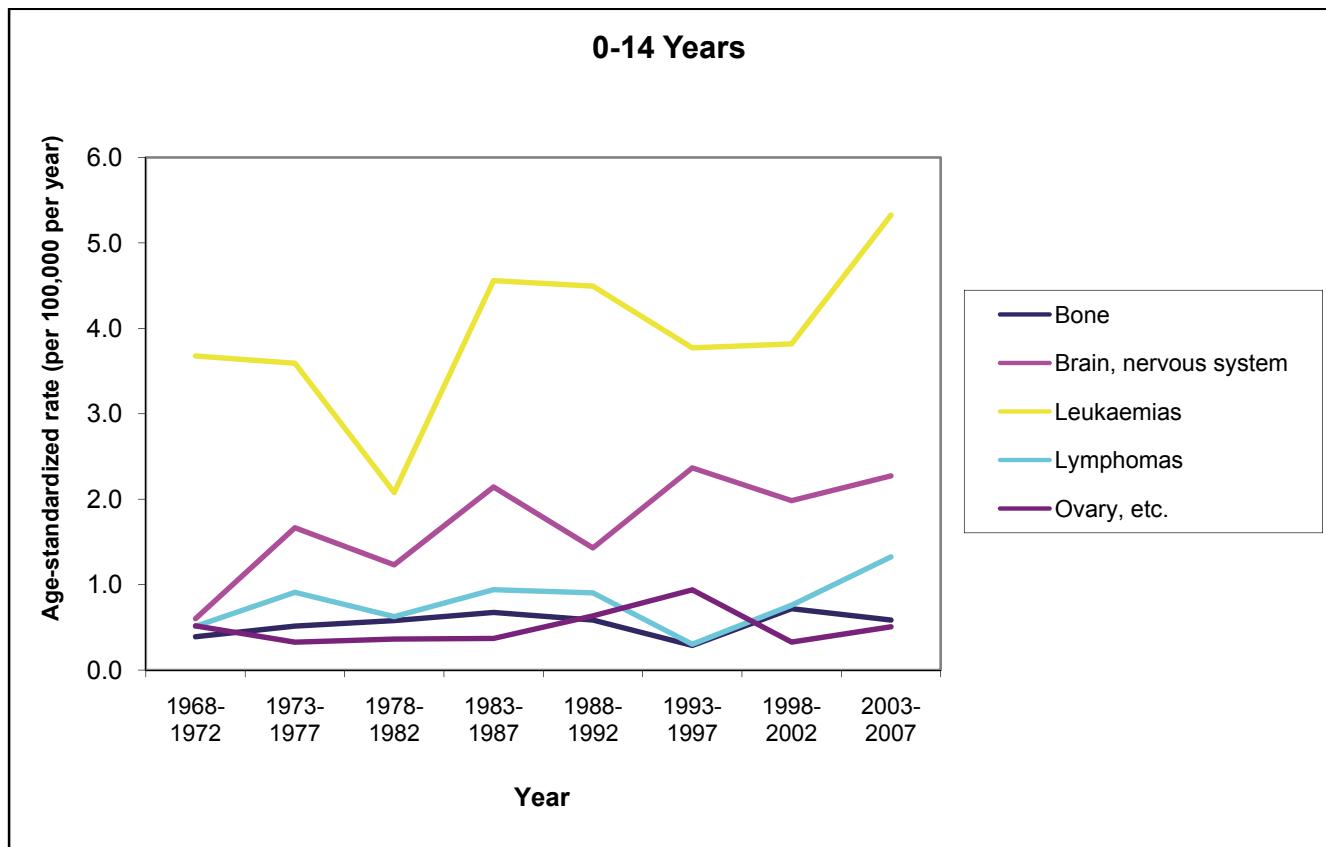


Figure 7.2(b) TRENDS IN SELECTED CANCERS IN FEMALE RESIDENTS BY BROAD AGE GROUP, 1968-2007



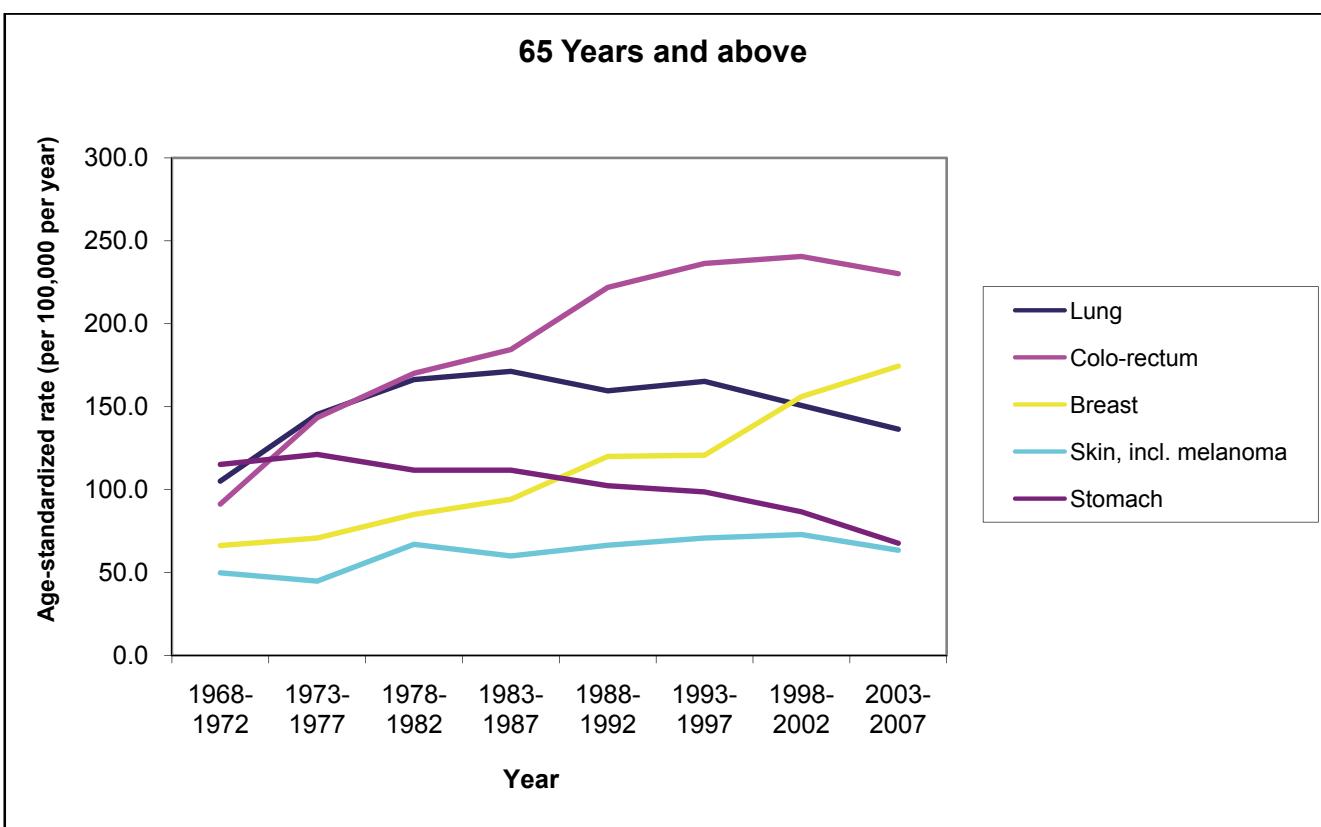
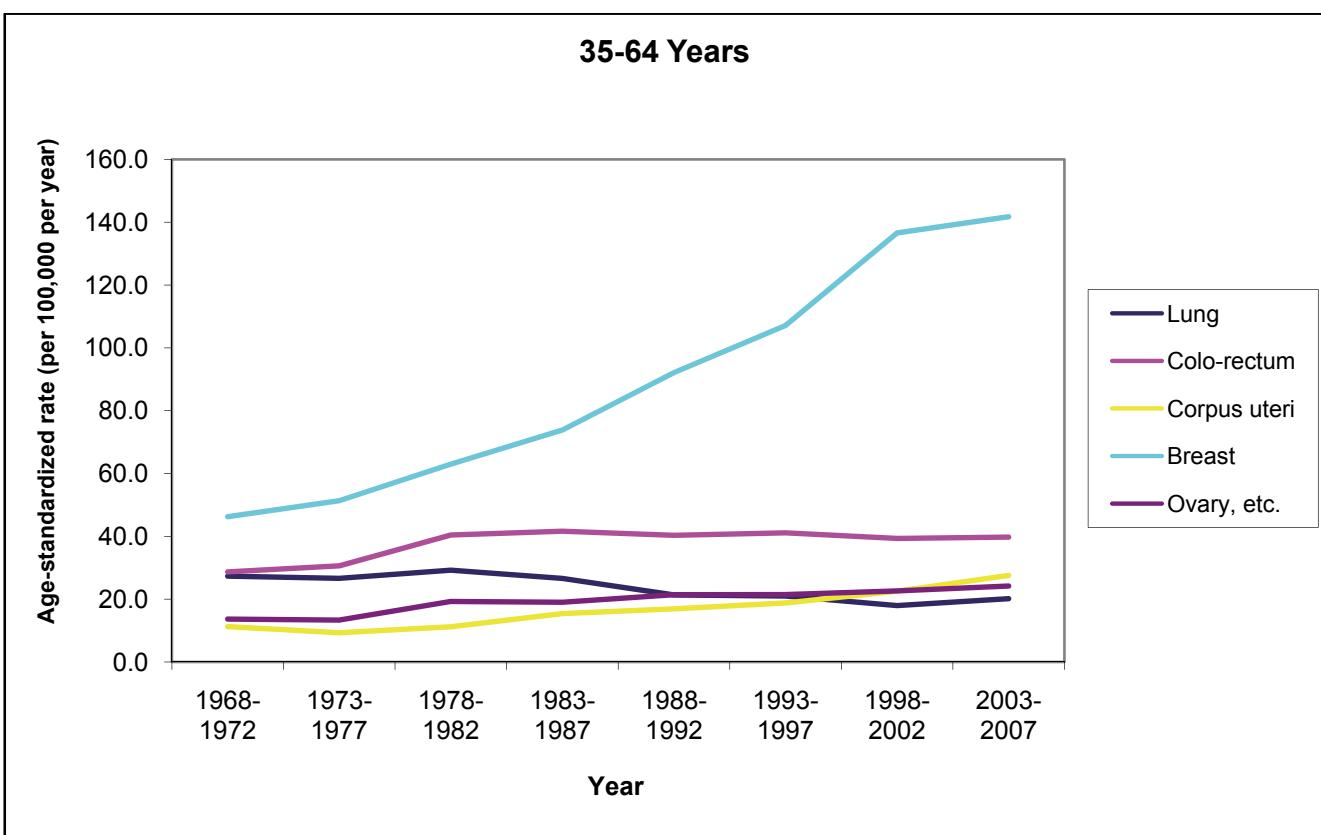


Table 7.1 NUMBER OF CASES OF CHILDHOOD CANCER BY INTERNATIONAL CLASSIFICATION OF CHILDHOOD CANCER (ICCC-3) GROUP AND AGE GROUP, 2003-2007

ICCC group	ICCC description	Age groups				
		<1	1-4	5-9	10-14	0-14
I	Leukemias, myeloproliferative diseases, and myelodysplastic diseases					
(a)	Lymphoid leukemias	1	68	49	25	143
(b)	Acute myeloid leukemias	3	10	8	1	22
(c)	Chronic myeloproliferative diseases	0	2	0	6	8
(d)	Myelodysplastic syndrome and myeloproliferative other diseases	0	2	0	1	3
(e)	Unspecified and other specified leukemias	0	1	2	1	4
II	Lymphomas and reticuloendothelial neoplasms					
(a)	Hodgkin lymphomas	0	0	1	5	6
(b)	Non-Hodgkin lymphomas (except Burkitt lymphoma)	1	8	13	24	46
(c)	Burkitt lymphoma	0	3	2	2	7
(d)	Miscellaneous lymphoreticular neoplasms	0	0	0	0	0
(e)	Unspecified lymphomas	0	0	0	0	0
III	CNS and miscellaneous intracranial and intraspinal neoplasms					
(a)	Ependymomas and choroid plexus tumour	0	4	0	3	7
(b)	Astrocytomas	0	8	9	6	23
(c)	Intracranial and intraspinal embryonal tumours	2	4	7	4	17
(d)	Other gliomas	0	0	3	4	7
(e)	Other specified intracranial and intraspinal neoplasms	1	5	1	2	9
(f)	Unspecified intracranial and intraspinal neoplasms	0	1	0	0	1
IV	Neuroblastoma and other peripheral nervous cell tumours					
(a)	Neuroblastoma and ganglioneuroblastoma	1	14	6	0	21
(b)	Other peripheral nervous cell tumours	0	0	0	2	2
V	Retinoblastoma					
V	Retinoblastoma	4	10	1	0	15
VI	Renal tumours					
(a)	Nephroblastoma and other nonepithelial renal tumours	3	3	1	1	8
(b)	Renal carcinomas	0	0	0	0	0
(c)	Unspecified malignant renal tumours	0	0	0	0	0
VII	Hepatic tumours					
(a)	Hepatoblastoma	0	8	0	0	8
(b)	Hepatic carcinomas	0	0	2	1	3
(c)	Unspecified malignant hepatic tumours	0	0	0	0	0
VIII	Malignant bone tumours					
(a)	Osteosarcomas	0	0	7	12	19
(b)	Chondrosarcomas	0	0	0	0	0

ICCC group	ICCC description	Age groups				
		<1	1-4	5-9	10-14	0-14
VIII	Malignant bone tumours (cont'd)					
(c)	Ewing tumour and related sarcomas of bone	1	0	1	2	4
(d)	Other specified malignant bone tumours	0	0	1	2	3
(e)	Unspecified malignant bone tumours	0	0	0	0	0
IX	Soft tissue and other extraosseous sarcomas					
(a)	Rhabdomyosarcomas	2	2	3	3	10
	Fibrosarcomas, peripheral nerve sheath tumours, and other fibrous neoplasms					
(b)	neoplasms	0	1	1	2	4
(c)	Kaposi sarcoma	0	0	0	0	0
(d)	Other specified soft tissue sarcomas	0	1	4	4	9
(e)	Unspecified soft tissue sarcomas	0	0	0	0	0
X	Germ cell tumours, trophoblastic tumours, and neoplasms of gonads					
(a)	Intracranial and intraspinal germ cell tumours	0	0	1	12	13
(b)	Malignant extracranial and extragonadal germ cell tumours	2	1	0	3	6
(c)	Malignant gonadal germ cell tumours	2	4	1	6	13
(d)	Gonadal carcinomas	0	0	0	1	1
(e)	Other and unspecified malignant gonadal tumours	0	0	0	1	1
XI	Other malignant epithelial neoplasms and malignant melanomas					
(a)	Adrenocortical carcinomas	0	0	0	0	0
(b)	Thyroid carcinomas	0	0	0	5	5
(c)	Nasopharyngeal carcinomas	0	0	0	3	3
(d)	Malignant melanomas	0	0	0	0	0
(e)	Skin carcinomas	0	0	1	0	1
(f)	Other and unspecified carcinomas	0	0	1	5	6
XII	Other and unspecified malignant neoplasms					
(a)	Other specified malignant tumours	0	0	0	0	0
(b)	Other unspecified malignant tumours	0	0	0	0	0
Total		23	160	126	149	458

8. TRENDS IN CANCER INCIDENCE 1968-2007

This report presents updated figures on cancers occurring since 1968 and documents incidence trends over the past 40 years. 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 2007 after an initial rise whereas the rate for females has shown a consistent upward trend since 1968 and has only recently leveled off in the 2003-2007 period (Fig 8.1). Overall, the age-standardized rate for cancer in females for 2003-2007 was 32.0% higher than in 1968-1972, 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, with males experiencing a slight decline in the recent 5 year period. Indians have seen a decline for females and for males until 1997, after which the rates have started to increase to close to the original 1968-1972 rates (Fig 8.2(a) and (b)).

The time trends for cancers of selected sites in males and females are presented in Figures 8.3(a) and (b). 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 1968 and 2007 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 cancer 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. Some of the malignancies with relatively large declines over the last 40 years include cancers of the stomach, liver, mouth, oesophagus and nasopharynx. These trends are described in greater detail in Chapter 12.

Some interesting observations between broad age groups (Table 8.3) are the steeper increase in uterine cancer among females in the 15-34 year age group, and the consistent rate of increase in lymphomas across all age groups in males. When interpreting the average annual percentage

changes, especially by age group, it should be noted that the large percentage changes are usually due to a low initial baseline rate.

Figure 8.1: TRENDS IN AGE-STANDARDIZED INCIDENCE FOR ALL CANCERS BY GENDER, 1968-2007

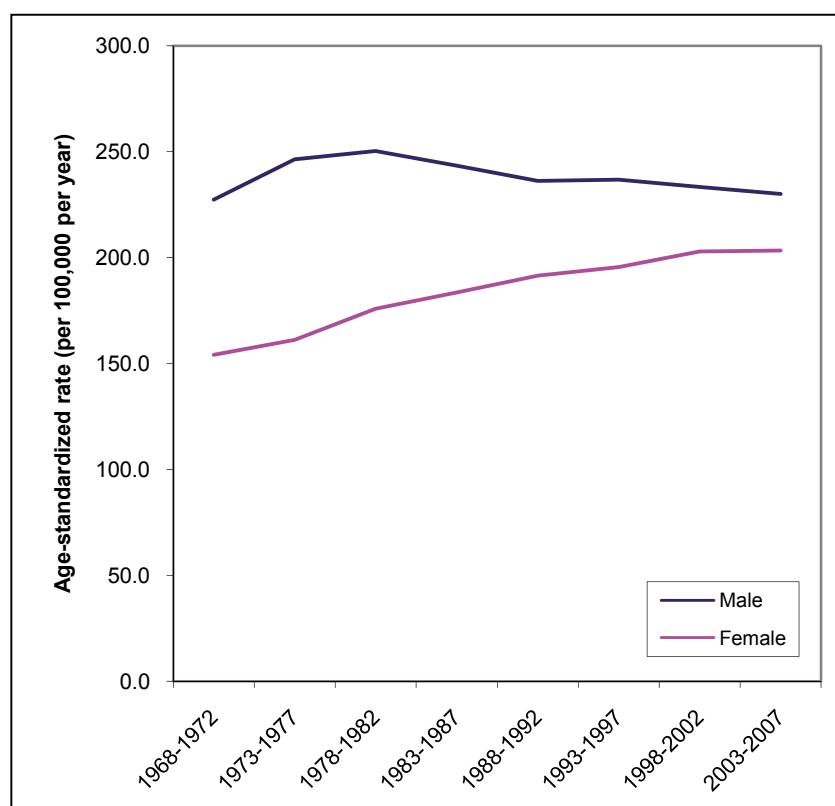


Figure 8.2(a): TRENDS IN AGE-STANDARDIZED INCIDENCE FOR ALL CANCERS BY ETHNIC GROUP, MALES, 1968-2007

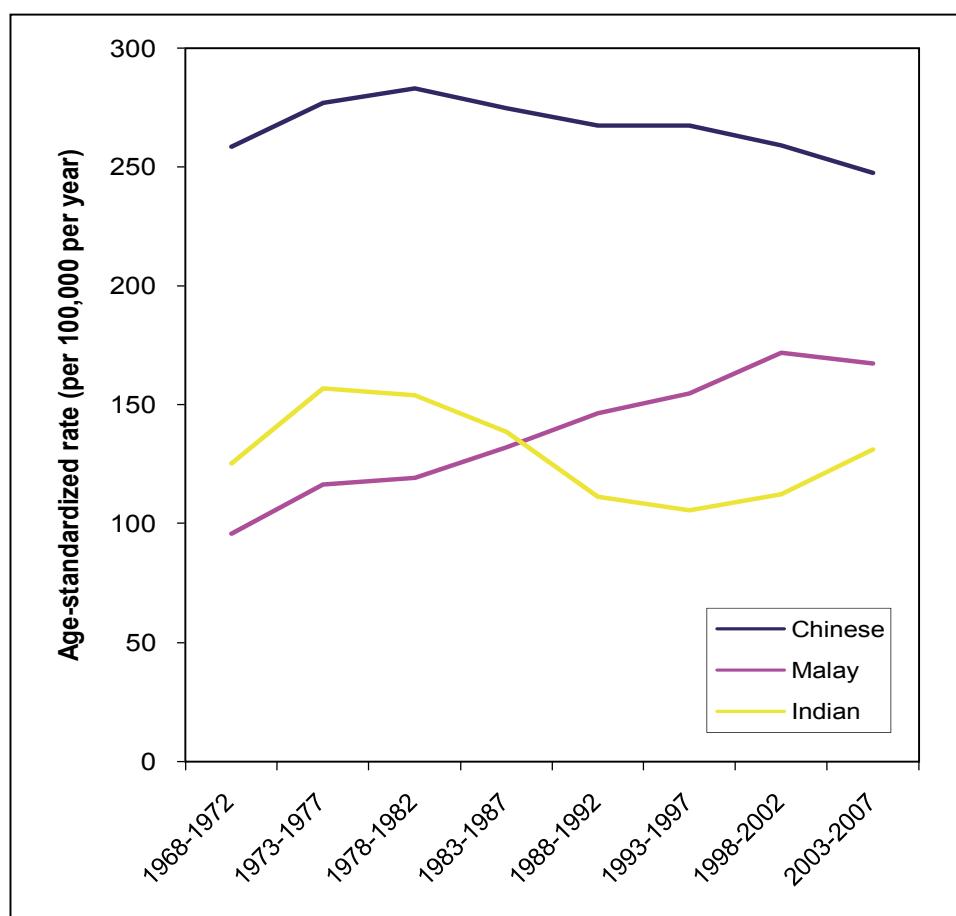


Figure 8.2(b): TRENDS IN AGE-STANDARDIZED INCIDENCE FOR ALL CANCERS BY ETHNIC GROUP, FEMALES, 1968-2007

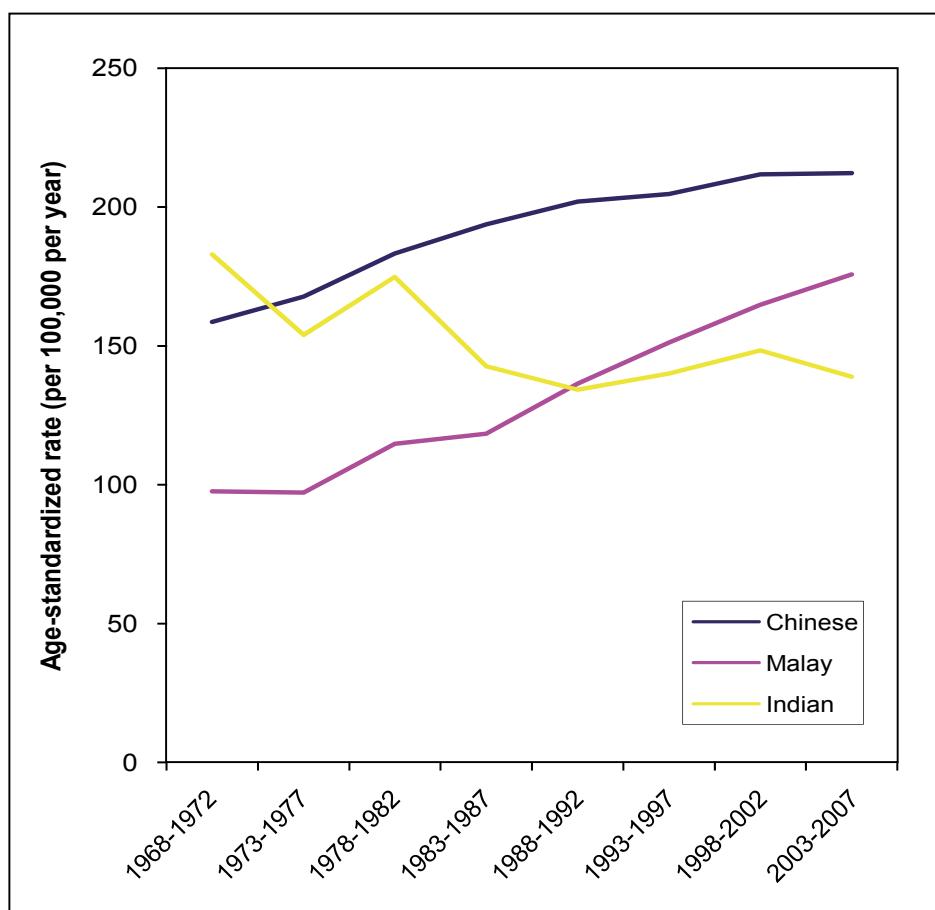


Figure 8.3(a): TRENDS IN AGE-STANDARDIZED INCIDENCE FOR SELECTED CANCER SITES IN MALES 1968-2007

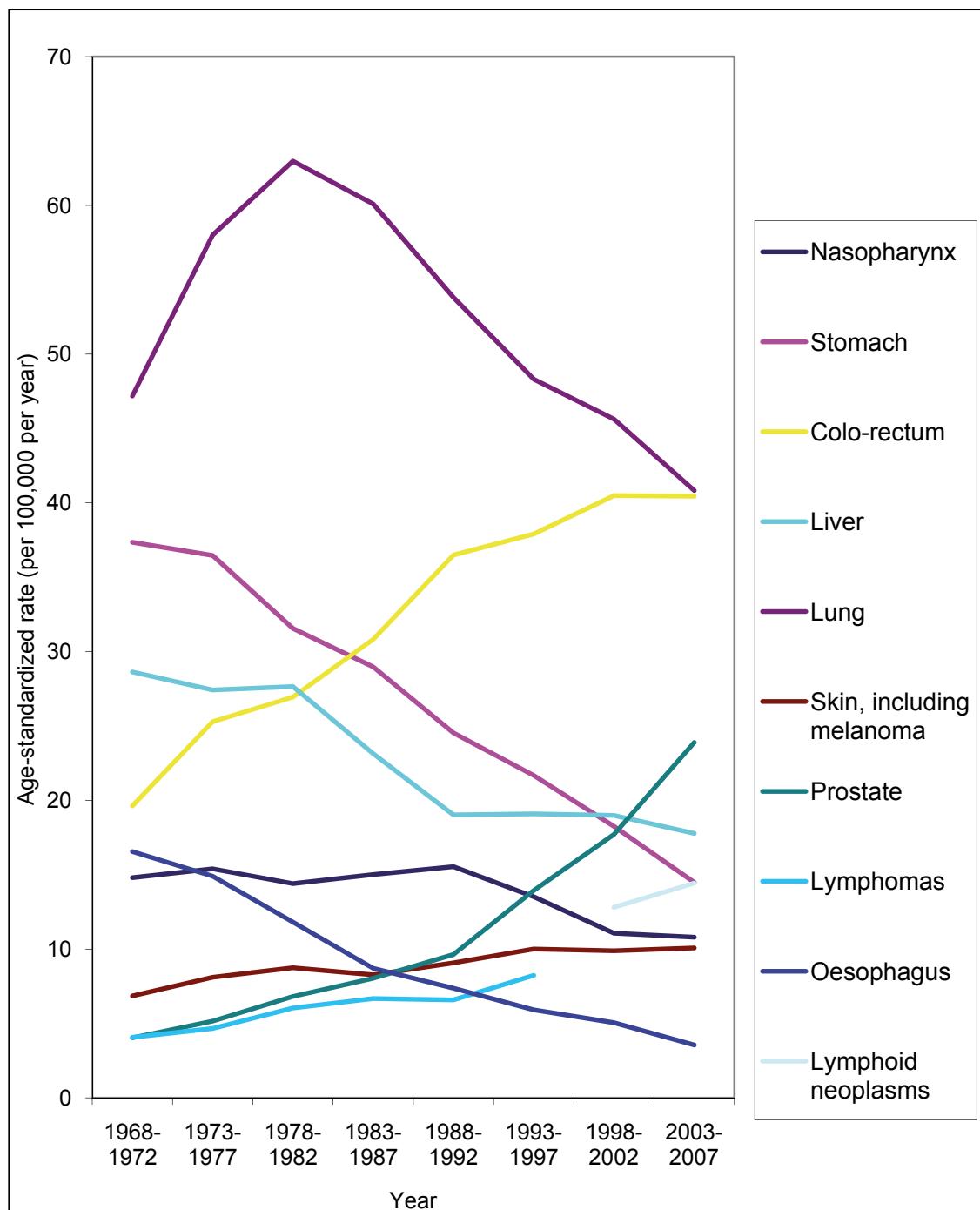


Figure 8.3(b): TRENDS IN AGE-STANDARDIZED INCIDENCE FOR SELECTED CANCER SITES IN FEMALES 1968-2007

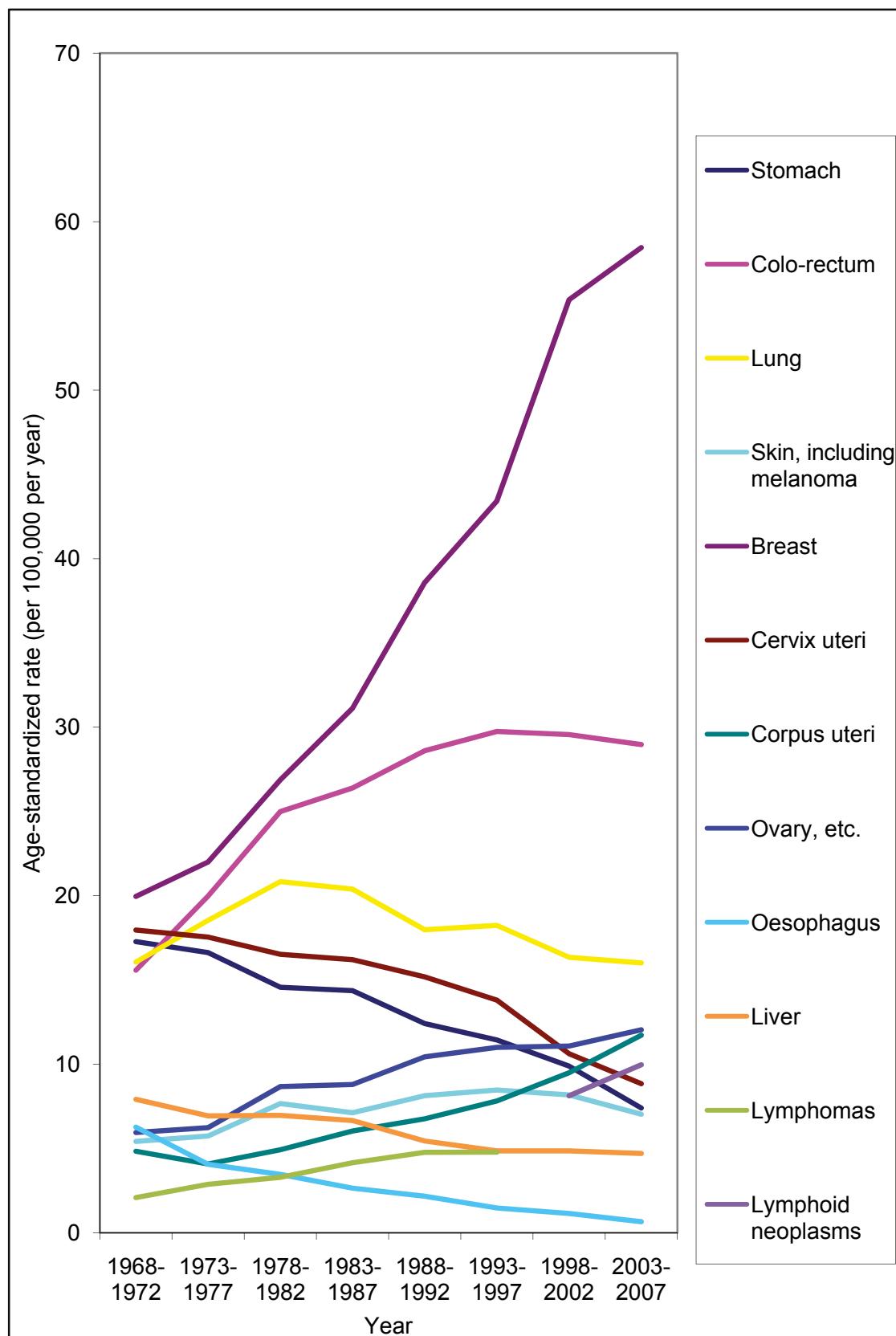


Fig. 8.4(a) AVERAGE ANNUAL PERCENT CHANGE IN AGE-STANDARDIZED INCIDENCE RATE OF SELECTED CANCER SITES IN MALES, 1998-2007

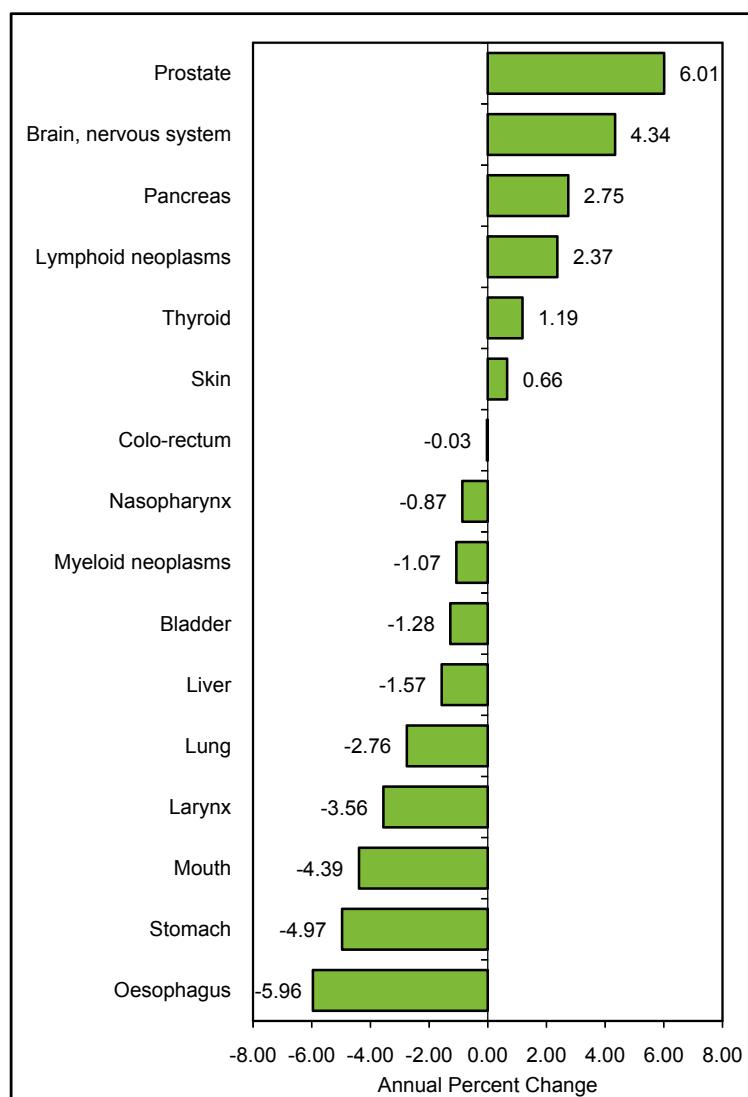


Fig. 8.4(b) AVERAGE ANNUAL PERCENT CHANGE IN AGE-STANDARDIZED INCIDENCE RATE OF SELECTED CANCER SITES IN FEMALES, 1998-2007

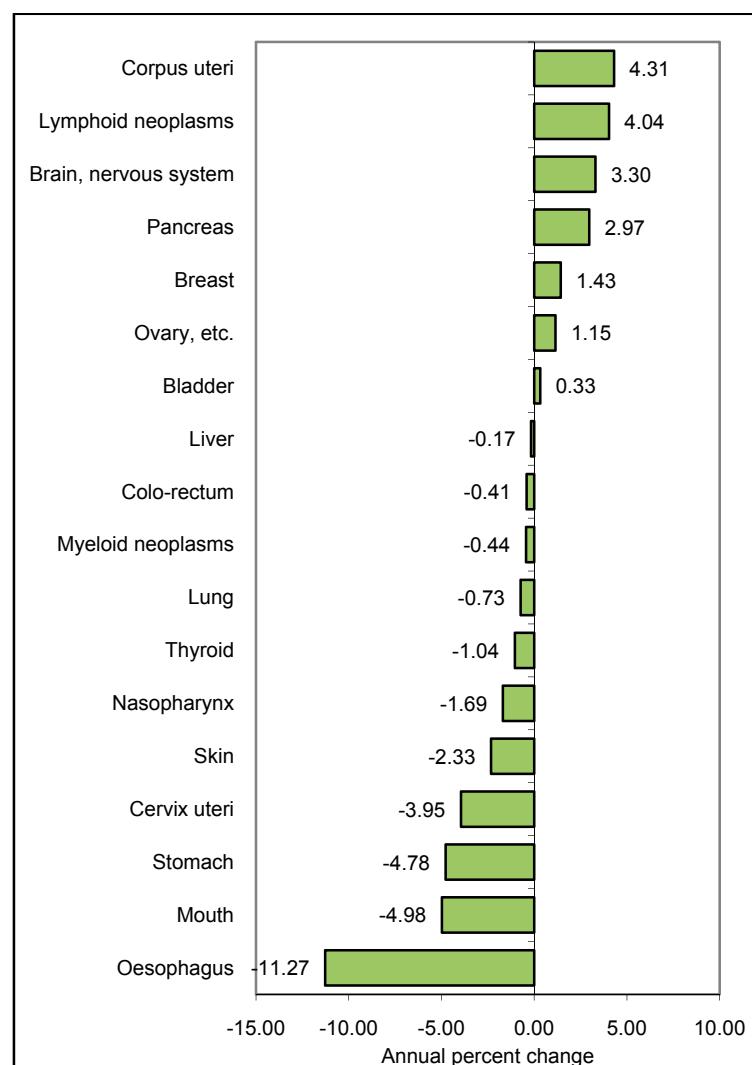


Table 8.1(a) TEN MOST FREQUENT CANCERS IN MALES 1968-2007, BY FIVE-YEAR PERIOD

SITE	1968-1972 NO.	ASR	SITE	1973-1977 NO.	ASR	SITE	1978-1982 NO.	ASR	SITE	1983-1987 NO.	ASR
Lung	1361	47.2	Lung	1920	58.0	Lung	2440	63.0	Lung	2770	60.1
Stomach	1093	37.4	Stomach	1215	36.5	Stomach	1232	31.6	Colo-rectum	1456	30.8
Liver	898	28.6	Liver	965	27.4	Liver	1126	27.7	Stomach	1333	29.0
Colo-rectum	572	19.6	Colo-rectum	841	25.3	Colo-rectum	1066	26.9	Liver	1094	23.1
Nasopharynx	567	14.8	Nasopharynx	671	15.4	Nasopharynx	703	14.4	Nasopharynx	863	15.0
Oesophagus	450	16.6	Oesophagus	465	14.9	Oesophagus	440	11.8	Oesophagus	398	8.7
Leukaemias	222	4.8	Skin, incl. melanoma	265	8.1	Skin, incl. melanoma	348	8.7	Skin, incl. melanoma	393	8.3
Larynx	193	6.8	Leukaemias	232	4.8	Larynx	290	7.3	Prostate	356	8.0
Skin, incl. melanoma	185	6.9	Larynx	221	6.7	Bladder	271	7.1	Lymphomas	351	6.7
Lymphomas	157	4.1	Bladder	197	6.3	Lymphomas	269	6.0	Bladder	316	6.9
All	6982	227.3	All	8555	246.3	All	10118	250.3	All	11667	243.3

SITE	1988-1992 NO.	ASR	SITE	1993-1997 NO.	ASR	SITE	1998-2002 NO.	ASR	SITE	2003-2007 NO.	ASR
Lung	2971	53.8	Lung	3167	48.3	Lung	3598	45.6	Colo-rectum	3902	40.5
Colo-rectum	2082	36.5	Colo-rectum	2571	37.9	Colo-rectum	3283	40.5	Lung	3828	40.8
Stomach	1372	24.5	Stomach	1439	21.7	Liver	1547	19.0	Prostate	2169	23.9
Liver	1089	19.0	Liver	1302	19.1	Stomach	1450	18.3	Liver	1700	17.8
Nasopharynx	1063	15.5	Nasopharynx	1122	13.5	Prostate	1359	17.7	Stomach	1375	14.5
Prostate	529	9.6	Prostate	903	13.9	Nasopharynx	1101	11.1	Lymphoid neoplasms	1309	14.4
Skin, incl. melanoma	527	9.1	Skin, incl. melanoma	697	10.0	Lymphoid neoplasms	1032	12.8	Nasopharynx	1198	10.8
Bladder	414	7.3	Lymphomas	601	8.2	Skin, incl. melanoma	817	9.9	Skin, incl. melanoma	973	10.1
Lymphomas	410	6.6	Leukaemias	489	7.1	Bladder	615	7.7	Bladder	675	7.1
Oesophagus	408	7.4	Bladder	486	7.2	Kidney & Oth.Urinary	466	5.6	Kidney & Oth.Urinary	620	6.2
All	13624	236.2	All	6189	236.7	All	18948	233.3	All	21940	230.0

Table 8.1(b) TEN MOST FREQUENT CANCERS IN FEMALES 1968-2007, BY FIVE-YEAR PERIOD

SITE	1968-1972 NO.	ASR	SITE	1973-1977 NO.	ASR	SITE	1978-1982 NO.	ASR	SITE	1983-1987 NO.	ASR
Breast	671	20.0	Breast	859	22.0	Breast	1237	26.9	Breast	1731	31.1
Cervix uteri	603	18.0	Colo-rectum	727	20.0	Colo-rectum	1097	25.0	Colo-rectum	1410	26.4
Stomach	542	17.3	Cervix uteri	676	17.5	Lung	893	20.8	Lung	1071	20.4
Lung	489	16.1	Lung	663	18.5	Cervix uteri	751	16.5	Cervix uteri	897	16.2
Colo-rectum	486	15.6	Stomach	610	16.6	Stomach	643	14.6	Stomach	772	14.4
Liver	243	7.9	Nasopharynx	273	6.3	Ovary, etc.	413	8.7	Ovary, etc.	501	8.8
Ovary, etc.	222	6.0	Ovary, etc.	262	6.2	Skin, incl. melanoma	344	7.7	Skin, incl. melanoma	390	7.1
Nasopharynx	222	6.1	Liver	255	6.9	Nasopharynx	326	6.6	Nasopharynx	372	6.3
Oesophagus	188	6.3	Skin, incl. melanoma	212	5.7	Liver	306	7.0	Thyroid	368	5.8
Leukaemias	169	4.0	Leukaemias	182	4.0	Thyroid	224	4.2	Liver	354	6.7
All	5084	154.1	All	6185	161.1	All	7986	175.8	All	10048	183.5

SITE	1988-1992 NO.	ASR	SITE	1993-1997 NO.	ASR	SITE	1998-2002 NO.	ASR	SITE	2003-2007 NO.	ASR
Breast	2621	38.6	Breast	3581	43.4	Breast	5530	55.4	Breast	6798	58.5
Colo-rectum	1868	28.6	Colo-rectum	2328	29.7	Colo-rectum	2836	29.6	Colo-rectum	3375	29.0
Lung	1174	18.0	Lung	1442	18.2	Lung	1601	16.3	Lung	1868	16.0
Cervix uteri	998	15.2	Cervix uteri	1127	13.8	Ovary, etc.	1060	11.1	Corpus uteri	1332	11.7
Stomach	826	12.4	Stomach	917	11.4	Cervix uteri	1035	10.6	Ovary, etc.	1327	12.0
Ovary, etc.	703	10.4	Ovary, etc.	886	11.0	Stomach	969	9.9	Cervix uteri	1009	8.8
Skin, incl. melanoma	562	8.1	Skin, incl. melanoma	704	8.5	Corpus uteri	904	9.5	Lymphoid neoplasms	973	10.0
Nasopharynx	440	6.2	Corpus uteri	607	7.8	Skin, incl. melanoma	823	8.2	Stomach	885	7.4
Thyroid	435	6.0	Thyroid	488	5.6	Lymphoid neoplasms	714	8.1	Skin, incl. melanoma	840	7.0
Corpus uteri	433	6.8	Nasopharynx	402	4.6	Thyroid	646	6.6	Thyroid	645	5.8
All	12735	191.5	All	15700	195.6	All	19726	203.0	All	23200	203.4

Table 8.2(a) TEN MOST FREQUENT CANCERS IN CHINESE MALES 1968-2007, BY FIVE-YEAR PERIOD

SITE	1968-1972 NO.	ASR	SITE	1973-1977 NO.	ASR	SITE	1978-1982 NO.	ASR	SITE	1983-1987 NO.	ASR
Lung	1273	55.9	Lung	1728	66.8	Lung	2226	73.8	Lung	2475	70.0
Stomach	1001	43.7	Stomach	1104	42.5	Stomach	1128	37.3	Colo-rectum	1293	35.7
Liver	792	32.9	Liver	840	31.1	Liver	988	31.5	Stomach	1219	34.4
Nasopharynx	536	19.2	Colo-rectum	732	28.1	Colo-rectum	952	31.1	Liver	974	27.0
Colo-rectum	498	22.0	Nasopharynx	640	19.6	Nasopharynx	677	18.0	Nasopharynx	822	18.3
Oesophagus	425	19.7	Oesophagus	436	17.7	Oesophagus	404	13.9	Oesophagus	377	10.7
Larynx	174	7.8	Skin, incl. melanoma	221	8.7	Skin, incl. melanoma	297	9.5	Skin, incl. melanoma	332	9.0
Leukaemias	164	4.7	Larynx	188	7.3	Larynx	255	8.3	Lymphomas	272	6.7
Skin, incl. melanoma	150	7.2	Leukaemias	179	4.8	Bladder	229	7.8	Bladder	262	7.3
Bladder	130	5.8	Bladder	172	7.0	Lymphomas	204	5.8	Prostate	257	7.3
All	6162	258.5	All	7465	276.9	All	8874	283.1	All	10141	274.8

SITE	1988-1992 NO.	ASR	SITE	1993-1997 NO.	ASR	SITE	1998-2002 NO.	ASR	SITE	2003-2007 NO.	ASR
Lung	2617	62.6	Lung	2817	56.6	Lung	3150	52.0	Colo-rectum	3457	44.7
Colo-rectum	1855	42.4	Colo-rectum	2307	44.4	Colo-rectum	2925	46.5	Lung	3315	44.3
Stomach	1249	29.4	Stomach	1322	26.0	Liver	1365	21.6	Prostate	1837	25.2
Nasopharynx	1006	18.7	Liver	1121	21.4	Stomach	1316	21.6	Liver	1482	19.4
Liver	960	22.1	Nasopharynx	1045	15.9	Prostate	1097	18.7	Stomach	1235	16.3
Skin, incl. melanoma	452	10.1	Prostate	718	14.6	Nasopharynx	1015	12.9	Nasopharynx	1100	12.5
Prostate	413	9.7	Skin, incl. melanoma	598	11.1	Lymphoid neoplasms	782	12.6	Lymphoid neoplasms	1029	14.5
Oesophagus	366	8.6	Lymphomas	467	8.2	Skin, incl. melanoma	696	10.9	Skin, incl. melanoma	800	10.5
Bladder	339	7.9	Non-Hodgkin's lymphoma	436	7.7	Bladder	493	8.0	Bladder	552	7.3
Lymphomas	313	6.5	Bladder	400	7.7	Kidney & Oth.Urinary	412	6.4	Kidney & Oth.Urinary	514	6.4
All	11800	267.5	All	14034	267.4	All	16272	259.1	All	18812	247.5

Table 8.2(b) TEN MOST FREQUENT CANCERS IN CHINESE FEMALES 1968-2007, BY FIVE-YEAR PERIOD

SITE	1968-1972		1973-1977		1978-1982		1983-1987	
	NO.	ASR	SITE	NO.	ASR	SITE	NO.	ASR
Breast	553	19.5	Breast	737	22.6	Breast	1048	27.4
Cervix uteri	527	18.6	Colo-rectum	672	21.3	Colo-rectum	999	26.6
Stomach	492	18.1	Lung	622	20.0	Lung	849	22.9
Lung	461	17.3	Cervix uteri	588	18.3	Cervix uteri	639	17.0
Colo-rectum	445	16.5	Stomach	568	17.9	Stomach	583	15.3
Nasopharynx	218	7.3	Nasopharynx	266	7.5	Ovary, etc.	341	8.7
Liver	214	8.0	Liver	231	7.3	Skin, incl. melanoma	315	8.0
Ovary, etc.	184	5.9	Ovary, etc.	201	5.8	Nasopharynx	314	7.8
Oesophagus	170	6.5	Skin, incl. melanoma	195	6.1	Liver	274	7.2
Skin, incl. melanoma	143	5.4	Leukaemias	148	4.0	Corpus uteri	190	5.1
All	4457	158.6	All	5468	167.8	All	7024	183.2
SITE	1988-1992		1993-1997		1998-2002		2003-2007	
	NO.	ASR	SITE	NO.	ASR	SITE	NO.	ASR
Breast	2198	39.4	Breast	2982	44.4	Breast	4634	57.4
Colo-rectum	1718	31.2	Colo-rectum	2115	32.3	Colo-rectum	2562	32.1
Lung	1096	19.8	Lung	1334	20.1	Lung	1439	17.6
Cervix uteri	877	16.2	Cervix uteri	991	14.8	Cervix uteri	910	11.5
Stomach	766	13.6	Stomach	850	12.7	Stomach	886	10.8
Ovary, etc.	588	10.7	Ovary, etc.	710	10.9	Ovary, etc.	841	11.0
Skin, incl. melanoma	511	8.6	Skin, incl. melanoma	621	8.8	Corpus uteri	755	9.7
Nasopharynx	419	7.2	Corpus uteri	494	7.8	Skin, incl. melanoma	748	8.8
Corpus uteri	368	7.1	Thyroid	403	5.9	Lymphoid neoplasms	545	7.7
Thyroid	356	6.0	Nasopharynx	381	5.4	Thyroid	513	6.6
All	11173	202.0	All	13573	204.6	All	16898	211.7
							All	19730
								212.2

Table 8.2(c) TEN MOST FREQUENT CANCERS IN MALAY MALES 1968-2007, BY FIVE-YEAR PERIOD

SITE	1968-1972 NO.	ASR	SITE	1973-1977 NO.	ASR	SITE	1978-1982 NO.	ASR	SITE	1983-1987 NO.	ASR
Liver	58	15.1	Lung	111	26.2	Lung	122	26.3	Lung	191	33.1
Lung	47	14.7	Liver	75	17.0	Liver	78	15.5	Liver	78	13.0
Stomach	33	9.9	Colo-rectum	45	11.5	Colo-rectum	54	10.6	Colo-rectum	77	14.1
Colo-rectum	29	8.3	Stomach	36	9.6	Stomach	41	9.5	Lymphomas	49	7.0
Leukaemias	29	4.3	Leukaemias	32	4.2	Lymphomas	33	5.9	Prostate	45	9.4
Nasopharynx	25	4.8	Nasopharynx	26	5.3	Leukaemias	31	4.4	Leukaemias	36	5.0
Lymphomas	21	3.7	Lymphomas	22	3.8	Prostate	25	7.0	Stomach	33	6.2
Skin, incl. melanoma	16	5.0	Prostate	20	7.0	Skin, incl. melanoma	24	4.6	Nasopharynx	30	4.3
Prostate	9	4.3	Skin, incl. melanoma	15	3.3	Nasopharynx	23	3.9	Skin, incl. melanoma	29	5.0
Bladder	9	3.6	Bladder	12	3.2	Bladder	18	3.6	Bladder	28	5.1
All	357	95.8	All	507	116.5	All	607	119.3	All	787	132.2

SITE	1988-1992 NO.	ASR	SITE	1993-1997 NO.	ASR	SITE	1998-2002 NO.	ASR	SITE	2003-2007 NO.	ASR
Lung	241	36.9	Lung	241	31.0	Lung	318	36.0	Lung	356	34.7
Colo-rectum	125	18.9	Colo-rectum	164	20.5	Colo-rectum	211	23.6	Colo-rectum	268	26.0
Liver	82	11.5	Liver	122	16.0	Lymphoid neoplasms	177	18.1	Lymphoid neoplasms	178	16.9
Lymphomas	61	8.0	Prostate	91	12.9	Prostate	140	16.7	Prostate	169	17.7
Stomach	57	8.4	Lymphomas	86	10.0	Liver	114	12.7	Liver	139	13.2
Leukaemias	54	6.6	Leukaemias	74	8.0	Bladder	72	8.0	Nasopharynx	84	6.8
Prostate	54	8.7	Nasopharynx	60	6.4	Nasopharynx	63	5.5	Bladder	63	6.0
Nasopharynx	51	6.6	Stomach	52	6.8	Stomach	63	6.6	Stomach	54	5.3
Bladder	45	7.0	Bladder	45	5.9	Myeloid neoplasms	60	6.4	Kidney & Oth.Urinary	53	4.9
Skin, incl. melanoma	30	4.1	Skin, incl. melanoma	38	4.6	Skin, incl. melanoma	46	5.2	Myeloid neoplasms	52	4.7
All	1016	146.4	All	1242	154.8	All	1584	171.9	All	1752	167.4

Table 8.2(d) TEN MOST FREQUENT CANCERS IN MALAY FEMALES 1968-2007, BY FIVE-YEAR PERIOD

1968-1972						1973-1977						1978-1982					
SITE	NO.	ASR	SITE	NO.	ASR	SITE	NO.	ASR	SITE	NO.	ASR	SITE	NO.	ASR	SITE	NO.	ASR
Breast	64	17.0	Breast	69	14.9	Breast	112	21.2	Breast	152	22.6						
Cervix uteri	45	11.2	Ovary, etc.	49	10.6	Ovary, etc.	57	9.9	Ovary, etc.	64	9.1						
Stomach	31	9.0	Cervix uteri	43	8.9	Colo-rectum	55	12.8	Colo-rectum	64	11.5						
Ovary, etc.	29	6.2	Colo-rectum	29	8.6	Cervix uteri	49	9.4	Lung	61	12.2						
Lung	20	7.5	Stomach	24	7.3	Thyroid	33	4.8	Cervix uteri	56	8.9						
Liver	19	6.7	Leukaemias	24	3.8	Lung	29	7.8	Thyroid	43	4.9						
Colo-rectum	18	6.0	Lung	22	6.5	Stomach	28	6.5	Liver	33	6.2						
Leukaemias	18	2.3	Corpus uteri	17	4.5	Liver	23	5.5	Lymphomas	31	5.3						
Lymphomas	16	3.6	Thyroid	17	3.6	Leukaemias	22	3.5	Stomach	29	5.5						
Thyroid	15	4.1	Lymphomas	14	2.8	Lymphomas	20	3.6	Leukaemias	29	3.5						
All	368	97.7	All	410	97.2	All	576	114.7	All	733	118.4						

1988-1992						1993-1997						1998-2002					
SITE	NO.	ASR	SITE	NO.	ASR	SITE	NO.	ASR	SITE	NO.	ASR	SITE	NO.	ASR	SITE	NO.	ASR
Breast	260	33.3	Breast	357	37.2	Breast	527	44.8	Breast	724	54.5						
Colo-rectum	94	13.9	Colo-rectum	133	16.6	Colo-rectum	177	18.7	Colo-rectum	221	20.0						
Cervix uteri	82	11.4	Ovary, etc.	113	11.9	Ovary, etc.	147	13.4	Ovary, etc.	163	12.7						
Ovary, etc.	81	9.9	Cervix uteri	90	10.1	Lung	116	12.0	Lymphoid neoplasms	156	13.6						
Lung	60	9.7	Lung	86	10.6	Lymphoid neoplasms	112	11.0	Lung	141	12.0						
Thyroid	59	6.3	Corpus uteri	69	7.8	Corpus uteri	90	8.8	Corpus uteri	138	11.1						
Lymphomas	46	5.9	Leukaemias	55	6.2	Cervix uteri	79	7.3	Cervix uteri	103	8.4						
Corpus uteri	38	5.1	Thyroid	54	5.4	Thyroid	79	6.9	Thyroid	95	7.4						
Leukaemias	36	4.3	Lymphomas	49	5.6	Myeloid neoplasms	43	4.3	Myeloid neoplasms	47	3.9						
Stomach	35	5.4	Skin, incl. melanoma	43	5.4	Stomach	42	3.9	Pancreas	46	4.1						
All	1011	136.4	All	1343	151.2	All	1746	164.7	All	2170	175.8						

Table 8.2(e) TEN MOST FREQUENT CANCERS IN INDIAN MALES 1968-2007, BY FIVE-YEAR PERIOD

SITE	1968-1972		1973-1977		1978-1982		1983-1987	
	NO.	ASR	SITE	NO.	ASR	SITE	NO.	ASR
Stomach	54	20.0	Stomach	73	22.6	Lung	74	21.8
Liver	42	10.3	Lung	65	19.6	Stomach	56	15.7
Colo-rectum	37	9.6	Colo-rectum	48	16.7	Liver	54	13.9
Lung	34	10.6	Liver	44	14.1	Colo-rectum	43	13.6
Leukaemias	24	5.8	Mouth	26	10.3	Oesophagus	30	8.1
Mouth	22	8.3	Oesophagus	23	6.9	Larynx	28	7.8
Oesophagus	18	5.4	Larynx	21	7.1	Leukaemias	27	6.5
Lymphomas	15	4.2	Tongue	20	5.3	Prostate	26	9.2
Larynx	12	4.1	Leukaemias	17	3.7	Lymphomas	25	7.5
Tongue	12	3.7	Prostate	16	7.0	Bladder	19	5.6
All	398	125.4	All	498	156.8	All	536	153.9

SITE	1988-1992		1993-1997		1998-2002		2003-2007	
	NO.	ASR	SITE	NO.	ASR	SITE	NO.	ASR
Lung	83	14.7	Lung	74	10.7	Colo-rectum	120	16.3
Colo-rectum	73	13.3	Colo-rectum	69	10.2	Lung	94	12.9
Stomach	56	9.9	Prostate	68	9.8	Prostate	86	11.4
Prostate	43	8.1	Stomach	57	8.8	Stomach	63	8.2
Liver	39	6.6	Liver	49	7.5	Liver	60	8.2
Lymphomas	31	5.7	Larynx	37	5.5	Lymphoid neoplasms	59	8.8
Oesophagus	31	5.4	Lymphomas	34	5.4	Bladder	36	4.7
Larynx	28	4.7	Bladder	33	5.0	Oesophagus	25	3.3
Bladder	23	4.1	Leukaemias	32	5.3	Mouth	21	2.8
Mouth	22	3.6	Mouth	24	3.7	Pancreas	21	3.0
All	621	111.3	All	692	105.6	All	819	112.4
							All	960
								131.2

Table 8.2(f) TEN MOST FREQUENT CANCERS IN INDIAN FEMALES 1968-2007, BY FIVE-YEAR PERIOD

SITE	1968-1972		1973-1977		1978-1982		1983-1987	
	NO.	ASR	SITE	NO.	ASR	SITE	NO.	ASR
Cervix uteri	26	27.2	Breast	41	27.3	Cervix uteri	54	28.9
Female Breast	25	25.0	Cervix uteri	37	26.2	Breast	52	28.9
Colo-rectum	17	19.1	Colo-rectum	12	9.6	Colo-rectum	36	26.7
Stomach	16	19.4	Stomach	12	9.3	Stomach	21	16.0
Mouth	12	16.8	Ovary, etc.	12	7.8	Mouth	13	9.6
Thyroid	9	11.7	Corpus uteri	11	7.1	Ovary, etc.	12	4.2
Liver	6	6.8	Lung	9	8.1	Skin, incl. melanoma	9	4.9
Oesophagus	6	5.8	Oesophagus	9	7.2	Lymphomas	9	3.2
Ovary, etc.	6	5.5	Liver	9	4.8	Lung	8	6.0
Leukaemias	6	2.9	Thyroid	9	4.3	Oesophagus	6	3.8
All	168	182.9	All	221	153.9	All	297	174.8
						All	343	142.6

SITE	1988-1992		1993-1997		1998-2002		2003-2007	
	NO.	ASR	SITE	NO.	ASR	SITE	NO.	ASR
Breast	119	34.7	Breast	183	39.3	Breast	283	47.4
Colo-rectum	35	12.8	Colo-rectum	59	15.7	Colo-rectum	73	13.9
Cervix uteri	31	8.6	Ovary, etc.	50	10.4	Ovary, etc.	58	9.0
Ovary, etc.	28	7.6	Cervix uteri	38	8.6	Corpus uteri	49	8.5
Stomach	23	7.7	Corpus uteri	35	7.6	Thyroid	46	7.0
Corpus uteri	20	6.4	Stomach	25	6.7	Lymphoid neoplasms	44	8.4
Leukaemias	17	5.3	Thyroid	22	3.5	Cervix uteri	37	6.6
Thyroid	17	3.7	Mouth	19	5.1	Lung	34	7.1
Mouth	13	4.6	Lung	17	5.2	Stomach	34	6.1
Skin, incl. melanoma	12	4.6	Skin, incl. melanoma	17	4.5	Myeloid neoplasms	19	3.3
All	426	134.2	All	599	140.1	All	832	148.4
						All	981	138.9

Table 8.3 AVERAGE ANNUAL PERCENTAGE CHANGE IN INCIDENCE RATES FOR SELECTED SITES AND ALL SITES BY BROAD AGE GROUP, 1998-2007

ICD-9	SITE	Age group (years)			
		0-14	15-34	35-64	65+
147	Nasopharynx		-4.69	-1.74	4.94
150	Oesophagus			-3.36	-7.55
151	Stomach			-7.90	-3.41
153-4	Colo-rectum		-2.43	-0.73	0.55
155	Liver			-2.10	-1.04
157	Pancreas			0.67	4.09
162	Lung	1.00		-3.93	-2.29
172-3	Skin	9.45		-0.19	0.76
185	Prostate			8.55	5.24
186	Testis	3.50		3.63	
188	Bladder			-2.39	-1.06
191-2	Brain, nervous system	1.75	13.53	6.15	
194	Other endocrine	-4.08	-4.86		
	Lymphoid neoplasms	2.46	3.58	1.97	2.42
	Myeloid neoplasms	-1.80	-2.38	-1.73	-0.09
	All	0.21	1.12	-0.92	-0.19

ICD-9	SITE	Age group (years)			
		0-14	15-34	35-64	65+
150	Oesophagus			-9.54	-11.67
151	Stomach		-14.52	-5.99	-3.84
153-4	Colo-rectum		-5.55	0.03	-0.50
155	Liver			-1.96	0.23
157	Pancreas			4.06	2.63
162	Lung	-7.84	1.22	-1.76	
172-3	Skin	5.84	-3.53	-1.97	
174	Breast	0.51	1.32	2.02	
180	Cervix	-3.67	-6.44	2.05	
182	Uterus	11.29	4.31	3.71	
183	Ovary	2.60	0.46	2.28	
191-2	Brain, nervous system	-1.14	11.53	4.45	
193	Thyroid		-1.03	-0.82	-2.62
194	Other endocrine				
	Lymphoid neoplasms	9.66	6.26	4.18	0.67
	Myeloid neoplasms	1.44	7.21	-1.67	-1.83
	All	3.60	1.35	0.34	-0.42

Percent change was not computed if no cases occurred in one or more five-year periods for that site and age group.

9. SUBSITE DISTRIBUTION

Table 9.1 shows the subsite distribution according to ICD-9, stratified by gender, for the period 1968-2007. 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, 1968-2007

ICD9	SITE	Male	%	Female	%	All	%
140	LIP, VERMILION	23	100.0	12	100.0	35	100.0
140.0	Upper lip, vermillion border	2	8.7	2	16.7	4	11.4
140.1	Lower lip, vermillion border	7	30.4	1	8.3	8	22.9
140.3	Upper lip, inner aspect	1	4.3	3	25.0	4	11.4
140.4	Lower lip, inner aspect	2	8.7	2	16.7	4	11.4
140.5	Lip, unspecified, inner aspect	0	0.0	1	8.3	1	2.9
140.6	Commissure of lip	1	4.3	0	0.0	1	2.9
140.8	Other sites of lip	1	4.3	0	0.0	1	2.9
140.9	Lip, unspecified, vermillion border	9	39.1	3	25.0	12	34.3
141	TONGUE	785	100.0	339	100.0	1124	100.0
141.0	Base of tongue	180	22.9	35	10.3	215	19.1
141.1	Dorsal surface of tongue	2	0.3	4	1.2	6	0.5
141.2	Tip and lateral border of tongue	17	2.2	11	3.2	28	2.5
141.3	Ventral surface of tongue	7	0.9	2	0.6	9	0.8
141.4	Anterior two-thirds of tongue, part unspecified	8	1.0	9	2.7	17	1.5
141.6	Lingual tonsil	1	0.1	0	0.0	1	0.1
141.8	Other sites of tongue	4	0.5	1	0.3	5	0.4
141.9	Tongue, unspecified	566	72.1	277	81.7	843	75.0
142	SALIVARY GLAND	335	100.0	318	100.0	653	100.0
142.0	Parotid gland	227	67.8	207	65.1	434	66.5
142.1	Submandibular gland	65	19.4	65	20.4	130	19.9
142.2	Sublingual gland	7	2.1	8	2.5	15	2.3
142.8	Other major salivary glands	1	0.3	2	0.6	3	0.5
142.9	Salivary gland, unspecified	35	10.4	36	11.3	71	10.9
143	GUM	49	100.0	44	100.0	93	100.0
143.0	Upper gum	9	18.4	7	15.9	16	17.2
143.1	Lower gum	24	49.0	13	29.5	37	39.8
143.9	Gum, unspecified	16	32.7	24	54.5	40	43.0

ICD9	SITE	Male	%	Female	%	All	%
144	FLOOR OF MOUTH	158	100.0	39	100.0	197	100.0
144.0	Anterior portion of floor of mouth	1	0.6	0	0.0	1	0.5
144.1	Lateral portion of floor of mouth	1	0.6	2	5.1	3	1.5
144.9	Floor of mouth, part unspecified	156	98.7	37	94.9	193	98.0
145	MOUTH, OTHER PARTS	591	100.0	295	100.0	886	100.0
145.0	Cheek mucosa	202	34.2	134	45.4	336	37.9
145.1	Vestibule of mouth	5	0.8	2	0.7	7	0.8
145.2	Hard palate	70	11.8	34	11.5	104	11.7
145.3	Soft palate	106	17.9	21	7.1	127	14.3
145.4	Uvula	7	1.2	3	1.0	10	1.1
145.5	Palate, unspecified	104	17.6	49	16.6	153	17.3
145.6	Retromolar area	45	7.6	26	8.8	71	8.0
145.8	Other specified parts of mouth	4	0.7	1	0.3	5	0.6
145.9	Mouth, unspecified	48	8.1	25	8.5	73	8.2
146	OROPHARYNX	457	100.0	126	100.0	583	100.0
146.0	Tonsil	343	75.1	102	81.0	445	76.3
146.1	Tonsillar fossa	11	2.4	0	0.0	11	1.9
146.2	Tonsillar pillars (anterior) (posterior)	7	1.5	1	0.8	8	1.4
146.3	Vallecula epiglottica	12	2.6	1	0.8	13	2.2
146.4	Anterior aspect of epiglottis	1	0.2	0	0.0	1	0.2
146.5	Junctional region of oropharynx	1	0.2	0	0.0	1	0.2
146.6	Lateral wall of oropharynx	3	0.7	1	0.8	4	0.7
146.7	Posterior wall of oropharynx	10	2.2	1	0.8	11	1.9
146.8	Other specified sites of oropharynx	1	0.2	2	1.6	3	0.5
146.9	Oropharynx, unspecified	68	14.9	18	14.3	86	14.8
147	NASOPHARYNX	7292	100.0	2816	100.0	10108	100.0
147.0	Superior wall of nasopharynx	8	0.1	3	0.1	11	0.1
147.1	Posterior wall of nasopharynx	10	0.1	3	0.1	13	0.1
147.2	Lateral wall of nasopharynx	12	0.2	7	0.2	19	0.2
147.3	Anterior wall of nasopharynx	7	0.1	1	0.0	8	0.1
147.8	Other specified sites of nasopharynx	1	0.0	0	0.0	1	0.0
147.9	Nasopharynx, unspecified	7254	99.5	2802	99.5	10056	99.5
148	HYPOPHARYNX	547	100.0	68	100.0	615	100.0
148.0	Postcricoid region of hypopharynx	29	5.3	15	22.1	44	7.2
148.1	Pyriform sinus	358	65.4	27	39.7	385	62.6
148.2	Aryepiglottic fold, hypopharyngeal aspect	2	0.4	1	1.5	3	0.5
148.3	Posterior hypopharyngeal wall	6	1.1	1	1.5	7	1.1
148.8	Other specified sites of hypopharynx	3	0.5	3	4.4	6	1.0
148.9	Hypopharynx, unspecified	149	27.2	21	30.9	170	27.6
149	PHARYNX	70	100.0	18	100.0	88	100.0
149.0	Unspecified	68	97.1	17	94.4	85	96.6
149.8	Other	1	1.4	1	5.6	2	2.3
149.9	NOS	1	1.4	0	0.0	1	1.1
150	OESOPHAGUS	3281	100.0	1089	100.0	4370	100.0
150.0	Cervical esophagus	25	0.8	10	0.9	35	0.8
150.1	Thoracic esophagus	25	0.8	4	0.4	29	0.7
150.2	Abdominal esophagus	4	0.1	1	0.1	5	0.1

ICD9	SITE		Male	%	Female	%	All	%
150	OESOPHAGUS (cont'd)							
150.3	Upper third of esophagus	280	8.5	119	10.9	399	9.1	
150.4	Middle third of esophagus	879	26.8	279	25.6	1158	26.5	
150.5	Lower third of esophagus	531	16.2	118	10.8	649	14.9	
150.8	Other specified part of esophagus	8	0.2	2	0.2	10	0.2	
150.9	Esophagus, unspecified	1529	46.6	556	51.1	2085	47.7	
151	STOMACH	10518	100.0	6164	100.0	16682	100.0	
151.0	Cardia	1081	10.3	369	6.0	1450	8.7	
151.1	Pylorus	426	4.1	257	4.2	683	4.1	
151.2	Pyloric antrum	787	7.5	506	8.2	1293	7.8	
151.3	Fundus of stomach	54	0.5	32	0.5	86	0.5	
151.4	Body of stomach	199	1.9	113	1.8	312	1.9	
151.5	Lesser curvature of stomach, unspecified	163	1.5	106	1.7	269	1.6	
151.6	Greater curvature of stomach, unspecified	50	0.5	43	0.7	93	0.6	
151.8	Other specified sites of stomach	106	1.0	47	0.8	153	0.9	
151.9	Stomach, unspecified	7652	72.8	4691	76.1	12343	74.0	
152	SMALL INTESTINES	291	100.0	259	100.0	550	100.0	
152.0	Duodenum	138	47.4	126	48.6	264	48.0	
152.1	Jejunum	42	14.4	46	17.8	88	16.0	
152.2	Ileum	35	12.0	16	6.2	51	9.3	
152.3	Meckel's diverticulum	3	1.0	1	0.4	4	0.7	
152.8	Other specified sites of small intestine	3	1.0	0	0.0	3	0.5	
152.9	Small intestine, unspecified	70	24.1	70	27.0	140	25.5	
153	COLON	8798	100.0	9001	100.0	17799	100.0	
153.0	Hepatic flexure	357	4.1	321	3.6	678	3.8	
153.1	Transverse colon	752	8.5	852	9.5	1604	9.0	
153.2	Descending colon	644	7.3	592	6.6	1236	6.9	
153.3	Sigmoid colon	3228	36.7	3138	34.9	6366	35.8	
153.4	Cecum	699	7.9	811	9.0	1510	8.5	
153.5	Appendix vermiciformis	118	1.3	165	1.8	283	1.6	
153.6	Ascending colon	585	6.6	684	7.6	1269	7.1	
153.7	Splenic flexure	332	3.8	249	2.8	581	3.3	
153.8	Other specified sites of large intestine	576	6.5	586	6.5	1162	6.5	
153.9	Colon, unspecified	1507	17.1	1603	17.8	3110	17.5	
154	RECTUM	6982	100.0	5127	100.0	12109	100.0	
154.0	Rectosigmoid junction	1541	22.1	1198	23.4	2739	22.6	
154.1	Rectum	5235	75.0	3729	72.7	8964	74.0	
154.2	Anal canal	124	1.8	116	2.3	240	2.0	
154.3	Anus, unspecified	44	0.6	55	1.1	99	0.8	
154.8	Other sites of rectum, rectosigmoid junction, and anus	38	0.5	29	0.6	67	0.6	
155	LIVER	9727	100.0	2910	100.0	12637	100.0	
155.0	Liver, primary	8867	91.2	2363	81.2	11230	88.9	
155.1	Intrahepatic bile ducts	356	3.7	331	11.4	687	5.4	
155.2	Liver, not specified as primary or secondary	504	5.2	216	7.4	720	5.7	

ICD9	SITE	Male	%	Female	%	All	%
156	GALL BLADDER, ETC.	810	100.0	988	100.0	1798	100.0
156.0	Gallbladder	317	39.1	527	53.3	844	46.9
156.1	Extrahepatic bile ducts	207	25.6	191	19.3	398	22.1
156.2	Ampulla of vater	261	32.2	244	24.7	505	28.1
156.8	Other specified sites of gallbladder and extrahepatic bile ducts	4	0.5	3	0.3	7	0.4
156.9	Biliary tract, part unspecified	21	2.6	23	2.3	44	2.4
157	PANCREAS	2114	100.0	1672	100.0	3786	100.0
157.0	Head of pancreas	632	29.9	495	29.6	1127	29.8
157.1	Body of pancreas	71	3.4	60	3.6	131	3.5
157.2	Tail of pancreas	94	4.4	79	4.7	173	4.6
157.3	Pancreatic duct	7	0.3	4	0.2	11	0.3
157.4	Islets of langerhans	5	0.2	4	0.2	9	0.2
157.8	Other specified sites of pancreas	50	2.4	33	2.0	83	2.2
157.9	Pancreas, part unspecified	1255	59.4	997	59.6	2252	59.5
158	RETROPERITONEUM & PERITONEUM	135	100.0	192	100.0	327	100.0
158.0	Retroperitoneum	99	73.3	116	60.4	215	65.7
158.8	Specified parts of peritoneum	21	15.6	25	13.0	46	14.1
158.9	Peritoneum, unspecified	15	11.1	51	26.6	66	20.2
160	NOSE, SINUSES, ETC.	438	100.0	238	100.0	676	100.0
160.0	Nasal cavities	189	43.2	88	37.0	277	41.0
160.1	Auditory tube, middle ear, and mastoid air cells	32	7.3	15	6.3	47	7.0
160.2	Maxillary sinus	166	37.9	107	45.0	273	40.4
160.3	Ethmoidal sinus	32	7.3	20	8.4	52	7.7
160.4	Frontal sinus	0	0.0	1	0.4	1	0.1
160.5	Sphenoidal sinus	8	1.8	3	1.3	11	1.6
160.8	Other accessory sinuses	2	0.5	2	0.8	4	0.6
160.9	Accessory sinus, unspecified	9	2.1	2	0.8	11	1.6
161	LARYNX	2310	100.0	248	100.0	2558	100.0
161.0	Glottis	1004	43.5	85	34.3	1089	42.6
161.1	Supraglottis	416	18.0	63	25.4	479	18.7
161.2	Subglottis	29	1.3	5	2.0	34	1.3
161.3	Laryngeal cartilages	14	0.6	5	2.0	19	0.7
161.8	Other specified sites of larynx	41	1.8	3	1.2	44	1.7
161.9	Larynx, unspecified	806	34.9	87	35.1	893	34.9
162	LUNG	22065	100.0	9204	100.0	31269	100.0
162.0	Trachea	31	0.1	12	0.1	43	0.1
162.2	Main bronchus	197	0.9	85	0.9	282	0.9
162.3	Upper lobe, bronchus or lung	2117	9.6	865	9.4	2982	9.5
162.4	Middle lobe, bronchus or lung	201	0.9	128	1.4	329	1.1
162.5	Lower lobe, bronchus or lung	1146	5.2	555	6.0	1701	5.4
162.8	Other parts of bronchus or lung	70	0.3	32	0.3	102	0.3
162.9	Bronchus and lung, unspecified	18303	83.0	7527	81.8	25830	82.6
163	PLEURA	100	100.0	28	100.0	128	100.0
163.0	Parietal pleura	2	2.0	2	7.1	4	3.1
163.9	Pleura, unspecified	98	98.0	26	92.9	124	96.9

ICD9	SITE	Male	%	Female	%	All	%
164	THYMUS, HEART	272	100.0	185	100.0	457	100.0
164.0	Thymus	160	58.8	146	78.9	306	67.0
164.1	Heart	3	1.1	2	1.1	5	1.1
164.2	Anterior mediastinum	22	8.1	10	5.4	32	7.0
164.3	Posterior mediastinum	5	1.8	1	0.5	6	1.3
164.8	Other parts of mediastinum	0	0.0	2	1.1	2	0.4
164.9	Mediastinum, part unspecified	82	30.1	24	13.0	106	23.2
170	BONE	438	100.0	349	100.0	787	100.0
170.0	Bones of skull and face, except mandible	19	4.3	25	7.2	44	5.6
170.1	Mandible	17	3.9	14	4.0	31	3.9
170.2	Vertebral column, excluding sacrum and coccyx	17	3.9	11	3.2	28	3.6
170.3	Ribs, sternum, and clavicle	18	4.1	14	4.0	32	4.1
170.4	Scapula and long bones of upper limb	58	13.2	37	10.6	95	12.1
170.5	Short bones of upper limb	3	0.7	3	0.9	6	0.8
170.6	Pelvic bones, sacrum, and coccyx	52	11.9	36	10.3	88	11.2
170.7	Long bones of lower limb	199	45.4	161	46.1	360	45.7
170.8	Short bones of lower limb	19	4.3	11	3.2	30	3.8
170.9	Bone and articular cartilage, site unspecified	36	8.2	37	10.6	73	9.3
171	CONNECTIVE TISSUES	785	100.0	602	100.0	1387	100.0
171.0	Connective and other soft tissue of head, face, and neck	77	9.8	45	7.5	122	8.8
171.2	Connective and other soft tissue of upper limb, including shoulder	86	11.0	67	11.1	153	11.0
171.3	Connective and other soft tissue of lower limb, including hip	264	33.6	197	32.7	461	33.2
171.4	Connective and other soft tissue of thorax	55	7.0	39	6.5	94	6.8
171.5	Connective and other soft tissue of abdomen	40	5.1	38	6.3	78	5.6
171.6	Connective and other soft tissue of pelvis	68	8.7	53	8.8	121	8.7
171.7	Connective and other soft tissue of trunk, unspecified	65	8.3	42	7.0	107	7.7
171.8	Other specified sites of connective and other soft tissue	5	0.6	4	0.7	9	0.6
171.9	Connective and other soft tissue, site unspecified	125	15.9	117	19.4	242	17.4
172	MELANOMA OF SKIN	242	100.0	230	100.0	472	100.0
172.0	Malignant melanoma of skin of lip	2	0.8	0	0.0	2	0.4
172.1	Malignant melanoma of skin of eyelid, including canthus	2	0.8	4	1.7	6	1.3
172.2	Malignant melanoma of skin of ear and external auditory canal	3	1.2	2	0.9	5	1.1
172.3	Malignant melanoma of skin of other and unspecified parts of face	11	4.5	16	7.0	27	5.7
172.4	Malignant melanoma of skin of scalp and neck	8	3.3	10	4.3	18	3.8
172.5	Malignant melanoma of skin of trunk, except scrotum	33	13.6	26	11.3	59	12.5

ICD9	SITE	Male	%	Female	%	All	%
172	MELANOMA OF SKIN (cont'd)						
172.6	Malignant melanoma of skin of upper limb, including shoulder	33	13.6	35	15.2	68	14.4
172.7	Malignant melanoma of skin of lower limb, including hip	89	36.8	103	44.8	192	40.7
172.8	Malignant melanoma of other specified sites of skin	4	1.7	3	1.3	7	1.5
172.9	Melanoma of skin, site unspecified	57	23.6	31	13.5	88	18.6
173	SKIN, OTHERS	3974	100.0	3810	100.0	7784	100.0
173.0	Other skin of lip	118	3.0	140	3.7	258	3.3
173.1	Other skin of eyelid, including canthus	268	6.7	282	7.4	550	7.1
173.2	Other skin of ear and external auditory canal	234	5.9	151	4.0	385	4.9
173.3	Other skin of other and unspecified parts of face	1455	36.6	1933	50.7	3388	43.5
173.4	Other scalp and skin of neck	257	6.5	277	7.3	534	6.9
173.5	Other skin of trunk, except scrotum	415	10.4	224	5.9	639	8.2
173.6	Other skin of upper limb, including shoulder	313	7.9	168	4.4	481	6.2
173.7	Other skin of lower limb, including hip	447	11.2	258	6.8	705	9.1
173.8	Other other specified sites of skin	145	3.6	78	2.0	223	2.9
173.9	Other skin, site unspecified	322	8.1	299	7.8	621	8.0
174	FEMALE BREAST			23031	100.0	23031	100.0
174.0	Nipple and areola of female breast			98	0.4	98	0.4
174.1	Central portion of female breast			429	1.9	429	1.9
174.2	Upper-inner quadrant of female breast			473	2.1	473	2.1
174.3	Lower-inner quadrant of female breast			304	1.3	304	1.3
174.4	Upper-outer quadrant of female breast			1622	7.0	1622	7.0
174.5	Lower-outer quadrant of female breast			334	1.5	334	1.5
174.6	Axillary tail of female breast			13	0.1	13	0.1
174.8	Other specified sites of female breast			338	1.5	338	1.5
174.9	Breast (female), unspecified			19420	84.3	19420	84.3
175	MALE BREAST	77	100.0			77	100.0
175.0	Nipple and areola of male breast	2	2.6			2	2.6
175.9	Other and unspecified sites of male breast	75	97.4			75	97.4
180	CERVIX UTERI			7096	100.0	7096	100.0
180.0	Endocervix			73	1.0	73	1.0
180.1	Exocervix			6	0.1	6	0.1
180.8	Other specified sites of cervix			6	0.1	6	0.1
180.9	Cervix uteri, unspecified			7011	98.8	7011	98.8
181	CHORIOEPITHELIOMA			162	100.0	162	100.0
181.9	Placenta			162	100.0	162	100.0
182	CORPUS UTERI			4121	100.0	4121	100.0
182.0	Corpus uteri, except isthmus			4115	99.9	4115	99.9
182.1	Isthmus			1	0.0	1	0.0
182.8	Other specified sites of body of uterus			5	0.1	5	0.1

ICD9	SITE	Male	%	Female	%	All	%
183	OVARY, ETC.			5374	100.0	5374	100.0
183.0	Ovary			5268	98.0	5268	98.0
183.2	Fallopian tube			74	1.4	74	1.4
183.3	Broad ligament of uterus			10	0.2	10	0.2
183.8	Other specified sites of uterine adnexa			17	0.3	17	0.3
183.9	Uterine adnexa, unspecified			5	0.1	5	0.1
184	OTHER FEM. GENITAL			464	100.0	464	100.0
184.0	Vagina			177	38.1	177	38.1
184.1	Labia majora			14	3.0	14	3.0
184.2	Labia minora			5	1.1	5	1.1
184.3	Clitoris			5	1.1	5	1.1
184.4	Vulva, unspecified			258	55.6	258	55.6
184.8	Other specified sites of female genital organs			1	0.2	1	0.2
184.9	Female genital organ, site unspecified			4	0.9	4	0.9
185	PROSTATE	5794	100.0			5794	100.0
185.9	NOS	5794	100.0			5794	100.0
186	TESTIS	560	100.0			560	100.0
186.0	Undescended testis	11	2.0			11	2.0
186.9	Other and unspecified testis	549	98.0			549	98.0
187	PENIS	425	100.0			425	100.0
187.1	Prepuce	23	5.4			23	5.4
187.2	Glans penis	24	5.6			24	5.6
187.3	Body of penis	2	0.5			2	0.5
187.4	Penis, part unspecified	259	60.9			259	60.9
187.5	Epididymis	4	0.9			4	0.9
187.6	Spermatic cord	6	1.4			6	1.4
187.7	Scrotum	96	22.6			96	22.6
187.8	Other specified sites of male genital organs	8	1.9			8	1.9
187.9	Male genital organ, site unspecified	3	0.7			3	0.7
188	BLADDER	3124	100.0	1002	100.0	4126	100.0
188.0	Trigone of urinary bladder	8	0.3	3	0.3	11	0.3
188.1	Dome of urinary bladder	19	0.6	7	0.7	26	0.6
188.2	Lateral wall of urinary bladder	137	4.4	33	3.3	170	4.1
188.3	Anterior wall of urinary bladder	6	0.2	0	0.0	6	0.1
188.4	Posterior wall of urinary bladder	16	0.5	8	0.8	24	0.6
188.5	Bladder neck	13	0.4	1	0.1	14	0.3
188.6	Ureteric orifice	31	1.0	12	1.2	43	1.0
188.7	Urachus	6	0.2	4	0.4	10	0.2
188.8	Other specified sites of bladder	55	1.8	21	2.1	76	1.8
188.9	Bladder, part unspecified	2833	90.7	913	91.1	3746	90.8
189	KIDNEY & OTH.URINARY	2126	100.0	1196	100.0	3322	100.0
189.0	Kidney, except pelvis	1783	83.9	957	80.0	2740	82.5
189.1	Renal pelvis	198	9.3	112	9.4	310	9.3
189.2	Ureter	110	5.2	78	6.5	188	5.7
189.3	Urethra	17	0.8	35	2.9	52	1.6
189.8	Other specified sites of urinary organs	5	0.2	4	0.3	9	0.3

ICD9	SITE	Male	%	Female	%	All	%
189	KIDNEY & OTH.URINARY (cont'd)						
189.9	Urinary organ, site unspecified	13	0.6	10	0.8	23	0.7
190	EYE	109	100.0	87	100.0	196	100.0
190.0	Eyeball, except conjunctiva, cornea, retina, and choroid	13	11.9	12	13.8	25	12.8
190.1	Orbit	9	8.3	4	4.6	13	6.6
190.2	Lacrimal gland	4	3.7	7	8.0	11	5.6
190.3	Conjunctiva	19	17.4	8	9.2	27	13.8
190.4	Cornea	2	1.8	0	0.0	2	1.0
190.5	Retina	41	37.6	37	42.5	78	39.8
190.6	Choroid	1	0.9	1	1.1	2	1.0
190.7	Lacrimal duct	0	0.0	1	1.1	1	0.5
190.9	Eye, part unspecified	20	18.3	17	19.5	37	18.9
191	BRAIN	1070	100.0	833	100.0	1903	100.0
191.0	Cerebrum, except lobes and ventricles	49	4.6	45	5.4	94	4.9
191.1	Frontal lobe	125	11.7	109	13.1	234	12.3
191.2	Temporal lobe	85	7.9	55	6.6	140	7.4
191.3	Parietal lobe	69	6.4	49	5.9	118	6.2
191.4	Occipital lobe	15	1.4	10	1.2	25	1.3
191.5	Ventricles	31	2.9	30	3.6	61	3.2
191.6	Cerebellum nos	130	12.1	94	11.3	224	11.8
191.7	Brain stem	33	3.1	48	5.8	81	4.3
191.8	Other parts of brain	47	4.4	30	3.6	77	4.0
191.9	Brain, unspecified	486	45.4	363	43.6	849	44.6
192	NERVOUS SYSTEM	90	100.0	99	100.0	189	100.0
192.0	Cranial nerves	5	5.6	10	10.1	15	7.9
192.1	Cerebral meninges	41	45.6	57	57.6	98	51.9
192.2	Spinal cord	31	34.4	14	14.1	45	23.8
192.3	Spinal meninges	1	1.1	2	2.0	3	1.6
192.8	Other specified sites of nervous system	1	1.1	0	0.0	1	0.5
192.9	Nervous system, part unspecified	11	12.2	16	16.2	27	14.3
193	THYROID	942	100.0	3140	100.0	4082	100.0
193.9	The thyroid gland, unspecified	942	100.0	3140	100.0	4082	100.0
194	OTHER ENDOCRINE	229	100.0	168	100.0	397	100.0
194.0	Adrenal gland	93	40.6	80	47.6	173	43.6
194.1	Parathyroid gland	1	0.4	4	2.4	5	1.3
194.3	Pituitary gland and craniopharyngeal duct	55	24.0	43	25.6	98	24.7
194.4	Pineal gland	59	25.8	16	9.5	75	18.9
194.5	Carotid body	5	2.2	11	6.5	16	4.0
194.6	Aortic body and other paraganglia	11	4.8	14	8.3	25	6.3
194.8	Other endocrine glands and related structures, other	2	0.9	0	0.0	2	0.5
194.9	Endocrine gland, site unspecified	3	1.3	0	0.0	3	0.8

10. Multiple Primary Cancers

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 6842 multiple primary cancers were registered among the resident population for the period 1968 to 2007: 6593 patients with two primaries, 243 with three primaries and 6 with 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, 1968-2007

SITE	ICD9	As first primary	As second primary	As third or fourth primary	Total number of occurrences
Colon	153	745	711	29	1485
Breast	174	846	533	11	1390
Lung	162	270	974	29	1273
Skin	173	631	393	26	1050
Stomach	151	374	565	18	957
Rectum	154	448	472	15	935
Prostate	185	288	327	20	635
Cervix	180	437	152	1	590
Bladder	188	284	277	9	570
Corpus uteri	182	283	254	6	543
Nasopharynx	147	383	138	7	528
Ovary	183	227	278	6	511
Lymphomas	200-2	202	202	8	412
Kidney	189	186	176	10	372
Thyroid	193	222	121	4	347
Larynx	161	221	104	4	329
Oesophagus	150	98	165	8	271
Liver	155	46	168	9	223
Leukaemias	204-8	70	116	8	194
Tongue	141	65	80	4	149
Mouth	143-5	71	58	2	131
Connective tissue	171	50	48	2	100
Pancreas	157	18	76	1	95
Gallbladder,etc	156	30	52	1	83
Nasal cavity	160	25	44	0	69
Vagina and vulva	184	23	41	3	67
Oropharynx	146	33	29	2	64
Small intestine	152	20	42	2	64
Salivary gland	142	35	18	5	58
Hypopharynx	148	24	32	1	57
Other & unspecified	187	196	4		387
Total		6842	6842	255	

¹ Listed in order of frequency.

Table 10.2 MULTIPLE CANCERS: SITE DISTRIBUTION OF SECOND AND SUBSEQUENT CANCERS IN RELATION TO FIRST PRIMARY SITE, 1968-2007

First primary SITE	ICD-9	141	142	143-5	146	147	148	150	151	152	153	154	155	156	157	160
Tongue	141	0	2	4	1	2	12	6	0	3	5	1	0	0	0	0
Salivary gland	142	2	0	1	3	0	0	5	0	3	2	0	0	0	0	1
Mouth	143-5	7	0	1	0	0	0	10	8	0	4	3	1	1	0	2
Oropharynx	146	3	0	2	4	1	5	1	0	0	1	0	0	0	0	0
Nasopharynx	147	31	5	11	6	2	2	16	1	24	22	11	5	2	19	19
Hypopharynx	148	0	0	1	1	0	4	2	0	1	0	0	0	0	0	0
Oesophagus	150	0	0	5	0	1	8	30	1	2	9	2	0	0	0	0
Stomach	151	0	1	4	2	11	4	11	2	88	43	13	1	3	1	3
Small intestine	152	0	0	0	0	0	0	0	2	5	3	0	0	1	0	0
Colon	153	5	1	3	0	18	1	21	99	2	66	20	11	12	3	3
Rectum	154	1	0	2	3	8	3	13	54	6	49	14	4	3	1	1
Liver	155	1	0	0	0	2	0	2	4	0	3	3	0	0	0	0
Gallbladder,etc	156	0	0	0	0	1	0	1	1	0	8	3	2	2	0	0
Pancreas	157	1	0	0	0	0	0	0	1	0	1	4	0	1	0	0
Nasal cavity	160	0	0	1	0	0	0	0	1	0	2	2	1	0	0	0
Larynx	161	1	1	2	3	1	23	15	0	26	17	7	0	1	1	1
Lung	162	8	0	3	3	10	2	10	33	4	34	19	5	0	4	3
Connective tissue	171	2	0	0	0	3	0	3	10	0	6	6	1	0	0	0
Skin	173	4	3	4	1	4	3	15	66	5	82	43	28	6	9	4
Breast	174	3	7	6	0	18	0	12	67	5	121	57	11	10	12	2
Cervix	180	1	0	3	1	9	2	5	28	5	47	43	6	1	4	0
Corpus uteri	182	1	1	0	1	3	0	1	9	2	35	21	5	3	3	1
Ovary	183	0	1	0	1	3	0	3	10	1	26	22	4	1	4	0
Vagina and vulva	184	0	0	0	0	0	0	0	1	0	4	2	0	0	0	0
Prostate	185	0	0	5	1	8	0	1	32	0	54	21	9	3	2	1
Bladder	188	1	1	0	0	6	0	8	19	1	37	22	12	1	2	2
Kidney	189	1	0	2	1	1	1	1	17	1	20	12	4	3	2	0
Thyroid	193	4	2	0	0	12	1	1	7	2	19	9	4	1	4	0
Lymphomas	200-2	4	0	1	1	10	1	2	19	6	14	13	10	0	2	0
Leukaemias	204-8	1	0	2	0	2	1	1	5	0	8	4	0	1	2	0
Other & unspecified	2	0	1	2	4	0	6	15	0	14	10	6	0	3	2	2

Table 10.2 MULTIPLE CANCERS: SITE DISTRIBUTION OF SECOND AND SUBSEQUENT CANCERS IN RELATION TO FIRST PRIMARY SITE, 1968-2007

First primary SITE	ICD-9	Second or subsequent primary										200-2	204-8	
		161	162	171	173	174	180	182	183	184	185	188	189	
Tongue	141	8	8	0	3	1	1	1	0	4	0	2	0	0
Salivary gland	142	0	0	0	4	6	0	0	0	0	0	0	2	3
Mouth	143-5	5	18	0	5	0	2	1	0	0	1	3	0	0
Oropharynx	146	1	6	0	4	2	0	0	0	0	1	2	0	0
Nasopharynx	147	7	64	6	35	22	10	6	0	22	5	4	5	15
Hypopharynx	148	1	7	0	3	0	0	0	0	0	2	1	1	0
Oesophagus	150	7	17	0	7	0	0	0	0	4	1	2	1	3
Stomach	151	9	58	4	30	21	7	1	4	0	24	9	14	4
Small intestine	152	0	2	0	1	0	0	0	3	1	3	0	0	0
Colon	153	10	93	3	60	60	26	27	33	2	64	37	29	20
Rectum	154	13	74	2	28	45	10	16	9	1	34	21	21	4
Liver	155	0	11	1	3	3	1	1	0	0	3	4	0	1
Gallbladder,etc	156	0	6	0	0	1	2	1	0	0	0	0	1	0
Pancreas	157	0	1	0	0	4	0	0	0	0	1	0	0	0
Nasal cavity	160	0	3	0	4	3	2	1	0	0	0	0	0	1
Larynx	161	64	4	15	0	1	0	0	0	19	9	1	6	5
Lung	162	9	3	20	19	5	5	2	0	21	17	10	9	5
Connective tissue	171	1	7	1	8	0	0	0	0	1	0	0	1	0
Skin	173	13	125	3	50	9	6	5	0	50	35	4	9	26
Breast	174	1	79	6	61	51	123	80	8	0	16	14	24	41
Cervix	180	2	92	2	19	61	23	23	0	15	6	7	7	5
Corpus uteri	182	2	25	1	6	56	3	96	2	0	6	8	6	2
Ovary	183	0	20	1	3	60	7	28	4	0	9	6	4	5
Vagina and vulva	184	1	3	0	2	2	3	0	1	0	0	2	1	0
Prostate	185	6	52	3	23	0	0	0	0	30	11	2	15	4
Bladder	188	0	56	3	15	7	0	0	1	0	49	28	4	5
Kidney	189	2	20	3	11	7	0	1	2	2	19	45	1	4
Thyroid	193	2	20	2	9	66	3	13	5	0	8	6	5	6
Lymphomas	200-2	2	31	2	22	14	3	3	0	9	5	4	5	9
Leukaemias	204-8	3	8	0	10	5	3	1	2	0	3	3	1	2
Other & unspecified	3	33	1	15	18	4	2	8	1	5	7	10	5	4

Table 10.3 MOST FREQUENT MULTIPLE PRIMARY SITES

First Primary	First Most Frequent Multiple Primary Site	Second Most Frequent Multiple Primary Site
Tongue	Oesophagus	
Salivary Gland	Breast	Stomach
Mouth	Lung	Oesophagus
Oropharynx	Lung	Oesophagus
Stomach	Colon	Lung
Small Intestine	Colon	
Colon	Stomach	Lung
Rectum	Lung	Stomach
Liver	Lung	
Gallbladder	Colon	Lung
Pancreas	Breast*	Rectum
Nasal Cavity	Skin	
Larynx	Lung	Colon
Lung	Colon	Stomach
Connective Tissue	Stomach	Breast
Skin	Lung	Colon
Breast	Corpus Uteri	Colon
Cervix	Lung	Breast
Corpus Uteri	Ovary	Breast
Ovary	Breast	Corpus Uteri
Vagina & vulva	Colon	
Prostate	Colon	Lung
Bladder	Lung	Prostate
Kidney	Bladder	
Thyroid	Breast	Lung
Lymphomas	Lung	Skin
Leukaemias	Colon*	Skin

* Tied in ranking with second most frequent multiple primary site.

11 HISTOLOGIC TYPES

Table 11.1 shows the numbers of cancers by histologic type as notified, for the period 1998-2007. 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.

Table 11.2 shows the number of cervical carcinoma in-situ reported in Singapore female residents for the seven 5-year periods. The national CervicalScreen Singapore programme was launched in 2004 to encourage women aged 25-69 who ever had sex to go for Pap smears once every 3 years.

Table 11.1 HISTOLOGIC TYPE BY SITE, 1998-2007

SITE	HISTOLOGY	1998-2002	2003-2007	1998-2007	%
		NO.	NO.	NO.	
Lip (ICD-9 140)					
	Squamous Cell Carcinoma	1	5	6	50.0
	Adenocarcinoma, NOS	1	2	3	25.0
	Basaloid Squamous Cell Carcinoma	0	1	1	8.3
	Adenoid Cystic Carcinoma	0	1	1	8.3
	Mucoepidermoid Carcinoma	0	1	1	8.3
	Total with histology	2	10	12	100.0
	All cases	2	10	12	
Tongue (ICD-9 141)					
	Squamous Cell Carcinoma	199	208	407	94.2
	Adenoid Cystic Carcinoma	3	4	7	1.6
	Carcinoma, NOS	2	4	6	1.4
	Mucoepidermoid Carcinoma	2	3	5	1.2
	Adenocarcinoma, NOS	1	1	2	0.5
	Carcinoma, Undifferentiated	1	0	1	0.2
	Small Cell Carcinoma	0	1	1	0.2
	Lymphoepithelial Carcinoma	1	0	1	0.2
	Basaloid Squamous Cell Carcinoma	0	1	1	0.2
	Paraganglioma, Malignant	1	0	1	0.2

SITE	HISTOLOGY	1998-2002	2003-2007	1998-2007	%
		NO.	NO.	NO.	
Tongue (ICD-9 141) Cont'd					
	Total with histology	210	222	432	100.0
	All cases	214	226	440	
Salivary gland (ICD-9 142)					
	Mucoepidermoid Carcinoma	19	41	60	24.5
	Adenoid Cystic Carcinoma	27	20	47	19.2
	Acinar Cell Carcinoma	24	14	38	15.5
	Adenocarcinoma, NOS	7	14	21	8.6
	Lymphoepithelial Carcinoma	7	11	18	7.3
	Squamous Cell Carcinoma	5	7	12	4.9
	Carcinoma In Pleomorphic Adenoma	5	4	9	3.7
	Carcinoma, NOS	4	4	8	3.3
	Basal Cell Adenocarcinoma	6	2	8	3.3
	Epithelial-Myoepithelial Carcinoma	5	3	8	3.3
	Neoplasm, Malignant, NOS	1	3	4	1.6
	Cystadenocarcinoma	2	1	3	1.2
	Duct Carcinoma	0	2	2	0.8
	Malignant Myoepithelioma	1	1	2	0.8
	Carcinoma, Undifferentiated	0	1	1	0.4
	Mucinous Adenocarcinoma	1	0	1	0.4
	Adenosquamous Carcinoma	1	0	1	0.4
	Desmoplastic Small Round Cell Tumor	0	1	1	0.4
	Primitive Neuroectodermal Tumor	0	1	1	0.4
	Total with histology	115	130	245	100.0
	All cases	115	130	245	
Mouth (ICD-9 143-145)					
	Squamous Cell Carcinoma	145	146	291	77.4
	Mucoepidermoid Carcinoma	19	14	33	8.8
	Adenoid Cystic Carcinoma	7	6	13	3.5
	Adenocarcinoma, NOS	5	7	12	3.2
	Carcinoma, NOS	1	5	6	1.6
	Carcinoma, Undifferentiated	2	2	4	1.1
	Basaloid Squamous Cell Carcinoma	0	3	3	0.8
	Neoplasm, Malignant, NOS	1	1	2	0.5
	Adenosquamous Carcinoma	2	0	2	0.5
	Malignant Melanoma, NOS	1	1	2	0.5
	Sarcoma, NOS	1	1	2	0.5
	Clear Cell Adenocarcinoma	0	1	1	0.3
	Mucinous Adenocarcinoma	0	1	1	0.3
	Rhabdomyosarcoma	0	1	1	0.3
	Carcinoma In Pleomorphic Adenoma	1	0	1	0.3
	Mesenchymoma, Malignant	1	0	1	0.3

SITE	HISTOLOGY	1998-2002	2003-2007	1998-2007	%
		NO.	NO.	NO.	
Mouth (ICD-9 143-145) Cont'd					
	Hemangiosarcoma	1	0	1	0.3
	Total with histology	187	189	376	100.0
	All cases	187	190	377	
Oropharynx (ICD-9 146)					
	Squamous Cell Carcinoma	91	92	183	88.4
	Carcinoma, Undifferentiated	4	6	10	4.8
	Carcinoma, NOS	3	2	5	2.4
	Lymphoepithelial Carcinoma	3	0	3	1.4
	Adenocarcinoma, NOS	2	0	2	1.0
	Basaloid Squamous Cell Carcinoma	0	1	1	0.5
	Mucoepidermoid Carcinoma	0	1	1	0.5
	Sarcoma, NOS	1	0	1	0.5
	Hemangiopericytoma, Malignant	0	1	1	0.5
	Total with histology	104	103	207	100.0
	All cases	104	105	209	
Nasopharynx (ICD-9 147)					
	Carcinoma, Undifferentiated	1265	1338	2603	85.1
	Carcinoma, NOS	106	162	268	8.8
	Squamous Cell Carcinoma	83	71	154	5.0
	Adenocarcinoma, NOS	7	4	11	0.4
	Neuroendocrine Carcinoma	3	3	6	0.2
	Neoplasm, Malignant, NOS	1	4	5	0.2
	Adenoid Cystic Carcinoma	0	2	2	0.1
	Basaloid Squamous Cell Carcinoma	0	1	1	0.0
	Basaloid Carcinoma	0	1	1	0.0
	Mucoepidermoid Carcinoma	1	0	1	0.0
	Adenosquamous Carcinoma	0	1	1	0.0
	Adenocarcinoma With Neuroendocrine Differentiation	0	1	1	0.0
	Malignant Melanoma, NOS	1	0	1	0.0
	Embryonal Rhabdomyosarcoma	0	1	1	0.0
	Carcinosarcoma	0	1	1	0.0
	Teratoma, Malignant	0	1	1	0.0
	Total with histology	1467	1591	3058	100.0
	All cases	1477	1601	3078	
Hypopharynx (ICD-9 148)					
	Squamous Cell Carcinoma	85	111	196	94.7
	Carcinoma, NOS	3	3	6	2.9
	Carcinoma, Undifferentiated	0	3	3	1.4
	Adenocarcinoma, NOS	0	1	1	0.5

SITE	HISTOLOGY	1998-2002	2003-2007	1998-2007	%
		NO.	NO.	NO.	
Hypopharynx (ICD-9 148) Cont'd					
	Adenoid Cystic Carcinoma	0	1	1	0.5
	Total with histology	88	119	207	100.0
	All cases	91	121	212	
Oesophagus (ICD-9 150)					
	Squamous Cell Carcinoma	382	320	702	79.2
	Adenocarcinoma, NOS	55	41	96	10.8
	Carcinoma, NOS	20	14	34	3.8
	Small Cell Carcinoma	7	3	10	1.1
	Mucinous Adenocarcinoma	6	3	9	1.0
	Basaloid Squamous Cell Carcinoma	0	6	6	0.7
	Neuroendocrine Carcinoma	3	3	6	0.7
	Adenosquamous Carcinoma	4	2	6	0.7
	Carcinoma, Undifferentiated	2	2	4	0.5
	Smooth Muscle Tumor, Borderline	1	2	3	0.3
	Gastrointestinal Stromal Sarcoma	0	3	3	0.3
	Neoplasm, Malignant, NOS	1	1	2	0.2
	Malignant Melanoma	2	0	2	0.2
	Leiomyosarcoma	2	0	2	0.2
	Carcinosarcoma	1	0	1	0.1
	Total with histology	486	400	886	100.0
	All cases	506	421	927	
Stomach (ICD-9 151)					
	Adenocarcinoma, NOS	1482	1157	2639	58.7
	Signet Ring Cell Carcinoma	373	430	803	17.8
	Adenocarcinoma, Intestinal Type	222	263	485	10.8
	Gastrointestinal Stromal Sarcoma	59	117	176	3.9
	Carcinoma, Diffuse Type	66	104	170	3.8
	Carcinoma, NOS	29	31	60	1.3
	Mucinous Adenocarcinoma	21	33	54	1.2
	Neuroendocrine Carcinoma	19	20	39	0.9
	Neoplasm, Malignant, NOS	7	10	17	0.4
	Squamous Cell Carcinoma	5	8	13	0.3
	Leiomyosarcoma	11	2	13	0.3
	Carcinoma, Undifferentiated	2	6	8	0.2
	Adenosquamous Carcinoma	4	4	8	0.2
	Small Cell Carcinoma	1	3	4	0.1
	Adenocarcinoma With Neuroendocrine Differentiation	0	2	2	0.0
	Malignant Melanoma	0	2	2	0.0
	Smooth Muscle Tumor, Borderline	2	0	2	0.0
	Lymphoepithelial Carcinoma	0	1	1	0.0

SITE	HISTOLOGY	1998-2002	2003-2007	1998-2007	%
		NO.	NO.	NO.	
Stomach (ICD-9 151) Cont'd					
Hepatoid Adenocarcinoma	0	1	1	1	0.0
Sarcoma, NOS	1	0	1	1	0.0
Carcinosarcoma	0	1	1	1	0.0
Total with histology	2304	2195	4499	4679	100.0
All cases	2419	2260	4679		
Small intestine (ICD-9 152)					
Adenocarcinoma, NOS	54	56	110	40.7	
Gastrointestinal Stromal Sarcoma	25	52	77	28.5	
Neuroendocrine Carcinoma	13	21	34	12.6	
Mucinous Adenocarcinoma	8	5	13	4.8	
Carcinoma, NOS	4	4	8	3.0	
Leiomyosarcoma	6	2	8	3.0	
Neoplasm, Malignant, NOS	2	4	6	2.2	
Carcinoma, Undifferentiated	2	2	4	1.5	
Sarcoma, NOS	2	1	3	1.1	
Squamous Cell Carcinoma	0	1	1	0.4	
Adenosquamous Carcinoma	1	0	1	0.4	
Malignant Fibrous Histiocytoma	1	0	1	0.4	
Liposarcoma, NOS	1	0	1	0.4	
Smooth Muscle Tumor, Borderline	1	0	1	0.4	
Hemangiosarcoma	0	1	1	0.4	
Kaposi Sarcoma	1	0	1	0.4	
Total with histology	121	149	270	100.0	
All cases	129	151	280		
Colon (ICD-9 153)					
Adenocarcinoma, NOS	3233	3739	6972	89.8	
Mucinous Adenocarcinoma	213	390	603	7.8	
Neuroendocrine Carcinoma	39	46	85	1.1	
Carcinoma, NOS	31	22	53	0.7	
Neoplasm, Malignant, NOS	6	3	9	0.1	
Carcinoma, Undifferentiated	6	3	9	0.1	
Mucinous Cystic Tumor, Borderline	1	7	8	0.1	
Gastrointestinal Stromal Sarcoma	5	3	8	0.1	
Adenosquamous Carcinoma	1	4	5	0.1	
Squamous Cell Carcinoma	1	1	2	0.0	
Adenocarcinoma With Neuroendocrine Differentiation	0	2	2	0.0	
Leiomyosarcoma	1	1	2	0.0	
Small Cell Carcinoma	1	0	1	0.0	
Sarcoma, NOS	0	1	1	0.0	
Rhabdomyosarcoma	1	0	1	0.0	

SITE	HISTOLOGY	1998-2002	2003-2007	1998-2007	%
		NO.	NO.	NO.	
Colon (ICD-9 153) Cont'd					
	Total with histology	3539	4222	7761	100.0
	All cases	3703	4432	8135	
Rectum and Anus (ICD-9 154)					
	Adenocarcinoma, NOS	2118	2480	4598	89.1
	Mucinous Adenocarcinoma	112	140	252	4.9
	Neuroendocrine Carcinoma	65	101	166	3.2
	Squamous Cell Carcinoma	28	19	47	0.9
	Carcinoma, NOS	10	14	24	0.5
	Gastrointestinal Stromal Sarcoma	10	8	18	0.3
	Malignant Melanoma	7	8	15	0.3
	Basaloid Carcinoma	8	3	11	0.2
	Neoplasm, Malignant, NOS	4	4	8	0.2
	Basaloid Squamous Cell Carcinoma	0	5	5	0.1
	Cloacogenic Carcinoma	2	2	4	0.1
	Paget Disease, Extramammary	2	2	4	0.1
	Small Cell Carcinoma	2	0	2	0.0
	Adenosquamous Carcinoma	1	1	2	0.0
	Leiomyosarcoma	2	0	2	0.0
	Carcinosarcoma	0	1	1	0.0
	Kaposi Sarcoma	1	0	1	0.0
	Total with histology	2372	2788	5160	100.0
	All cases	2416	2845	5261	
Liver (ICD-9 155)					
	Hepatocellular Carcinoma	509	690	1199	81.5
	Adenocarcinoma, NOS	17	69	86	5.8
	Cholangiocarcinoma	35	43	78	5.3
	Carcinoma, NOS	17	26	43	2.9
	Neoplasm, Malignant, NOS	7	11	18	1.2
	Hepatoblastoma	8	8	16	1.1
	Combined Hepatocellular Carcinoma And Cholangiocarcinoma	1	9	10	0.7
	Hemangiosarcoma	0	6	6	0.4
	Neuroendocrine Carcinoma	3	1	4	0.3
	Sarcoma, NOS	2	2	4	0.3
	Hemangioendothelioma, Malignant	1	2	3	0.2
	Carcinosarcoma	1	1	2	0.1
	Small Cell Carcinoma	1	0	1	0.1
	Cystadenocarcinoma	0	1	1	0.1
	Total with histology	602	869	1471	100.0
	All cases	2017	2249	4266	

SITE	HISTOLOGY	1998-2002	2003-2007	1998-2007	%
		NO.	NO.	NO.	
Gall bladder and extrahepatic bile ducts (ICD-9 156)					
Adenocarcinoma, NOS	275	265	540	88.1	
Carcinoma, NOS	8	14	22	3.6	
Mucinous Adenocarcinoma	7	12	19	3.1	
Adenosquamous Carcinoma	4	5	9	1.5	
Squamous Cell Carcinoma	2	5	7	1.1	
Neuroendocrine Carcinoma	2	3	5	0.8	
Neoplasm, Malignant, NOS	2	2	4	0.7	
Carcinoma, Undifferentiated	0	2	2	0.3	
Carcinosarcoma	0	2	2	0.3	
Hepatoid Adenocarcinoma	0	1	1	0.2	
Sarcoma, NOS	0	1	1	0.2	
Embryonal Rhabdomyosarcoma	1	0	1	0.2	
Total with histology	301	312	613	100.0	
All cases	392	387	779		
Pancreas (ICD-9 157)					
Adenocarcinoma, NOS	325	523	848	78.1	
Carcinoma, NOS	27	37	64	5.9	
Neoplasm, Malignant, NOS	8	28	36	3.3	
Neuroendocrine Carcinoma	8	22	30	2.8	
Mucinous Adenocarcinoma	11	13	24	2.2	
Carcinoma, Undifferentiated	6	5	11	1.0	
Mucinous Cystadenocarcinoma	7	4	11	1.0	
Solid Pseudopapillary Carcinoma	2	8	10	0.9	
Papillary Adenocarcinoma	2	7	9	0.8	
Islet Cell Carcinoma	2	6	8	0.7	
Signet Ring Cell Carcinoma	3	3	6	0.6	
Intraductal Papillary-Mucinous Carcinoma, Invasive	0	5	5	0.5	
Acinar Cell Carcinoma	2	3	5	0.5	
Adenosquamous Carcinoma	0	4	4	0.4	
Small Cell Carcinoma	1	2	3	0.3	
Mixed Islet Cell And Exocrine					
Adenocarcinoma	1	2	3	0.3	
Cystadenocarcinoma	2	1	3	0.3	
Squamous Cell Carcinoma	0	2	2	0.2	
Adenoid Cystic Carcinoma	1	0	1	0.1	
Leiomyosarcoma	1	0	1	0.1	
Gastrointestinal Stromal Sarcoma	0	1	1	0.1	
Carcinosarcoma	0	1	1	0.1	
Total with histology	409	677	1086	100.0	
All cases	754	1036	1790		

SITE	HISTOLOGY	1998-2002	2003-2007	1998-2007	%
		NO.	NO.	NO.	
Retroperitoneum and Peritoneum (ICD-9 158)					
Liposarcoma, NOS	19	14	33	22.0	
Serous Cystadenocarcinoma	12	11	23	15.3	
Mesothelioma, Malignant	5	9	14	9.3	
Leiomyosarcoma	3	10	13	8.7	
Sarcoma, NOS	9	2	11	7.3	
Adenocarcinoma, NOS	4	4	8	5.3	
Neoplasm, Malignant, NOS	3	3	6	4.0	
Serous Surface Papillary Carcinoma	2	4	6	4.0	
Malignant Fibrous Histiocytoma	4	1	5	3.3	
Retroperitoneal Fibromatosis	3	1	4	2.7	
Stromal Sarcoma	4	0	4	2.7	
Germ Cell Tumor, Nonseminomatous	3	1	4	2.7	
Paraganglioma, Malignant	0	3	3	2.0	
Neuroblastoma	1	2	3	2.0	
Malignant Peripheral Nerve Sheath Tumor	1	2	3	2.0	
Mucinous Cystadenocarcinoma	1	1	2	1.3	
Smooth Muscle Tumor, Borderline	0	2	2	1.3	
Embryonal Rhabdomyosarcoma	1	1	2	1.3	
Neuroendocrine Carcinoma	1	0	1	0.7	
Gastrointestinal Stromal Sarcoma	0	1	1	0.7	
Synovial Sarcoma	0	1	1	0.7	
Mixed Germ Cell Tumor	0	1	1	0.7	
Total with histology	76	74	150	100.0	
All cases	81	79	160		
Nasal cavities and sinuses (ICD-9 160)					
Squamous Cell Carcinoma	36	47	83	35.8	
Olfactory Neuroblastoma	9	16	25	10.8	
Carcinoma, Undifferentiated	7	12	19	8.2	
Schneiderian Carcinoma	5	9	14	6.0	
Adenocarcinoma, NOS	6	7	13	5.6	
Adenoid Cystic Carcinoma	6	6	12	5.2	
Sarcoma, NOS	2	7	9	3.9	
Carcinoma, NOS	2	6	8	3.4	
Neuroendocrine Carcinoma	5	3	8	3.4	
Hemangiopericytoma, Malignant	2	5	7	3.0	
Rhabdomyosarcoma	2	4	6	2.6	
Mucoepidermoid Carcinoma	3	1	4	1.7	
Basaloid Squamous Cell Carcinoma	0	3	3	1.3	
Neoplasm, Malignant, NOS	2	0	2	0.9	
Small Cell Carcinoma	0	2	2	0.9	
Mucinous Adenocarcinoma	1	1	2	0.9	
Acinar Cell Carcinoma	0	2	2	0.9	

SITE	HISTOLOGY	1998-2002	2003-2007	1998-2007	%
		NO.	NO.	NO.	
Nasal cavities and sinuses (ICD-9 160) Cont'd					
	Adenosquamous Carcinoma	1	1	2	0.9
	Malignant Melanoma	1	1	2	0.9
	Teratocarcinoma	1	1	2	0.9
	Malignant Peripheral Nerve Sheath Tumor	0	2	2	0.9
	Lymphoepithelial Carcinoma	0	1	1	0.4
	Basal Cell Adenocarcinoma	0	1	1	0.4
	Malignant Fibrous Histiocytoma	1	0	1	0.4
	Leiomyosarcoma	1	0	1	0.4
	Primitive Neuroectodermal Tumor	1	0	1	0.4
	Total with histology	94	138	232	100.0
	All cases	97	138	235	
Larynx (ICD-9 161)					
	Squamous Cell Carcinoma	360	359	719	97.0
	Carcinoma, NOS	2	5	7	0.9
	Spindle Cell Carcinoma	2	2	4	0.5
	Carcinoma, Undifferentiated	3	0	3	0.4
	Neuroendocrine Carcinoma	1	2	3	0.4
	Basaloid Carcinoma	1	1	2	0.3
	Lymphoepithelial Carcinoma	0	1	1	0.1
	Adenocarcinoma, NOS	1	0	1	0.1
	Sarcoma, NOS	0	1	1	0.1
	Total with histology	370	371	741	100.0
	All cases	376	385	761	
Lung (ICD-9 162)					
	Adenocarcinoma, NOS	1884	2120	4004	42.8
	Squamous Cell Carcinoma	985	903	1888	20.2
	Small Cell Carcinoma	479	482	961	10.3
	Non-Small Cell Carcinoma	0	810	810	8.7
	Carcinoma, NOS	613	101	714	7.6
	Large Cell Carcinoma	177	117	294	3.1
	Bronchiolo-Alveolar Adenocarcinoma	70	106	176	1.9
	Neuroendocrine Carcinoma	59	51	110	1.2
	Neoplasm, Malignant, NOS	64	40	104	1.1
	Adenosquamous Carcinoma	42	33	75	0.8
	Carcinoma, Undifferentiated	35	29	64	0.7
	Mucinous Adenocarcinoma	13	23	36	0.4
	Pleomorphic Carcinoma	12	12	24	0.3
	Acinar Cell Carcinoma	1	22	23	0.2
	Lymphoepithelial Carcinoma	7	10	17	0.2
	Clear Cell Adenocarcinoma	5	5	10	0.1
	Mucoepidermoid Carcinoma	2	8	10	0.1

SITE	HISTOLOGY	1998-2002	2003-2007	1998-2007	%
		NO.	NO.	NO.	
Lung (ICD-9 162) Cont'd					
Sarcoma, NOS	3	7	10	0.1	
Spindle Cell Carcinoma	4	3	7	0.1	
Adenoid Cystic Carcinoma	1	5	6	0.1	
Leiomyosarcoma	1	3	4	0.0	
Basaloid Squamous Cell Carcinoma	0	3	3	0.0	
Carcinosarcoma	1	2	3	0.0	
Adenocarcinoma With Mixed Subtypes	0	2	2	0.0	
Solitary Fibrous Tumor, Malignant	0	2	2	0.0	
Lymphangiomymomatosis	0	2	2	0.0	
Adenocarcinoma With Neuroendocrine Differentiation	0	1	1	0.0	
Smooth Muscle Tumor, Borderline	0	1	1	0.0	
Pulmonary Blastoma	1	0	1	0.0	
Epitheloid Hemangio Endothelioma, Malignant	1	0	1	0.0	
Hemangiopericytoma, Malignant	1	0	1	0.0	
Total with histology	4461	4903	9364	100.0	
All cases	5199	5696	10895		
Pleura (ICD-9 163)					
Mesothelioma, Malignant	32	42	74	94.9	
Neoplasm, Malignant, NOS	1	2	3	3.8	
Sarcoma, NOS	0	1	1	1.3	
Total with histology	33	45	78	100.0	
All cases	33	48	81		
Thymus and mediastinum (ICD-9 164)					
Thymoma, NOS	53	19	72	32.1	
Thymoma, Type B2	0	23	23	10.3	
Thymoma, Type B3	0	16	16	7.1	
Germ Cell Tumour, NOS	4	11	15	6.7	
Thymoma, Type Ab	0	14	14	6.3	
Thymic Carcinoma	0	11	11	4.9	
Neuroendocrine Carcinoma	6	3	9	4.0	
Thymoma, Type B1	0	9	9	4.0	
Squamous Cell Carcinoma	2	6	8	3.6	
Carcinoma, NOS	5	1	6	2.7	
Thymoma, Type A	0	6	6	2.7	
Yolk Sac Tumor	2	4	6	2.7	
Sarcoma, NOS	1	3	4	1.8	
Liposarcoma, Well Differentiated	2	2	4	1.8	
Teratoma, Malignant	3	1	4	1.8	
Embryonal Carcinoma	2	1	3	1.3	
Rhabdomyosarcoma	0	2	2	0.9	

SITE	HISTOLOGY	1998-2002	2003-2007	1998-2007	%
		NO.	NO.	NO.	
Thymus and mediastinum (ICD-9 164) Cont'd					
Synovial Sarcoma	2	0	2	2	0.9
Mixed Germ Cell Tumor	0	2	2	2	0.9
Neuroblastoma	0	2	2	2	0.9
Lymphoepithelial Carcinoma	0	1	1	1	0.4
Paraganglioma, Malignant	0	1	1	1	0.4
Carcinosarcoma	0	1	1	1	0.4
Hemangiosarcoma	0	1	1	1	0.4
Primitive Neuroectodermal Tumor	1	0	1	1	0.4
Malignant Peripheral Nerve Sheath Tumor	0	1	1	1	0.4
Total with histology	83	141	224	240	100.0
All cases	88	152	240		
Bone (ICD-9 170)					
Osteosarcoma	43	43	86	86	36.6
Giant Cell Tumor Of Bone	18	37	55	55	23.4
Chondrosarcoma	22	23	45	45	19.1
Ewing Sarcoma	6	8	14	14	6.0
Sarcoma, NOS	6	6	12	12	5.1
Chordoma	5	6	11	11	4.7
Osteochondromatosis	2	1	3	3	1.3
Ameloblastoma, Malignant	1	2	3	3	1.3
Malignant Fibrous Histiocytoma	1	0	1	1	0.4
Synovial Sarcoma	0	1	1	1	0.4
Hemangiosarcoma	0	1	1	1	0.4
Mesenchymal Chondrosarcoma	0	1	1	1	0.4
Adamantinoma Of Long Bones	1	0	1	1	0.4
Odontogenic Tumor, Malignant	0	1	1	1	0.4
Total with histology	105	130	235	244	100.0
All cases	112	132	244		
Connective tissues (ICD-9 171)					
Sarcoma, NOS	31	28	59	59	11.3
Malignant Fibrous Histiocytoma	27	21	48	48	9.2
Malignant Peripheral Nerve Sheath Tumor	19	26	45	45	8.6
Leiomyosarcoma	16	26	42	42	8.0
Liposarcoma, Well Differentiated	6	33	39	39	7.5
Synovial Sarcoma	11	22	33	33	6.3
Myxoid Liposarcoma	12	15	27	27	5.2
Liposarcoma, NOS	14	7	21	21	4.0
Primitive Neuroectodermal Tumor	6	15	21	21	4.0
Fibromyxosarcoma	4	16	20	20	3.8
Hemangiosarcoma	10	10	20	20	3.8
Giant Cell Sarcoma	3	9	12	12	2.3

SITE	HISTOLOGY	1998-2002	2003-2007	1998-2007	%
		NO.	NO.	NO.	
Connective tissues (ICD-9 171) Cont'd					
Pleomorphic Liposarcoma	7	4	11	2.1	
Kaposi Sarcoma	4	7	11	2.1	
Epithelioid Sarcoma	2	7	9	1.7	
Rhabdomyosarcoma, NOS	5	4	9	1.7	
Neuroblastoma	3	6	9	1.7	
Fibrosarcoma	5	2	7	1.3	
Dedifferentiated Liposarcoma	1	6	7	1.3	
Smooth Muscle Tumor, Borderline	4	3	7	1.3	
Myxoid Chondrosarcoma	5	2	7	1.3	
Neoplasm, Malignant, NOS	2	3	5	1.0	
Aggressive Fibromatosis	1	4	5	1.0	
Embryonal Rhabdomyosarcoma	3	2	5	1.0	
Chondrosarcoma	1	4	5	1.0	
Alveolar Soft Part Sarcoma	3	2	5	1.0	
Myxosarcoma	3	1	4	0.8	
Angiomyxoma	1	3	4	0.8	
Clear Cell Sarcoma	2	2	4	0.8	
Abdominal Fibromatosis	1	2	3	0.6	
Round Cell Liposarcoma	0	3	3	0.6	
Malignant Rhabdoid Tumor	3	0	3	0.6	
Infantile Fibrosarcoma	1	1	2	0.4	
Myofibroblastic Tumor	0	2	2	0.4	
Mesenchymal Chondrosarcoma	0	2	2	0.4	
Glomus Tumor, Malignant	0	1	1	0.2	
Fibroblastic Liposarcoma	0	1	1	0.2	
Alveolar Rhabdomyosarcoma	1	0	1	0.2	
Gastrointestinal Stromal Sarcoma	0	1	1	0.2	
Malignant Myoepithelioma	0	1	1	0.2	
Malignant Tenosynovial Giant Cell Tumor	0	1	1	0.2	
Total with histology	217	305	522	100.0	
All cases	223	311	534		
Melanoma of skin (ICD-9 172)					
Malignant Melanoma, NOS	58	62	120	66.3	
Acral Lentiginous Melanoma, Malignant	7	18	25	13.8	
Superficial Spreading Melanoma	1	14	15	8.3	
Nodular Melanoma	4	8	12	6.6	
Lentigo Maligna Melanoma	1	1	2	1.1	
Desmoplastic Melanoma, Malignant	2	0	2	1.1	
Spindle Cell Melanoma	1	1	2	1.1	
Balloon Cell Melanoma	0	1	1	0.6	
Amelanotic Melanoma	0	1	1	0.6	
Blue Nevus, Malignant	1	0	1	0.6	

SITE	HISTOLOGY	1998-2002	2003-2007	1998-2007	%
		NO.	NO.	NO.	
Melanoma of skin (ICD-9 172) Cont'd					
	Total with histology	75	106	181	100.0
	All cases	77	106	183	
Skin, excluding melanoma (ICD-9 173)					
	Basal Cell Carcinoma	982	984	1966	60.3
	Squamous Cell Carcinoma	375	457	832	25.5
	Dermatofibrosarcoma	50	48	98	3.0
	Basal Cell Carcinoma, Nodular	0	72	72	2.2
	Basosquamous Carcinoma	28	22	50	1.5
	Sebaceous Adenocarcinoma	23	18	41	1.3
	Hemangiosarcoma	15	14	29	0.9
	Skin Appendage Carcinoma, NOS	14	8	22	0.7
	Carcinoma, NOS	15	5	20	0.6
	Sweat Gland Adenocarcinoma	12	6	18	0.6
	Paget Disease, Extramammary	6	9	15	0.5
	Adenocarcinoma, NOS	7	5	12	0.4
	Eccrine Poroma, Malignant	0	11	11	0.3
	Neoplasm, Malignant, NOS	5	5	10	0.3
	Merkel Cell Carcinoma	3	6	9	0.3
	Trichilemmocarcinoma	1	7	8	0.2
	Adenoid Cystic Carcinoma	6	2	8	0.2
	Kaposi Sarcoma	4	4	8	0.2
	Mucinous Adenocarcinoma	2	3	5	0.2
	Adenoid Basal Carcinoma	0	3	3	0.1
	Malignant Fibrous Histiocytoma	3	0	3	0.1
	Basaloid Squamous Cell Carcinoma	0	2	2	0.1
	Squamous Cell Carcinoma, Clear Cell Type	0	2	2	0.1
	Neuroendocrine Carcinoma	2	0	2	0.1
	Apocrine Adenocarcinoma	1	1	2	0.1
	Mucoepidermoid Carcinoma	2	0	2	0.1
	Lymphangiosarcoma	1	1	2	0.1
	Malignant Peripheral Nerve Sheath Tumor	2	0	2	0.1
	Small Cell Carcinoma	1	0	1	0.0
	Pilomatrix Carcinoma	0	1	1	0.0
	Ceruminous Adenocarcinoma	0	1	1	0.0
	Sarcoma, NOS	0	1	1	0.0
	Leiomyosarcoma	1	0	1	0.0
	Carcinosarcoma	0	1	1	0.0
	Total with histology	1561	1699	3260	100.0
	All cases	1564	1707	3271	

SITE	HISTOLOGY	1998-2002	2003-2007	1998-2007	%
		NO.	NO.	NO.	
Female breast (ICD-9 174)					
Duct Carcinoma	4342	5318	9660	79.1	
Lobular Carcinoma	246	263	509	4.2	
Mucinous Adenocarcinoma	157	183	340	2.8	
Infiltrating Duct And Lobular Carcinoma	99	177	276	2.3	
Phyllodes Tumor, Malignant	124	144	268	2.2	
Carcinoma, NOS	134	85	219	1.8	
Infiltrating Duct Mixed With Other Types Of Carcinoma	0	188	188	1.5	
Tubular Adenocarcinoma	50	47	97	0.8	
Medullary Carcinoma	53	28	81	0.7	
Adenocarcinoma, NOS	49	30	79	0.6	
Papillary Carcinoma	46	27	73	0.6	
Cribriform Carcinoma	46	18	64	0.5	
Paget Disease And Infiltrating Duct Carcinoma Of Breast	8	52	60	0.5	
Comedocarcinoma	35	8	43	0.4	
Neoplasm, Malignant, NOS	30	10	40	0.3	
Intracystic Carcinoma	9	23	32	0.3	
Intraductal Papillary Adenocarcinoma With Invasion	5	20	25	0.2	
Atypical Medullary Carcinoma	0	22	22	0.2	
Paget Disease, Mammary	16	3	19	0.2	
Metaplastic Carcinoma	0	18	18	0.1	
Paget Disease And Intraductal Carcinoma Of Breast	3	14	17	0.1	
Infiltrating Lobular Mixed With Other Types Of Carcinoma	0	15	15	0.1	
Neuroendocrine Carcinoma	4	8	12	0.1	
Squamous Cell Carcinoma	3	5	8	0.1	
Stromal Sarcoma	2	5	7	0.1	
Adenoid Cystic Carcinoma	2	4	6	0.0	
Signet Ring Cell Carcinoma	1	4	5	0.0	
Malignant Fibrous Histiocytoma	4	1	5	0.0	
Sarcoma, NOS	1	3	4	0.0	
Apocrine Adenocarcinoma	0	2	2	0.0	
Intraductal Micropapillary	0	2	2	0.0	
Adenosquamous Carcinoma	2	0	2	0.0	
Adenocarcinoma With Neuroendocrine Differentiation	0	2	2	0.0	
Hemangiosarcoma	0	2	2	0.0	
Osteosarcoma	1	1	2	0.0	
Epithelial-Myoepithelial Carcinoma	1	0	1	0.0	
Malignant Melanoma	1	0	1	0.0	
Leiomyosarcoma	0	1	1	0.0	
Carcinosarcoma	1	0	1	0.0	

SITE	HISTOLOGY	1998-2002	2003-2007	1998-2007	%
		NO.	NO.	NO.	
Female breast (ICD-9 174) Cont'd					
	Adenomyoepithelioma, Malignant	0	1	1	0.0
	Total with histology	5475	6734	12209	100.0
	All cases	5530	6798	12328	
Male breast (ICD-9 175)					
	Duct Carcinoma	18	12	30	78.9
	Papillary Carcinoma	1	1	2	5.3
	Infiltrating Duct Mixed With Other Types Of Carcinoma	0	2	2	5.3
	Adenoid Cystic Carcinoma	1	0	1	2.6
	Tubular Adenocarcinoma	0	1	1	2.6
	Lobular Carcinoma	1	0	1	2.6
	Metaplastic Carcinoma	0	1	1	2.6
	Total with histology	21	17	38	100.0
	All cases	22	17	39	
Cervix uteri (ICD-9 180)					
	Squamous Cell Carcinoma	716	717	1433	70.6
	Adenocarcinoma, NOS	161	113	274	13.5
	Adenosquamous Carcinoma	45	45	90	4.4
	Carcinoma, NOS	39	15	54	2.7
	Mucinous Adenocarcinoma	11	24	35	1.7
	Endometrioid Adenocarcinoma	5	22	27	1.3
	Neuroendocrine Carcinoma	11	8	19	0.9
	Papillary Adenocarcinoma	5	10	15	0.7
	Clear Cell Adenocarcinoma	10	5	15	0.7
	Small Cell Carcinoma	6	7	13	0.6
	Papillary Squamous Cell Carcinoma	4	7	11	0.5
	Adenosarcoma	0	10	10	0.5
	Serous Adenocarcinoma	2	6	8	0.4
	Adenocarcinoma, Endocervical Type	0	4	4	0.2
	Leiomyosarcoma	2	2	4	0.2
	Neoplasm, Malignant, NOS	2	1	3	0.1
	Lymphoepithelial Carcinoma	0	3	3	0.1
	Adenoid Cystic Carcinoma	3	0	3	0.1
	Mullerian Mixed Tumor	0	3	3	0.1
	Malignant Melanoma	0	2	2	0.1
	Sarcoma, NOS	1	1	2	0.1
	Alveolar Soft Part Sarcoma	1	0	1	0.0
	Total with histology	1024	1005	2029	100.0
	All cases	1035	1009	2044	

SITE	HISTOLOGY	1998-2002	2003-2007	1998-2007	%
		NO.	NO.	NO.	
Placenta (ICD-9 181)					
	Choriocarcinoma	6	9	15	93.8
	Placental Site Trophoblastic Tumor	0	1	1	6.3
	Total with histology	6	10	16	100.0
	All cases	7	10	17	
Corpus uteri (ICD-9 182)					
	Endometrioid Adenocarcinoma	459	922	1381	62.2
	Adenocarcinoma, NOS	182	70	252	11.3
	Serous Adenocarcinoma	53	83	136	6.1
	Mullerian Mixed Tumor	39	68	107	4.8
	Leiomyosarcoma	36	42	78	3.5
	Endometrial Stromal Sarcoma	24	35	59	2.7
	Mucinous Adenocarcinoma	19	25	44	2.0
	Smooth Muscle Tumor, Borderline	22	14	36	1.6
	Clear Cell Adenocarcinoma	13	18	31	1.4
	Carcinoma, NOS	13	7	20	0.9
	Adenosquamous Carcinoma	12	8	20	0.9
	Adenosarcoma	7	11	18	0.8
	Carcinosarcoma	4	11	15	0.7
	Sarcoma, NOS	4	3	7	0.3
	Squamous Cell Carcinoma	1	5	6	0.3
	Neuroendocrine Carcinoma	3	2	5	0.2
	Neoplasm, Malignant, NOS	3	0	3	0.1
	Small Cell Carcinoma	1	1	2	0.1
	Mixed Mesenchymal Tumor	1	0	1	0.0
	Total with histology	896	1325	2221	100.0
	All cases	904	1332	2236	
Ovary and uterine adnexa (ICD-9 183)					
	Serous Cystadenocarcinoma	246	282	528	23.0
	Mucinous Cystic Tumor, Borderline	142	186	328	14.3
	Endometrioid Adenocarcinoma	140	159	299	13.1
	Clear Cell Adenocarcinoma	125	170	295	12.9
	Adenocarcinoma, NOS	58	80	138	6.0
	Serous Cystadenoma, Borderline	62	58	120	5.2
	Mucinous Adenocarcinoma	34	63	97	4.2
	Mucinous Cystadenocarcinoma	40	47	87	3.8
	Teratoma, Malignant	40	43	83	3.6
	Granulosa Cell Tumor, Malignant	30	25	55	2.4
	Carcinoma, NOS	10	23	33	1.4
	Mullerian Mixed Tumor	13	14	27	1.2
	Papillary Adenocarcinoma	16	7	23	1.0
	Yolk Sac Tumor	5	13	18	0.8

SITE	HISTOLOGY	1998-2002	2003-2007	1998-2007	%
		NO.	NO.	NO.	
Ovary and uterine adnexa (ICD-9 183) Cont'd					
Serous Papillary Carcinoma	1	16	17	0.7	
Transitional Cell Carcinoma	9	5	14	0.6	
Squamous Cell Carcinoma	6	6	12	0.5	
Neoplasm, Malignant, NOS	1	8	9	0.4	
Dysgerminoma	5	4	9	0.4	
Adenosquamous Carcinoma	6	2	8	0.3	
Sertoli-Leydig Cell Tumor, Poorly Differentiation	2	6	8	0.3	
Mixed Germ Cell Tumor	4	4	8	0.3	
Endometrioid Adenofibroma, Malignant	4	3	7	0.3	
Sarcoma, NOS	2	5	7	0.3	
Sex Cord-Gonadal Stromal Tumor, Malignant, NOS	4	2	6	0.3	
Leiomyosarcoma	1	5	6	0.3	
Neuroendocrine Carcinoma	1	4	5	0.2	
Cystadenocarcinoma	4	1	5	0.2	
Endometrial Stromal Sarcoma	0	5	5	0.2	
Serous Adenocarcinofibroma	0	5	5	0.2	
Clear Cell Adenocarcinofibroma	0	4	4	0.2	
Struma Ovarii, Malignant	4	0	4	0.2	
Small Cell Carcinoma	1	2	3	0.1	
Juvenile Granulosa Cell Tumor, Malignant	1	2	3	0.1	
Clear Cell Cystic Tumor Of Borderline	0	2	2	0.1	
Smooth Muscle Tumor, Borderline	1	1	2	0.1	
Adenosarcoma	2	0	2	0.1	
Adenofibroma, Malignant	0	2	2	0.1	
Sebaceous Adenocarcinoma	1	0	1	0.0	
Sex Cord Tumor With Annular Tubules	0	1	1	0.0	
Steroid Cell Tumor, Malignant	0	1	1	0.0	
Carcinosarcoma	0	1	1	0.0	
Embryonal Carcinoma	1	0	1	0.0	
Gonadoblastoma, Malignant	1	0	1	0.0	
Choriocarcinoma	1	0	1	0.0	
Total with histology	1024	1267	2291	100.0	
All cases	1060	1327	2387		
Vagina and vulva (ICD-9 184)					
Squamous Cell Carcinoma	53	59	112	54.6	
Paget Disease, Extramammary	16	17	33	16.1	
Basal Cell Carcinoma	7	5	12	5.9	
Malignant Melanoma	3	9	12	5.9	
Adenocarcinoma, NOS	2	6	8	3.9	
Carcinoma, NOS	6	1	7	3.4	
Sarcoma, NOS	2	1	3	1.5	

SITE	HISTOLOGY	1998-2002	2003-2007	1998-2007	%
		NO.	NO.	NO.	
Vagina and vulva (ICD-9 184) Cont'd					
	Basosquamous Carcinoma	1	1	2	1.0
	Basaloid Carcinoma	1	1	2	1.0
	Mucinous Adenocarcinoma	2	0	2	1.0
	Dermatofibrosarcoma	1	1	2	1.0
	Angiomyxoma	0	2	2	1.0
	Basaloid Squamous Cell Carcinoma	0	1	1	0.5
	Multifocal Superficial Basal Cell Carcinoma	0	1	1	0.5
	Basal Cell Carcinoma, Nodular	0	1	1	0.5
	Neuroendocrine Carcinoma	0	1	1	0.5
	Adenosquamous Carcinoma	1	0	1	0.5
	Embryonal Rhabdomyosarcoma	0	1	1	0.5
	Stromal Sarcoma	1	0	1	0.5
	Hemangiosarcoma	0	1	1	0.5
	Total with histology	96	109	205	100.0
	All cases	96	110	206	
Prostate (ICD-9 185)					
	Adenocarcinoma, NOS	1008	1170	2178	63.9
	Acinar Cell Carcinoma	262	877	1139	33.4
	Carcinoma, NOS	26	20	46	1.3
	Duct Carcinoma	2	13	15	0.4
	Mucinous Adenocarcinoma	4	3	7	0.2
	Neoplasm, Malignant, NOS	1	5	6	0.2
	Transitional Cell Carcinoma	3	3	6	0.2
	Neuroendocrine Carcinoma	0	4	4	0.1
	Small Cell Carcinoma	2	1	3	0.1
	Sarcoma, NOS	1	0	1	0.0
	Leiomyosarcoma	1	0	1	0.0
	Smooth Muscle Tumor, Borderline	0	1	1	0.0
	Embryonal Rhabdomyosarcoma	1	0	1	0.0
	Primitive Neuroectodermal Tumor	1	0	1	0.0
	Total with histology	1312	2097	3409	100.0
	All cases	1359	2169	3528	
Testis (ICD-9 186)					
	Seminoma	55	65	120	59.4
	Mixed Germ Cell Tumor	15	20	35	17.3
	Yolk Sac Tumor	7	8	15	7.4
	Embryonal Carcinoma	3	7	10	5.0
	Teratoma, Malignant	6	3	9	4.5
	Leydig Cell Tumor, Malignant	0	3	3	1.5
	Rhabdomyosarcoma	0	3	3	1.5
	Spermatocytic Seminoma	2	1	3	1.5

SITE	HISTOLOGY	1998-2002	2003-2007	1998-2007	%
		NO.	NO.	NO.	
Testis (ICD-9 186) Cont'd					
Liposarcoma, Well Differentiated	0	2	2	1.0	
Mucinous Cystadenocarcinoma	0	1	1	0.5	
Germ Cell Tumor, Nonseminomatous	0	1	1	0.5	
Total with histology	88	114	202	100.0	
All cases	90	116	206		
Penis and other male genital organs (ICD-9 187)					
Squamous Cell Carcinoma	41	51	92	60.9	
Paget Disease, Extramammary	10	31	41	27.2	
Adenocarcinoma, NOS	3	3	6	4.0	
Basal Cell Carcinoma	1	2	3	2.0	
Liposarcoma, NOS	1	2	3	2.0	
Rhabdomyosarcoma	3	0	3	2.0	
Skin Appendage Carcinoma	1	0	1	0.7	
Serous Cystadenoma, Borderline					
Malignancy	1	0	1	0.7	
Adenosquamous Carcinoma	0	1	1	0.7	
Total with histology	61	90	151	100.0	
All cases	63	92	155		
Bladder (ICD-9 188)					
Papillary Transitional Cell Carcinoma	399	546	945	57.0	
Transitional Cell Carcinoma, NOS	315	278	593	35.7	
Adenocarcinoma, NOS	22	12	34	2.0	
Carcinoma, NOS	11	9	20	1.2	
Squamous Cell Carcinoma	6	10	16	1.0	
Neoplasm, Malignant, NOS	5	9	14	0.8	
Mucinous Adenocarcinoma	4	4	8	0.5	
Neuroendocrine Carcinoma	6	1	7	0.4	
Paraganglioma, Malignant	2	5	7	0.4	
Small Cell Carcinoma	2	3	5	0.3	
Leiomyosarcoma	3	1	4	0.2	
Sarcoma, NOS	1	1	2	0.1	
Giant Cell Sarcoma	0	1	1	0.1	
Myofibroblastic Tumor	0	1	1	0.1	
Malignant Fibrous Histiocytoma	1	0	1	0.1	
Carcinosarcoma	0	1	1	0.1	
Total with histology	777	882	1659	100.0	
All cases	801	898	1699		
Kidney and other urinary organs (ICD-9 189)					
Renal Cell Carcinoma, NOS	449	593	1042	73.3	
Transitional Cell Carcinoma, NOS	107	133	240	16.9	

SITE	HISTOLOGY	1998-2002	2003-2007	1998-2007	%
		NO.	NO.	NO.	
Kidney and other urinary organs (ICD-9 189) Cont'd					
Carcinoma, NOS	8	18	26	1.8	
Papillary Adenocarcinoma	2	22	24	1.7	
Nephroblastoma	12	8	20	1.4	
Renal Cell Carcinoma, Sarcomatoid	0	14	14	1.0	
Adenocarcinoma, NOS	6	6	12	0.8	
Chromophobe Carcinoma	1	11	12	0.8	
Squamous Cell Carcinoma	4	4	8	0.6	
Neoplasm, Malignant, NOS	4	3	7	0.5	
Sarcoma, NOS	1	2	3	0.2	
Leiomyosarcoma	3	0	3	0.2	
Malignant Rhabdoid Tumor	2	1	3	0.2	
Collecting Duct Carcinoma	0	2	2	0.1	
Malignant Fibrous Histiocytoma	1	1	2	0.1	
Carcinoid Tumor	1	0	1	0.1	
Mucinous Adenocarcinoma	1	0	1	0.1	
Malignant Cystic Nephroma	0	1	1	0.1	
Primitive Neuroectodermal Tumor	0	1	1	0.1	
Total with histology	602	820	1422	100.0	
All cases	748	950	1698		
Eye (ICD-9 190)					
Retinoblastoma	10	15	25	44.6	
Malignant Melanoma	6	9	15	26.8	
Squamous Cell Carcinoma	2	5	7	12.5	
Neoplasm, Malignant, NOS	1	1	2	3.6	
Adenoid Cystic Carcinoma	1	1	2	3.6	
Rhabdomyosarcoma	1	1	2	3.6	
Carcinoma, NOS	0	1	1	1.8	
Basaloid Carcinoma	0	1	1	1.8	
Adenocarcinoma, NOS	0	1	1	1.8	
Total with histology	21	35	56	100.0	
All cases	23	35	58		
Brain and nervous system (ICD-9 191-192)					
Astrocytoma	140	178	318	41.7	
Oligodendrogloma	32	39	71	9.3	
Pilocytic Astrocytoma	19	31	50	6.6	
Ependymoma	21	21	42	5.5	
Medulloblastoma	21	21	42	5.5	
Meningeal Sarcomatosis	0	33	33	4.3	
Glioma, Malignant, NOS	10	15	25	3.3	
Mixed Glioma	6	16	22	2.9	
Primitive Neuroectodermal Tumor	12	8	20	2.6	

SITE	HISTOLOGY	1998-2002	2003-2007	1998-2007	%
		NO.	NO.	NO.	
Brain and nervous system (ICD-9 191-192) Cont'd					
Meningioma, Malignant	8	9	17	2.2	
Germinoma	3	13	16	2.1	
Hemangioblastoma	5	10	15	2.0	
Hemangiopericytoma, Malignant	8	3	11	1.4	
Gliosarcoma	4	7	11	1.4	
Papillary Meningioma	0	9	9	1.2	
Fibrillary Astrocytoma	5	3	8	1.0	
Central Neurocytoma	0	8	8	1.0	
Neoplasm, Malignant, NOS	2	5	7	0.9	
Neuroblastoma	2	3	5	0.7	
Myxopapillary Ependymoma	1	3	4	0.5	
Pleomorphic Xanthoastrocytoma	0	4	4	0.5	
Ganglioglioma, Anaplastic	0	4	4	0.5	
Sarcoma, NOS	1	2	3	0.4	
Subependymoma	1	2	3	0.4	
Malignant Rhabdoid Tumor	2	0	2	0.3	
Mixed Germ Cell Tumor	0	2	2	0.3	
Subependymal Giant Cell Astrocytoma	1	1	2	0.3	
Desmoplastic Infantile Astrocytoma	0	2	2	0.3	
Paraganglioma, Malignant	1	0	1	0.1	
Malignant Melanoma	1	0	1	0.1	
Malignant Fibrous Histiocytoma	1	0	1	0.1	
Choroid Plexus Carcinoma	1	0	1	0.1	
Astroblastoma	0	1	1	0.1	
Chordoid Glioma	0	1	1	0.1	
Total with histology	308	454	762	100.0	
All cases	357	520	877		
Thyroid (ICD-9 193)					
Papillary Carcinoma	571	444	1015	60.6	
Follicular Carcinoma	127	27	154	9.2	
Papillary Carcinoma, Follicular Variant	65	84	149	8.9	
Papillary Microcarcinoma	0	133	133	7.9	
Follicular Carcinoma, Minimally Invasive	0	78	78	4.7	
Medullary Carcinoma	13	19	32	1.9	
Carcinoma, Anaplastic	13	15	28	1.7	
Oxyphilic Carcinoma	13	12	25	1.5	
Carcinoma, NOS	16	8	24	1.4	
Papillary Carcinoma, Encapsulated	0	15	15	0.9	
Neoplasm, Malignant, NOS	1	5	6	0.4	
Insular Carcinoma	0	5	5	0.3	
Squamous Cell Carcinoma	1	2	3	0.2	
Papillary Carcinoma, Columnar Cell	0	3	3	0.2	

SITE	HISTOLOGY	1998-2002	2003-2007	1998-2007	%
		NO.	NO.	NO.	
Thyroid (ICD-9 193) Cont'd					
Mixed Medullary-Papillary Carcinoma	0	2	2	0.1	
Mixed Medullary-Follicular Carcinoma	0	1	1	0.1	
Hemangiosarcoma	1	0	1	0.1	
Total with histology	821	853	1674	100.0	
All cases	831	860	1691		
Other endocrine glands (ICD-9 194)					
Craniopharyngioma	15	14	29	17.7	
Neuroblastoma	18	8	26	15.9	
Germinoma	14	9	23	14.0	
Adrenal Cortical Carcinoma	12	6	18	11.0	
Paraganglioma, Malignant	4	10	14	8.5	
Extra-Adrenal Paraganglioma, Malignant	7	3	10	6.1	
Carcinoma, NOS	4	4	8	4.9	
Pheochromocytoma, Malignant	2	5	7	4.3	
Teratoma, Malignant	3	2	5	3.0	
Glomus Jugulare Tumor	2	2	4	2.4	
Pineoblastoma	1	3	4	2.4	
Adenocarcinoma, NOS	2	1	3	1.8	
Pineocytoma	2	1	3	1.8	
Neoplasm, Malignant, NOS	0	2	2	1.2	
Neuroendocrine Carcinoma	1	1	2	1.2	
Leiomyosarcoma	1	0	1	0.6	
Gastrointestinal Stromal Sarcoma	0	1	1	0.6	
Embryonal Carcinoma	0	1	1	0.6	
Yolk Sac Tumor	0	1	1	0.6	
Mixed Germ Cell Tumor	1	0	1	0.6	
Primitive Neuroectodermal Tumor	1	0	1	0.6	
Total with histology	90	74	164	100.0	
All cases	95	89	184		

Table 11.2 NUMBER OF CASES OF CERVICAL CARCINOMA-IN-SITU IN FEMALE RESIDENTS BY AGE GROUP, 1968-2007

AGE (years)	1968 -1972	1973 -1977	1978 -1982	1983 -1987	1988 -1992	1993 -1997	1998 -2002	2003 -2007	TOTAL
15-19	1	-	-	-	4	1	4	1	11
20-24	10	5	5	9	17	22	23	34	125
25-29	38	68	44	86	117	78	136	125	692
30-34	110	125	107	232	301	218	227	222	1,542
35-39	121	131	112	234	361	337	307	262	1,865
40-44	102	117	110	160	326	282	315	299	1,711
45-49	61	79	74	114	199	216	233	231	1,207
50-54	27	27	31	54	94	103	149	124	609
55-59	8	6	11	25	50	41	70	88	299
60-64	3	6	13	10	27	39	55	53	206
65-69	6	3	4	7	21	27	43	30	141
70-74	1	1	2	8	9	11	9	13	54
75-79	-	2	-	-	4	4	7	8	25
>=80	-	-	2	4	1	4	7	5	23
Unknown	1	1	-	-	5	-	-	-	7
Total	489	571	515	943	1,536	1,383	1,585	1,495	8,517

12 COMMENTARY ON SELECTED SITES

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 IX [24], which uses age-standardized incidence rates from 1998-2002 across all registries. Instances where cities are missing for certain cancer sites are where age-standardized incidence rates are not available.

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

Compared to the past five years, the rates of tongue cancer have seen a slight decline for both males and females. Risk for Indian males has risen nearly two-fold and risk for Malay females has increased more than two-fold compared to 1998-2002 to surpass that of Chinese females. Squamous cell carcinoma accounted for 94% of all specified histological types.

INCIDENCE DATA (2003-2007)		Males		
	No.	% ^a	ASR ^b	RR (95% CI) ^c
All residents	154	0.7	1.5	-
Chinese	122	0.6	1.5	1.0
Malays	5	0.3	0.3	0.3 (0.1-0.7)
Indians	23	2.4	3.1	2.0 (1.3-3.1)

INCIDENCE DATA (2003-2007)		Females		
	No.	% ^a	ASR ^b	RR (95% CI) ^c
All residents	72	0.3	0.6	-
Chinese	50	0.3	0.5	1.0
Malays	12	0.6	0.9	2.0 (1.1-3.7)
Indians	9	0.9	1.4	2.6 (1.3-5.4)

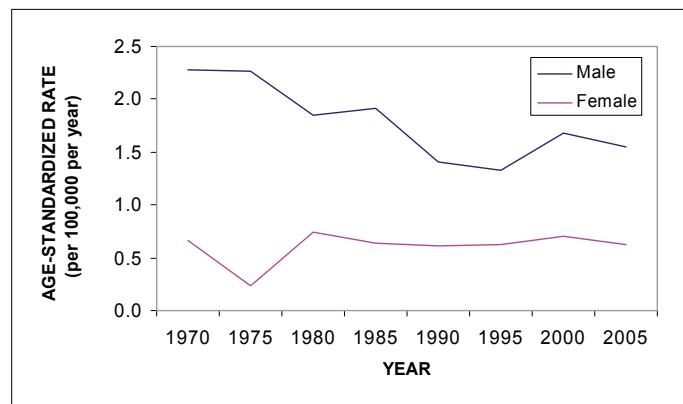
^a percentage of all cancers in this sex-ethnic group

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

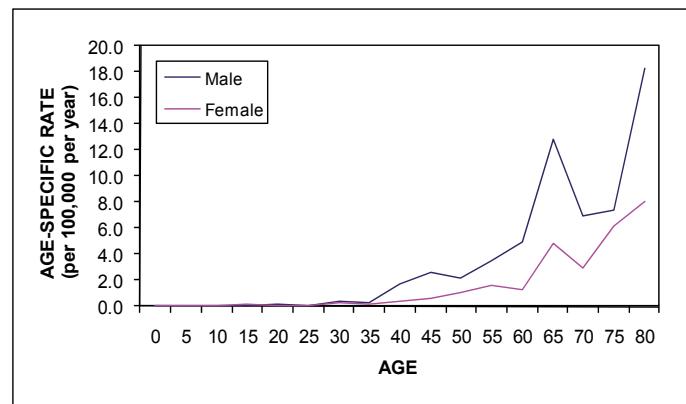
^c age-adjusted relative risk and 95% confidence interval for Malays and Indians (Chinese as reference group)

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

SUBSITES 2003-2007				HISTOLOGY 2003-2007	
ICD9	SUBSITE	Male	Female	NO.	%
141.0	Base	48	12	Squamous Cell Carcinoma	208 93.7
141.1	Dorsal Surface	1	4	Carcinoma, Nos	4 1.8
141.2	Tip and border	6	-	Adenoid Cystic Carcinoma	4 1.8
141.3	Ventral Surface	6	-	Mucoepidermoid Carcinoma	3 1.4
141.4	Ant 2/3	7	8	Small Cell Carcinoma	1 0.5
141.6	Lingual Tonsil	1	-	Basaloid Squamous Cell Carcinoma	1 0.5
141.8	Other	3	-	Adenocarcinoma, Nos	1 0.5
141.9	NOS	82	48	Total with histology	222 100.0
All cases		154	72	All cases	226

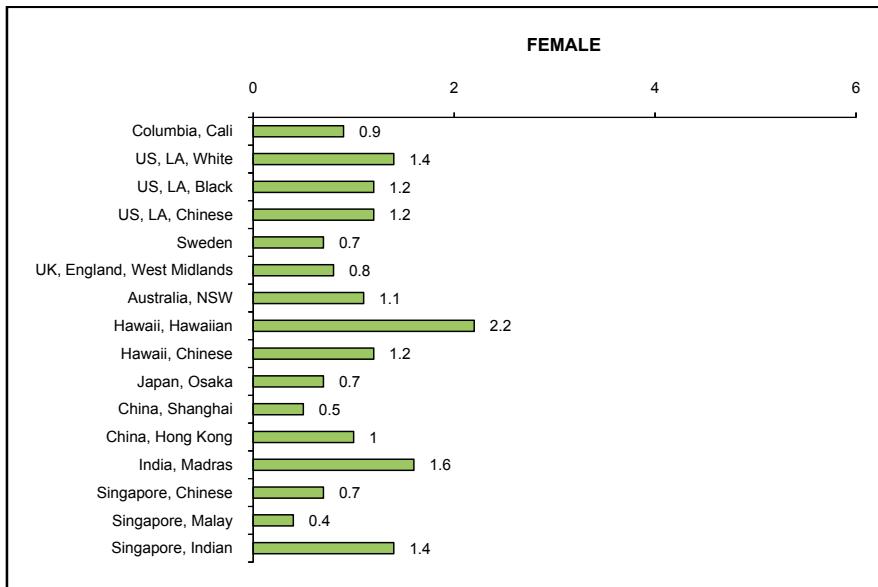
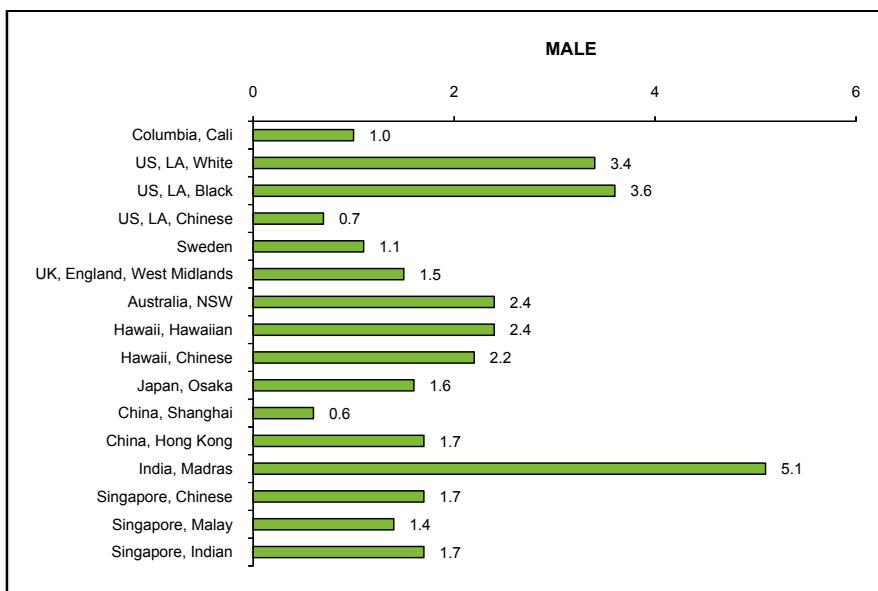


TONGUE: AGE-STANDARDIZED INCIDENCE BY SEX, 1968-2007



TONGUE: AGE-SPECIFIC INCIDENCE BY SEX, 2003-2007

TONGUE: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 1998-2002
(per 100,000 per year)



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. Close to three-fourths (73.1%) and 20.8% of tumors in the last five years occurred in the parotid and submandibular glands respectively. Adenoid cystic, acinar cell and mucoepidermoid carcinomas are the major histologic types (61.5%) of salivary gland malignancies.

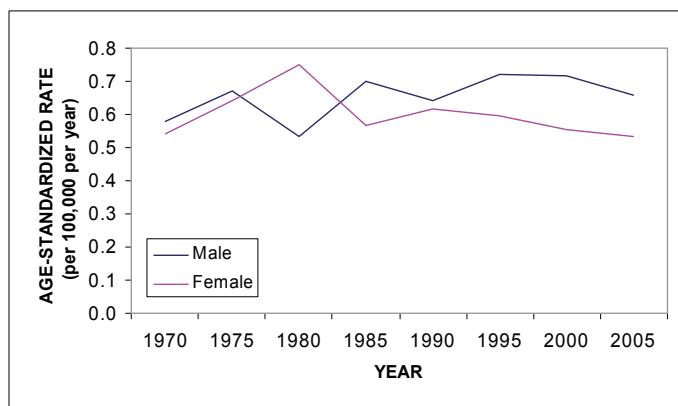
The incidence rates for Singapore Chinese are similar to other worldwide populations of Chinese ethnicity.

INCIDENCE DATA (2003-2007)		No.	%	Males	RR (95% CI)
				ASR	
All residents		68	0.3	0.7	-
Chinese		57	0.3	0.7	1.0
Malays		6	0.3	0.5	0.7 (0.3-1.7)
Indians		5	0.5	0.6	0.9 (0.3-2.1)

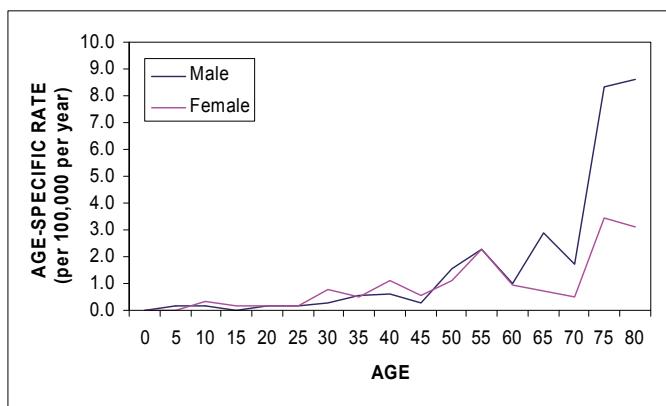
INCIDENCE DATA (2003-2007)		No.	%	Females	RR (95% CI)
				ASR	
All residents		62	0.3	0.5	-
Chinese		52	0.3	0.5	1.0
Malays		8	0.4	0.5	1.1 (0.5-2.3)
Indians		1	0.1	0.2	0.2 (0.0-1.6)

SUBSITES 2003-2007			
ICD9	SUBSITE	Male	Female
142.0	Parotid	49	46
142.1	Submandibular	14	13
142.2	Sublingual	3	2
142.9	NOS	2	1
All cases		68	62

HISTOLOGY 2003-2007	NO.	%
Mucoepidermoid Carcinoma	41	31.5
Adenoid Cystic Carcinoma	20	15.4
Adenocarcinoma, Nos	14	10.8
Acinar Cell Carcinoma	14	10.8
Lymphoepithelial Carcinoma	11	8.5
Squamous Cell Carcinoma	7	5.4
Carcinoma, Nos	4	3.1
Carcinoma In Pleomorphic Adenoma	4	3.1
Neoplasm, Malignant, Nos	3	2.3
Epithelial-Myoepithelial Carcinoma	3	2.3
Basal Cell Adenocarcinoma	2	1.5
Duct Carcinoma	2	1.5
Carcinoma, Undifferentiated	1	0.8
Cystadenocarcinoma	1	0.8
Desmoplastic Small Round Cell Tumour	1	0.8
Malignant Myoepithelioma	1	0.8
Primitive Neuroectodermal Tumour	1	0.8
Total with histology	130	100.0
All cases	130	

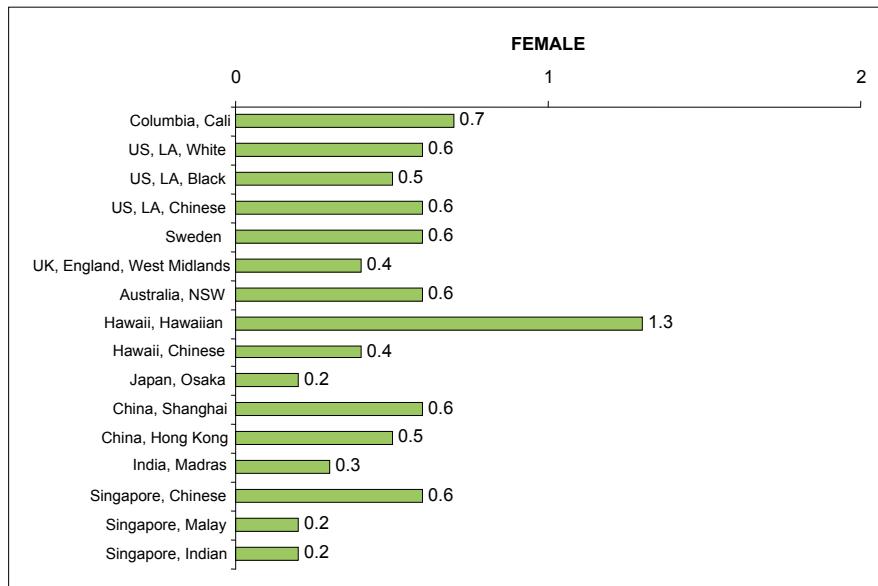
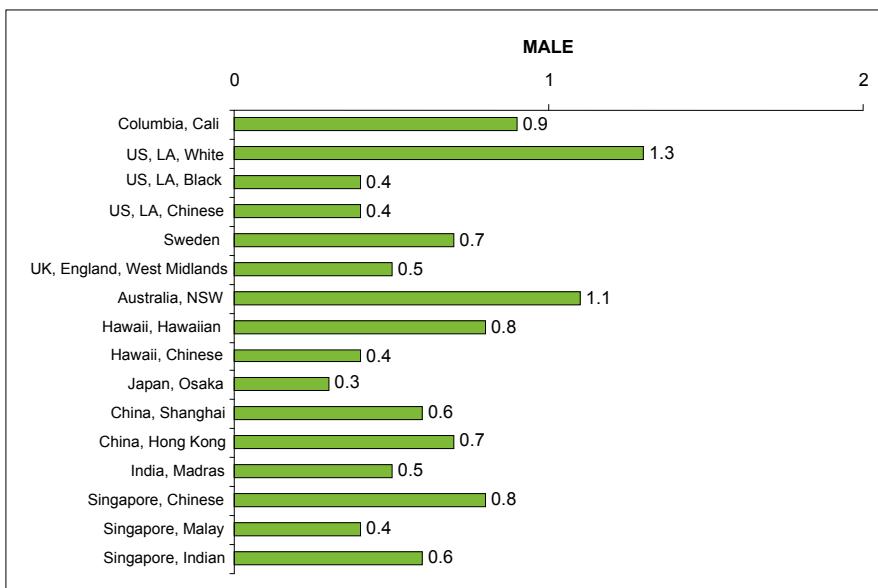


SALIVARY GLAND: AGE-STANDARDIZED INCIDENCE BY SEX, 1968-2007



SALIVARY GLAND: AGE-SPECIFIC INCIDENCE BY SEX, 2003-2007

SALIVARY GLAND: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 1998-2002
(per 100,000 per year)



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

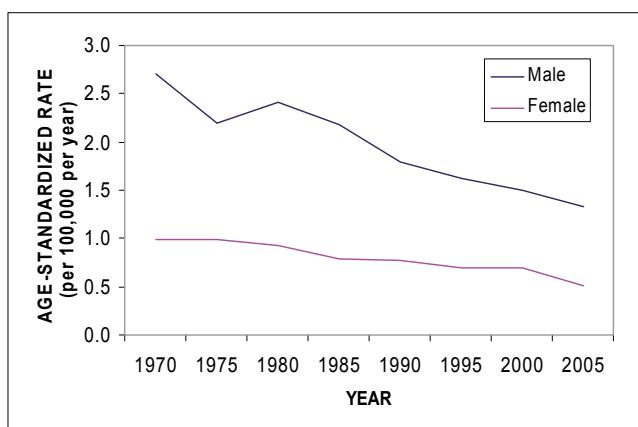
The incidence of this cancer among Indians in Singapore remains markedly higher than the other ethnic groups, especially for females; but lower than that in India. The trend in all residents has been a gradual decline over the 40-year period, by 51.9% in males (from 2.7 in 1968-72 to 1.3 per 100,000 per year) and by 50% in females (from 1.0 to 0.5 per 100,000 per year). The male: female ratio of case numbers is 2.1:1. The age incidence curve shows an increase in risk with age, most marked after the fourth decade of life.

INCIDENCE DATA (2003-2007)		No.	%	Males	RR (95% CI)
				ASR	
All residents		128	0.6	1.3	-
Chinese		103	0.5	1.3	1.0
Malays		7	0.4	0.7	0.5 (0.2-1.1)
Indians		17	1.8	2.4	1.8 (1.0-2.9)

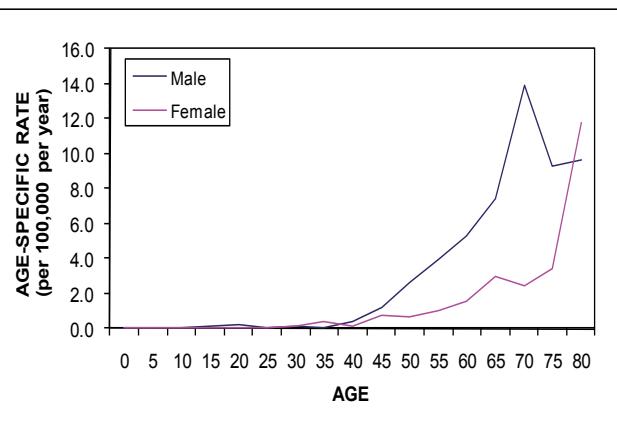
INCIDENCE DATA (2003-2007)		No.	%	Females	RR (95% CI)
				ASR	
All residents		62	0.3	0.5	-
Chinese		46	0.2	0.4	1.0
Malays		2	0.1	0.2	0.4 (0.1-1.6)
Indians		14	1.4	2.4	4.8 (2.6-8.9)

SUBSITES 2003-2007			
ICD9	SUBSITE	Male	Female
143.0	Gum, upper	3	2
143.1	Gum, lower	7	4
143.9	Gum, NOS	1	6
144.9	Floor of mouth, NOS	29	-
145.0	Cheek mucosa	26	19
145.1	Vestibule	-	1
145.2	Hard palate	11	6
145.3	Soft palate	19	5
145.4	Uvula	3	-
145.5	Palate, NOS	9	7
145.6	Retromolar	10	10
145.8	Other	1	-
145.9	NOS	9	2
All cases		128	62

HISTOLOGY 2003-2007		
	NO.	%
Squamous Cell Carcinoma	146	77.2
Mucoepidermoid Carcinoma	14	7.4
Adenocarcinoma, Nos	7	3.7
Adenoid Cystic Carcinoma	6	3.2
Carcinoma, Nos	5	2.6
Basaloid Squamous Cell Carcinoma	3	1.6
Carcinoma, Undifferentiated	2	1.1
Neoplasm, Malignant, Nos	1	0.5
Clear Cell Adenocarcinoma	1	0.5
Mucinous Adenocarcinoma	1	0.5
Malignant Melanoma, Nos	1	0.5
Sarcoma, Nos	1	0.5
Rhabdomyosarcoma	1	0.5
Total with histology	189	100.0
All cases	190	

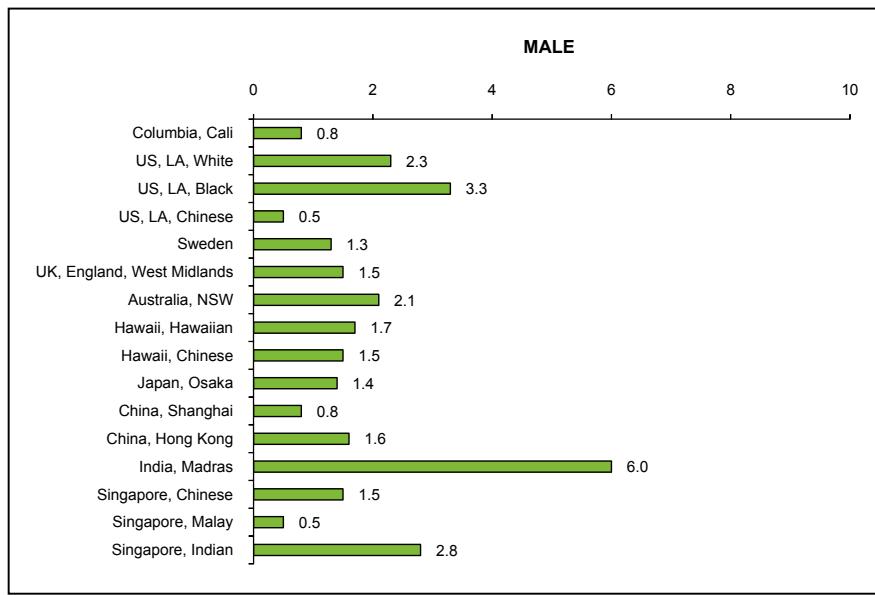


MOUTH: AGE-STANDARDIZED INCIDENCE BY SEX, 1968-2007

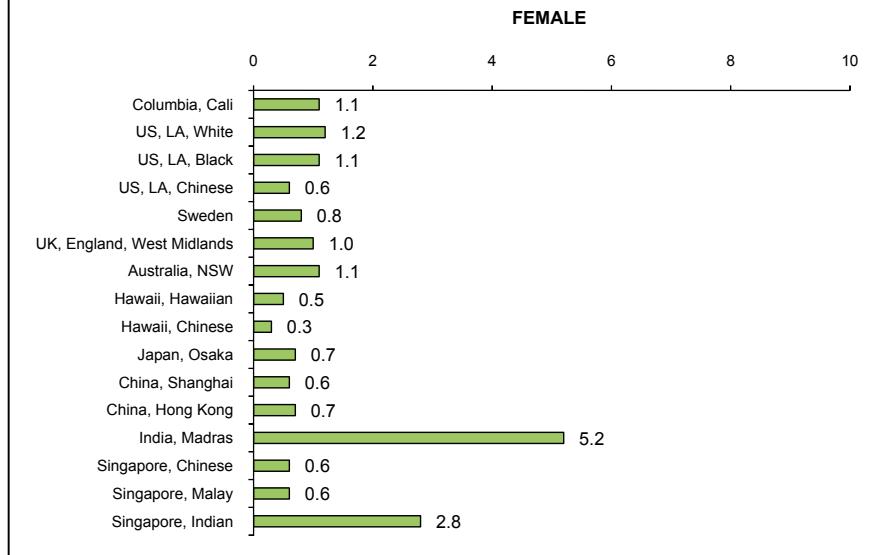


MOUTH: AGE-SPECIFIC INCIDENCE BY SEX, 2003-2007

**MOUTH: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 1998-2002
(per 100,000 per year)**



MALE



FEMALE

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

Of the 1601 incident cases of this disease, 92.5% occurred in Chinese. Incidence rates remained remarkably stable between 1968 and 1992 but subsequently began to decline. Among Chinese men, the annual ASR fell significantly from 18.7 in 1988-1992 to 12.9 per 100,000 in 1998-2002 and has further fallen slightly to 12.5 per 100,000 in 2003-2007. Compared to the Chinese, Malays have about 30-50% of the risk. Rates are low among Indians, their relative risk is about one-tenth that of Chinese.

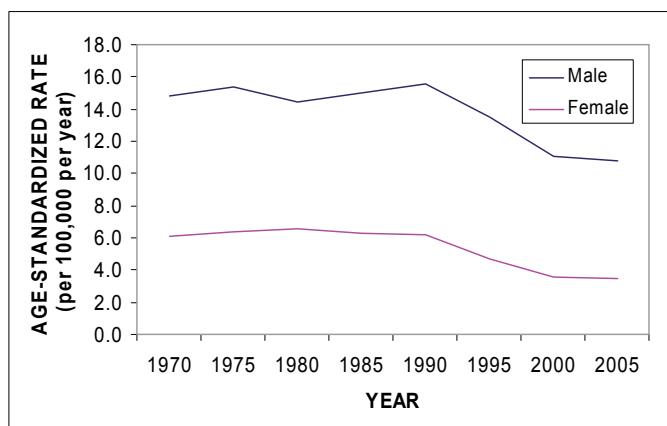
The age-specific incidence rates for nasopharyngeal cancer begin to rise in the third decade of life and peak at 60 years among males. On the contrary, one can observe dual peaks in ASR among the females; one at 55 years and one at 75 years. The male to female ratio remains similar as in previous years, at 2.7:1. Earlier data from the Cancer Registry [1-3] showed significantly higher risks for individuals of Cantonese origin, consistent with the high incidence in Hong Kong and Singapore relative to other countries.

INCIDENCE DATA (2003-2007)		No.	%	Males	RR (95% CI)
				ASR	
All residents		1198	5.5	10.8	-
Chinese		1100	5.8	12.5	1.0
Malays		84	4.8	6.8	0.5 (0.4-0.7)
Indians		8	0.8	1.1	0.1 (0.0-0.1)

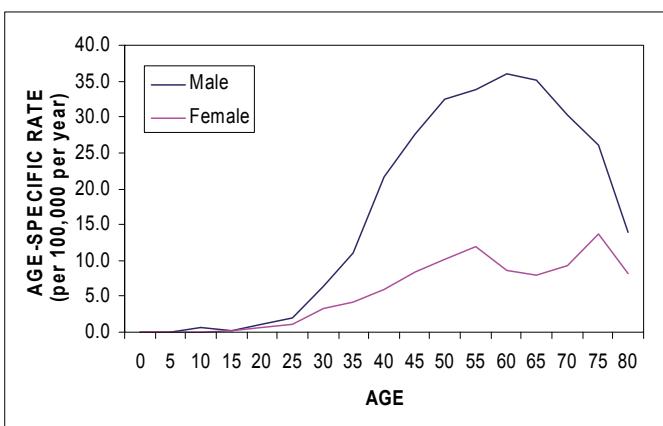
INCIDENCE DATA (2003-2007)		No.	%	Females	RR (95% CI)
				ASR	
All residents		403	1.7	3.4	-
Chinese		381	1.9	4.1	1.0
Malays		17	0.8	1.3	0.3 (0.2-0.5)
Indians		2	0.2	0.3	0.1 (0.0-0.2)

SUBSITES 2003-2007			
ICD9	SUBSITE	Male	Female
147.0	Superior Wall	3	1
147.1	Posterior Wall	8	2
147.2	Lateral Wall	5	1
147.3	Anterior Wall	3	-
147.9	NOS	1179	399
All cases		1198	403

HISTOLOGY 2003-2007	NO.	%
Carcinoma, Undifferentiated	1338	84.1
Carcinoma, Nos	162	10.2
Squamous Cell Carcinoma	71	4.5
Neoplasm, Malignant, Nos	4	0.3
Adenocarcinoma, Nos	4	0.3
Neuroendocrine Carcinoma	3	0.2
Adenoid Cystic Carcinoma	2	0.1
Basaloid Squamous Cell Carcinoma	1	0.1
Basaloid Carcinoma	1	0.1
Adenosquamous Carcinoma	1	0.1
Adenocarcinoma With Neuroendocrine Differentiation	1	0.1
Embryonal Rhabdomyosarcoma	1	0.1
Carcinosarcoma	1	0.1
Teratoma, Malignant	1	0.1
Total with histology	1591	100.0
All cases	1601	

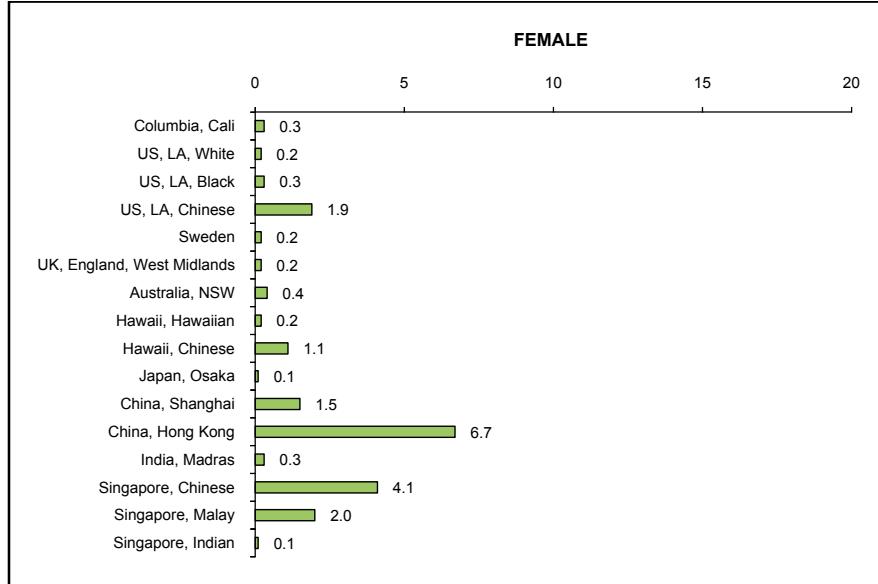
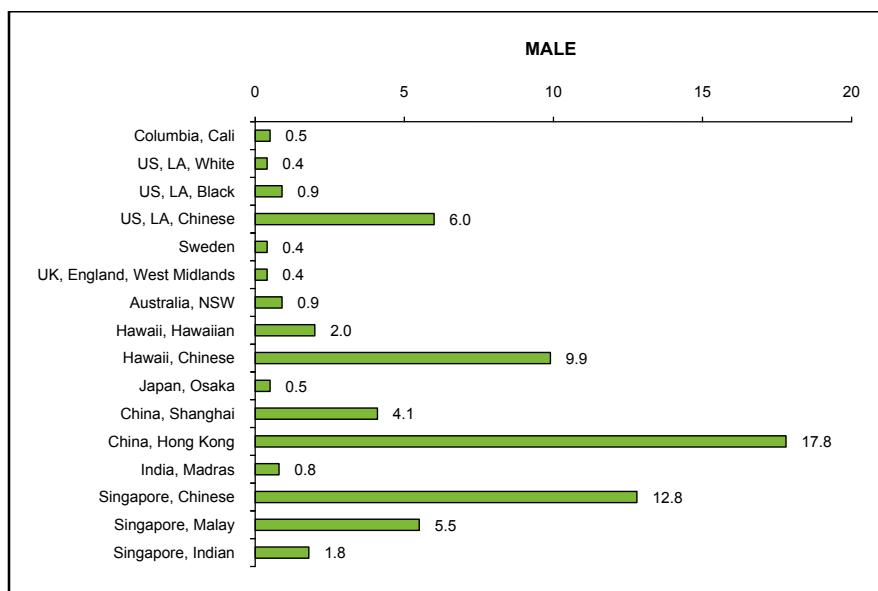


NASOPHARYNX: AGE-STANDARDIZED INCIDENCE BY SEX, 1968-2007



NASOPHARYNX: AGE-SPECIFIC INCIDENCE BY SEX, 2003-2007

**NASOPHARYNX: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 1998-2002
(per 100,000 per year)**



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

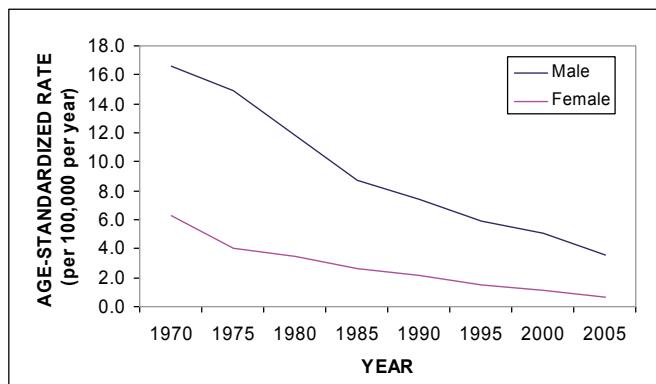
Since 1968, rates of oesophageal cancer in Singapore have been on the decline and this trend has continued in 2003-2007. The annual incidence rates (per 100,000) for Chinese males and females locally were 4.1 and 0.7, respectively, per 100,000 in 2003-2007 compared with 19.7 and 6.4 in 1968-72, an average annual decline of 4.4% in males and 5.9% in females. The male: female ratio of this cancer is 3.57. The age-incidence curves for 1998-2002 show a steep rise after the age of 40 for males and after the age of 50 for females. Of cases with specified histology (95% of those notified), 80.0% were squamous cell carcinomas and 10.3% were adenocarcinomas.

Among ethnic groups, risks among Malay and Indian men remain generally lower than that for Chinese men. There is a suggestion of a higher risk among Indian women, but the number of cases is small. Earlier data [1-3] showed that Hokkiens and Teochews had significantly higher risks than other Chinese dialect groups.

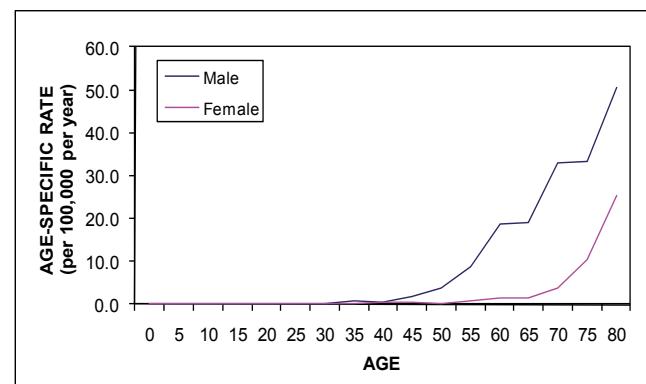
INCIDENCE DATA (2003-2007)		Males			
		No.	%	ASR	RR (95% CI)
All residents		334	1.5	3.6	-
Chinese		306	1.6	4.1	1.0
Malays		10	0.6	0.9	0.3 (0.1-0.5)
Indians		16	1.7	2.0	0.5 (0.3-0.9)

INCIDENCE DATA (2003-2007)		Females			
		No.	%	ASR	RR (95% CI)
All residents		87	0.4	0.7	-
Chinese		77	0.4	0.7	1.0
Malays		3	0.1	0.3	0.4 (0.1-1.2)
Indians		7	0.7	0.9	1.7 (0.8-3.7)

SUBSITES 2003-2007				HISTOLOGY 2003-2007		
ICD9	SUBSITE	Male	Female		NO.	%
150.0	Cervical	5	1	Squamous Cell Carcinoma	320	80.0
150.1	Thoracic	15	2	Adenocarcinoma, Nos	41	10.3
150.2	Abdominal	2	-	Carcinoma, Nos	14	3.5
150.3	Upper third	30	12	Basaloid Squamous Cell Carcinoma	6	1.5
150.4	Middle third	84	29	Small Cell Carcinoma	3	0.8
150.5	Lower third	93	15	Neuroendocrine Carcinoma	3	0.8
150.8	Other	5	-	Mucinous Adenocarcinoma	3	0.8
150.9	NOS	100	28	Gastrointestinal Stromal Sarcoma	3	0.8
All cases		334	87	Carcinoma, Undifferentiated	2	0.5
				Adenosquamous Carcinoma	2	0.5
				Smooth Muscle Tumour, Borderline	2	0.5
				Neoplasm, Malignant, Nos	1	0.3
				Total with histology	400	100.0
				All cases	421	

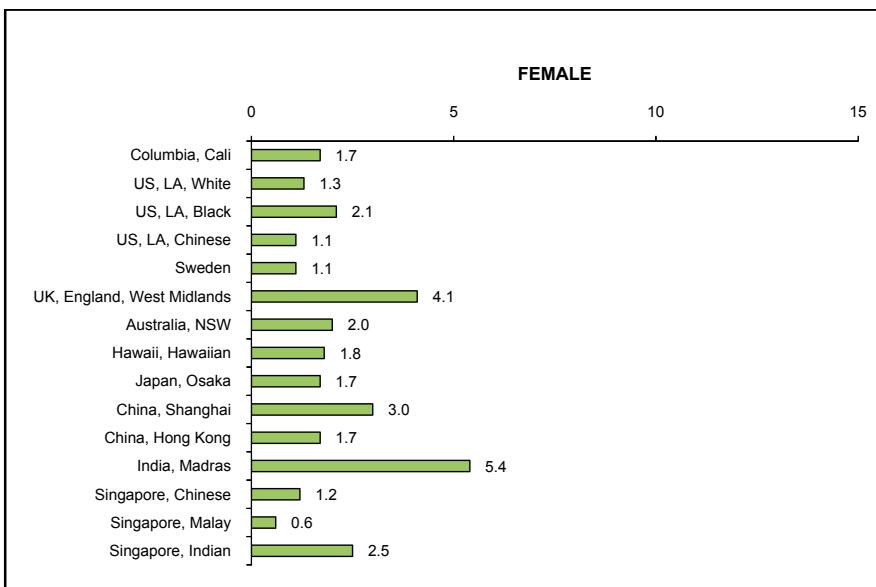
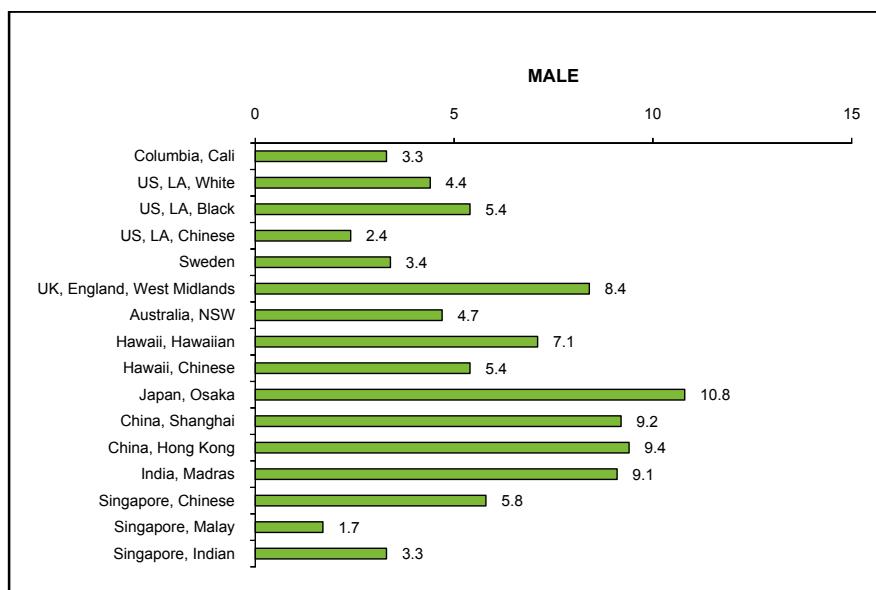


OESOPHAGUS: AGE-STANDARDIZED INCIDENCE
BY SEX, 1968-2007



OESOPHAGUS: AGE-SPECIFIC INCIDENCE
BY SEX, 2003-2007

**OESOPHAGUS: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 1998-2002
(per 100,000 per year)**



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

The steady decline in incidence of stomach cancer has continued, with an average annual decline of 2.7% in males and 2.2% in females. It now ranks 5th and 8th among males and females respectively, each ranking having fallen compared to the previous 5-year period. The age-specific incidence rises sharply from the end of the fifth decade, and the male: female ratio is 1.6:1.

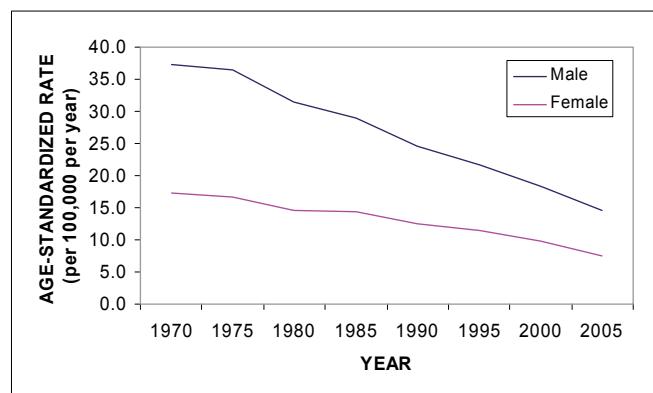
Chinese account for 91% of all cases diagnosed in 2003-2007. Age-adjusted risks for Malays and Indians are all significantly lower than for Chinese males and females, and the relative risks remain similar to previous reports. Data presented in previous publications for the period 1968-1987 [1-3] showed that Hokkiens and Teochews had significantly higher risks than other Chinese dialect groups; foreign-born Chinese also had higher risks than the local-born.

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

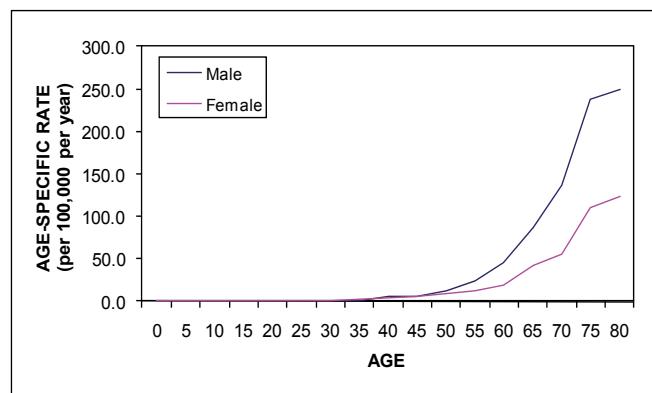
INCIDENCE DATA (2003-2007)	No.	%	Males ASR	RR (95% CI)
All residents	1375	6.3	14.5	-
Chinese	1235	6.6	16.3	1.0
Malays	54	3.1	5.3	0.3 (0.2-0.4)
Indians	70	7.3	9.4	0.6 (0.4-0.7)
INCIDENCE DATA (2003-2007)	No.	%	Females ASR	RR (95% CI)
All residents	885	3.8	7.4	-
Chinese	811	4.1	8.1	1.0
Malays	35	1.6	2.8	0.4 (0.3-0.5)
Indians	32	3.3	4.9	0.6 (0.4-0.9)

SUBSITES 2003-2007			
ICD9	SUBSITE	Male	Female
151.0	Cardia	249	116
151.1	Pylorus	72	35
151.2	Pyloric Antrum	268	187
151.3	Fundus	19	13
151.4	Body	77	61
151.5	Lesser Curvature	124	80
151.6	Greater Curvature	42	34
151.8	Other	68	29
151.9	NOS	456	330
All cases		1375	885

HISTOLOGY 2003-2007		
	NO.	%
Adenocarcinoma, Nos	1157	52.7
Signet Ring Cell Carcinoma	430	19.6
Adenocarcinoma, Intestinal Type	263	12.0
Gastrointestinal Stromal Sarcoma	117	5.3
Carcinoma, Diffuse Type	104	4.7
Mucinous Adenocarcinoma	33	1.5
Carcinoma, Nos	31	1.4
Neuroendocrine Carcinoma	20	0.9
Neoplasm, Malignant, Nos	10	0.5
Squamous Cell Carcinoma	8	0.4
Carcinoma, Undifferentiated	6	0.3
Adenosquamous Carcinoma	4	0.2
Small Cell Carcinoma	3	0.1
Adenocarcinoma With Neuroendocrine Differentiation	2	0.1
Malignant Melanoma	2	0.1
Leiomyosarcoma	2	0.1
Lymphoepithelial Carcinoma	1	0.0
Hepatoid Adenocarcinoma	1	0.0
Carcinosarcoma	1	0.0
Total with histology	2195	100.0
All cases	2260	

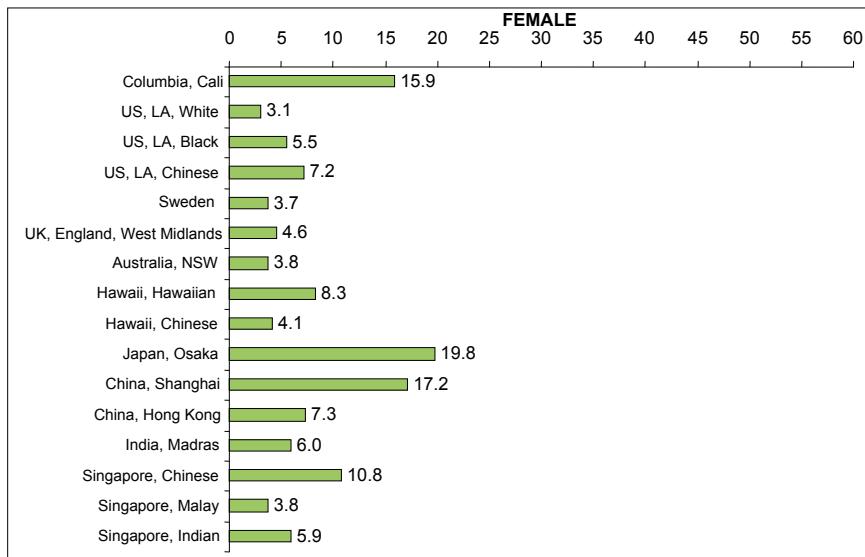
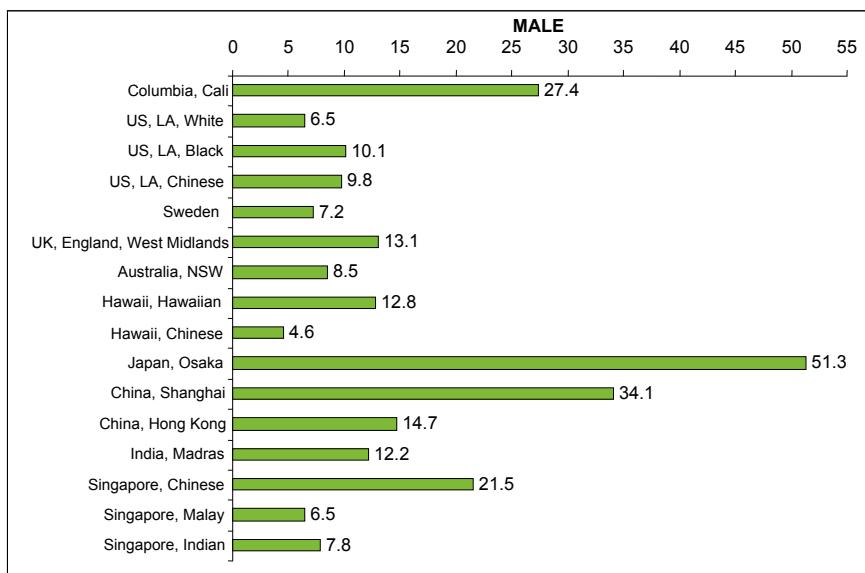


STOMACH: AGE-STANDARDIZED INCIDENCE BY SEX, 1968-2007



STOMACH: AGE-SPECIFIC INCIDENCE BY SEX, 2003-2007

**STOMACH: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 1998-2002
(per 100,000 per year)**



12.7 Colorectal

The incidence of cancer of the large bowel (colon and rectum) has ranked second for both males and females in Singapore since 1983 and in 2003-2007, and has overtaken lung cancer as the leading cause of cancer incidence among Singapore males. It accounts for 17.8% of cancers in males and 14.5% in females, and is the most frequent cancer when both genders are combined (7277 cases in 2003-2007 compared to 5696 cases of lung cancer in the same period).

The age-standardized incidence rate in Singapore Chinese is the highest among Chinese populations around the world and has exceeded those of whites in the US. They are also inching towards the rates in Australia, NSW, 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}

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

The age-standardized rates for colon cancer in 2003-2007 represent a 125.1% increase over risks in 1968-72 for males, and a 112.4% increase for females. Compared with the previous five-year period (1998-2002), rates in males and females appear to have stabilized. The age-specific rates begin to increase sharply in the 40-45 year age group.

Of the 6940 colorectal cancer cases with specific subsite (see also section 12.8), 1405 (20.2%) occurred proximal to the splenic flexure, 5077 (73.2%) were in the distal colon (including splenic flexure / descending / sigmoid colon / rectum and rectosigmoid junction) and 458 (6.6%) were in other / overlapping sites.

Among the ethnic groups, Malays and Indians have a risk between 20-60% that of Chinese.

INCIDENCE DATA (2003-2007)	No.	%	Males ASR	RR (95% CI)
All residents	2192	10.0	23.0	-
Chinese	1962	10.4	25.7	1.0
Malays	146	8.3	14.4	0.6 (0.5-0.7)
Indians	55	5.7	7.4	0.3 (0.2-0.4)

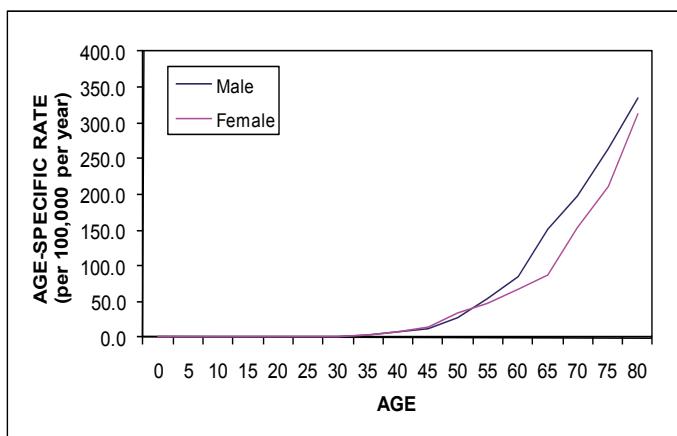
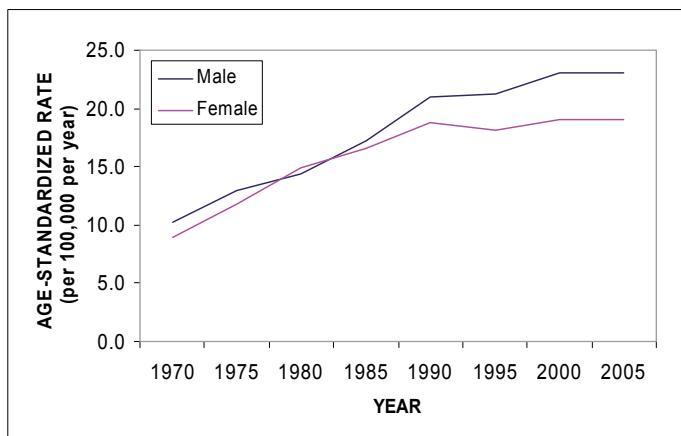
INCIDENCE DATA (2003-2007)	No.	%	Females ASR	RR (95% CI)
All residents	2240	9.6	19.1	-
Chinese	2035	10.3	20.8	1.0
Malays	140	6.4	12.6	0.6 (0.5-0.7)
Indians	50	5.1	7.0	0.4 (0.3-0.5)

¹ Jemal A, Thun MJ, Ries LA, et al. Annual report to the nation on the status of cancer, 1975-2005, featuring trends in lung cancer, tobacco use, and tobacco control. J Natl Cancer Inst. 2008; Dec 3;100(23): 1672-94.

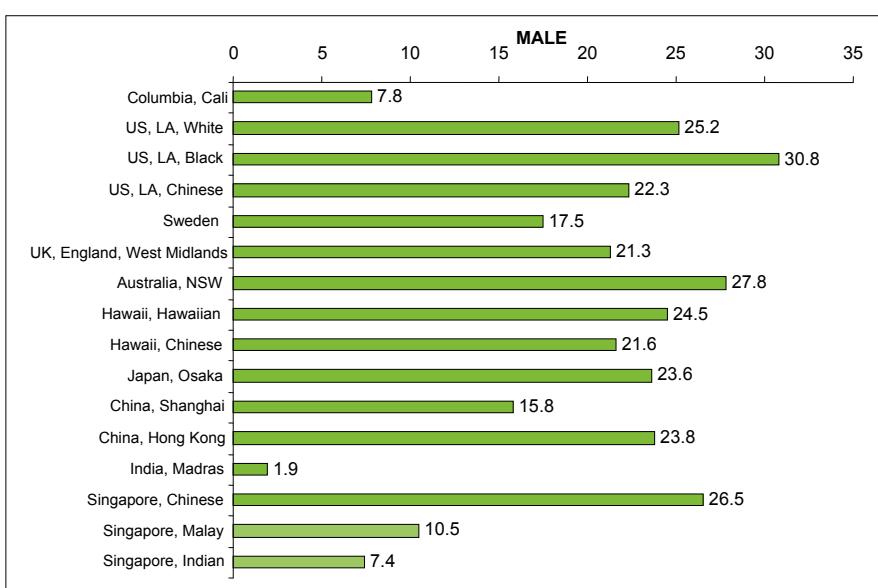
² Quinn M. Cancer trends in the United States – a view from Europe. J Natl Cancer Inst 2003; 95: 1258-9.

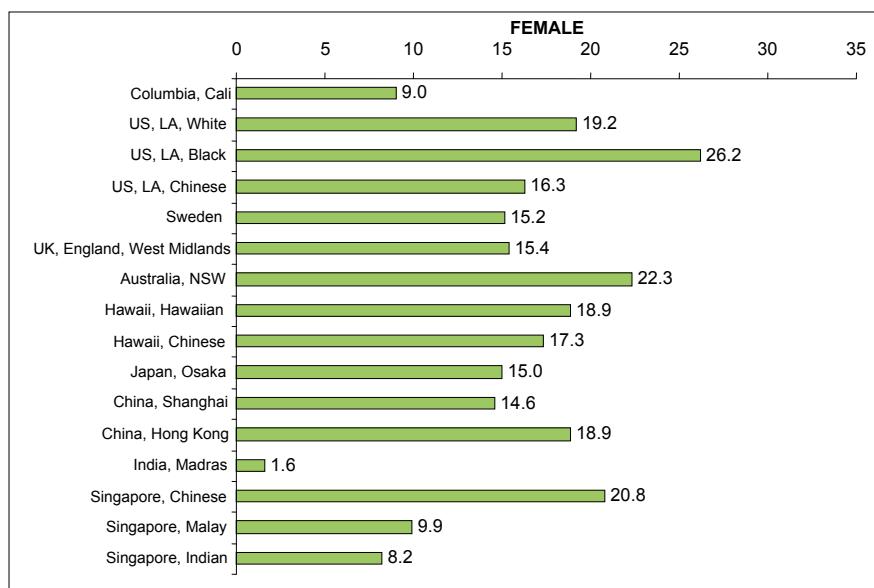
SUBSITES 2003-2007		Male	Female
ICD9	SUBSITE		
153.0	Hepatic Flexure	147	107
153.1	Transverse Colon	173	199
153.2	Descending Colon	161	169
153.3	Sigmoid Colon	923	889
153.4	Caecum	153	200
153.5	Appendix	25	38
153.6	Ascending Colon	159	204
153.7	Splenic Flexure	103	90
153.8	Other	183	172
153.9	NOS	165	172
All cases		2192	2240

HISTOLOGY 2003-2007		NO.	%
Adenocarcinoma, Nos		3739	88.6
Mucinous Adenocarcinoma		390	9.2
Neuroendocrine Carcinoma		46	1.1
Carcinoma, Nos		22	0.5
Mucinous Cystic Tumour, Borderline		7	0.2
Adenosquamous Carcinoma		4	0.1
Neoplasm, Malignant, Nos		3	0.1
Carcinoma, Undifferentiated		3	0.1
Gastrointestinal Stromal Sarcoma		3	0.1
Adenocarcinoma With Neuroendocrine Differentiation		2	0.0
Squamous Cell Carcinoma		1	0.0
Sarcoma, Nos		1	0.0
Leiomyosarcoma		1	0.0
Total with histology		4222	100.0
All cases		4432	



**COLON: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 1998-2002
(per 100,000 per year)**





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

Cancers of the rectum, rectosigmoid junction and anus (ICD-9 154) constituted 43.8% and 33.6% of cancers of the large bowel among males and females, respectively, in 2003-2007. Incidence rates in Singapore exceed those in most developed countries, including the US and parts of Europe – reasons for this are not clear. The rates in 2003-2007 show a negligible decrease (0.2%) over the previous 5-year period for males, and a 5.8% decrease for females.

The age-adjusted relative risk among ethnic groups for rectal cancer is similar to colon cancer, with rates for Indians being 30-40% that of Chinese and Malays being intermediate between the two.

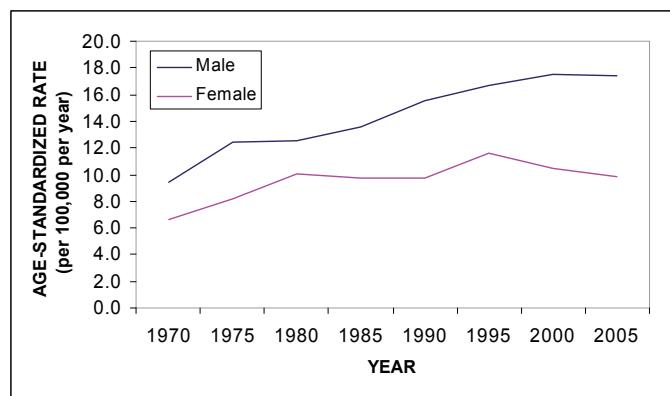
Note: As it can be difficult to determine the exact anatomical origin of tumours arising near the rectosigmoid junction, it should be noted that data on large bowel cancers, particularly for international comparisons, may be affected by the degree to which 'sigmoid colon' (ICD-9 1533 / ICD-O-2 C18.7)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

INCIDENCE (2003-2007)	No	%	Males	RR (95% CI)
			ASR	
All	171	7.8	17.5	-
Chinese	149	7.9	19.0	1.0
Malays	12	7.0	11.6	0.6 (0.5-0.7)
Indians	7	7.5	9.7	0.5 (0.4-0.6)

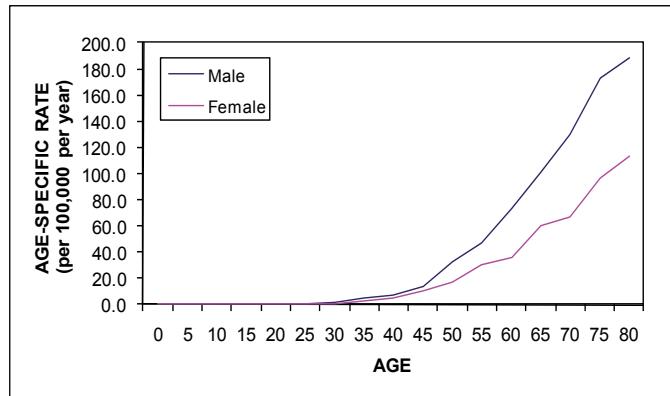
INCIDENCE (2003-2007)	No	%	Females	RR (95% CI)
			ASR	
All	113	4.9	9.9	-
Chinese	102	5.2	10.7	1.0
Malays	8	3.7	7.4	0.6 (0.5-0.8)
Indians	2	2.7	4.2	0.4 (0.3-0.6)

SUBSITES 2003-2007		Male	Female
ICD9	SUBSITE		
154.0	Rectosigmoid Junction	545	387
154.1	Rectum	1107	703
154.2	Anal Canal	32	23
154.3	Anus	5	8
154.8	Others	21	14
All cases		1710	1135

HISTOLOGY 2003-2007	NO.	%
Adenocarcinoma, Nos	2480	89.0
Mucinous Adenocarcinoma	140	5.0
Neuroendocrine Carcinoma	101	3.6
Squamous Cell Carcinoma	19	0.7
Carcinoma, Nos	14	0.5
Malignant Melanoma	8	0.3
Gastrointestinal Stromal Sarcoma	8	0.3
Basaloid Squamous Cell Carcinoma	5	0.2
Neoplasm, Malignant, Nos	4	0.1
Basaloid Carcinoma	3	0.1
Cloacogenic Carcinoma	2	0.1
Paget Disease, Extramammary	2	0.1
Adenosquamous Carcinoma	1	0.0
Carcinosarcoma	1	0.0
Total with histology	2788	100.0
All cases	2845	

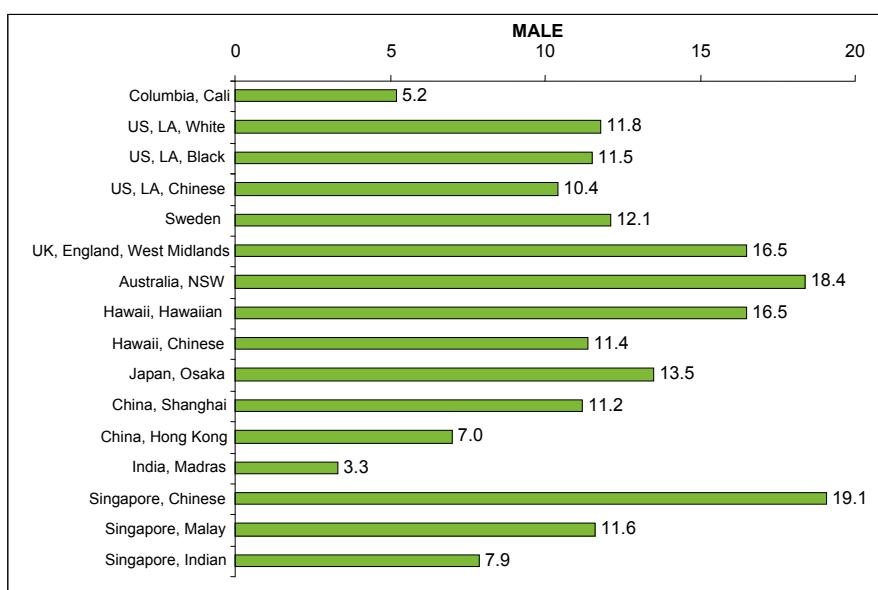


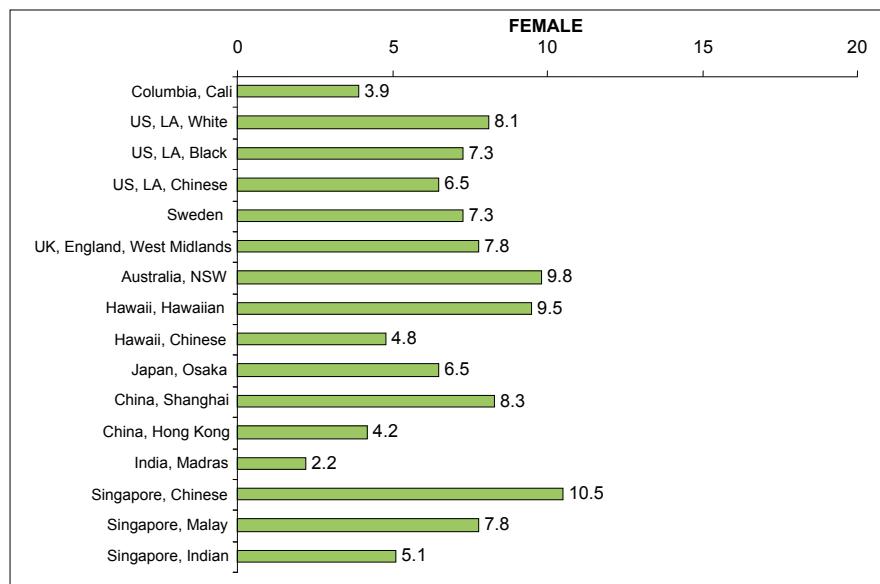
RECTUM: AGE-STANDARDIZED INCIDENCE BY SEX, 1968-2007



RECTUM: AGE-SPECIFIC INCIDENCE BY SEX, 2003-2007

**RECTUM: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 1998-2002
(per 100,000 per year)**





12.8 Liver (ICD-9: 155 / ICD-O-3: C22)

Overall, liver cancer incidence rates showed a marginal decline in women while they appear to have remained stable in men over the past 20 years, showing a slight decline only in the past 5 years. Rates begin to rise during the fourth decade of life for men, and about 15-20 years later for women. The male: female ratio is 3.1:1. The rates in Singapore, while still considerably higher than in the West, are lower than those in Japan, Hong Kong and Shanghai.

The risks among Malays and Indians are lower than for Chinese; this difference is more marked in men.

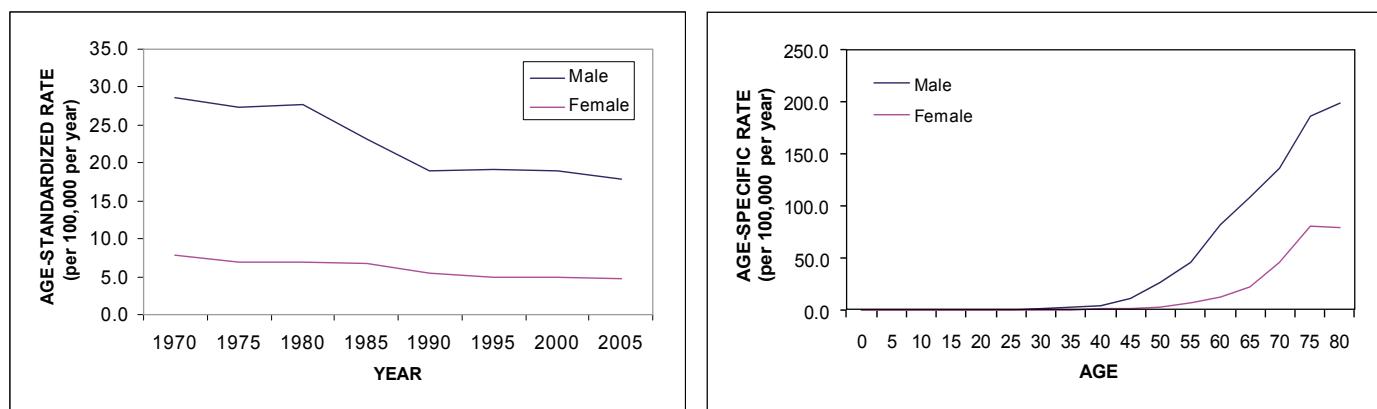
The monitoring of rates for liver cancer by the Registry continues to constitute an important part of the surveillance system accompanying the nationwide immunization programme against Hepatitis B.

INCIDENCE DATA (2003-2007)		Males		
	No.	%	ASR	RR (95% CI)
All residents	1700	7.7	17.8	-
Chinese	1482	7.9	19.4	1.0
Malays	139	7.9	13.2	0.7 (0.6-0.8)
Indians	64	6.6	8.8	0.4 (0.3-0.6)

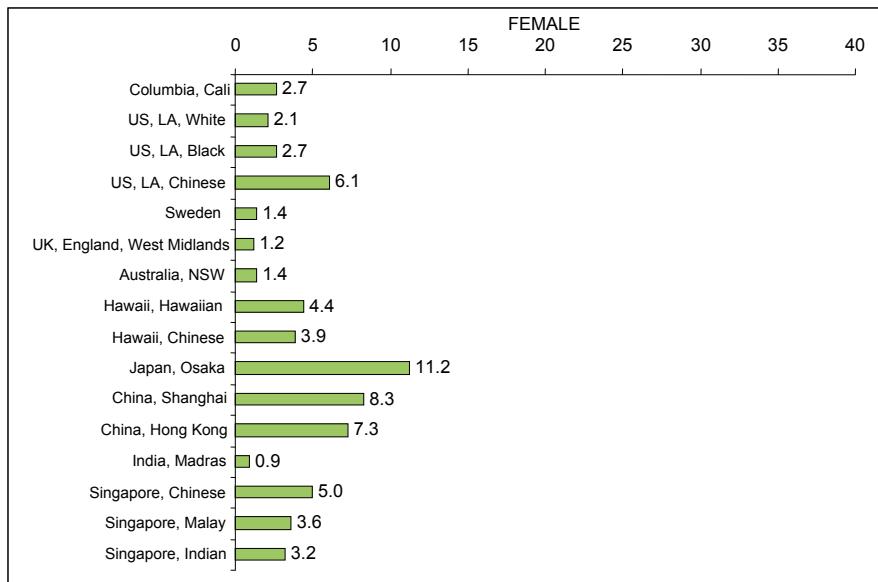
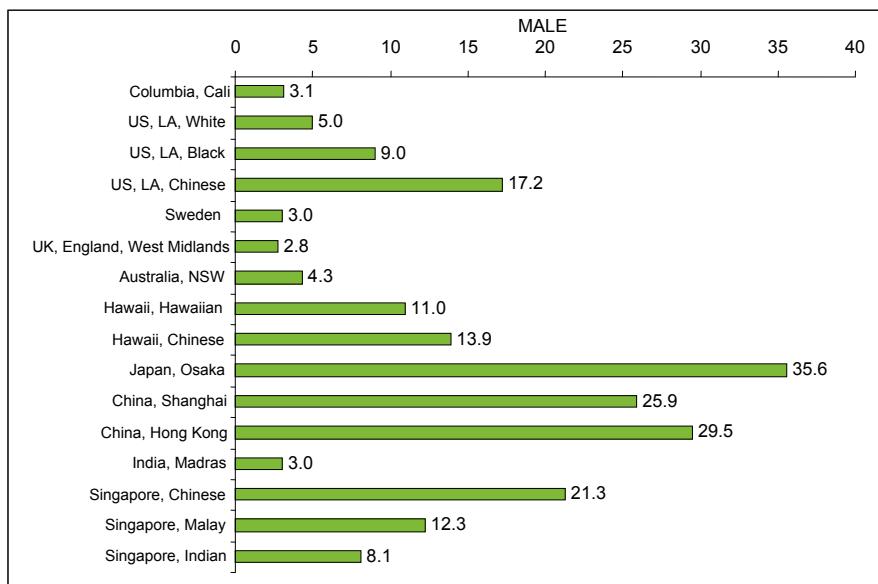
INCIDENCE DATA (2003-2007)		Females		
	No.	%	ASR	RR (95% CI)
All residents	549	2.4	4.7	-
Chinese	481	2.4	4.9	1.0
Malays	44	2.0	4.0	0.8 (0.6-1.1)
Indians	20	2.0	3.5	0.7 (0.4-1.0)

SUBSITES 2003-2007		Male	Female
ICD9	SUBSITE		
155.0	Primary Liver	1587	436
155.1	Intrahepatic Bile Ducts	108	106
	Liver, not specified		
155.2	primary or secondary	5	7
All cases		1700	549

HISTOLOGY 2003-2007	NO.	%
Hepatocellular Carcinoma	690	79.4
Adenocarcinoma, Nos	69	7.9
Cholangiocarcinoma	43	4.9
Carcinoma, Nos	26	3.0
Neoplasm, Malignant, Nos	11	1.3
Combined Hepatocellular Carcinoma		
And Cholangiocarcinoma	9	1.0
Hepatoblastoma	8	0.9
Hemangiosarcoma	6	0.7
Sarcoma, Nos	2	0.2
Hemangiendothelioma, Malignant	2	0.2
Neuroendocrine Carcinoma	1	0.1
Cystadenocarcinoma	1	0.1
Carcinosarcoma	1	0.1
Total with histology	869	100.0
All cases	2249	



**LIVER: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 1998-2002
(per 100,000 per year)**



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

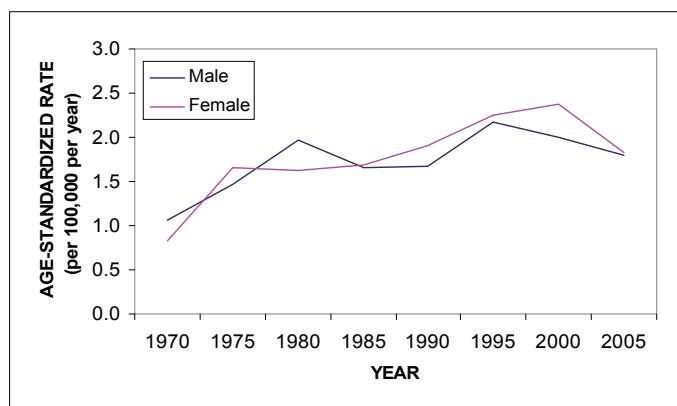
Of the 387 cases diagnosed in 2003-2007, 55.8% occurred in females, giving a female: male ratio of 1.3:1. Although an uncommon cancer (0.9% of all cancers), rates among females continued to increase and the rate in the 1998-2002 period was three times the rates experienced in 1968-1972. For the most recent 2003-2007 period, the rates in females have fallen to the same rate as the males. For males, the trend is less distinct as the numbers are smaller. The incidence among Singapore Chinese remains lower than that in Japan, China and Hong Kong. There are no significant inter-ethnic differences.

INCIDENCE DATA (2003-2007)	No.	%	Males	
			ASR	RR (95% CI)
All residents	171	0.8	1.8	-
Chinese	137	0.7	1.8	1.0
Malays	15	0.9	1.4	0.8 (0.5-1.4)
Indians	16	1.7	2.1	1.2 (0.7-2.0)

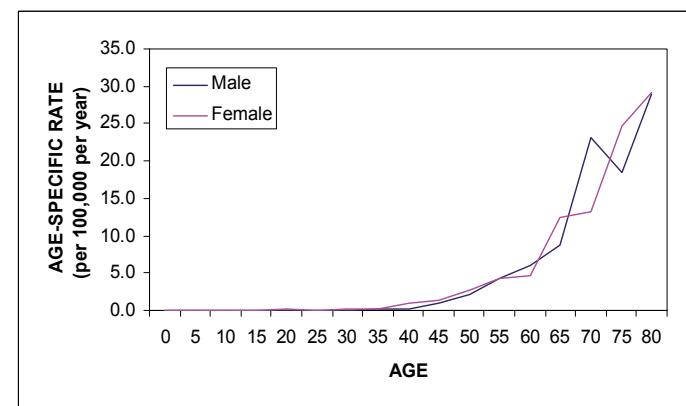
INCIDENCE DATA (2003-2007)	No.	%	Females	
			ASR	RR (95% CI)
All residents	216	0.9	1.8	-
Chinese	189	1.0	1.9	1.0
Malays	17	0.8	1.5	0.8 (0.5-1.3)
Indians	8	0.8	1.3	0.6 (0.3-1.3)

SUBSITES 2003-2007		Male	Female
ICD9	SUBSITE		
156.0	Gall Bladder	72	125
156.1	Extrahepatic Bile Ducts	42	32
156.2	Ampulla	50	56
156.8	Other	1	-
156.9	NOS	6	3
All cases		171	216

HISTOLOGY 2003-2007	NO.	%
Adenocarcinoma, Nos	265	84.9
Carcinoma, Nos	14	4.5
Mucinous Adenocarcinoma	12	3.8
Squamous Cell Carcinoma	5	1.6
Adenosquamous Carcinoma	5	1.6
Neuroendocrine Carcinoma	3	1.0
Neoplasm, Malignant, Nos	2	0.6
Carcinoma, Undifferentiated	2	0.6
Carcinosarcoma	2	0.6
Hepatoid Adenocarcinoma	1	0.3
Sarcoma, Nos	1	0.3
Total with histology	312	100.0
All cases	387	

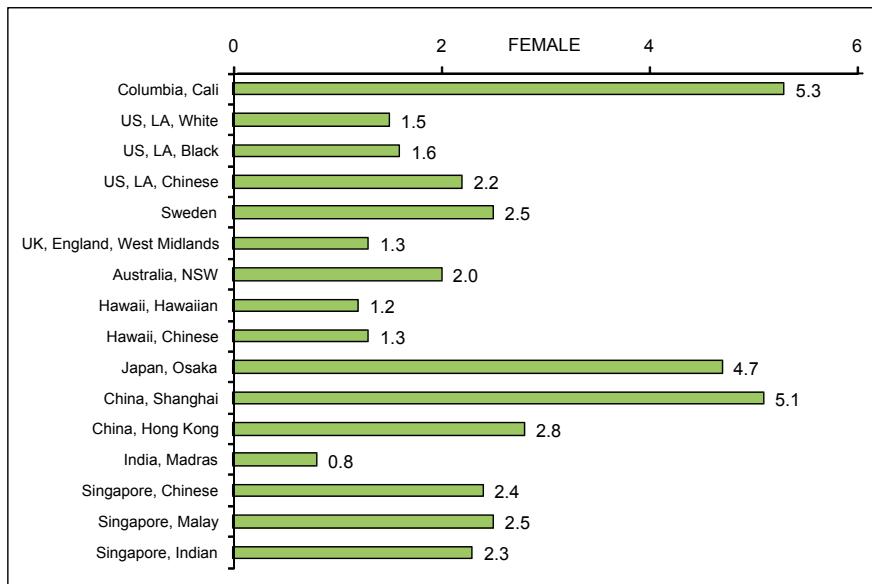
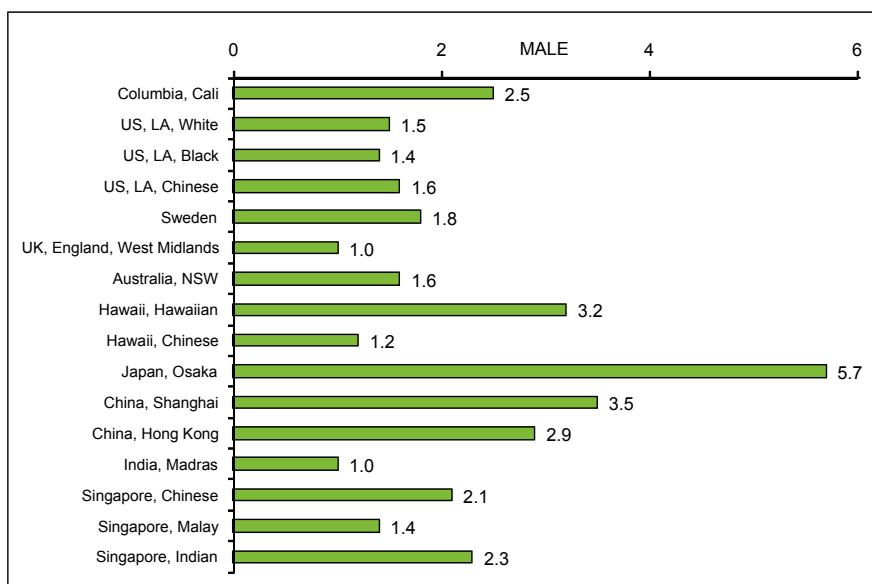


GALL BLADDER: AGE-STANDARDIZED INCIDENCE BY SEX, 1968-2007



GALL BLADDER: AGE-SPECIFIC INCIDENCE BY SEX, 2003-2007

**GALL BLADDER: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 1998-2002
(per 100,000 per year)**



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

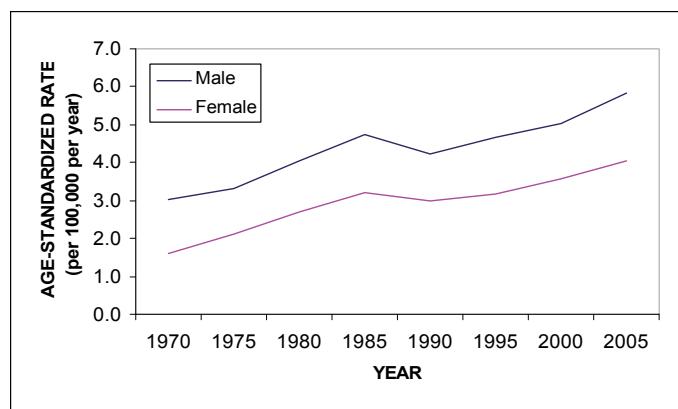
In 2003-2007, pancreatic cancer constituted about 2% of all cancers diagnosed in males and females. The age-standardized incidence rates have increased in parallel for both sexes over the last 40 years, and in 2003-2007 increased by 16% in males and 13% in females over the previous 5 year period. Indians have about half the risk of pancreatic cancer compared to their Chinese counterparts.

INCIDENCE DATA (2003-2007)		No.	%	Males	RR (95% CI)
				ASR	
All residents		566	2.6	5.8	-
Chinese		486	2.6	6.3	1.0
Malays		46	2.6	4.5	0.7 (0.5-1.0)
Indians		31	3.2	4.1	0.7 (0.5-0.9)

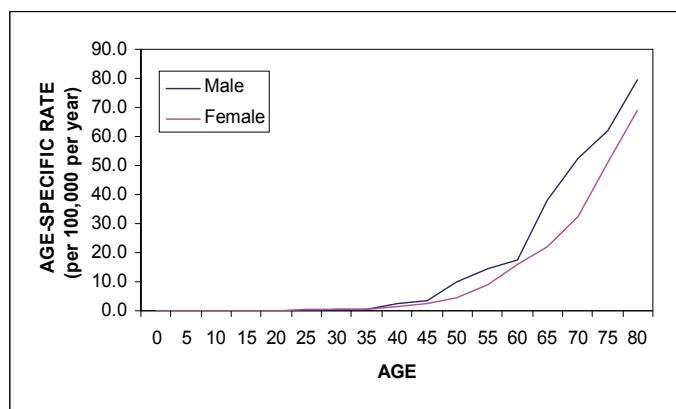
INCIDENCE DATA (2003-2007)		No.	%	Females	RR (95% CI)
				ASR	
All residents		470	2.0	4.0	-
Chinese		407	2.1	4.2	1.0
Malays		46	2.1	4.1	1.0 (0.7-1.3)
Indians		14	1.4	2.3	0.5 (0.3-0.9)

HISTOLOGY 2003-2007		NO.	%
Adenocarcinoma, Nos		523	77.3
Carcinoma, Nos		37	5.5
Neoplasm, Malignant, Nos		28	4.1
Neuroendocrine Carcinoma		22	3.2
Mucinous Adenocarcinoma		13	1.9
Solid Pseudopapillary Carcinoma		8	1.2
Papillary Adenocarcinoma		7	1.0
Islet Cell Carcinoma		6	0.9
Carcinoma, Undifferentiated		5	0.7
Intraductal Papillary-Mucinous			
Carcinoma, Invasive		5	0.7
Mucinous Cystadenocarcinoma		4	0.6
Adenosquamous Carcinoma		4	0.6
Signet Ring Cell Carcinoma		3	0.4
Acinar Cell Carcinoma		3	0.4
Small Cell Carcinoma		2	0.3
Squamous Cell Carcinoma		2	0.3
Mixed Islet Cell And Exocrine			
Adenocarcinoma		2	0.3
Cystadenocarcinoma		1	0.1
Gastrointestinal Stromal Sarcoma		1	0.1
Carcinosarcoma		1	0.1
Total with histology		677	100.0
All cases		1036	

SUBSITES 2003-2007			
ICD9	SUBSITE	Male	Female
157.0	Head	204	181
157.1	Body	40	34
157.2	Tail	59	46
157.3	Pancreatic Duct	4	-
157.4	Islets of Langerhans	-	3
157.8	Other	39	23
157.9	NOS	220	183
All cases		566	470

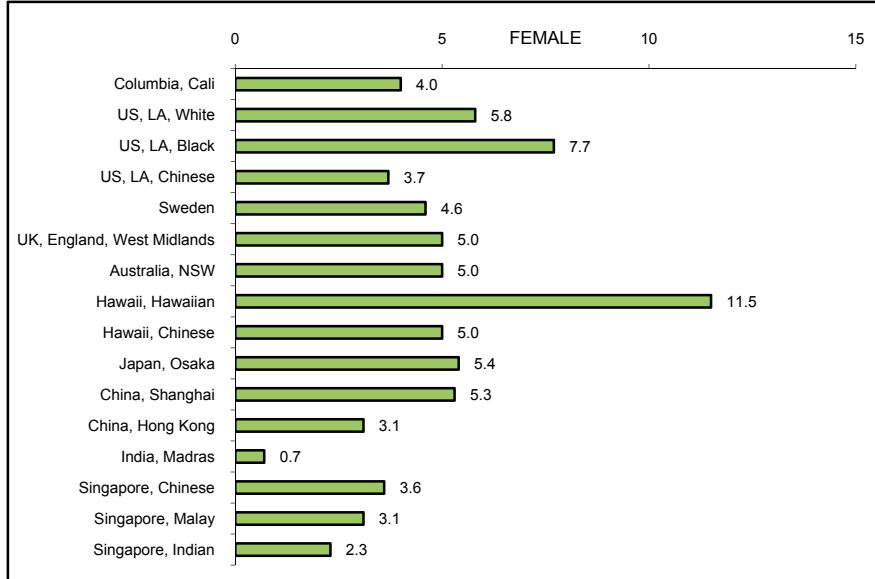
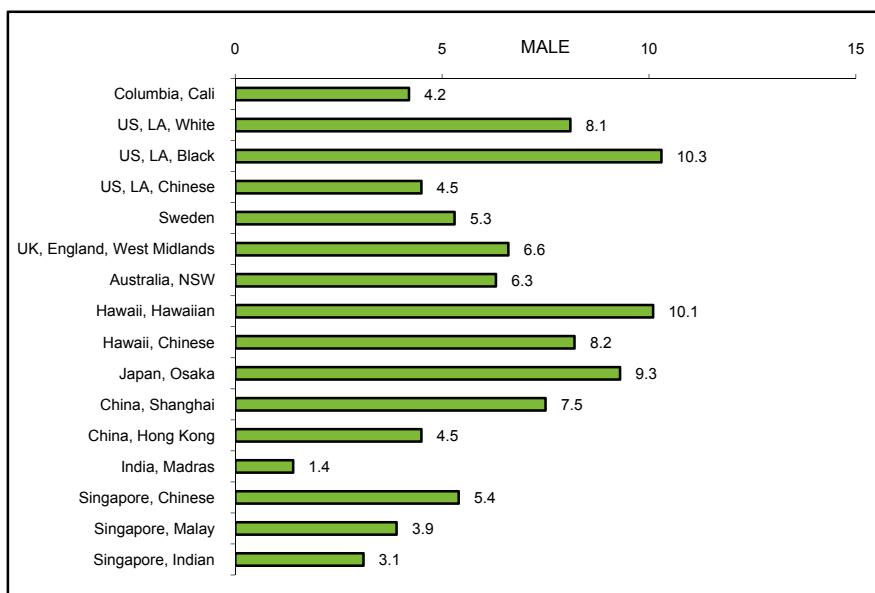


PANCREAS: AGE-STANDARDIZED INCIDENCE BY SEX, 1968-2007



PANCREAS: AGE-SPECIFIC INCIDENCE BY SEX, 2003-2007

**PANCREAS: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 1998-2002
(per 100,000 per year)**



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

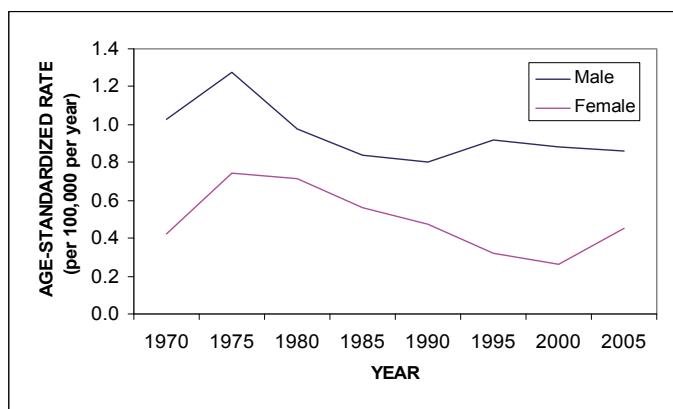
This cancer is relatively uncommon in Singapore, with only 138 cases (about 0.3% of all cancers) occurring in 2003-2007. The risk for males and females has fallen since 1973-1977; this trend has been more consistent in the latter. The male: female ratio of this cancer is 3:1. The rates in Chinese males are the highest compared to other Chinese males around the world whereas those in Chinese females are comparable to other Chinese females globally.

INCIDENCE DATA (2003-2007)		Males		
	No.	%	ASR	RR (95% CI)
All residents	83	0.4	0.9	-
Chinese	75	0.4	1.0	1.0
Malays	4	0.2	0.3	0.4 (0.1-1.1)
Indians	3	0.3	0.5	0.4 (0.1-1.3)

INCIDENCE DATA (2003-2007)		Females		
	No.	%	ASR	RR (95% CI)
All residents	55	0.2	0.5	-
Chinese	44	0.2	0.5	1.0
Malays	9	0.4	0.7	1.4 (0.7-3.0)
Indians	2	0.2	0.2	0.6 (0.1-2.3)

HISTOLOGY 2003-2007	NO.	%
Squamous Cell Carcinoma	47	34.1
Olfactory Neuroblastoma	16	11.6
Carcinoma, Undifferentiated	12	8.7
Schneiderian Carcinoma	9	6.5
Adenocarcinoma, Nos	7	5.1
Sarcoma, Nos	7	5.1
Carcinoma, Nos	6	4.3
Adenoid Cystic Carcinoma	6	4.3
Hemangiopericytoma, Malignant	5	3.6
Rhabdomyosarcoma	4	2.9
Basaloid Squamous Cell		
Carcinoma	3	2.2
Neuroendocrine Carcinoma	3	2.2
Small Cell Carcinoma	2	1.4
Acinar Cell Carcinoma	2	1.4
Malignant Peripheral Nerve		
Sheath Tumour	2	1.4
Lymphoepithelial Carcinoma	1	0.7
Basal Cell Adenocarcinoma	1	0.7
Mucoepidermoid Carcinoma	1	0.7
Mucinous Adenocarcinoma	1	0.7
Adenosquamous Carcinoma	1	0.7
Malignant Melanoma	1	0.7
Teratocarcinoma	1	0.7
Total with histology	138	100.0
All cases	138	

SUBSITES 2003-2007			
ICD9	SUBSITE	Male	Female
160.0	Nasal Cavities	50	31
160.1	Middle Ear	1	1
160.2	Maxillary Sinus	21	16
160.3	Ethmoidal Sinus	4	2
160.5	Sphenoidal Sinus	2	3
160.8	Other	2	1
160.9	NOS	3	1
All cases		83	55

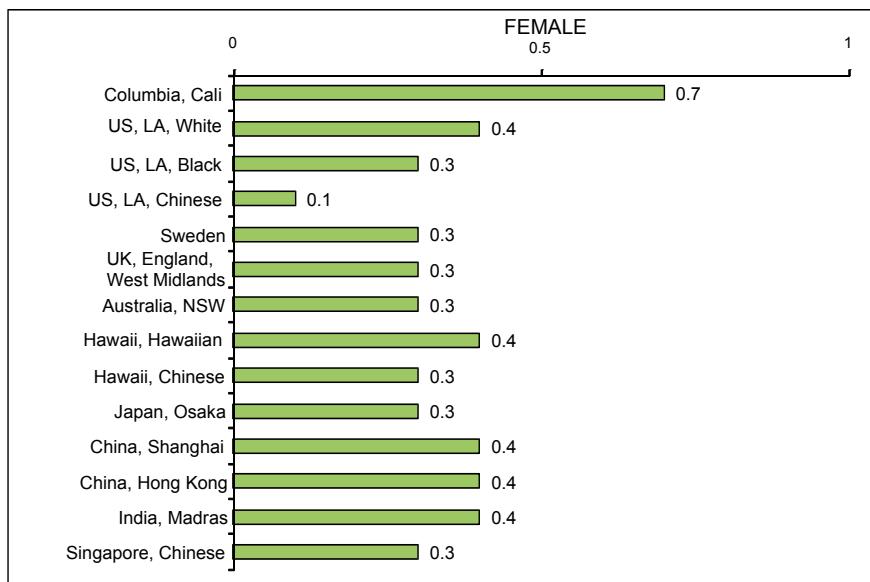
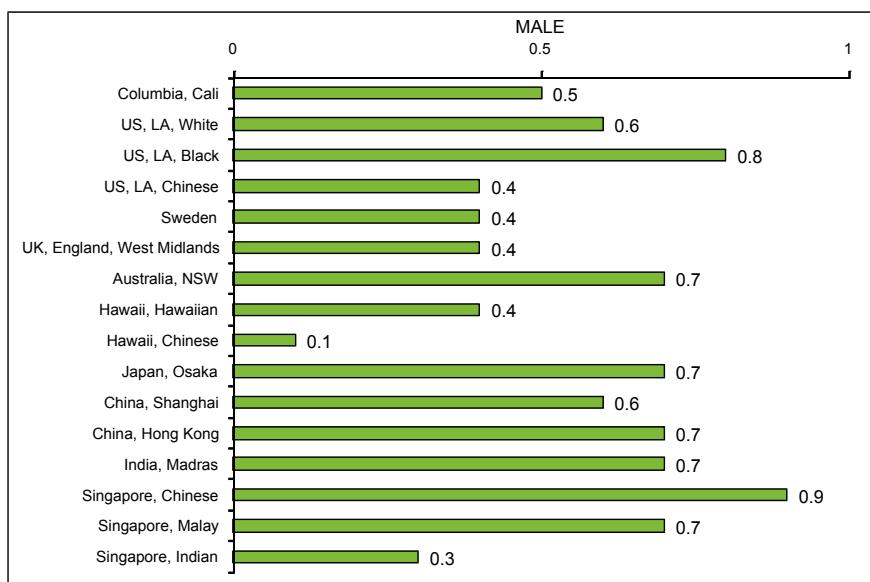


NASAL CAVITIES: AGE-STANDARDIZED INCIDENCE BY SEX, 1968-2007



NASAL CAVITIES: AGE-SPECIFIC INCIDENCE BY SEX, 2003-2007

**NASAL CAVITIES: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 1998-2002
(per 100,000 per year)**



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

Cancer of the larynx exhibits a marked male predominance, consistent with the global pattern. In 2003-2007, the male: female ratio was 10.7:1. There has been an overall decline in incidence rates among males from 6.8 per 100,000 in 1968-1972 to 3.7 per 100,000 in 2003-2007. The rates are significantly lower among Malay and Indian males compared to Chinese males, but are not significantly different among the ethnicities in females.

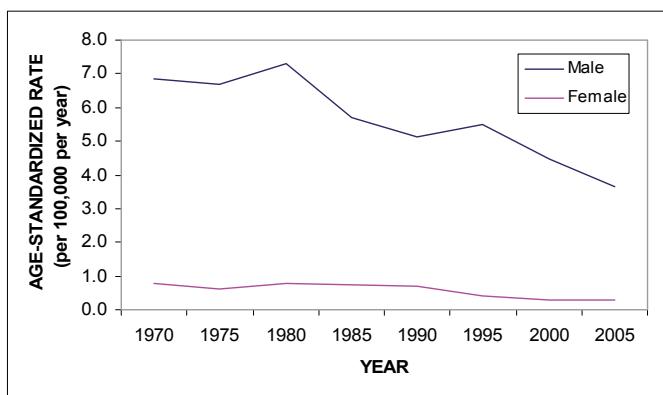
Rates in Singapore Chinese males are tied with Hong Kong Chinese males to be the highest ranked among Chinese males globally, whereas rates in Chinese females are similar to their counterparts around the world.

INCIDENCE DATA (2003-2007)		Males			
		No.	%	ASR	RR (95% CI)
All residents		352	1.6	3.7	-
Chinese		301	1.6	3.9	1.0
Malays		24	1.4	2.2	0.6 (0.4-0.9)
Indians		22	2.3	3.1	0.8 (0.5-1.2)

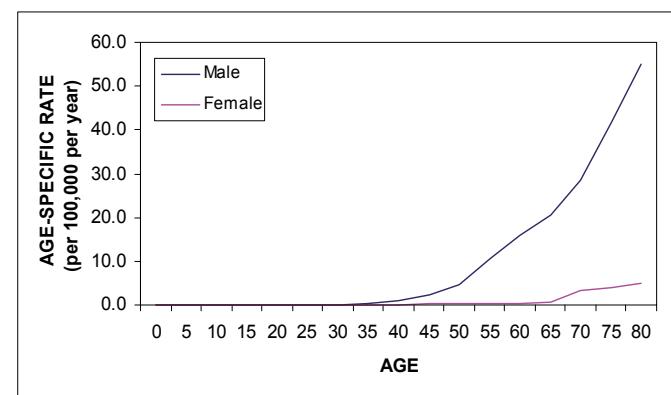
INCIDENCE DATA (2003-2007)		Females			
		No.	%	ASR	RR (95% CI)
All residents		33	0.1	0.3	-
Chinese		24	0.1	0.2	1.0
Malays		6	0.3	0.5	2.1 (0.9-5.3)
Indians		2	0.2	0.3	1.3 (0.3-5.6)

SUBSITES 2003-2007			
ICD9	SUBSITE	Male	Female
161.0	Glottis	198	13
161.1	Supraglottic	88	14
161.2	Subglottic	9	-
161.3	Laryngeal Cartilages	4	-
161.8	Other	16	1
161.9	NOS	37	5
All cases		352	33

HISTOLOGY 2003-2007	NO.	%
Squamous Cell Carcinoma	359	96.8
Carcinoma, Nos	5	1.3
Spindle Cell Carcinoma	2	0.5
Neuroendocrine Carcinoma	2	0.5
Lymphoepithelial Carcinoma	1	0.3
Basaloid Carcinoma	1	0.3
Sarcoma, Nos	1	0.3
Total with histology	371	100.0
All cases	385	

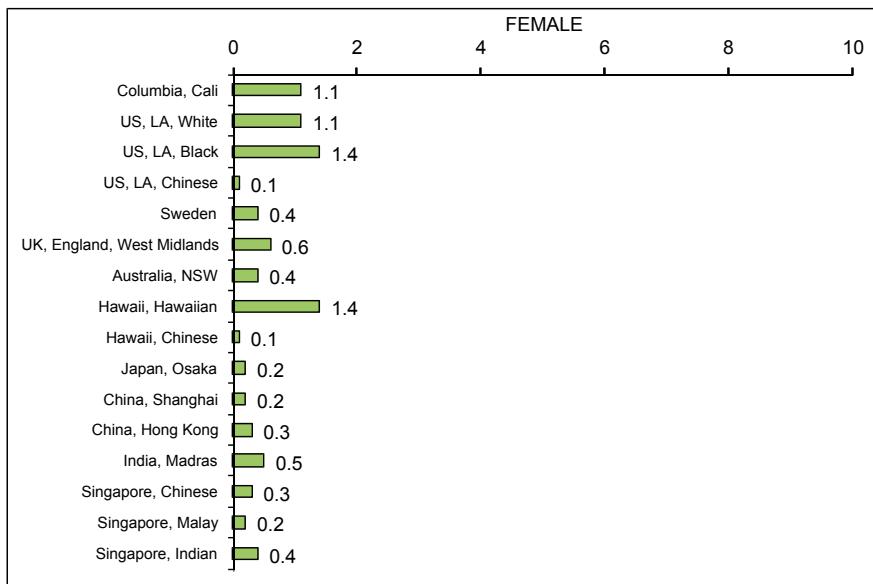
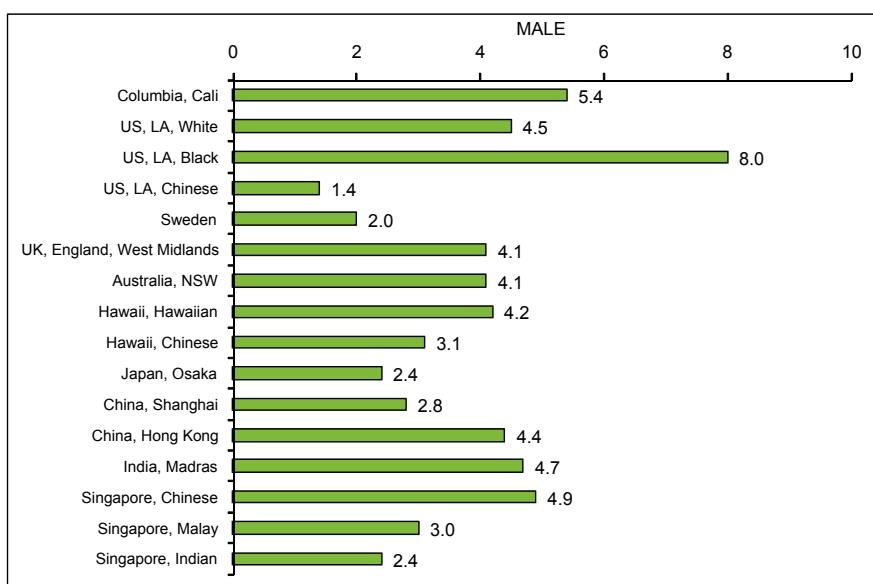


LARYNX: AGE-STANDARDIZED INCIDENCE
BY SEX, 1968-2007



LARYNX: AGE-SPECIFIC INCIDENCE
BY SEX, 2003-2007

**LARYNX: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 1998-2002
(per 100,000 per year)**



12.13 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 20% the risk of their Chinese counterparts, with the rate for Malays being intermediate. The male: female ratio is 2.0:1.

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 2003-2007 were 21% lower than those in 1968-72 for males, and 0.3% lower for females. This cancer has been the most frequent cancer among males since 1968, and has only been recently outranked by colorectal cancer in the current five year period. It is the third most frequent cancer among females.

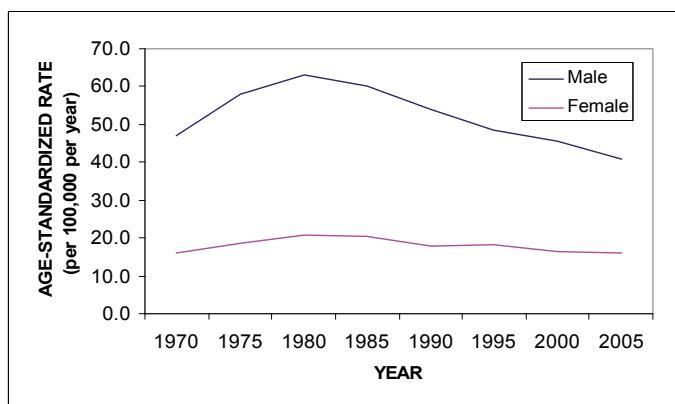
INCIDENCE DATA (2003-2007)		No.	%	Males ASR	RR (95% CI)
All residents		3828	17.4	40.8	-
Chinese		3315	17.6	44.3	1.0
Malays		356	20.3	34.7	0.8 (0.7-0.9)
Indians		122	12.7	16.9	0.4 (0.3-0.4)

INCIDENCE DATA (2003-2007)		No.	%	Females ASR	RR (95% CI)
All residents		1868	8.0	16.0	-
Chinese		1687	8.5	17.4	1.0
Malays		141	6.5	12.0	0.7 (0.6-0.8)
Indians		26	2.6	4.1	0.2 (0.2-0.3)

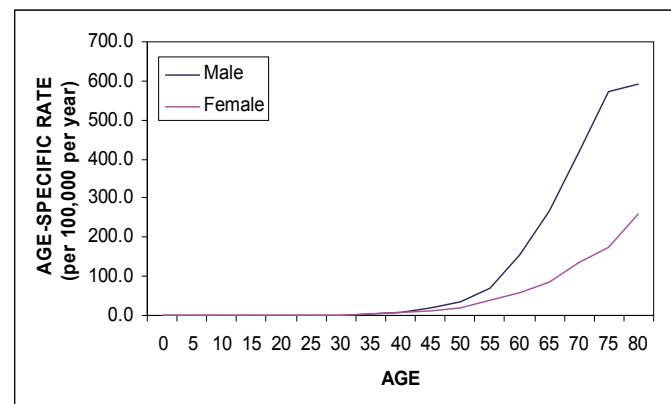
SUBSITES 2003-2007		Male	Female
ICD9	SUBSITE		
162.0	Trachea	5	1
162.2	Main Bronchus	164	71
162.3	Upper Lobe	1406	587
162.4	Middle Lobe	133	86
162.5	Lower	776	389
162.8	Other	61	25
162.9	NOS	1283	709
All cases		3828	1868

HISTOLOGY 2003-2007	NO.	%
Adenocarcinoma, Nos	2120	43.2
Squamous Cell Carcinoma	903	18.4
Non-Small Cell Carcinoma	810	16.5
Small Cell Carcinoma	482	9.8
Large Cell Carcinoma	117	2.4
Bronchiolo-Alveolar Adenocarcinoma	106	2.2
Carcinoma, Nos	101	2.1
Neuroendocrine Carcinoma	51	1.0
Neoplasm, Malignant, Nos	40	0.8
Adenosquamous Carcinoma	33	0.7
Carcinoma, Undifferentiated	29	0.6
Mucinous Adenocarcinoma	23	0.5
Acinar Cell Carcinoma	22	0.4
Pleomorphic Carcinoma	12	0.2
Lymphoepithelial Carcinoma	10	0.2

HISTOLOGY 2003-2007 (cont'd)	NO.	%
Mucoepidermoid Carcinoma	8	0.2
Sarcoma, Nos	7	0.1
Adenoid Cystic Carcinoma	5	0.1
Clear Cell Adenocarcinoma	5	0.1
Spindle Cell Carcinoma	3	0.1
Basaloid Squamous Cell Carcinoma	3	0.1
Leiomyosarcoma	3	0.1
Adenocarcinoma With Mixed Subtypes	2	0.0
Solitary Fibrous Tumour, Malignant	2	0.0
Carcinosarcoma	2	0.0
Lymphangiomyomatosis	2	0.0
Adenocarcinoma With Neuroendocrine Differentiation	1	0.0
Smooth Muscle Tumour, Borderline	1	0.0
Total with histology	4903	100.0
All cases	5696	

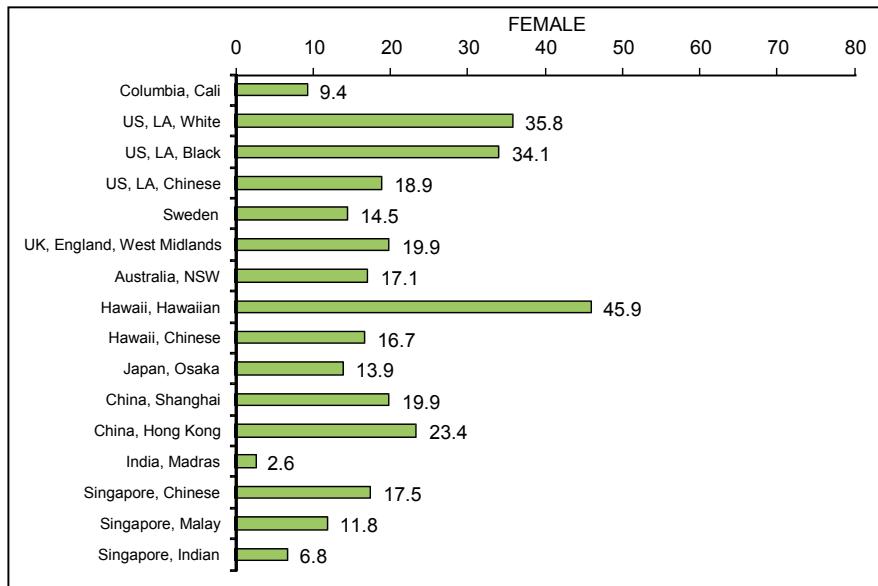
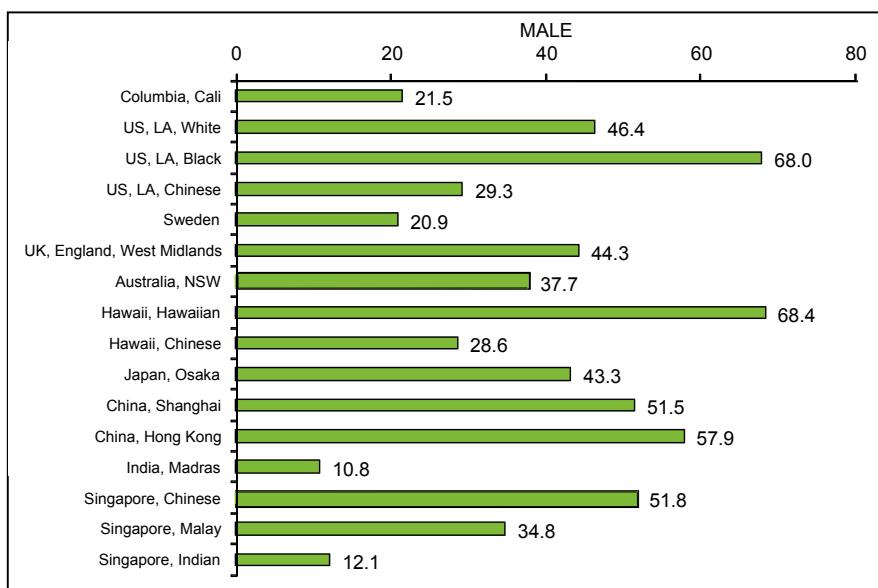


LUNG: AGE-STANDARDIZED INCIDENCE
BY SEX, 1968-2007



LUNG: AGE-SPECIFIC INCIDENCE
BY SEX, 2003-2007

**LUNG: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 1998-2002
(per 100,000 per year)**



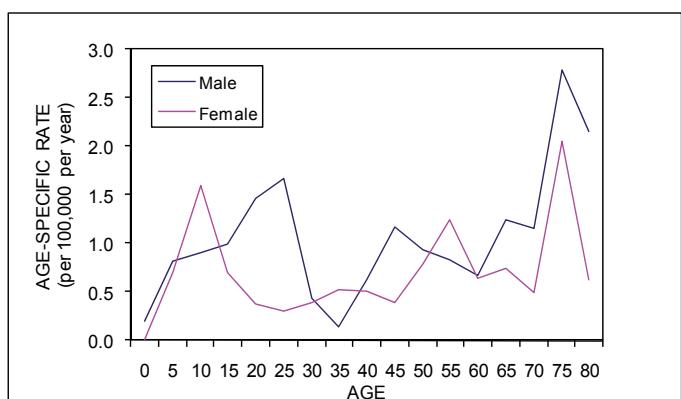
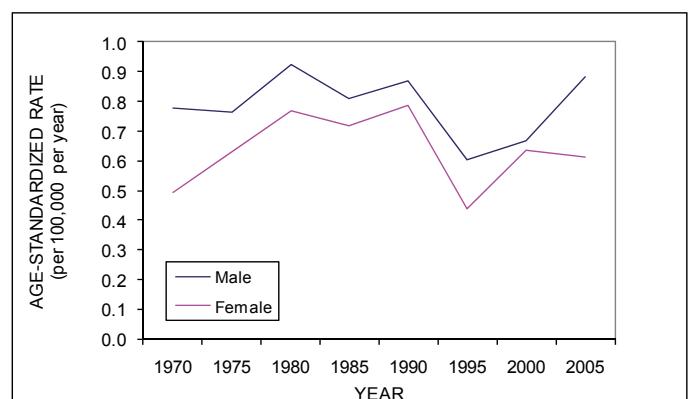
12.14 Bone (ICD-9: 170 / ICD-O-3: C40-C41)

There were 132 bone cancers registered for 2003-2007. Comparisons between ethnic group and five year periods are limited by the small number of cases. Histological information was available for 98.5% of the cases, an improvement of 4% from the previous 5-year period. The main histological types were osteosarcomas (33%), giant cell tumours (29%) and chondrosarcomas (18%).

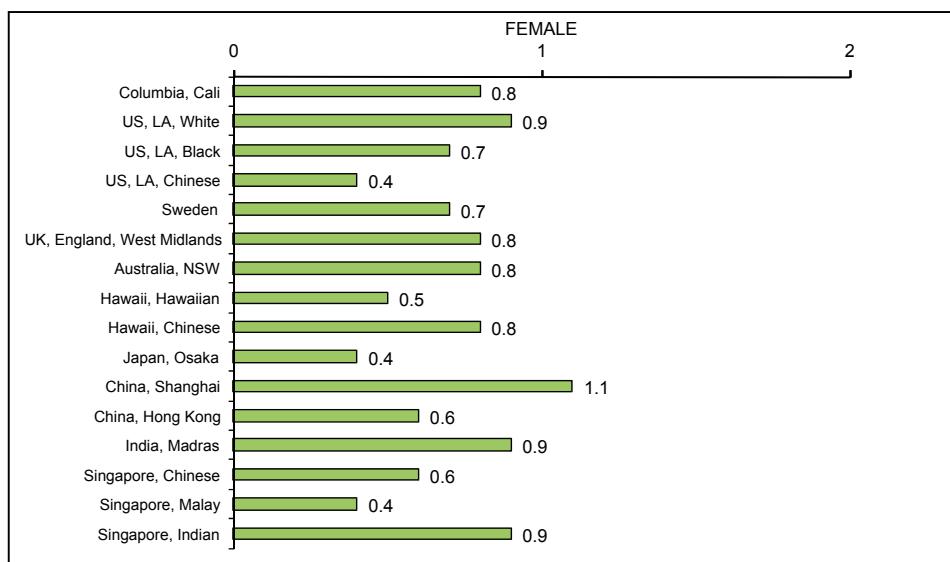
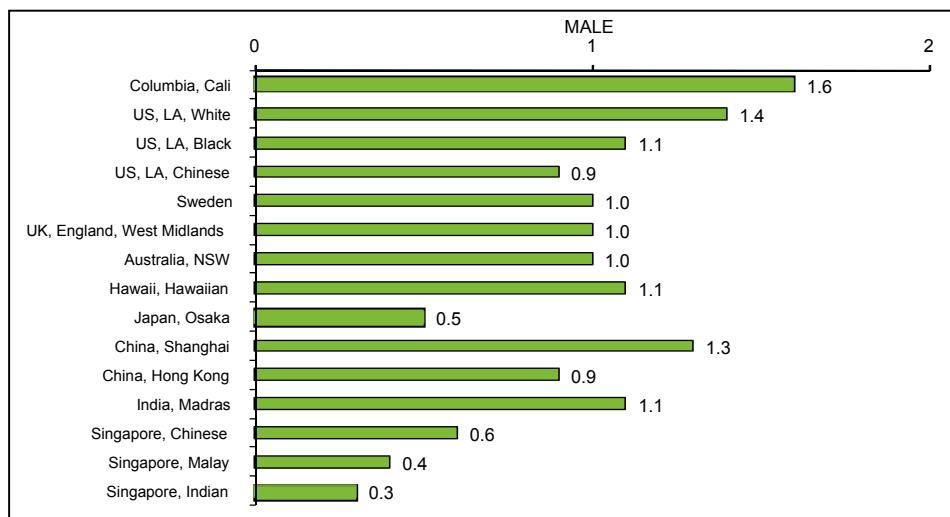
INCIDENCE DATA (2003-2007)		No.	%	Males	RR (95% CI)
All residents		76	0.3	0.9	-
Chinese		56	0.3	0.9	1.0
Malays		9	0.5	0.8	0.9 (0.4-1.8)
Indians		7	0.7	1.0	1.2 (0.5-2.5)
INCIDENCE DATA (2003-2007)		No.	%	Females	RR (95% CI)
All residents		56	0.2	0.6	-
Chinese		42	0.2	0.6	1.0
Malays		9	0.4	0.7	1.2 (0.6-2.4)
Indians		5	0.5	0.8	1.2 (0.5-3.0)

SUBSITES 2003-2007			
ICD9	SUBSITE	Male	Female
170.0	Skull and face	3	6
170.1	Mandible	4	1
170.2	Vertebral Column	4	1
170.3	Ribs, sternum and clavicle	-	3
170.4	Upper limb, long	15	10
170.5	Upper limb, short	1	-
170.6	Pelvis	10	4
170.7	Lower limb, long	35	26
170.8	Lower limb, short	3	2
170.9	NOS	1	3
All cases		76	56

HISTOLOGY 2003-2007	NO.	%
Osteosarcoma	43	33.1
Giant Cell Tumour Of Bone	37	28.5
Chondrosarcoma	23	17.7
Ewing Sarcoma	8	6.2
Sarcoma, Nos	6	4.6
Chordoma	6	4.6
Ameloblastoma, Malignant	2	1.5
Synovial Sarcoma	1	0.8
Hemangiosarcoma	1	0.8
Osteochondromatosis	1	0.8
Mesenchymal Chondrosarcoma	1	0.8
Odontogenic Tumour, Malignant	1	0.8
Total with histology	130	100.0
All cases	132	



**BONE: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 1998-2002
(per 100,000 per year)**



12.15 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.

There were 312 such tumours in this period and the most common histological types were the liposarcomas, leiomyosarcomas and malignant peripheral nerve sheath tumours.

INCIDENCE DATA (2003-2007)		No.	%	Males ASR	RR (95% CI)
All residents	182	0.8		1.9	-
Chinese	157	0.8		2.1	1.0
Malays	16	0.9		1.2	0.7 (0.4-1.1)
Indians	5	0.5		0.6	0.3 (0.1-0.7)

INCIDENCE DATA (2003-2007)		No.	%	Females ASR	RR (95% CI)
All residents	129	0.6		1.2	-
Chinese	115	0.6		1.4	1.0
Malays	8	0.4		0.6	0.5 (0.2-1.0)
Indians	4	0.4		0.7	0.4 (0.1-1.1)

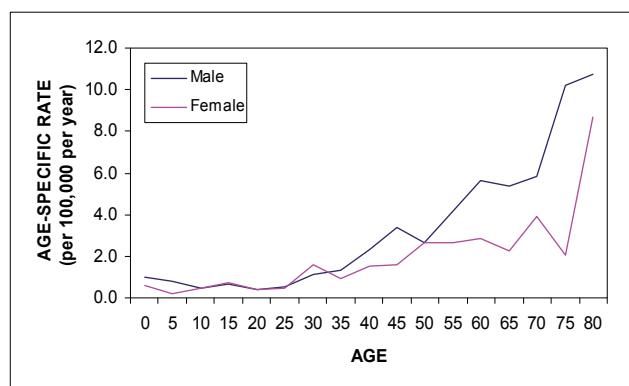
SUBSITES 2003-2007			
ICD	SUBSITE	Male	Female
171.0	Head and neck	1	1
171.2	Upper limb	2	1
171.3	Lower limb	7	4
171.4	Thorax	1	1
171.5	Abdomen	1	1
171.6	Pelvis	2	1
171.7	Trunk	7	5
171.8	Other	4	2
171.9	NOS	9	6
All		18	12

HISTOLOGY 2003-2007	NO.	%
Liposarcoma, well differentiated	33	10.8
Sarcoma, NOS	28	9.2
Malignant peripheral nerve sheath tumor	26	8.5
Leiomyosarcoma	26	8.5
Synovial sarcoma	22	7.2
Malignant fibrous histiocytoma	21	6.9
Fibromyxosarcoma	16	5.2
Myxoid liposarcoma	15	4.9
Primitive neuroectodermal tumor	15	4.9
Hemangiosarcoma	10	3.3
Giant cell sarcoma	9	3.0
Liposarcoma, NOS	7	2.3
Kaposi sarcoma	7	2.3
Epithelioid sarcoma	7	2.3
Neuroblastoma	6	2.0
Dedifferentiated liposarcoma	6	2.0
Pleomorphic liposarcoma	4	1.3
Rhabdomyosarcoma, NOS	4	1.3
Aggressive fibromatosis	4	1.3
Chondrosarcoma	4	1.3
Smooth muscle tumor, borderline	3	1.0

HISTOLOGY 2003-2007 (cont'd)	NO.	%
Neoplasm, malignant, NOS	3	1.0
Angiomyxoma	3	1.0
Round cell liposarcoma	3	1.0
Fibrosarcoma	2	0.7
Myxoid chondrosarcoma	2	0.7
Embryonal rhabdomyosarcoma	2	0.7
Alveolar soft part sarcoma	2	0.7
Clear cell sarcoma	2	0.7
Abdominal fibromatosis	2	0.7
Myofibroblastic tumor	2	0.7
Mesenchymal chondrosarcoma	2	0.7
Myxosarcoma	1	0.3
Infantile fibrosarcoma	1	0.3
Glomus tumor, malignant	1	0.3
Fibroblastic liposarcoma	1	0.3
Gastrointestinal stromal sarcoma	1	0.3
Malignant myoepithelioma	1	0.3
Malignant tenosynovial giant cell tumor	1	0.3
Total with histology	305	100.0
All cases	311	

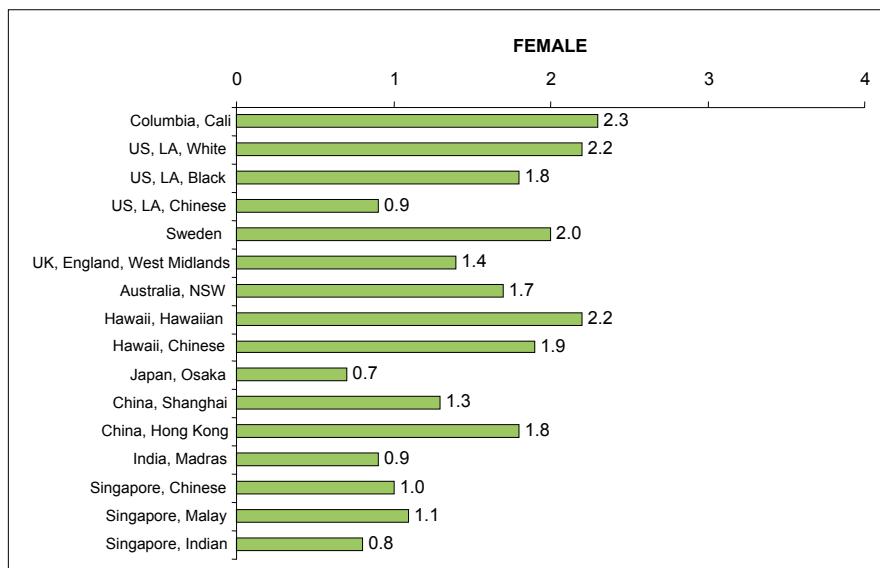
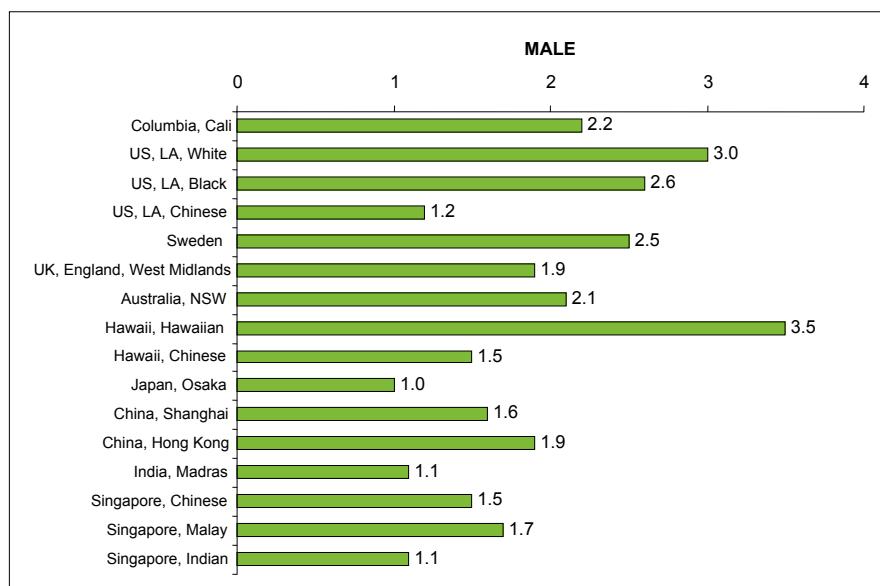


CONNECTIVE TISSUE: AGE-STANDARDIZED
INCIDENCE BY SEX, 1968-2007



CONNECTIVE TISSUE: AGE-SPECIFIC INCIDENCE
BY SEX, 2003-2007

**CONNECTIVE TISSUE: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 1998-2002
(per 100,000 per year)**



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

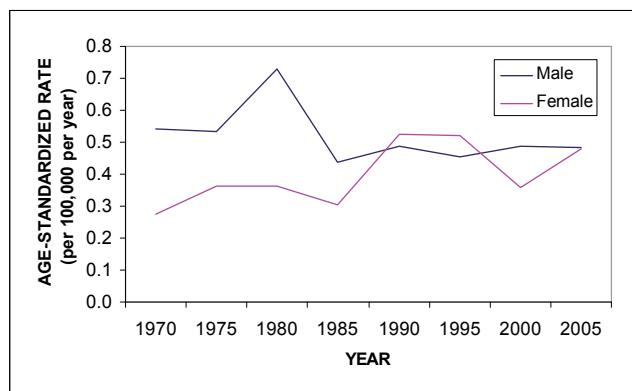
In contrast to its high incidence in Caucasian populations, melanoma of the skin is a rare cancer in Singapore. Only 106 cases were diagnosed locally in 2003-2007 and it is difficult to comment on time trends due to the small number of cases.

The most common subsite encountered in this period was the lower limb, with 42 cases (46.7% of those specified). 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.

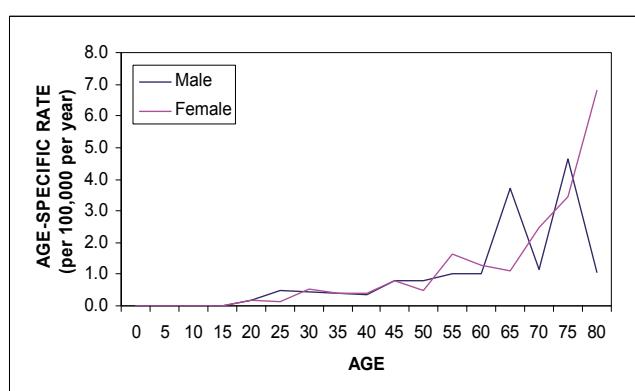
INCIDENCE DATA (2003-2007)		No.	%	Males	
				ASR	RR (95% CI)
All residents		49	0.2	0.5	-
Chinese		36	0.2	0.5	1.0
Malays		2	0.1	0.1	0.4 (0.1-1.6)
Indians		2	0.2	0.2	0.6 (0.1-2.4)

INCIDENCE DATA (2003-2007)		No.	%	Females	
				ASR	RR (95% CI)
All residents		57	0.3	0.5	-
Chinese		50	0.3	0.5	1.0
Malays		5	0.2	0.4	0.8 (0.3-2.0)
Indians		1	0.1	0.1	0.3 (0.0-2.0)

SUBSITES 2003-2007				HISTOLOGY 2003-2007	
ICD9	SUBSITE	Male	Female	No.	%
172.0	Lip	1	-		
172.2	Ear and external auditory canal	1	-		
172.3	Face, other	2	3		
172.4	Scalp and neck	1	2		
172.5	Trunk, except scrotum	14	7		
172.6	Limb, Upper	7	6		
172.7	Limb, Lower	13	29		
172.8	Other	2	2		
172.9	NOS	8	8		
All cases		49	57	Total with histology	106 100.0
All cases		49	57	All cases	106

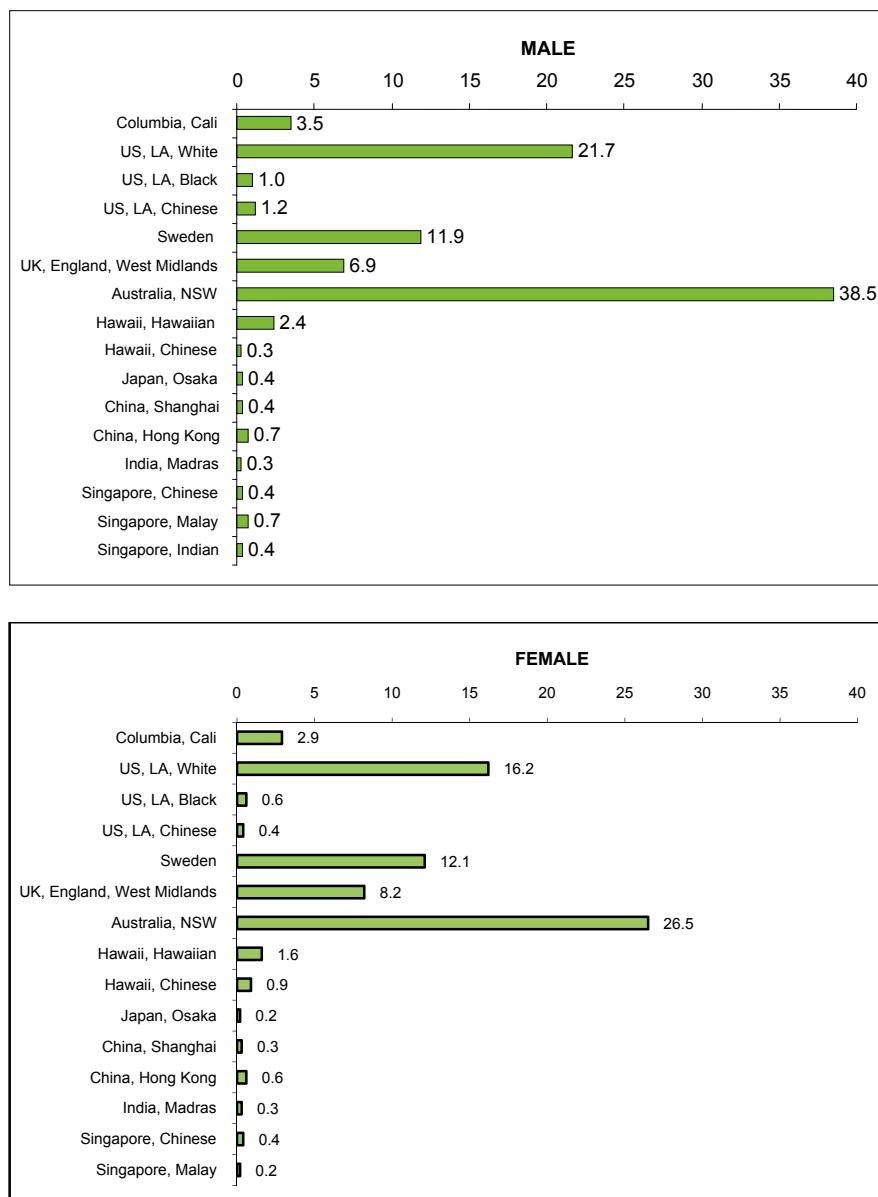


SKIN, MELANOMA: AGE-STANDARDIZED INCIDENCE BY SEX, 1968-2007



SKIN, MELANOMA: AGE-SPECIFIC INCIDENCE BY SEX, 2003-2007

**SKIN, MELANOMA: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 1998-2002
(per 100,000 per year)**



12.17 Skin, excluding melanoma (ICD-9: 173 / ICD-O-3: C44 excluding M8720-8790)

There were a total of 1707 incident cases of non-melanoma cancer of the skin in 2003-2007, of which the predominant histological type was basal cell carcinoma (57.9%) followed by squamous cell carcinoma (26.9%). Of the cancers with specified subsite, the major proportion (61.0% in males and 73.4% in females) occurred on the head and neck.

There has been a rising trend in the incidence of this cancer in both men and women over the last 40 years although the incidence in women has seen a slight dip over the past 5 years. Among ethnic groups, Malays and Indians continue to have substantially lower risks than Chinese.

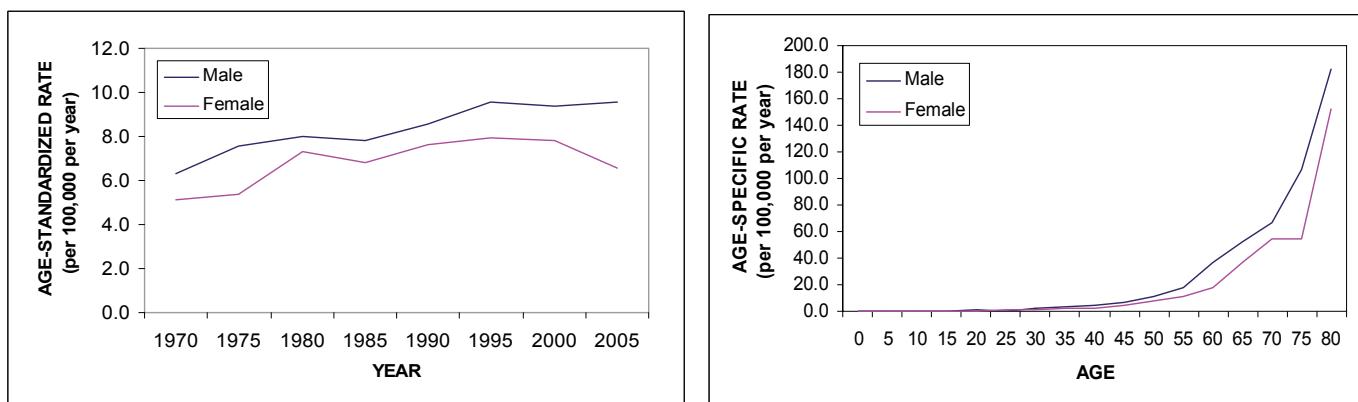
INCIDENCE (2003-2007)	No.	%	Males ASR	RR (95% CI)
All	92	4.2	9.5	-
Chinese	76	4.0	10.0	1.0
Malays	3	2.0	3.4	0.3 (0.2-0.5)
Indians	2	2.6	3.7	0.3 (0.2-0.5)

INCIDENCE (2003-2007)	No.	%	Females ASR	RR (95% CI)
All	78	3.3	6.5	-
Chinese	70	3.5	6.9	1.0
Malays	3	1.7	3.2	0.5 (0.3-0.7)
Indians	1	1.4	2.0	0.3 (0.2-0.5)

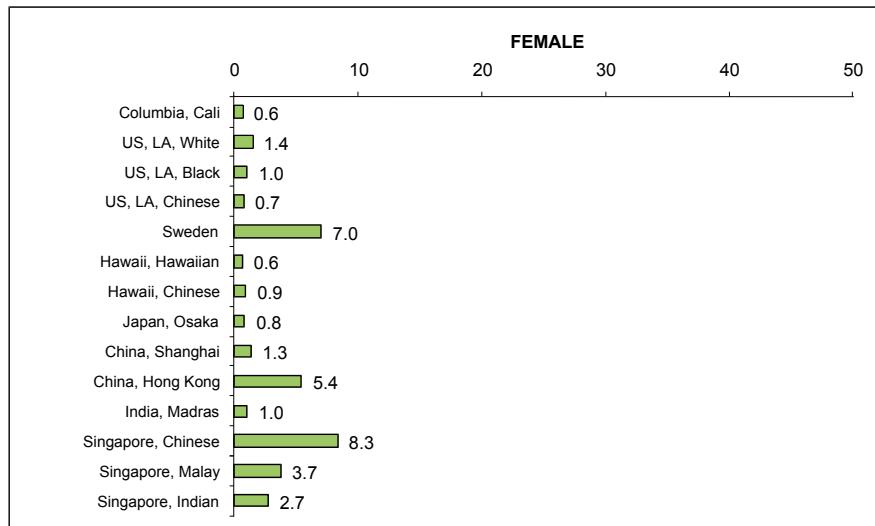
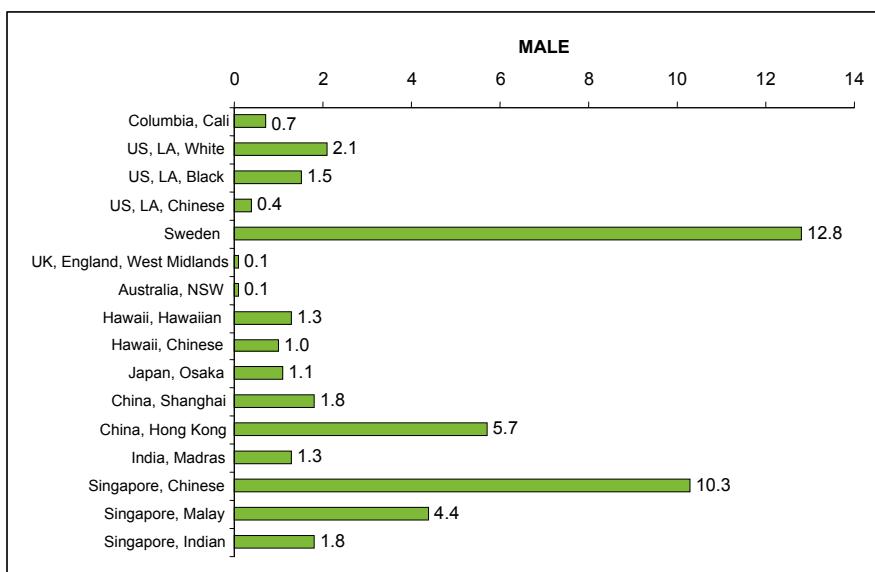
SUBSITES 2003-2007		Male	Female
ICD9	SUBSITE		
173.0	Lip	27	28
173.1	Eyelid	48	48
173.2	Ear and External auditory canal	51	34
173.3	Face, other	303	362
173.4	Scalp and neck	65	33
173.5	Trunk	99	56
173.6	Upper limb	98	48
173.7	Lower limb	63	54
173.8	Other	56	25
173.9	NOS	114	95
All cases		924	783

HISTOLOGY 2003-2007	NO.	%
Basal Cell Carcinoma	984	57.9
Squamous Cell Carcinoma	457	26.9
Basal Cell Carcinoma, Nodular	72	4.2
Dermatofibrosarcoma	48	2.8
Basosquamous Carcinoma	22	1.3
Sebaceous Adenocarcinoma	18	1.1
Hemangiosarcoma	14	0.8
Eccrine Poroma, Malignant	11	0.6
Paget Disease, Extramammary	9	0.5
Skin Appendage Carcinoma, Nos	8	0.5
Trichilemmocarcinoma	7	0.4
Merkel Cell Carcinoma	6	0.4
Sweat Gland Adenocarcinoma	6	0.4
Neoplasm, Malignant, Nos	5	0.3
Carcinoma, Nos	5	0.3
Adenocarcinoma, Nos	5	0.3

HISTOLOGY 2003-2007 (cont'd)	NO.	%
Kaposi Sarcoma	4	0.2
Adenoid Basal Carcinoma	3	0.2
Mucinous Adenocarcinoma	3	0.2
Basaloid Squamous Cell		
Carcinoma	2	0.1
Squamous Cell Carcinoma,		
Clear Cell Type	2	0.1
Adenoid Cystic Carcinoma	2	0.1
Pilomatrix Carcinoma	1	0.1
Apocrine Adenocarcinoma	1	0.1
Ceruminous Adenocarcinoma	1	0.1
Sarcoma, Nos	1	0.1
Carcinosarcoma	1	0.1
Lymphangiosarcoma	1	0.1
Total with histology	1699	100.0
All cases	1707	



**SKIN, OTHERS: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 1998-2002
(per 100,000 per year)**



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

Cancer of the breast has remained the most frequent cancer among females over the last forty years. The previously observed upward trend in incidence has continued, and the incidence rate in 2003-2007 is 2.9 times that in 1968-1972 and 5.6% higher than in 1998-2002. The pattern of increase over time is consistent across all three ethnic groups.

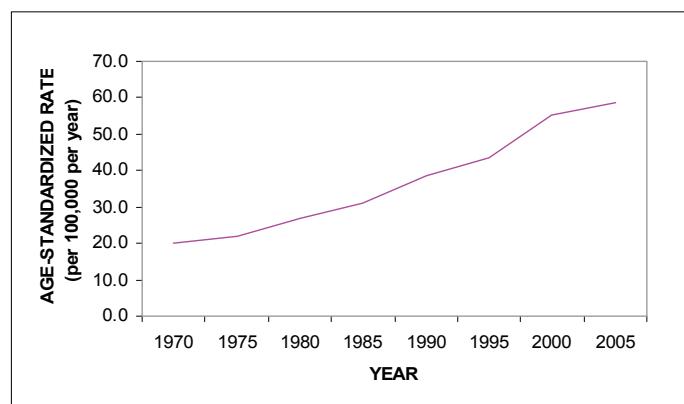
The age pattern for 2003-2007 suggests that the highest age-specific incidence rate is occurring progressively later in life. Sixty percent of all cases occurred in women 50 years of age and older. The shift in peak age is consistent with a birth cohort effect. The wider use of screening mammography in recent years may also have contributed to a larger number of cancers being detected, particularly in women above the age of 50.

Among ethnic groups, Malay and Indian women have risks that are lower than that of Chinese women by about 10% and 30% respectively.

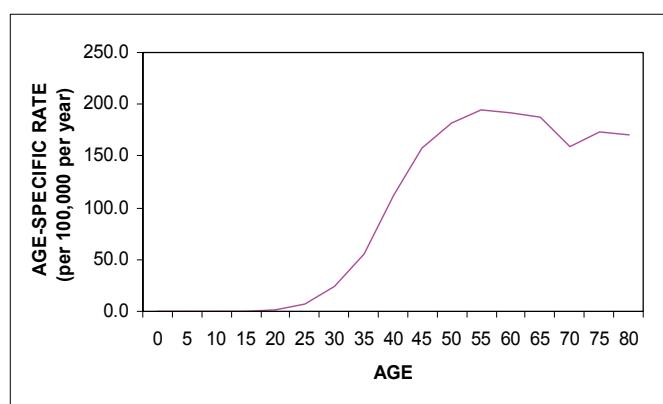
Internationally, rates of breast cancer in Singapore remain about half those among women in the United States and Europe; they are higher than those in most other parts of Asia.

INCIDENCE DATA (2003-2007)					SUBSITES 2003-2007		
	No.	%	Females ASR	RR (95% CI)	ICD9	Subsite	Female
All residents	6798	29.3	58.5	-	174.0	Nipple and Areola	35
Chinese	5594	28.3	59.9	1.0	174.1	Central Portion	422
Malays	724	33.3	54.5	0.9 (0.8-1.0)	174.2	Upper-Inner Quadrant	463
Indians	367	37.4	48.6	0.8 (0.7-0.9)	174.3	Lower-Inner Quadrant	297
					174.4	Upper-Outer Quadrant	1588
					174.5	Lower-Outer Quadrant	330
					174.6	Axillary Tail	10
					174.8	Other	330
					174.9	NOS	3323
					All cases		6798

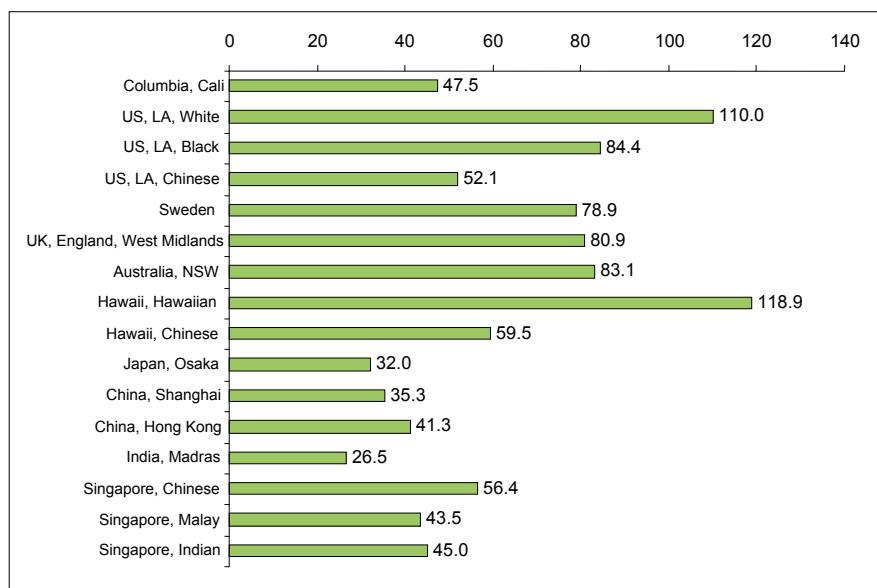
HISTOLOGY 2003-2007	NO.	%	HISTOLOGY 2003-2007 (cont'd)	NO.	%
Duct Carcinoma	5318	79.0	Paget Disease And Intraductal		
Lobular Carcinoma	263	3.9	Carcinoma Of Breast	14	0.2
Infiltrating Duct Mixed With Other			Neoplasm, Malignant, Nos	10	0.1
Types Of Carcinoma	188	2.8	Neuroendocrine Carcinoma	8	0.1
Mucinous Adenocarcinoma	183	2.7	Comedocarcinoma	8	0.1
Infiltrating Duct And Lobular			Squamous Cell Carcinoma	5	0.1
Carcinoma	177	2.6	Stromal Sarcoma	5	0.1
Phyllodes Tumour, Malignant	144	2.1	Adenoid Cystic Carcinoma	4	0.1
Carcinoma, Nos	85	1.3	Signet Ring Cell Carcinoma	4	0.1
Paget Disease And Infiltrating Duct			Paget Disease, Mammary	3	0.0
Carcinoma Of Breast	52	0.8	Sarcoma, Nos	3	0.0
Tubular Adenocarcinoma	47	0.7	Apocrine Adenocarcinoma	2	0.0
Adenocarcinoma, Nos	30	0.4	Intraductal Micropapillary	2	0.0
Medullary Carcinoma	28	0.4	Adenocarcinoma With		
Papillary Carcinoma	27	0.4	Neuroendocrine Differentiation	2	0.0
Intracystic Carcinoma	23	0.3	Hemangiosarcoma	2	0.0
Atypical Medullary Carcinoma	22	0.3	Malignant Fibrous Histiocytoma	1	0.0
Intraductal Papillary Adenocarcinoma			Leiomyosarcoma	1	0.0
With Invasion	20	0.3	Adenomyoepithelioma, Malignant	1	0.0
Cribiform Carcinoma	18	0.3	Osteosarcoma	1	0.0
Metaplastic Carcinoma	18	0.3			
Infiltrating Lobular Mixed With Other					
Types Of Carcinoma	15	0.2			
Total with histology		6734	100.0		
All cases		6798			



FEMALE BREAST: AGE-STANDARDIZED INCIDENCE, 1968-2007



FEMALE BREAST: AGE-SPECIFIC INCIDENCE, 2003-2007

**FEMALE BREAST: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 1998-2002
(per 100,000 per year)**

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

The incidence rate for cancer of the cervix has consistently declined over the last four decades. The age-standardized rate in 2003-2007 was 17.0% lower than that in 1998-2002. The peak incidence appears to be between 55 and 70 years of age.

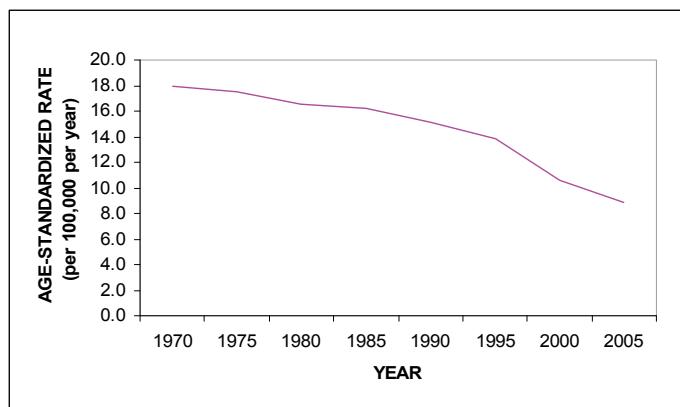
Cancer of the cervix has fallen in ranking from the second most common cancer in 1968-1972 to the sixth most common cancer among women in 2003-2007, and constitutes 4.3% of all female cancers diagnosed in 2003-2007. Indian women have a substantially lower risk (30%) compared to Chinese.

The rates of cervical cancer are the highest in Singapore Chinese women compared to Chinese women residing in other parts of the world.

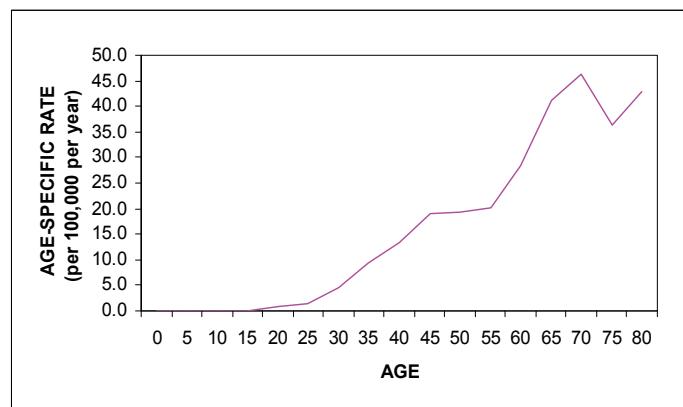
INCIDENCE DATA (2003-2007)	No.	%	Females ASR	RR (95% CI)
All residents	1009	4.4	8.8	-
Chinese	861	4.4	9.3	1.0
Malays	103	4.7	8.4	0.9 (0.7-1.1)
Indians	25	2.6	3.8	0.4 (0.2-0.5)

HISTOLOGY 2003-2007	NO.	%
Squamous Cell Carcinoma	717	71.3
Adenocarcinoma, Nos	113	11.2
Adenosquamous Carcinoma	45	4.5
Mucinous Adenocarcinoma	24	2.4
Endometrioid Adenocarcinoma	22	2.2
Carcinoma, Nos	15	1.5
Papillary Adenocarcinoma	10	1.0
Adenosarcoma	10	1.0
Neuroendocrine Carcinoma	8	0.8
Small Cell Carcinoma	7	0.7
Papillary Squamous Cell Carcinoma	7	0.7
Serous Adenocarcinoma	6	0.6
Clear Cell Adenocarcinoma	5	0.5
Adenocarcinoma, Endocervical Type	4	0.4
Lymphoepithelial Carcinoma	3	0.3
Mullerian Mixed Tumour	3	0.3
Malignant Melanoma	2	0.2
Leiomyosarcoma	2	0.2
Neoplasm, Malignant, Nos	1	0.1
Sarcoma, Nos	1	0.1
Total with histology	1005	100.0
All cases	1009	

SUBSITES 2003-2007		Female
ICD9	SUBSITE	
180.0	Endocervix	33
180.1	Exocervix	4
180.8	Other	5
180.9	NOS	967
All cases		1009

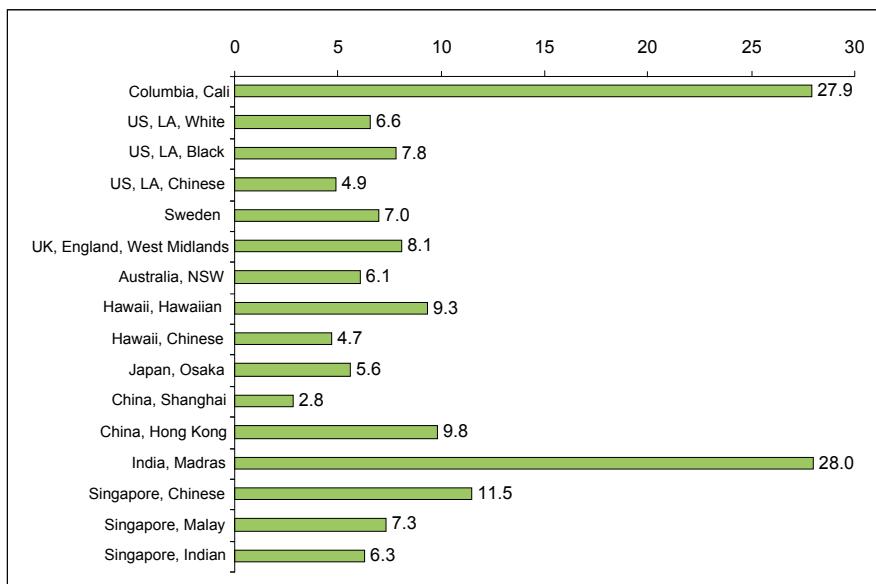


**CERVIX: AGE-STANDARDIZED INCIDENCE,
1968-2007**



**CERVIX: AGE-SPECIFIC INCIDENCE,
2003-2007**

**CERVIX: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 1998-2002
(per 100,000 per year)**



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

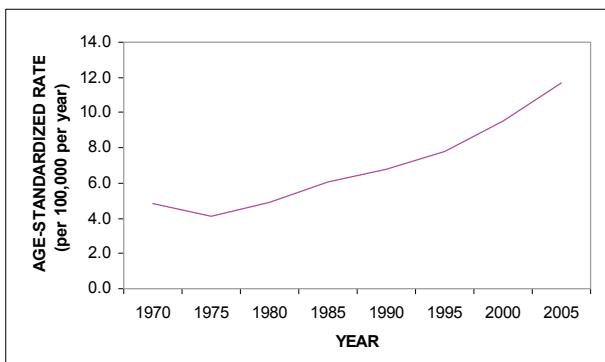
The incidence rate of uterine cancer has been increasing steadily over the last four decades, from 4.1 per 100,000 in 1973-77 to 11.7 per 100,000 in 2003-2007. It is currently ranked 4th in incidence among cancers in women, up from 7th place in 1998-2002. The peak incidence appears to be between 50 and 70 years of age.

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 6th most frequent cancer, respectively. It constitutes between 5.6% and 8.2% of all female cancers in the three ethnic groups.

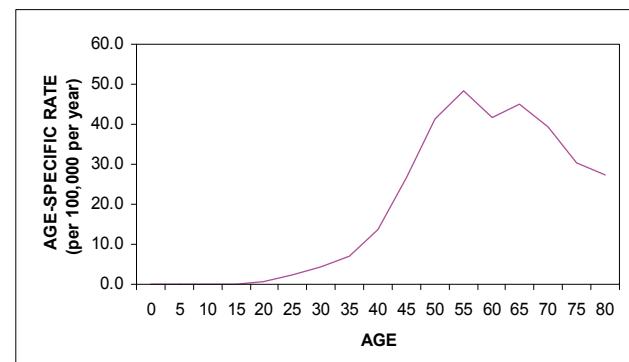
The rates of uterine cancer are highest among those of Chinese women globally, except for those in Hawaii, who experience unusually high rates. They are lower than the rates in most Western countries.

INCIDENCE DATA (2003-2007)	Females			
	No.	%	ASR	RR (95% CI)
All residents	1332	5.7	11.7	-
Chinese	1101	5.6	12.0	1.0
Malays	138	6.4	11.1	0.9 (0.8-1.1)
Indians	80	8.1	11.6	0.8 (0.7-1.0)

SUBSITES 2003-2007			HISTOLOGY 2003-2007	
ICD9	SUBSITE	Female	NO.	%
182.0	Corpus	1328	Endometrioid Adenocarcinoma	922 69.6
182.1	Isthmus	1	Serous Adenocarcinoma	83 6.3
182.8	NOS	3	Adenocarcinoma, Nos	70 5.3
All cases			Mullerian Mixed Tumour	68 5.1
			Leiomyosarcoma	42 3.2
			Endometrial Stromal Sarcoma	35 2.6
			Mucinous Adenocarcinoma	25 1.9
			Clear Cell Adenocarcinoma	18 1.4
			Smooth Muscle Tumour, Borderline	14 1.1
			Adenosarcoma	11 0.8
			Carcinosarcoma	11 0.8
			Adenosquamous Carcinoma	8 0.6
			Carcinoma, Nos	7 0.5
			Squamous Cell Carcinoma	5 0.4
			Sarcoma, Nos	3 0.2
			Neuroendocrine Carcinoma	2 0.2
			Small Cell Carcinoma	1 0.1
Total with histology			1325	100.0
All cases			1332	

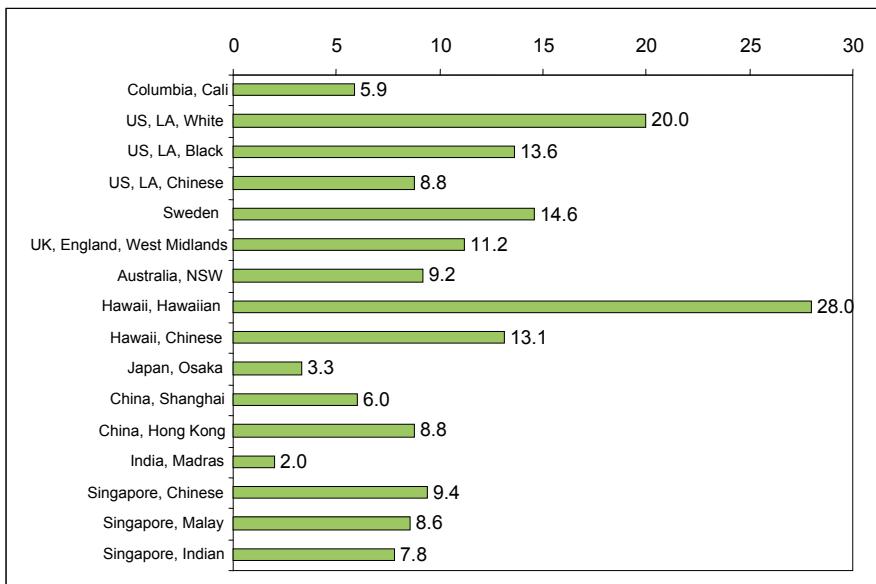


UTERUS: AGE-STANDARDIZED INCIDENCE, 1968-2007



UTERUS: AGE-SPECIFIC INCIDENCE, 2003-2007

**UTERUS: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 1998-2002
(per 100,000 per year)**



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

Rates for cancer of the ovary in Singapore fall between those of Western Europe and the US, and the rest of Asia. A steady increase has been observed over the last four decades. This cancer now ranks fifth, ahead of cervical cancer, for all women, and accounts for 5.7% of all female cancers diagnosed in 2003-2007. The rate of this cancer increases greatly after the age of 35-40.

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 1968-2007.

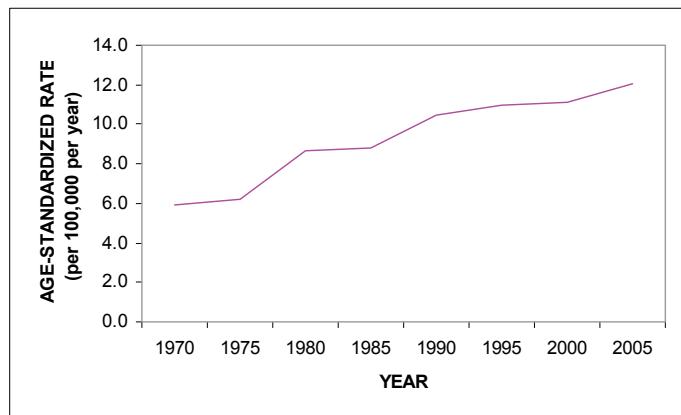
The rates of ovarian cancer are highest among Chinese women residing globally, except in Hawaii, but still lower than those among women living in Western countries.

INCIDENCE DATA (2003-2007)		Females		RR (95% CI)
No.	%	ASR		
All residents	1327	5.7	12.0	-
Chinese	1071	5.4	12.2	1.0
Malays	163	7.5	12.7	1.0 (0.9-1.2)
Indians	76	7.7	9.9	0.8 (0.7-1.0)

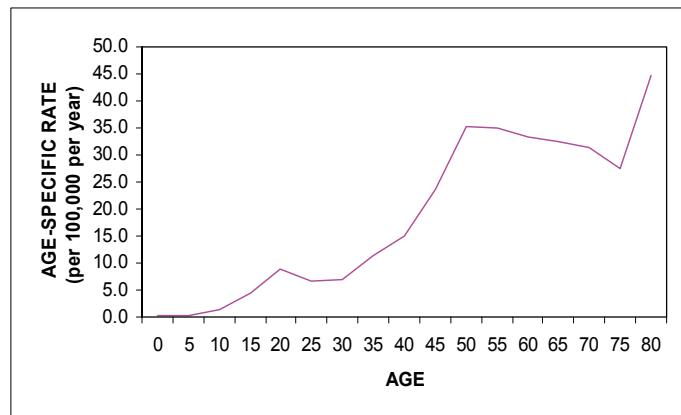
SUBSITES 2003-2007		
ICD9	SUBSITE	Female
183.0	Ovary	1300
183.2	Fallopian Tube	19
183.3	Broad Ligament	1
183.8	Other	5
183.9	NOS	2
All cases		1327

HISTOLOGY 2003-2007	NO.	%
Serous Cystadenocarcinoma	282	22.3
Mucinous Cystic Tumour, Borderline	186	14.7
Clear Cell Adenocarcinoma	170	13.4
Endometrioid Adenocarcinoma	159	12.5
Adenocarcinoma, Nos	80	6.3
Mucinous Adenocarcinoma	63	5.0
Serous Cystadenoma, Borderline	58	4.6
Mucinous Cystadenocarcinoma	47	3.7
Teratoma, Malignant	43	3.4
Granulosa Cell Tumour, Malignant	25	2.0
Carcinoma, Nos	23	1.8
Serous Papillary Carcinoma	16	1.3
Mullerian Mixed Tumour	14	1.1
Yolk Sac Tumour	13	1.0
Neoplasm, Malignant, Nos	8	0.6
Papillary Adenocarcinoma	7	0.6
Squamous Cell Carcinoma	6	0.5
Sertoli-Leydig Cell Tumour, Poorly Differentiated	6	0.5
Transitional Cell Carcinoma	5	0.4
Sarcoma, Nos	5	0.4
Leiomyosarcoma	5	0.4

HISTOLOGY 2003-2007 (cont'd)	NO.	%
Endometrial Stromal Sarcoma	5	0.4
Serous Adenocarcinofibroma	5	0.4
Neuroendocrine Carcinoma	4	0.3
Clear Cell Adenocarcinofibroma	4	0.3
Dysgerminoma	4	0.3
Mixed Germ Cell Tumour	4	0.3
Endometrioid Adenofibroma, Malignant	3	0.2
Small Cell Carcinoma	2	0.2
Clear Cell Cystic Tumour Of Borderline	2	0.2
Adenosquamous Carcinoma	2	0.2
Sex Cord-Gonadal Stromal Tumour, Malignant, Nos	2	0.2
Juvenile Granulosa Cell Tumour, Malignant	2	0.2
Adenofibroma, Malignant	2	0.2
Cystadenocarcinoma	1	0.1
Sex Cord Tumour With Annular Tubules	1	0.1
Steroid Cell Tumour, Malignant	1	0.1
Smooth Muscle Tumour, Borderline	1	0.1
Carcinosarcoma	1	0.1
Total with histology	1267	100.0
All cases	1327	

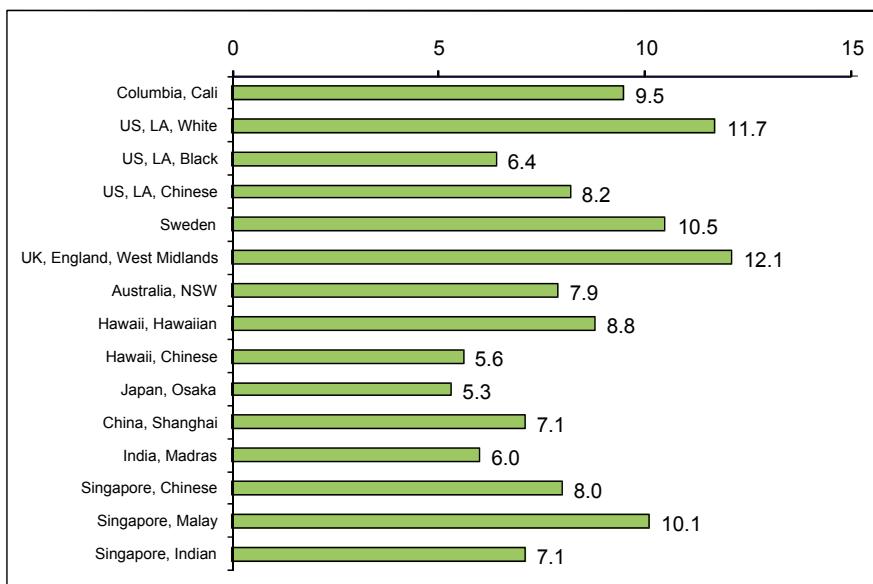


OVARY: AGE-STANDARDIZED INCIDENCE, 1968-2007



OVARY: AGE-SPECIFIC INCIDENCE, 2003-2007

**OVARY: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 1998-2002
(per 100,000 per year)**



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

Prostate cancer is now the third most frequent cancer among Singapore males, up from 5th place in the previous five-year period, and the incidence has been steadily increasing over the last 40 years. The average annual rate of increase between 1968 and 2007 was 5.0%, with the last 15 years having seen a relatively steeper increase. The age-adjusted risk of this cancer in 2003-2007 was 5.7 times that observed in 1968-72 (4.2 per 100,000). The age-incidence curve rises sharply after 50 years of age.

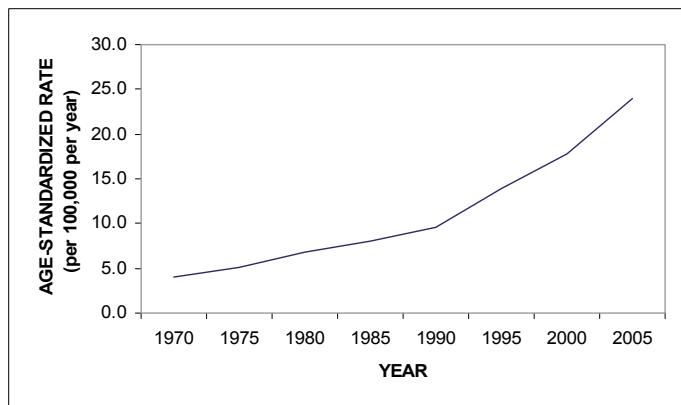
Indian men appear to have a lower risk of this disease relative to Chinese. However, the increase in rates over time is observed in all ethnic groups. Prostate cancer is the third most frequent cancer among Malay and Indian men.

Singapore Chinese males have the highest rates of prostate cancer among Chinese males in Asia, but these rates are still much lower than those in Chinese residing in Western countries.

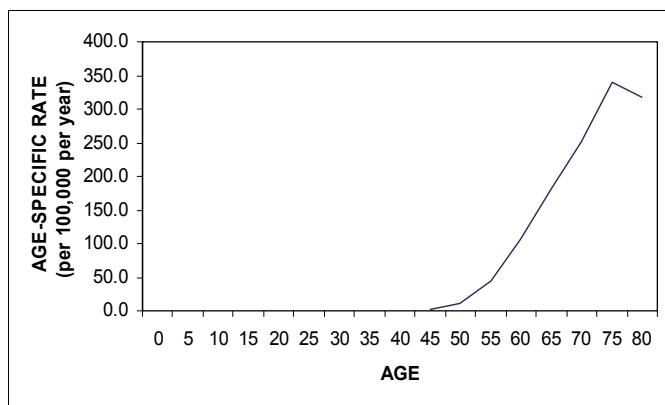
INCIDENCE DATA (2003-2007)	No.	%	Males	RR (95% CI)
			ASR	
All residents	2169	9.9	23.9	-
Chinese	1837	9.8	25.2	1.0
Malays	169	9.6	17.7	0.6 (0.5-0.7)
Indians	117	12.1	15.9	0.4 (0.3-0.5)

HISTOLOGY 2003-2007	NO.	%
Adenocarcinoma, Nos	1170	55.8
Acinar Cell Carcinoma	877	41.8
Carcinoma, Nos	20	1.0
Duct Carcinoma	13	0.6
Neoplasm, Malignant, Nos	5	0.2
Neuroendocrine Carcinoma	4	0.2
Transitional Cell Carcinoma	3	0.1
Mucinous Adenocarcinoma	3	0.1
Small Cell Carcinoma	1	0.0
Smooth Muscle Tumour, Borderline	1	0.0
Total with histology	2097	100.0
All cases	2169	

SUBSITES 2003-2007		
ICD9	SUBSITE	Male
185.9	NOS	2169
All cases	2169	

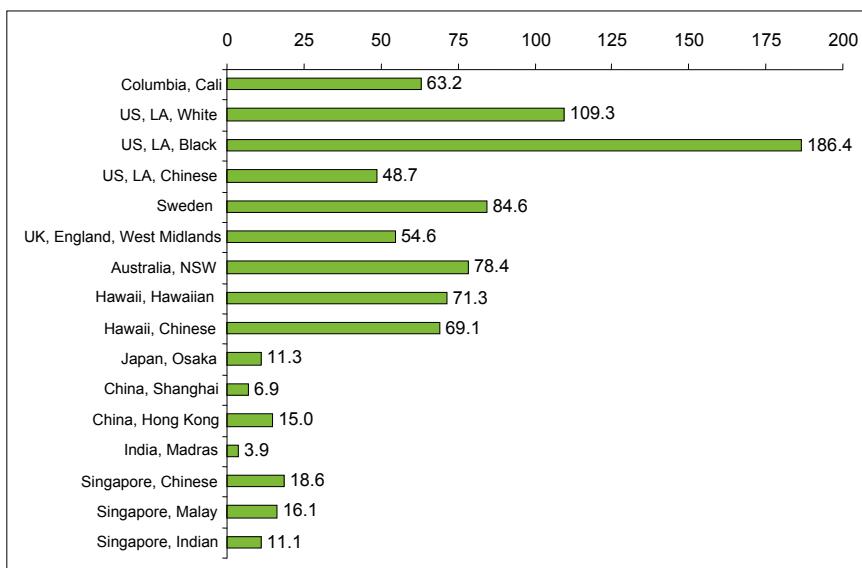


PROSTATE: AGE-STANDARDIZED INCIDENCE, 1968-2007



PROSTATE: AGE-SPECIFIC INCIDENCE, 2003-2007

**PROSTATE: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 1998-2002
(per 100,000 per year)**



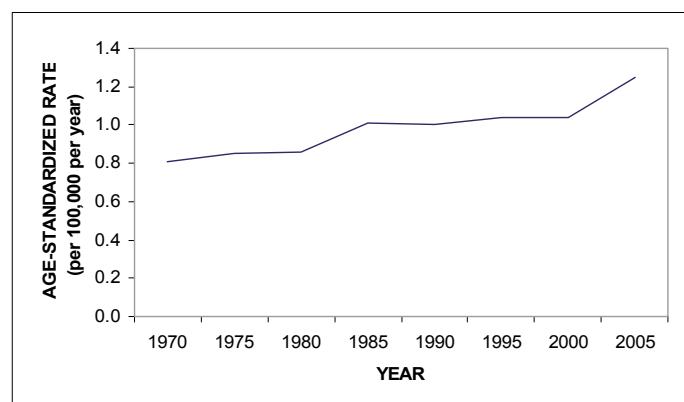
12.23 Testis (ICD-9: 186 / ICD-O-3: C62)

The incidence of testicular cancer is low and has remained fairly constant over the last 40 years, though it has increased by about 20% in the past 5 year period. There were 116 cases in 2003-2007, of which the majority were seminomas (57.0%) and mixed germ cell tumours (17.5%).

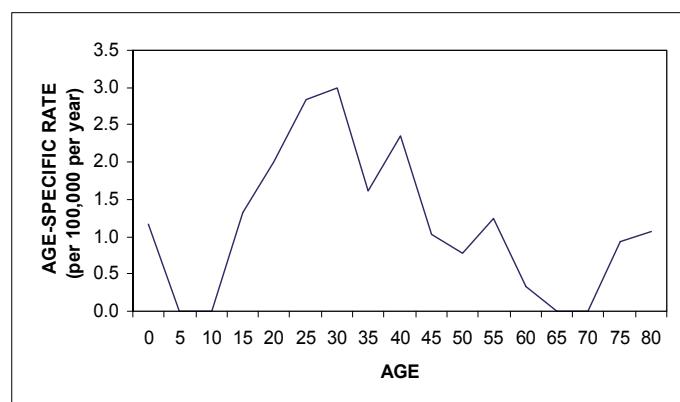
INCIDENCE DATA (2003-2007)	No.	%	Males ASR	RR (95% CI)
All residents	116	0.5	1.2	-
Chinese	90	0.5	1.3	1.0
Malays	15	0.9	1.2	1.0 (0.6-1.7)
Indians	7	0.7	0.8	0.7 (0.3-1.5)

HISTOLOGY 2003-2007	NO.	%
Seminoma	65	57.0
Mixed Germ Cell Tumour	20	17.5
Yolk Sac Tumour	8	7.0
Embryonal Carcinoma	7	6.1
Leydig Cell Tumour, Malignant	3	2.6
Rhabdomyosarcoma	3	2.6
Teratoma, Malignant	3	2.6
Liposarcoma, Well Differentiated	2	1.8
Mucinous Cystadenocarcinoma	1	0.9
Spermatocytic Seminoma	1	0.9
Germ Cell Tumour, Nonseminomatous	1	0.9
Total with histology	114	100.0
All cases	116	

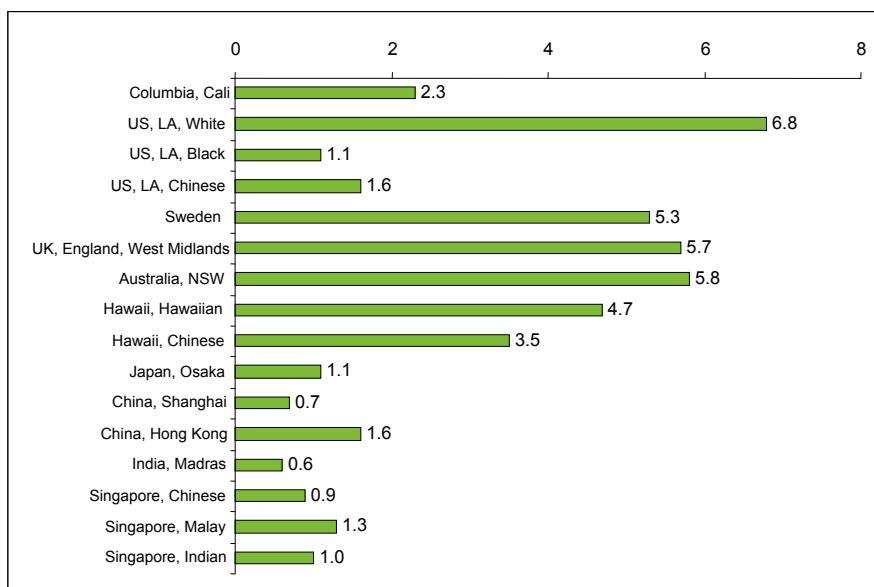
ICD9	SUBSITE	Male
186.9	NOS	116
	All cases	116



TESTIS: AGE-STANDARDIZED INCIDENCE, 1968-2007



TESTIS: AGE-SPECIFIC INCIDENCE, 2003-2007

**TESTIS: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 1998-2002
(per 100,000 per year)**

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

In Singapore, cancer of the bladder ranks ninth among males and is relatively less frequent among females. The male: female ratio is 3:1. Rates have been fairly stable throughout the period 1968-2003, with a suggestion of a slight increase among males.

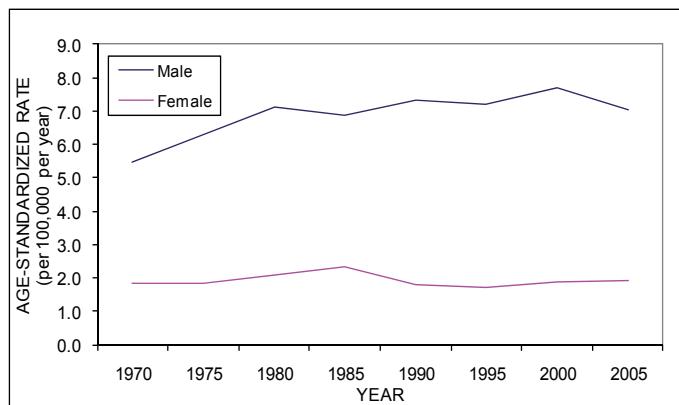
Transitional cell (including papillary) carcinomas comprise 93.4% of all cases diagnosed in 2003-2007. In males, Indians have a lower risk compared with Chinese, while ethnic comparisons are difficult for females because of the small number of cases. Bladder cancer is the 7th most frequent cancer among both Indian and Malay males.

INCIDENCE DATA (2003-2007)		No.	%	Males ASR	RR (95% CI)
All residents		675	3.1	7.1	-
Chinese		552	2.9	7.3	1.0
Malays		63	3.6	6.0	0.8 (0.6-1.0)
Indians		38	4.0	5.1	0.5 (0.3-0.7)

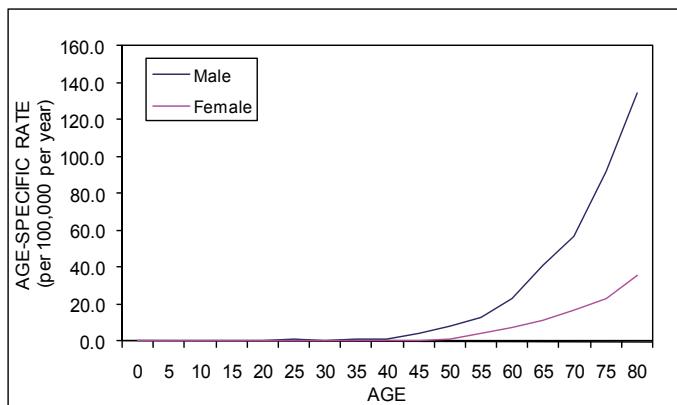
INCIDENCE DATA (2003-2007)		No.	%	Females ASR	RR (95% CI)
All residents		223	1.0	1.9	-
Chinese		196	1.0	2.0	1.0
Malays		14	0.6	1.2	0.6 (0.3-1.0)
Indians		11	1.1	1.9	0.8 (0.4-1.4)

SUBSITES 2003-2007			
ICD9	SUBSITE	Male	Female
188.0	Trigone	5	2
188.1	Dome	14	6
188.2	Lateral Wall	119	32
188.3	Anterior Wall	5	-
188.4	Posterior Wall	13	6
188.5	Bladder Neck	10	1
188.6	Ureteric Orifice	27	9
188.7	Urachus	3	1
188.8	Other	50	21
188.9	NOS	429	145
All cases		675	223

HISTOLOGY 2003-2007	NO.	%
Papillary Transitional Cell Carcinoma	546	61.9
Transitional Cell Carcinoma, Nos	278	31.5
Adenocarcinoma, Nos	12	1.4
Squamous Cell Carcinoma	10	1.1
Neoplasm, Malignant, Nos	9	1.0
Carcinoma, Nos	9	1.0
Paraganglioma, Malignant	5	0.6
Mucinous Adenocarcinoma	4	0.5
Small Cell Carcinoma	3	0.3
Neuroendocrine Carcinoma	1	0.1
Sarcoma, Nos	1	0.1
Giant Cell Sarcoma	1	0.1
Myofibroblastic Tumour	1	0.1
Leiomyosarcoma	1	0.1
Carcinosarcoma	1	0.1
Total with histology	882	100.0
All cases	898	

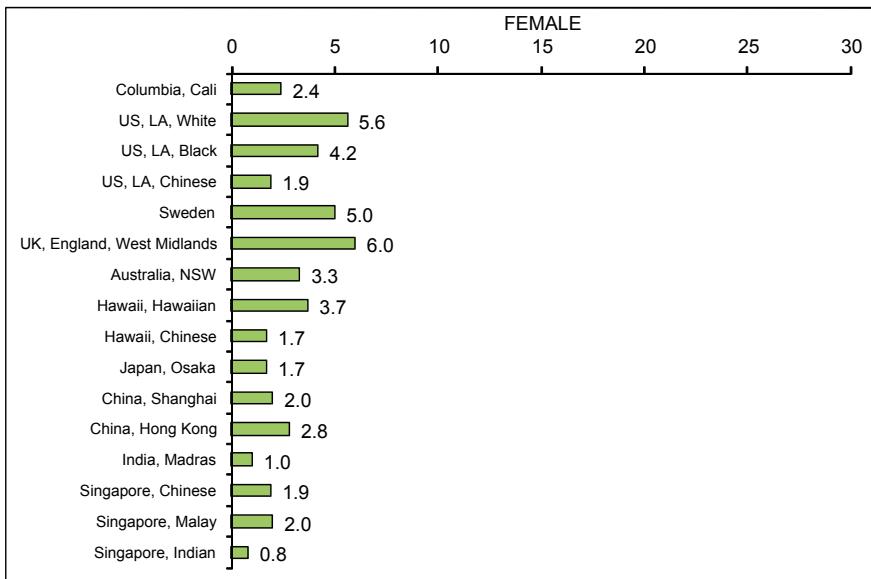
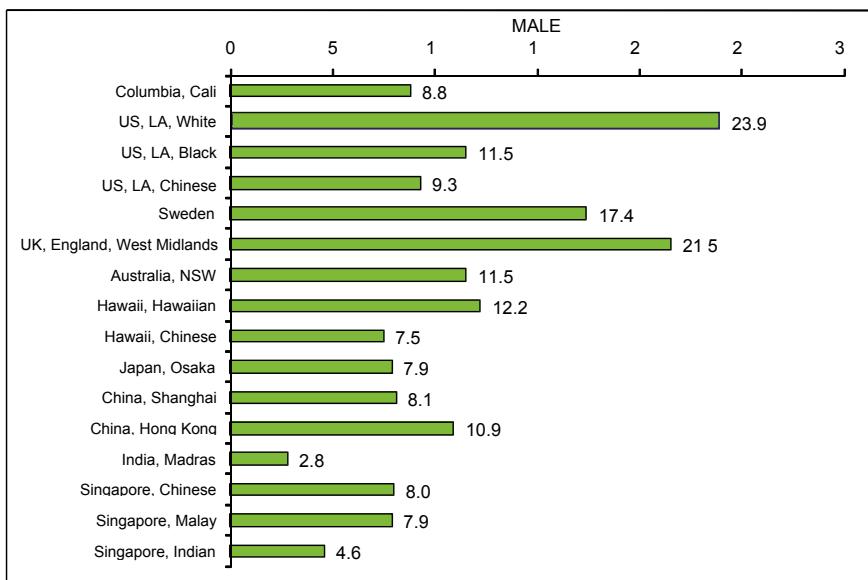


BLADDER: AGE-STANDARDIZED INCIDENCE BY SEX, 1968-2007



BLADDER: AGE-SPECIFIC INCIDENCE BY SEX, 2003-2007

**BLADDER: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 1998-2002
(per 100,000 per year)**



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

Of the 950 cases registered under this site for 2003-2007, 802 (84.4%) occurred in the renal parenchyma, 8.9% in the renal pelvis, and 5.1% in the ureter. Renal cell carcinomas comprised 72.3% of all cases with information on histology.

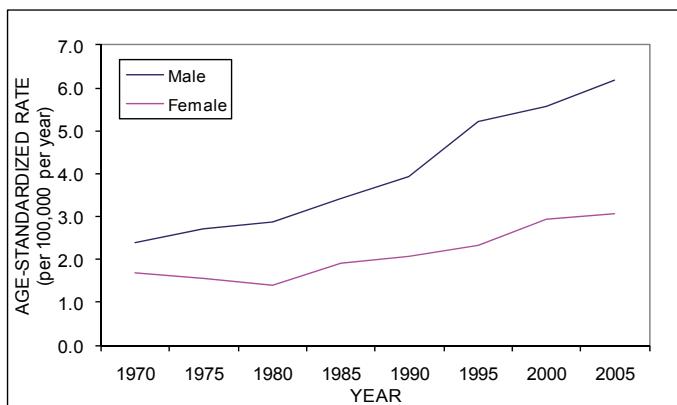
The upward trend in incidence has continued in both males and females, their rates having increased by 159.4% and 80.5% respectively over the last 40 years.

INCIDENCE DATA (2003-2007)		No.	%	Males ASR	RR (95% CI)
All residents		620	2.8	6.2	-
Chinese		514	2.7	6.4	1.0
Malays		53	3.0	4.9	0.7 (0.6-1.0)
Indians		35	3.6	4.8	0.5 (0.4-0.8)

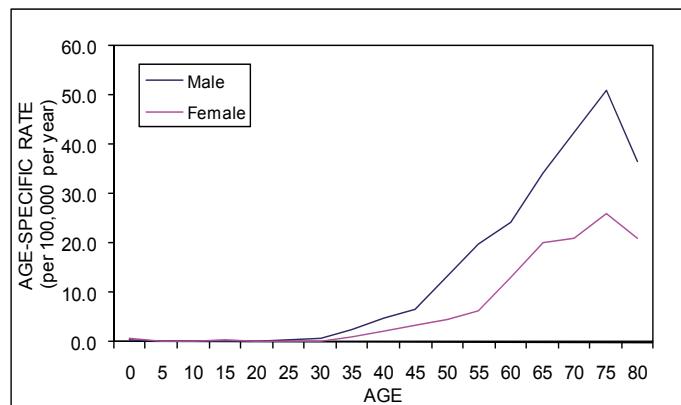
INCIDENCE DATA (2003-2007)		No.	%	Females ASR	RR (95% CI)
All residents		330	1.4	3.1	-
Chinese		276	1.4	3.1	1.0
Malays		27	1.2	2.3	0.7 (0.5-1.1)
Indians		21	2.1	3.2	0.9 (0.6-1.4)

HISTOLOGY 2003-2007		NO.	%
Renal Cell Carcinoma, Nos		593	72.3
Transitional Cell Carcinoma, Nos		133	16.2
Papillary Adenocarcinoma		22	2.7
Carcinoma, Nos		18	2.2
Renal Cell Carcinoma, Sarcomatoid		14	1.7
Chromophobe Carcinoma		11	1.3
Nephroblastoma		8	1.0
Adenocarcinoma, Nos		6	0.7
Squamous Cell Carcinoma		4	0.5
Neoplasm, Malignant, Nos		3	0.4
Collecting Duct Carcinoma		2	0.2
Sarcoma, Nos		2	0.2
Malignant Fibrous Histiocytoma		1	0.1
Malignant Cystic Nephroma		1	0.1
Malignant Rhabdoid Tumour		1	0.1
Primitive Neuroectodermal Tumour		1	0.1
Total with histology		820	100.0
All cases		950	

SUBSITES 2003-2007		Male	Female
ICD9	SUBSITE		
189.0	Kidney	537	265
189.1	Renal Pelvis	53	32
189.2	Ureter	24	24
189.3	Urethra	3	5
189.8	Other	1	2
189.9	NOS	2	2
All cases		620	330

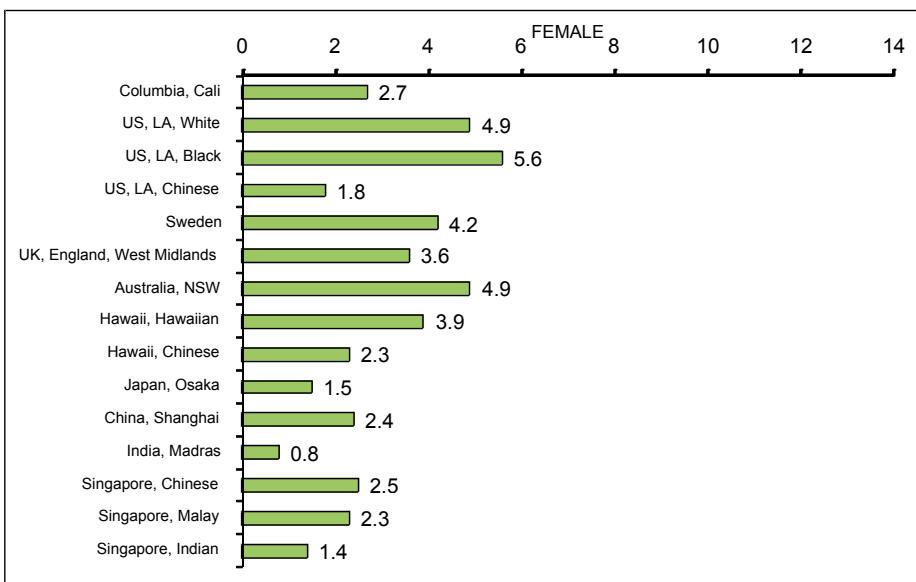
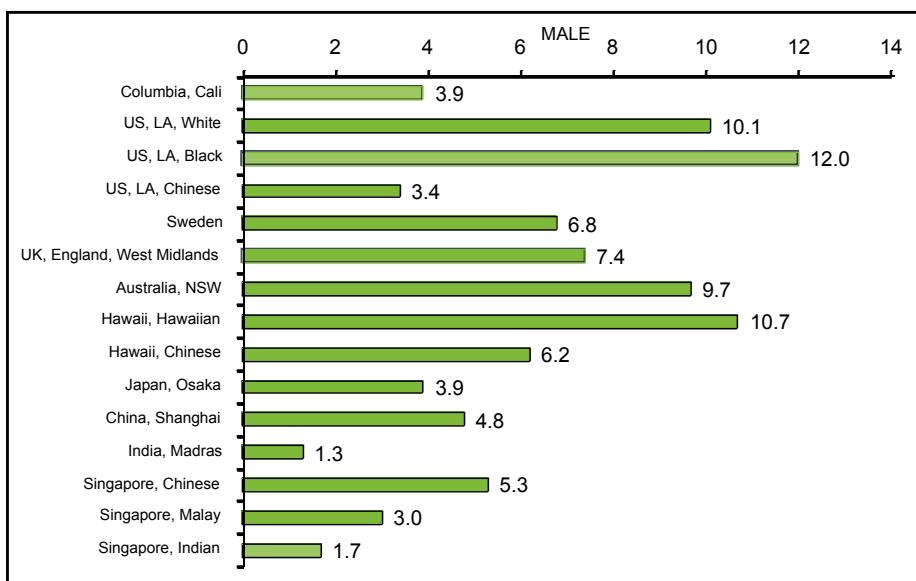


KIDNEY: AGE-STANDARDIZED
INCIDENCE BY SEX, 1968-2007



KIDNEY: AGE-SPECIFIC INCIDENCE
BY SEX, 2003-2007

KIDNEY: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 1998-2002
(per 100,000 per year)



12.26 Brain and nervous system (ICD-9: 191-2 / ICD-O-3: C70-72)

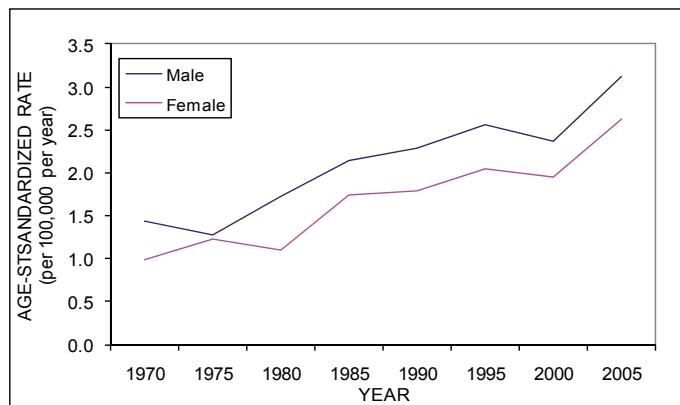
This group of cancers continues to be relatively uncommon in Singapore, and incidence rates for all three major ethnic groups are lower than most other parts of the world. There is a suggestion of an increase in rates over time, although not consistent throughout the 40 years. The glioblastoma histology cases are subsumed under the astrocytoma category for this report. Historically, the majority of primary brain tumours are astrocytic neoplasms. There are no significant ethnic differences in risk.

INCIDENCE DATA (2003-2007)		No.	%	Males	RR (95% CI)
				ASR	
All residents		280	1.3	3.1	-
Chinese		217	1.2	3.2	1.0
Malays		31	1.8	2.7	0.9 (0.6-1.3)
Indians		20	2.1	2.9	0.8 (0.5-1.3)

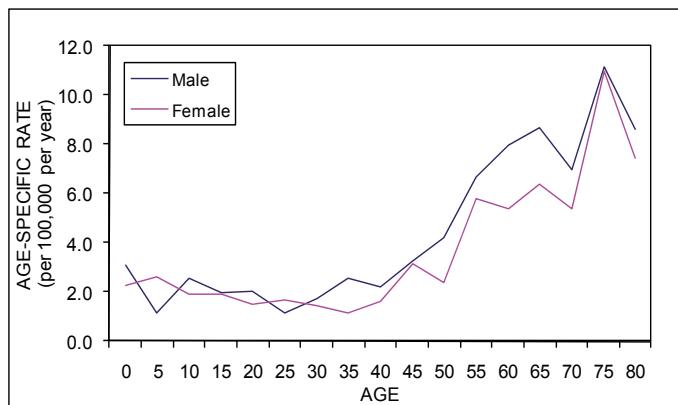
INCIDENCE DATA (2003-2007)		No.	%	Females	RR (95% CI)
				ASR	
All residents		240	1.0	2.6	-
Chinese		203	1.0	3.0	1.0
Malays		22	1.0	1.7	0.7 (0.4-1.0)
Indians		12	1.2	1.6	0.6 (0.3-1.1)

SUBSITES 2003-2007			
ICD9	SUBSITE	Male	Female
191.0	Cerebrum	8	10
191.1	Frontal lobe	42	48
191.2	Temporal lobe	35	22
191.3	Parietal lobe	18	13
191.4	Occipital lobe	3	4
191.5	Ventricles	1	6
191.6	Cerebellum	23	21
191.7	Brain stem	6	11
191.8	Brain, other	24	13
191.9	Brain, NOS	90	54
192.0	Cranial nerves	2	1
192.1	Meninges	21	32
192.2	Spinal cord	4	3
192.3	Spinal meninges	-	1
192.9	NOS	3	1
All cases		280	240

HISTOLOGY 2003-2007	NO.	%
Astrocytoma	178	39.2
Oligodendrogloma	39	8.6
Meningeal Sarcomatosis	33	7.3
Pilocytic Astrocytoma	31	6.8
Ependymoma	21	4.6
Medulloblastoma	21	4.6
Mixed Glioma	16	3.5
Glioma, Malignant, Nos	15	3.3
Germinoma	13	2.9
Hemangioblastoma	10	2.2
Meningioma, Malignant	9	2.0
Papillary Meningioma	9	2.0
Primitive Neuroectodermal Tumour	8	1.8
Central Neurocytoma	8	1.8
Gliosarcoma	7	1.5
Neoplasm, Malignant, Nos	5	1.1
Pleomorphic Xanthoastrocytoma	4	0.9
Ganglioglioma, Anaplastic	4	0.9
Hemangiopericytoma, Malignant	3	0.7
Myxopapillary Ependymoma	3	0.7
Fibrillary Astrocytoma	3	0.7
Neuroblastoma	3	0.7
Sarcoma, Nos	2	0.4
Mixed Germ Cell Tumour	2	0.4
Subependymoma	2	0.4
Desmoplastic Infantile Astrocytoma	2	0.4
Subependymal Giant Cell Astrocytoma	1	0.2
Astroblastoma	1	0.2
Chordoid Glioma	1	0.2
Total with histology	454	100.0
All cases	520	

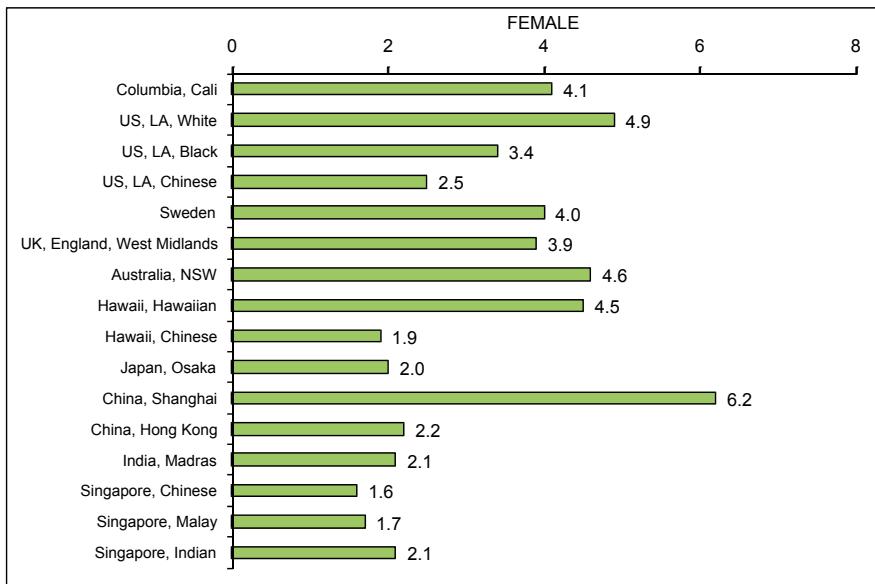
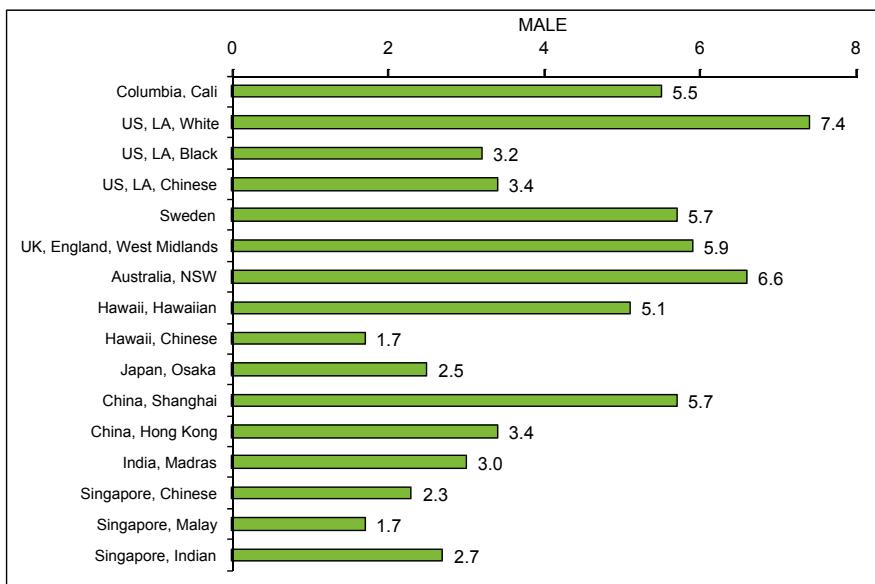


BRAIN: AGE-STANDARDIZED
INCIDENCE BY SEX, 1968-2007



BRAIN: AGE-SPECIFIC INCIDENCE
BY SEX, 2003-2007

BRAIN: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 1998-2002
(per 100,000 per year)



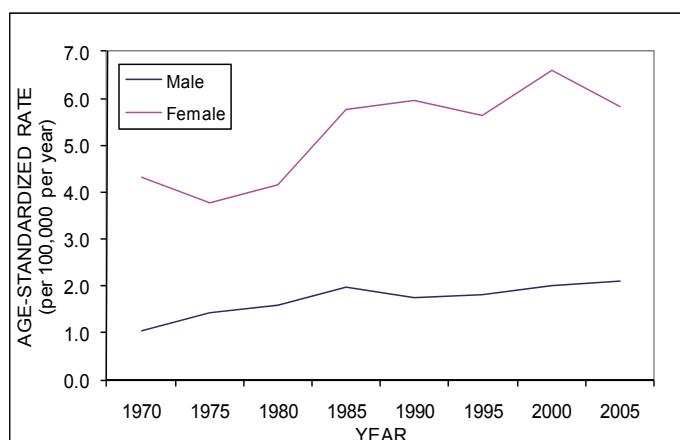
12.27 Thyroid (ICD-9: 193 / ICD-O-3: C73)

Thyroid cancer occurs more frequently in females; the female: male ratio in 2003-2007 is 3:1. Papillary carcinomas, including the follicular variant, account for 79.7% of cases, and follicular carcinomas for 12.3%. Rates appear to be fairly stable since 1983 for males, but there is an upward trend among females over the 40 year period. The age-standardized rate for females was 5.8 per 100,000 per year in 2003-2007 compared with 4.3 per 100,000 per year in 1968-72. There is no significant ethnic difference in risk. Singapore Chinese have rates similar to those in Hong Kong and Chinese in LA in the US. In contrast to many other cancers, the age-specific incidence begins to rise at a younger age, particularly in females.

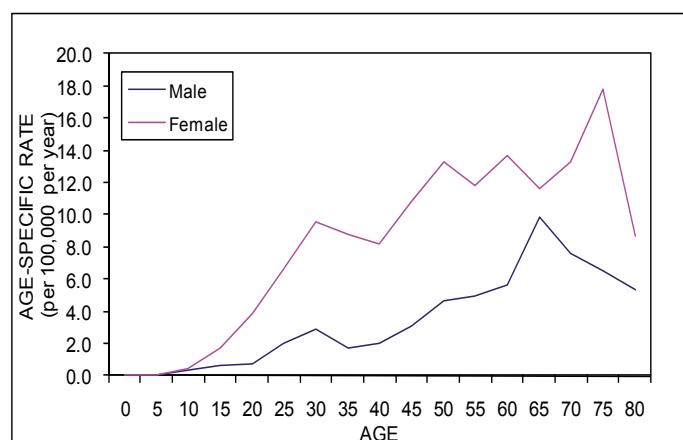
INCIDENCE DATA (2003-2007)		No.	%	Males	RR (95% CI)
				ASR	
All residents		215	1.0	2.1	-
Chinese		172	0.9	2.1	1.0
Malays		28	1.6	2.3	1.1 (0.8-1.7)
Indians		12	1.3	1.8	0.6 (0.3-1.1)

INCIDENCE DATA (2003-2007)		No.	%	Females	RR (95% CI)
				ASR	
All residents		645	2.8	5.8	-
Chinese		496	2.5	5.6	1.0
Malays		95	4.4	7.4	1.3 (1.0-1.6)
Indians		38	3.9	4.8	0.8 (0.6-1.1)

SUBSITES 2003-2007				HISTOLOGY 2003-2007		NO.	%
ICD9	SUBSITE	Male	Female				
193.9	NOS	215	645	Papillary Carcinoma		444	52.1
	All cases	215	645	Papillary Microcarcinoma		133	15.6
				Papillary Carcinoma, Follicular Variant		84	9.8
				Follicular Carcinoma, Minimally Invasive		78	9.1
				Follicular Carcinoma		27	3.2
				Medullary Carcinoma		19	2.2
				Carcinoma, Anaplastic		15	1.8
				Papillary Carcinoma, Encapsulated		15	1.8
				Oxyphilic Carcinoma		12	1.4
				Carcinoma, Nos		8	0.9
				Neoplasm, Malignant, Nos		5	0.6
				Insular Carcinoma		5	0.6
				Papillary Carcinoma, Columnar Cell		3	0.4
				Squamous Cell Carcinoma		2	0.2
				Mixed Medullary-Papillary Carcinoma		2	0.2
				Mixed Medullary-Follicular Carcinoma		1	0.1
				Total with histology		853	100.0
				All cases		860	

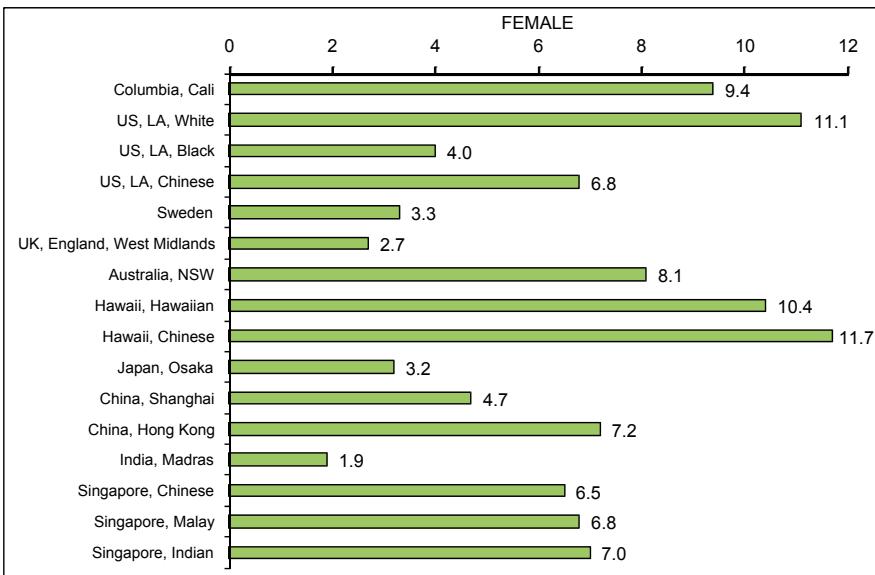
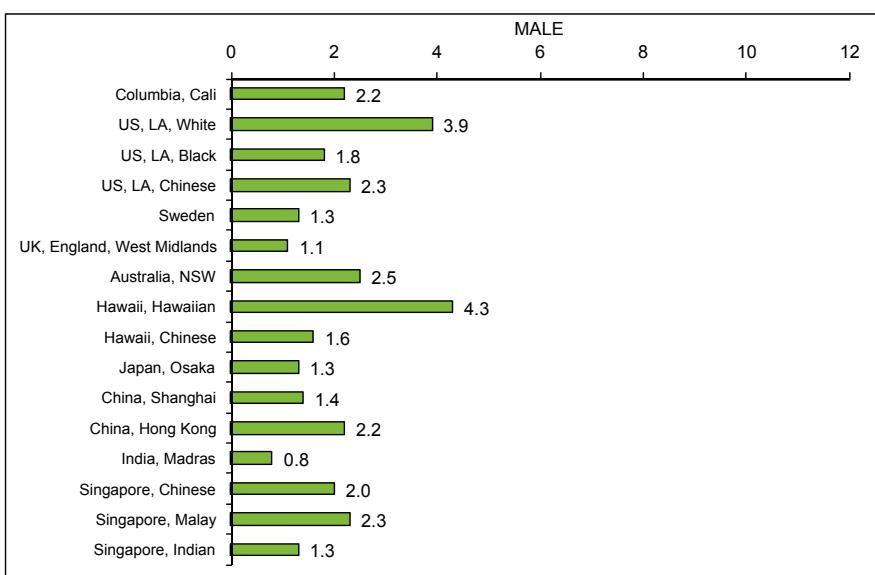


**THYROID: AGE-STANDARDIZED
INCIDENCE BY SEX, 1968-2007**



**THYROID: AGE-SPECIFIC INCIDENCE
BY SEX, 2003-2007**

**THYROID: AGE-STANDARDIZED INCIDENCE IN SELECTED COUNTRIES 1998-2002
(per 100,000 per year)**



12.28 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. It also formed the basis of a reclassification of the malignant lymphoid tissues for the period 1998-2002. The pathologic report diagnoses of the earlier period 1998-2002 were reviewed and reclassified according to the WHO Classification 4th Edition (2008) if this was not utilised as the classification in the submission of the pathologic diagnoses to the Singapore Cancer Registry (SCR). This revision and update was possible because all diagnoses of malignant lymphomas or leukaemias of lymphoid origin were notified to the Singapore Cancer Registry with not only the morphologic diagnosis but with information on immunophenotype and in some, genetic features of the neoplasms, thereby providing information of the lineage or subtype of the malignant neoplasms. This more accurately defines the entities where possible.

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

The characterisation of the lymphoid malignancies and subgroups within these major groups has been made possible over the ten year period 1998-2007 by the immunotyping methods utilising monoclonal antibodies in routine diagnostic practice to determine the neoplastic lymphoid type.

Changes have been made in the listings of the classification of the lymphoid neoplasms in 2003-2007 compared to that in 1998-2002 (Singapore Cancer Registry Report No.6 / Trends In Cancer Incidence in Singapore 1968-2002), in line with the WHO Classification 4th Edition (2008) and are as follows:-

a. Lymphoid Leukaemia (ICD9 204)

These are now subdivided into the Precursor Lymphoid neoplasms which include

- i. Precursor B-cell Lymphoblastic Lymphoma / Leukaemia
- ii. Precursor T-cell Lymphoblastic Lymphoma / Leukaemia
and
- iii. Precursor cell Lymphoblastic Lymphoma / Leukaemia, otherwise not specified (NOS)

Chronic Lymphocytic Leukaemia has been relegated to the Mature B-cell neoplasm group.

The separation of the lymphoid leukaemias into the two major groups of Precursor Lymphoblastic Lymphoma / Leukaemia and Chronic Lymphocytic Leukaemia / Small Lymphocytic Lymphoma has epidemiological significance as the former has a higher incidence in the childhood / paediatric age group compared to the latter which occurs in the elderly. The adult T-cell Leukaemia / Lymphoma has been now relegated to the Mature T-cell Lymphoma group.

b. The Immunoproliferative neoplasm (ICD9 203) of 1998-2002 has been re-assigned in line with WHO 4th Edition (2008) classification to the group of Mature B-cell neoplasm where Multiple Myeloma, Plasmacytomas and Plasma Cell Leukaemias are now placed.

Incidence

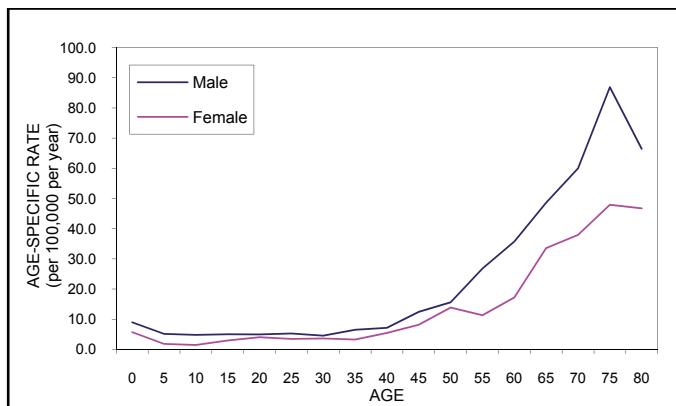
There were 2282 cases of lymphoid neoplasms diagnosed in 2003-2007 compared to 1746 cases in 1998-2002. These included all cases of Hodgkin Lymphoma (HL) and Non-Hodgkin Lymphoma (NHL) as well as Lymphoid Leukaemias. Of the 45,140 cancers reported to the Singapore Cancer Registry in 2003-2007, 5% were malignant lymphoma, registering an increase compared to 4.5% in 1998-2002. The age standardised rate (ASR) for males and females in 2003-2007 was 14.4 and 9.97 per 100,000 compared to 12.81 and 8.13 per 100,000 in 1998-2002, thus indicating an increase in incidence of malignant lymphoid neoplasms. In contrast, the percentage of Hodgkin Lymphoma among all malignant lymphoid neoplasms remains about the same at 7% and 6.9% for both periods. The Non-Hodgkin Lymphomas and Leukaemias have increased from 1623 cases registered in 1998-2002 to 2124 in 2003-2007.

These numbers include 41 cases in 1998-2002 and 61 cases in 2003-2007 which were registered as malignant lymphoma Not Otherwise Specified (NOS) as there was no information submitted regarding whether they were Hodgkin lymphoma or non-Hodgkin lymphoma. The lymphoid neoplasms have risen from 8th ranking cancer amongst males in 1998-2002 to 6th in 2003-2007 and from 10th to 7th rank in females in the corresponding periods.

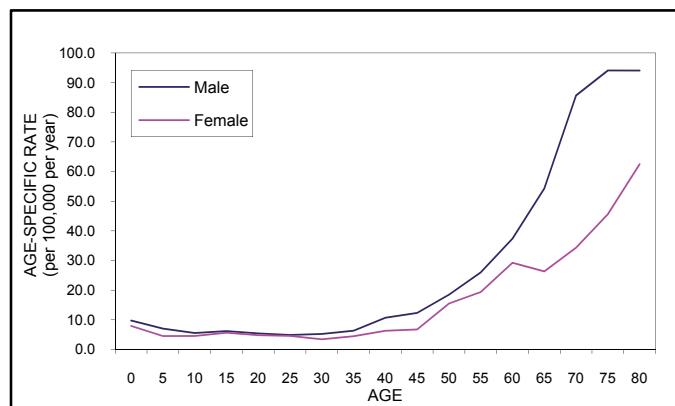
Regarding the ethnic distribution, the Malays have a significantly higher rate than Chinese being 3rd in frequency of the ten most frequent cancers amongst males in comparison to 7th in Chinese and 4th most frequent cancer among females compared to 9th in the Chinese. The risk among Malay females is 40% higher than Chinese.

INCIDENCE DATA (1998-2002)		Males			INCIDENCE DATA (2003-2007)		Males		
No.	%	ASR	RR (95% CI)	No.	%	ASR	RR (95% CI)		
All residents	1032	5.5	12.8	-	All residents	1309	6.0	14.4	-
Chinese	782	4.8	12.6	1.0	Chinese	1029	5.5	14.5	1.0
Malays	177	11.2	18.1	1.4 (1.2-1.7)	Malays	178	10.2	16.9	1.1 (1.0-1.3)
Indians	59	7.2	8.8	0.6 (0.5-0.8)	Indians	80	8.3	11.4	0.7 (0.6-0.9)

INCIDENCE DATA (1998-2002)		Females			INCIDENCE DATA (2003-2007)		Females		
No.	%	ASR	RR (95% CI)	No.	% ^a	ASR	RR (95% CI)		
All residents	714	3.6	8.13	-	All residents	973	4.2	10.0	-
Chinese	545	3.2	7.66	1.0	Chinese	747	3.8	9.6	1.0
Malays	112	6.4	11.02	1.4 (1.2-1.8)	Malays	156	7.2	13.6	1.4 (1.2-1.7)
Indians	44	5.3	8.36	1.0 (0.8-1.4)	Indians	54	5.5	8.5	0.9 (0.7-1.1)



LYMPHOID NEOPLASMS: AGE-SPECIFIC INCIDENCE, 1998-2002



LYMPHOID NEOPLASMS: AGE-SPECIFIC INCIDENCE, 2003-2007

12.28.1 Non-Hodgkin Lymphoma

Distribution of Non-Hodgkin Lymphomas by Histologic type

There were 2063 and 1582 cases of non-Hodgkin lymphomas including the Precursor lymphoblastic lymphomas / leukaemias registered during the five year periods of 2003-2007 and 1998-2002 respectively.

The two major types of non-Hodgkin lymphoma with immunophenotypic characterisation are the B-cell and T-cell lymphoid neoplasms. The B-cell malignant lymphoid neoplasm which includes mature non-Hodgkin lymphoma and Precursor B lymphoid neoplasm / leukaemia numbered 1519 in 2003-2007 and 1119 in 1998-2002. The number of T-cell malignant neoplasms were far less, numbering 284 and 239 in the two periods 2003-2007 and 1998-2002 respectively.

It is noted that in the year 1998-2002 about 90% of cases notified as Precursor lymphoblastic lymphoma / leukaemia fell into the category of NOS with 65% in 2003-2007. These numbers appear higher than expected and they may not reflect the true incidence of the subtypes due to lack of clinical and laboratory information during submission of data regarding the type.

The mature B-cell and T-cell neoplasms accounted for the majority of non-Hodgkin lymphoma with the incidence of mature B-cell lymphomas far exceeding that of mature T-cell lymphomas. 84.4% and 82.6% of all mature B-and T-cell lymphoma were mature B-cell type in 2003-2007 and in 1998-2002, respectively. The mature T-cell malignant lymphomas accounted for 15.6% and 17.4% in 2003-2007 and 1998-2002 respectively.

Large B-cell lymphoma with 672 cases was the most frequently reported subtype of malignant lymphomas in 2003-2007 accounting for 30% of all malignant lymphomas and 46.6% of the mature B-cell lymphomas. There has been a minimal decrease compared to 48.5% in 1998-2002. The incidences of the other subtypes of the B-cell lymphomas remain relatively unchanged over the two periods 1998-2002 and 2003-2007 except for a slight increase in marginal zone lymphomas.

Of the 266 cases of mature T-cell and the NK/T-cell lymphomas, the Cutaneous T-cell lymphomas which include Mycosis Fungoides amounted 34% of cases reported in 2003-2007. There appears to be a substantial drop in the number of cases of Mycosis Fungoides reported compared to the earlier period 1998-2002. This could be because in the earlier period, a number of cases were notified to the Singapore Cancer Registry based on clinical diagnoses without immunohistochemical substantiation.

HISTOLOGY	1998-2002 NO.	2003-2007 NO.
<u>NON-HODGKIN LYMPHOMA</u>		
PRECURSOR LYMPHOID NEOPLASM		
Precursor cell Lymphoblastic Lymphoma / Leukaemia, NOS	206	177
Precursor B-cell Lymphoblastic Lymphoma / Leukaemia	1	79
Precursor T-cell Lymphoblastic Lymphoma / Leukaemia	3	18
MATURE B-CELL NEOPLASMS		
Small Lymphocytic Lymphoma / B-cell Chronic Lymphocytic Leukaemia (SLL / CLL)	79	112
Burkitt Lymphoma / Burkitt Cell Leukaemia	36	47
Mantle cell Lymphoma	20	13
Malignant Lymphoma, Lymphoplasmacytic	8	12
Hairy Cell Leukaemia	6	3
B-cell Prolymphocytic Leukaemia	0	1
Marginal zone B-cell Lymphoma (extranodal)	72	98
Marginal zone B-cell Lymphoma (nodal)	3	46
Splenic marginal zone B-cell Lymphoma	4	10
Mediastinal Large B-cell Lymphoma	26	34
Diffuse Large B-cell Lymphoma, NOS and variants / subtypes	516	638
Follicular Lymphoma	139	162
Plasma Cell Neoplasms	209	264

HISTOLOGY	1998-2002 NO.	2003-2007 NO.
MATURE T-CELL / NK-CELL LYMPHOMA		
Mycosis Fungoides	107	76
Mature T-Cell Lymphoma, NOS	45	67
NK / T-Cell Lymphoma, Nasal And Nasal-Type	32	40
Anaplastic Large Cell Lymphoma, T-Cell And Null Cell Type	21	32
Angioimmunoblastic T-Cell Lymphoma	13	24
Primary Cutaneous CD30+ T-Cell Lymphoproliferative Disorder	1	10
Cutaneous T-Cell Lymphoma, NOS	12	5
Subcutaneous Panniculitis-Like T-Cell Lymphoma	2	3
Intestinal T-Cell Lymphoma	0	2
Adult T-Cell Leukaemia / Lymphoma (HTLV-1 Positive)	2	2
Aggressive NK-Cell Leukaemia	0	2
T-Cell Large Granular Lymphocytic Leukaemia	0	1
Prolymphocytic Leukaemia, T-Cell Type	0	1
Sezary Syndrome	1	1
NEOPLASM OF HISTIOCYTES AND DENDRITIC CELL NEOPLASMS		
Malignant Histiocytosis	3	0
Langerhans Cell Histiocytosis	0	10
Histiocytic Sarcoma	1	0
Interdigitating / Follicular Dendritic Cell Sarcoma	0	4
POST TRANSPLANT LYMPHOPROLIFERATIVE DISORDER (PTLD) WHO 2008		
Infectious Mononucleosis-Like PTLD	0	2
Polymorphic PTLD	0	2

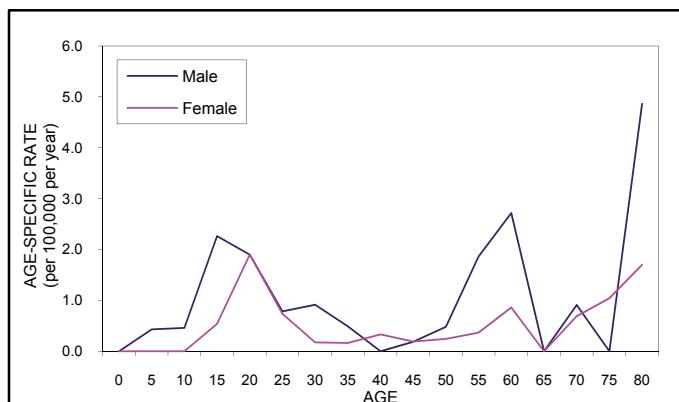
12.28.2 HODGKIN LYMPHOMA (HL)

The numbers of Hodgkin Lymphoma show a smaller increase between the two five year periods, 1998-2002 and 2003-2007. In the ASR trends of males and females, the two major peaks of the neoplasia are that in childhood & young adults and that in the elderly above the age of 50.

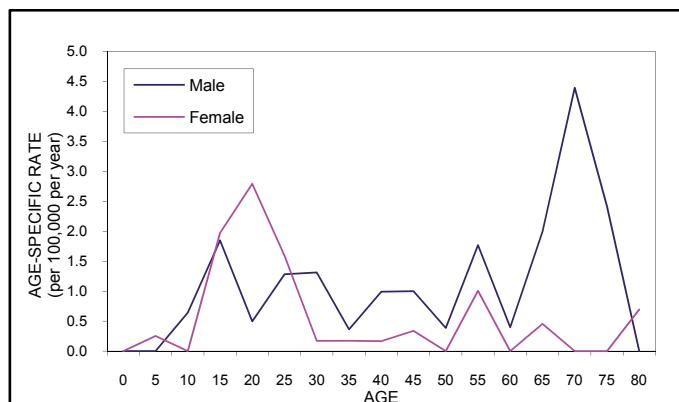
Among the ethnic groups, the ASR amongst Chinese shows no significant change but the ASR in Malays and Indians is significantly greater than that of the ethnic groups of Chinese.

The commonest subtype is the Classical Hodgkin Lymphoma, with Nodular Sclerosis accounting for 65% and 68% in the two periods 1998-2002 and 2003-2007.

INCIDENCE DATA (1998-2002)				INCIDENCE DATA (2003-2007)				
	No.	%	Males ASR		No.	%	Males ASR	
All residents	71	0.4	0.9	-	All residents	94	0.4	1.0
Chinese	51	0.3	0.9	1.0	Chinese	62	0.3	0.9
Malays	13	0.8	1.2	1.5 (0.8-2.7)	Malays	17	1.0	1.4
Indians	5	0.6	0.9	1.0 (0.4-2.4)	Indians	12	1.3	1.6
INCIDENCE DATA (1998-2002)				INCIDENCE DATA (2003-2007)				
	No.	%	Females ASR		No.	%	Females ASR	
All residents	52	0.3	0.6	-	All residents	64	0.3	0.8
Chinese	27	0.2	0.4	1.0	Chinese	39	0.2	0.7
Malays	15	0.9	1.4	3.5 (1.9-6.6)	Malays	15	0.7	1.2
Indians	7	0.8	1.0	2.9 (1.3-6.8)	Indians	8	0.8	1.4



HODGKIN LYMPHOMA: AGE-SPECIFIC INCIDENCE, 1998-2002



HODGKIN LYMPHOMA: AGE-SPECIFIC INCIDENCE, 2003-2007

HISTOLOGY	1998-2002 NO.	2003-2007 NO.
Hodgkin Lymphoma, NOS	24	15
Nodular Lymphocyte Predominant, Hodgkin Lymphoma	3	8
Classical Hodgkin Lymphoma, Lymphocyte-Rich	3	8
Classical Hodgkin Lymphoma, Mixed Cellularity	12	18
Classical Hodgkin Lymphoma, Lymphocyte Depletion	1	0
Classical Hodgkin Lymphoma, Nodular Sclerosis	80	109

12.29 MYELOID NEOPLASMS

There has been a major shift in the tabulation of Haematopoietic malignancies of myeloid lineage and the approach to the classification of myeloid neoplasms with the publication of the WHO Classification of Tumours of the Haematopoietic and Lymphoid Tissues, 3rd Edition, published in 2001, where there has been a new approach with the institution of an integrated multidisciplinary approach [16] which includes the cytochemical and immunophenotypic type. Emerging genetic information besides the traditional morphologic, cytochemical and immunophenotypic features now play an important role in the attempts to classify the neoplasms, and these are embodied in the current revision of the WHO classification 4th Edition (2008), which formulates the criteria whereby the major groupings are designated as follows:

1. Myeloproliferative Neoplasms (MPN)
2. Myelodysplastic Syndromes (MDS)
3. Myelodysplastic / Myeloproliferative Neoplasms (MDS/MPN)
4. Acute Myeloid Leukaemia (AML) and related Precursor neoplasms
5. Acute Leukaemia of Ambiguous Lineage

The total number of myeloid neoplasms in 2003-2007 numbered 800 against 732 in 1998-2002. With the new multidisciplinary approach to classification in the 3rd and 4th Edition of WHO Classification, there has been a greater attempt to subclassify into the major groupings. However, due to the lack of integrated clinical and laboratory information from notification data submitted, it has not been possible to list the subtypes accurately. Compared to the previous 5 year period, there has been an improvement in the subgrouping notification of AML categorized as AML, NOS in the recent 2003-2007 period (from 93% of 364 cases down to 58% of 407 cases). Because of this, comparison of the other subgroupings of myeloid neoplasms cannot be fairly performed for these two periods.

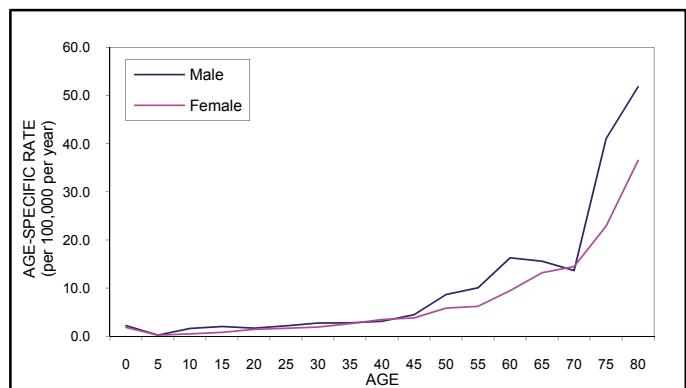
This exists in the analysis of the group of Myelodysplastic Syndromes (MDS) and Myeloproliferative Neoplasms (MPN) where NOS may not refer to the actual Not Otherwise Specified designation after results have been obtained following extensive haematological and genetic workup but the term could be used to reflect the lack of information necessary for subgrouping.

Incidence

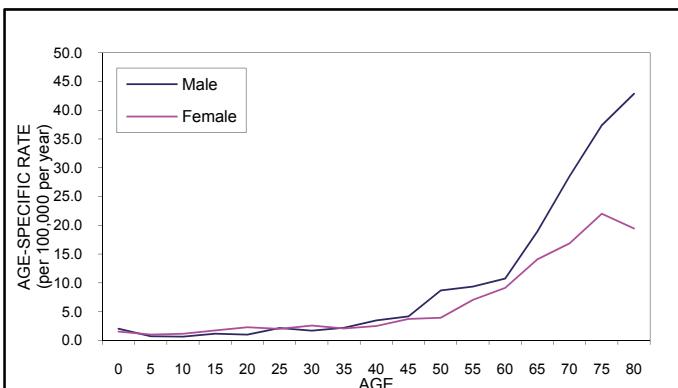
The commonest myeloid neoplasm is Acute Myeloid Leukaemia accounting for 50% of 800 cases in 2003-2007. This is followed by the Myeloproliferative Neoplasms (MPN) accounting for 30% with 238 cases. There is under representation of results of the subtyping of Myelodysplastic Syndromes (MDS) with most listed as not otherwise specified.

The ASR for all myeloid neoplasms shows a slight decline with males at 4.8 per 100,000 and females at 3.6 per 100,000 for 1998-2002 to 4.6 per 100,000 and 3.5 per 100,000 for 2003-2007.

INCIDENCE DATA (1998-2002)				INCIDENCE DATA (2003-2007)			
Males				Males			
No.	%	ASR	RR (95% CI)	No.	%	ASR	RR (95% CI)
All residents	398	2.1	4.8	-	439	2.0	4.6
Chinese	315	1.9	4.9	1.0	347	1.8	4.6
Malays	60	3.8	6.4	1.3 (0.9-1.7)	52	3.0	4.8
Indians	19	2.3	2.8	0.5 (0.3-0.8)	27	2.8	3.5
INCIDENCE DATA (1998-2002)				INCIDENCE DATA (2003-2007)			
Females				Females			
No.	%	ASR	RR (95% CI)	No.	%	ASR	RR (95% CI)
All residents	334	1.7	3.6	-	361	1.6	3.5
Chinese	269	1.6	3.5	1.0	290	1.5	3.6
Malays	43	2.5	4.3	1.2 (0.8-1.6)	47	2.2	3.9
Indians	19	2.3	3.3	0.9 (0.6-1.5)	15	1.5	2.2



MYELOID NEOPLASMS: AGE-SPECIFIC INCIDENCE,
1998-2002



MYELOID NEOPLASMS: AGE-SPECIFIC INCIDENCE,
2003-2007

HISTOLOGY	1998-2002 NO.	2003-2007 NO.
<u>MYELOID NEOPLASMS</u>		
ACUTE MYELOID LEUKEMIA (AML)		
AML, NOS (Subtypes not specified)	339	237
AML with maturation / without maturation	0	73
Acute Monocytic Leukaemia	1	20
AML with minimal differentiation	0	16
Myeloid Leukaemia, NOS	10	14
Acute promyelocytic leukaemia with t(15;17)(q22;q12); PML-RARA	6	10
Acute Myelomonocytic Leukaemia	1	8
Acute Megakaryoblastic Leukaemia	2	7
Myeloid Sarcoma	4	5
AML, M6 Type / Acute erythroid leukaemia	0	5
AML with myelodysplasia-related changes	0	5
Acute Panmyelosis With Myelofibrosis	1	2
AML with inv (16)(p13.1q22) or t(16;16)(p13.1;q22);CBFB-MYH11	0	2
AML with t(8;21)(q22;q22); RUNX1-RUNX1T1	0	2
AML with t(9;11)(p22;q23);MLLT3-MLL	0	1
MYELOPROLIFERATIVE NEOPLASMS (MPN)		
Chronic Myelogenous Leukaemia, NOS	124	131
Polycythemia Vera	5	1
Myelofibrosis With Myeloid Metaplasia	1	5
Essential Thrombocythemia	5	12
Mastocytoma, NOS	0	2
Malignant Mastocytosis	1	0
Chronic Myeloproliferative Disease, NOS	0	18
Myeloproliferative Disease, NOS	91	69

HISTOLOGY	1998-2002 NO.	2003-2007 NO.
MYELODYSPLASTIC / MYELOPROLIFERATIVE NEOPLASMS (MDS / MPN)		
Chronic Myelomonocytic Leukaemia, NOS	6	13
Juvenile Myelomonocytic Leukaemia	0	1
Myeloproliferative Neoplasm, Unclassifiable	0	1
Refractory Anaemia With Sideroblasts	1	0
MYELODYSPLASTIC SYNDROME (MDS)		
Refractory Anaemia	0	1
Refractory Anaemia With Excess Blasts	0	6
Refractory Anaemia With Excess Blasts In Transformation	1	0
Myelodysplastic Syndrome, NOS	70	80
LEUKAEMIA OF UNKNOWN LINEAGE OR UNCLASSIFIABLE		
Leukaemia, NOS	18	14
Acute Undifferentiated Leukaemia	43	36
Acute Biphenotypic Leukaemia	1	3
Mixed Phenotype Acute Leukaemia, B / Myeloid, NOS	1	0

Summary Histology Table of Lymphoid & Myeloid Neoplasms

HISTOLOGY	1998-2002 NO.	%	2003-2007 NO.	%
LYMPHOID NEOPLASMS				
Hodgkin Lymphoma	123	7.0	158	6.9
Mature B-Cell Neoplasms	1118	64.0	1440	63.1
Precursor Lymphoid Neoplasm	210	12.0	274	12.0
Mature T-Cell & NK-Cell Neoplasms	236	13.5	266	11.7
Post Transplant Lymphoproliferative Disorder (PTLD)	0	0	4	0.2
Neoplasm of Histiocytes and Dendritic Cell Neoplasms	4	0.2	14	0.6
Malignant Lymphoma, NOS / Other Lymphoid Neoplasms	55	3.2	126	5.5
TOTAL	1746	100	2282	100
MYELOID NEOPLASMS				
Acute Myeloid Leukemia (AML)	364	49.7	407	50.9
Myeloproliferative Diseases	227	31.0	238	29.8
Myelodysplastic Syndrome (MDS)	71	9.7	87	10.9
Myelodysplastic / Myeloproliferative Diseases	7	1.0	15	1.9
Leukaemia of Unknown Lineage or Unclassifiable	63	8.6	53	6.6
TOTAL	732	100	800	100

13. CANCER REGISTRATIONS AMONG NON-RESIDENTS

This chapter presents data on cancer registrations among non-residents for the period 1968-2007. There were 52,908 non-resident cancers from 1968-2002, comprising 20.2% of all registered cases. In 2003-2007 alone, non-resident cancers numbered 14,147 and comprised 23.9% of all cases, slightly higher than the 19.3% in the preceding five-year period. The ratio of males to females has generally been close to unity in more recent years.

Table 13.1 NUMBER (AND % OF ALL REGISTRATIONS) OF NON-RESIDENT CANCERS REGISTERED BY TIME PERIOD

Period	Males	% ¹	Females	% ¹	Total	% ¹
1968-1972	942	11.9	662	11.5	1604	11.7
1973-1977	1242	12.7	1009	14.0	2251	13.2
1978-1982	2456	19.5	1967	19.7	4423	19.6
1983-1987	3206	21.5	2804	21.8	6010	21.7
1988-1992	3179	18.9	3230	20.2	6409	19.6
1993-1997	4350	21.2	4488	22.2	8838	21.7
1998-2002	4567	19.4	4659	19.1	9226	19.3
2003-2007	6807	23.7	7340	24.1	14147	23.9
Total	26749	19.8	26159	20.6	52908	20.2

¹percentage of total resident and non-resident registrations

The sources of information and basis of diagnosis for all non-residents in 2003-2007 are given in Table 13.2. Similar data for 1968-2002 are presented in the previous publication [6].

Table 13.3 describes the ten most frequent cancers registered by five-year period since 1968. 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 2003-2007 period.

TABLE 13.2 SOURCES OF CASES, TYPES OF NOTIFICATIONS AND MOST VALID BASIS OF DIAGNOSIS FOR NON-RESIDENT REGISTRATIONS, 2003-2007

Source and type of notification	No.	%	%
Cases notified by medical practitioners	8,024		56.7
- spontaneously	4,502	31.8	
- on request	3,522	24.9	
Cases registered by staff on the basis of:	6,123		43.3
- pathology reports	5,188	36.7	
- hospital records	816	5.8	
- death records	119	0.8	
Total	14,147	100.0	100.0
Most valid basis of diagnosis	No.	%	
Death Certificate Only	1	0.01	
Clinical Only	353	3.1	
Clinical Investigation	127	1.1	
Specific Tumour Markers	20	0.2	
Cytology	1,556	13.8	
Metastasis	850	7.6	
Primary Tumour	11,240	100.0	
Total	14,147	100.0	

Table 13.3(a) TEN MOST FREQUENT CANCERS REGISTERED AMONG NON-RESIDENT MALES, 1968-2007

SITE	1968-72 NO.	%	SITE	1973-77 NO.	%	SITE	1978-82 NO.	%	SITE	1983-87 NO.	%
Lung	131	13.9	Lung	174	14.0	Lung	436	17.8	Lung	607	18.9
Nasopharynx	112	11.9	Nasopharynx	170	13.7	Nasopharynx	296	12.1	Colo-rectum	395	12.3
Skin ¹	107	11.4	Skin ¹	158	12.7	Colo-rectum	273	11.1	Nasopharynx	328	10.2
Stomach	100	10.6	Stomach	127	10.2	Stomach	245	10.0	Stomach	288	9.0
Colo-rectum	84	8.9	Colo-rectum	124	10.0	Skin ¹	190	7.7	Skin ¹	244	7.6
Liver	68	7.2	Liver	90	7.2	Liver	167	6.8	Liver	173	5.4
Oesophagus	52	5.5	Leukaemias	52	4.2	Lymphomas	95	3.9	Lymphomas	148	4.6
Larynx	31	3.3	Larynx	40	3.2	Leukaemias	86	3.5	Bladder	102	3.2
Lymphomas	31	3.3	Oesophagus	37	3.0	Bladder	71	2.9	Leukaemias	95	3.0
Leukaemias	24	2.5	Lymphomas	36	2.9	Oesophagus	69	2.8	Prostate	94	2.9
Others	202	21.4	Others	234	18.8	Others	528	21.5	Others	732	22.8
All	942	100.0	All	1242	100.0	All	2456	100.0	All	3206	100.0

SITE	1988-1992 NO.	%	SITE	1993-1997 NO.	%	SITE	1998-2002 NO.	%	SITE	2003-2007 NO.	%
Lung	565	17.8	Lung	741	17.0	Lung	597	13.1	Lung	881	12.9
Colo-rectum	436	13.7	Colo-rectum	551	12.7	Colo-rectum	570	12.5	Colo-rectum	822	12.1
Nasopharynx	291	9.2	Skin ¹	403	9.3	Skin ¹	521	11.4	Prostate	653	9.6
Stomach	291	9.2	Stomach	298	6.9	Liver	383	8.4	Skin ¹	628	9.2
Skin ¹	274	8.6	Liver	290	6.7	Nasopharynx	311	6.8	Liver	499	7.3
Lymphomas	160	5.0	Nasopharynx	283	6.5	Prostate	274	6.0	Lymphomas	406	6.0
Liver	131	4.1	Prostate	283	6.5	Stomach	255	5.6	Nasopharynx	398	5.8
Prostate	120	3.8	Lymphomas	235	5.4	Lymphomas	242	5.3	Leukaemias	326	4.8
Bladder	95	3.0	Leukaemias	160	3.7	Leukaemias	238	5.2	Stomach	300	4.4
Leukaemias	94	3.0	Bladder	130	3.0	Bladder	133	2.9	Kidney ²	222	3.3
Others	722	22.7	Others	976	22.4	Others	1043	22.8	Others	1672	24.6
All	3179	100.0	All	4350	100.0	All	4567	100.0	All	6807	100.0

¹includes melanoma²includes other urinary organs

Table 13.3(b) TEN MOST FREQUENT CANCERS REGISTERED AMONG NON-RESIDENT FEMALES, 1968-2007

SITE	1968-72		1973-77		1978-82		1983-87		NO.	%
	NO.	%	SITE	NO.	%	SITE	NO.	%		
Cervix uteri	116	17.5	Breast	179	17.7	Cervix uteri	316	16.1	Breast	525
Breast	92	13.9	Cervix uteri	148	14.7	Breast	304	15.5	Cervix uteri	446
Colo-rectum	57	8.6	Colo-rectum	102	10.1	Colo-rectum	215	10.9	Colo-rectum	357
Skin ¹	51	7.7	Skin ¹	69	6.8	Lung	145	7.4	Lung	190
Nasopharynx	40	6.0	Stomach	67	6.6	Stomach	129	6.6	Stomach	154
Stomach	40	6.0	Nasopharynx	61	6.0	Nasopharynx	97	4.9	Skin ¹	139
Lung	34	5.1	Lung	54	5.4	Skin ¹	91	4.6	Nasopharynx	126
Thyroid	33	5.0	Corpus uteri	38	3.8	Ovary	85	4.3	Ovary	110
Corpus uteri	25	3.8	Ovary	38	3.8	Thyroid	66	3.4	Thyroid	94
Oesophagus	23	3.5	Thyroid	33	3.3	Leukaemias	53	2.7	Corpus uteri	79
Others	151	22.8	Others	220	21.8	Others	466	23.7	Others	584
All	662	100.0	All	1009	100.0	All	1967	100.0	All	2804
										100.0

SITE	1988-1992		1993-1997		1998-2002		2003-2007		NO.	%
	NO.	%	SITE	NO.	%	SITE	NO.	%		
Breast	682	21.1	Breast	1106	24.6	Breast	1288	27.6	Breast	2230
Cervix uteri	481	14.9	Cervix uteri	587	13.1	Cervix uteri	422	9.1	Colo-rectum	645
Colo-rectum	325	10.1	Colo-rectum	436	9.7	Colo-rectum	421	9.0	Cervix uteri	540
Lung	224	6.9	Lung	288	6.4	Lung	303	6.5	Lung	480
Ovary	171	5.3	Ovary	254	5.7	Ovary	286	6.1	Ovary	405
Stomach	165	5.1	Skin ¹	232	5.2	Ovary	244	5.2	Skin ¹	381
Skin ¹	150	4.6	Corpus uteri	185	4.1	Corpus uteri	198	4.2	Corpus uteri	338
Corpus uteri	113	3.5	Stomach	172	3.8	Thyroid	189	4.1	Lymphomas	293
Nasopharynx	103	3.2	Lymphomas	169	3.8	Lymphomas	176	3.8	Thyroid	284
Lymphomas	102	3.2	Thyroid	146	3.3	Stomach	139	3.0	Leukaemias	227
Others	714	22.1	Others	913	20.3	Others	993	21.3	Others	1517
All	3230	100.0	All	4488	100.0	All	4659	100.0	All	7340
										100.0

¹ includes melanoma

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APPENDICES

APPENDIX A1**Sources of cases, types of notifications and most valid basis of diagnosis, 2003-2007**

Source and type of notification	No.	%	%
Cases notified by medical practitioners	18,680		41.4
- spontaneously	15,928	35.3	
- on request	2,752	6.1	
Cases registered by staff on the basis of:	26,460		58.6
- pathology reports	23,324	51.7	
- hospital records	2,536	5.6	
- death records	600	1.3	
Total	45,140	100.0	100.0
Most valid basis of diagnosis	No.	%	%
Microscopic Confirmation	41,351		91.6
- histology of primary	36,291	80.4	
- histology of metastasis	1,642	3.6	
- cytology	3,418	7.6	
Other basis of diagnosis	3,789		8.4
- clinical investigation	2,529	5.6	
- clinical Only	660	1.5	
- death certificate only	600	1.3	
Total	45,140	100.0	100.0

APPENDIX A2 MOST VALID BASIS OF DIAGNOSIS FOR SELECTED SITES IN MALES, 2003-2007

Site	ICD9	Death Certificate Only	Clinical Only	Clinical Investigation	Specific Tumour Markers	Cytology	Metastasis	Primary Tumour	Total
Tongue	141	3	1	0	0	6	0	144	154
Salivary gland	142	0	0	0	0	11	5	52	68
Mouth	143-5	1	0	0	0	4	0	123	128
Oropharynx	146	1	1	0	0	2	2	75	81
Nasopharynx	147	2	7	2	0	9	18	1,160	1,198
Hypopharynx	148	0	0	1	0	4	3	101	109
Oesophagus	150	3	2	7	0	4	4	314	334
Stomach	151	8	12	13	0	6	11	1,325	1,375
Colon	153	26	13	41	8	5	30	2,069	2,192
Rectum	154	3	5	15	2	4	7	1,674	1,710
Liver	155	110	151	532	250	46	63	548	1,700
Gall bladder, etc.	156	1	6	21	2	10	26	105	171
Pancreas	157	25	19	88	33	117	108	176	566
Nose, sinuses, etc.	160	0	0	0	0	0	1	82	83
Larynx	161	1	3	7	0	5	3	333	352
Bronchus, trachea	162	77	80	330	3	894	379	2,065	3,828
Bone	170	1	0	0	0	0	0	75	76
Connective tissues	171	1	0	2	0	0	6	173	182
Melanoma of skin	172	0	0	0	0	0	5	44	49
Skin, others	173	0	3	0	0	18	0	903	924
Prostate	185	5	9	20	38	12	31	2,054	2,169
Testis	186	0	0	2	0	1	3	110	116
Penis	187	0	2	0	0	0	0	90	92
Bladder	188	2	3	7	0	23	3	637	675
Kidney & Oth.Urinary	189	9	11	53	1	19	32	495	620
Eye	190	0	0	0	0	0	1	18	19
Brain, nervous system	191-2	11	17	9	1	5	2	235	280
Thyroid	193	0	2	1	0	12	6	194	215
Lymphoid neoplasms	5	0	0	0	0	350	9	945	1,309
Myeloid neoplasms	5	0	0	0	0	372	1	61	439
Other and unspecified	14	19	92	10	66	161	52	414	
All	315	376	1256	350	2015	931	16,697	21,940	

**APPENDIX A3 MOST VALID BASIS OF DIAGNOSIS FOR SELECTED SITES IN FEMALES,
2003-2007**

Site	ICD9	Death Certificate Only	Clinical Only	Clinical Investigation	Specific Tumour Markers	Cytology	Metastasis	Primary Tumour	Total
Tongue	141	0	0	0	0	1	0	71	72
Salivary gland	142	0	0	0	0	2	1	59	62
Mouth	143-5	0	0	0	0	0	1	61	62
Oropharynx	146	0	0	0	0	0	1	23	24
Nasopharynx	147	0	0	0	0	5	10	388	403
Hypopharynx	148	1	0	0	0	0	0	11	12
Oesophagus	150	2	2	5	0	0	0	78	87
Stomach	151	9	8	14	1	7	12	834	885
Colon	153	31	20	67	6	7	27	2,082	2,240
Rectum	154	9	7	16	0	1	5	1,097	1,135
Liver	155	43	52	186	65	12	30	161	549
Gall bladder, etc.	156	5	7	30	3	6	31	134	216
Pancreas	157	39	25	105	26	72	75	128	470
Nose, sinuses, etc.	160	0	0	0	0	0	1	54	55
Larynx	161	1	0	2	0	0	0	30	33
Bronchus, trachea	162	61	53	184	7	473	216	874	1,868
Bone	170	0	0	1	0	0	1	54	56
Connective tissues	171	0	3	0	0	3	5	118	129
Melanoma of skin	172	0	0	0	0	2	5	50	57
Skin, others	173	0	5	1	0	17	3	757	783
Female Breast	174	21	31	12	0	44	41	6,649	6,798
Cervix uteri	180	2	2	0	0	7	4	994	1,009
Chorioepithelioma	181	0	0	0	0	0	2	8	10
Corpus uteri	182	0	2	4	1	2	10	1,313	1,332
Ovary, etc.	183	14	11	25	10	46	38	1,183	1,327
Other fem. genital	184	0	1	0	0	0	1	108	110
Bladder	188	0	2	2	0	8	1	210	223
Kidney & Oth.Urinary	189	4	10	42	1	7	15	251	330
Eye	190	0	0	0	0	0	1	15	16
Brain, nervous system	191-2	6	15	8	0	3	0	208	240
Thyroid	193	1	2	1	0	19	6	616	645
Lymphoid neoplasms	9	0	0	0	0	274	6	684	973
Myeloid neoplasms	7	0	0	0	0	302	6	46	361
Other and unspecified	18	23	80	13	77	141	42	394	
All	285	284	789	134	1403	711	19,594	23,200	

SITE	SINGAPORE : ALL RESIDENTS 2003-2007, MALES										NUMBER OF CASES BY AGE GROUP (YEARS)										Appendix B1			
	All	Unkn.	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75-	80+	ICD-9				
Lip, Vermillion	6	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	-	-	1	-	-	140
Tongue	154	-	-	-	-	-	-	1	-	3	2	14	20	14	17	15	31	12	8	17	141			
Salivary gland	68	-	-	1	1	-	1	2	4	5	2	10	11	3	7	3	9	8	8	142				
Mouth	128	-	-	-	-	1	1	-	-	1	-	3	9	17	19	16	18	24	10	9	143-5			
Oropharynx	81	-	-	-	-	-	-	-	-	1	1	6	11	12	11	17	10	5	7	146				
Nasopharynx	1198	-	-	-	4	1	6	12	45	83	176	213	209	163	108	85	52	28	13	147				
Hypopharynx	109	-	-	-	-	-	-	-	-	4	5	12	12	20	16	18	11	11	11	148				
Oesophagus	334	-	-	-	-	-	-	-	-	5	5	14	25	43	56	46	57	36	47	150				
Stomach	1375	-	-	-	-	-	-	3	5	1	10	44	47	80	115	137	211	235	256	231	151			
Small intestines	83	-	-	-	-	-	-	-	2	-	2	2	8	9	11	8	16	14	5	6	152			
Colon	2192	-	-	-	-	-	1	4	6	13	24	59	92	181	256	255	366	339	285	311	153			
Rectum	1710	-	-	-	-	-	1	5	14	34	58	108	212	228	221	244	224	186	175	175	154			
Liver	1700	-	3	1	1	1	3	1	10	21	41	87	170	225	247	266	236	202	185	155				
Gall bladder, etc.	171	-	-	-	-	-	-	-	-	1	2	7	14	21	18	21	40	20	27	156				
Pancreas	566	-	-	-	-	-	-	1	1	4	4	19	27	63	71	53	92	90	67	74	157			
Retroperitoneum & Peritoneum	25	-	-	-	-	-	1	-	1	-	-	-	-	2	3	5	4	7	1	1	158			
Nose, sinuses, etc.	83	-	1	-	-	-	-	2	2	5	5	8	8	11	11	16	9	2	3	160				
Larynx	352	-	-	-	-	-	-	-	2	8	18	30	51	48	50	49	45	45	51	161				
Bronchus, trachea	3828	-	1	-	3	2	1	13	20	78	143	232	341	461	647	719	619	548	548	162				
Pleura	41	-	-	-	-	-	-	1	-	1	1	6	2	5	4	11	7	3	163					
Thymus, heart	92	-	1	1	3	8	7	6	3	6	8	8	4	11	8	8	3	4	3	164				
Bone	76	-	1	5	6	6	8	10	3	1	5	9	6	4	2	3	2	3	2	170				
Connective tissues	182	-	5	5	3	4	2	3	8	10	19	26	17	20	17	13	9	11	10	171				
Melanoma of skin	49	-	-	-	-	1	3	3	3	3	3	6	5	5	3	9	2	5	1	172				
Skin, others	924	-	-	1	1	-	4	3	13	21	40	52	68	87	109	127	114	115	169	173				
Male Breast	17	-	-	-	-	-	-	-	-	-	-	1	2	1	6	2	1	3	1	175				
Prostate	2169	-	-	-	-	-	-	-	-	2	3	17	68	218	320	444	434	367	296	185				
Testis	116	-	6	-	-	8	11	17	21	12	19	8	5	6	1	-	-	1	1	186				
Penis	92	-	-	-	-	-	-	1	5	4	11	10	36	55	63	70	99	98	99	125	188			
Bladder	675	-	-	-	-	-	-	5	4	1	3	3	13	9	10	14	16	14	7	187				
Kidney & Oth.Urinary	620	-	3	-	1	-	1	3	5	18	39	50	87	95	73	83	73	55	34	189				
Eye	19	-	9	-	-	-	1	-	-	1	-	1	-	2	3	-	1	-	-	2	190			
Brain, nervous system	280	-	16	7	17	12	11	7	12	19	18	25	27	32	24	21	12	12	8	191-2				
Thyroid	215	-	-	-	2	4	4	12	20	13	16	24	30	24	17	24	13	7	5	193				
Other endocrine	48	-	5	3	6	4	2	1	3	3	3	5	3	3	3	3	-	4	-	194				
Lymphoid neoplasms	1309	-	51	37	34	35	32	33	31	50	78	98	129	123	116	142	143	96	81					
Myeloid neoplasms	439	-	11	4	3	5	5	17	15	19	29	30	58	42	33	46	46	40	36					
Other and unspecified	414	-	1	-	-	-	1	2	4	8	11	22	38	48	39	68	57	44	71	OTH				
All	21940	-	113	66	82	93	114	159	254	415	832	1236	1923	2407	2550	3262	3176	2679	2579	ALL				

SINGAPORE : ALL RESIDENTS 2003-2007, FEMALES		NUMBER OF CASES BY AGE GROUP (YEARS)												Appendix B2							
		All	Unkn.	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75-	80+	ICD-9
Lip, Vermilion	4	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	1	140
Tongue	72	-	-	-	-	1	-	-	2	1	3	5	7	8	4	13	6	9	13	141	
Salivary gland	62	-	-	-	2	1	1	6	4	9	4	7	11	3	2	1	5	5	5	142	
Mouth	62	-	-	-	-	-	-	1	3	1	6	4	5	5	8	5	5	5	19	143-5	
Oropharynx	24	-	-	-	-	-	-	-	-	1	5	6	1	3	1	1	2	2	4	146	
Nasopharynx	403	-	-	-	-	1	3	7	25	32	48	64	65	58	27	21	19	20	13	147	
Hypopharynx	12	-	-	-	-	-	1	1	-	-	-	1	-	-	-	-	3	2	4	148	
Oesophagus	87	-	-	-	-	-	-	-	2	4	4	4	-	4	5	4	8	15	41	150	
Stomach	885	-	-	-	-	1	4	8	21	33	49	63	58	60	114	113	161	200	151		
Small intestines	68	-	-	-	1	-	-	2	3	1	5	5	3	10	4	9	8	9	8	152	
Colon	2240	-	-	-	-	1	9	8	12	23	66	109	212	234	210	233	314	307	502	153	
Rectum	1135	-	-	-	-	1	1	7	25	37	76	109	145	112	161	137	141	183	154		
Liver	549	-	5	1	-	2	1	-	2	6	12	16	22	36	43	61	94	119	129	155	
Gall bladder, etc.	216	-	-	-	-	1	-	-	1	1	7	10	17	21	15	33	27	36	47	156	
Pancreas	470	-	-	-	-	1	-	2	3	4	10	19	27	44	50	59	66	74	111	157	
Retropitoneum & Peritoneum	54	-	1	2	-	1	1	1	1	3	4	4	4	6	5	5	8	3	5	158	
Nose, sinuses, etc.	55	-	-	-	-	-	-	1	2	5	11	6	3	6	1	4	7	4	5	160	
Larynx	33	-	-	-	-	-	-	-	1	-	1	3	2	2	1	2	7	6	8	161	
Bronchus, trachea	1868	-	-	-	1	1	2	3	7	22	55	99	131	191	180	226	275	255	420	162	
Pleura	7	-	-	-	-	-	1	-	-	-	-	-	2	1	1	-	-	1	1	163	
Thymus, heart	60	-	1	-	-	-	2	-	4	2	5	7	10	9	3	6	5	3	3	164	
Bone	56	-	-	4	10	4	2	2	3	4	4	3	5	6	2	2	1	3	1	170	
Connective tissues	129	-	3	1	3	4	2	3	12	7	12	12	17	13	9	6	8	3	14	171	
Melanoma of skin	57	-	-	-	-	1	1	1	4	3	3	6	3	8	4	3	5	5	11	172	
Skin, others	783	-	1	-	2	-	7	9	19	19	37	46	53	55	99	110	80	246	173		
Female Breast	6798	-	-	4	6	49	178	422	892	1195	1149	945	607	501	324	252	274	174			
Cervix uteri	1009	-	-	-	-	5	9	35	72	107	145	122	98	90	110	94	53	69	180		
Choriocarcinoma	10	-	-	-	-	1	1	1	1	3	1	2	-	-	-	-	-	-	181		
Corpus uteri	1332	-	-	-	-	4	16	32	53	109	203	262	234	131	120	80	44	44	182		
Ovary, etc.	1327	-	1	1	8	25	48	44	53	87	120	179	223	170	105	87	64	40	72	183	
Other fem. genital	110	-	-	1	-	-	-	3	2	3	12	8	17	12	14	8	18	12	184		
Bladder	223	-	-	-	-	-	1	1	3	6	5	6	20	23	31	35	34	58	188		
Kidney & Oth.Urinary	330	-	3	1	-	2	1	1	2	7	18	26	28	31	41	54	43	38	34	189	
Eye	16	-	5	2	-	1	-	-	-	-	-	2	1	2	1	1	-	1	190		
Brain, nervous system	240	-	11	15	11	11	8	11	11	9	13	24	15	28	17	17	11	16	12	191-2	
Thyroid	645	-	4	-	3	10	21	43	72	67	65	82	84	57	43	31	27	26	14	193	
Lymphoid neoplasms	973	-	37	28	23	34	29	32	34	48	56	98	107	92	90	75	68	96			
Myeloid neoplasms	361	-	7	6	6	9	11	13	17	16	18	28	29	36	26	37	34	34	34		
Other and unspecified	394	-	1	-	-	2	1	1	4	8	10	20	43	37	32	35	50	53	97	OTH	
All	23200	-	79	62	73	117	166	261	554	973	1766	2528	2844	2714	2025	2203	2078	1944	2813	ALL	

SITE	SINGAPORE : CHINESE RESIDENTS 2003-2007, MALES										NUMBER OF CASES BY AGE GROUP (YEARS)							Appendix B3		
	All	Unkn.	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75-	80+	ICD-9
Lip, Vermilion	5	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	-	-	-	140
Tongue	122	-	-	-	-	-	1	-	3	1	12	18	9	15	11	28	9	5	10	141
Salivary gland	57	-	-	-	-	-	1	2	4	3	2	9	10	3	6	3	6	8	8	142
Mouth	103	-	-	-	-	-	-	-	1	-	3	9	13	14	13	16	17	8	9	143-5
Oropharynx	70	-	-	-	-	-	-	-	-	1	-	2	11	12	10	14	9	4	7	146
Nasopharynx	1100	-	-	-	1	6	12	43	77	160	197	187	155	100	78	45	27	12	147	
Hypopharynx	101	-	-	-	-	-	-	-	-	3	4	11	10	18	16	18	11	10	148	
Oesophagus	306	-	-	-	-	-	-	-	-	4	4	14	20	40	53	45	52	32	42	150
Stomach	1235	-	-	-	-	1	5	1	8	39	36	69	101	126	186	215	235	213	151	
Small intestines	67	-	-	-	-	-	-	2	-	2	2	6	6	9	6	12	11	5	6	152
Colon	1962	-	-	-	-	1	3	6	10	19	42	81	165	235	225	337	310	254	274	153
Rectum	1495	-	-	-	-	1	3	11	25	50	89	184	207	199	219	190	161	156	154	
Liver	1482	-	3	1	1	1	3	1	9	19	37	73	145	188	227	237	210	163	164	155
Gall bladder, etc.	137	-	-	-	-	-	-	-	-	1	1	3	13	25	54	59	43	83	80	57
Pancreas	486	-	-	-	-	-	-	-	-	3	3	13	25	54	59	43	83	80	57	
Retropertitoneum & Peritoneum	19	-	-	-	-	-	-	-	1	-	-	-	-	2	2	4	3	6	1	-
Nose, sinuses, etc.	75	-	1	-	-	-	-	2	2	5	4	7	8	9	11	15	6	2	3	160
Larynx	301	-	-	-	-	-	-	-	2	1	1	1	1	3	13	25	43	45	37	40
Bronchus, trachea	3315	-	-	1	-	2	1	1	-	1	-	-	1	-	5	2	4	3	3	161
Pleura	36	-	-	-	-	-	-	5	3	6	5	6	4	10	8	8	3	3	3	162
Thymus, heart	79	-	1	1	1	7	6	5	3	6	5	6	4	10	8	8	3	3	2	164
Bone	56	-	5	4	6	5	7	3	1	3	7	4	3	1	3	1	3	-	170	
Connective tissues	157	-	4	4	1	3	1	2	6	8	15	24	15	18	17	12	9	11	7	171
Melanoma of skin	36	-	-	-	-	-	1	3	1	2	1	5	2	5	3	9	1	2	1	172
Skin, others	764	-	-	1	1	-	3	3	12	12	25	38	55	65	85	104	100	107	153	173
Male Breast	14	-	-	-	-	-	-	-	-	-	-	-	1	1	5	2	1	3	1	175
Prostate	1837	-	-	-	-	-	-	-	-	2	2	16	50	185	279	391	373	299	240	185
Testis	90	-	5	-	-	6	7	15	15	9	15	6	4	5	1	-	-	1	1	186
Penis	82	-	-	-	-	-	-	-	-	1	4	3	11	7	10	14	13	12	7	187
Bladder	552	-	-	-	-	-	-	4	4	7	8	22	41	53	61	79	84	81	108	188
Kidney & Oth.Urinary	514	-	2	-	-	-	-	3	5	16	27	39	77	79	64	68	66	40	28	189
Eye	16	-	8	-	-	1	-	-	-	1	-	1	3	-	1	3	-	-	1	190
Brain, nervous system	217	-	10	5	15	7	11	6	10	15	10	20	21	26	16	18	11	8	8	191-2
Thyroid	172	-	-	1	1	2	10	17	10	10	19	27	21	15	17	11	6	5	5	193
Other endocrine	37	-	4	3	5	3	1	1	1	2	5	3	1	3	-	4	-	-	-	194
Lymphoid neoplasms	1029	-	34	30	26	27	22	23	28	35	65	74	96	103	94	109	117	78	68	
Myeloid neoplasms	347	-	7	3	3	5	4	10	9	12	21	25	45	37	27	38	39	31	31	
Other and unspecified	339	-	-	-	-	-	-	-	1	2	7	10	19	32	43	27	53	45	38	
All	18812	-	79	54	58	70	80	127	213	334	664	1021	1610	2078	2236	2863	2782	2245	ALL	

SITE	SINGAPORE : CHINESE RESIDENTS 2003-2007, FEMALES										NUMBER OF CASES BY AGE GROUP (YEARS)										Appendix B4	
	All	Unkn.	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75-	80+	ICD-9		
Lip, Vermilion	3	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	140	
Tongue	50	-	-	-	-	1	-	-	-	1	1	2	2	4	6	4	11	4	5	9		
Salivary gland	52	-	-	1	-	-	1	6	4	7	3	5	10	3	2	1	4	5	5	142		
Mouth	46	-	-	-	-	-	-	1	2	1	5	4	4	2	4	2	4	4	17	143-5		
Oropharynx	22	-	-	-	-	-	-	-	-	1	5	6	1	2	1	1	1	1	4	146		
Nasopharynx	381	-	-	-	1	3	6	25	30	44	63	60	54	25	20	18	19	13	147			
Hypopharynx	10	-	-	-	-	-	1	-	-	-	1	-	-	-	-	2	2	4	4	148		
Oesophagus	77	-	-	-	-	-	-	-	1	1	3	-	4	4	4	7	14	39	150			
Stomach	811	-	-	-	-	-	1	7	17	28	43	57	52	57	105	101	151	192	151			
Small intestines	52	-	-	-	-	-	2	2	-	4	3	2	9	4	6	6	8	6	6	152		
Colon	2035	-	-	-	-	1	5	4	11	18	52	95	193	203	191	211	284	286	481	153		
Rectum	1021	-	-	-	-	1	1	7	18	30	73	101	126	97	139	123	134	171	154			
Liver	481	-	2	1	-	-	1	-	2	4	12	15	19	33	35	52	80	106	119	155		
Gall bladder, etc.	189	-	-	-	-	-	-	1	-	6	8	16	21	14	28	22	31	42	42	156		
Pancreas	407	-	-	-	-	1	-	2	3	4	6	15	24	29	45	48	61	67	102	157		
Retropertitoneum & Peritoneum	41	-	1	1	-	-	1	1	2	4	2	4	4	4	5	4	5	2	4	158		
Nose, sinuses, etc.	44	-	-	-	-	-	-	1	2	3	9	5	3	5	1	4	4	2	5	160		
Larynx	24	-	-	-	-	-	-	-	-	1	2	1	1	1	1	2	5	5	6	161		
Bronchus, trachea	1687	-	-	-	1	1	2	2	6	15	45	80	114	163	163	203	253	239	400	162		
Pleura	4	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	1	-	163		
Thymus, heart	56	-	1	-	-	-	2	-	4	2	3	7	10	8	3	6	5	2	3	164		
Bone	42	-	-	3	7	3	1	1	3	4	3	3	4	3	2	1	1	3	-	170		
Connective tissues	115	-	2	1	2	3	2	3	12	6	9	12	15	11	9	5	8	2	13	171		
Melanoma of skin	50	-	-	-	-	-	1	1	3	2	3	4	3	8	4	3	5	5	8	172		
Skin, others	701	-	-	-	-	1	-	6	9	13	14	24	39	44	48	87	103	76	237	173		
Female Breast	5594	-	-	-	2	5	33	143	336	690	971	955	800	515	428	258	214	244	174			
Cervix uteri	861	-	-	-	-	3	7	30	58	89	122	107	86	78	93	78	48	62	180			
Choriocarcinoma	8	-	-	-	-	-	1	1	1	2	1	2	-	-	-	-	-	-	-	181		
Corpus uteri	1101	-	-	-	-	2	16	25	45	84	168	229	195	110	93	62	34	38	38	182		
Ovary, etc.	1071	-	1	1	5	18	33	37	40	73	80	150	189	134	88	75	47	36	64	183		
Other fern. genital	95	-	1	-	-	-	-	1	2	2	12	7	13	12	12	8	14	11	184			
Bladder	196	-	-	-	-	-	1	1	3	5	4	6	15	21	27	28	32	53	188			
Kidney & Oth.Urinary	276	-	3	-	-	1	1	1	1	6	15	21	23	27	35	48	31	32	189			
Eye	15	-	5	2	-	-	1	-	-	-	-	-	2	1	1	1	-	1	190			
Brain, nervous system	203	-	11	11	9	9	8	10	9	7	10	16	11	26	15	16	11	13	11	191-2		
Thyroid	496	-	-	2	5	15	34	52	47	47	64	71	45	31	25	23	23	12	193			
Other endocrine	31	-	1	-	3	2	1	-	2	4	2	5	3	1	3	1	-	2	194			
Lymphoid neoplasms	747	-	26	18	20	23	19	23	20	26	38	40	79	77	58	57	56	90				
Myeloid neoplasms	290	-	5	4	5	7	9	10	15	12	15	22	20	28	31	28	27	28				
Other and unspecified	345	-	1	-	2	1	1	3	7	7	17	38	33	31	31	38	48	87	OTH			
All	19730	-	59	43	56	81	117	207	448	772	1373	2083	2429	2283	1759	1887	1773	1745	2615	ALL		

SITE	SINGAPORE : MALAY RESIDENTS 2003-2007, MALES										NUMBER OF CASES BY AGE GROUP (YEARS)							Appendix B5			
	All	Unkn.	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75-	80+	ICD-9	
Lip, Vermilion	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	140	
Tongue	5	-	-	-	-	-	-	-	-	-	2	1	1	-	-	-	-	-	1	141	
Salivary gland	6	-	-	-	-	1	-	-	-	-	1	-	1	-	1	-	2	-	-	142	
Mouth	7	-	-	-	-	1	1	-	-	-	-	-	-	-	1	3	1	-	-	143-5	
Oropharynx	2	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	146	
Nasopharynx	84	-	-	-	-	-	-	-	-	2	4	15	15	19	7	7	4	1	1	147	
Hypopharynx	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	148	
Oesophagus	10	-	-	-	-	-	-	-	-	1	1	-	-	2	1	1	1	2	1	150	
Stomach	54	-	-	-	-	-	2	-	-	1	2	5	4	6	6	9	7	5	7	151	
Small intestines	8	-	-	-	-	-	-	-	-	-	1	1	-	2	3	1	-	-	-	152	
Colon	146	-	-	-	-	-	1	-	1	4	10	8	12	12	21	19	16	20	22	153	
Rectum	122	-	-	-	-	-	2	1	6	5	10	17	10	12	16	19	15	9	154		
Liver	139	-	-	-	-	-	-	1	2	3	10	18	25	13	15	18	22	12	155		
Gall bladder, etc.	15	-	-	-	-	-	-	-	-	1	2	1	1	1	1	4	1	3	156		
Pancreas	46	-	-	-	-	-	1	-	-	1	3	1	5	5	6	7	5	7	5	157	
Retroperitoneum & Peritoneum	6	-	-	-	-	1	-	-	-	-	-	-	-	1	1	1	1	-	1	158	
Nose, sinuses, etc.	4	-	-	-	-	-	-	-	-	1	1	-	1	-	-	1	-	-	-	160	
Larynx	24	-	-	-	-	-	-	-	-	1	14	23	34	39	32	52	58	55	44	161	
Bronchus, trachea	356	-	-	-	-	1	-	2	-	-	-	2	3	3	1	2	1	4	8	162	
Pleura	3	-	-	-	-	-	-	-	-	1	1	-	-	-	1	-	-	-	-	163	
Thymus, heart	11	-	-	-	-	2	1	1	-	-	2	2	-	1	-	-	-	-	1	164	
Bone	9	-	1	-	-	2	1	-	-	-	-	2	1	-	-	1	-	-	1	170	
Connective tissues	16	-	1	1	1	1	1	2	1	3	2	-	1	-	1	-	-	1	171		
Melanoma of skin	2	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	172		
Skin, others	35	-	-	-	-	-	-	-	-	4	3	3	1	4	5	7	3	5	173		
Male Breast	2	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	175	
Prostate	169	-	-	-	-	-	-	-	-	-	-	10	14	21	31	25	35	33	185		
Testis	15	-	1	-	-	1	3	2	2	2	1	1	-	-	-	-	-	-	-	186	
Penis	3	-	-	-	-	-	-	-	-	-	-	1	2	9	7	5	6	8	2	187	
Bladder	63	-	-	-	-	-	-	-	-	2	4	7	5	8	6	7	9	7	10	188	
Kidney & Oth.Urinary	53	-	1	-	1	-	-	-	-	1	2	9	7	5	8	6	8	2	6	3	189
Eye	2	-	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	190	
Brain, nervous system	31	-	3	1	1	5	-	1	1	4	2	3	3	2	-	1	3	-	191-2		
Thyroid	28	-	-	-	-	2	2	2	2	2	5	4	2	1	1	3	1	1	-	193	
Other endocrine	6	-	1	-	1	1	-	1	-	1	-	-	-	-	-	-	-	-	194		
Lymphoid neoplasms	178	-	8	3	5	4	7	6	1	8	11	14	23	10	15	24	19	12	8		
Myeloid neoplasms	52	-	2	-	-	1	3	2	3	5	2	7	5	4	5	3	7	3	3		
Other and unspecified	38	-	-	-	-	-	-	1	-	3	4	2	9	8	4	4	4	3	OTH		
All	1752	-	18	5	13	17	26	19	41	102	131	185	167	171	229	213	214	182	ALL		

SITE	SINGAPORE : MALAY RESIDENTS 2003-2007, FEMALES										NUMBER OF CASES BY AGE GROUP (YEARS)										Appendix B6	
	All	Unkn.	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75-	80+	ICD-9		
Lip, Vermilion	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	140	
Tongue	12	-	-	-	-	-	-	-	-	-	1	3	-	-	-	-	-	-	-	3	3	141
Salivary gland	8	-	-	-	-	-	-	-	-	2	1	2	1	-	-	-	-	-	1	-	-	142
Mouth	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	143-5	
Oropharynx	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	146
Nasopharynx	17	-	-	-	-	-	-	-	1	2	3	1	4	3	2	1	-	-	-	-	-	147
Hypopharynx	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	148
Oesophagus	3	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	1	150	
Stomach	35	-	-	-	-	-	1	1	-	1	3	3	5	3	-	2	8	5	3	3	151	
Small intestines	2	-	-	-	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	152
Colon	140	-	-	-	-	-	4	2	1	3	9	7	10	23	17	18	20	8	18	18	153	
Rectum	81	-	-	-	-	-	-	-	5	4	2	6	14	11	16	9	4	10	10	10	154	
Liver	44	-	-	-	-	2	-	-	2	-	1	1	3	1	6	4	10	9	6	6	155	
Gall bladder, etc.	17	-	-	-	-	1	-	-	1	1	1	1	-	1	3	5	2	1	1	1	156	
Pancreas	46	-	-	-	-	-	-	-	-	2	4	3	13	3	10	1	4	6	6	6	157	
Retroperitoneum & Peritoneum	7	-	-	-	-	-	-	-	1	-	-	-	1	-	1	3	-	-	1	1	1	158
Nose, sinuses, etc.	9	-	-	-	-	-	-	-	-	2	1	-	1	-	-	3	2	-	-	-	-	160
Larynx	6	-	-	-	-	-	-	-	1	-	-	-	1	1	-	-	1	2	2	2	2	161
Bronchus, trachea	141	-	-	-	-	-	-	-	1	5	8	17	11	22	13	19	16	15	14	14	162	
Pleura	2	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	163
Thymus, heart	3	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	1	-	-	-	164
Bone	9	-	-	-	3	-	1	1	-	1	-	-	1	-	2	-	-	-	-	1	1	170
Connective tissues	8	-	-	-	1	-	-	-	1	2	-	1	2	-	1	-	-	-	-	-	-	171
Melanoma of skin	5	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	3	3	172
Skin, others	37	-	-	1	-	1	-	1	-	1	1	6	1	5	3	6	2	4	5	5	3	173
Female Breast	724	-	-	-	2	-	11	23	56	132	135	114	79	60	35	44	17	16	16	16	16	174
Cervix uteri	103	-	-	-	-	1	1	4	10	8	18	10	9	8	14	13	4	3	3	3	3	180
Chorioepithelioma	2	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	181
Corpus uteri	138	-	-	-	-	-	1	-	5	4	13	24	23	21	11	19	9	5	3	3	3	182
Ovary, etc.	163	-	-	-	-	7	14	3	6	8	28	21	20	22	12	7	11	-	4	4	4	183
Other fem. genital	9	-	-	-	-	-	-	1	-	1	-	1	-	1	-	-	3	1	1	1	184	
Bladder	14	-	-	-	-	-	-	-	-	1	1	-	3	1	3	3	1	1	1	1	188	
Kidney & Oth.Urinary	27	-	-	-	1	-	-	1	1	1	1	1	3	2	1	5	7	3	2	2	189	
Eye	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	190
Brain, nervous system	22	-	-	3	2	1	-	-	2	1	3	2	1	-	1	-	-	3	1	1	191-2	
Thyroid	95	-	2	-	-	1	5	5	10	11	12	9	10	8	2	3	3	1	1	1	1	193
Other endocrine	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	194
Lymphoid neoplasms	156	-	7	6	2	6	7	1	6	7	8	12	15	22	11	21	13	8	4	4	4	195
Myeloid neoplasms	47	-	1	1	1	2	2	-	2	4	1	5	5	4	1	5	4	4	4	5	5	196
Other and unspecified	27	-	-	-	-	-	-	-	2	2	2	2	1	3	6	3	6	3	6	6	OTH	
All	2170	-	10	11	12	27	39	29	61	125	249	283	255	271	172	197	191	114	124	ALL		

SITE	SINGAPORE : INDIAN RESIDENTS 2003-2007, MALES											NUMBER OF CASES BY AGE GROUP (YEARS)						Appendix B7		
	All	Unkn.	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75-	80+	ICD-9
Lip, Vermilion	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tongue	23	-	-	-	-	-	-	-	-	-	-	1	3	2	2	2	3	3	3	140
Salivary gland	5	-	1	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	6	141
Mouth	17	-	-	-	-	-	-	-	-	-	-	4	4	3	1	4	1	1	-	142
Oropharynx	9	-	-	-	-	-	-	-	-	-	-	3	-	1	1	-	-	-	-	143-5
Nasopharynx	8	-	-	2	-	-	-	-	-	-	1	1	-	1	1	-	-	-	-	146
Hypopharynx	7	-	-	-	-	-	-	-	-	-	1	1	1	1	2	-	-	-	1	148
Oesophagus	16	-	-	-	-	-	-	-	-	-	-	-	5	1	2	-	3	2	3	150
Stomach	70	-	-	-	-	-	-	-	-	-	1	2	6	6	7	3	14	11	12	8
Small intestines	3	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	152
Colon	55	-	-	-	-	-	-	-	2	1	3	1	3	5	7	6	11	6	10	153
Rectum	72	-	-	-	-	-	-	-	1	1	3	6	8	11	9	7	13	7	6	154
Liver	64	-	-	-	-	-	-	-	-	-	3	4	11	7	11	5	16	7	7	155
Gall bladder, etc.	16	-	-	-	-	-	-	-	-	-	2	-	3	2	-	4	2	2	3	156
Pancreas	31	-	-	-	-	-	-	-	1	-	3	-	4	6	4	2	5	3	3	157
Retropertitoneum & Peritoneum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	158
Nose, sinuses, etc.	3	-	-	-	-	-	-	-	-	-	-	-	3	2	4	2	5	1	4	1
Larynx	22	-	-	-	-	-	-	-	-	-	5	6	13	15	16	16	20	15	16	161
Bronchus, trachea	122	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	162
Pleura	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	163
Thymus, heart	2	-	-	-	-	-	-	-	-	-	-	2	-	-	1	-	-	-	-	164
Bone	7	-	-	-	2	-	-	1	-	-	1	-	1	1	1	-	-	-	1	170
Connective tissues	5	-	-	-	1	-	-	-	-	-	1	-	1	1	-	-	-	-	1	171
Melanoma of skin	2	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	172
Skin, others	25	-	-	-	-	-	-	1	-	-	1	1	1	1	6	3	6	-	1	173
Male Breast	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	175
Prostate	117	-	-	-	-	-	-	1	1	-	1	1	3	11	10	16	30	28	18	185
Testis	7	-	-	-	-	1	1	-	2	-	1	1	-	1	-	-	-	-	-	186
Penis	3	-	-	-	-	-	-	-	1	-	-	2	4	4	2	7	4	7	5	188
Bladder	38	-	-	-	-	-	-	1	-	-	4	3	2	7	3	7	2	6	-	189
Kidney & Oth.Urinary	35	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	190
Eye	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	191-2
Brain, nervous system	20	-	1	-	-	-	-	1	1	3	1	3	1	1	5	2	-	1	-	193
Thyroid	12	-	-	-	1	-	-	1	-	1	1	1	1	1	1	4	-	-	-	194
Other endocrine	4	-	-	-	-	-	-	-	1	2	-	-	-	1	-	-	-	-	-	195
Lymphoid neoplasms	80	-	7	4	3	2	3	3	2	3	2	3	2	7	10	8	5	6	7	3
Myeloid neoplasms	27	-	1	1	-	-	-	4	-	4	3	3	5	-	2	1	2	-	1	1
Other and unspecified	31	-	1	-	-	-	-	1	-	1	-	1	-	1	3	3	6	7	2	5
All	960	-	10	7	9	4	7	9	12	18	37	54	90	118	97	125	134	127	102	ALL

SITE	SINGAPORE : INDIAN RESIDENTS 2003-2007, FEMALES											NUMBER OF CASES BY AGE GROUP (YEARS)							Appendix B8		
	All	Unkn.	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75-	80+	ICD-9	
Lip, Vermilion	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	140	
Tongue	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	141	
Salivary gland	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	142	
Mouth	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	143-5	
Oropharynx	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	146	
Nasopharynx	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	147	
Hypopharynx	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	148	
Oesophagus	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	150	
Stomach	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	151	
Small intestines	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	152	
Colon	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	153	
Rectum	27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	154	
Liver	20	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	155	
Gall bladder, etc.	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	156	
Pancreas	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	157	
Retroperitoneum & Peritoneum	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	158	
Nose, sinuses, etc.	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	160	
Larynx	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	161	
Bronchus, trachea	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	162	
Pleura	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	163	
Thymus, heart	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	164	
Bone	5	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	170	
Connective tissues	4	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	171	
Melanoma of skin	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	172	
Skin, others	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	173	
Female Breast	367	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	174	
Cervix uteri	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	175	
Chorioepithelioma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	176	
Corpus uteri	80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	177	
Ovary, etc.	76	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	178	
Other fem. genital	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	179	
Bladder	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	180	
Kidney & Oth.Urinary	21	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	181	
Eye	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	182	
Brain, nervous system	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	183	
Thyroid	38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	184	
Other endocrine	3	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	185	
Lymphoid neoplasms	54	-	2	3	1	4	2	1	4	-	2	2	3	7	3	10	5	3	2	186	
Myeloid neoplasms	15	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	187	
Other and unspecified	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	188	
All	981	-	7	5	4	7	7	18	25	49	100	126	125	122	78	101	97	63	47	ALL	

SITE	SINGAPORE : ALL RESIDENTS 2003-2007, MALES										INCIDENCE RATES BY AGE GROUP (YEARS)							Appendix C1			
	CR	ASR	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75-	80+	ICD-9	
Lip, Vermilion	0.1	0.1	-	-	-	-	-	-	-	-	0.1	0.2	0.2	0.3	0.4	-	0.9	-	-	140	
Tongue	1.8	1.5	-	-	-	-	0.2	-	0.4	0.3	1.7	2.6	2.2	3.5	5.0	12.8	7.0	7.4	18.3	141	
Salivary gland	0.8	0.7	-	0.2	0.2	-	0.2	0.2	0.3	0.5	0.6	0.3	1.6	2.3	1.0	2.9	1.7	8.3	8.6	142	
Mouth	1.5	1.3	-	-	-	0.2	0.2	-	0.1	-	0.4	1.2	2.6	3.9	5.3	7.4	13.9	9.3	9.7	143-5	
Oropharynx	0.9	0.8	-	-	-	-	-	-	0.1	0.1	0.8	1.7	2.5	3.7	7.0	5.8	4.6	7.5	146	146	
Nasopharynx	13.9	10.8	-	-	0.6	0.2	1.1	2.0	6.4	11.1	21.8	27.6	32.4	33.9	36.0	35.1	30.2	26.0	14.0	147	
Hypopharynx	1.3	1.2	-	-	-	-	-	-	-	-	0.5	0.6	1.9	2.5	6.7	6.6	10.5	10.2	11.8	148	
Oesophagus	3.9	3.6	-	-	-	-	-	-	-	-	0.7	0.6	1.8	3.9	8.9	18.6	19.0	33.1	33.4	50.6	
Stomach	16.0	14.5	-	-	-	-	0.5	0.8	0.1	1.3	5.4	6.1	12.4	23.9	45.6	87.0	136.5	237.5	248.7	151	
Small intestines	1.0	0.9	-	-	-	-	-	-	0.3	0.2	1.0	1.4	2.3	2.7	6.6	8.1	4.6	6.5	6.5	152	
Colon	25.4	23.0	-	-	-	0.2	0.7	1.0	1.9	3.2	7.3	11.9	28.1	53.2	84.9	150.9	196.9	264.4	334.8	153	
Rectum	19.9	17.5	-	-	-	0.2	0.8	2.0	4.6	7.2	14.0	32.9	47.4	73.6	100.6	130.1	172.5	188.4	154		
Liver	19.7	17.8	0.6	0.2	0.2	0.5	0.2	1.4	2.8	5.1	11.3	26.4	46.7	82.2	109.7	137.0	187.4	199.1	155		
Gall bladder, etc.	2.0	1.8	-	-	-	-	-	-	-	0.1	0.2	0.9	2.2	4.4	6.0	8.7	23.2	18.6	29.1	156	
Pancreas	6.6	5.8	-	-	-	-	0.2	0.2	0.6	0.5	2.3	3.5	9.8	14.7	17.6	37.9	52.3	62.2	79.7	157	
Retropertitoneum & Peritoneum	0.3	0.3	-	-	-	-	0.2	-	0.1	-	-	-	0.3	0.6	1.7	1.6	4.1	0.9	1.1	158	
Nose, sinuses, etc.	1.0	0.9	0.2	-	-	-	-	0.3	0.3	0.7	0.6	1.0	1.2	2.3	3.7	6.6	5.2	1.9	3.2	160	
Larynx	4.1	3.7	-	-	-	-	-	-	0.3	1.0	2.3	4.7	10.6	16.0	20.6	28.5	41.7	54.9	161		
Bronchus, trachea	44.4	40.8	-	0.2	-	0.5	0.4	0.2	1.9	2.7	9.6	18.5	36.0	70.8	153.5	266.8	417.5	574.2	589.9	162	
Pleura	0.5	0.4	-	-	-	-	-	0.2	-	-	0.1	0.1	0.9	0.4	1.7	1.6	6.4	6.5	3.2	163	
Thymus, heart	1.1	1.0	0.2	0.2	0.5	1.3	1.3	1.0	0.4	0.8	1.0	1.0	0.6	2.3	2.7	3.3	1.7	3.7	3.2	164	
Bone	0.9	0.9	0.2	0.8	0.9	1.0	1.5	1.7	0.4	0.1	0.6	1.2	0.9	0.8	0.7	1.2	1.2	2.2	2.2	170	
Connective tissues	2.1	1.9	1.0	0.8	0.5	0.7	0.4	0.5	1.1	1.3	2.3	3.4	2.6	4.2	5.7	5.4	5.2	10.2	10.8	171	
Melanoma of skin	0.6	0.5	-	-	-	-	0.2	0.5	0.4	0.4	0.4	0.8	0.8	1.0	1.0	3.7	1.2	4.6	1.1	172	
Skin, others	10.7	9.6	-	0.2	0.2	-	0.7	0.5	1.9	2.8	4.9	6.7	10.6	18.1	36.3	52.4	66.2	106.7	181.9	173	
Male Breast	0.2	0.2	-	-	-	-	-	-	-	-	-	0.1	0.3	0.2	2.0	0.8	0.6	2.8	1.1	175	
Prostate	25.2	23.9	-	-	-	-	-	-	-	-	0.3	0.4	2.2	10.6	45.3	106.5	183.1	252.0	340.4	318.6	185
Testis	1.3	1.2	1.2	-	-	1.3	2.0	2.8	3.0	1.6	2.3	1.0	0.8	1.2	0.3	-	-	0.9	1.1	186	
Penis	1.1	0.9	-	-	-	-	-	-	0.1	0.6	0.4	2.0	1.9	3.3	5.8	9.3	13.0	7.5	187		
Bladder	7.8	7.1	-	-	-	-	-	0.8	0.6	1.5	1.2	4.7	8.5	13.1	23.3	40.8	56.9	91.8	134.6	188	
Kidney & Oth.Urinary	7.2	6.2	0.6	-	0.2	-	0.2	0.5	0.7	2.4	4.8	6.5	13.5	19.7	24.3	34.2	42.4	51.0	36.6	189	
Eye	0.2	0.3	1.7	-	-	0.2	-	-	-	0.1	-	-	0.3	0.6	-	0.4	-	-	2.2	190	
Brain, nervous system	3.3	3.1	1.1	2.6	2.0	1.2	1.7	2.5	2.2	3.2	4.7	5.0	5.7	9.9	7.5	11.1	8.6	87.2	191-2		
Thyroid	2.5	2.1	-	0.3	0.7	0.7	2.0	2.8	1.7	2.0	3.1	4.7	5.0	5.7	9.9	7.5	6.5	5.4	193		
Other endocrine	0.6	0.6	1.0	0.5	0.9	0.7	0.4	0.2	0.4	0.4	0.6	0.5	0.6	1.0	-	2.3	-	-	194		
Lymphoid neoplasms	15.2	14.4	9.9	6.0	5.1	5.8	5.8	5.5	4.4	6.7	9.6	12.7	20.0	25.6	38.6	58.6	83.0	89.1	87.2		
Myeloid neoplasms	5.1	4.6	2.1	0.7	0.5	0.8	0.9	2.8	2.1	2.5	3.6	3.9	9.0	8.7	11.0	19.0	26.7	37.1	38.8		
Other and unspecified	4.8	4.3	0.2	-	-	0.2	0.3	0.6	1.1	1.4	2.8	5.9	10.0	13.0	28.0	33.1	40.8	76.4	OTH		
All	254.7	230.0	21.9	10.8	12.4	15.3	20.8	26.6	36.2	55.7	102.9	160.0	298.6	500.0	848.9	1345.2	1844.4	2485.2	2776.1	ALL	

SITE	INCIDENCE RATES BY AGE GROUP (YEARS)										Appendix C2										
	CR	ASR	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75-	80+ ICD-9		
Lip, Vermilion	0.0	0.0	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	0.6	140	
Tongue	0.8	0.6	-	-	-	0.2	-	-	-	0.3	0.1	0.4	0.7	1.1	1.7	1.3	4.9	2.9	6.2	8.1	141
Salivary gland	0.7	0.5	-	-	0.3	0.2	0.2	0.2	0.8	0.5	1.1	0.5	1.1	2.3	1.0	0.7	0.5	3.4	3.1	142	
Mouth	0.7	0.5	-	-	-	-	-	-	0.1	0.4	0.1	0.8	0.6	1.0	1.6	3.0	2.5	3.4	11.8	143-5	
Oropharynx	0.3	0.2	-	-	-	-	-	-	-	0.1	0.7	0.9	0.2	1.0	0.4	0.5	1.4	2.5	2.5	146	
Nasopharynx	4.6	3.4	-	-	-	0.2	0.6	1.1	3.3	4.2	6.0	8.5	10.3	12.0	8.6	7.9	9.3	13.7	8.1	147	
Hypopharynx	0.1	0.1	-	-	-	-	-	0.2	0.1	-	-	-	0.2	-	-	-	-	1.4	2.5	148	
Oesophagus	1.0	0.7	-	-	-	-	-	-	-	0.3	0.5	0.5	-	0.8	1.6	1.5	3.9	10.3	25.5	150	
Stomach	10.1	7.4	-	-	-	-	0.2	0.6	1.1	2.7	4.1	6.5	9.9	12.0	19.0	42.7	55.5	110.4	124.1	151	
Small intestines	0.8	0.6	-	-	0.2	-	-	0.3	0.4	0.1	0.6	0.7	0.5	2.1	1.3	3.4	3.9	6.2	5.0	152	
Colon	25.6	19.1	-	-	-	0.2	1.7	1.2	1.6	3.0	8.3	14.4	33.5	48.3	66.6	87.2	154.2	210.6	311.6	153	
Rectum	13.0	9.9	-	-	-	0.2	0.2	0.9	3.3	4.6	10.0	17.2	29.9	35.5	60.3	67.3	96.7	113.6	154		
Liver	6.3	4.7	1.0	0.2	-	0.3	0.2	-	0.3	0.8	1.5	2.1	3.5	7.4	13.6	22.8	46.2	81.6	80.1	155	
Gall bladder, etc.	2.5	1.8	-	-	-	-	0.2	-	0.1	0.1	0.9	1.3	2.7	4.3	4.8	12.4	13.3	24.7	29.2	156	
Pancreas	5.4	4.0	-	-	-	0.2	-	0.3	0.4	0.5	1.3	2.5	4.3	9.1	15.9	22.1	32.4	50.8	68.9	157	
Retroperitoneum & Peritoneum	0.6	0.5	0.2	0.2	0.3	-	0.2	0.2	0.1	0.4	0.5	0.5	0.5	0.6	1.2	1.6	1.9	3.9	2.1	3.1	158
Nose, sinuses, etc.	0.6	0.5	-	-	-	-	-	0.2	0.3	0.7	1.4	0.8	0.5	1.2	0.3	1.5	3.4	2.7	3.1	160	
Larynx	0.4	0.3	-	-	-	-	-	0.2	-	-	0.1	0.4	0.3	0.4	0.3	0.7	3.4	4.1	5.0	161	
Bronchus, trachea	21.4	16.0	-	-	0.2	0.2	0.4	0.5	0.9	2.9	6.9	13.1	20.7	39.4	57.1	84.6	135.1	174.9	260.7	162	
Pleura	0.1	0.1	-	-	-	-	0.2	-	-	-	-	-	-	0.3	0.2	0.3	-	0.7	0.6	163	
Thymus, heart	0.7	0.5	0.2	-	-	-	0.4	-	0.5	0.3	0.6	0.9	1.6	1.9	1.0	2.2	2.5	2.1	1.9	164	
Bone	0.6	0.6	-	0.7	1.6	0.7	0.4	0.3	0.4	0.5	0.5	0.4	0.8	1.2	0.6	0.7	0.5	2.1	0.6	170	
Connective tissues	1.5	1.2	0.6	0.2	0.5	0.7	0.4	0.5	1.6	0.9	1.5	1.6	2.7	2.7	2.9	2.2	3.9	2.1	8.7	171	
Melanoma of skin	0.7	0.5	-	-	-	0.2	0.2	0.5	0.4	0.4	0.8	0.5	1.7	1.3	1.1	2.5	3.4	6.8	172		
Skin, others	9.0	6.6	-	0.2	-	0.3	-	1.1	1.2	2.5	2.4	4.9	7.3	10.9	17.4	37.1	54.0	152.7	173		
Female Breast	77.8	58.5	-	-	0.7	1.1	7.5	23.5	55.0	112.0	157.9	181.3	195.0	192.5	187.6	159.1	172.8	170.1	174		
Cervix uteri	11.5	8.8	-	-	-	-	0.9	1.4	4.6	9.4	13.4	19.2	19.3	20.2	28.5	41.2	46.2	36.4	42.8	180	
Chorioepithelioma	0.1	0.1	-	-	-	-	0.2	0.2	0.1	0.1	0.4	0.1	0.3	-	-	-	-	-	-	181	
Corpus uteri	15.2	11.7	-	-	-	-	0.7	2.4	4.2	6.9	13.7	26.8	41.4	48.3	41.5	44.9	39.3	30.2	27.3	182	
Ovary, etc.	15.2	12.0	0.2	0.2	1.3	4.4	8.9	6.7	7.0	11.3	15.1	23.6	35.2	35.1	33.3	32.6	31.4	27.4	44.7	183	
Other fem. genital	1.3	1.0	-	0.2	-	-	-	-	0.4	0.3	0.4	1.6	1.3	3.5	3.8	5.2	3.9	12.3	7.4	184	
Bladder	2.6	1.9	-	-	-	-	0.2	0.1	0.4	0.8	0.7	0.9	4.1	7.3	11.6	17.2	23.3	36.0	188		
Kidney & Oth. Urinary	3.8	3.1	0.6	0.2	-	0.3	0.2	0.2	0.3	0.9	2.3	3.4	4.4	6.4	13.0	20.2	21.1	26.1	21.1	189	
Eye	0.2	0.2	1.0	0.3	-	-	0.2	-	-	-	-	-	0.3	0.2	0.6	0.4	0.5	-	0.6	190	
Brain, nervous system	2.7	2.6	2.3	2.6	1.8	1.9	1.5	1.7	1.5	1.2	1.6	3.2	2.4	5.8	5.4	6.4	5.4	11.0	7.4	191-2	
Thyroid	7.4	5.8	-	-	0.5	1.7	3.9	6.6	9.5	8.7	8.2	10.8	13.3	11.8	13.6	11.6	13.3	17.8	8.7	193	
Other endocrine	0.5	0.5	0.8	-	0.5	0.3	0.4	0.2	-	0.4	0.5	0.3	1.1	0.6	0.6	1.1	1.5	-	1.2	194	
Lymphoid neoplasms	11.1	10.0	7.6	4.9	3.7	5.9	5.4	4.0	4.2	4.4	6.0	7.4	15.5	22.1	29.2	33.7	36.8	46.6	59.6		
Myeloid neoplasms	4.1	3.5	1.4	1.0	1.0	1.6	2.0	2.0	2.2	2.1	2.3	3.7	4.6	7.4	8.2	13.9	16.7	23.3	21.1		
Other and unspecified	4.5	3.3	0.2	-	-	0.3	0.2	0.5	1.0	1.3	2.6	6.8	7.6	10.1	13.1	24.6	36.4	60.2	OTM		
All	265.3	203.4	16.2	10.8	11.7	20.4	30.8	39.9	73.2	126.8	221.8	334.0	448.9	560.2	642.0	824.8	1020.6	1333.3	1746.1	ALL	

SITE	SINGAPORE : CHINESE RESIDENTS 2003-2007, MALES										INCIDENCE RATES BY AGE GROUP (YEARS)										Appendix C3	
	CR	ASR	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75-	80+	ICD-9		
Lip, Vermilion	0.1	0.1	-	-	-	-	-	-	-	-	-	-	-	0.2	0.2	0.3	0.4	-	-	1.2	-	140
Tongue	1.9	1.5	-	-	-	-	-	0.2	-	0.6	0.2	2.0	3.0	1.7	3.8	4.4	14.0	6.6	6.0	13.8	141	
Salivary gland	0.9	0.7	-	-	-	-	-	-	0.2	0.4	0.7	0.5	0.3	1.7	2.5	1.2	3.0	2.2	7.2	11.1	142	
Mouth	1.6	1.3	-	-	-	-	-	-	-	0.2	-	0.5	1.5	2.5	3.5	5.2	8.0	12.4	9.7	12.4	143-5	
Oropharynx	1.1	0.9	-	-	-	-	-	-	-	0.2	-	0.3	2.1	3.0	4.0	7.0	6.6	4.8	9.7	146		
Nasopharynx	16.9	12.5	-	-	-	0.2	1.5	2.6	8.1	14.0	26.4	32.8	36.1	39.2	39.8	38.9	32.9	32.6	16.6	147		
Hypopharynx	1.6	1.3	-	-	-	-	-	-	-	-	0.5	0.7	2.1	2.5	7.2	8.0	13.2	13.3	13.8	148		
Oesophagus	4.7	4.1	-	-	-	-	-	-	-	0.7	0.7	2.3	3.9	10.1	21.1	22.4	38.1	38.6	58.1	150		
Stomach	19.0	16.3	-	-	-	-	0.2	1.1	0.2	1.1	0.2	1.5	6.4	6.0	13.3	25.5	50.1	92.7	157.4	283.5	294.6	
Small intestines	1.0	0.9	-	-	-	-	-	-	0.4	-	0.4	0.3	1.0	1.2	2.3	2.4	6.0	8.1	6.0	8.3	152	
Colon	30.2	25.7	-	-	-	0.2	0.7	1.3	1.9	3.4	6.9	13.5	31.8	59.4	89.5	167.9	226.9	306.4	379.0	153		
Rectum	23.0	19.0	-	-	-	0.2	0.6	2.1	4.5	8.3	14.8	35.5	52.3	79.2	109.1	139.1	194.2	215.8	154			
Liver	22.8	19.4	0.9	0.2	0.2	0.2	0.7	0.2	1.7	3.4	6.1	12.2	28.0	47.5	90.3	118.1	153.7	196.6	226.8	155		
Gall bladder, etc.	2.1	1.8	-	-	-	-	-	-	-	-	0.2	0.2	0.2	0.5	2.5	4.0	6.0	10.0	23.4	20.5	26.3	
Pancreas	7.5	6.3	-	-	-	-	-	-	-	0.6	0.5	2.1	4.2	10.4	14.9	17.1	41.4	58.6	68.8	91.3		
Retropitoneum & Peritoneum	0.3	0.3	-	-	-	-	-	-	0.2	-	-	-	-	-	0.4	0.5	1.6	1.5	4.4	1.2	-	
Nose, sinuses, etc.	1.2	1.0	0.3	-	-	-	-	-	0.4	0.4	0.9	0.7	1.2	1.5	2.3	4.4	7.5	4.4	2.4	4.1	160	
Larynx	4.6	3.9	-	-	-	-	-	-	-	-	0.4	1.3	2.2	4.8	10.9	17.9	21.4	32.9	44.6	55.3	161	
Bronchus, trachea	51.1	44.3	-	0.2	-	0.5	0.2	0.2	2.1	3.4	9.6	18.8	35.5	72.0	161.5	287.0	464.9	655.0	663.9	162		
Pleura	0.6	0.5	-	-	-	-	-	-	0.2	-	-	0.2	-	-	1.0	0.5	1.6	1.5	8.1	7.2	4.1	
Thymus, heart	1.2	1.1	0.3	0.2	0.2	1.6	1.5	1.1	0.6	1.1	0.8	1.0	0.8	2.5	3.2	4.0	2.2	3.6	2.8	164		
Bone	0.9	0.9	-	1.2	0.9	1.4	1.2	1.5	0.6	0.2	0.5	1.2	0.8	0.8	0.4	1.5	0.7	3.6	-	-	170	
Connective tissues	2.4	2.0	1.2	0.9	0.2	0.7	0.2	0.4	1.1	1.5	2.5	4.0	2.9	4.5	6.8	6.0	6.6	13.3	9.7	171		
Melanoma of skin	0.6	0.5	-	-	-	0.2	0.6	0.2	0.4	0.2	0.2	0.4	0.2	0.4	1.3	1.2	4.5	0.7	2.4	1.4	172	
Skin, others	11.8	10.0	-	0.2	0.2	-	0.7	0.6	2.2	2.2	4.1	6.3	10.6	16.4	33.8	51.8	73.2	129.1	211.6	173		
Male Breast	0.2	0.2	-	-	-	-	-	-	-	-	-	-	-	-	0.2	0.3	2.0	1.0	0.7	3.6	1.4	
Prostate	28.3	25.2	-	-	-	-	-	-	-	-	-	-	-	-	2.7	9.6	46.7	111.0	194.8	273.1	332.0	
Testis	1.4	1.3	1.4	-	-	1.4	1.7	3.2	2.8	1.6	2.5	1.0	0.8	1.3	0.4	-	-	-	1.2	1.4	186	
Penis	1.3	1.1	-	-	-	-	-	-	-	-	0.2	0.7	0.5	2.1	1.8	4.0	7.0	9.5	14.5	9.7	187	
Bladder	8.5	7.3	-	-	-	-	-	-	0.9	0.7	1.3	1.3	3.7	7.9	13.4	24.3	39.4	61.5	97.7	149.4	188	
Kidney & Oth.Urinary	7.9	6.4	0.6	-	-	-	-	-	0.6	0.9	2.9	4.5	6.5	14.8	20.0	25.5	33.9	48.3	48.3	38.7	189	
Eye	0.2	0.4	2.3	-	-	-	0.2	-	-	-	0.2	-	-	0.2	0.8	-	0.5	-	-	1.4	190	
Brain, nervous system	3.3	2.9	1.2	3.2	1.6	2.7	1.3	1.9	2.7	1.7	3.3	4.0	6.6	6.4	9.0	8.1	9.7	11.1	191-2			
Thyroid	2.6	2.1	-	0.2	0.2	0.5	2.1	3.2	1.8	1.7	3.2	5.2	5.3	6.0	8.5	8.1	7.2	6.9	193			
Other endocrine	0.6	0.6	1.2	0.7	1.1	0.7	0.2	0.2	0.2	0.3	0.8	0.6	0.3	1.2	-	2.9	-	-	-	-	194	
Lymphoid neoplasms	15.8	14.5	9.8	7.1	5.6	6.2	5.5	4.9	5.2	6.3	10.7	12.3	18.5	26.0	37.4	54.3	85.7	94.1	94.1			
Myeloid neoplasms	5.3	4.6	2.0	0.7	0.6	1.2	1.0	2.1	1.7	2.2	3.5	4.2	8.7	9.3	10.7	18.9	28.6	37.4	42.9			
Other and unspecified	5.2	4.3	-	-	-	-	-	0.2	0.4	1.3	1.7	3.2	6.2	10.9	10.7	26.4	32.9	45.8	85.8	OTH		
All	289.7	247.5	22.8	12.7	12.4	16.2	19.8	27.1	39.9	60.6	109.6	170.2	340.5	524.9	889.4	1426.5	2036.6	2772.0	3105.1	All		

SITE	INCIDENCE RATES BY AGE GROUP (YEARS)										Appendix C4 ICD-9								
	CR	ASR	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75-	80+
Lip, Vermilion	0.0	0.0	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-
Tongue	0.8	0.5	-	-	-	0.2	-	-	0.2	0.2	0.3	0.3	0.8	1.5	1.5	5.0	2.4	4.1	-
Salivary gland	0.8	0.5	-	-	0.2	-	-	0.2	1.0	0.7	1.2	0.5	1.0	2.5	1.1	0.9	0.6	3.3	3.5
Mouth	0.7	0.4	-	-	-	-	-	-	0.2	0.3	0.2	0.8	0.8	1.0	0.8	1.8	1.2	3.3	11.8
Oropharynx	0.3	0.2	-	-	-	-	-	-	-	-	0.2	0.8	1.2	0.3	0.8	0.5	0.6	0.8	2.8
Nasopharynx	5.7	4.1	-	-	-	0.2	0.8	1.2	4.3	5.2	7.3	10.6	11.8	13.6	9.5	9.1	10.8	15.5	9.0
Hypopharynx	0.2	0.1	-	-	-	-	-	-	0.2	-	-	-	0.2	-	-	-	1.2	1.6	2.8
Oesophagus	1.2	0.7	-	-	-	-	-	-	-	-	0.2	0.2	0.5	-	1.0	1.5	1.8	4.2	11.4
Stomach	12.2	8.1	-	-	-	-	-	-	0.2	1.2	2.9	4.6	7.3	11.2	13.1	21.6	47.7	60.8	123.1
Small intestines	0.8	0.6	-	-	-	-	-	-	0.4	0.3	-	0.7	0.5	0.4	2.3	1.5	2.7	3.6	6.5
Colon	30.6	20.8	-	-	-	-	-	-	0.2	1.3	0.8	1.9	3.1	8.6	16.1	37.9	51.0	72.5	95.8
Rectum	15.4	10.7	-	-	-	-	-	-	0.3	0.2	1.2	3.1	5.0	12.3	19.8	31.7	36.8	63.1	74.1
Liver	7.2	4.9	0.6	0.3	-	-	-	-	0.3	-	0.7	2.0	2.5	3.7	8.3	13.3	23.6	48.2	86.4
Gall bladder, etc.	2.8	1.9	-	-	-	-	-	-	-	0.2	-	-	1.0	1.4	3.1	5.3	12.7	13.2	25.3
Pancreas	6.1	4.2	-	-	-	0.2	-	-	0.4	0.5	0.7	1.0	2.5	4.7	7.3	17.1	21.8	36.7	54.6
Retropitoneum & Peritoneum	0.6	0.5	0.3	0.3	0.2	-	-	-	0.2	0.2	0.3	0.7	0.3	0.8	1.0	1.9	1.8	3.0	1.6
Nose, sinuses, etc.	0.7	0.5	-	-	-	-	-	-	0.2	0.3	0.5	1.5	0.8	0.6	1.3	0.4	1.8	2.4	1.6
Larynx	0.4	0.2	-	-	-	-	-	-	-	-	-	0.2	0.3	0.2	0.3	0.4	0.9	3.0	4.1
Bronchus, trachea	25.4	17.4	-	-	-	0.2	0.2	0.5	0.4	1.0	2.6	7.5	13.5	22.4	41.0	61.9	92.2	152.3	194.8
Pleura	0.1	0.1	-	-	-	-	-	-	0.3	-	-	-	-	-	0.3	0.4	-	0.8	-
Thymus, heart	0.8	0.6	0.3	-	-	-	-	-	0.5	-	0.7	0.3	0.5	1.2	2.0	2.0	1.1	2.7	3.0
Bone	0.6	0.6	-	0.8	1.6	0.7	0.3	0.2	0.5	0.7	0.5	0.5	0.8	0.8	0.8	0.5	0.6	2.4	-
Connective tissues	1.7	1.4	0.6	0.3	0.5	0.7	0.5	0.6	2.1	1.0	1.5	2.0	2.9	2.8	3.4	2.3	4.8	1.6	9.0
Melanoma of skin	0.8	0.5	-	-	-	-	-	-	0.3	0.2	0.5	0.5	0.7	0.6	2.0	1.5	1.4	3.0	4.1
Skin, others	10.5	7.0	-	-	-	-	-	-	0.2	-	1.2	1.5	2.2	2.3	4.1	7.7	11.1	18.2	39.5
Female Breast	84.1	59.9	-	-	-	0.5	1.3	6.6	24.5	57.7	114.5	164.0	187.5	201.2	195.6	194.4	155.3	174.4	169.4
Cervix uteri	12.9	9.3	-	-	-	-	-	-	0.8	1.4	5.1	10.0	14.8	20.6	21.0	21.6	29.6	42.2	47.0
Chorioepithelioma	0.1	0.1	-	-	-	-	-	-	-	0.2	0.2	0.3	0.2	0.4	-	-	-	-	-
Corpus uteri	16.6	12.0	-	-	-	-	-	-	0.5	3.2	4.3	7.7	13.9	28.4	45.0	49.0	41.8	42.2	37.3
Ovary, etc.	16.1	12.2	0.3	0.3	1.1	4.4	8.4	7.4	6.9	12.5	13.3	25.3	37.1	33.7	33.4	34.1	28.3	29.3	44.4
Other fem. genital	1.4	1.0	-	0.3	-	-	-	-	-	0.2	0.3	0.3	2.0	1.4	3.3	4.6	5.4	4.8	11.4
Bladder	2.9	2.0	-	-	-	-	-	-	0.2	0.2	0.5	0.8	0.7	1.2	3.8	8.0	12.3	16.9	26.1
Kidney & Oth.Urinary	4.2	3.1	0.9	-	-	0.2	0.3	0.2	0.2	1.0	2.5	3.5	4.5	6.8	13.3	21.8	18.7	25.3	22.2
Eye	0.2	0.3	1.5	0.5	-	-	0.3	-	-	-	-	-	0.4	0.3	0.4	0.5	0.6	-	0.7
Brain, nervous system	3.1	2.9	3.4	2.8	-	2.1	2.2	2.0	1.5	1.2	1.7	2.7	2.2	6.5	5.7	7.3	6.6	10.6	7.6
Thyroid	7.5	5.6	-	-	0.5	1.2	3.8	6.8	8.9	8.1	7.8	10.8	13.9	11.3	11.8	11.4	13.8	18.7	8.3
Other endocrine	0.5	0.4	0.3	-	0.7	0.5	0.3	0.2	-	0.3	0.7	0.3	1.0	0.8	0.4	1.4	0.6	-	1.4
Lymphoid neoplasms	11.2	9.6	7.9	4.5	4.6	5.7	4.8	4.6	3.4	4.5	6.3	6.8	15.5	19.4	29.2	26.3	34.3	45.6	62.5
Myeloid neoplasms	4.4	3.6	1.5	1.0	1.1	1.7	2.3	2.0	2.6	2.1	2.5	3.7	3.9	7.0	9.1	14.1	16.9	22.0	19.4
Other and unspecified	5.2	3.5	0.3	-	-	0.5	0.3	0.2	0.5	1.2	1.2	2.9	7.5	8.3	11.8	14.1	22.9	39.1	60.4
All	296.7	212.2	18.0	10.8	12.8	20.0	29.7	41.1	76.8	132.7	227.8	351.9	476.8	574.1	668.1	856.9	1067.4	1422.2	1816.0

SITE	SINGAPORE : MALAY RESIDENTS 2003-2007, MALES										INCIDENCE RATES BY AGE GROUP (YEARS)							Appendix C5					
	CR	ASR	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75-	80+	ICD-9			
Lip, Vermilion	0.1	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.2	-	-	140			
Tongue	0.4	0.3	-	-	-	-	-	-	-	-	1.8	1.0	1.4	-	-	-	-	-	9.5	141			
Salivary gland	0.5	0.5	-	-	-	-	-	-	-	-	0.9	-	-	2.2	-	-	4.2	-	15.9	-			
Mouth	0.6	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.2	16.5	7.9	-			
Oropharynx	0.2	0.1	-	-	-	-	-	-	-	-	0.9	1.0	-	-	-	-	-	-	-	143-5			
Nasopharynx	7.0	6.8	-	-	-	-	-	-	-	-	2.5	4.2	13.5	15.4	27.1	15.1	27.0	29.3	22.0	7.9	9.5		
Hypopharynx	0.1	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	148			
Oesophagus	0.8	0.9	-	-	-	-	-	-	-	-	1.1	0.9	-	-	4.3	3.9	4.2	5.5	15.9	9.5	150		
Stomach	4.5	5.3	-	-	-	-	-	-	-	-	1.1	1.8	5.1	5.7	12.9	23.2	37.7	38.5	39.7	66.7	151		
Small intestines	0.7	0.9	-	-	-	-	-	-	-	-	-	-	1.0	1.4	-	7.7	12.6	5.5	-	-	152		
Colon	12.1	14.4	-	-	-	-	-	-	-	-	1.1	1.3	4.2	9.0	8.2	17.1	25.9	81.1	79.5	158.7	209.5	153	
Rectum	10.2	11.6	-	-	-	-	-	-	-	-	2.7	1.3	6.4	4.5	10.3	24.2	21.6	46.3	66.9	104.4	119.0	154	
Liver	11.6	13.2	-	-	-	-	-	-	-	-	1.3	2.1	2.7	10.3	25.6	53.9	50.2	62.8	98.9	174.6	114.3	155	
Gall bladder, etc.	1.2	1.4	-	-	-	-	-	-	-	-	-	-	0.9	2.1	1.4	2.2	3.9	4.2	22.0	7.9	28.6	156	
Pancreas	3.8	4.5	-	-	-	-	-	-	-	-	1.1	-	-	1.1	2.7	1.0	7.1	10.8	23.2	29.3	27.5	47.6	
Retropertitoneum & Peritoneum	0.5	0.7	-	-	-	-	-	-	-	-	1.1	-	-	-	-	-	2.2	3.9	4.2	5.5	-		
Nose, sinuses, etc.	0.3	0.3	-	-	-	-	-	-	-	-	-	-	-	0.9	1.0	-	2.2	-	5.5	-	-		
Larynx	2.0	2.2	-	-	-	-	-	-	-	-	-	-	-	2.1	4.3	6.5	3.9	8.4	5.5	31.7	76.2		
Bronchus, trachea	29.6	34.7	-	-	-	-	-	-	-	-	0.9	1.1	-	2.5	1.1	12.6	23.7	48.4	84.1	123.6	217.6	318.7	
Pleura	0.2	0.3	-	-	-	-	-	-	-	-	-	-	-	-	1.0	1.4	-	-	-	-	160		
Thymus, heart	0.9	0.8	-	-	-	-	-	-	-	-	1.6	0.9	1.1	1.4	-	1.8	2.1	-	-	-	-		
Bone	0.7	0.8	1.1	-	-	-	-	-	-	-	2.2	1.4	-	-	-	-	2.8	2.2	-	5.5	-		
Connective tissues	1.3	1.2	-	-	-	-	-	-	-	-	0.9	0.8	0.9	1.1	1.4	2.5	1.1	2.7	2.1	-	-		
Melanoma of skin	0.2	0.1	-	-	-	-	-	-	-	-	-	-	-	-	1.1	-	-	-	-	9.5	164		
Skin, others	2.9	3.4	-	-	-	-	-	-	-	-	-	-	-	-	3.6	3.1	4.3	2.2	15.4	20.9	38.5	23.8	
Male Breast	0.2	0.1	-	-	-	-	-	-	-	-	-	-	-	-	1.0	1.4	-	-	-	-	175		
Prostate	14.1	17.7	-	-	-	-	-	-	-	-	-	-	-	-	14.2	30.2	81.1	129.7	137.4	277.8	314.3	185	
Testis	1.2	1.2	1.1	-	-	-	-	-	-	-	0.9	3.2	2.7	2.5	2.1	1.8	1.0	1.4	-	-	-	186	
Penis	0.2	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.2	-	-	11.0	-		
Bladder	5.2	6.0	-	-	-	-	-	-	-	-	-	-	-	-	1.1	1.8	9.3	10.0	10.8	23.2	29.3	49.5	95.2
Kidney & Oth.Urinary	4.4	4.9	1.1	-	-	-	-	-	-	-	0.8	-	-	-	2.1	3.6	7.2	7.1	17.2	23.2	33.5	11.0	47.6
Eye	0.2	0.2	1.1	-	-	-	-	-	-	-	-	-	-	-	-	-	1.4	-	-	-	-		
Brain, nervous system	2.6	2.7	3.2	0.9	0.8	4.4	-	1.4	1.3	1.1	3.6	2.1	4.3	6.5	7.7	-	5.5	23.8	104.4	95.2	76.2	191-2	
Thyroid	2.3	2.3	-	-	-	-	-	1.8	2.2	2.7	2.5	2.1	4.5	4.1	2.8	2.2	3.9	12.6	5.5	7.9	-	193	
Other endocrine	0.5	0.5	1.1	-	0.8	0.9	1.1	-	1.3	-	-	0.9	-	-	-	-	-	-	-	-	194		
Lymphoid neoplasms	14.8	16.9	8.5	2.7	4.0	3.5	7.5	8.2	1.3	8.5	9.9	14.4	32.8	21.6	57.9	100.4	104.4	16.5	23.8	-	-		
Myeloid neoplasms	4.3	4.7	2.1	-	-	-	1.1	4.1	2.5	3.2	4.5	2.1	10.0	10.8	15.4	20.9	16.5	55.6	55.6	28.6	-		
Other and unspecified	3.2	4.2	-	-	-	-	-	-	-	-	1.3	-	-	3.1	5.7	4.3	34.7	33.5	22.0	31.7	28.6		
All	145.8	167.4	19.0	4.4	10.4	15.0	28.0	25.8	23.9	43.5	91.7	134.9	263.5	359.9	660.2	958.2	1170.3	1698.4	1733.3	ALL			

SITE	INCIDENCE RATES BY AGE GROUP (YEARS)										Appendix C6									
	CR	ASR	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75-	80+	ICD-9
Lip, Vermilion	0.1	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.7	140
Tongue	1.0	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21.4	29.1
Salivary gland	0.7	0.5	-	-	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	7.1	141
Mouth	0.2	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19.4	142
Oropharynx	0.1	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.1	143-5
Nasopharynx	1.4	1.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	146
Hypopharynx	0.1	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	147
Oesophagus	0.2	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	148
Stomach	2.9	2.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	150
Small intestines	0.2	0.2	-	-	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	9.7	151
Colon	11.7	12.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	152
Rectum	6.7	7.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	153
Liver	3.7	4.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	154
Gall bladder, etc.	1.4	1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	155
Pancreas	3.8	4.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	156
Retropitoneum & Peritoneum	0.6	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	157
Nose, sinuses, etc.	0.7	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	160
Larynx	0.5	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	161
Bronchus, trachea	11.7	12.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	162
Pleura	0.2	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	163
Thymus, heart	0.2	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	164
Bone	0.7	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	170
Connective tissues	0.7	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	171
Melanoma of skin	0.4	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	172
Skin, others	3.1	3.2	-	-	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	173
Female Breast	60.3	54.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	174
Cervix uteri	8.6	8.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	180
Choriocarcinoma	0.2	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	181
Corpus uteri	11.5	11.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	182
Ovary, etc.	13.6	12.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	183
Other fem. genital	0.7	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	184
Bladder	1.2	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	188
Kidney & Oth. Urinary	2.2	2.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	189
Eye	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	190
Brain, nervous system	1.8	1.7	-	-	2.8	1.7	0.9	-	-	-	-	-	-	-	-	-	-	-	-	191-2
Thyroid	7.9	7.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	193
Other endocrine	0.5	0.6	2.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	194
Lymphoid neoplasms	13.0	13.6	7.9	5.7	1.7	5.5	7.8	1.3	7.2	7.1	7.2	12.4	20.7	44.3	36.5	76.9	56.3	57.1	38.8	
Myeloid neoplasms	3.9	3.9	1.1	0.9	0.9	1.8	2.2	-	2.4	4.1	0.9	5.2	6.9	8.0	3.3	18.3	17.3	28.6	48.5	
Other and unspecified	2.2	2.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
All	180.7	175.8	11.3	10.4	10.2	24.9	43.6	38.4	73.6	127.2	223.1	293.3	571.4	545.3	351.2	721.6	826.8	814.3	1203.9	ALL

SITE	INCIDENCE RATES BY AGE GROUP (YEARS)										Appendix C7										
	CR	ASR	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75-	80+	ICD-9	
Lip, Vermilion	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Tongue	3.1	3.1	-	-	-	-	-	-	-	-	-	1.6	6.7	6.4	10.6	20.0	20.1	28.0	69.0	140	
Salivary gland	0.7	0.6	-	1.7	1.7	-	-	-	-	-	1.4	-	2.2	-	-	-	-	9.3	-	141	
Mouth	2.3	2.4	-	-	-	-	-	-	-	-	-	-	9.0	12.8	16.0	6.7	26.8	9.3	-	142	
Oropharynx	1.2	1.3	-	-	-	-	-	-	-	-	-	4.9	-	-	5.3	20.0	6.7	9.3	-	143-5	
Nasopharynx	1.1	1.1	-	3.5	-	-	-	-	-	1.3	-	-	1.4	1.6	2.2	3.2	10.6	-	-	146	
Hypopharynx	0.9	1.0	-	-	-	-	-	-	-	-	-	1.4	-	-	-	-	-	-	-	147	
Oesophagus	2.1	2.0	-	-	-	-	-	-	-	-	-	-	-	-	11.2	3.2	10.6	-	20.1	18.7	
Stomach	9.4	9.4	-	-	-	-	-	-	-	1.3	2.7	9.8	13.5	22.4	16.0	93.3	73.8	112.1	92.0	150	
Small intestines	0.4	0.4	-	-	-	-	-	-	-	-	-	-	-	2.2	3.2	-	6.7	-	-	151	
Colon	7.3	7.4	-	-	-	-	-	-	-	2.7	1.3	4.1	1.6	6.7	16.0	37.2	40.0	73.8	56.1	114.9	
Rectum	9.6	9.7	-	-	-	-	-	-	-	1.4	1.3	4.1	9.8	17.9	35.1	47.9	46.7	87.2	65.4	69.0	
Liver	8.5	8.8	-	-	-	-	-	-	-	-	-	-	4.9	9.0	35.1	37.2	73.3	33.6	149.5	80.5	155
Gall bladder, etc.	2.1	2.1	-	-	-	-	-	-	-	-	-	-	3.3	-	9.6	10.6	-	26.8	18.7	34.5	156
Pancreas	4.1	4.1	-	-	-	-	-	-	-	1.4	-	4.1	-	9.0	19.2	21.3	13.3	33.6	28.0	34.5	157
Retropertitoneum & Peritoneum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	158
Nose, sinuses, etc.	0.4	0.5	-	-	-	-	-	-	-	-	-	-	-	-	4.9	4.5	12.8	10.6	33.3	6.7	37.4
Larynx	2.9	3.1	-	-	-	-	-	-	-	-	-	6.9	9.8	29.1	47.9	85.1	106.7	134.2	140.2	183.9	161
Bronchus, trachea	16.3	16.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	162
Pleura	0.1	0.1	-	-	-	-	-	-	-	-	-	1.4	-	-	-	-	-	-	9.3	-	163
Thymus, heart	0.3	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.3	-	164
Bone	0.9	1.0	-	-	3.5	-	2.1	-	-	-	-	3.3	-	-	5.3	-	-	-	-	11.5	170
Connective tissues	0.7	0.6	-	-	1.7	-	-	-	-	-	1.4	-	2.2	3.2	-	-	-	-	-	-	171
Melanoma of skin	0.3	0.2	-	-	-	-	-	-	-	-	1.4	-	-	-	-	-	-	-	9.3	-	172
Skin, others	3.3	3.7	-	-	-	2.3	-	-	1.3	1.4	1.6	2.2	19.2	16.0	40.0	-	-	9.3	46.0	173	
Male Breast	0.1	0.2	-	-	-	-	-	-	-	-	-	-	-	-	5.3	-	-	-	-	-	175
Prostate	15.6	15.9	-	-	-	2.0	2.3	-	2.7	-	1.4	1.6	6.7	35.1	53.2	106.7	2013.7	261.7	206.9	185	
Testis	0.9	0.8	-	-	-	-	-	-	-	-	-	-	-	3.2	-	-	-	-	-	-	186
Penis	0.4	0.3	-	-	-	-	-	-	-	-	-	-	2.2	3.2	-	-	-	-	9.3	-	187
Bladder	5.1	5.1	-	-	-	-	2.1	-	2.5	-	3.3	9.0	12.8	10.6	46.7	26.8	65.4	57.5	188	-	189
Kidney & Oth.Urinary	4.7	4.8	-	-	-	2.3	-	-	-	5.5	4.9	4.5	22.4	16.0	46.7	13.4	56.1	-	-	-	190
Eye	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	191-2
Brain, nervous system	2.7	2.9	1.7	-	-	-	-	-	1.4	1.3	4.1	1.6	6.7	3.2	26.6	13.3	-	9.3	-	-	193
Thyroid	1.6	1.8	-	-	2.0	-	-	-	1.4	1.3	1.4	1.6	2.2	3.2	5.3	26.7	-	-	-	-	194
Other endocrine	0.5	0.4	-	-	-	-	-	1.4	2.5	-	-	-	-	3.2	-	-	-	-	-	-	195
Lymphoid neoplasms	10.7	11.4	12.0	6.7	5.2	4.0	6.8	6.3	2.7	3.8	2.7	11.5	22.4	25.6	26.6	40.0	47.0	46.7	34.5	-	196
Myeloid neoplasms	3.6	3.5	1.7	1.7	-	-	8.4	-	5.0	4.1	4.9	11.2	-	10.6	6.7	13.4	-	11.5	-	-	197
Other and unspecified	4.1	4.6	1.7	-	-	2.3	-	-	1.4	-	1.4	-	2.2	9.6	16.0	40.0	47.0	18.7	57.5	OTH	198
All	128.2	131.2	17.2	11.6	15.6	8.0	15.9	18.9	16.4	22.6	50.8	88.4	201.8	377.0	516.0	833.3	899.3	1186.9	1172.4	ALL	199

SITE	INCIDENCE RATES BY AGE GROUP (YEARS)										Appendix C8									
	CR	ASR	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75-	80+	ICD-9
Lip, Vermilion	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	140
Tongue	1.3	1.4	-	-	-	-	-	-	1.5	-	-	-	4.7	-	-	-	12.2	16.9	14.1	20.8
Salivary gland	0.1	0.2	-	-	-	-	-	2.2	-	-	-	-	-	-	-	-	-	-	-	141
Mouth	2.0	2.4	-	-	-	-	-	-	-	1.6	-	1.8	-	3.2	16.3	24.4	25.4	14.1	-	142
Oropharynx	0.1	0.2	-	-	-	-	-	-	-	-	-	-	-	-	5.4	-	-	-	-	143-5
Nasopharynx	0.3	0.3	-	-	-	-	-	-	-	-	-	-	-	-	3.2	-	-	-	-	146
Hypopharynx	0.1	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	147
Oesophagus	1.0	0.9	-	-	-	-	-	-	-	1.6	4.8	-	-	-	-	-	-	8.5	-	148
Stomach	4.5	4.9	-	-	-	-	-	-	3.3	1.5	3.2	1.6	5.5	2.3	6.4	16.3	36.6	25.4	70.4	62.5
Small intestines	1.8	1.9	-	-	-	-	-	-	-	1.5	1.6	1.6	3.7	2.3	-	-	18.3	16.9	14.1	20.8
Colon	7.1	7.0	-	-	-	-	-	-	3.3	-	3.2	4.8	9.2	16.4	19.1	5.4	18.3	67.8	154.9	41.7
Rectum	3.8	4.2	-	-	-	-	-	-	-	1.6	4.8	1.8	2.3	15.9	21.7	30.5	42.4	28.2	-	154
Liver	2.8	3.5	3.6	-	-	-	-	-	-	-	-	-	-	-	6.4	10.9	24.4	33.9	56.3	41.7
Gall bladder, etc.	1.1	1.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12.2	-	42.3	41.7
Pancreas	2.0	2.3	-	-	-	-	-	-	-	-	-	1.6	-	-	6.4	10.9	6.1	25.4	42.3	41.7
Retropitoneum & Peritoneum	0.6	0.5	-	-	-	-	-	-	-	-	-	-	3.7	-	-	-	-	14.1	-	158
Nose, sinuses, etc.	0.3	0.2	-	-	-	-	-	-	-	3.2	-	-	-	-	-	-	-	-	-	160
Larynx	0.3	0.3	-	-	-	-	-	-	-	-	-	-	-	1.8	-	-	-	8.5	-	161
Bronchus, trachea	3.7	4.1	-	-	-	-	-	-	-	-	3.2	3.2	1.8	9.3	6.4	10.9	24.4	33.9	-	104.2
Pleura	0.1	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	162
Thymus, heart	0.1	0.1	-	-	-	-	-	-	-	-	-	-	-	-	3.2	-	-	-	-	163
Bone	0.7	0.8	-	1.7	-	2.0	-	-	-	-	-	-	-	-	2.3	3.2	-	6.1	-	170
Connective tissues	0.6	0.7	1.8	-	-	2.0	-	-	-	-	-	-	-	-	-	-	-	-	14.1	-
Melanoma of skin	0.1	0.1	-	-	-	-	-	-	-	-	-	-	-	1.8	-	-	-	-	-	171
Skin, others	2.0	2.0	-	-	-	-	-	-	-	-	-	-	-	5.5	2.3	3.2	10.9	6.1	16.9	-
Female Breast	51.9	48.6	-	-	-	-	-	2.2	3.3	5.9	31.6	81.5	128.4	147.2	172.0	152.2	201.2	144.1	197.2	208.3
Cervix uteri	3.5	3.8	-	-	-	-	-	2.2	-	-	-	-	-	-	-	-	-	-	-	174
Chorioepithelioma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	181
Corpus uteri	11.3	11.6	-	-	-	-	-	2.2	-	3.0	4.7	14.4	18.3	16.4	41.4	54.3	48.8	76.3	70.4	62.5
Ovary, etc.	10.8	9.9	-	-	5.3	-	-	2.2	6.6	10.4	6.3	14.4	12.8	30.4	35.0	10.9	30.5	50.8	14.1	62.5
Other fem. genital	0.6	0.6	-	-	-	-	-	-	-	-	-	-	-	-	6.4	-	6.1	-	14.1	-
Bladder	1.6	1.9	-	-	-	-	-	-	-	-	-	-	-	-	6.4	5.4	6.1	33.9	14.1	41.7
Kidney & Oth.Urinary	3.0	3.2	-	1.7	-	-	-	-	-	1.5	-	1.6	7.3	4.7	3.2	21.7	6.1	42.4	14.1	-
Eye	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	189
Brain, nervous system	1.7	1.6	-	-	-	2.0	-	1.6	-	-	4.9	4.4	11.1	9.6	9.2	9.3	6.4	16.3	18.3	-
Thyroid	5.4	4.8	-	-	-	-	-	-	-	-	-	-	-	-	2.3	-	-	8.5	-	193
Other endocrine	0.4	0.5	1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	194
Lymphoid neoplasms	7.6	8.5	3.6	5.2	1.8	8.1	4.3	1.6	5.9	-	-	3.2	3.7	7.0	22.3	16.3	61.0	42.4	42.3	41.7
Myeloid neoplasms	2.1	2.2	1.8	-	-	-	-	-	4.9	-	-	1.6	-	9.3	3.2	5.4	-	16.9	14.1	20.8
Other and unspecified	2.3	2.3	-	-	-	-	-	-	1.5	-	1.6	1.8	7.0	3.2	-	6.1	33.9	28.2	41.7	OTH
All	138.8	138.9	12.6	8.7	7.1	14.2	15.1	29.6	37.0	77.5	159.7	231.2	292.1	388.5	423.9	615.9	822.0	887.3	979.2	ALL

APPENDIX D1
CUMULATIVE RATES (%) FOR AGE 0-74 YEARS BY ETHNIC GROUP, 2003-2007, MALES

SITE	ALL	CHINESE	MALAY	INDIAN	ICD-9
Lip, Vermilion	0.01	0.01	0.02	0.00	140
Tongue	0.18	0.18	0.02	0.33	141
Salivary gland	0.06	0.06	0.04	0.04	142
Mouth	0.18	0.17	0.11	0.36	143-5
Oropharynx	0.11	0.12	0.01	0.18	146
Nasopharynx	1.19	1.36	0.79	0.10	147
Hypopharynx	0.15	0.17	0.01	0.10	148
Oesophagus	0.43	0.50	0.10	0.23	150
Stomach	1.60	1.77	0.64	1.16	151
Small intestines	0.11	0.11	0.14	0.06	152
Colon	2.70	3.02	1.58	0.92	153
Rectum	2.07	2.23	1.44	1.26	154
Liver	2.12	2.32	1.54	0.97	155
Gall bladder, etc.	0.23	0.23	0.18	0.25	156
Pancreas	0.70	0.75	0.52	0.51	157
Retroperitoneum & Peritoneum	0.04	0.04	0.08	0.00	158
Nose, sinuses, etc.	0.11	0.12	0.05	0.08	160
Larynx	0.42	0.46	0.15	0.36	161
Lung	4.89	5.28	4.17	2.10	162
Pleura	0.06	0.06	0.03	0.00	163
Thymus, heart	0.09	0.11	0.05	0.01	164
Bone	0.07	0.06	0.08	0.07	170
Connective tissues	0.18	0.20	0.10	0.04	171
Melanoma of skin	0.05	0.05	0.01	0.01	172
Skin, others	1.01	1.01	0.44	0.42	173
Male Breast	0.02	0.02	0.01	0.03	175
Prostate	3.00	3.19	1.96	2.02	185
Testis	0.09	0.09	0.08	0.07	186
Penis	0.12	0.13	0.07	0.03	187
Bladder	0.76	0.77	0.67	0.57	188
Kidney & Oth.Urinary	0.75	0.79	0.53	0.58	189
Eye	0.02	0.02	0.01	0.00	190
Brain, nervous system	0.28	0.28	0.21	0.31	191-2
Thyroid	0.23	0.23	0.23	0.23	193
Other endocrine	0.05	0.05	0.03	0.04	194
Lymphoid neoplasms	1.49	1.48	1.93	1.12	
Myeloid neoplasms	0.47	0.48	0.47	0.34	
Other and unspecified	0.48	0.47	0.52	0.61	
All	26.50	28.40	19.04	15.46	

APPENDIX D2
CUMULATIVE RATES (%) FOR AGE 0-74 YEARS BY ETHNIC GROUP, 2003-2007, FEMALES

SITE	ALL	CHINESE	MALAY	INDIAN	ICD-9
Lip, Vermilion	0.00	0.00	0.00	0.00	140
Tongue	0.07	0.06	0.04	0.18	141
Salivary gland	0.05	0.05	0.04	0.01	142
Mouth	0.05	0.04	0.00	0.36	143-5
Oropharynx	0.02	0.02	0.00	0.03	146
Nasopharynx	0.36	0.42	0.14	0.06	147
Hypopharynx	0.01	0.01	0.01	0.04	148
Oesophagus	0.05	0.05	0.02	0.07	150
Stomach	0.77	0.85	0.32	0.51	151
Small intestines	0.07	0.06	0.01	0.23	152
Colon	2.10	2.30	1.48	0.74	153
Rectum	1.15	1.24	0.91	0.61	154
Liver	0.50	0.52	0.44	0.40	155
Gall bladder, etc.	0.20	0.21	0.21	0.07	156
Pancreas	0.44	0.46	0.44	0.25	157
Retroperitoneum & Peritoneum	0.06	0.06	0.10	0.03	158
Nose, sinuses, etc.	0.05	0.05	0.09	0.02	160
Larynx	0.03	0.03	0.02	0.05	161
Lung	1.81	1.98	1.36	0.47	162
Pleura	0.01	0.00	0.01	0.00	163
Thymus, heart	0.06	0.07	0.01	0.02	164
Bone	0.05	0.05	0.05	0.08	170
Connective tissues	0.11	0.13	0.06	0.03	171
Melanoma of skin	0.05	0.05	0.01	0.01	172
Skin, others	0.70	0.75	0.32	0.25	173
Female Breast	6.37	6.52	5.97	5.35	174
Cervix uteri	1.02	1.07	1.05	0.45	180
Chorioepithelioma	0.01	0.01	0.01	0.00	181
Corpus uteri	1.35	1.37	1.33	1.40	182
Ovary, etc.	1.23	1.23	1.37	1.08	183
Other fem. genital	0.10	0.11	0.05	0.06	184
Bladder	0.22	0.22	0.18	0.26	188
Kidney & Oth.Urinary	0.37	0.37	0.32	0.45	189
Eye	0.02	0.02	0.00	0.00	190
Brain, nervous system	0.22	0.25	0.11	0.16	191-2
Thyroid	0.57	0.55	0.71	0.49	193
Other endocrine	0.04	0.04	0.06	0.06	194
Lymphoid neoplasms	0.95	0.89	1.49	0.93	
Myeloid neoplasms	0.35	0.36	0.37	0.22	
Other and unspecified	0.34	0.36	0.25	0.28	
All	21.91	22.82	19.36	15.68	

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

